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
Listing and Delisting Recommendations

SEPTEMBER 2005

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

COV0117

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STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER QUALITY

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WATER BODY FACT SHEETS SUPPORTING THE LISTING AND DELISTING RECOMMENDATIONS

VOLUME III

DRAFT
September 2005

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 Listing and Delisting Recommendations

Volume III

This volume of the Staff Report contains the fact sheets to support the revision of the Clean Water Act Section 303(d) list of water quality limited segments. The staff report is divided into three volumes: (1) Volume I contains the listing methodology and a summary of the additions, deletions, changes, and priorities; (2) Volume II contains summaries of the proposed changes (new listings and delistings) to the section 303(d) list for the North Coast, San Francisco Bay, Central Coast, and Los Angeles regions; (3) Volume III contains summaries of the proposed changes (new listings and delistings) for the Central Valley, Lahontan, Colorado River Basin, Santa Ana, and San Diego regions.

This document is Volume III of the Staff Report. Changes proposed for the 2006 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 regional section in this volume is divided into the following parts:

- **List**: This section contains fact sheets for all pollutant-water body combinations in the region recommended for placement on the section 303(d) list.

- **Delist**: This section contains fact sheets for all water body pollutant combinations in the region recommended for removal from the section 303(d) list.

- **Area Changes**: This section contains fact sheets for water bodies in the region where major mapping changes are recommended.

References for all data and information used are presented in Appendix 2 of Volume I of the Staff Report: *Revision of the Clean Water Act Section 303(d) List of Water Quality Limited Segments*.

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Fact Sheets Supporting
Revision of the Section 303(d) List

September 2005

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Central Valley Region (5)

LIST

Recommendations to place waters and pollutants on the section 303(d) List

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Region 5

Water Segment: American River, South Fork

Pollutant: Mercury

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. Under section 3.5 a single line of evidence is necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. A large number of samples exceed the mercury tissue guideline. The listing should start below Slab Creek Reservoir.

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

This conclusion is based on the staff findings that:
1. The guideline used satisfies the requirements of section 6.1.3 of the Policy.
2. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
3. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
4. Eleven of 24 samples exceeded the mercury guideline and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
5. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat

Matrix: Tissue

Water Quality Objective/ All waters shall be maintained free of toxic substances in concentrations that

Water Quality Criterion:	produce detrimental physiological responses in human, plant, animal, or aquatic life. The objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances.
Evaluation Guideline:	An OEHHA guideline of 0.3 mg/kg ww was used (Brodberg and Pollock, 1999).
Data Used to Assess Water Quality:	Eleven of 24 samples exceeded the mercury tissue guideline. Fish tissue was analyzed from Sacramento pike minnow, rainbow trout, and brown trout. The reporting limit was 0.01 mg/kg (CDFG, 2005).
Spatial Representation:	Samples were collected in one location in the Camp Lotus reach of the South Fork of the American River.
Temporal Representation:	Samples were collected between 6/15/2004 and 7/29/2004.
Data Quality Assessment:	DFG Office of Spill Prevention and Response Laboratory QAPP. Data quality requirements acceptable.

Line of Evidence	Testimonial Evidence
Beneficial Use	CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat
Information Used to Assess Water Quality:	Information from RWQCB staff: The listing should start below Slab Creek Reservoir. Some data from 2002 shows no problem downstream of the reservoir.

Region 5

Water Segment: Bear River (Amador Co, Lower Bear River Reservoir to Mokelumne River, N Fork)

Pollutant: Copper

Decision: List

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

Two lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.1, nearly all of the measurements exceed the water quality criterion and the pollutant is likely to cause or contribute to the toxic effect.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Sixty-seven of 69 samples exceeded the hardness based criteria from USEPA (CTR) for freshwater acute (CMC), 4 of 5 measurements exceed the NTR value for total copper, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
5. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat, WA - Warm Freshwater Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	Hardness-based criteria from USEPA (CTR) for freshwater acute (CMC).
Data Used to Assess Water Quality:	Sixty-seven of 69 samples exceeded the hardness-based CTR criterion for dissolved copper. [Historical Water Quality Results for Analytical Laboratory Measurements PG&E Company Mokelumne River Project (FERC 137)] (PG&E, 2003b).
Spatial Representation:	Bear River below Lower Bear River Reservoir.
Temporal Representation:	Samples taken between 2000 and 2003.
Data Quality Assessment:	Well documented QA/QC including report on Certified Analytical Reports and chain of custody documentation.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	USEPA National Ambient Water Quality Criterion for the protection of aquatic life.
Data Used to Assess Water Quality:	Four of 5 samples from this location exceeded the standard for total copper. Preliminary Mokelumne River Supplemental Copper Sampling Results (PG&E, 2003b).
Spatial Representation:	Bear River below Lower Bear River Reservoir.
Temporal Representation:	Samples taken monthly from 2002 to 2003.
Data Quality Assessment:	Well documented QA/QC including report on Certified Analytical Reports and chain-of-custody documentation.

Region 5

Water Segment: Carson Creek (from WWTP to Deer Creek)

Pollutant: Aluminum

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Three of 11 samples exceeded the MCLs Secondary criteria; 2 of the 3 exceeded the Primary MCL criteria and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ At a minimum, water designated for use as domestic or municipal supply

Water Quality Criterion:	(MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs) specified in the following provisions of Title 22 of the California Code of Regulations, which are incorporated by reference into this plan.
Evaluation Guideline:	MCLs Title 22 Primary and Secondary.
Data Used to Assess Water Quality:	Two out of 11 samples exceed the secondary MCL. Three measurements of 11 exceed the Primary MCL. All receiving water samples were grab samples.(Central Valley RWQCB, 2003a).
Spatial Representation:	Samples were collected at one station.
Temporal Representation:	Receiving water samples were collected from March 2001 through Feb. 2002.
Data Quality Assessment:	The effluent and receiving water monitoring study was initiated in March 2001, consistent with the QAPP prepared by RBI (RBI 2001) and submitted to and reviewed by the RWQCB permitting staff.

Region 5

Water Segment: Carson Creek (from WWTP to Deer Creek)

Pollutant: Copper

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 11 samples exceed the CTR Freshwater acute criteria and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat

Matrix: Water

Water Quality Objective/ Waters shall not contain chemical constituents in concentrations that adversely

Water Quality Criterion:	affect beneficial uses.
Evaluation Guideline:	CTR Hardness-based Freshwater Acute criterion (13.44 ppb).
Data Used to Assess Water Quality:	Two out of 11 samples exceed the CTR criterion based on an assumed hardness of 100 mg/L as CaCO3 (Central Valley RWQCB, 2003a).
Spatial Representation:	One station was sampled.
Temporal Representation:	Samples were collected from March 2001 through Feb. 2002.
Data Quality Assessment:	The effluent and receiving water monitoring study was initiated in March 2001, consistent with the QAPP prepared by RBI (RBI 2001) and submitted to and reviewed by the RWQCB permitting staff.

Region 5

Water Segment: Carson Creek (from WWTP to Deer Creek)

Pollutant: Manganese

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Three of 4 samples exceeded the DHS Title 22 Secondary MCL criteria (0.05 mg/L) and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ At a minimum, water designated for use as domestic or municipal supply

Water Quality Criterion:	(MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs) specified in the following provisions of Title 22 of the California Code of Regulations, which are incorporated by reference into this plan.
Evaluation Guideline:	DHS Title 22 Secondary MCL Human Health criterion.
Data Used to Assess Water Quality:	Three out of 4 samples exceed the exceed the manganese MCL based on an assumed hardness of 100 mg/L as CaCO3 (Central Valley RWQCB, 2003a).
Spatial Representation:	One station was sampled.
Temporal Representation:	Samples were collected from March 2001 through Feb. 2002.
Data Quality Assessment:	The effluent and receiving water monitoring study was initiated in March 2001, consistent with the QAPP prepared by RBI (RBI 2001) and submitted to and reviewed by the RWQCB permitting staff.

Region 5

Water Segment:	Clear Lake
Pollutant:	Mercury
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	CM - Commercial and Sport Fishing (CA), WA - Warm Freshwater Habitat
Information Used to Assess Water Quality:	The Clear Lake watershed contains the Sulphur Bank mercury mine, a USEPA Superfund site. This TMDL was completed in 2003 and approved by USEPA on 10/20/03. This TMDL is in the implementation phase. Completion of tasks is dependent on funding from federal and state TMDL programs.

Region 5

Water Segment: Cosumnes River

Pollutant: Exotic Species

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.10 of the Listing Policy. Under section 3.10 two lines of evidence are necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. Over a three-year period, this study strongly indicated that non-native presence was responsible for sharp native species abundance declines in the Cosumnes River basin.

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

This conclusion is based on the staff findings that:
1. This study was conducted from 1999-2001.
2. Trends analysis was examined using Pearson Correlation Coefficients between abundances of fish species at forty-four sampling sites.
3. Where non-native fish species were present, native fish species abundance was low or non-existent. Natives had been extirpated from many sites.
4. Some natives distribution overlapped with non-natives, highly suggesting that predation by non-natives was responsible for native abundance declines. This model supports the overall pattern of gradual disappearance of native fishes from the Cosumnes basin.
5. It cannot be determined if the trend in water quality is expected to meet water standards by the next listing cycle.
6. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence	Population/Community Degradation
Beneficial Use:	WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances. Compliance with this objective will be determined by analyses of indicator organisms, species diversity, population density, growth anomalies, and biotoxicity tests of appropriate duration or other methods as specified by the Regional Water Board. Taken from Region 5 Basin Plan, Page III-8.00, Water Quality Objectives.
Data Used to Assess Water Quality:	Fish species were studied over a three-year period from 1999-2001. Of the 25 species collected, 17 were non-native species, and 14 were native species (Moyle et al., 2003). Rainbow trout was the only native species that occupied much of its native range in headwater streams protected from invasion of non-natives due to downstream barriers. Non-native species were found primarily in low-land habitats on the valley floor of the foothills. Where non-native fish species were present, native fish species abundance was low or non-existent. Trends analysis was examined using Pearson Correlation Coefficients between abundances of fish species at forty-four sites.
Spatial Representation:	July, August and September of 1999-2001, this study sampled a total of 44 sites throughout the Cosumnes River watershed. Twenty four of the sites were sampled once in the 3-year period, 14 sites were sampled twice, and 8 sites were sampled all 3 years. At each site, 50 to100m of stream for fish was sampled.
Temporal Representation:	Sampling occurred in July, August and September of 1999, 2000 and 2001.
Environmental Conditions:	Changes in relative diversity and abundance of native species may also be driven by habitat alteration, flow changes, or hydromodification.
Data Quality Assessment:	Peer Reviewed Journal Article.

Region 5

Water Segment: Deer Creek (Sacramento County)

Pollutant: Iron

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Five of 12 samples exceeded the chemical constituents water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, MI - Fish Migration, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WI - Wildlife Habitat

Matrix: -N/A

Water Quality Objective/ Water Quality Criterion:	Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At a minimum, water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs) specified in the following provisions of Title 22 of the California Code of Regulations, which are incorporated by reference into this plan: Tables 64431-A (Inorganic Chemicals) and 64431-B (Fluoride) of Section 64431, Table 64444-A (Organic Chemicals) of Section 64444, and Tables 64449-A (Secondary Maximum Contaminant Levels-Consumer Acceptance Limits) and 64449-B (Secondary Maximum Contaminant Levels- Ranges) of Section 64449. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect.
Evaluation Guideline:	California DHS Secondary MCL metal (300 ug/l).
Data Used to Assess Water Quality:	All receiving water samples were grab samples. Concentrations of iron (expressed as total recoverable) ranged from 50 ug/l in June 2002 to 590 ug/l in May 2002. The samples collected in February, May, July, August and December 2002 had total recoverable iron concentrations ranging from 300 to 590 ug/l, which are greater than the DHS secondary MCL of 300 ug/l. Five samples out of 12 receiving water samples contained levels of total recoverable iron that exceeded the MCL (Central Valley RWQCB, 2003a).
Spatial Representation:	The Deer Creek Wastewater Treatment Plant is located in the Section 16, T9N, R9E, MDB&M, adjacent to Deer Creek, a tributary to the Cosumnes River. Receiving water samples were collected at the NPDES permit R1 monitoring location, which is located in Deer Creek at the gauging station upstream of the point of discharge at the first bridge crossing Deer Creek as part of the access road to the DCWWTP.
Temporal Representation:	Receiving water sampling was conducted between February 2002 and February 2003.
Data Quality Assessment:	The QAPP demonstrates that all field-sampling procedures were conducted in a technically appropriate, efficient, and cost-effective manner, ultimately contributing to the project goals.

Region 5

Water Segment: Del Puerto Creek

Pollutant: Pyrethroid

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.6 the site has significant sediment toxicity and the pollutant is likely to cause or contribute to the toxic effect. A TIE is available that indicates pyrethroid pesticides are a likely cause of toxicity.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Five of 7 samples exhibit sediment toxicity and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. A TIE is has been completed and the likely cause of toxicity is pyrethroid pesticides.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Toxicity

Beneficial Use: MI - Fish Migration, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Waters are to remain free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal or aquatic life. Toxicity may be caused by a single substance or the interactive effect of multiple substances (Region 5 Basin Plan, September, 1998)
Data Used to Assess Water Quality:	Five out of seven samples displayed statistically significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%. All samples were tested using the 10-day Hyalella azteca test. Samples were collected at: -Del Puerto Creek at Vineyard, on 10/9/2001, 5/29/2002 (CVRWQCB, 2002), 10/28/2002, 9/11/2002 (CVRWQCB, 2002), 4/11/2003 -Del Puerto Creek at Hwy 33 on 10/28/2002 -Del Puerto Creek 100 feet upstream of Vineyard Lane bridge on 10/28/2002 -note: samples also were collected from Del Puerto Creek at Rogers Road on 10/28/04; however, these samples did not meet the QA requirements, and have not been included in the counts (SWAMP, 2004).
Spatial Representation:	Samples were collected at three sites. Toxicity in the survival endpoint was detected at two sites.
Temporal Representation:	Samples were collected between October 2001 through October 2002. Samples were collected October 9, 2001 at Vineyard; October. 28, 2002 at Highway 33, Vineyard, and 100 feet upstream of the Vineyard Lane bridge, and May 29, 2002 at Vineyard.
Environmental Conditions:	San Joaquin River Sub-Basin; located in Stanislaus County, on the west side of the valley floor. This stream reaches the San Joaquin River downstream of the Merced River mouth and upstream of the Tuolumne River. The sampling sites are located at Del Puerto Creek at Vineyard, Del Puerto Creek at Rogers Road, Del Puerto Creek at Highway 33, Del Puerto Creek 100 feet upstream of Vineyard Lane bridge.
Data Quality Assessment:	SWAMP QAPP. None of the samples displaying toxicity in the survival endpoint and considered as part of the data assessed had any associated QA qualifiers. Samples also were collected from Del Puerto Creek at Rogers Road on 10/28/04; however, these samples did not meet the QA requirements, and were not considered here.

Line of Evidence	Pollutant-Water
Beneficial Use	MI - Fish Migration, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Non-Numeric Objective:	Waters are to remain free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal or aquatic life. Toxicity may be caused by a single substance or the interactive effect of multiple substances (Region 5 Basin Plan, September, 1998)

Data Used to Assess Water Quality:	Toxicity Identification Evaluations (TIEs) were conducted on samples collected from Del Puerto Creek at Vineyard on 5/29/2002 and 9/11/2002. Toxicity was increased by the following TIE manipulations: addition of PBO and decrease of test temperatures, both suggesting evidence of pyrethroid pesticides (CVRWQCB, 2002).

Region 5

Water Segment: Delta Waterways (Stockton Ship Channel)

Pollutant: Exotic Species

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.10 of the Listing Policy. Under section 3.10 two lines of evidence are necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. There have been numerous studies since the late 1960's showing sharp declines in phytoplankton biomass and in native species, such as the delta smelt, which has declined ten-fold over the last 20 years. Non-native species are believed to be responsible, in part, for this alteration in the delta food web and extirpating native species.

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

This conclusion is based on the staff findings that:
1. There are numerous studies since the late 1960's.
2. Baseline data is from data acquired from these earlier studies.
3. Trends were determined using statistical analyses on graphs and tables.
4. Summer chlorophyll a decreased markedly after invasion of the non-native Asian clam. Phytoplankton is a significant source during the spring and summer for many species in the delta.
5. Phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels. Some non-native species compete with zooplankton for food, or alter species composition of the food web. In areas where non-natives are abundant, native fishes are rare or absent.
6. It cannot be determined if the trend in water quality is expected to meet water standards by the next listing cycle.
7. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence	Population/Community Degradation
Beneficial Use:	WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances. Compliance with this objective will be determined by analyses of indicator organisms, species diversity, population density, growth anomalies, and biotoxicity tests of appropriate duration or other methods as specified by the Regional Water Board. Taken from Region 5 Basin Plan, Page III-8.00, Water Quality Objectives.
Data Used to Assess Water Quality:	Thousands of chlorophyll-a measurements have been made in the Delta since the late 1960s and 55-93% of them, depending on the year, are below 10 ug/L. Growth rates of some primary consumers are closely tied to phytoplankton availability below about 10ug/L. There is a statistically significant downward trend of phytoplankton from 1975-1995 (Jassby et al., 2003). In 1986 the non-native Asian clam invaded Suisun Bay. The Asian clam is a consumer of phytoplankton, changing phytoplankton dynamics in Suisun Bay and the western Delta. Summer chlorophyll decreased markedly after the Asian clam invaded and phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels of the Delta. Some non-native species compete with zooplankton for food, or alter species composition of the food web, affecting native species survival. Recent studies in the central Delta show that introduced fishes dominate (USFWS, 2004. Five-Year Review of Recovery Plan for Delta Smelt. Federal Register 68(148):45270-45271). In areas where non-natives are abundant, native fishes are rare or absent. Over the last 20 years, the native delta smelt population has taken a ten-fold decline in numbers, due in part by non-native species predation and lack of adequate food supply (USFWS, 2004).
Spatial Representation:	The Sacramento-San Joaquin Delta extends from Chipps Island to include leveed and flooded islands; river channels; sloughs; and tidal marshes. Stations were distributed throughout the Delta for sampling by the Dept. of Water Resources to assess water quality, some since the late 1960's.
Temporal Representation:	Numerous studies since the late 1960s.
Environmental Conditions:	Changes in relative diversity and abundance of native species may also be driven by habitat alteration, flow changes, or hydromodification.
Data Quality Assessment:	Peer Reviewed Journal Article and Reports.

Region 5

Water Segment: Delta Waterways (central portion)

Pollutant: Exotic Species

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.10 of the Listing Policy. Under section 3.10 two lines of evidence are necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. There have been numerous studies since the late 1960's showing sharp declines in phytoplankton biomass and in native species, such as the delta smelt, which has declined ten-fold over the last 20 years. Non-native species are believed to be responsible for this alteration in the delta food web and extirpating native species.

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

This conclusion is based on the staff findings that:
1. There are numerous studies since the late 1960's.
2. Baseline data is from data acquired from these earlier studies.
3. Trends were determined using statistical analyses on graphs and tables.
4. Summer chlorophyll a decreased markedly after invasion of the non-native Asian clam. Phytoplankton is a significant source during the spring and summer for many species in the delta.
5. Phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels. Some non-native species compete with zooplankton for food, or alter species composition of the food web. In areas where non-natives are abundant, native fishes are rare or absent.
6. It cannot be determined if the trend in water quality is expected to meet water standards by the next listing cycle.
7. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence	Population/Community Degradation
Beneficial Use:	WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances. Compliance with this objective will be determined by analyses of indicator organisms, species diversity, population density, growth anomalies, and biotoxicity tests of appropriate duration or other methods as specified by the Regional Water Board. Taken from Region 5 Basin Plan, Page III-8.00, Water Quality Objectives.
Data Used to Assess Water Quality:	Thousands of chlorophyll-a measurements have been made in the Delta since the late 1960s and 55-93% of them, depending on the year, are below 10 ug/L. Growth rates of some primary consumers are closely tied to phytoplankton availability below about 10ug/L. There is a statistically significant downward trend of phytoplankton from 1975-1995 (Jassby et al., 2003). In 1986 the non-native Asian clam invaded Suisun Bay. The Asian clam is a consumer of phytoplankton, changing phytoplankton dynamics in Suisun Bay and the western Delta. Summer chlorophyll decreased markedly after the Asian clam invaded and phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels of the Delta. Some non-native species compete with zooplankton for food, or alter species composition of the food web, affecting native species survival. Recent studies in the central Delta show that introduced fishes dominate (USFWS, 2004. Five-Year Review of Recovery Plan for Delta Smelt. Federal Register 68(148):45270-45271). In areas where non-natives are abundant, native fishes are rare or absent. Over the last 20 years, the native delta smelt population has taken a ten-fold decline in numbers, due in part by non-native species predation and lack of adequate food supply (USFWS, 2005).
Spatial Representation:	The Sacramento-San Joaquin Delta extends from Chipps Island to include leveed and flooded islands; river channels; sloughs; and tidal marshes. Stations were distributed throughout the Delta for sampling by the Dept. of Water Resources to assess water quality, some since the late 1960's.
Temporal Representation:	Numerous studies since the late 1960s.
Environmental Conditions:	Changes in relative diversity and abundance of native species may also be driven by habitat alteration, flow changes, or hydromodification.
Data Quality Assessment:	Peer Reviewed Article and Reports.

Region 5

Water Segment: Delta Waterways (eastern portion)

Pollutant: Exotic Species

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.10 of the Listing Policy. Under section 3.10 two lines of evidence are necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. There have been numerous studies since the late 1960's showing sharp declines in phytoplankton biomass and in native species, such as the delta smelt, which has declined ten-fold over the last 20 years. Non-native species are believed to be responsible for this alteration in the delta food web and extirpating native species.

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

This conclusion is based on the staff findings that:
1. There are numerous studies since the late 1960's.
2. Baseline data is from data acquired from these earlier studies.
3. Trends were determined using statistical analyses on graphs and tables.
4. Summer chlorophyll a decreased markedly after invasion of the non-native Asian clam. Phytoplankton is a significant source during the spring and summer for many species in the delta.
5. Phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels. Some non-native species compete with zooplankton for food, or alter species composition of the food web. In areas where non-natives are abundant, native fishes are rare or absent.
6. It cannot be determined if the trend in water quality is expected to meet water standards by the next listing cycle.
7. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence	Population/Community Degradation
Beneficial Use:	WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances. Compliance with this objective will be determined by analyses of indicator organisms, species diversity, population density, growth anomalies, and biotoxicity tests of appropriate duration or other methods as specified by the Regional Water Board. Taken from Region 5 Basin Plan, Page III-8.00, Water Quality Objectives.
Data Used to Assess Water Quality:	Thousands of chlorophyll-a measurements have been made in the Delta since the late 1960s and 55-93% of them, depending on the year, are below 10 ug/L. Growth rates of some primary consumers are closely tied to phytoplankton availability below about 10ug/L. There is a statistically significant downward trend of phytoplankton from 1975-1995 (Jassby et al., 2003). In 1986 the non-native Asian clam invaded Suisun Bay. The Asian clam is a consumer of phytoplankton, changing phytoplankton dynamics in Suisun Bay and the western Delta. Summer chlorophyll decreased markedly after the Asian clam invaded and phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels of the Delta. Some non-native species compete with zooplankton for food, or alter species composition of the food web, affecting native species survival. Recent studies in the central Delta show that introduced fishes dominate (USFWS, 2004. Five-Year Review of Recovery Plan for Delta Smelt. Federal Register 68(148):45270-45271). In areas where non-natives are abundant, native fishes are rare or absent. Over the last 20 years, the native delta smelt population has taken a ten-fold decline in numbers, due in part by non-native species predation and lack of adequate food supply (USFWS, 2005.
Spatial Representation:	The Sacramento-San Joaquin Delta extends from Chipps Island to include leveed and flooded islands; river channels; sloughs; and tidal marshes. Stations were distributed throughout the Delta for sampling by the Dept. of Water Resources to assess water quality, some since the late 1960's.
Temporal Representation:	Numerous studies since the late 1960s.
Environmental Conditions:	Changes in relative diversity and abundance of native species may also be driven by habitat alteration, flow changes, or hydromodification.
Data Quality Assessment:	Peer Reviewed Journal Article and Reports.

Region 5

Water Segment: Delta Waterways (export area)

Pollutant: Exotic Species

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.10 of the Listing Policy. Under section 3.10 two lines of evidence are necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. There have been numerous studies since the late 1960's showing sharp declines in phytoplankton biomass and in native species, such as the delta smelt, which has declined ten-fold over the last 20 years. Non-native species are believed to be responsible for this alteration in the delta food web and extirpating native species.

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

This conclusion is based on the staff findings that:
1. There are numerous studies since the late 1960's.
2. Baseline data is from data acquired from these earlier studies.
3. Trends were determined using statistical analyses on graphs and tables.
4. Summer chlorophyll a decreased markedly after invasion of the non-native Asian clam. Phytoplankton is a significant source during the spring and summer for many species in the delta.
5. Phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels. Some non-native species compete with zooplankton for food, or alter species composition of the food web. In areas where non-natives are abundant, native fishes are rare or absent.
6. It cannot be determined if the trend in water quality is expected to meet water standards by the next listing cycle.
7. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence	Population/Community Degradation
Beneficial Use:	WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances. Compliance with this objective will be determined by analyses of indicator organisms, species diversity, population density, growth anomalies, and biotoxicity tests of appropriate duration or other methods as specified by the Regional Water Board. Taken from Region 5 Basin Plan, Page III-8.00, Water Quality Objectives.
Data Used to Assess Water Quality:	Thousands of chlorophyll-a measurements have been made in the Delta since the late 1960s and 55-93% of them, depending on the year, are below 10 ug/L. Growth rates of some primary consumers are closely tied to phytoplankton availability below about 10ug/L. There is a statistically significant downward trend of phytoplankton from 1975-1995 (Jassby et al., 2003). In 1986 the non-native Asian clam invaded Suisun Bay. The Asian clam is a consumer of phytoplankton, changing phytoplankton dynamics in Suisun Bay and the western Delta. Summer chlorophyll decreased markedly after the Asian clam invaded and phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels of the Delta. Some non-native species compete with zooplankton for food, or alter species composition of the food web, affecting native species survival. Recent studies in the central Delta show that introduced fishes dominate (USFWS, 2004. Five-Year Review of Recovery Plan for Delta Smelt. Federal Register 68(148):45270-45271). In areas where non-natives are abundant, native fishes are rare or absent. Over the last 20 years, the native delta smelt population has taken a ten-fold decline in numbers, due in part by non-native species predation and lack of adequate food supply (USFWS, 2005.)
Spatial Representation:	The Sacramento-San Joaquin Delta extends from Chipps Island to include leveed and flooded islands; river channels; sloughs; and tidal marshes. Stations were distributed throughout the Delta for sampling by the Dept. of Water Resources to assess water quality, some since the late 1960's.
Temporal Representation:	Numerous studies since the late 1960s.
Environmental Conditions:	Changes in relative diversity and abundance of native species may also be driven by habitat alteration, flow changes, or hydromodification.
Data Quality Assessment:	Peer Reviewed Journal Article and Reports.

Region 5

Water Segment: Delta Waterways (northern portion)

Pollutant: DDT

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Four of the 6 samples exceeded the OEHHA Screening Value and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Central Valley RWQCB Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life.

Evaluation Guideline:	100 ng/g - OEHHA Screening Value (Brodberg & Pollock, 1999).
Data Used to Assess Water Quality:	Four out of 6 samples exceeded. A total of 3 filet composite samples of white catfish, one filet composite of smallmouth bass, and individual filet samples of channel catfish and largemouth bass were collected. White catfish were collected in 1992-93 and 1998. Channel catfish were collected in 1993. Largemouth bass were collected in 1998 and smallmouth bass in 2001. The guideline was exceeded in all catfish samples. Bass did not exceed the guideline (TSMP, 2002).
Spatial Representation:	One station near Hood located in the river stretch from Clarksburg to Courtland along the Sacramento/Yolo County line.
Temporal Representation:	Samples were collected annually 1992-93, 1998, 2001.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 Data Report. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 5

Water Segment: Delta Waterways (northern portion)

Pollutant: Exotic Species

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.10 of the Listing Policy. Under section 3.10 two lines of evidence are necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. There have been numerous studies since the late 1960's showing sharp declines in phytoplankton biomass and in native species, such as the delta smelt, which has declined ten-fold over the last 20 years. Non-native species are believed to be responsible for this alteration in the delta food web and extirpating native species.

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

This conclusion is based on the staff findings that:
1. There are numerous studies since the late 1960's.
2. Baseline data is from data acquired from these earlier studies.
3. Trends were determined using statistical analyses on graphs and tables.
4. Summer chlorophyll a decreased markedly after invasion of the non-native Asian clam. Phytoplankton is a significant source during the spring and summer for many species in the delta.
5. Phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels. Some non-native species compete with zooplankton for food, or alter species composition of the food web. In areas where non-natives are abundant, native fishes are rare or absent.
6. It cannot be determined if the trend in water quality is expected to meet water standards by the next listing cycle.
7. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence	Population/Community Degradation
Beneficial Use:	WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances. Compliance with this objective will be determined by analyses of indicator organisms, species diversity, population density, growth anomalies, and biotoxicity tests of appropriate duration or other methods as specified by the Regional Water Board. Taken from Region 5 Basin Plan, Page III-8.00, Water Quality Objectives.
Data Used to Assess Water Quality:	Thousands of chlorophyll-a measurements have been made in the Delta since the late 1960s and 55-93% of them, depending on the year, are below 10 ug/L. Growth rates of some primary consumers are closely tied to phytoplankton availability below about 10ug/L. There is a statistically significant downward trend of phytoplankton from 1975-1995 (Jassby et al., 2003). In 1986 the non-native Asian clam invaded Suisun Bay. The Asian clam is a consumer of phytoplankton, changing phytoplankton dynamics in Suisun Bay and the western Delta. Summer chlorophyll decreased markedly after the Asian clam invaded and phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels of the Delta. Some non-native species compete with zooplankton for food, or alter species composition of the food web, affecting native species survival. Recent studies in the central Delta show that introduced fishes dominate (USFWS, 2004. Five-Year Review of Recovery Plan for Delta Smelt. Federal Register 68(148):45270-45271). In areas where non-natives are abundant, native fishes are rare or absent. Over the last 20 years, the native delta smelt population has taken a ten-fold decline in numbers, due in part by non-native species predation and lack of adequate food supply (USFWS, 2005).
Spatial Representation:	The Sacramento-San Joaquin Delta extends from Chipps Island to include leveed and flooded islands; river channels; sloughs; and tidal marshes. Stations were distributed throughout the Delta for sampling by the Dept. of Water Resources to assess water quality, some since the late 1960's.
Temporal Representation:	Numerous studies since the late 1960s.
Environmental Conditions:	Changes in relative diversity and abundance of native species may also be driven by habitat alteration, flow changes, or hydromodification.
Data Quality Assessment:	Peer Reviewed Journal Article and Reports.

Region 5

Water Segment: Delta Waterways (northern portion)

Pollutant: Mercury

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Nine of the 16 samples exceeded the OEHHA Screening Value and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Central Valley RWQCB Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life.

Evaluation Guideline:	0.3 ug/g - OEHHA Screening Value (Brodberg & Pollock, 1999).
Data Used to Assess Water Quality:	Nine out of 16 samples exceeded. A total of 4 filet composite and 12 individual samples of the following fish were collected: 12 white catfish, and one each largemouth bass, smallmouth bass, channel catfish, chinook salmon. White catfish were collected in 1992-93 and 1998. Channel catfish were collected in 1993. Largemouth bass were collected in 1998 and smallmouth bass in 2001. Chinook salmon were collected in 2002. Seven white catfish samples collected in 1992 and 1998 exceeded the guideline. The largemouth bass and smallmouth bass also exceed the guideline (TSMP, 2002).
Spatial Representation:	Two stations were sampled: in the river stretch from Clarksburg to Courtland along the Sacramento/Yolo County line (Hood), about 3 miles downstream of Garcia Bend launch ramp (RM44).
Temporal Representation:	Samples were collected annually 1992-93, 1996-99, 2001-02.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 Data Report. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 5

Water Segment: Delta Waterways (northern portion)

Pollutant: Polychlorinated biphenyls

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of the 6 samples exceeded the OEHHA Screening Value and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Central Valley RWQCB Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life.

Evaluation Guideline:	20 ng/g - OEHHA Screening Value (Brodberg & Pollock, 1999).
Data Used to Assess Water Quality:	Two out of 6 samples exceeded. A total of 3 filet composite samples of white catfish, one filet composite of smallmouth bass, and individual filet samples of channel catfish and largemouth bass were collected. White catfish were collected in 1992-93 and 1998. Channel catfish were collected in 1993. Largemouth bass were collected in 1998 and smallmouth bass in 2001. The guideline was exceeded in 1992 and 1998 catfish samples (TSMP, 2002).
Spatial Representation:	One station near Hood located in the river stretch from Clarksburg to Courtland along the Sacramento/Yolo County line.
Temporal Representation:	Samples were collected annually 1992-93, 1998, and 2001.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 Data Report. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 5

Water Segment: Delta Waterways (northwestern portion)

Pollutant: Exotic Species

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.10 of the Listing Policy. Under section 3.10 two lines of evidence are necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. There have been numerous studies since the late 1960's showing sharp declines in phytoplankton biomass and in native species, such as the delta smelt, which has declined ten-fold over the last 20 years. Non-native species are believed to be responsible for this alteration in the delta food web and extirpating native species.

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

This conclusion is based on the staff findings that:
1. There are numerous studies since the late 1960's.
2. Baseline data is from data acquired from these earlier studies.
3. Trends were determined using statistical analyses on graphs and tables.
4. Summer chlorophyll a decreased markedly after invasion of the non-native Asian clam. Phytoplankton is a significant source during the spring and summer for many species in the delta.
5. Phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels. Some non-native species compete with zooplankton for food, or alter species composition of the food web. In areas where non-natives are abundant, native fishes are rare or absent.
6. It cannot be determined if the trend in water quality is expected to meet water standards by the next listing cycle.
7. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence	Population/Community Degradation
Beneficial Use:	WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances. Compliance with this objective will be determined by analyses of indicator organisms, species diversity, population density, growth anomalies, and biotoxicity tests of appropriate duration or other methods as specified by the Regional Water Board. Taken from Region 5 Basin Plan, Page III-8.00, Water Quality Objectives.
Data Used to Assess Water Quality:	Thousands of chlorophyll-a measurements have been made in the Delta since the late 1960s and 55-93% of them, depending on the year, are below 10 ug/L. Growth rates of some primary consumers are closely tied to phytoplankton availability below about 10ug/L. There is a statistically significant downward trend of phytoplankton from 1975-1995 (Jassby et al., 2003). In 1986 the non-native Asian clam invaded Suisun Bay. The Asian clam is a consumer of phytoplankton, changing phytoplankton dynamics in Suisun Bay and the western Delta. Summer chlorophyll decreased markedly after the Asian clam invaded and phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels of the Delta. Some non-native species compete with zooplankton for food, or alter species composition of the food web, affecting native species survival. Recent studies in the central Delta show that introduced fishes dominate (USFWS, 2004. Five-Year Review of Recovery Plan for Delta Smelt. Federal Register 68(148):45270-45271). In areas where non-natives are abundant, native fishes are rare or absent. Over the last 20 years, the native delta smelt population has taken a ten-fold decline in numbers, due in part by non-native species predation and lack of adequate food supply (USFWS, 2005).
Spatial Representation:	The Sacramento-San Joaquin Delta extends from Chipps Island to include leveed and flooded islands; river channels; sloughs; and tidal marshes. Stations were distributed throughout the Delta for sampling by the Dept. of Water Resources to assess water quality, some since the late 1960's.
Temporal Representation:	Numerous studies since the late 1960s.
Environmental Conditions:	Changes in relative diversity and abundance of native species may also be driven by habitat alteration, flow changes, or hydromodification.
Data Quality Assessment:	Peer Reviewed Journal Article and Reports.

Region 5

Water Segment: Delta Waterways (southern portion)

Pollutant: DDT

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Central Valley RWQCB Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life.

Evaluation Guideline:	100 ng/g - OEHHA Screening Value (Brodberg & Pollock, 1999).
Data Used to Assess Water Quality:	Two out of 2 samples exceeded. A total of 2 filet composite samples of largemouth bass were collected. Largemouth bass were collected in 1992-93. The guideline was exceeded in both samples of largemouth bass (TSMP, 2002).
Spatial Representation:	One station along the San Joaquin River 1 1/2 miles upstream from the Mossdale launch ramp (Mossdale) was sampled.
Temporal Representation:	Samples were collected annually 1992-93.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 Data Report.

Region 5

Water Segment: Delta Waterways (southern portion)

Pollutant: Exotic Species

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.10 of the Listing Policy. Under section 3.10 two lines of evidence are necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. There have been numerous studies since the late 1960's showing sharp declines in phytoplankton biomass and in native species, such as the delta smelt, which has declined ten-fold over the last 20 years. Non-native species are believed to be responsible for this alteration in the delta food web and extirpating native species.

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

This conclusion is based on the staff findings that:
1. There are numerous studies since the late 1960's.
2. Baseline data is from data acquired from these earlier studies.
3. Trends were determined using statistical analyses on graphs and tables.
4. Summer chlorophyll a decreased markedly after invasion of the non-native Asian clam. Phytoplankton is a significant source during the spring and summer for many species in the delta.
5. Phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels. Some non-native species compete with zooplankton for food, or alter species composition of the food web. In areas where non-natives are abundant, native fishes are rare or absent.
6. It cannot be determined if the trend in water quality is expected to meet water standards by the next listing cycle.
7. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence	Population/Community Degradation
Beneficial Use:	WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances. Compliance with this objective will be determined by analyses of indicator organisms, species diversity, population density, growth anomalies, and biotoxicity tests of appropriate duration or other methods as specified by the Regional Water Board. Taken from Region 5 Basin Plan, Page III-8.00, Water Quality Objectives.
Data Used to Assess Water Quality:	Thousands of chlorophyll-a measurements have been made in the Delta since the late 1960s and 55-93% of them, depending on the year, are below 10 ug/L. Growth rates of some primary consumers are closely tied to phytoplankton availability below about 10ug/L. There is a statistically significant downward trend of phytoplankton from 1975-1995 (Jassby et al., 2003). In 1986 the non-native Asian clam invaded Suisun Bay. The Asian clam is a consumer of phytoplankton, changing phytoplankton dynamics in Suisun Bay and the western Delta. Summer chlorophyll decreased markedly after the Asian clam invaded and phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels of the Delta. Some non-native species compete with zooplankton for food, or alter species composition of the food web, affecting native species survival. Recent studies in the central Delta show that introduced fishes dominate (USFWS, 2004. Five-Year Review of Recovery Plan for Delta Smelt. Federal Register 68(148):45270-45271). In areas where non-natives are abundant, native fishes are rare or absent. Over the last 20 years, the native delta smelt population has taken a ten-fold decline in numbers, due in part by non-native species predation and lack of adequate food supply (USFWS, 2005).
Spatial Representation:	The Sacramento-San Joaquin Delta extends from Chipps Island to include leveed and flooded islands; river channels; sloughs; and tidal marshes. Stations were distributed throughout the Delta for sampling by the Dept. of Water Resources to assess water quality, some since the late 1960's.
Temporal Representation:	Numerous studies since the late 1960s.
Environmental Conditions:	Changes in relative diversity and abundance of native species may also be driven by habitat alteration, flow changes, or hydromodification.
Data Quality Assessment:	Peer Reviewed Journal Article and Reports.

Region 5

Water Segment: Delta Waterways (western portion)

Pollutant: Exotic Species

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.10 of the Listing Policy. Under section 3.10 two lines of evidence are necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. There have been numerous studies since the late 1960's showing sharp declines in phytoplankton biomass and in native species, such as the delta smelt, which has declined ten-fold over the last 20 years. Non-native species are believed to be responsible for this alteration in the delta food web and extirpating native species.

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

This conclusion is based on the staff findings that:
1. There are numerous studies since the late 1960's.
2. Baseline data is from data acquired from these earlier studies.
3. Trends were determined using statistical analyses on graphs and tables.
4. Summer chlorophyll a decreased markedly after invasion of the non-native Asian clam. Phytoplankton is a significant source during the spring and summer for many species in the delta.
5. Phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels. Some non-native species compete with zooplankton for food, or alter species composition of the food web. In areas where non-natives are abundant, native fishes are rare or absent.
6. It cannot be determined if the trend in water quality is expected to meet water standards by the next listing cycle.
7. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence	Population/Community Degradation
Beneficial Use:	WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances. Compliance with this objective will be determined by analyses of indicator organisms, species diversity, population density, growth anomalies, and biotoxicity tests of appropriate duration or other methods as specified by the Regional Water Board. Taken from Region 5 Basin Plan, Page III-8.00, Water Quality Objectives.
Data Used to Assess Water Quality:	Thousands of chlorophyll-a measurements have been made in the Delta since the late 1960's and 55-93% of them, depending on the year, are below 10 ug/L. Growth rates of some primary consumers are closely tied to phytoplankton availability below about 10ug/L. There is statistically significant downward trend of phytoplankton from 1975-1995 (Jassby et al., 2003). In 1986 the non-native Asian clam invaded Suisun Bay. The Asian clam is a consumer of phytoplankton, changing phytoplankton dynamics in Suisun Bay and the western Delta. Summer chlorophyll decreased markedly after the Asian clam invaded and phytoplankton biomass has declined over the past few decades, affecting food biomass availability for higher tropic levels of the Delta. Some non-native species compete with zooplankton for food, or alter species composition of the food web, affecting native species survival. Recent studies in the central Delta show that introduced fishes dominate (USFWS, 2004. Five-Year Review of Recovery Plan for Delta Smelt. Federal Register 68(148):45270-45271). In areas where non-natives are abundant, native fishes are rare or absent. Over the last 20 years, the native delta smelt population has taken a ten-fold decline in numbers, due in part by non-native species predation and lack of adequate food supply (USFWS, 20050.
Spatial Representation:	The Sacramento-San Joaquin Delta extends from Chipps Island to include leveed and flooded islands; river channels; sloughs; and tidal marshes. Stations were distributed throughout the Delta for sampling by the Dept. of Water Resources to assess water quality, some since the late 1960's.
Temporal Representation:	Numerous studies since the late 1960's.
Environmental Conditions:	Changes in relative diversity and abundance of native species may also be driven by habitat alteration, flow changes, or hydromodification.
Data Quality Assessment:	Peer Reviewed Journal Article and Reports.

Region 5

Water Segment: Feather River, Lower (Lake Oroville Dam to Confluence with Sacramento River)

Pollutant: Chlorpyrifos

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 14 samples exceeded the CDFG 1 hour criteria and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat

Matrix: Water

Water Quality Objective/ Pesticide concentrations shall not exceed those allowable by applicable antidegradation policies (see State Water Resources Control Board Resolution

Water Quality Criterion:	No. 68-16 and 40 CFR section 131.12). No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses.
Evaluation Guideline:	CDFG Hazard Assessment Criteria 25 ng/L 1-hour average.
Data Used to Assess Water Quality:	Seven sites were monitored in the Sacramento River Basin (this data represents the Feather River near Nicolaus/Verona). Sampling frequency for each storm event was one sample/day was taken for 7 days. Two storm events were sampled for the 2004 TMDL project in the Sacramento River Basin. The first storm event (Storm 1) was the period 28 January to 6 February 2004. The second storm event (Storm 2) was the period 15-23 February, 2004. For storm 1 sampling was conducted from 28 January to 3 February. For storm 2 the sampling period began on 16 February and extended until 22 February. Isokinetic, depth integrated water samples were collected at 6-10 equally spaced points across the channel width with a USGS D-77 sampler using the equal-width-increment method (EWI). Samples were collected from a boat at Feather River near Nicolaus/Verona. Fourteen samples were taken; 2 exceeded the CDFG criteria (Calanchini et al., 2004a).
Spatial Representation:	On 2 and 3 February, for sampling at Feather River, a single grab sample was collected from the bank at each site.
Temporal Representation:	The Feather River was sampled on 22 February; these samples were collected with a D77 using the EWI method.
Data Quality Assessment:	Sample quality control was measured through collection of sequential duplicates (n=8), blanks (n=5) and matrix spikes (n=5) (Table 3). The relative percent difference (RPD) between environmental and duplicate sample concentrations of chlorpyrifos ranged from 0-104%. The RPDs between environmental and duplicate sample concentrations of diazinon ranged from 0-40%.

Line of Evidence	Pollutant-Water
Beneficial Use	CO - Cold Freshwater Habitat
Non-Numeric Objective:	No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the executive Officer. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.

Evaluation Guideline:	CDFG Hazard Assessment Criteria - 14 ng/L 4-day average and 25 ng/L 1-hour average
Data Used to Assess Water Quality:	Data was obtained from the USGS Water-Resources Investigations Report 02-410. None of the concentrations from the samples from this site exceeded the CDFG criteria. Some of the concentrations were cited as less than values and as such could not be used in this assessment.
Spatial Representation:	Samples were collected on the Feather River near Nicolaus.
Temporal Representation:	Samples were collected over a 3 year period from 2/2000 to 2/2003. All samples were taken in late January or February.

Region 5

Water Segment: Feather River, North Fork (below Lake Almanor)

Pollutant: Mercury

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. Under section 3.5 a single line of evidence is necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. Seven fish tissue samples collected in 2001 exceed the tissue guideline.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Seven of 7 samples exceeded the OEHHA screening value for protection of humans eating fish and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, MI - Fish Migration, MU - Municipal & Domestic, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	None.
Evaluation Guideline:	None.
Data Used to Assess Water Quality:	3 Sacramento suckers, 1 rainbow trout, 1 brown trout, 2 smallmouth bass, and several crayfish were collected from Belden Forebay (upstream of dredge disposal pile). Belden methyl-mercury values in suckers ranged from 53.2-91.1 ppb. The trout values were 53.5 ppb (rainbow) and 69.1 ppb (brown). The bass methyl-mercury values were 111.0 and 55.6 ppb. The crayfish value was 31.5 ppb. No data were available from the North Fork of the Feather River (below the dredge disposal pile).
Spatial Representation:	7 upstream fish samples.
Temporal Representation:	Upstream samples were collected August 14, 2001.
Environmental Conditions:	Unknown. Probably relatively low flows.
Data Quality Assessment:	Extensive QA/QC information included in report. Appears to follow standard laboratory requirements.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, MI - Fish Migration, MU - Municipal & Domestic, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Tissue
Evaluation Guideline:	The OEHHA screening value for protection of humans eating fish is 0.3 ppm for mercury.
Data Used to Assess Water Quality:	Three Sacramento suckers, 1 rainbow trout, 1 brown trout, 2 smallmouth bass, and several crayfish were collected from Belden Forebay (upstream of dredge disposal pile). Belden total mercury values in suckers ranged from 54.7-92.8 ppb. The trout values were 54.5 ppb (rainbow) and 70.6 ppb (brown). The bass total mercury values were 114.0 and 56.7 ppb. The crayfish value was 33.3 ppb.

	No data were available from the North Fork of the Feather River (below the dredge disposal pile) (PG&E, 2002).
Spatial Representation:	Seven upstream fish samples Belden Forebay.
Temporal Representation:	Upstream samples were collected August 14, 2001.
Environmental Conditions:	Unknown. Probably relatively low flows.
Data Quality Assessment:	Extensive QA/QC information included in report. Appears to follow standard laboratory requirements.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, MI - Fish Migration, MU - Municipal & Domestic, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Tissue
Evaluation Guideline:	The OEHHA screening value for protection of humans eating fish is 0.3 ppm for mercury (Brodberg & Pollock, 1999).
Data Used to Assess Water Quality:	Six Sacramento suckers, 1 rainbow trout, 2 Sacramento pike minnow, and 9 smallmouth bass were collected upstream (of Poe Powerhouse). Upstream total mercury values in smallmouth bass ranged from 0.09-0.27 ppm (average = 0.13 ppm). The trout value was 0.07 ppm. The two pike minnow values were 0.33 and 0.18 ppm. Upstream Sacramento sucker values were unavailable. Six Sacramento suckers, 2 rainbow trout, 8 Sacramento pike minnow, 9 smallmouth bass, and 9 spotted bass were collected downstream (of Poe Powerhouse). Downstream total mercury values in smallmouth bass ranged from 0.11-0.32 ppm (average = 0.17 ppm). Mercury values in spotted bass ranged from 0.19-0.65 ppm (average = 0.33 ppm). Mercury values in pike minnows ranged from 0.22-0.98 ppm (average = 0.57 ppm). The two trout values were 0.03 and 0.04 ppm. Downstream Sacramento sucker values were unavailable (PG&E, 2003a).
Spatial Representation:	Eighteen upstream (of Poe Powerhouse) and 10 downstream fish tissue samples taken.
Temporal Representation:	Upstream data collected 11/21/2002 and 6/16/2003 as part of overall Poe Project (Poe Reservoir and Big Bend Dam reservoir below Poe Powerhouse). This data covers both winter (wet) and summer (dry) periods.

	Downstream data collected 12/4/2002, 12/5/2002, and 6/19/2003.
Environmental Conditions:	Data from both relatively low and relatively high flow periods are included.
Data Quality Assessment:	Unknown, but PG&E was responsible.

Region 5

Water Segment: Feather River, North Fork (below Lake Almanor)

Pollutant: Temperature, water

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A large number of annual maximum temperature values exceeded the 21.0°C criteria.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. The total number of annual maximum temperatures was 41. Of this total, there were 35 values that exceeded the 21.0°C steelhead criteria and this exceeds the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat, WA - Warm Freshwater Habitat

Matrix: Water

Water Quality Objective/ "The natural receiving water temperature of intrastate waters shall not be altered

Water Quality Criterion:	unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses." "At no time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5°F above natural receiving water temperature. Temperature changes due to controllable factors shall be limited for the water bodies specified as described in Table III-4. To the extent of any conflict with the above, the more stringent objective applies."
Evaluation Guideline:	The guideline used was from Sullivan et al (2000). Published Temperature Thresholds-Peer Reviewed Literature which includes reviewed sub-lethal and acute temperature thresholds from a wide range of studies, incorporating information from laboratory-based research, field observations, and risk assessment approaches. This report calculated the Annual Maximum (instantaneous maximum observed during the summer) upper threshold criterion for steelhead trout as 21.0°C. The risk assessment approach used by Sullivan et al (2000) suggests that an upper threshold for the Annual Maximum of 21.0°C for steelhead will reduce average growth 10% from optimum.
Data Used to Assess Water Quality:	Temperature measurements were taken over the span of 4 years (1999, 2000, 2002 and 2003) from May or June to September at 25 different monitoring stations along the North Fork of the Feather River. For each station, temperature monitoring was continuous and taken at 5 or 15 minute intervals, depending on the station and year monitored, using digital thermographs. Based on the data provided, all 10 monitoring stations exceeded the 21.0°C annual maximum criterion for steelhead either once or more than once during the sampling period from 1999 to 2003. For each monitoring year, each station had a set of 4 to 5 hourly maximum temperature values (except for those months when sampling did not occur), a value for each month. Based on each set of values the annual maximum temperature for each year was determined. There was a total of 41 annual maximum temperatures. Of this total, there were 35 annual maximum temperature values that exceeded the 21.0°C criteria (PG&E, 2003c); (PG&E, 2003a).
Spatial Representation:	There were 25 sampling stations spanning the length of the North Fork of the Feather River. Ten of these stations were for years 1999, 2000 and 2003. And 15 were for 2002.
Temporal Representation:	Samples were taken during 1999, 2000, 2002 and 2003 from either May or June to September. For each station, temperature monitoring was continuous and taken at 5 or 15 minute intervals, depending on the station and year monitored.
Data Quality Assessment:	High Quality - automatic data loggers, several years/water year types. Quality assurance well documented.

Region 5

Water Segment:	Grasslands Marshes
Pollutant:	Selenium
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	WA - Warm Freshwater Habitat
Information Used to Assess Water Quality:	TMDL completed in 2000.

Region 5

Water Segment: Grayson Drain (at outfall)

Pollutant: Sediment Bioassays -- Chronic Toxicity -- Freshwater

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. All of the measurements exhibited toxicity.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Toxicity

Beneficial Use: CM - Commercial and Sport Fishing (CA), WA - Warm Freshwater Habitat

Matrix: Sediment

Water Quality Objective/ Waters are to remain free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal or aquatic life.

Water Quality Criterion:	Toxicity may be caused by a single substance or the interactive effect of multiple substances (Region 5 Basin Plan, September, 1998)
Data Used to Assess Water Quality:	Three out of three samples displayed statistically significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%. All samples were tested using the test organism Hyalella azteca, either as 10 or 4 day tests (SWAMP, 2004).
Spatial Representation:	Samples were collected at one site, Grayson Drain at Grayson Road.
Temporal Representation:	Samples were collected between September 2002 through July 2003 (Sampling dates: September 19, 2002; April 11, 2003; July 15, 2003).
Environmental Conditions:	San Joaquin River Sub-Basin; located in Stanislaus County
Data Quality Assessment:	SWAMP QAPP.

Region 5

Water Segment: Ingram Creek (from confluence with Hospital Creek to Hwy 33 crossing)

Pollutant: Pyrethroid

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Two lines of evidence is available in the administrative record to assess this pollutant. Several samples exhibit toxicity. Toxicity Identification Evaluations indicate the likely cause of the toxicity is pyrethroid pesticides.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. All samples exhibit toxicity and TIEs indicate pyrethroid pesticides are the likely cause.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Toxicity

Beneficial Use: MI - Fish Migration, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Sediment

Water Quality Objective/ Water Quality Criterion:	Waters are to remain free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal or aquatic life. Toxicity may be caused by a single substance or the interactive effect of multiple substances (Region 5 Basin Plan, September, 1998)
Data Used to Assess Water Quality:	Five out of five samples displayed statistically significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%. All samples were tested using the test organism Hyalella azteca test, either as 10 or 4 day tests (SWAMP, 2004).
Spatial Representation:	Samples were collected at one site, Ingram Creek at River Road.
Temporal Representation:	Samples were collected between September 2002 through September 2004 (Sampling dates: September 24, 2002; April 11, 2003; July 15, 2003; November 13, 2003; September 13, 2004).
Environmental Conditions:	San Joaquin River Sub-Basin; located in Stanislaus County.
Data Quality Assessment:	SWAMP QAPP.

Line of Evidence	Pollutant-Water
Beneficial Use	MI - Fish Migration, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Non-Numeric Objective:	Waters are to remain free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal or aquatic life. Toxicity may be caused by a single substance or the interactive effect of multiple substances (Region 5 Basin Plan, September, 1998)
Data Used to Assess Water Quality:	Toxicity Identification Evaluations (TIEs) were conducted on samples collected on September 13, 2004. Results suggests the cause of toxicity to be pyrethroid pesticide(s), although there may also be additional factors contributing to the toxicity (UC Davis, 2002).

Region 5

Water Segment: Ingram Creek (from confluence with San Joaquin River to confluence with Hospital Creek)

Pollutant: Pyrethroid

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Two lines of evidence is available in the administrative record to assess this pollutant. Several samples exhibit toxicity. Toxicity Identification Evaluations indicate the likely cause of the toxicity is pyrethroid pesticides.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. All samples exhibit toxicity and TIEs indicate pyrethroid pesticides are the likely cause.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Toxicity

Beneficial Use: MI - Fish Migration, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Sediment

Water Quality Objective/ Water Quality Criterion:	Waters are to remain free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal or aquatic life. Toxicity may be caused by a single substance or the interactive effect of multiple substances (Region 5 Basin Plan, September, 1998)
Data Used to Assess Water Quality:	Five out of five samples displayed statistically significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%. All samples were tested using the test organism Hyalella azteca test, either as 10 or 4 day tests (SWAMP, 2004).
Spatial Representation:	Samples were collected at one site, Ingram Creek at River Road.
Temporal Representation:	Samples were collected between September 2002 through September 2004 (Sampling dates: September 24, 2002; April 11, 2003; July 15, 2003; November 13, 2003; September 13, 2004).
Environmental Conditions:	San Joaquin River Sub-Basin; located in Stanislaus County.
Data Quality Assessment:	SWAMP QAPP.

Line of Evidence	Pollutant-Water
Beneficial Use	MI - Fish Migration, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Non-Numeric Objective:	Waters are to remain free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal or aquatic life. Toxicity may be caused by a single substance or the interactive effect of multiple substances (Region 5 Basin Plan, September, 1998)
Data Used to Assess Water Quality:	Toxicity Identification Evaluations (TIEs) were conducted on samples collected on September 13, 2004. Results suggests the cause of toxicity to be pyrethroid pesticide(s), although there may also be additional factors contributing to the toxicity (UC Davis, 2002).

Region 5

Water Segment: Kaweah Lake

Pollutant: Mercury

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Central Valley RWQCB Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life.

Evaluation Guideline:	0.3 ug/g (OEHHA Screening Value) (Brodberg & Pollock, 1999).
Data Used to Assess Water Quality:	Three out of 3 samples exceeded. Three filet composite samples of largemouth bass were collected. Bass were collected in 1993, 2001, and 2003. All samples exceeded the guideline (TSMP, 2002).
Spatial Representation:	One station located in the center of this lake.
Temporal Representation:	Samples were collected 9/1/93, 11/6/01, and 6/17/03.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 Data Report. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 5

Water Segment: Lower Bear River Reservoir

Pollutant: Copper

Decision: List

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

One lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.1 the site exceeds the water quality criterion on 3 occasions.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Three of 7 samples exceeded the CTR criterion and this exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat, WA - Warm Freshwater Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	Hardness based criteria from USEPA (CTR) for freshwater (USEPA, 2000).
Data Used to Assess Water Quality:	Dissolved copper and hardness values were measured at the top, middle and bottom of the Lower Bear River Reservoir on each of 7 dates. The hardness and dissolved copper values were averaged for each date and compared the daily average hardness-corrected copper criteria to the daily average copper concentrations (excluding one anomalously high copper concentration flagged as possibly contaminated). Based on this analysis, 3 of 7 average dissolved copper concentrations exceeded their respective average hardness-corrected copper criterion. [Preliminary Supplemental Copper Monitoring Results March - December 2002] (PG&E, 2003b).
Spatial Representation:	Lower Bear River Reservoir sample collected near the dam from the epilimnion (Middle). Latitude (38° 32.365 N); Longitude (120° 15.162 W).
Temporal Representation:	Samples taken monthly from 5/16/2002 to 10/23/2002.
Data Quality Assessment:	Well documented QA/QC including report on certified analytical reports and chain-of-custody documentation.

Region 5

Water Segment: Main Drainage Canal

Pollutant: Diazinon

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A large number of samples exceed the water quality objective even though forty of the ELISA samples could not be used because the quality of the data was questionable.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Fifty of 98 samples exceeded the CDFG Hazard Assessment Criteria and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the executive Officer. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15. Pesticide concentrations shall not exceed those allowable by applicable antidegradation policies (see State Water Resources Control Board Resolution No. 68-16 and 40 C.F.R. Section 131.12). Pesticide concentrations shall not exceed the lowest levels technically and economically achievable. A trend in declining water quality has not been established per the Policy in section 3.1.10.
Evaluation Guideline:	CDFG Hazard Assessment Criteria - acute value: 0.10 ug/L, chronic value: 0.16 ug/L (Siepmann & Finlayson, 2002).
Data Used to Assess Water Quality:	Samples were analyzed using ELISA, GC/MS Arvada, CO. One hundred fifty-six total samples were collected. Forty-six of the ELISA samples could not be used because the quality of the data was questionable. Fifty of 98 samples exceeded the guideline (Dileanis et al., 2002), (Dileanis, 2003a), (Dileanis, 2003b), (Holmes et al., 2000).
Spatial Representation:	Samples were collected at the Main Drainage Canal at Gridley Road.
Temporal Representation:	Samples were collected as follows: 1/2000 - 10 on 1/30 and 1/31; 2/2000 - 34 samples with as many as 6/day; 1/2001 - 18 averaging 5/day; 2/2001 - 20 averaging 6/day; 1/2002 - 16 averaging 3/day; 2/2002 - 15 2-4/day; 3/2002 for 6 consecutive days. 18 samples were also collected in Jan. and Feb. 1994.
Data Quality Assessment:	Data from USGS reports are considered of adequate quality per section 6.1.4 of the Policy.

Region 5

Water Segment: Merced River, Lower (McSwain Reservoir to San Joaquin River)

Pollutant: Mercury

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Central Valley RWQCB Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life.

Evaluation Guideline:	0.3 ug/g-OEHHA Screening Value (Brodberg & Pollock, 1999).
Data Used to Assess Water Quality:	Two out of 2 samples exceeded. Two filet composite samples of were collected in 1998. One sample each of largemouth bass and one of channel catfish. Both samples exceeded the guideline (TSMP, 2002).
Spatial Representation:	One station located at George J. Hatfield State Recreation Area.
Temporal Representation:	Samples were collected on 11/5/98.
Data Quality Assessment:	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game.

Region 5

Water Segment: Mokelumne River, North Fork

Pollutant: Copper

Decision: List

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

One lines of evidence are available in the administrative record to assess this pollutant. Three measurements exceed the water quality criterion.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Three of 30 samples exceeded the CTR criteria for freshwater acute (CMC) and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
5. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat

Matrix: Water

Water Quality Objective/ Hardness based criteria from USEPA (CTR) for freshwater acute (CMC) (13.44

Water Quality Criterion:	ppb).
Data Used to Assess Water Quality:	Three out of 30 samples exceeded the CTR criteria for dissolved copper. Historical Water Quality Results for Analytical Laboratory Measurements PG& E Company Mokelumne River Project (FERC 137) [Table A2] (PG&E, 2003b).
Spatial Representation:	Three stations along the north fork.
Temporal Representation:	Samples taken between 3/14/2001 and 5/14/2002.
Data Quality Assessment:	Well documented QA/QC including report on certified analytical reports and Chain-of-Custody documentation.

Region 5

Water Segment: Morrison Creek

Pollutant: Chlorpyrifos

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Three of 19 samples exceeded the CDFG criteria (25 ng/L 1-hour average) and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat, WA - Warm Freshwater Habitat

Matrix: Water

Water Quality Objective/ The narrative pesticide objectives state, in part:
- No individual pesticide or combination of pesticides shall be present in

Water Quality Criterion:	concentrations that adversely affect beneficial uses, - Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses, - Pesticide concentrations shall not exceed those allowable by applicable antidegradation policies, and - Pesticide concentrations shall not exceed the lowest levels technically and economically achievable. The Basin Plan narrative water quality objective for toxicity states that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
Evaluation Guideline:	CDFG Hazard Assessment Criteria 25 ng/L 1-hour average.
Data Used to Assess Water Quality:	Chlorpyrifos was detected 30 percent of the time at the Franklin Blvd. monitoring site, but was never detected at the upstream, rural Morrison Creek monitoring site near Sunrise Blvd. Eight samples were collected in 2001; all were non-detects. In 2003, 19 samples were taken; 3 samples at the Franklin Blvd site exceeded the CDFG criteria (Spector et al., 2004).
Spatial Representation:	The two monitoring sites that were monitored in 2003 are Morrison Creek near Sunrise Boulevard and Morrison Creek at Franklin Boulevard. In 2001, Morrison Creek was monitored by Regional Board staff at three sites - at Sunrise Boulevard, at Hedge Road, and at Franklin Boulevard. Samples were collected beneath the water surface as near as possible to the center of the stream when water levels were low or when access was only possible from the bank. Otherwise, three to four grab samples were collected as one integrated grab sample.
Temporal Representation:	Storm events were sampled during the orchard dormant spray season months of January and February 2001 and 2002, and January through April 2003, to determine pesticide concentrations in rain and creeks during and after the orchard dormant spray season.
Data Quality Assessment:	During each monitoring season, additional samples were collected for quality assurance/quality control (QA/QC) purposes. Four types of quality assurance samples were collected to confirm the integrity of analytical results reported in this three-year monitoring study. The QA/QC samples included sample duplicates, equipment blanks, matrix spikes, and matrix spike duplicates. The procedures used for collecting the QA/QC samples are based on the San Joaquin River TMDL Quality Assurance Project Plan. During this 2001-2003 study, approximately 15-25 percent of the samples collected were either equipment blanks, sample duplicates, or matrix spikes and matrix spike duplicates.

Region 5

Water Segment: Natoma, Lake

Pollutant: Mercury

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.4 and 3.5 of the Listing Policy. Under sections 3.5 a single line of evidence is necessary to assess listing status while under section 3.4, a minimum of two lines of evidence are needed to assess listing status.

Three lines of evidence are available in the administrative record to assess this pollutant. A health advisory against the consumption of edible resident organisms has been issued by OEHHA and water segment-specific data indicates the evaluation guideline for tissue has been exceeded. In addition many measurements of tissue mercury concentration exceed the available guideline.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. A total of 11 fish species were collected. Exceedances of the CDFG criteria were recorded in 10 channel catfish (ranged from 1.1 to 1.9 mg/kg) and 14 largemouth bass (ranged from 0.27 to 0.86 mg/kg). These samples provide documentation in support of the fish consumption health advisory issued by OEHHA in September 2004 and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use:	CM - Commercial and Sport Fishing (CA)
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	OEHHA screening value for mercury 0.3 mg/kg (ppb).
Evaluation Guideline:	USEPA criteria of 0.30 mg methylmercury/kg wet weight as the fish tissue residue criterion that should not be exceeded (Klasing & Brodberg, 2004).
Data Used to Assess Water Quality:	Water, bed sediment, and biota in Lake Natoma and two tributaries in the lower American River watershed were sampled during 2002 and 2003, providing one of the first comprehensive assessments of mercury (Hg) and methylmercury (MeHg) contamination and bioaccumulation associated with large-scale gold dredging in the Sierra Nevada. Larger fish from Lake Natoma had elevated Hg concentrations in axial muscle tissue (wet basis): 10 channel catfish (505 to 750 mm total length) ranged from 1.1 to 1.9 mg/kg; 14 largemouth bass (LMB) of legal catch size (340 to 490 mm) ranged from 0.27 to 0.86 mg/kg. Smaller fish (bluegill, redear sunfish, green sunfish, and LMB < 270 mm) generally had Hg < 0.30 mg/kg. At ten sites in Willow and Alder creeks, concentrations of MeHg in unfiltered water (0.05 to 0.76 ng/L) and filtered water (0.04 to 0.56 ng/L) correlated spatially with concentrations of MeHg in two taxa of invertebrates: Hydropsyche (caddisfly larvae, n=7) and Coenagrionidae (damselfly nymphs, n=6). In bed sediments (0-2 cm depth), potential rates of Hg methylation and demethylation correlated strongly with organic matter content, acid extractable Fe(II) concentration, and total reduced sulfur, but not with microbial sulfate reduction rates, indicating the possible role of iron-reducing bacteria in mercury methylation and demethylation (Saiki et al., 2004).
Spatial Representation:	USGS and UCD collected a total of 11 fish species at several sites in Lake Natoma, including the vicinity of Negro Bar and Mississippi Bar, the mouths of Willow Creek and Alder Creek, Natomas Slough, and near Nimbus Dam.
Temporal Representation:	USGS and UCD collected a total of 11 fish species by electrofishing equipment or gill nets in August 2000, from September to October 2002, and in July 2003.
Environmental Conditions:	Documentation in support of fish consumption health advisory issued by OEHHA in September 2004. The specific objective was to determine if total mercury concentrations in skinless fillets of selected sport fish approach or exceed criteria for human health concerns.

Numeric Line of Evidence	Health Advisories
Beneficial Use:	CM - Commercial and Sport Fishing (CA)
Matrix:	Tissue
Water Quality Objective/	Fish consumption health advisory issued by OEHHA in September 2004.

Water Quality Criterion:

Evaluation Guideline: OEHHA guidance tissue levels for methylmercury (Klasing & Brodberg, 2004).

Data Used to Assess Water Quality: USGS and UCD collected a total of 11 fish species by electrofishing equipment or gill nets in August 2000, from September to October 2002, and in July 2003, at several sites in Lake Natoma, including the vicinity of Negro Bar and Mississippi Bar, the mouths of Willow Creek and Alder Creek, Natomas Slough, and near Nimbus Dam (Saiki et al., 2004; Alpers et al., 2004). Species collected included largemouth bass, smallmouth bass, spotted bass, channel catfish, white catfish, brown bullhead, black bullhead, redear sunfish, green sunfish, bluegill, and rainbow trout. Fish were measured and weighed; boneless and skinless individual fillets were submitted to University of California, Davis (the August 2000 and July 2003 samples) or the USGS Columbia Environmental Research Center (CERC) in Columbia, Missouri (the September to October 2002 samples) for total mercury analyses by atomic absorption spectrophotometry using either a Perkin Elmer Flow Injection Mercury System or a Milestone DMA-80 analyzer. Under TSMP, the California Department of Fish and Game (CDFG) collected largemouth bass (n= 15 in three composites), pike minnow (n= 16 in three composites), and sucker samples (n = 35 in nine composites) by electrofishing equipment or gill nets in 1979-1983, 1987, and 1990-1993 near the Highway 160 and Watt Avenue bridges on the lower American River. Fish were measured and weighed and made into composites using skin-off muscle fillet. Composite samples were homogenized at the CDFG Water Pollution Control Laboratory and analyzed for total mercury by cold vapor atomic absorption spectrophotometry (Rasmussen, 1995). For the Sacramento River Watershed Program, largemouth bass (n = 26 in seven composites), striped bass (n = 1), pike minnow (n = 25 in five composites), sucker (n = 35 in seven composites), white catfish (n = 9 in two composites), and redear sunfish (n = 10 in two composites) were collected by electroshock, nets, or hook and line from 1997 to 2002 at known fishing locations on the lower American River from Sunrise Avenue to Discovery Park. Fish were measured and weighed and made into composites using skin-off muscle fillet. Composite samples were homogenized at Moss Landing Marine Laboratory and analyzed for total mercury using a Perkin Elmer Flow Injection Mercury System (Saiki et al., 2004).

Spatial Representation: Sample locations included Lake Natoma at Willow Creek, Mississippi Bar, Nimbus Dam, Alder Creek, Natomas Slough and Negro Bar.

Temporal Representation: Collection dates for USGS and UCD sampling data from Lake Natoma ranged from Aug. 2000, Sept. and Oct. 2002, and July 2003.

Environmental Conditions: Of the samples collected at Lake Natoma and the lower American River, largemouth bass (n = 64), bluegill (n = 78), pikeminnow (n = 41), sucker (n = 70), channel catfish (n =11), white catfish (n = 10) and redear sunfish (n = 20) had sufficient sample size (≥ 9 fish per species) of legal/edible size fish to be considered representative of mercury levels in those species, thereby allowing adequate estimation of the health risks associated with their consumption.

Data Quality Assessment: The health advisory was based on data from UC Davis monitoring programs and published U.S. Geological Survey (USGS) reports. The Policy considers

	documentation from these sources to be of adequate quality.
Line of Evidence	Pollutant-Tissue
Beneficial Use	CM - Commercial and Sport Fishing (CA)
Information Used to Assess Water Quality:	Supplemental information from a relational database and GIS for Hg. The present study was intended to assess the fishing intensity and mercury concentrations in fish tissue data that are currently available. This assessment will inform this goal of the CALFED Mercury Strategy as well as the goal of the Delta Tributaries Mercury Council to reduce the risk of mercury exposure of humans and wildlife. In order to serve these goals, critical information includes the relative distribution of fishing intensity and fish concentrations of mercury and knowledge of the communities from which anglers are originating. Fish tissue mercury concentrations >0.3 ppm have been measured in the Upper American River.

Region 5

Water Segment: Orestimba Creek (below Kilburn Road)

Pollutant: Sediment Bioassays -- Chronic Toxicity -- Freshwater

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

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

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

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

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded.

Lines of Evidence:

Numeric Line of Evidence Toxicity

Beneficial Use: MI - Fish Migration, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Sediment

Water Quality Objective/ Water Quality Criterion: Waters are to remain free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal or aquatic life. Toxicity may be caused by a single substance or the interactive effect of multiple

	substances. From the Region 5 Basin Plan, September, 1998.
Data Used to Assess Water Quality:	Three out of four samples displayed statistically significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%. All samples were tested using the Hyalella azteca test. Please note QA qualifier under Data Quality Assessment section below (SWAMP, 2004).
Spatial Representation:	All three samples were collected from the same station; Orestimba Creek at River Road.
Temporal Representation:	Samples were collected on Oct. 9, 2001, and Sept. 19, 2002, May 29, 2002 and April 11, 2003. Toxicity in the survival endpoint was detected in samples collected in October 2001, September 2002 and April 2003.
Environmental Conditions:	The water body is located in the San Joaquin River Sub-Basin, on the west side, in the Stanislaus County valley floor. The site is just upstream of Highway 140/Crows Landing Road.
Data Quality Assessment:	SWAMP QAPP. The sample collected October 9. 2001 from Orestimba Creek at River Road was received at an improper temperature.

Region 5

Water Segment:	Sacramento River (Keswick Dam to Cottonwood Creek)
Pollutant:	Cadmium
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	WA - Warm Freshwater Habitat
Information Used to Assess Water Quality:	TMDL completed in 2002.

Region 5

Water Segment:	Sacramento River (Keswick Dam to Cottonwood Creek)
Pollutant:	Copper
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	WA - Warm Freshwater Habitat
Information Used to Assess Water Quality:	TMDL completed in 2002.

Region 5

Water Segment:	Sacramento River (Keswick Dam to Cottonwood Creek)
Pollutant:	Zinc
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	WA - Warm Freshwater Habitat
Information Used to Assess Water Quality:	TMDL completed in 2002.

Region 5

Water Segment: Sacramento River (Red Bluff to Knights Landing)

Pollutant: Mercury

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Three of the 5 samples exceeded the OEHHA Screening Value and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Central Valley RWQCB Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life.

Evaluation Guideline:	0.3 ug/g - OEHHA Screening Value (Brodberg & Pollock, 1999).
Data Used to Assess Water Quality:	Three out of 5 samples exceeded. A total of 5 filet composites and one individual sample of largemouth bass were collected. The composite samples consisted of one each largemouth bass and Sacramento pike minnow, and 2 sucker composites. All samples were collected in 2002. Both largemouth bass samples and the pike minnow sample exceed the guideline. The sucker samples did not exceed the guideline (TSMP, 2002).
Spatial Representation:	Two stations were sampled: in the Arnold Bend area (Colusa) and about one mile upstream from Colusa Drain outlet (Knights Landing).
Temporal Representation:	Samples were collected 9/13/2002 and 10/29/2002.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 Data Report. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 5

Water Segment:	Salt Slough (upstream from confluence with San Joaquin River)
Pollutant:	Selenium
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	MU - Municipal & Domestic
Information Used to Assess Water Quality:	TMDL completed in 1999.

Region 5

Water Segment: San Joaquin River (Friant Dam to Mendota Pool)

Pollutant: Exotic Species

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.10 of the Listing Policy. Under section 3.10 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Comparative analysis between four studies, from 1898 to 1971 was used to show an increase of non-native species and a decrease in native species over time.

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

This conclusion is based on the staff findings that:
1. Four studies were used spanning from 1898 to 1971.
2. Baseline data was taken from the 1898, 1934, and 1940-41 studies.
3. In a 1898 survey: 9 native species collected, 0 non-native species collected; in a 1934 survey: 10 native species were collected and 4 non-native species were collected; in a 1940-1941 survey: 13 native species were collected and 8 non-native species were collected; and in a 1969-71 survey: 6 native species were collected and 7 non-native species were collected. As the number of non-native fish species increased, the number of native fish species decreased over time.
6. It cannot be determined if the trend in water quality is expected to meet water standards by the next listing cycle.
7. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Population/Community Degradation

Beneficial Use:	WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances. Compliance with this objective will be determined by analyses of indicator organisms, species diversity, population density, growth anomalies, and biotoxicity tests of appropriate duration or other methods as specified by the Regional Water Board. Taken from Region 5 Basin Plan, Page III-8.00, Water Quality Objectives.
Data Used to Assess Water Quality:	A fish survey was completed between 1969-1971 (Moyle and Nichols, 1974). Data was compared to previous collections, as follows: (1) in a 1898 survey: 9 native species collected, 0 non-native species collected; (2) in a 1934 survey: 10 native species collected and 4 non-native species collected; (3) in a 1940-1941 survey: 13 native species collected and 8 non-native species collected; and (4) in a 1969-71 survey (this study): 6 native species collected and 7 non-native species collected. As the number of non-native fish species increased, the number of native fish species decreased over time.
Spatial Representation:	Samples were collected at 167 locations during the summer and autumns of 1969, 1970, and 1971 for this study at Friant Dam on the San Joaquin River.
Temporal Representation:	Time range from 1898 to 1971. Samples from the study were compared to measurements collected in 1898, 1934, and 1940-1941. This study: summer and autumns of 1969, 1970 and 1971.
Environmental Conditions:	Changes in relative diversity and abundance of native species may also be driven by habitat alteration, flow changes, or hydromodification.
Data Quality Assessment:	Peer Reviewed Journal Article.

Region 5

Water Segment:	San Joaquin River (Merced River to Tuolumne River)
Pollutant:	Selenium
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	MU - Municipal & Domestic
Information Used to Assess Water Quality:	TMDL completed in 2002.

Region 5

Water Segment: Sugar Pine Creek (tributary to Lower Bear River Reservoir)

Pollutant: Copper

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. Two samples exceeded the water quality objective. A sample from snowmelt also exceeded the standard.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 3 samples exceeded the hardness-based criteria (CTR) for freshwater acute (CMC) and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat, WA - Warm Freshwater Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	Hardness based criteria from USEPA (CTR) for freshwater acute (CMC).
Data Used to Assess Water Quality:	Two out of 3 samples at this location exceeded the CTR 1-hour criterion. In addition, one sample of snowmelt collected near Sugar Pine Creek exceeded the criterion (PG&E, 2003b).
Spatial Representation:	Small tributary flow from snowmelt near Sugar Pine creek, northwest shore of Lower Bear River Reservoir. Latitude (38° 33.21 N); Longitude (120° 14.36 W).
Temporal Representation:	Samples taken from 4/23/2002 to 6/11/2002.
Data Quality Assessment:	Well documented QA/QC including report on certified analytical reports and chain-of-custody documentation.

Region 5

Water Segment: Wadsworth Canal

Pollutant: Diazinon

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. Over half of the samples exceeded the water quality guideline.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Eighty-seven of 162 exceeded the CDFG Hazard Assessment guideline and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat

Matrix: Water

Water Quality Objective/ No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. Discharges shall not result in

Water Quality Criterion:	pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses.
Evaluation Guideline:	CDFG Hazard Assessment Criteria - 0.10 ug/L 4-day average and 0.16 ug/L 1-hour average (Siepmann & Finlayson, 2002).
Data Used to Assess Water Quality:	Eighty-seven of 162 samples exceeded the acute guideline (4-day average) (Dileanis et al., 2002), (Dileanis, 2003a), (Dileanis, 2003b), (Gill, 2002), (Holmes et al., 2000), (Nordmark, 1999), (Nordmark, 2000).
Spatial Representation:	Samples were collected at Wadsworth Canal at Franklin Road; in 2000 samples were also collected from Wadsworth Canal at South Butte Road.
Temporal Representation:	Samples were collected in Jan. and Feb (2/day) 1994, 1999, 2000, 2001and 2002; 2 in Dec. 1998; in 2000 and 2001, 3 samples were collected in March, 3/day in 2002.
Data Quality Assessment:	Data from USGS reports are considered of adequate quality per section 6.1.4 of the Policy.

Region 5

Water Segment: Willow Creek (Madera County)

Pollutant: Temperature, water

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A large number of temperature values exceeded the water quality objective.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Eight of 11 annual maximum temperature values for the South Fork of Willow Creek below Forest Service Road (SfW 5.8 & 7.7), exceeded the 21.0°C criteria for steelhead and this exceeds the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses. Temperature objectives for COLD interstate waters, WARM interstate waters, and Enclosed Bays and Estuaries are as specified in the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays of California including any revisions. There are also temperature objectives for the Delta in the State Water Board's May 1991 Water Quality Control Plan for Salinity. At no time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5°F above natural receiving water temperature. Temperature changes due to controllable factors shall be limited for the water bodies specified as described in Table III-4. To the extent of any conflict with the above, the more stringent objective applies. In determining compliance with the water quality objectives for temperature, appropriate averaging periods may be applied provided that beneficial uses will be fully protected.
Evaluation Guideline:	The guideline used was from Sullivan et al (2000). Published Temperature Thresholds-Peer Reviewed Literature which includes reviewed sub-lethal and acute temperature thresholds from a wide range of studies, incorporating information from laboratory-based research, field observations, and risk assessment approaches. This report calculated the Annual Maximum (instantaneous maximum observed during the summer) upper threshold criterion for steelhead trout as 21.0°C. The risk assessment approach used by Sullivan et al (2000) suggests that an upper threshold for the Annual Maximum of 21.0°C for steelhead will reduce average growth 10% from optimum.
Data Used to Assess Water Quality:	Stream temperatures were measured with Omnidata Model 112 temperature recorders at 2 locations on Willow Creek. Data was collected daily at different times of the day. Monitoring occurred from 1986 to 1996. At sampling location NFWC 11, below Bass Lake, two annual maximum temperature values (values for years 1990 and 1995 only) exceeded the 21.0°C criteria for steelhead. For sampling location SFWC 5.8 and 7.7, below Forest Service Road, 8 annual maximum temperature values exceeded the 21.0°C criteria for steelhead (PG&E, 2001).
Spatial Representation:	Stream temperatures were monitored at the following stream segments: NFWC (North Fork Willow Creek) below Bass Lake (SfW 11), and SFWC (South Fork Willow Creek) below Forest Service Road (SfW 5.8 and 7.7).
Temporal Representation:	The data was collected on a daily basis at varying times of the day. Monitoring occurred in all years from 1986 to 1996.
Data Quality Assessment:	Data is supported by a Quality Assurance Project Plan (QAPP) pursuant to the requirements of 40 CFR 31.45 and are acceptable for use in developing the section 303(d) list.

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Central Valley Region (5)

DELIST

Recommendations to remove waters and pollutants from the section 303(d) List

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Region 5

Water Segment: Feather River, Lower (Lake Oroville Dam to Confluence with Sacramento River)

Pollutant: Diazinon

Decision: Delist

Weight of Evidence: Three lines of evidence are available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The CDFG Hazard Assessment Criteria used complies with the requirements of section 6.1.3 of the Policy.
2. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
3. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
4. Thirteen of 218 samples taken over a period from 1994 through 2003 exceeded the CDFG acute criteria and 3 out of 129 exceeded the chronic criteria. These combined exceedances do not exceed the allowable frequency of the Listing Policy. Additionally, a remedial program is in place; a TMDL and implementation plan has been approved for this water segment-pollutant combination.
5. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Line of Evidence Pollutant-Water

Beneficial Use AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MI - Fish Migration, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Non-Numeric Objective: No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. Discharges shall not result in

	pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the executive Officer. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.
Evaluation Guideline:	CDFG Hazard Assessment Criteria 0.16 ug/L 1-hour average (Siepmann & Finlayson, 2002).
Data Used to Assess Water Quality:	There were 30 samples which were considered to be of "questionable" quality and therefore were not used in the assessment of this water body for this pollutant. Of the remaining 218 samples, 13 were in exceedance of the acute criteria and 3 out of 120 samples exceeded the chronic criteria (Dileanis et al., 2002), (Dileanis, 2003a), (Dileanis, 2003b), (Dileanis, 2003c), (Larsen et al., 1998), (Holmes et al., 2000), (Foe & Sheipline, 1993), (Larry Walker Associates, 2002).
Spatial Representation:	In 1994, 2000-01, samples were collected along the Feather River at Yuba City and Nicolaus. In 2001 Star Bend was also sampled. Samples were collected on the Feather River near Gridley and Verona in 2003.
Temporal Representation:	2000 samples were collected in late January/early February. Samples were collected in late January, February and early March 2002. Samples were also collected near Verona in 2003.

Line of Evidence	Pollutant-Water
Beneficial Use	AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MI - Fish Migration, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Information Used to Assess Water Quality:	Immediately after collection, sample bottles were placed on ice and delivered to CDFA Center for Analytical Chemistry in Sacramento. Samples were usually delivered on the same day and no later than 48 hours after collection.
Non-Numeric Objective:	No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the executive Officer. Pesticide concentrations shall not exceed the lowest levels technically and economically achievable. Waters designated for

	use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.
Evaluation Guideline:	CDFG Hazard Assessment Criteria: 0.16 ug/L 1-hour average, 0.10 ug/L 4-day chronic average (Siepmann & Finlayson, 2002).
Data Used to Assess Water Quality:	Fifteen samples were taken; none exceeded the acute CDFG criteria. None of nine samples exceeded the chronic criteria.
Spatial Representation:	Seven sites were monitored in the Sacramento River Basin (Feather River near Nicolaus/Verona). Isokinetic, depth integrated water samples were collected at 6-10 equally spaced points across the channel width with a USGS D-77 sampler using the equal-width-increment method (EWI). Samples were collected from a boat. The PTFE bottles were used to minimize loss of pesticide due to sorption to container walls.
Temporal Representation:	Sampling frequency for each storm event was one sample/day was taken for 7 days. Two storm events were sampled for the 2004 TMDL project in the Sacramento River Basin. The first storm event (Storm 1) was the period 28 January to 6 February 2004. The second storm event (Storm 2) was the period 15-23 February, 2004. For storm 1 sampling was conducted from 28 January to 3 February. For storm 2 the sampling period began on 16 February and extended until 22 February. On 2 and 3 February, a single grab sample was collected from the bank. The Feather River was sampled on 22 February; these samples were collected with a D77 using the EWI method (Calanchini, 2004).

Line of Evidence	Remedial Program in Place
Beneficial Use	AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MI - Fish Migration, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Information Used to Assess Water Quality:	A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Sacramento and Feather River Diazinon TMDL was approved by RWQCB on October 16, 2003 and subsequently approved by USEPA on August 11, 2004.

Region 5

Water Segment: Morrison Creek

Pollutant: Diazinon

Decision: Delist

Weight of Evidence: This pollutant is being considered for removal from the section 303(d) list under section 4.1 of the Listing Policy. Under section 4.1 a single line of evidence is necessary to assess delisting status.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. None of the 28 samples exceeded the CDFG Hazard Assessment Criteria and this does not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
4. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat, WA - Warm Freshwater Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: The narrative pesticide objectives state, in part:
- No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses,
- Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses,
- Pesticide concentrations shall not exceed those allowable by applicable antidegradation policies, and

	- Pesticide concentrations shall not exceed the lowest levels technically and economically achievable. The Basin Plan narrative water quality objective for toxicity states that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
Evaluation Guideline:	CDFG Hazard Assessment Criteria 0.16 ug/L 1-hour average (Siepmann & Finlayson, 2002).
Data Used to Assess Water Quality:	Out of 28 samples, none were in exceedance (Spector et al., 2004).
Spatial Representation:	The two monitoring sites that were monitored in 2003 are Morrison Creek near Sunrise Boulevard and Morrison Creek at Franklin Boulevard. In 2001, Morrison Creek was monitored by Regional Board staff at three sites - at Sunrise Boulevard, at Hedge Road, and at Franklin Boulevard. Samples were collected beneath the water surface as near as possible to the center of the stream when water levels were low or when access was only possible from the bank. Otherwise, three to four grab samples were collected as one integrated grab sample.
Temporal Representation:	Storm events were sampled during the orchard dormant spray season months of January and February 2001 and 2002, and January through April 2003, to determine pesticide concentrations in rain and creeks during and after the orchard dormant spray season.
Data Quality Assessment:	During each monitoring season, additional samples were collected for quality assurance/quality control (QA/QC) purposes. Four types of quality assurance samples were collected to confirm the integrity of analytical results reported in this three-year monitoring study. The QA/QC samples included sample duplicates, equipment blanks, matrix spikes, and matrix spike duplicates. The procedures used for collecting the QA/QC samples are based on the San Joaquin River TMDL Quality Assurance Project Plan. During this 2001-2003 study, approximately 15-25 percent of the samples collected were either equipment blanks, sample duplicates, or matrix spikes and matrix spike duplicates.

Region 5

Water Segment: Sacramento River (Knights Landing to the Delta)

Pollutant: Diazinon

Decision: Delist

Weight of Evidence: Three lines of evidence are available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Out of 1,109 samples, 12 samples exceeded the acute criteria and additional 14 samples exceeded the chronic criteria. This does not exceed the allowable frequency of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MI - Fish Migration, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Pesticide concentrations shall not exceed those allowable by applicable

Water Quality Criterion:	antidegradation policies (see State Water Resources Control Board Resolution No. 68-16 and 40 CFR section 131.12). No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses.
Evaluation Guideline:	CDFG Hazard Assessment Criteria 0.16 ug/L 1-hour average (acute), 0.10 ug/L 4-day (chronic) average.
Data Used to Assess Water Quality:	Thirty-four samples were taken; 1 sample exceeded both the acute and chronic CDFG criteria.
Spatial Representation:	Monitoring sites included the Sacramento River at Tower Bridge and Sacramento River at Veterans Bridge. Sampling frequency for each storm event was one sample/day was taken for 7days. At the Tower Bridge site two additional days of sampling were performed during the first storm event because ELISA (Enzyme-Linked Immunosorbent Assay) tests indicated a continuing presence of diazinon in the water. These two samples (5 and 6 February) were collected using a 3L PTFE bottle lowered by line from three equally spaced points across the channel width. On 2 and 3 February, for sampling at Veterans Bridge a single grab sample was collected from the bank at each site. Isokinetic, depth integrated water samples were collected at 6-10 equally spaced points across the channel width with a USGS D-77 sampler using the equal-width-increment method (EWI). Samples were collected from a boat at three sites (Sacramento River at Veterans Bridge, Feather River near Nicolaus/Verona and Sacramento Slough) and from a bridge at one site (Sacramento River at Tower Bridge).
Temporal Representation:	Two storm events were sampled for the 2004 TMDL project in the Sacramento River Basin. The first storm event (Storm 1) was the period 28 January to 6 February 2004. The second storm event (Storm 2) was the period 15-23 February, 2004. For storm 1 sampling was conducted from 28 January to 3 February at most sites, and as late as 6 February at the Tower Bridge at Sacramento site. For storm 2 the sampling period began on 16 February and extended until 22 February at most sites, and through 23 February at the Sacramento River at Veterans Bridge and Sacramento River at Tower Bridge sites.
Data Quality Assessment:	Sample quality control was measured through collection of sequential duplicates (n=8), blanks (n=5) and matrix spikes (n=5). The relative percent difference (RPD) between environmental and duplicate sample concentrations of chlorpyrifos ranged from 0-104%. The RPDs between environmental and duplicate sample concentrations of diazinon ranged from 0-40%.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MI - Fish Migration, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact

	Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses.
Evaluation Guideline:	CDFG Hazard Assessment Criteria 0.16 ug/L 1-hour average (acute), 0.10 ug/L 4-day average (chronic).
Data Used to Assess Water Quality:	Out of 1,089 samples, 15 were considered to be of "questionable" quality and therefore were not used as part of this assessment. Of the remaining 1,075 samples, there were 11 that exceeded the acute criteria and 14 additional samples exceeded the chronic criteria (Dileanis et al., 2002), (Dileanis, 2003a), (Dileanis 2003b), (Dileanis 2003c), (Domagalski, 2000), (Gill, 2002), (LWA, 1996), (LWA, 2002a), (LWA, 2002b), (MacCoy et al., 1995), (Nordmark et al., 1998a), (Nordmark, 1998), (Nordmark, 1999), (Nordmark, 2000).
Spatial Representation:	Samples were collected at Alamar, Bryte, Freeport, Sacramento, River Mile 44, and Verona.
Temporal Representation:	Samples were taken from 1995 through 2001; samples at Sacramento began in 1992.

Line of Evidence	Remedial Program in Place
Beneficial Use	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MI - Fish Migration, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Information Used to Assess Water Quality:	A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Sacramento and Feather River Diazinon TMDL was approved by RWQCB on October 16, 2003 and subsequently approved by USEPA on August 11, 2004.

Region 5

Water Segment: Sutter Bypass

Pollutant: Diazinon

Decision: Delist

Weight of Evidence: This pollutant is being considered for removal from the section 303(d) list under section 4.1 of the Listing Policy. Under section 4.1 a single line of evidence is necessary to assess delisting status.

One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. None of 88 samples exceeded the CDFG criteria and this does not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
4. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the

	accuracy of analytical methods approved by the Environmental Protection Agency or the executive Officer. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15. Pesticide concentrations shall not exceed those allowable by applicable antidegradation policies (see State Water Resources Control Board Resolution No. 68-16 and 40 C.F.R. Section 131.12). Pesticide concentrations shall not exceed the lowest levels technically and economically achievable. A trend in declining water quality has not been established per the Policy in section 3.1.10.
Evaluation Guideline:	CDFG Hazard Assessment Criteria -0.16 ug/L (acute) (Siepmann & Finlayson, 2002).
Data Used to Assess Water Quality:	None of the 88 samples exceeded the criteria (Gill, 2002), (Nordmark et al., 1998a), (Nordmark, 1998), (Nordmark, 1999), (Nordmark, 2000).
Spatial Representation:	Samples collected at Karnak and Kirkville Road.
Temporal Representation:	Samples taken from 1996 to 2001.

Central Valley Region (5)

Area Change

Recommendations to change the area affected by pollutants on the section 303(d) List

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Region 5

Water Segment:	Delta Waterways (Stockton Ship Channel)
Pollutant:	
Decision:	Accept Area Change
Weight of Evidence:	The data and information in the administrative record supports this change in estimated size affected.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.
Lines of Evidence:	

Line of Evidence	-N/A
Beneficial Use	MU - Municipal & Domestic
Information Used to Assess Water Quality:	Map changes are recommended to more accurately identify the water quality limited segment.

Region 5

Water Segment: Delta Waterways (eastern portion)

Pollutant:

Decision: Accept Area Change

Weight of Evidence: The data and information in the administrative record supports this change in estimated size affected.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.

Lines of Evidence:

Line of Evidence	-N/A
Beneficial Use	MU - Municipal & Domestic
Information Used to Assess Water Quality:	Map changes are recommended to more accurately identify the water quality limited segment.

Region 5

Water Segment:	Delta Waterways (western portion)
Pollutant:	
Decision:	Accept Area Change
Weight of Evidence:	The data and information in the administrative record supports this change in estimated size affected.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.
Lines of Evidence:	

Line of Evidence	-N/A
Beneficial Use	MU - Municipal & Domestic
Information Used to Assess Water Quality:	Map changes are recommended to more accurately identify the water quality limited segment.

Region 5

Water Segment:	Marsh Creek (Dunn Creek to Marsh Creek Reservoir)
Pollutant:	Mercury
Decision:	Accept Area Change
Weight of Evidence:	The data and information in the administrative record supports this change in estimated size affected.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.
Lines of Evidence:	

Line of Evidence	-N/A
Beneficial Use	CM - Commercial and Sport Fishing (CA)
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 water body has been remapped and the revised extent impacted is 10 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. 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.

Region 5

Water Segment:	Marsh Creek (Dunn Creek to Marsh Creek Reservoir)
Pollutant:	Metals
Decision:	Accept Area Change
Weight of Evidence:	The data and information in the administrative record supports this change in estimated size affected.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.
Lines of Evidence:	

Line of Evidence	-N/A
Beneficial Use	CM - Commercial and Sport Fishing (CA)
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 water body has been remapped and the revised extent impacted is 10 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. 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.

Region 5

Water Segment:	Marsh Creek (Marsh Creek Reservoir to San Joaquin River)
Pollutant:	Mercury
Decision:	Accept Area Change
Weight of Evidence:	The data and information in the administrative record supports this change in estimated size affected.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.
Lines of Evidence:	

Line of Evidence	-N/A
Beneficial Use	CM - Commercial and Sport Fishing (CA)
Data Used to Assess Water Quality:	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 Reservoir to San Joaquin River.

Region 5

Water Segment:	Salt Slough (upstream from confluence with San Joaquin River)
Pollutant:	Boron
Decision:	Accept Area Change
Weight of Evidence:	The data and information in the administrative record supports this change in estimated size affected.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.
Lines of Evidence:	

Line of Evidence	-N/A
Beneficial Use	MU - Municipal & Domestic
Information 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 water body 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.

Region 5

Water Segment:	Salt Slough (upstream from confluence with San Joaquin River)
Pollutant:	Electrical Conductivity
Decision:	Accept Area Change
Weight of Evidence:	The data and information in the administrative record supports this change in estimated size affected.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.
Lines of Evidence:	

Line of Evidence	-N/A
Beneficial Use	AG - Agricultural Supply
Information 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 water body 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.

Region 5

Water Segment:	Salt Slough (upstream from confluence with San Joaquin River)
Pollutant:	Unknown Toxicity
Decision:	Accept Area Change
Weight of Evidence:	The data and information in the administrative record supports this change in estimated size affected.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.
Lines of Evidence:	

Line of Evidence	-N/A
Beneficial Use	WA - Warm Freshwater Habitat
Information 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 water body 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.

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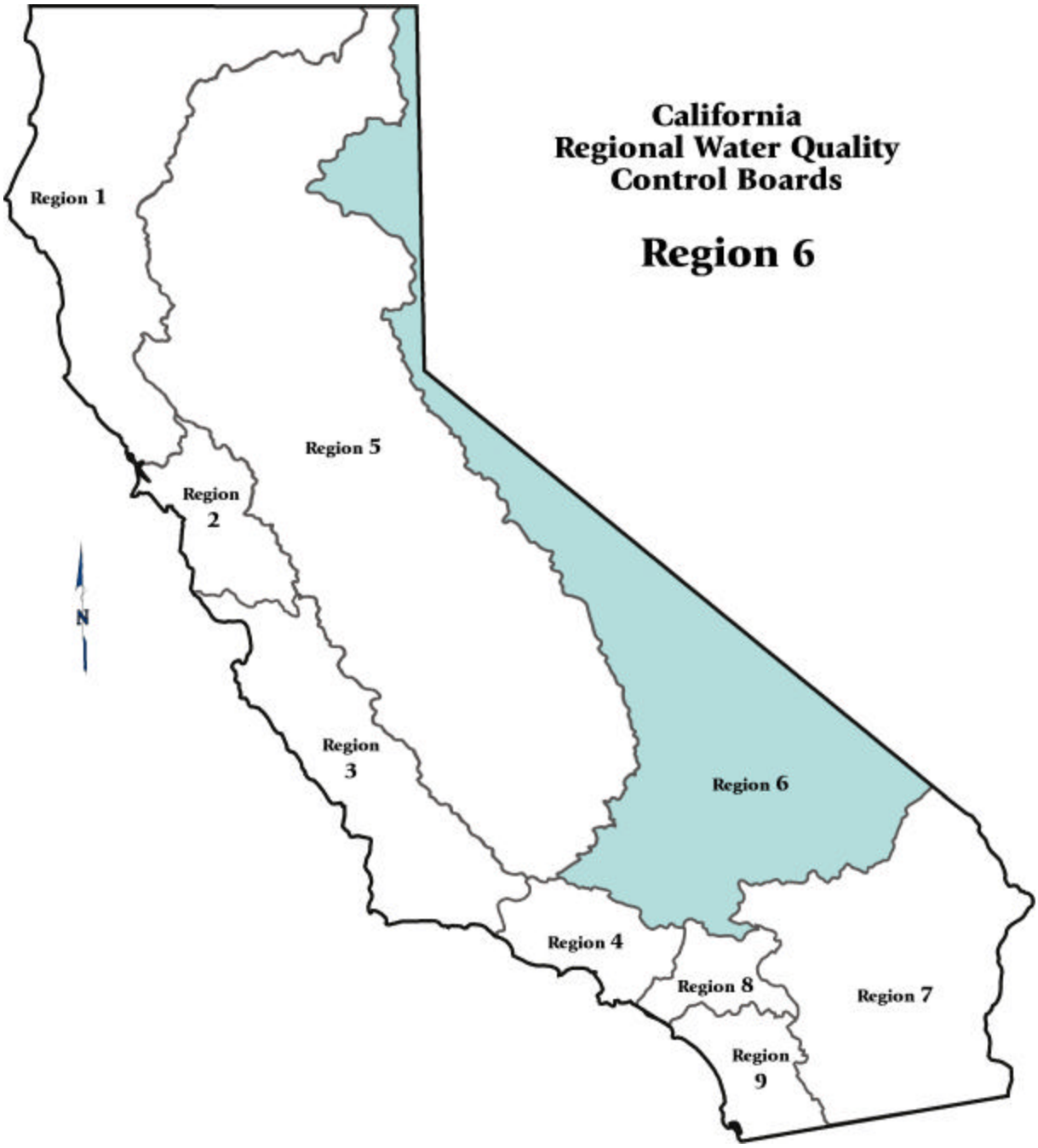
Fact Sheets Supporting
Revision of the Section 303(d) List



September 2005

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Lahontan Region (6)

Recommendations to place waters and pollutants on the section 303(d) List

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Region 6

Water Segment: Crowley Lake

Pollutant: Ammonia

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Seven of 38 samples exceeded the ammonia water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: Ammonia concentrations shall not exceed the values listed for the corresponding conditions in Tables 3-1 to 3-4 of the Basin Plan. The ammonia objective is a

	function of temperature and pH.
Data Used to Assess Water Quality:	Thirty-eight total ammonia samples from Crowley Lake and its outlet are available (Jellison et al., 2003). None of the samples exceeded the one-hour criteria. Every sample collected during the summer months exceed the 4-day criteria, for total of seven exceedances. These data characterize the summer season as the critical condition.
Spatial Representation:	Several stations.
Temporal Representation:	Data were collected in 2000 and 2001.
Environmental Conditions:	The occurrence of elevated ammonia and depressed dissolved oxygen concentrations are associated with the natural eutrophic condition (elevated nutrient levels) of Crowley Lake.

Region 6

Water Segment: Crowley Lake

Pollutant: Oxygen, Dissolved

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Thirty-six of 112 samples do not meet the water quality objective and this exceeds the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat

Matrix: Water

Water Quality Objective/ The Basin Plan water quality objective for dissolved oxygen in water bodies designated as COLD and SPWN is an instantaneous concentration minimum of

Water Quality Criterion:	5 mg/L.
Data Used to Assess Water Quality:	Jellison and Dawson (2003) showed that during the summer months at depths below approximately 10 meters, Crowley Lake does not meet the objective. Of 112 samples collected from various in-lake locations, 36 depth-averaged dissolved oxygen measurements were less than 5 mg/L (Jellison et al., 2003).
Spatial Representation:	Several locations.
Temporal Representation:	Data collected in 2000 and 2001.
Environmental Conditions:	The occurrence of elevated ammonia and depressed dissolved oxygen concentrations are associated with the natural eutrophic condition (naturally high nutrient concentrations) of Crowley Lake.

Region 6

Water Segment:	Heavenly Valley Creek (source to USFS boundary)
Pollutant:	Sedimentation/Siltation
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.
Lines of Evidence:	

Line of Evidence	Remedial Program in Place
Beneficial Use	CO - Cold Freshwater Habitat
Information Used to Assess Water Quality:	TMDL completed in 2002 (SWRCB, 2003).

Region 6

Water Segment:	Indian Creek Reservoir
Pollutant:	Phosphorus
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.
Lines of Evidence:	

Line of Evidence	Remedial Program in Place
Beneficial Use	WI - Wildlife Habitat
Information Used to Assess Water Quality:	A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Indian Creek Reservoir Phosphorus TMDL was approved by RWQCB on July 24, 2002 and subsequently approved by USEPA on July 1, 2003.

Region 6

Water Segment:	Mono Lake
Pollutant:	Salinity/TDS/Chlorides
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. A remedial program other than a TMDL has been developed, approved, and is being implemented. This program is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a program is in place to address this water quality problem.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	SA - Saline Water Habitat, WA - Warm Freshwater Habitat
Information Used to Assess Water Quality:	SWRCB Water Rights Decision 1631 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 (SWRCB, 2003).

Region 6

Water Segment: Searles Lake

Pollutant: Petroleum Products

Decision: List

Weight of Evidence: This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. A remedial program other than a TMDL has been developed, approved, and is being implemented. This program is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle.

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

SWRCB Staff Recommendation: After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a program is in place to address this water quality problem.

Lines of Evidence:

Line of Evidence Pollutant-Water

Beneficial Use R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SA - Saline Water Habitat, WI - Wildlife Habitat

Information Used to Assess Water Quality: Thirteen site inspections by Regional Board staff between February and June, 2000. Visible oil observed. Sample collected showed 156,000 ppm TPH.

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 ongoing threat to wildlife. DFG has documented hundreds of bird deaths, primarily from salt toxicosis and salt encrustation. 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 (SWRCB, 2003).
Spatial Representation:	Visible oil observed at numerous locations.
Temporal Representation:	Visible oil observed on more than 13 occasions during a 5-month period.

Line of Evidence	Remedial Program in Place
Beneficial Use	R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SA - Saline Water Habitat, WI - Wildlife Habitat
Information Used to Assess Water Quality:	Source is IMCC Chemical mineral extraction operation. Waste Discharge Requirements, Cleanup and Abatement Orders. 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 (SWRCB, 2003).

Region 6

Water Segment: Searles Lake

Pollutant: Salinity/TDS/Chlorides

Decision: List

Weight of Evidence: This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

Three lines of evidence are available in the administrative record to assess this pollutant. A remedial program other than a TMDL has been developed, approved, and is being implemented. This program is expected to result in attainment of the standards. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle.

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

SWRCB Staff Recommendation: After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a program is in place to address this water quality problem.

Lines of Evidence:

Line of Evidence	Pollutant-Water
Beneficial Use	R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SA - Saline Water Habitat, WI - Wildlife Habitat
Information Used to Assess Water Quality:	13 site inspections by Regional Board staff between February and June, 2000. Visible oil observed. Sample collected showed 156,000 ppm TPH.
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 (SWRCB, 2003).

	DFG believes that wastewater ponds created at Searles Lake are an ongoing 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.

Line of Evidence	Pollutant-Water
Beneficial Use	R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SA - Saline Water Habitat, WI - Wildlife Habitat
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. 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 (SWRCB, 2003).

Line of Evidence	Remedial Program in Place
Beneficial Use	R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SA - Saline Water Habitat, WI - Wildlife Habitat
Information Used to Assess Water Quality:	Waste Discharge Requirements Cleanup and Abatement Orders issued. 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 (SWRCB, 2003).

Region 6

Water Segment: Susan River

Pollutant: Mercury

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Lahontan RWQCB Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life.

Evaluation Guideline:	0.3 ug/g (OEHHA Screening Value) (Brodberg & Pollock, 1999).
Data Used to Assess Water Quality:	Two out of 4 samples exceeded. Four filet composite samples, two each, of rainbow trout and brook trout were collected. Rainbow trout were collected in 1998-99. Brook trout were collected in 1999 and 2001. The 1999 rainbow and brook trout samples exceeded the guideline. Both sampled stations exceeded the guideline in 1999 (TSMP, 2002).
Spatial Representation:	Two station were sampled: just upstream of HWY 36 bridge on the Susan River (Susanville) and downstream of Piute Creek mouth at Alexander Street bridge (Piute Creek).
Temporal Representation:	Samples were collected annually in 1998-99 and 2001.
Data Quality Assessment:	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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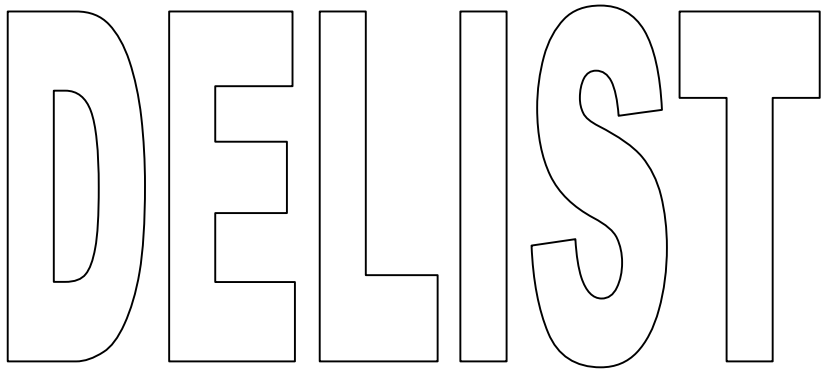
Lahontan Region (6)

Delist Recommendations



Recommendations to remove waters and pollutants from the section 303(d) List

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Region 6

Water Segment:	Aurora Canyon Creek
Pollutant:	Habitat alterations
Decision:	Delist
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on staff findings that the original listing basis is faulty due to the fact that the listing was not for a pollutant.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.
Lines of Evidence:	

Line of Evidence	Testimonial Evidence
Beneficial Use	CO - Cold Freshwater Habitat
Data Used to Assess Water Quality:	The listing is not for a pollutant, and no pollutants have been identified related to this listing. Regional Board staff is not aware of evidence or data to indicate current water quality standards exceedances or beneficial use impacts related to this listing.

Region 6

Water Segment: Bear Creek (Placer County)

Pollutant: Sedimentation/Siltation

Decision: Delist

Weight of Evidence: This pollutant is being considered for removal from the section 303(d) list under sections 4.2 and 4.9 of the Listing Policy. Three lines of evidence are available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. The mean of monthly means for turbidity did not exceed the Basin Plan's Water Quality Objective in either location and none of the individual monthly means were in exceedance. Of the 122 individual measurements, there was one sample that exceeded 3 NTU and this sample was taken in the year 1986. Additionally, two bioassessment studies show that conditions are healthy and there is no evidence of acute impairment from ski resort operations (the basis for the original listing).
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: SP - Fish Spawning, WI - Wildlife Habitat

Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Lahontan RWQCB Basin Plan: The turbidity shall not be raised above 3 Nephelometric Turbidity Units (NTU) mean of monthly mean.
Data Used to Assess Water Quality:	There were a total of 122 individual measurements of turbidity and 39 monthly means taken from two locations in the Alpine Meadows Ski Area. The mean of monthly means did not exceed the Basin Plan's Water Quality Objective in either location and none of the individual monthly means were in exceedance. Of the 122 individual measurements, there was one sample that exceeded 3 NTU and this sample was taken in the year 1986 (Chan, 2001).
Spatial Representation:	Samples were taken at Alpine Meadows Ski Area near the Lodge and the Ginzton Chalet.
Temporal Representation:	Samples were taken from July of 1985 through May of 2004.
Data Quality Assessment:	Waste Discharge Requirement (WDR) Monitoring for Alpine Ski Resort.

Line of Evidence	Narrative Description Data
Beneficial Use	SP - Fish Spawning, WI - Wildlife Habitat
Non-Numeric Objective:	Lahontan RWQCB Basin Plan: The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect the water for beneficial uses.
Data Used to Assess Water Quality:	A private aquatic ecologist from Tahoe City was contracted by Alpine Meadows Ski Corporation to sample the upper, middle and lower reaches of Bear Creek. Field sampling was conducted in July 2001 following the Department of Fish and Game's California Stream Bioassessment Procedure (CSBP). The sampling results showed that a robust benthic community exists in Bear Creek, and no evidence of acute impairment from ski resort operations was detectable (Chan, 2001).
Spatial Representation:	Alpine Meadows Ski Area: Upstream of main lodge and parking area in the southern fork of the Bear Creek headwaters adjacent to the Meadow chairlift; downstream of the parking area below the Ginzton Bridge just above the subdivision: and immediately upstream of the Truckee River confluence.
Temporal Representation:	July 2001.

Line of Evidence	Narrative Description Data
Beneficial Use	SP - Fish Spawning, WI - Wildlife Habitat
Non-Numeric Objective:	Lahontan RWQCB Basin Plan: The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect the water for beneficial uses.
Data Used to Assess Water Quality:	Dr. David Herbst with the Sierra Aquatic Research Laboratory (SNARL) performed an assessment in both the 2000 and 2001 seasons, in the lower potion of Bear Creek above the confluence with the Truckee River, and downstream of the ski area parking lot. The biologic data were assessed using an Index of Biologic Integrity (IBI) developed specifically for streams in the Truckee River watershed. The IBI analysis results in a numeric value called a biologic condition score, which can be used to compare streams of similar types to a desired "reference" condition. For the Truckee River watershed, the range of biologic condition scores exhibited by reference streams is 25 to 35 (a higher score indicates better biologic integrity). Bear Creek's scores were 33 (2000) and 29 (2001), indicating that the biologic health in the creek below the ski area (where any impacts would most likely be manifested) is well within the desired conditions exhibited by regional reference streams (Herbst, 2002b).
Spatial Representation:	Bear Creek below Alpine Meadow's ski area.
Temporal Representation:	August 2000 and July of 2001.

Region 6

Water Segment: Cinder Cone Springs

Pollutant: Nitrate as Nitrate (NO3)

Decision: Delist

Weight of Evidence: Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list.

This conclusion is based on the staff findings that:
1. Effluent disposal to the Cinder cone ended when the Tahoe-Truckee Sanitation Agency's (TTSA) regional wastewater treatment plant (WWTP) became operational in 1978.
2. The reliability of the quality of the data collected in 1969 (which was partially used as a basis for the original listing) is unknown.
3. In 1977, 3 out of 11 samples exceeded the current MCL for Nitrate.
4. Over 25 years passed since the practice which caused the impairment ceased and before any new data was collected in this area to assess water quality. The 1969 and 1977 data are no longer reflective of current conditions in Cinder Cone Springs and it is presumed that standards are now met since Regional Board staff are not aware of conditions or information indicating impairment to these beneficial uses related to the constituents for which the springs are listed.
5. According to the 2003 monitoring data (which is the only data we have relevant to the current conditions at Cinder Cone Springs), none of the 6 samples exceed the MCL for Nitrate.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	MCL for Nitrate as Nitrate, 45 mg/L.
Data Used to Assess Water Quality:	1969 Baseline data for Cinder Cone Springs (data collected prior to sewage effluent being discharged in to the Cinder Cone). 4 out of 25 samples exceed the MCL for Nitrate as Nitrate (LRWQCB, 2004b).
Spatial Representation:	"Springs draining the Cinder Cone disposal site".
Temporal Representation:	Data collected in 1969.
Environmental Conditions:	The Cinder cone was used by the North Tahoe and Tahoe City Public Utility Districts (PUDs) to dispose of sewage effluent from the Lake Tahoe basin from April 1970 to February 1978.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	MCL for Nitrate as Nitrate, 45 mg/L.
Data Used to Assess Water Quality:	None of the 6 samples exceed the MCL for Nitrate as Nitrate (LRWQCB, 2004b).
Spatial Representation:	R4 Spring at Bunker Drive, Tahoe City Lat. 39.175890 - Lon. 120.147754 R5 Spring Box near Twin Crags Access Road Lat. 39.164355 -1 Lon. 20.161009 R13 Spring near water tank on Western States Trail Bridge Lat. 39.197210 -Lon. 120.194524
Temporal Representation:	Samples collected on July 3, 2003 and October 10, 2003.
Environmental Conditions:	The Cinder cone was used by the North Tahoe and Tahoe City Public Utility Districts (PUDs) to dispose of sewage effluent from the Lake Tahoe basin from April 1970 to February 1978.
Data Quality Assessment:	Sampling protocols and quality assurance/control procedures followed the USGS National Field Manual for the Collection of Water Quality Data.

Line of Evidence	Pollutant-Water

Beneficial Use	MU - Municipal & Domestic
Information Used to Assess Water Quality:	1. Effluent disposal to the Cinder cone ended when the Tahoe-Truckee Sanitation Agency's (TTSA) regional wastewater treatment plant (WWTP) became operational in 1978. 2. The reliability of the quality of the data collected in 1969 (which was partially used as a basis for the original listing) is unknown. 3. In 1977, 3 out of 11 samples exceeded the current MCL for Nitrate. 4. Over 25 years passed since the practice which caused the impairment ceased and before any new data was collected in this area to assess water quality. The 1969 and 1977 data are no longer reflective of current conditions in Cinder Cone Springs and it is presumed that standards are now met since Regional Board staff are not aware of conditions or information indicating impairment to these beneficial uses related to the constituents for which the springs are listed. 5. According to the 2003 monitoring data (which is the only data we have relevant to the current conditions at Cinder Cone Springs), none of the 6 samples exceed the MCL for Nitrate (LRWQCB, 2004b).

Region 6

Water Segment: Cinder Cone Springs

Pollutant: Salinity/TDS/Chlorides

Decision: Delist

Weight of Evidence: Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list.

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. None of 34 samples exceeded the MCL for TDS, and there is no criteria for salinity and chlorides in this water body.
4. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: Recommended MCL for TDS is 500 mg/L. No specific criteria available for Chloride and salinity for this water body.

Data Used to Assess Water Quality: 1969 Baseline data for Cinder Cone Springs (data collected prior to sewage effluent being discharged in to the Cinder Cone). None of the 28 samples exceed the recommended MCL for TDS (LRWQCB, 2004b).

Spatial Representation:	"Springs draining the Cinder Cone disposal site".
Temporal Representation:	Samples collected in 1969.
Environmental Conditions:	The Cinder cone was used by the North Tahoe and Tahoe City Public Utility Districts (PUDs) to dispose of sewage effluent from the Lake Tahoe basin from April 1970 to February 1978.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Recommended MCL for TDS is 500 mg/L. No criteria available for Chloride and salinity for this water body.
Evaluation Guideline:	None of the 6 samples exceed the recommended MCL for TDS.
Data Used to Assess Water Quality:	Staff report which summarizes and compares the available data on historical and current water quality for the springs and recommends that Cinder Cone Springs be removed from the 303(d) list of impaired waters. None of the 6 samples taken in 2003 exceed the recommended MCL for TDS (LRWQCB, 2004b).
Spatial Representation:	R4 Spring at Bunker Drive, Tahoe City: Lat. 39.175890 - Lon. 120.147754 R5 Spring Box near Twin Crags Access Road: Lat. 39.164355 - Lon. 120.161009 R13 Spring near water tank on Western States Trail Bridge:Lat. 39.197210 - Lon.120.194524
Temporal Representation:	Samples taken on July 3, 2003 and October 10, 2003.
Environmental Conditions:	The Cinder cone was used by the North Tahoe and Tahoe City Public Utility Districts (PUDs) to dispose of sewage effluent from the Lake Tahoe basin from April 1970 to February 1978.
Data Quality Assessment:	Sampling protocols and quality assurance/control procedures followed the USGS National Field Manual for the Collection of Water Quality Data.

Region 6

Water Segment:	Clark Canyon Creek
Pollutant:	Habitat alterations
Decision:	Delist
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on staff findings that the original listing basis is faulty due to the fact that the listing was not for a pollutant.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.
Lines of Evidence:	

Line of Evidence	Testimonial Evidence
Beneficial Use	CO - Cold Freshwater Habitat
Information Used to Assess Water Quality:	The listing is not for a pollutant, and no pollutants have been identified related to this listing. Regional Board staff is not aware of evidence or data to indicate current water quality standards exceedances or beneficial use impacts related to this listing.

Region 6

Water Segment:	Cottonwood Creek (below LADWP diversion)
Pollutant:	Flow alterations
Decision:	Delist
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that the original listing basis is faulty due to lack of data and the fact that the listing was not for a pollutant.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.
Lines of Evidence:	

Line of Evidence	Testimonial Evidence
Beneficial Use	AG - Agricultural Supply, MU - Municipal & Domestic
Information Used to Assess Water Quality:	The original basis for the listing of this water body was best professional judgment based on staff concerns regarding water diversions. Therefore, this listing basis was faulty due to lack of data. Listing is not for a pollutant, and no pollutants have been identified related to this listing. Regional Board staff is not aware of evidence to indicate current water quality standards exceedances or beneficial use impacts related to this listing.

Region 6

Water Segment: Crowley Lake

Pollutant: Nitrogen

Decision: Delist

Weight of Evidence: This pollutant is being considered for removal from the section 303(d) list under section 4.11 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant. Algae blooms were observed in the lake and it was assumed that the concentrations of this nutrient were contributing to the algae blooms. The nutrient levels are not a result of the treatment or disposal of wastes.

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

This conclusion is based on the following:
No numeric water quality objectives (WQOs) for total nitrogen (N) or phosphorus (P) are established for Crowley Lake. Nuisance conditions, as defined in the Basin Plan, include the requirement that the impairment "occurs during or as a result of the treatment or disposal of wastes." (LRWQCB, 1995, P. 3-15). Because the nitrogen and phosphorus loading to, and associated algal blooms in, Crowley Lake are the result of natural conditions, the algal blooms do not cause nuisance conditions.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Line of Evidence Narrative Description Data

Beneficial Use MU - Municipal & Domestic, WA - Warm Freshwater Habitat

Information Used to Assess Water Quality: At the time Crowley Lake was placed on the 303(d) list, it was considered impaired by nutrient inputs based on observations of seasonal algae blooms. Land uses such as grazing, fish hatcheries, and residential

	development were thought to have the potential to be contributing excess nutrients that caused the perceived impairment. However, current studies and evaluation revealed that the lake is naturally eutrophic and that controllable, man-induced nutrient inputs are not significantly affecting the trophic state of the lake and are not impairing beneficial uses. Seasonal occurrences of algae blooms will likely persist in the lake, but they are natural conditions of the lake due to its environmental setting. The nutrient levels are not a result of the treatment or disposal of wastes.
Non-Numeric Objective:	From the Basin Plan: Biostimulatory Substances: Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect the water for beneficial uses. Basin Plan: Nuisance is defined as "Anything [that] ... occurs during or as a result of the treatment or disposal of waste." (Basin Plan page 3-15)
Data Used to Assess Water Quality:	Nutrient concentrations, sources and limnological information are based on data collected under contract between the Sierra Nevada Aquatic Research Laboratory (SNARL) and the Lahontan RWQCB (Contract numbers 9-175-265-0 and 0-196-160-0). SNARL provided the results of their work in two reports (Jellison and Dawson 2003, Jellison et al., 2003). The sampling program consisted of lake and tributary sampling programs performed in 2000 and 2001.
Spatial Representation:	Crowley Lake and its seven major tributaries.
Temporal Representation:	Historic (1950-1975) and current (1997; 2000-2001).

Region 6

Water Segment: Crowley Lake

Pollutant: Phosphorus

Decision: Delist

Weight of Evidence: This pollutant is being considered for removal from the section 303(d) list under section 4.11 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant. Algae blooms were observed in the lake and it was assumed that the concentrations of this nutrient were contributing to the algae blooms. The nutrient levels are not a result of the treatment or disposal of wastes.

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

This conclusion is based on the following:
No numeric water quality objectives (WQOs) for total nitrogen (N) or phosphorus (P) are established for Crowley Lake. Nuisance conditions, as defined in the Basin Plan, include the requirement that the impairment "occurs during or as a result of the treatment or disposal of wastes." (LRWQCB, 1995, p. 3-15). Because the nitrogen and phosphorus loading to, and associated algal blooms in, Crowley Lake are the result of natural conditions, the algal blooms do not cause nuisance conditions.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Line of Evidence Narrative Description Data

Beneficial Use MU - Municipal & Domestic, WA - Warm Freshwater Habitat

Information Used to Assess Water Quality: At the time Crowley Lake was placed on the 303(d) list, it was considered impaired by nutrient inputs based on observations of seasonal algae blooms. Land uses such as grazing, fish hatcheries, and residential

	development were thought to have the potential to be contributing excess nutrients that caused the perceived impairment. However, current studies and evaluation revealed that the lake is naturally eutrophic and that controllable, man-induced nutrient inputs are not significantly affecting the trophic state of the lake and are not impairing beneficial uses. Seasonal occurrences of algae blooms will likely persist in the lake, but they are natural conditions of the lake due to its environmental setting. The nutrient levels are not a result of the treatment or disposal of wastes.
Non-Numeric Objective:	From the Basin Plan: Biostimulatory Substances: Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect the water for beneficial uses. Basin Plan: Nuisance is defined as "Anything [that] ... occurs during or as a result of the treatment or disposal of wastes."
Data Used to Assess Water Quality:	Nutrient concentrations, sources and limnological information are based on data collected under contract between the Sierra Nevada Aquatic Research Laboratory (SNARL) and the Lahontan RWQCB (Contract numbers 9-175-265-0 and 0-196-160-0). SNARL provided the results of their work in two reports (Jellison and Dawson, 2003; Jellison et al., 2003). The sampling program consisted of lake and tributary sampling programs performed in 2000 and 2001.
Spatial Representation:	Crowley Lake and its seven major tributaries.
Temporal Representation:	Historic (1950-1975) and current (1997; 2000-2001).

Region 6

Water Segment:	Goodale Creek
Pollutant:	Sedimentation/Siltation
Decision:	Delist
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that the original listing basis is faulty due to lack of data.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.
Lines of Evidence:	

Line of Evidence	Testimonial Evidence
Beneficial Use	AG - Agricultural Supply, MU - Municipal & Domestic
Information Used to Assess Water Quality:	The original basis for the listing of this water body was a newspaper article on a single sedimentation event. No data or QA/QC information was available. Therefore, the listing basis is faulty due to a lack of data. Regional Board staff is not aware of any evidence to indicate current water quality standards exceedances or beneficial use impacts related to the listing for this pollutant.

Region 6

Water Segment:	Green Creek
Pollutant:	Habitat alterations
Decision:	Delist
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on staff findings that the original listing basis is faulty due to the fact that the listing was not for a pollutant.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.
Lines of Evidence:	

Line of Evidence	Testimonial Evidence
Beneficial Use	AG - Agricultural Supply, MU - Municipal & Domestic
Information Used to Assess Water Quality:	The original basis for the listing of this water body is unknown. According the 2002 303(d) list, the creek is listed "due to impacts of hydromodification by Dynamo Pond facility", so it is unclear if the listing should have been for flow alterations instead of habitat alterations. The listing is not for a pollutant, and no pollutants have been identified related to this listing. Regional Board staff is not aware of evidence or data to indicate current water quality standards exceedances or beneficial use impacts related to this listing.

Region 6

Water Segment:	Green Valley Lake Creek
Pollutant:	Priority Organics
Decision:	Delist
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that the original listing basis is faulty due to lack of data.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.
Lines of Evidence:	

Line of Evidence	Testimonial Evidence
Beneficial Use	MU - Municipal & Domestic, R1 - Water Contact Recreation
Information Used to Assess Water Quality:	The original basis for the listing of this water body was verbal reference to a 1980s sampling. The analytical results were not provided to water quality assessment staff nor were any QA/QC information available. Therefore, the listing basis is faulty due to lack of data. Regional Board staff is not aware of evidence to indicate current water quality standards exceedances or beneficial use impacts related to the listing for this pollutant.

Region 6

Water Segment:	Honey Lake Wildfowl Management Ponds
Pollutant:	Flow alterations
Decision:	Delist
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that the original listing basis is faulty due to lack of data and the fact that the listing was not for a pollutant.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Line of Evidence	Testimonial Evidence
Beneficial Use	AG - Agricultural Supply, MU - Municipal & Domestic
Information Used to Assess Water Quality:	The original basis for the listing of this water body was best professional judgment based on concerns over low water levels during 1980s drought. Therefore, the listing basis was faulty due to lack of data. Additionally, the listing is not for a pollutant. However, this water body is also listed for pollutants that may be related to the flow alteration (metals, salinity/TDS/chlorides, trace elements), and will remain on the list for those pollutants.

Region 6

Water Segment:	Horseshoe Lake (San Bernardino County)
Pollutant:	Sedimentation/Siltation
Decision:	Delist
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that the original listing basis is faulty due to lack of data.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.
Lines of Evidence:	

Line of Evidence	Testimonial Evidence
Beneficial Use	MU - Municipal & Domestic, R1 - Water Contact Recreation
Information Used to Assess Water Quality:	Regional Board staff testimonial: The original basis for the listing of this water body was a newspaper article on a single sedimentation event. No data or QA/QC information was available. Therefore, the listing basis was faulty due to a lack of data. Regional Board staff is not aware of evidence to indicate current water quality standards exceedances or beneficial use impacts related to the listing for this pollutant.

Region 6

Water Segment:	Indian Creek (Alpine County)
Pollutant:	Habitat alterations
Decision:	Delist
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that the original listing basis was faulty due to the fact that the listing was not for a pollutant.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.
Lines of Evidence:	

Line of Evidence	Testimonial Evidence
Beneficial Use	AG - Agricultural Supply, MU - Municipal & Domestic
Information Used to Assess Water Quality:	The habitat listing was based on best professional judgment (Department of Fish and Game staff in the 1980s pointed out riparian damage in West Fork Carson River watershed during field trip). This listing is not for a pollutant. A pollutant (pathogens) has been identified and Indian Creek is listed for that; therefore, the habitat alteration listing should be removed.

Region 6

Water Segment:	Lassen Creek
Pollutant:	Flow alterations
Decision:	Delist
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on staff findings that the original listing basis was faulty due to lack of data and the fact that the listing was not for a pollutant.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.
Lines of Evidence:	

Line of Evidence	Testimonial Evidence
Beneficial Use	AG - Agricultural Supply, MU - Municipal & Domestic
Information Used to Assess Water Quality:	The original basis for the listing of this water body was best professional judgment based on staff concerns regarding agricultural diversions. Therefore, the listing basis was faulty due to lack of data. Listing is not for a pollutant, and no pollutants have been identified related to this listing. Regional Board staff is not aware of evidence to indicate current water quality standards exceedances or beneficial use impacts related to this listing.

Region 6

Water Segment: Lee Vining Creek

Pollutant: Flow alterations

Decision: Delist

Weight of Evidence: Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that the original listing basis is faulty due to the fact that the listing was not for a pollutant. Additionally, minimum flow requirements are being implemented as mandated by Decision 1631 [Decision And Order Amending Water Right Licenses To Establish Fishery Protection Flows In Streams Tributary To Mono Lake And To Protect Public Trust Resources At Mono Lake And In The Mono Lake Basin, SWRCB, September 28, 1994]

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Line of Evidence Testimonial Evidence

Beneficial Use GW - Groundwater Recharge, MU - Municipal & Domestic

Information Used to Assess Water Quality: The original basis for the listing of this water body was data and information contained in the 1993 Mono Basin Water Rights EIR. These data indicated that the long period of little or no flow in Lee Vining Creek, from which Los Angeles Department of Water and Power diverts water, resulted in losses to riparian vegetation and other deterioration of channel conditions.

As a result of Decision 1631 (SWRCB, 1994), minimum flows were mandated in Lee Vining Creek, and considerable restoration work was completed under the supervision of the Restoration Technical Committee at the direction of the El Dorado County Superior Court. Communication with State Board's Division of Water Rights staff (personal communication with Jim Canady, February 3, 2005), indicate that flow

requirements are being implemented as mandated. Additionally, listing is not for a pollutant, and no pollutants have been identified. Regional Board staff is not aware of evidence to indicate beneficial use impacts related to this listing.

Region 6

Water Segment:	Mill Creek (Modoc County)
Pollutant:	Sedimentation/Siltation
Decision:	Delist
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that the original listing basis is faulty due to lack of data.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.
Lines of Evidence:	

Line of Evidence	Testimonial Evidence
Beneficial Use	AG - Agricultural Supply, MU - Municipal & Domestic
Data Used to Assess Water Quality:	The original listing based on qualitative information in a 1980s Modoc National Forest Management Plan EIR. No data or QA/QC information was available and the listing document is no longer available to water quality assessment staff. This listing basis was faulty due to lack of data. Regional Board staff is not aware of evidence to indicate current water quality standards exceedances or beneficial use impacts related to the listing for this pollutant.

Region 6

Water Segment: Pine Creek (Lassen County)

Pollutant: Sedimentation/Siltation

Decision: Delist

Weight of Evidence: Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that the original Sedimentation/Siltation listing basis is faulty due to the fact that the real problem was fish passage issues, which is not a pollutant. Additionally the fish passage issue has been addressed through a CRMP.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Line of Evidence Testimonial Evidence

Beneficial Use AG - Agricultural Supply, MU - Municipal & Domestic

Information Used to Assess Water Quality: Pine Creek was listed due to lack of access to spawning habitat for Eagle Lake Trout (ELT). The "sedimentation/siltation" designation was apparently an artifact of an old 303(d) listing database, which provided a "picklist" of pollutants to select from. Since "lack of fish passage" was not an available option in the picklist, sedimentation/siltation was selected as the descriptor.

A Coordinated Resource Management Planning (CRMP) Group was formed in 1987, and as of 1997, over forty restoration projects to address habitat degradation and fish passage issues were completed (see Macdonald, 2000). In 1999, to address the lack of access to ELT spawning habitat, Caltrans agreed to replace the existing culverts on Highway 44 with ones that provide fish passage. The project also helped restore Pine Creek in its original channel. In 2000, a report summarizing current conditions and proposing delisting of Pine Creek was completed and accepted by USEPA as a TMDL-funded work product. The delisting was

not acted on in 2000 due to a request by the CRMP to leave it on the list to secure funding. Regional Board staff recommends that Pine Creek be delisted as outlined in the 2000 delisting report.

Region 6

Water Segment:	Rough Creek
Pollutant:	Habitat alterations
Decision:	Delist
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on staff findings that the original listing basis is faulty due to the fact that the listing was not for a pollutant.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.
Lines of Evidence:	

Line of Evidence	Testimonial Evidence
Beneficial Use	CO - Cold Freshwater Habitat
Data Used to Assess Water Quality:	The listing is not for a pollutant, and no pollutants have been identified related to this listing. Regional Board staff is not aware of evidence or data to indicate current water quality standards exceedances or beneficial use impacts related to this listing.

Region 6

Water Segment:	Skedaddle Creek
Pollutant:	Coliform Bacteria
Decision:	Delist
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on staff findings that the original listing basis is faulty due to lack of data.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.
Lines of Evidence:	

Line of Evidence	Testimonial Evidence
Beneficial Use	AG - Agricultural Supply, MU - Municipal & Domestic
Information Used to Assess Water Quality:	The original basis for the listing of this water body was a "very old" (circa 1970s) USBLM report of elevated pathogen levels in the creek, and the assumption that levels were still high in late 1980s since grazing was still ongoing. Quantitative data not available. Therefore, the listing basis was faulty due to lack of data. Additionally, USBLM has implemented BMPs for grazing in the watershed since 1970s. Regional Board staff is not aware of evidence to indicate current water quality standards exceedances or beneficial use impacts related to the listing for this pollutant.

Region 6

Water Segment: Tinemaha Reservoir

Pollutant: Copper

Decision: Delist

Weight of Evidence: This pollutant is being considered for removal from the section 303(d) list under section 4.1 of the Listing Policy. Under section 4.1 a single line of evidence is necessary to assess listing status.

Four lines of evidence are available in the administrative record to assess this pollutant. Only one sample exceeded the water quality objective.

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

This conclusion is based on the staff findings that:
1.The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3.One of a total of 54 samples taken during 2002 exceeded the water quality objective and this does not exceed the allowable frequency listed in Table 4.1 of the Listing Policy. The one exceedance may have been due to inadequate sample bottle preparation.
4.Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, MU - Municipal & Domestic

Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	CTR for freshwater chronic (hardness based).
Data Used to Assess Water Quality:	None of the 6 samples exceeded the standard (LRWQCB, 2003a).
Spatial Representation:	At Reservoir Outlet.
Temporal Representation:	Samples collected once per month from 8/21/2002 to 11/7/2002.
Data Quality Assessment:	Clear QA/QC Plan included in the report.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	MCL for drinking water is 1 mg/L for copper.
Data Used to Assess Water Quality:	There were a total of 22 samples, 21 were used to make the assessment. One sample showed high concentration and it was stated in the report that this "may be due to inadequate sample bottle preparation, which was enhanced with an additional acid wash after first sampling event when travel blanks had detectable total copper concentrations. A replicate of this sample also showed unusually high concentrations, therefore this sample is not being considered (although it should be noted that it still does not exceed standards). Of the 21 useable samples, there were 0 exceedances (all but 2 were nondetects) (LRWQCB, 2003a).
Spatial Representation:	Owens River above Tinemaha Reservoir.
Temporal Representation:	Sampling occurred twice monthly from 1/15/02 to 10/16/02.
Data Quality Assessment:	Clear QA/QC Plan included in the report.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, MU - Municipal & Domestic
Matrix:	Water

Water Quality Objective/ Water Quality Criterion:	MCL for drinking water is 1 mg/L for copper.
Data Used to Assess Water Quality:	There were a total of 20 samples. Of the 20 samples, there were 0 exceedances (all but 1 sample were nondetects) (LRWQCB, 2003a).
Spatial Representation:	Tinemaha Reservoir outlet.
Temporal Representation:	Sampling occurred twice monthly from 1/15/02 to 10/16/02.
Data Quality Assessment:	Clear QA/QC Plan included in the report.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	CTR for freshwater chronic (hardness based).
Data Used to Assess Water Quality:	None of the 6 samples exceeded the standard (LRWQCB, 2003a).
Spatial Representation:	Owens River near Reservoir Inlet.
Temporal Representation:	Samples collected once per month from 8/21/2002 to 11/7/2002
Data Quality Assessment:	Clear QA/QC Plan included in the report.

Region 6

Water Segment:	Topaz Lake
Pollutant:	Sedimentation/Siltation
Decision:	Delist
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that the original listing basis is faulty due to a lack of data to support the listing.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.
Lines of Evidence:	

Line of Evidence	Testimonial Evidence
Beneficial Use	AG - Agricultural Supply, MU - Municipal & Domestic
Information Used to Assess Water Quality:	These listings were based on best professional judgment after staff observed turbid water in an irrigation channel that diverts water from the mainstem West Walker River into Topaz Lake. No data or other information was provided. The irrigation channel was mistakenly identified as the West Walker River, resulting in its listing (in error) for sedimentation as well. The West Walker River remained on the list following the extreme flood event of 1997, due to concerns over potential impacts from flooding. The basis of this listing is faulty due to lack of data. Regional Board staff is not aware of evidence to indicate current water quality standards exceedances or beneficial use impacts related to this listing.

Region 6

Water Segment:	Tuttle Creek
Pollutant:	Habitat alterations
Decision:	Delist
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that the original listing basis is faulty due to a lack of data to support a listing.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.
Lines of Evidence:	

Line of Evidence	Testimonial Evidence
Beneficial Use	AG - Agricultural Supply, MU - Municipal & Domestic
Information Used to Assess Water Quality:	The original basis for the listing of this water body is completely unknown. Therefore, the listing basis was faulty due to lack of data. Listing is not for pollutant, and no pollutants have been identified related to this listing. Regional Board staff is not aware of evidence to indicate current water quality standards exceedances or beneficial use impacts related to this listing.

Region 6

Water Segment: West Walker River

Pollutant: Sedimentation/Siltation

Decision: Delist

Weight of Evidence: Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that the original listing basis was faulty due to lack of data and the fact that the original listing was in error (incorrect identification of water body). The actual issue was the failure of an irrigation diversion to Topaz Lake off the mainstem West Walker River, not the West Walker River itself. However, as a result of the 1997 flood, a significant segment of the irrigation diversion from the West Walker River to Topaz Lake (Topaz Lake diversion) was aggraded with sediment. This sediment has since been removed and the issue has been resolved.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Line of Evidence Testimonial Evidence

Beneficial Use AG - Agricultural Supply, MU - Municipal & Domestic

Information Used to Assess Water Quality: This listing was based on best professional judgment after staff observed turbid water in an irrigation channel that diverts water from the mainstem West Walker River into Topaz Lake. No data or other information was provided. The irrigation channel was mistakenly identified as the West Walker River, resulting in its listing (in error) for sedimentation as well. The West Walker River remained on the list following the extreme flood event of 1997, due to concerns over potential impacts from flooding.

The original listing was in error (incorrect identification of water body). The actual issue was the failure of an irrigation diversion to Topaz Lake off the mainstem West Walker River, not the West Walker River itself.

However, as a result of the 1997 flood, a significant segment of the irrigation diversion from the West Walker River to Topaz Lake (Topaz Lake diversion) was aggraded with sediment. The Walker River Irrigation District applied for and received permits and certifications to remove the sediment and restore the capacity of the diversion channel. The work was completed in late 2000 in accordance with the permit conditions. The sediment concerns in the Topaz Lake diversion have been resolved, and Regional Board staff is not aware of evidence to indicate current water quality standards exceedances or beneficial use impacts.

Fact Sheets Supporting
Revision of the Section 303(d) List

September 2005

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Colorado River Basin Region (7)

Recommendations to place waters and pollutants on the section 303(d) List

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Region 7

Water Segment: Alamo River

Pollutant: Chlorpyrifos

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.5 and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Currently, the Alamo River is listed for pesticides. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to water quality impacts. There is sufficient justification for removing the general listings for pesticides from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

One line of evidence is available in the administrative record to assess this pollutant. Based on section 3.5 and 3.6, the site does exhibit exceedances. Water toxicity has been documented in this water body and the pollutant is likely to cause or contribute to the toxic effect. Six of the samples exceed the water quality objective.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Six of the 11 water samples exceeded the water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This pollutant should replace the existing listing for Pesticides.

Lines of Evidence:

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Basin Plan: No individual chemical or combination of chemicals shall be present in concentrations that adversely affect beneficial uses.
Evaluation Guideline:	Department of Fish and Game guideline of 0.014 ug/L (Siepmann and Finlayson, 2000).
Data Used to Assess Water Quality:	Numeric data generated from 4 water samples collected as part of SWAMP and 7 samples collected by USGS. Six of these 11 samples exceeded the evaluation guideline (SWAMP, 2004; LeBlanc et al., 2004).
Spatial Representation:	Seven stations were sampled, all situated along the Alamo River from the international boundary with Mexico to the outlet (mouth) of the Alamo River into the Salton Sea.
Temporal Representation:	Four samples taken during the spring (May) and the fall (October) of 2002. Seven samples collected in April 2003, and the guideline was exceeded in 5 of them.
Environmental Conditions:	The Alamo River flows from Mexico through the Imperial Valley in the Salton Sea. Most of the water flowing through it comes from agricultural return flows.
Data Quality Assessment:	SWAMP QAPP.

Region 7

Water Segment: Alamo River

Pollutant: DDT

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.5 and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Currently, the Alamo River is listed for pesticides. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to water quality impacts. There is sufficient justification for removing the general listings for pesticides from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

Two lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.5 and 3.6, the site does exhibit exceedances. Tissue toxicity has been documented in this water body and the pollutant is likely to cause or contribute to the toxic effect. Eleven of the samples exceed the water quality objective.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Eleven of the 11 tissue samples exceeded the water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. This addresses DDT and related pollutants.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are met

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

Lines of Evidence:

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	FR - Freshwater Replenishment, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	CTR: freshwater acute maximum = 1.1 ppb for 4,4'DDT and freshwater chronic maximum = 0.001 ppb for 4,4'DDT as a 4-day average.
Data Used to Assess Water Quality:	Samples were collected by the RWQCB on 6/21/2001 at 7 different stations. All samples were non-detects, with a detection limit of 0.1 ppb. Samples were also collected by the RWQCB on 4/15/2003 at 7 different stations. All samples were non-detects, with a detection limit of 0.018 ppb. Therefore, there were no exceedances of the total 14 samples (CRBRWQCB, 2004c).
Spatial Representation:	Samples were collected at the following Alamo River sampling stations: AR-B (at the International Boundary), AR-D10 (Lower Alamo River drainshed, at Drop Structure #10), AR-D8 (Central Drain drainshed, at Drop Structure #8), AR-D6A (Holtville Main Drain drainshed, at Drop Structure #6A), AR-D6 (Rose Drain drainshed, at Drop Structure #6), AR-D3 (Central Alamo River drainshed, at Drop Structure #3), and at AR-GRB.
Temporal Representation:	All samples were collected on 4/15/2003 and 6/21/2001.
Data Quality Assessment:	Used RWQCB QA/QC in sample collection. Lab analysis was done by North Coast Labs.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	FR - Freshwater Replenishment, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Colorado River Basin RWQCB Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life.

Evaluation Guideline:	100 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Eleven out of 11 samples exceeded. A total of 6 filet composite samples and 5 individual samples of carp and channel catfish were collected. Carp were collected in 1993-94, 2000, and 2002. Channel catfish were collected in 1993-94, 1996-98, and 2002. The guideline was exceeded in all samples. This addresses DDT and related pollutants (TSMP, 2002).
Spatial Representation:	Four stations along the Alamo River were sampled: upstream of Highway 78 crossing (Brawley), downstream of Sinclair Road (Calipatria), under the bridge at Highway 115 crossing (Holtville), and at the International Boundary to just downstream of Highway 98 (International Boundary).
Temporal Representation:	Samples were collected annually 1993-94, 1996-98, 2000, and 2002.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment: Alamo River

Pollutant: Dieldrin

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.5 and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Currently, the Alamo River is listed for pesticides. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to water quality impacts. There is sufficient justification for removing the general listings for pesticides from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

Two lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.5 and 3.6, the site does exhibit exceedances. Tissue toxicity has been documented in this water body and the pollutant is likely to cause or contribute to the toxic effect. Ten of the samples exceed the water quality objective.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Ten of the 11 tissue samples exceeded the water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. The Alamo River from Holtville Drain to the outlet into the Salton Sea only.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are met

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

Lines of Evidence:

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	FR - Freshwater Replenishment, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	USEPA: freshwater acute maximum = 0.24 ppb. USEPA: freshwater chronic maximum = 0.056 ppb.
Data Used to Assess Water Quality:	Data were collected by the RWQCB on 4/15/2003 and 6/21/01 at 7 different stations on the Alamo River. Of the 14 samples, all samples were non-detects and did not exceed either of the criteria (CRBRWQCB, 2004c).
Spatial Representation:	The Alamo River from Holtville Drain to the outlet into the Salton Sea only. Samples were collected at the following Alamo River sampling stations: AR-B (at the International Boundary), AR-D10 (Lower Alamo River drainshed, at Drop Structure #10), AR-D8 (Central Drain drainshed, at Drop Structure #8), AR-D6A (Holtville Main Drain drainshed, at Drop Structure #6A), AR-D6 (Rose Drain drainshed, at Drop Structure #6), AR-D3 (Central Alamo River drainshed, at Drop Structure #3), and at AR-GRB.
Temporal Representation:	All samples were collected on 4/15/2003 and 6/21/01.
QA/QC Equivalent:	Used RWQCB QA/QC in sample collection. Lab analysis was done by E.S. Babcock & Sons laboratory and a Quality Assurance Manual was provided.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	FR - Freshwater Replenishment, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Colorado River Basin RWQCB Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life.

Evaluation Guideline:	2 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Ten out of 11 samples exceeded. A total of 5 filet composite and individual samples of carp and 6 filet composite and individual samples of channel catfish were collected. Carp were collected in 1993-94, 2000, and 2002. Channel catfish were collected in 1993-94, 1996-98, and 2002. The guideline was exceeded in all samples except a 2002 individual sample of carp (TSMP, 2002).
Spatial Representation:	The Alamo River from Holtville Drain to the outlet into the Salton Sea only. Four stations along the Alamo River were sampled: upstream of Highway 78 crossing (Brawley), downstream of Sinclair Road (Calipatria), under the bridge at Highway 115 crossing (Holtville), and at the International Boundary to just downstream of Highway 98 (International Boundary). However, only the Alamo River @ Calipatria should be placed on the list.
Temporal Representation:	Samples were collected annually 1993-94, 1996-98, 2000, and 2002.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment: Alamo River

Pollutant: Polychlorinated biphenyls

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 2.1, 3.6, and 3.9 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status while under section 3.9, a minimum of two lines of evidence are needed to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.6 the site has significant toxicity and the pollutant is likely to cause or contribute to the toxic effect. The benthic community is impacted and may be impacted by this pollutant.

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

This conclusion is based on the staff findings that:
1. The sediment quality guideline used complies with the requirements of section 6.1.3 of the Policy.
2. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
3. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
4. None of the 7 samples exceeded the USEPA freshwater chronic and acute criteria, however 11 of 11 tissue samples exceeded the OEHHA Screening Value and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy. The Alamo River from Central Drain to the outlet into the Salton Sea only should be placed on the list.
5. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	FR - Freshwater Replenishment, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	USEPA: freshwater acute total PCB's maximum = 2 ppb. USEPA: freshwater chronic total PCB's maximum = 0.014 ppb.
Data Used to Assess Water Quality:	Data were collected by the RWQCB on 6/21/2001 at 7 different stations on the Alamo River. Of the 7 samples, all samples were non-detects and did not exceed the criteria (CRBRWQCB, 2004c).
Spatial Representation:	The Alamo River from Central Drain to the outlet into the Salton Sea only. Samples were collected at the following Alamo River sampling stations: AR-B (at the International Boundary), AR-D10 (Lower Alamo River drainshed, at Drop Structure #10), AR-D8 (Central Drain drainshed, at Drop Structure #8), AR-D6A (Holtville Main Drain drainshed, at Drop Structure #6A), AR-D6 (Rose Drain drainshed, at Drop Structure #6), AR-D3 (Central Alamo River drainshed, at Drop Structure #3), and at AR-GRB.
Temporal Representation:	All samples were collected on 6/21/2001.
QA/QC Equivalent:	Used RWQCB QA/QC in sample collection. Lab analysis was done by North Coast Labs.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	FR - Freshwater Replenishment, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Colorado River Basin RWQCB Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life.
Evaluation Guideline:	20 ng/g (OEHHA Screening Value).
Data Used to Assess Water	Eleven out of 11 samples exceeded. A total of 6 filet composite samples

Quality:	and 5 individual samples of carp and channel catfish were collected. Carp were collected in 1993-94, 2000, and 2002. Channel catfish were collected in 1993-94, 1996-98, and 2002. The guideline was exceeded in all samples (TSMP, 2002).
Spatial Representation:	The Alamo River from Central Drain to the outlet into the Salton Sea only. Four stations along the Alamo River were sampled: upstream of Highway 78 crossing (Brawley), downstream of Sinclair Road (Calipatria), under the bridge at Highway 115 crossing (Holtville), and at the International Boundary to just downstream of Highway 98 (International Boundary). Only the Alamo River from Central Drain to Calipatria should be placed on the list.
Temporal Representation:	Samples were collected annually 1993-94, 1996-98, 2000, and 2002.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment: Alamo River

Pollutant: Sedimentation/Siltation

Decision: List

Weight of Evidence: This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle.

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

SWRCB Staff Recommendation: After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	WA - Warm Freshwater Habitat
Information Used to Assess Water Quality:	TMDL completed in 2002 (SWRCB, 2003).

Region 7

Water Segment: Alamo River

Pollutant: Toxaphene

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.5 and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Currently, the Alamo River is listed for pesticides. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to water quality impacts. There is sufficient justification for removing the general listings for pesticides from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

Two lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.5 and 3.6, the site does exhibit exceedances. Tissue toxicity has been documented in this water body and the pollutant is likely to cause or contribute to the toxic effect. Eight of the samples exceed the water quality objective.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Eight of the 11 tissue samples exceeded the water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. The Alamo River from Central Drain to the outlet into the Salton Sea only should be placed on the list.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are met

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

Lines of Evidence:

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	FR - Freshwater Replenishment, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	USEPA: freshwater acute maximum = 0.73 ppb. USEPA: freshwater chronic maximum = 0.0002 ppb.
Data Used to Assess Water Quality:	Data were collected by the RWQCB on 4/15/2003 and 6/21/2001 at 7 different stations on the Alamo River. Of the 14 samples, all samples were non-detects and did not exceed either of the criteria (CRBRWQCB, 2004c).
Spatial Representation:	The Alamo River from Central Drain to the outlet into the Salton Sea only. Samples were collected at the following Alamo River sampling stations: AR-B (at the International Boundary), AR-D10 (Lower Alamo River drainshed, at Drop Structure #10), AR-D8 (Central Drain drainshed, at Drop Structure #8), AR-D6A (Holtville Main Drain drainshed, at Drop Structure #6A), AR-D6 (Rose Drain drainshed, at Drop Structure #6), AR-D3 (Central Alamo River drainshed, at Drop Structure #3), and at AR-GRB.
Temporal Representation:	All samples were collected on 4/15/2003 and 6/21/2001.
QA/QC Equivalent:	Used RWQCB QA/QC in sample collection. Lab analysis was done by E.S. Babcock & Sons laboratory and North Coast Labs. A Quality Assurance Manual was also provided.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	FR - Freshwater Replenishment, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Colorado River Basin RWQCB Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life.

Evaluation Guideline:	30 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Eight out of 11 samples exceeded. A total of 6 filet composite samples and 5 individual filet samples of carp and channel catfish were collected. Carp were collected in 1993-94, 2000, and 2002. Channel catfish were collected in 1993-94, 1996-98, and 2002. The guideline was exceeded in all samples except 1993 carp and channel catfish and 2002 carp samples (TSMP, 2002).
Spatial Representation:	The Alamo River from Central Drain to the outlet into the Salton Sea only. Four stations along the Alamo River were sampled: upstream of Highway 78 crossing (Brawley), downstream of Sinclair Road (Calipatria), under the bridge at Highway 115 crossing (Holtville), and at the International Boundary to just downstream of Highway 98 (International Boundary). Only the Alamo River from Central Drain to Calipatria should be placed on the list.
Temporal Representation:	Samples were collected annually 1993-94, 1996-98, 2000, and 2002.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment: All American Canal

Pollutant: Specific Conductance

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Sixty five of 71 samples exceeded the California Code of Regulations: Recommended Secondary Maximum Contaminant Level water quality objective and this exceeds the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix:	Water
Evaluation Guideline:	California Code of Regulations: Recommended Secondary Maximum Contaminant Level = 900 micromhos for water supplied to the public, because this may adversely affect the taste, odor or appearance of drinking water. Upper Secondary MCL = 1,600 micromhos and Short Term MCL = 2,200 micromhos.
Data Used to Assess Water Quality:	Samples were collected by the Imperial Irrigation District (IID) once a year as part of the Annual Title 22 source water analysis from 1998 to 2003. Six of 6 samples were in exceedance of the recommended criterion (900 micromhos) and 0 of 6 were in exceedance of the upper or short term criteria. Samples were also collected monthly by the IID from 1998 to 2003. Fifty nine of 65 samples were in exceedance of the recommended criterion (900 micromhos) and 1 of 65 samples were in exceedance of the upper and short term MCLs (1000 mg/L). Six samples were below all criteria (CRBRWQCB, 2004a). California Code of Regulations: Recommended Secondary Maximum Contaminant Level = 900 micromhos for water supplied to the public, because this may adversely affect the taste, odor or appearance of drinking water. Upper Secondary MCL = 1,600 umhos and Short Term MCL = 2,200 umhos.
Spatial Representation:	Samples were collected from the All-American Canal at Drop # 4 and Drop #1.
Temporal Representation:	The 6 samples were collected once a year from 1998 through 2003. Samples were collected in June in 1998-1999, October in 2000-2002, and November in 2003. The 65 samples were collected once a month from 6/21998 through 1/12/2004.
Data Quality Assessment:	Imperial Irrigation District (IID) SOPs and Clinical Laboratory of San Bernardino (CLSB) QA Manual.

Region 7

Water Segment: All American Canal

Pollutant: Sulfates

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Fifty three of 66 samples exceeded the California Code of Regulations: Recommended Secondary Maximum Contaminant Level and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Evaluation Guideline:	California Code of Regulations: Recommended Secondary Maximum Contaminant Level = 250 mg/L for water supplied to the public, because this may adversely affect the taste, odor or appearance of drinking water. Upper Secondary MCL = 500 mg/L and Short Term MCL = 600 mg/L.
Data Used to Assess Water Quality:	Samples were collected monthly by the Imperial Irrigation District (IID) from the All-American Canal from 1998 through 2003. Fifty three of 66 samples were in exceedance of the recommended criterion (250 mg/L). None of the 66 samples were in exceedance of the upper and short term MCLs (500 and 600 mg/L respectively). Thirteen samples were below all criteria (CRBRWQCB, 2004a).
Spatial Representation:	Samples were collected from the All-American Canal below Drop # 1.
Temporal Representation:	Samples were collected once a month from 6/21998 through 1/12/2004.
QA/QC Equivalent:	Imperial Irrigation District (IID) SOPs.

Region 7

Water Segment: All American Canal

Pollutant: Total Dissolved Solids

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Seventy of 71 samples exceed the California Code of Regulations: Recommended Secondary Maximum Contaminant Level, and this exceeds the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Evaluation Guideline:	California Code of Regulations: Recommended Secondary Maximum Contaminant Level = 500 mg/L for water supplied to the public, because this may adversely affect the taste, odor or appearance of drinking water. Upper Secondary MCL = 1,000 mg/L and Short Term MCL = 1,500.
Data Used to Assess Water Quality:	Samples were collected by the Imperial Irrigation District (IID) once a year as part of the Annual Title 22 source water analysis from 1998 through 2003. Six of 6 samples were in exceedance of the recommended criterion (500 mg/L) and 0 of 6 were in exceedance of the upper and short term MCLs. Samples were also collected monthly by the IID from 1998 through 2003. Sixty four of 65 samples were in exceedance of the recommended criterion (500 mg/L) and 1 of 65 were in exceedance of the upper and short term MCLs (1000 mg/L) (CRBRWQCB, 2004a).
Spatial Representation:	Samples were collected from the All-American Canal at Drop # 4 and Drop #1.
Temporal Representation:	For the 6 samples: samples were collected once a year from 1998 through 2003. Samples were collected in June in 1998-1999, October in 2000-2002, and November in 2003. For the 65 samples: samples were collected once a month from 6/2/1998 to 1/12/2004.
Data Quality Assessment:	Imperial Irrigation District (IID) SOPs and Clinical Laboratory of San Bernardino (CLSB) QA Manual.

Region 7

Water Segment: Coachella Valley Storm Channel

Pollutant: Toxaphene

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Three of the 8 samples exceeded the NAS Guideline and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. The Coachella Valley Storm Channel from Lincoln Street to the outlet into the Salton Sea only should be placed on the list.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Sediment

Water Quality Objective/ Colorado River Basin RWQCB Basin Plan: No individual chemical or

Water Quality Criterion:	combination of chemicals shall be presenting concentration that adversely affect beneficial uses.
Evaluation Guideline:	100 ng/g [NAS Guideline (whole fish)].
Data Used to Assess Water Quality:	Three out of 8 samples exceeded. Four whole fish composite samples of red shiner, 3 whole fish composite samples of tilapia, and one composite sample of redbelly tilapia were collected. Red shiner were collected in 1992, 1995, and 2000-01. Tilapia were collected in 1996, 1999, and 2002. Redbelly tilapia were collected in 1995. The guideline was exceeded in 1996 tilapia and 2000-01 red shiner (TSMP, 2002).
Spatial Representation:	The Coachella Valley Storm Channel from Lincoln Street to the outlet into the Salton Sea only. One station located at foot of Lincoln Street was sampled and was in exceedance.
Temporal Representation:	Samples were collected annually in 1992, 1995-96, 1999, and 2000-02.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment: Colorado River (Imperial Reservoir to California Mexico Border)

Pollutant: Manganese

Decision: List

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

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

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	Basin Plan: No individual chemical or combination of chemicals shall be present in concentrations that adversely affect beneficial uses.
Evaluation Guideline:	Department of Health Services MCL of 50 ug/L.
Data Used to Assess Water Quality:	Numeric data was generated from two samples (SWAMP, 2004). Both samples exceeded the MCL.
Spatial Representation:	One station sampled, situated close to the international boundary with Mexico. The sampled Station, Reservation Main Drain 4 (727CRRMD4) is part of the Lower Colorado River, Yuma Hydrologic Unit. This site is very close to the international boundary with Mexico. The reservation area is primary outlet for the subsurface drainage water and storm runoff water from lands in the Bard and Main Drain. Downstream of this area is Arizona jurisdiction and the management of the river water is by the International Boundary Water Commission (IBWC) and the US Bureau Reclamation (USBR).
Temporal Representation:	Two samples taken during the spring and fall of 2002.
Environmental Conditions:	The sampled Station, Reservation Main Drain 4 (727CRRMD4) is part of the Lower Colorado River, Yuma Hydrologic Unit. This site is very close to the international boundary with Mexico. The reservation area is primary outlet for the subsurface drainage water and storm runoff water from lands in the Bard and Main Drain. Downstream of this area is Arizona jurisdiction and the management of the river water is by the International Boundary Water Commission (IBWC) and the US Bureau Reclamation (USBR).
Data Quality Assessment:	SWAMP QAPP.

Region 7

Water Segment: Colorado River (Imperial Reservoir to California Mexico Border)

Pollutant: Selenium

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. Under section 3.5 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. A sufficient number of samples exceed the 2 ug/g OEHHA tissue screening value guideline for Selenium. Under section 3.5 of the Listing Policy any water body segment where tissue pollutant levels in organisms exceed a pollutant specific evaluation guideline shall be placed on the section 303(d) list.

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

This conclusion is based on the staff findings that:
1.The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3.Three of 5 samples exceeded the OEHHA tissue-screening value of Selenium and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4.Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use:	AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA)
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Colorado River Basin RWQCB Basin Plan: No individual chemical or combination of chemicals shall be present in concentrations that adversely affect beneficial uses.
Evaluation Guideline:	2 ug/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Three out of 5 samples exceeded (TSMP, 2002). A total of 5 filet samples of largemouth bass were collected. Bass were collected in 1992, 1999, and 2001-02. Bass exceeded the guideline in 1999 and 2001-02.
Spatial Representation:	Two stations were sampled: about 2 miles downstream of the Needles Marina Resort and from Squaw Lake boat launch ramp to 1/4 mile north of Senator Lake.
Temporal Representation:	Samples were collected annually in 1992, 1999 and 2001-02.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 Data Report. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment: Imperial Valley Drains

Pollutant: DDT

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.5, and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Currently, Imperial Valley Drains is listed for pesticides. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to water quality impacts. There is sufficient justification for removing the general listings for pesticides from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

One line of evidence is available in the administrative record to assess this pollutant. Based on section 3.5 and 3.6, the site does exhibit exceedances in tissue. Twelve of the samples exceed the water quality objective.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Twelve of the 16 tissue samples exceeded the water quality criteria, and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. This addresses DDT and related pollutants. The Barbara Worth Drain, Peach Drain, and Rice Drain only.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

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

Lines of Evidence:

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	CM - Commercial and Sport Fishing (CA)
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Colorado River Basin RWQCB Basin Plan: No individual chemical or combination of chemicals shall be presenting concentration that adversely affect beneficial uses.
Evaluation Guideline:	1000 ng/g [NAS Guideline (whole fish)].
Data Used to Assess Water Quality:	This addresses DDT and related pollutants. Two mosquitofish samples exceeded the guideline out of a total of 5 samples. A total of 5 whole fish composite samples of mosquitofish and sailfin molly were collected. Two mosquitofish samples were collected in 2000 and 3 sailfin molly samples were collected in 1992, and 2001-02. Sailfin molly samples did not exceed the guideline (TSMP, 2002). Three out of 3 sailfin molly and mosquitofish samples were in exceedance of the guideline. A total of 3 whole fish composite samples were collected. One sailfin molly sample was collected in 1992 and 2 mosquitofish samples were collected in 1995-96. Three out of 3 mosquitofish samples were in exceedance of the guideline. A total of 3 whole mosquitofish samples were collected in 2001-02. Two out of 2 samples exceeded the guideline. One filet composite sample of carp was collected in 1999 and 1 individual filet sample of carp was collected in 2002. Two out of 3 samples exceeded the guideline. A total of 3 filet composite samples, 2 channel catfish and 1 tilapia were collected. Channel catfish were collected in 1999 and 2002. Tilapia were collected in 2000. The 2 channel catfish samples exceeded, not the tilapia sample.
Spatial Representation:	The Barbara Worth Drain, Peach Drain, and Rice Drain only. For the 5 samples: 1 station located off Anderhold Road south of Highway S80 where drain comes alongside road. This information only applies to the Barbara Worth Drain area of the Imperial Valley Drains. For the 3 samples collected in 1992, and 1995-96: 1 station located at HWY 115 crossing. This information only applies to the Peach Drain area of the Imperial Valley Drains. For the 3 samples collected in 2002-02: 1 station located alongside headgate #101. This information only applies to the Rice Drain area of the Imperial Valley Drains. For the 2 samples collected: 1 station located downstream of Meloland Road. This information only applies to the Central Drain area of the Imperial Valley Drains.

	For the 3 samples collected in 1999, 2000 and 2002: 1 station location upstream from the last head gate on the drain. This information only applies to the Holtville Main Drain area of the Imperial Valley Drain.
Temporal Representation:	Samples were collected in 1992, 1995-96, 1999, 2001 and 2000-02.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 Data Report. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment: Imperial Valley Drains

Pollutant: Dieldrin

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.5, and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Currently, New River (Imperial) is listed for pesticides. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to water quality impacts. There is sufficient justification for removing the general listings for pesticides from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

One line of evidence is available in the administrative record to assess this pollutant. Based on section 3.5 and 3.6, the site does exhibit exceedances in tissue. Six of the samples exceed the water quality objective.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Six of the 8 tissue samples exceeded the water quality criteria, and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. Only one station at Barbara Worth Drain and one station at Fig Drain should be placed on the list.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

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

Lines of Evidence:

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	CM - Commercial and Sport Fishing (CA)
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Colorado River Basin RWQCB Basin Plan: No individual chemical or combination of chemicals shall be presenting concentration that adversely affect beneficial uses.
Evaluation Guideline:	2 ng/g (OEHHA Screening Value) and 100 ng/g {NAS Guideline (whole fish)}.
Data Used to Assess Water Quality:	Two out of 2 samples exceeded the OEHHA value. One filet composite sample (1999) and one individual sample (2002) of carp were collected. The guideline was exceeded in both samples. Two of 3 samples exceeded the NAS guideline. A total of 3 whole fish composite samples of sailfin molly and mosquitofish were collected. One sailfin molly sample was collected in 1992 and 2 mosquitofish samples were collected in 1995-96. The NAS guideline was exceeded in the sailfin molly and in 1 mosquitofish sample (TSMP, 2002). Two out of 3 samples were in exceedance of the NAS guideline. A total of 3 whole fish composite samples of mosquitofish were collected in 2001-02. The guideline was exceeded in 2001 and 2002 samples.
Spatial Representation:	The Barbara Worth Drain and Fig Drain only. For the 2 carp samples: 1 station located downstream of Meloland Road. This information only applies to the Central Drain area of the Imperial Valley Drains. For the 3 samples collected in 1992 and 1995-96: 1 station located at HWY 115 crossing. This information only applies to the Peach Drain area of the Imperial Valley Drains. For the 3 samples collected in 2001-02: 1 station located alongside headgate #101. This information only applies to the Rice Drain area of the Imperial Valley Drains only one station at Barbara Worth Drain and one station at Fig Drain should be placed on the list.
Temporal Representation:	Samples were collected 12/5/99 and 10/22/02; 1992 and 1995-96; and 2001-02.
Data Quality Assessment:	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment: Imperial Valley Drains

Pollutant: Endosulfan

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.5 and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Currently, New River (Imperial) is listed for pesticides. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to water quality impacts. There is sufficient justification for removing the general listings for pesticides from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

One line of evidence is available in the administrative record to assess this pollutant. Based on section 3.5 and 3.6, the site does exhibit exceedances in tissue. Two of the samples exceed the water quality objective.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of the 3 tissue samples exceeded the water quality criteria, and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. One station located at the highway 115 crossing and Peach Drain was in exceedance.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

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

Lines of Evidence:

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	CM - Commercial and Sport Fishing (CA)
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Colorado River Basin RWQCB Basin Plan: No individual chemical or combination of chemicals shall be present in concentrations that adversely affect beneficial uses.
Evaluation Guideline:	100 ng/g [NAS Guideline (whole fish)].
Data Used to Assess Water Quality:	Two out of 3 samples exceeded the criteria. A total of 2 whole fish composite samples of mosquitofish and one of sailfin molly and were collected. Sailfin molly were collected in 1992 and the mosquitofish in 1995-96. The guideline was exceeded in sailfin molly and one of the two mosquitofish samples (TSMP, 2002).
Spatial Representation:	The Peach Drain only. One station located at the highway 115 crossing and Peach Drain was in exceedance. This information only applies to the Peach Drain area of the Imperial Valley Drains.
Temporal Representation:	Samples were collected in 1992 and 1995-96.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game.

Region 7

Water Segment: Imperial Valley Drains

Pollutant: Polychlorinated biphenyls

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of the 2 samples exceeded the OEHHA Screening Value and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. The Central Drain from Meloland Rd. to the outlet into the Alamo River only should be placed on the list.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Colorado River Basin RWQCB Basin Plan: No individual chemical or

Water Quality Criterion:	combination of chemicals shall be presenting concentration that adversely affect beneficial uses.
Evaluation Guideline:	20 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Two out of 2 samples exceeded. One filet composite sample (1999) and one individual filet sample (2002) of carp were collected. The guideline was exceeded in both samples (TSMP, 2002).
Spatial Representation:	The Central Drain from Meloland Rd. to the outlet into the Alamo River only. One station located downstream of Meloland Road was sampled. This information only applies to the Central Drain area of the Imperial Valley Drains. Only the Central Drain downstream of Meloland Road station should be placed on the list.
Temporal Representation:	Samples were collected 12/5/99 and 10/22/02.
Data Quality Assessment:	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment: Imperial Valley Drains

Pollutant: Toxaphene

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.5, and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Currently, New River (Imperial) is listed for pesticides. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to water quality impacts. There is sufficient justification for removing the general listings for pesticides from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

One line of evidence is available in the administrative record to assess this pollutant. Based on section 3.5 and 3.6, the site does exhibit exceedances in tissue. Ten of the samples exceed the water quality objective.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Ten of the 10 tissue samples exceeded the water quality criteria, and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. The Barbara Worth Drain, Peach Drain, and Rice Drain only should be listed.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

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

Lines of Evidence:

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	CM - Commercial and Sport Fishing (CA)
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Colorado River Basin RWQCB Basin Plan: No individual chemical or combination of chemicals shall be present in concentrations that adversely affect beneficial uses.
Evaluation Guideline:	100 ng/g [NAS Guideline (whole fish)] and 30 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Five out of 5 samples exceeded the NAS guideline. A total of 5 whole fish composite samples of mosquitofish and sailfin molly were collected. Two mosquitofish samples were collected in 2000 and 3 sailfin molly samples were collected in 1992 and 2001-02. The guideline was exceeded in all samples (TSMP, 2002). Two out of 2 samples exceeded the OEHHA guideline. One filet composite sample (1999) and 1 individual filet sample (2002) of carp were collected. Both samples were in exceedance. Three out of 3 samples exceeded the NAS guideline. A total of 3 whole fish composite samples of sailfin molly and mosquitofish were collected. One sailfin molly sample was collected in 1992 and 2 mosquitofish samples were collected in 1995-96. The guideline was exceeded in all samples.
Spatial Representation:	The Barbara Worth Drain, Peach Drain, and Rice Drain only. For the 5 samples: 1 station located off Anderhold Road south of Highway S80 where drain comes alongside road. This information only applies to the Barbara Worth Drain area of the Imperial Valley Drains. For the 2 samples: 1 station located downstream of Meloland Road. This information only applies to the Central Drain area of the Imperial Valley Drains. For the 3 samples: One station located at highway 115 crossing. This information only applies to the Peach Drain area of the Imperial Valley Drains.
Temporal Representation:	Samples were collected on 12-5-1999, 10/22/2002, in 1992, 1995-1996 and 2000-2002.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 Data Report. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment: New River (Imperial)

Pollutant: Chlordane

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.5 and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Currently, New River (Imperial) is listed for pesticides. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to water quality impacts. There is sufficient justification for removing the general listings for pesticides from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

Two lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.5 and 3.6, the site does exhibit exceedances in tissue. Five of the samples exceed the water quality objective.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Five of the 13 tissue samples exceeded the water quality criteria, and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use:	FR - Freshwater Replenishment, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	CTR: freshwater acute maximum = 2.4 ppb and CTR: freshwater chronic maximum = 0.0043 ppb as a 4-day average.
Data Used to Assess Water Quality:	Data were collected by the RWQCB at four locations on the New River in 2003. Of the 4 samples, all samples were non-detects with a detection limit of 0.025 ppb. Therefore, there were no exceedances (CRBRWQCB, 2004C).
Spatial Representation:	Data were collected at four locations on the New River, from the international boundary to the outlet to the Salton Sea.
Temporal Representation:	Samples were collected on 4/17/2003.
QA/QC Equivalent:	Used RWQCB QA/QC in sample collection. Lab analysis was done by E.S. Babcock & Sons laboratory and a Quality Assurance Manual was provided.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	FR - Freshwater Replenishment, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Colorado River Basin RWQCB Basin Plan: No individual chemical or combination of chemicals shall be present in concentrations that adversely affect beneficial uses.
Evaluation Guideline:	30 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Five out of 13 samples exceeded. A total of 7 filet composite and individual samples of channel catfish, 5 composite and individual samples of carp, and one composite of tilapia were collected. Channel catfish were collected in 1992-93, 1995, 1997-98, and 2001-02. Carp were collected in 1993-94, 1997, and 1999. Tilapia were collected in 1996. Carp and channel catfish samples exceeded the guideline in 1992-94. A channel catfish sample exceeded the guideline in 2002 (TSMP, 2002).

Spatial Representation:	Two stations on the New River were sampled: at the gauging station about one mile downstream of the Lack Road Bridge near Westmorland and near the international boundary.
Temporal Representation:	Samples were collected during the period of 1992-1999 and 2001-02.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment: New River (Imperial)

Pollutant: Chlorpyrifos

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.5 and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Currently, New River (Imperial) is listed for pesticides. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to water quality impacts. There is sufficient justification for removing the general listings for pesticides from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

One line of evidence is available in the administrative record to assess this pollutant. Based on section 3.5 and 3.6, the site does exhibit exceedances in water. Two of the samples exceed the water quality objective.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of the 9 water samples exceeded the water quality criteria, and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use:	WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Basin Plan: No individual chemical or combination of chemicals shall be present in concentrations that adversely affect beneficial uses.
Evaluation Guideline:	Guideline from the Department of Fish and Game of 0.014 ug/L used (Siepmann and Finlayson, 2000).
Data Used to Assess Water Quality:	Numeric data generated from 4 water samples from SWAMP and 5 water samples taken by USGS. Two of nine samples exceeded the evaluation guideline (SWAMP, 2004; LeBlanc, 2004).
Spatial Representation:	Five stations were sampled. All were situated along the New River from the international boundary with Mexico to the outlet (mouth) of New River in the Salton Sea. Exceedances were observed at the Evans Hewes Highway and the Rice Drain stations.
Temporal Representation:	Four samples were taken during the spring (May) and the fall (October) of 2002. No exceedances were observed. Of the five samples collected in April 2003, two exceeded the evaluation guideline.
Environmental Conditions:	The New River flows from Mexico through the Imperial Valley in the Salton Sea. Most of the water flowing through it comes from agricultural return flows.
Data Quality Assessment:	SWAMP QAPP.

Region 7

Water Segment: New River (Imperial)

Pollutant: DDT

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.5 and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Currently, New River (Imperial) is listed for pesticides. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to water quality impacts. There is sufficient justification for removing the general listings for pesticides from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

Two lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.5 and 3.6, the site does exhibit exceedances in tissue. Eleven of the samples exceed the water quality objective.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Eleven of the 13 tissue samples exceeded the water quality criteria, and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. This addresses DDT and related pollutants.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use:	FR - Freshwater Replenishment, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	CTR: freshwater acute maximum = 1.1 ppb for 4,4'DDT and freshwater chronic maximum = 0.001 ppb for 4,4'DDT as a 4-day average.
Data Used to Assess Water Quality:	Data were collected by the RWQCB at four locations on the New River in 2003. None of the 4 samples exceeded the acute maximum, however 3 samples were below the detection limit (0.018 ppb) and 1 was above (0.13 ppb) the chronic maximum (CRBRWQCB, 2004c).
Spatial Representation:	Data were collected at four locations on the New River, from the international boundary to the outlet to the Salton Sea.
Temporal Representation:	Samples were collected on 4/17/2003.
QA/QC Equivalent:	Used RWQCB QA/QC in sample collection. Lab analysis was done by E.S. Babcock & Sons laboratory and a Quality Assurance Manual was provided.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	FR - Freshwater Replenishment, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Colorado River Basin RWQCB Basin Plan: No individual chemical or combination of chemicals shall be presenting concentration that adversely affect beneficial uses.
Evaluation Guideline:	100 ng/g (OEHHA Screening Value; Brodberg, 1999).
Data Used to Assess Water Quality:	Eleven out of 13 samples exceeded. A total of 7 filet composite and individual samples of channel catfish, 5 filet composite and individual samples of carp, and one filet composite of tilapia were collected. Channel catfish were collected from 1992-99 and 2001-02. Carp were collected 1993-4, 1997, and 1999. Tilapia were collected in 1996. The guideline was exceeded in all samples except tilapia and a 1997 individual carp sample. This addresses DDT and related pollutants (TSMP, 2002).

Spatial Representation:	Two stations, one station was located at the gauging station about one mile downstream of the Lack Road Bridge near Westmorland and the second station was located near the international boundary.
Temporal Representation:	Samples were collected annually 1992-99 and 2001-02.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment: New River (Imperial)

Pollutant: Diazinon

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.5 and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Currently, New River (Imperial) is listed for pesticides. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to water quality impacts. There is sufficient justification for removing the general listings for pesticides from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

One line of evidence is available in the administrative record to assess this pollutant. Based on section 3.5 and 3.6, the site does exhibit exceedances in water. Three of the samples exceed the water quality objective.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Three of the 9 water samples exceeded the water quality criteria, and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use:	WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Basin Plan: No individual chemical or combination of chemicals shall be present in concentrations that adversely affect beneficial uses.
Evaluation Guideline:	DFG Evaluation guideline of 0.10 ug/L (Siepmann and Finlayson, 2000).
Data Used to Assess Water Quality:	Numeric data generated from 4 water samples from SWAMP and 5 water samples from USGS. Three of 9 samples exceeded the evaluation guideline (LeBlanc, et al. 2004; SWAMP, 2004).
Spatial Representation:	Five stations were sampled. All were situated along the New River from the international boundary with Mexico to the outlet (mouth) of New River in the Salton Sea. The boundary station had two exceedances and the outlet had one exceedance.
Temporal Representation:	Four samples were taken during the spring (May) and the fall (October) of 2002. Exceedances at both stations occurred in the fall sampling event. Five samples were collected in April 2003 and the diazinon concentration exceeded the evaluation guideline in one sample.
Environmental Conditions:	The New River flows from Mexico through the Imperial Valley in the Salton Sea. Most of the water flowing through it comes from agricultural return flows.
Data Quality Assessment:	SWAMP QAPP.

Region 7

Water Segment: New River (Imperial)

Pollutant: Dieldrin

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.5 and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Currently, New River (Imperial) is listed for pesticides. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to water quality impacts. There is sufficient justification for removing the general listings for pesticides from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

Two lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.5 and 3.6, the site does exhibit exceedances in tissue. Ten of the samples exceed the water quality objective.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Ten of the 13 tissue samples exceeded the water quality criteria, and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use:	FR - Freshwater Replenishment, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	USEPA: freshwater acute maximum = 0.24 ppb and freshwater chronic maximum = 0.056 ppb as a 4-day average.
Data Used to Assess Water Quality:	Data were collected by the RWQCB at four locations on the New River in 2003. All samples were non-detects with a detection limit of 0.012 ppb. Therefore, there were no exceedances (CRBRWQCB, 2004c).
Spatial Representation:	Data were collected at four locations on the New River, from the international boundary to the outlet to the Salton Sea.
Temporal Representation:	Samples were collected on 4/17/2003.
QA/QC Equivalent:	Used RWQCB QA/QC in sample collection. Lab analysis was done by E.S. Babcock & Sons laboratory and a Quality Assurance Manual was provided.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	FR - Freshwater Replenishment, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Colorado River Basin RWQCB Basin Plan: No individual chemical or combination of chemicals shall be present in concentrations that adversely affect beneficial uses.
Evaluation Guideline:	2 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Ten out of 13 samples exceeded. A total of 7 filet composite and individual samples of channel catfish, 5 filet composite and individual samples of carp, and one filet composite of tilapia were collected. Channel catfish were collected from 1992-99 and 2001-02. Carp were collected 1993-4, 1997, and 1999. Tilapia were collected in 1996. The guideline was exceeded in all samples except tilapia and 1994 and 1997 carp samples (TSMP, 2002).
Spatial Representation:	Two stations, one station located at the gauging station about one mile

	downstream of the Lack Road Bridge near Westmorland and the second station located near the international boundary.
Temporal Representation:	Samples were collected annually 1992-99 and 2001-02.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment: New River (Imperial)

Pollutant: Mercury

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.1 and 3.5 of the Listing Policy. Under section 3.1 and 3.5 a single line of evidence is necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. Two tissue samples exceeded the tissue guideline.

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

This conclusion is based on the staff findings that:
1. The sediment quality guideline used complies with the requirements of section 6.1.3 of the Policy.
2. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
3. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
4. Four of 113 water samples exceed the USEPA: freshwater chronic and acute guideline and this does not exceed the allowable frequency listed in Table 3.1, however 2 of 12 fish tissue samples exhibit toxicity exceeding the fish consumption standard, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy. The New River from the International Boundary to the USGS Station in Calexico only.
5. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use:	FR - Freshwater Replenishment, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	USEPA: freshwater chronic maximum = 0.77 ppb as a 4-day average and freshwater acute maximum = 1.4 ppb.
Data Used to Assess Water Quality:	Samples were collected monthly by the RWQCB from June 1995 to December 2003. Of the 98 monthly samples, 2 were in exceedance of the chronic criteria and 1 was in exceedance of the acute criteria. Samples were also collected by the RWQCB at 3 locations from 6/11/1996 to 12/4/1996. None of these 6 samples were in exceedance. Samples were also collected by the RWQCB from 10/31/1999 to 11/6/1999. One of these 9 samples was in exceedance of the acute criteria (CRBRWQCB, 2004c).
Spatial Representation:	The New River from the International Boundary to the USGS Station in Calexico only. The 98 and 9 samples were collected on the New River at the International Boundary. The 6 samples were collected on the New River at the International Boundary at the International Drain, and at the Puente Madero.
Temporal Representation:	The 98 samples were collected monthly from June 1995 through December 2003. The 6 samples were collected on 6 days from 6/11/1996 to 12/4/1996. The 9 samples were collected monthly from 10/31/1999 to 11/6/1999.
Environmental Conditions:	For the 98 samples, temperature, pH, D.O., and conductivity were also measured.
Data Quality Assessment:	Used RWQCB QA/QC in sample collection. Lab analysis was done by E.S. Babcock & Sons laboratory and a Quality Assurance Manual was provided.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	FR - Freshwater Replenishment, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Colorado River Basin RWQCB Basin Plan: No individual chemical or combination of chemicals shall be presenting concentration that adversely

	affect beneficial uses.
Evaluation Guideline:	0.3 ug/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Two out of 12 samples exceeded. A total of 7 filet composite and individual samples of channel catfish, 4 composite and individual samples of carp, and one composite of tilapia were collected. Channel catfish were collected in 1992-93, 1995, 1997-98, and 2001-02. Carp were collected in 1993-94 and 1997. Tilapia were collected in 1996. Two composite samples of carp in 1993-94 exceeded the guideline (TSMP, 2002).
Spatial Representation:	The New River from the International Boundary to the USGS Station in Calexico only. Two stations on the New River were samples: at the gauging station about one mile downstream of the Lack Road Bridge near Westmorland and near the international boundary.
Temporal Representation:	Samples were collected during the period of 1992-1998 and 2001-02.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment:	New River (Imperial)
Pollutant:	Pathogens
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.
Lines of Evidence:	

Line of Evidence	Remedial Program in Place
Beneficial Use	R1 - Water Contact Recreation, R2 - Non-Contact Recreation
Information Used to Assess Water Quality:	TMDL completed in 2002 (SWRCB, 2003).

Region 7

Water Segment: New River (Imperial)

Pollutant: Polychlorinated biphenyls

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.1 and 3.5 of the Listing Policy. Under section 3.1 and 3.5 a single line of evidence is necessary to assess listing status. Two lines of evidence are available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The sediment quality guideline used complies with the requirements of section 6.1.3 of the Policy.
2. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
3. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
4. None of 107 samples exceeded the USEPA: freshwater acute and chronic criteria. However, 10 of 13 samples exceeded the OEHHA Screening Value, and these do exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
5. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: FR - Freshwater Replenishment, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife

	Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	USEPA: freshwater acute total PCBs maximum = 2 ppb and freshwater chronic maximum as a 4-day average based on hardness.
Data Used to Assess Water Quality:	Data were collected by the RWQCB on 6/21/2001 at 9 different stations on the New River. All 9 samples were non-detects. There were no exceedances. Samples were also collected by the RWQCB from June 1995 to December 2003. None of these 98 samples were in exceedance (CRBRWQCB, 2004c).
Spatial Representation:	Samples were collected on the New River at the International Boundary.
Temporal Representation:	The 9 samples were collected on 6/21/2001 and the 98 samples were collected monthly from June 1995 to December 2003.
Environmental Conditions:	For the 98 samples, temperature, pH, D.O., and conductivity were also measured.
Data Quality Assessment:	Used RWQCB QA/QC in sample collection. Lab analysis was done by North Coast Labs.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	FR - Freshwater Replenishment, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Colorado River Basin RWQCB Basin Plan: No individual chemical or combination of chemicals shall be present in concentrations that adversely affect beneficial uses.
Evaluation Guideline:	20 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Ten out of 13 samples exceeded. A total of 7 filet composite and individual samples of channel catfish, 5 filet composite and individual samples of carp, and one filet composite of tilapia were collected. Channel catfish were collected in 1992-93, 1995, 1997-98, and 2001-02. Carp were collected in 1993-94, 1997, and 1999. Tilapia were collected in 1996. A 1994 carp sample, a 1995 channel catfish sample, and the 1996 tilapia sample had no detectable levels of PCB (TSMP, 2002).

Spatial Representation:	Two stations on the New River were sampled: at the gauging station about one mile downstream of the Lack Road Bridge near Westmorland and near the international boundary.
Temporal Representation:	Samples were collected during the period of 1992-1999 and 2001-02.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment: New River (Imperial)

Pollutant: Selenium

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Fourteen of 117 samples exceeded the water quality criteria and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards for the pollutant are exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: FR - Freshwater Replenishment, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	USEPA: freshwater chronic maximum = 5 ppb as a 4-day average.
Data Used to Assess Water Quality:	Samples were collected by the RWQCB from June 1995 through December 2003. Of the 98 monthly samples, 8 were in exceedance of the chronic criteria and 2 were in exceedance of the USEPA: freshwater acute maximum. Four samples were also collected during the spring and fall of 2002 and numerical data was generated from them. All four samples exceeded the CTR: 5 ug/L criterion. Samples were also collected by the RWQCB at three locations from 6/11/96 through 12/4/96. None of these 6 samples were in exceedance of the USEPA: freshwater acute maximum. Samples were collected by the RWQCB from 10/31/99 through 11/6/99. None of these 9 samples were in exceedance of the USEPA: freshwater acute maximum (CRBRWQCB, 2004c).
Spatial Representation:	Samples were collected on the New River at the International Boundary. The 6 samples were collected on the New River at the International Boundary, a the International Drain, and at Puente Madero. The 4 samples were samples at 2 stations, one at the International Boundary with Mexico and the other at the outlet (mouth) of the New River into the Salton Sea.
Temporal Representation:	The 98 samples were collected monthly from June 1995 through December 2003. The 6 samples were collected on 6 days from 6/11/1996 to 12/4/1996, the 9 samples were collected monthly from 10/31/1999 to 11/6/1999, and the 4 samples were collected during the spring and fall of 2002.
Environmental Conditions:	For the 98 samples, temperature, pH, D.O., and conductivity were also measured.
Data Quality Assessment:	Used RWQCB QA/QC in sample collection. Lab analysis was done by E.S. Babcock & Sons laboratory and a Quality Assurance Manual was provided. And the SWAMP QAPP was also used.

Region 7

Water Segment: New River (Imperial)

Pollutant: Toxaphene

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.5 and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Currently, New River (Imperial) is listed for pesticides. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to water quality impacts. There is sufficient justification for removing the general listings for pesticides from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

Two lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.5 and 3.6, the site does exhibit exceedances in tissue. Seven of the samples exceed the water quality objective.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Seven of the 17 tissue samples exceeded the water quality criteria, and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. Only the New River at Westmoreland station should be placed on the list.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination be placed on the section 303(d) list because water quality standards are exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use:	CM - Commercial and Sport Fishing (CA), IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	USEPA: freshwater acute maximum = 0.73 ppb and chronic maximum = 0.0002 ppb as a 4-day average.
Data Used to Assess Water Quality:	Data were collected by the RWQCB at 4 locations on the New River. All samples were below the detection limit (0.760 ppb), which is greater than the acute and chronic criteria. Therefore, the data cannot be assessed in comparison to the chronic criteria (CRBRWQCB, 2004c).
Spatial Representation:	Data were collected at four locations on the New River, from the international boundary to the outlet to the Salton Sea.
Temporal Representation:	Samples were collected on 4/17/2003.
Data Quality Assessment:	Used RWQCB QA/QC in sample collection. Lab analysis was done by E.S. Babcock & Sons laboratory and a Quality Assurance Manual was provided.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	CM - Commercial and Sport Fishing (CA), IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Colorado River Basin RWQCB Basin Plan: No individual chemical or combination of chemicals shall be presenting concentration that adversely affect beneficial uses.
Evaluation Guideline:	30 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Seven out of 13 samples exceeded. A total of 7 filet composite and individual samples of channel catfish, 5 composite and individual samples of carp, and one composite of tilapia were collected. Channel catfish were collected in 1992-93, 1995, 1997-98, and 2001-02. Carp were collected in 1993-94, 1997, and 1999. Tilapia were collected in 1996. Channel catfish samples exceeded the guideline in 1993, 1995, 1997-98 2001-02. Carp exceeded in 1999. Only the New River at Westmoreland station met the criteria in the Listing Policy (TSMP, 2002).

Spatial Representation:	Two stations on the New River were sampled: at the gauging station about one mile downstream of the Lack Road Bridge near Westmorland and near the international boundary. Only the New River at Westmoreland station should be placed on the list.
Temporal Representation:	Samples were collected during the period of 1992-1999 and 2001-02.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 7

Water Segment: New River (Imperial)

Pollutant: Toxicity

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.6 the site has significant sediment and water toxicity. While many pollutants are found in this water body it is uncertain which cause these effects.

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

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

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded.

Lines of Evidence:

Numeric Line of Evidence Toxicity

Beneficial Use: WA - Warm Freshwater Habitat

Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Basin Plan: All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal, or indigenous aquatic life.
Evaluation Guideline:	Significant toxicity as compared to control.
Data Used to Assess Water Quality:	Toxicity testing data generated from 4 sediment samples. Four of these samples were toxic (SWAMP, 2004).
Spatial Representation:	Three stations were sampled, all were situated along the New River from the international boundary with Mexico to the outlet (mouth) of New River into the Salton Sea.
Temporal Representation:	All samples were taken between the spring (May) and the fall (October) of 2002. Toxicity was detected during both seasons.
Environmental Conditions:	The New River flows from Mexico through the Imperial Valley in the Salton Sea. Most of the water flowing through it comes from agricultural return flows.
Data Quality Assessment:	SWAMP QAPP.

Numeric Line of Evidence	Toxicity
Beneficial Use:	WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Basin Plan: All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal, or indigenous aquatic life.
Evaluation Guideline:	Significant toxicity as compared to control.
Data Used to Assess Water Quality:	Toxicity testing data generated from 3 water samples. Three of these samples were toxic (SWAMP, 2004).
Spatial Representation:	Three stations were sampled, all were situated along the New River from the international boundary with Mexico to the outlet (mouth) of New River into the Salton Sea.
Temporal Representation:	All samples were taken between the spring (May) and the fall (October) of

2002. Toxicity was detected during both seasons.

Environmental Conditions: The New River flows from Mexico through the Imperial Valley in the Salton Sea. Most of the water flowing through it comes from agricultural return flows.

Data Quality Assessment: SWAMP QAPP.

Region 7

Water Segment: Palo Verde Outfall Drain

Pollutant: DDT

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Four of the 11 samples exceeded the OEHHA Screening Value and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Colorado River Basin RWQCB Basin Plan: No individual chemical or combination of chemicals shall be present in concentrations that adversely

	affect beneficial uses.
Evaluation Guideline:	100 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Four out of 11 samples exceeded. A total of 10 filet composite samples and one individual sample of largemouth bass, carp, channel catfish, and flathead catfish were collected. Carp were collected in 1992 and 1995. Channel catfish were collected in 1995. Flathead catfish were collected in 1992 and 2000. The 2000 sample of flathead was the lone individual sample. Largemouth bass were collected in 1995-96 and 1998-2002. The guideline was exceeded in the 1992 and 1995 carp samples, the 1992 fathead sample, and the 1995 channel catfish sample. Largemouth bass did not exceed the guideline (TSMP, 2002).
Spatial Representation:	One station located from the boat ramp off Clark Way in Palo Verde downstream 3/4 of a mile was sampled.
Temporal Representation:	Samples were collected annually 1992, 1995-96, 1998-2002.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Fact Sheets Supporting
Revision of the Section 303(d) List

September 2005

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Santa Ana Region (8)

LIST

Recommendations to place waters and pollutants on the section 303(d) List

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Region 8

Water Segment: Anaheim Bay

Pollutant: Polychlorinated biphenyls

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health.

Evaluation Guideline:	20 ng/g (OEHHA Screening Value)
Data Used to Assess Water Quality:	Three out of 4 samples exceeded. All 5 samples were filet composites representing the following species: diamond turbot, shiner surfperch, black surfperch, and yellowfin croaker. All but the diamond turbot exceeded guideline (TSMP, 2002).
Spatial Representation:	One station sampled in Anaheim Bay.
Temporal Representation:	Samples were collected in June and October 1999.
Data Quality Assessment:	CFCP 1998 Year 1 QA Summary of Pesticides and PCBs. California Department of Fish and Game. CDFG Fish and Wildlife Water Pollution Control Laboratory Data Quality Assurance Report. 1999 Coastal Fish Contamination Program (CFCP Year 2). California Department of Fish and Game.

Region 8

Water Segment: Anaheim Bay

Pollutant: Toxicity

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6, waters may be placed on the 303(d) list for toxicity alone.

One line of evidence is available in the administrative record to assess this pollutant. A large number of samples were toxic.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Twenty-three of 63 samples exceeded the (90 percent of the minimum significant difference for test species Eohaustorius estuarius) and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Toxicity

Beneficial Use: MA - Marine Habitat

Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Basin Plan Narrative Water Quality Objective: The concentrations of toxic substances in the water column, sediments or biota shall not adversely affect beneficial uses.
Data Used to Assess Water Quality:	Twenty-three of 63 samples exceeded the 90 percent of the minimum significant difference for test species Eohaustorius estuarius. Nine of 31 samples exhibited toxicity in the dry season (8/25/01), and 17 of 33 exhibited toxicity in the wet season (4/14/03) (Santa Ana RWQCB, 2004).
Spatial Representation:	Samples were collected at stations 1 through 35 in Anaheim Bay.
Temporal Representation:	Data were collected on 8/25/01 and 4/14/2003.
Environmental Conditions:	Samples were collected during dry (8/25/01) and wet (4/14/03) seasons.
Data Quality Assessment:	SARWQCB followed the Bight 1998 QAPP developed by SCCWRP.
QA/QC Equivalent:	Quality control data was presented.

Region 8

Water Segment: Balboa Beach

Pollutant: DDT

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Four of the 21 samples exceeded the OEHHA Screening Value and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels

	which are harmful to human health.
Evaluation Guideline:	100 ng/g - OEHHA Screening Value (Newport Pier Health Advisory for DDT & PCB).
Data Used to Assess Water Quality:	Four out of 21 samples exceeded. All 21 samples were filet composites representing the following species: barred surfperch, black surfperch, California corbina, diamond turbot, shiner surfperch, spotted scorpionfish, spotted turbot, walleye surfperch, white croaker, and yellowfin croaker. Walleye surfperch from Balboa Pier and Newport Beach exceeded guideline. Shiner surfperch from Newport Beach and Newport Jetty also exceeded guideline (TSMP, 2002).
Spatial Representation:	Four stations were sampled: Newport Beach (Newport Pier, Newport Beach) and Balboa Beach (Balboa Pier, Newport Jetty).
Temporal Representation:	Samples were collected in May, June, August, October, November 1999 and April 2000.
Data Quality Assessment:	CFCP 1998 Year 1 QA Summary Pesticides and PCBs. California Department of Fish and Game. CDFG Fish and Wildlife Water Pollution Control Laboratory Data Quality Assurance Report. 1999 Coastal Fish Contamination Program (CFCP Year 2). California Department of Fish and Game.

Region 8

Water Segment: Balboa Beach

Pollutant: Dieldrin

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of the 21 samples exceeded the OEHHA Screening Value and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels

	which are harmful to human health.
Evaluation Guideline:	2.0 ng/g - OEHHA Screening Value (Newport Pier Health Advisory for DDT & PCB).
Data Used to Assess Water Quality:	Two out of 21 samples exceeded. All 21 samples were filet composites representing the following species: barred surfperch, black surfperch, California corbina, diamond turbot, shiner surfperch, spotted scorpionfish, spotted turbot, walleye surfperch, white croaker, and yellowfin croaker. Only walleye surfperch and shiner surfperch from Newport Beach exceeded guideline. Dieldrin in all other samples was not detected at the detection limit of 2.0 ng/g (TSMP, 2002).
Spatial Representation:	Four stations were sampled: Newport Beach (Newport Pier, Newport Beach) and Balboa Beach (Balboa Pier, Newport Jetty).
Temporal Representation:	Samples were collected in May, June, August, October, November 1999 and April 2000.
Data Quality Assessment:	CFCP 1998 Year 1 QA Summary Pesticides and PCBs. California Department of Fish and Game. CDFG Fish and Wildlife Water Pollution Control Laboratory Data Quality Assurance Report. 1999 Coastal Fish Contamination Program (CFCP Year 2). California Department of Fish and Game.

Region 8

Water Segment: Balboa Beach

Pollutant: Polychlorinated biphenyls

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Nine of the 21 samples exceeded the OEHHA Screening Value and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels

	which are harmful to human health.
Evaluation Guideline:	20 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Nine out of 21 samples exceeded. All 21 samples were filet composites representing the following species: barred surfperch, black surfperch, California corbina, diamond turbot, shiner surfperch, spotted scorpionfish, spotted turbot, walleye surfperch, white croaker, and yellowfin croaker. Four out of six samples at Newport Beach, two out of six at Newport Pier, two out of four at Balboa Pier, and one out of five at Newport Jetty exceeded guideline (TSMP, 2002).
Spatial Representation:	Four stations were sampled: Balboa Pier, Newport Beach, Newport Jetty, and Newport Pier.
Temporal Representation:	Samples were collected in May, June, August, October, November 1999 and April 2000.

Region 8

Water Segment: Big Bear Lake

Pollutant: Mercury

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. Under section 3.5 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. A large number of samples exceed the OEHHA screening value.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Four of 30 samples exceeded the 0.3 OEHHA mg/kg (ppm) wet weight screening value and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, MI - Fish Migration, R1 - Water Contact Recreation, RA - Rare & Endangered Species, SP - Fish Spawning, WA - Warm Freshwater Habitat

Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Toxic Substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels harmful to humans.
Evaluation Guideline:	The OEHHA screening value for mercury 0.3 mg/kg (ppm) wet weight (OEHHA, 1999).
Data Used to Assess Water Quality:	Four of 30 composite samples exceeded the OEHHA screening values (TSMP, 2002).
Spatial Representation:	Sample were collected from stations 801.71.07; 801.71.08; 801.71.10; 801.71.12.
Temporal Representation:	Samples were collected between May 1984 and July 2000.
Data Quality Assessment:	These data were collected as part of the California Toxic Substances Monitoring Program.

Region 8

Water Segment: Big Bear Lake

Pollutant: Polychlorinated biphenyls

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Four of the 12 samples exceeded the OEHHA Screening Value and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels

	which are harmful to human health.
Evaluation Guideline:	20 ng/g (OEHHA Screening Value)
Data Used to Assess Water Quality:	Four out of 12 samples exceeded. A total of 9 filet composite samples of largemouth bass and 3 filet composite samples of carp were collected. Largemouth bass were collected in 1994-95 and 2000-01. Carp were collected in 2000-01. The guideline was exceeded in all three carp samples and one largemouth bass sample collected in 2000. Seven smaller size largemouth bass samples had undeletable levels of PCBs (TSMP, 2002).
Spatial Representation:	Three stations were sampled: at Metcalf and Grout Bays, about 200 yards from the dam along the south shore, and in the vicinity of the mouth of Rathbone Creek.
Temporal Representation:	Samples were collected annually 1994-95 and 2000-01.
Data Quality Assessment:	Toxic Substances Monitoring Program 1994-95 Data Report. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 8

Water Segment: Elsinore, Lake

Pollutant: Polychlorinated biphenyls

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Five of the 6 samples exceeded the OEHHA Screening Value and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels

	which are harmful to human health.
Evaluation Guideline:	20 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Five out of 6 samples exceeded. A total of 6 filet composite samples of carp were collected. Carp were collected in 1994-95 and 2000-2002. The guideline was exceeded in every sample except in 1994 (TSMP, 2002).
Spatial Representation:	One station located west of Interstate 15.
Temporal Representation:	Samples were collected annually 1994-95 and 2000-02
Data Quality Assessment:	Toxic Substances Monitoring Program 1994-95 Data Report. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 8

Water Segment: Huntington Beach State Park

Pollutant: Polychlorinated biphenyls

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Four of the 6 samples exceeded the OEHHA Screening Value and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA), MA - Marine Habitat

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels

	which are harmful to human health.
Evaluation Guideline:	20 ng/g (OEHHA Screening Value)
Data Used to Assess Water Quality:	Four out of 6 samples exceeded. All 6 samples were filet composites representing the following species: barred surfperch, black surfperch, kelp bass, opaleye, shiner surfperch, and yellowfin croaker. Black surfperch and kelp bass from Emma Oil Platform, shiner surfperch from Huntington Beach and yellowfin croaker from Huntington Beach Pier exceeded guideline (TSMP, 2002).
Spatial Representation:	Three stations were sampled: Huntington Beach, Huntington Beach Pier, and Emma Oil Platform.
Temporal Representation:	Samples were collected in March and October 1999.
Data Quality Assessment:	CFCP 1998 Year 1 QA Summary: Pesticides and PCBs. California Department of Fish and Game. CDFG Fish and Wildlife Water Pollution Control Laboratory Data Quality Assurance Report. 1999 Coastal Fish Contamination Program (CFCP Year 2). California Department of Fish and Game.

Region 8

Water Segment: Huntington Harbour

Pollutant: Chlordane

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 two lines of evidence are necessary to assess listing status. One line of evidence documents toxicity and the other line of evidence associates the observed toxicity with a pollutant or pollutants

Two lines of evidence are available in the administrative record to assess this pollutant. These includes sediment chemical data and sediment toxicity data.

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

This conclusion is based on the staff findings that:
1. The sediment quality guideline used complies with the requirements of section 6.1.3 of the Policy.
2. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
3. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
4. Seven of 66 samples exceeded the 6 ng/g (ppb) dry weight ERM sediment guideline (Long et al., 1995), and 63 of 66 samples exceeded the 90 percent of the minimum significant difference for test species Eohaustorius estuarius, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
5. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence	Pollutant-Sediment
Beneficial Use:	MA - Marine Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	The ERM sediment quality guideline for chlordane is 6 ng/g (ppb) dry weight (Long et. al., 1995).
Data Used to Assess Water Quality:	Seven of 66 samples exceeded the ERM (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected at stations 36 through 72 in Huntington Harbor.
Temporal Representation:	Samples were collected on 08/08/2001 and 02/27/2003.
Environmental Conditions:	Samples were collected during dry season (8/8/01) and wet season (2/27/03).
Data Quality Assessment:	SARWQCB followed the Bight 1998 QAPP developed by SCCWRP.
QA/QC Equivalent:	Quality control data was presented.

Numeric Line of Evidence	Toxicity
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: " The concentration of toxic pollutants in the water column, sediment or biota shall not adversely affect beneficial use."
Data Used to Assess Water Quality:	Sixty-three of 66 samples exceeded the 90 percent of the minimum significant difference for test species Eohaustorius estuarius. Thirty-two of 33 samples exhibited toxicity in the dry season (8/7/01 and 8/8/03), and 31 of 33 exhibited toxicity in the wet season (2/24/03) (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected at stations 36 through 72 in Huntington Harbour.
Temporal Representation:	Samples were collected on 8/7/01, 8/8/01 and 2/24/03.

Environmental Conditions:	Samples were collected during wet (8/7/01, 8/8/01) and dry season (2/24/03).
Data Quality Assessment:	SARQWCB followed the Bight 1998 QAPP developed by SCCWRP.

Region 8

Water Segment: Huntington Harbour

Pollutant: Lead

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 two lines of evidence are necessary to assess listing status. One line of evidence documents toxicity and the other line of evidence associates the observed toxicity with a pollutant or pollutants.

Two lines of evidence are available in the administrative record to assess this pollutant. Toxicity is observed and a sufficient number of samples exceed the PEL sediment quality guideline.

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

This conclusion is based on the staff findings that:
1. A sediment quality guideline is available that complies with the requirements of section 6.1.3 of the Policy.
2. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
3. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
4. Seven of 65 samples exceeded the PEL sediment quality guideline and this exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
5.Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded.

Lines of Evidence:

Numeric Line of Evidence	Pollutant-Sediment
Beneficial Use:	MA - Marine Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Evaluation Guideline:	PEL sediment quality guideline for lead is 112.18 ug/g/dw.
Data Used to Assess Water Quality:	Seven of 65 samples were collected exceeded the PEL sediment quality guideline (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected at stations 36 through 72 in Huntington Harbor.
Temporal Representation:	Samples were collected on 08/08/2001 and 02/27/2003.
Environmental Conditions:	Samples were collected during dry season (8/8/01) and wet season (2/27/03).
Data Quality Assessment:	SARWQCB followed the Bight 1998 QAPP developed by SCCWRP.
QA/QC Equivalent:	Quality control data was presented.

Numeric Line of Evidence	Toxicity
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: " The concentration of toxic pollutants in the water column, sediment or biota shall not adversely affect beneficial use."
Data Used to Assess Water Quality:	Sixty-three of 66 samples exceeded the 90 percent of the minimum significant difference for test species Eohaustorius estuarius. Thirty-two of 33 samples exhibited toxicity in the dry season (8/7/01 and 8/8/03), and 31 of 33 exhibited toxicity in the wet season (2/24/03) (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected at stations 36 through 72 in Huntington Harbour.

Temporal Representation:	Samples were collected on 8/7/01, 8/8/01 and 2/24/03.
Environmental Conditions:	Samples were collected during wet (8/7/01, 8/8/01) and dry season (2/24/03).
Data Quality Assessment:	SARQWCB followed the Bight 1998 QAPP developed by SCCWRP.

Region 8

Water Segment: Huntington Harbour

Pollutant: Toxicity

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 waters may be placed on the 303(d) list for toxicity alone.

One line of evidence is available in the administrative record to assess this toxicity condition. A substantial number of sediment samples were toxic and a pollutant is causing or contributing to the toxic effect.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Sixty-three of 66 samples exceeded the 90 percent of the minimum significant difference for test species Eohaustorius estuarius.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Toxicity

Beneficial Use: ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat

Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: " The concentration of toxic pollutants in the water column, sediment or biota shall not adversely affect beneficial use."
Data Used to Assess Water Quality:	Sixty-three of 66 samples exceeded the 90 percent of the minimum significant difference for test species Eohaustorius estuarius. Thirty-two of 33 samples exhibited toxicity in the dry season (8/7/01 and 8/8/03), and 31 of 33 exhibited toxicity in the wet season (2/24/03) (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected at stations 36 through 72 in Huntington Harbour.
Temporal Representation:	Samples were collected on 8/7/01, 8/8/01 and 2/24/03.
Environmental Conditions:	Samples were collected during wet (8/7/01, 8/8/01) and dry season (2/24/03).
Data Quality Assessment:	SARQWCB followed the Bight 1998 QAPP developed by SCCWRP.

Region 8

Water Segment:	Newport Bay, Lower
Pollutant:	Chlorpyrifos
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	ES - Estuarine Habitat
Information Used to Assess Water Quality:	A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Newport Bay Watershed Diazinon/Chlorpyrifos TMDL was approved by RWQCB on April 4, 2003 and subsequently approved by USEPA on February 13, 2004.
Non-Numeric Objective:	The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses.

Region 8

Water Segment: Newport Bay, Lower

Pollutant: Copper

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.1 of the Listing Policy. Under section 3.1 One line of evidence is necessary to assess listing status. Three lines of evidence are available in the administrative record to assess this pollutant. A sufficient number of samples exceed the CTR criteria. Sediment toxicity has been documented, but none of the samples exceeded the sediment quality guideline in this water body.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 2 samples exceeded the CTR criteria.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

Currently, Newport Bay, lower, is listed for metals. It is not possible in a general listing to determine which specific metal is causing or contributing to a water quality impacts. There is sufficient justification for removing the general listings for metals from the 303(d) list and replace these general listings with the specific metals found to be exceeding.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards for the pollutant are exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Sediment

Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	The concentration of toxic substances in the water column, sediments or biota shall not adversely affect beneficial uses.
Evaluation Guideline:	The ERM sediment quality guideline for copper is 270 ug/g (ppm) dry weight (Long et al., 1995).
Data Used to Assess Water Quality:	None of 3 samples exceeded the ERM (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected at the Lower Newport Bay at stations 2137, 2136, and 2142.
Temporal Representation:	Sample were collected in May 2002.
Data Quality Assessment:	SCCWRP QAPP was used.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	CTR Criterion Continuous Concentration for dissolved Copper in saltwater is 3.1 ug/l for the protection of aquatic life.
Data Used to Assess Water Quality:	Two of two samples taken at different sampling stations exceeded the CTR CCC Criteria.
Spatial Representation:	Two sample sites located in Lower Newport Bay at Harbor Inner Reach and at the PCH Bridge.
Temporal Representation:	Samples were taken 10/29/02.
Data Quality Assessment:	USEPA Quality Assurance Plan

Numeric Line of Evidence	Toxicity

Beneficial Use:	MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: The concentration of toxic substances in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Data Used to Assess Water Quality:	Toxicity Results (Bay and Greenstein, 2003). -Five of 15 sediment samples exhibited significantly toxic to amphipods. -Fifteen of 15 pore water samples collected had significant effect on Purple Urchin larval development. -One of 15 sediment water interface samples were significantly toxic to Purple Sea Urchin. -Five of 15 sediment water interface samples were significantly toxic to the fertilization test.
Spatial Representation:	Samples were collected from 13 sites.
Temporal Representation:	Samples were collected in September 1994, June 1996, and August 1997.
Data Quality Assessment:	Study was conducted by the California Department of Fish and Game.
QA/QC Equivalent:	QA/QC information is contained in the document

Region 8

Water Segment: Newport Bay, Lower

Pollutant: DDT

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.5 and 3.6 of the Listing Policy. Multiple lines of evidence are available in the administrative record to assess this pollutant. A sufficient number of tissue samples exceed the OEHHA screening value. Toxicity has been documented in sediment and there is significant biological community degradation in the water segment. However, it is not possible to determine exceedances of sediment samples because there are no applicable sediment quality guidelines for DDT.

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

This conclusion is based on the staff findings that:
1. The tissue, sediment, toxicity and community degradation measurements used satisfy the data quality requirements of section 6.1.4 of the Policy.
2. The tissue, sediment, toxicity and community degradation data used satisfy the data quantity requirements of section 6.1.5 of the Policy.
3. Eighteen of 56 tissue samples taken exceed the total DDT OEHHA screening value. There is significant sediment toxicity and biological community degradation documented. But exceedances in sediment samples cannot be determined because there is no applicable sediment quality guideline for this pollutant. These samples exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use:	MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health.
Evaluation Guideline:	100 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Two of 5 samples exceeded. All 5 samples were filet composites representing the following species: diamond turbot, shiner surfperch, spotted turbot, and yellowfin croaker. Two samples of shiner surfperch exceeded guideline (TSMP, 2002).
Spatial Representation:	One station was sampled located at Pacific Coast Highway Bridge in Newport Bay.
Temporal Representation:	Samples were collected in May and October 1999.
Data Quality Assessment:	CFCP 1998 Year 1 QA Summary of` Pesticides and PCBs. California Department of Fish and Game. CDFG Fish and Wildlife Water Pollution Control Laboratory Data Quality Assurance Report - 1999 Coastal Fish Contamination Program (CFCP Year 2). Department of Fish and Game.

Numeric Line of Evidence	Pollutant-Sediment
Beneficial Use:	MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Evaluation Guideline:	There is no applicable sediment quality guideline available.
Data Used to Assess Water Quality:	Three samples were collected (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected at sites 2137, 2136, and 2142 in lower Newport Bay.
Temporal Representation:	Samples were collected in May 2002.
Data Quality Assessment:	SCCWRP QAPP was used.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	CM - Commercial and Sport Fishing (CA), MA - Marine Habitat, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels harmful to humans.
Evaluation Guideline:	The OEHHA screening value is 100 ug/kg (ppb) wet weight (OEHHA, 1999).
Data Used to Assess Water Quality:	Sixteen of 51 samples exceeded the OEHHA screening value. Ten of 40 sample exceeded in the outer and 6 of 11 exceeded in the inner Lower Newport Bay. Three of the 18 samples collected between June - July 2001 in the outer Lower Bay were 2 - 4 times higher than the OEHHA screening value of 100 ug/L (TSMP, 2002).
Spatial Representation:	Samples were collected in the Lower Newport Bay in the inner and outer Lower Bay.
Temporal Representation:	Samples were collected in November 2000-January 2001, June-July 2001, and March-April & August-September 2002. In the outer bay, 1 sample exceeded during November 200 - January 2001; and 6 samples during June - July 2001; and 3 samples exceeded during March-April and August-September 2001. In the inner bay; 1 sample exceeded during June-July 2001 and 5 during March-April and August-September 2001.
Data Quality Assessment:	SCCWRP QAPP was used.
QA/QC Equivalent:	The report shows evidence of lab QC such as spikes and replicates.

Numeric Line of Evidence	Toxicity
Beneficial Use:	MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: The concentration of toxic substances in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).

Data Used to Assess Water Quality:	Toxicity Results (Bay and Greenstein, 2003). -Five of 15 sediment samples exhibited significantly toxic to amphipods. -Fifteen of 15 pore water samples collected had significant effect on Purple Urchin larval development. -One of 15 sediment water interface samples were significantly toxic to Purple Sea Urchin. -Five of 15 sediment water interface samples were significantly toxic to the fertilization test.
Spatial Representation:	Samples were collected from 13 sites.
Temporal Representation:	Samples were collected in September 1994, June 1996, and August 1997.
Data Quality Assessment:	Study was conducted by the California Department of Fish and Game.
QA/QC Equivalent:	QA/QC information is contained in the document

Numeric Line of Evidence	Population/Community Degradation
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective for Toxic substances: the concentration of toxic substances in the water column, sediments, and biota shall not adversely affect beneficial uses.
Data Used to Assess Water Quality:	Four of 16 samples exhibited significant biological community degradation (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected from 16 sites.
Temporal Representation:	Samples were collected in September 1994, June 1996, and August 1997.
Data Quality Assessment:	Study was conducted by the California Department of Fish and Game.
QA/QC Equivalent:	QA/QC information is contained in the document.

Region 8

Water Segment:	Newport Bay, Lower
Pollutant:	Diazinon
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	ES - Estuarine Habitat
Information Used to Assess Water Quality:	A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Newport Bay Watershed Diazinon/Chlorpyrifos TMDL was approved by RWQCB on April 4, 2003 and subsequently approved by USEPA on February 13, 2004.
Non-Numeric Objective:	The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses.

Region 8

Water Segment: Newport Bay, Lower

Pollutant: Fecal Coliform

Decision: List

Weight of Evidence: This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle.

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

SWRCB Staff Recommendation: After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence Remedial Program in Place

Beneficial Use R1 - Water Contact Recreation

Information Used to Assess Water Quality: TMDL completed in 2000 (SWRCB, 2003).

Non-Numeric Objective:

Region 8

Water Segment: Newport Bay, Lower

Pollutant: Nutrients

Decision: List

Weight of Evidence: This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle.

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

SWRCB Staff Recommendation: After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence Remedial Program in Place

Beneficial Use WA - Warm Freshwater Habitat

Information Used to Assess Water Quality: TMDL completed in 1999 (SWRCB, 2003).

Non-Numeric Objective:

Region 8

Water Segment: Newport Bay, Lower

Pollutant: Polychlorinated biphenyls

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 and 3.6 of the Listing Policy.

Currently, Newport Bay is listed for organics. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to a water quality impacts. There is sufficient justification for removing the general listings for organics from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. There were 29 of 130 samples that exceeded the guidelines, and this exceeds the allowable frequency of the Listing Policy. Sediment toxicity is also documented in this water body and this pollutant could cause or contribute to the toxic effect.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use:	CM - Commercial and Sport Fishing (CA)
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health.
Evaluation Guideline:	20 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Three out of 5 samples exceeded. All 5 samples were filet composites representing the following species: diamond turbot, shiner surfperch, spotted turbot, and yellowfin croaker. Two samples of shiner surfperch and one yellowfin croaker exceeded the guideline (TSMP, 2002).
Spatial Representation:	One station was sampled located at Pacific Coast Highway Bridge in Newport Bay.
Temporal Representation:	Samples were collected in May and October 1999.
Data Quality Assessment:	CFCP 1998 Year 1 QA Summary: Pesticides and PCBs. California Department of Fish and Game. CDFG Fish and Wildlife Water Pollution Control Laboratory Data Quality Assurance Report. 1999 Coastal Fish Contamination Program (CFCP Year 2). California Department of Fish and Game.

Numeric Line of Evidence	Pollutant-Sediment
Beneficial Use:	CM - Commercial and Sport Fishing (CA), MA - Marine Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	The concentration of toxic substances in the water column, sediments or biota shall not adversely affect beneficial uses.
Evaluation Guideline:	The sediment quality guideline is 400 ng/g (ppb) dry weight (MacDonald et al., 2000).
Data Used to Assess Water Quality:	None of the 3 samples exceeded the sediment quality guideline (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected at sites 2137, 2136, and 2142 in the Lower Newport Bay.
Temporal Representation:	Samples were collected in May 2002.

Data Quality Assessment:	SCCWRP QAPP was used.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	CM - Commercial and Sport Fishing (CA), SH - Shellfish Harvesting
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels harmful to humans.
Evaluation Guideline:	The OEHHA value for fish consumption is 20 ug/kg (ppb) wet weight (OEHHA, 1999).
Data Used to Assess Water Quality:	Ten of 50 samples exceeded the OEHHA value (4 of 30 outer and 6 of 11 inner) (TSMP, 2002).
Spatial Representation:	Samples were collected in inner and outer Lower Newport Bay.
Temporal Representation:	Samples were collected in November 2000-January 2001, June-July 2001, and March-April & August-September 2002.
Data Quality Assessment:	SCCWRP QAPP was used.
QA/QC Equivalent:	The report shows evidence of lab QC such as spikes and replicates.

Numeric Line of Evidence	Toxicity
Beneficial Use:	MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: The concentration of toxic substances in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Data Used to Assess Water Quality:	Toxicity Results (Bay and Greenstein, 2003). -Five of 15 sediment samples exhibited significantly toxic to amphipods. -Fifteen of 15 pore water samples collected had significant effect on Purple Urchin larval development. -One of 15 sediment water interface samples were significantly toxic to Purple Sea Urchin. -Five of 15 sediment water interface samples were significantly toxic to

	the fertilization test.
Spatial Representation:	Samples were collected from 13 sites.
Temporal Representation:	Samples were collected in September 1994, June 1996, and August 1997.
Data Quality Assessment:	Study was conducted by the California Department of Fish and Game.
QA/QC Equivalent:	QA/QC information is contained in the document

Line of Evidence	Pollutant-Tissue
Beneficial Use	CM - Commercial and Sport Fishing (CA), SH - Shellfish Harvesting
Evaluation Guideline:	The 20 ppb (ww) OEHHA screening value was used.
Data Used to Assess Water Quality:	Sixteen of 72 samples exceeded the OEHHA value. The summary reports that 7 of 21 samples were in exceeded in 2001 and 9 of 51 exceeded in 2003 (TSMP, 2002).
Spatial Representation:	Samples were collected at the Lower Newport Bay at NPDES monitoring stations.
Temporal Representation:	Assessment summaries were written for data as of 06/2001 and 04/2003.

Region 8

Water Segment: Newport Bay, Lower

Pollutant: Sedimentation/Siltation

Decision: List

Weight of Evidence: This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle.

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

SWRCB Staff Recommendation: After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence Remedial Program in Place

Beneficial Use WA - Warm Freshwater Habitat

Information Used to Assess Water Quality: TMDL completed in 1999 (SWRCB, 2003).

Non-Numeric Objective:

Region 8

Water Segment:	Newport Bay, Upper (Ecological Reserve)
Pollutant:	Chlorpyrifos
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	ES - Estuarine Habitat
Information Used to Assess Water Quality:	A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Newport Bay Watershed Diazinon/Chlorpyrifos TMDL was approved by RWQCB on April 4, 2003 and subsequently approved by USEPA on February 13, 2004.
Non-Numeric Objective:	The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).

Region 8

Water Segment: Newport Bay, Upper (Ecological Reserve)

Pollutant: Copper

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.1 of the Listing Policy. Under section 3.1 one line of evidence is necessary to assess listing status. Four lines of evidence are available in the administrative record to assess this pollutant. A sufficient number of samples exceed the CTR criteria. Sediment toxicity has been documented, but none of the samples exceeded the sediment quality guideline in this water body.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 6 samples exceeded the CTR criteria.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

Currently, Newport Bay, upper, is listed for metals. It is not possible in a general listing to determine which specific metal is causing or contributing to a water quality impacts. There is sufficient justification for removing the general listings for metals from the 303(d) list and replace these general listings with the specific metals found to be exceeding.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use:	BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, MA - Marine Habitat, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	CTR Criterion Continuous Concentration for dissolved Copper in saltwater is 3.1 ug/l for the protection of aquatic life.
Data Used to Assess Water Quality:	Two of four samples taken at different sampling stations exceeded the CTR CCC Criteria (Bay and Greenstein, 2003).
Spatial Representation:	Four sampling sites located in Upper Newport Bay at North Star Beach and at the mouth of San Diego Creek.
Temporal Representation:	Samples taken between 8/28/01 and 10/29/02.
Data Quality Assessment:	USEPA Quality Assurance plan

Numeric Line of Evidence	Pollutant-Sediment
Beneficial Use:	BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, MA - Marine Habitat, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Evaluation Guideline:	The ERM sediment quality guideline for copper is 270 ug/g (ppm) dry weight (Long et al., 1995).
Data Used to Assess Water Quality:	None of the 2 samples exceeded the ERM sediment quality guideline One sample was collected on each day at each location for each metal constituent. Acid volatile results indicate no pore water problem due to copper (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected in the Upper Newport Bay (NB10).
Temporal Representation:	Samples were collected in November 2001 and March 2002.

Data Quality Assessment:	SCCWRP QAPP was used.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, MA - Marine Habitat, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the CTR saltwater chronic criteria is 3.1 ug/L.
Data Used to Assess Water Quality:	None of the 2 samples exceeded the CTR criteria.
Spatial Representation:	Samples were collected at Upper Newport Bay (NB10)
Temporal Representation:	Samples were collected in November 2001 and March 2002. One sample was collected on each day.
Data Quality Assessment:	SCCWRP QAPP was used.

Numeric Line of Evidence	Toxicity
Beneficial Use:	MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: The concentration of toxic substances in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Data Used to Assess Water Quality:	Toxicity Results (Bay and Greenstein, 2003): Five of 15 sediment samples were significant toxic to amphipods. Fifteen of 15 pore water samples collected had significant effect in Purple Urchin larval development. One of 15 sediment water interface samples were was significantly toxic to Purple Sea Urchin. Five of 15 sediment water interface samples were significantly toxic to the fertilization test.
Spatial Representation:	Samples were collected from 15 sites.

Temporal Representation:	Samples were collected in September 1994, June 1996, and August 1997.
Data Quality Assessment:	Study was conducted by the California Department of Fish and Game.
QA/QC Equivalent:	QA/QC information is contained in the document .

Region 8

Water Segment: Newport Bay, Upper (Ecological Reserve)

Pollutant: DDT

Decision: List

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Eight of 23 samples exceeded the 100 ug/kg (ppb) wet weight OEHHA screening value (OEHHA, 1999). For toxicity; Five of 15 sediment samples were significant toxic to amphipods. Fifteen of 15 pore water samples collected had significant effect in Purple Urchin larval development. One of 15 sediment water interface samples were was significantly toxic to Purple Sea Urchin. Five of 15 sediment water interface samples were significantly toxic to the fertilization test.
For benthic degradation; 4 of 16 samples exhibited significant biological community degradation. Three samples were collected, however number of exceedances cannot be determined due to the unavailability of an applicable sediment quality guideline for total DDT. These exceedances meet the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence	Population/Community Degradation
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: Toxic substances. The concentration of toxic substances in the water column, sediments, biota shall not adversely affect beneficial uses.
Data Used to Assess Water Quality:	Four of 16 samples exhibited significant biological community degradation (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected from 16 sites.
Temporal Representation:	Samples were collected in September 1994, June 1996, and August 1997.
Data Quality Assessment:	QAPP Information Study was conducted by the California Department of Fish and Game.
QA/QC Equivalent:	QA/QC information is contained in the document.

Numeric Line of Evidence	Toxicity
Beneficial Use:	MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: The concentration of toxic substances in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Data Used to Assess Water Quality:	Toxicity Results (Bay and Greenstein, 2003): Five of 15 sediment samples were significant toxic to amphipods. Fifteen of 15 pore water samples collected had significant effect in Purple Urchin larval development. One of 15 sediment water interface samples were was significantly toxic to Purple Sea Urchin. Five of 15 sediment water interface samples were significantly toxic to the fertilization test.
Spatial Representation:	Samples were collected from 15 sites.
Temporal Representation:	Samples were collected in September 1994, June 1996, and August 1997.

Data Quality Assessment:	Study was conducted by the California Department of Fish and Game.
QA/QC Equivalent:	QA/QC information is contained in the document .

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, MA - Marine Habitat, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health.
Evaluation Guideline:	100 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Three out of 7 samples exceeded. Filet composite samples of diamond turbot (1997) and striped mullet (2002) were collected. Individual samples of brown smoothhound shark (1998), orangemouth corvina (1999), California halibut (2000), round stingray (2001), and spotted sand bass (2002) were also collected. The guideline was exceeded in the diamond turbot, striped mullet, and spotted sand bass samples (TSMP, 2002).
Spatial Representation:	Two stations in Upper Newport Bay were sampled: mouth of the channel, around the corner into the preserve from the DFG Marine Studies Center (Ecological Reserve); Newport Dunes Aquatic Park across from the public boat launch ramp (Newport Dunes).
Temporal Representation:	Samples were collected annually 1997-2002.
Data Quality Assessment:	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, MA - Marine Habitat, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare &

	Endangered Species, SH - Shellfish Harvesting, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Toxic Substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels harmful to humans (SARWQCB, 1995).
Evaluation Guideline:	The OEHHA screening value for DDT is 100 ug/kg (ppb) wet weight (OEHHA, 1999).
Data Used to Assess Water Quality:	Eight of 23 samples were exceeded the OEHHA screening value. Of the 23 samples; 4 of 19 were exceeding in the outer bay and 4 of 4 were exceeding in the inner bay (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected in inner and outer Upper Newport Bay.
Temporal Representation:	Samples were collected in November 2000-January 2001 (0 samples exceeded) , 2 samples exceeded in the outer upper bay between June-July 2001. Three samples exceeded in the out upper bay and 4 samples exceed in the inner upper bay between March-April & August-September 2002.
Data Quality Assessment:	SCCWRP QAPP was used.
QA/QC Equivalent:	The report shows evidence of lab QC such as spikes and replicates.

Numeric Line of Evidence	Pollutant-Sediment
Beneficial Use:	BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, MA - Marine Habitat, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Evaluation Guideline:	The is no applicable sediment quality guideline available for total DDT.
Data Used to Assess Water Quality:	Three samples were collected (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected in the Upper Newport Bay at NB10, NB10b, and NB10c.

Temporal Representation:	Samples were collected in November 2001 and March 2002.
Data Quality Assessment:	SCCWRP QAPP was used.
QA/QC Equivalent:	The report shows evidence of lab QC such as spikes and replicates.

Region 8

Water Segment:	Newport Bay, Upper (Ecological Reserve)
Pollutant:	Diazinon
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	ES - Estuarine Habitat
Information Used to Assess Water Quality:	A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Newport Bay Watershed Diazinon/Chlorpyrifos TMDL was approved by RWQCB on April 4, 2003 and subsequently approved by USEPA on February 13, 2004.
Non-Numeric Objective:	The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).

Region 8

Water Segment:	Newport Bay, Upper (Ecological Reserve)
Pollutant:	Fecal Coliform
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.
Lines of Evidence:	

Line of Evidence	Remedial Program in Place
Beneficial Use	R1 - Water Contact Recreation
Information Used to Assess Water Quality:	TMDL completed in 2000 (SWRCB, 2003).

Region 8

Water Segment: Newport Bay, Upper (Ecological Reserve)

Pollutant: Nutrients

Decision: List

Weight of Evidence: This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle.

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

SWRCB Staff Recommendation: After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence Remedial Program in Place

Beneficial Use BI - Preserva.of Bio.Hab.of Spec.Signif., ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat

Information Used to Assess Water Quality: TMDL completed in 1999 (SWRCB, 2003).

Non-Numeric Objective:

Region 8

Water Segment: Newport Bay, Upper (Ecological Reserve)

Pollutant: Polychlorinated biphenyls

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 2.1, and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

There are four lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.5 and 3.6, the site does have exceedances in tissue.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Three of 30 samples exceeded the OEHHA screening value and this does exceed the allowable frequency listed in Table 3.1 of the Listing Policy. Although sediment toxicity has been documented in this water body, none of 4 samples exceeded the dry weight sediment quality guideline.
4. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards for the pollutant are exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health.
Data Used to Assess Water Quality:	Three out of 7 samples exceeded. Filet composite samples of diamond turbot (1997) and striped mullet (2002) were collected. Individual samples of brown smoothhound shark (1998), orangemouth corvina (1999), California halibut (2000), round stingray (2001), and spotted sand bass (2002) were also collected. The guideline was exceeded in the orangemouth corvina, striped mullet, and spotted sand bass samples (TSMP, 2002).
Spatial Representation:	Two stations in Upper Newport Bay were sampled: mouth of the channel, around the corner into the preserve from the DFG Marine Studies Center (Ecological Reserve); and Newport Dunes Aquatic Park across from the public boat launch ramp (Newport Dunes).
Temporal Representation:	Samples were collected annually 1997-2002.
Data Quality Assessment:	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	CM - Commercial and Sport Fishing (CA)
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Toxic Substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels harmful to humans (SARWQCB, 1995).
Evaluation Guideline:	The OEHHA screening value for polychlorinated biphenyls is 20 ug/kg (ppb) wet weight (OEHHA, 1999).
Data Used to Assess Water Quality:	None of the 23 samples exceeded the OEHHA screening value (TSMP, 2002).
Spatial Representation:	Nineteen samples were collected from the inner bay and 4 from the outer bay.

Temporal Representation:	Samples were collected in November 2000-January 2001, June-July 2001, and March-April & August-September 2002.
Data Quality Assessment:	SCCWRP QAPP was used.
QA/QC Equivalent:	The report shows evidence of lab QC such as spikes and replicates.

Numeric Line of Evidence	Toxicity
Beneficial Use:	MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: The concentration of toxic substances in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Data Used to Assess Water Quality:	Toxicity Results (Bay and Greenstein, 2003): Five of 15 sediment samples were significant toxic to amphipods. Fifteen of 15 pore water samples collected had significant effect in Purple Urchin larval development. One of 15 sediment water interface samples were was significantly toxic to Purple Sea Urchin. Five of 15 sediment water interface samples were significantly toxic to the fertilization test.
Spatial Representation:	Samples were collected from 15 sites.
Temporal Representation:	Samples were collected in September 1994, June 1996, and August 1997.
Data Quality Assessment:	Study was conducted by the California Department of Fish and Game.
QA/QC Equivalent:	QA/QC information is contained in the document .

Line of Evidence	Pollutant-Sediment
Beneficial Use	ES - Estuarine Habitat, MA - Marine Habitat
Non-Numeric Objective:	The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Evaluation Guideline:	The sediment quality guideline is 400 ng/g (ppb) dry weight (MacDonald et al., 2000)
Data Used to Assess Water	None of the 4 samples exceeded the sediment quality guideline (Bay and

Quality:	Greenstein, 2003).
Spatial Representation:	Samples were collected in the Upper Newport Bay at NB10, NB10b, and NB10c.
Temporal Representation:	One sample was collect at NB10 in November 2001, one sample was collected at each of following sites NB10, NB10b, and NB10c on March 2002.

Region 8

Water Segment: Newport Bay, Upper (Ecological Reserve)

Pollutant: Sedimentation/Siltation

Decision: List

Weight of Evidence: This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle.

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

SWRCB Staff Recommendation: After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	BI - Preserva.of Bio.Hab.of Spec.Signif., ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Information Used to Assess Water Quality:	TMDL completed in 1999 (SWRCB, 2003).

Region 8

Water Segment: Peters Canyon Channel

Pollutant: DDT

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Three of the 14 samples exceeded the NAS Guideline and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels

	which are harmful to human health.
Evaluation Guideline:	1000 ng/g [NAS Guideline (whole fish)].
Data Used to Assess Water Quality:	Three out of 14 samples exceeded. A total of 13 whole fish composite samples of red shiner and one whole fish composite of flathead minnow were collected. Red shiner samples were collected in 1992-2002. Flathead minnow sample was collected in 2001. The guideline was exceeded in 1992-93 and 1998 samples of red shiner (TSMP, 2002).
Spatial Representation:	One station located upstream from Irvine Center Parkway Bridge.
Temporal Representation:	Samples were collected annually from 1992-2002.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 8

Water Segment: Peters Canyon Channel

Pollutant: Toxaphene

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Nine of the 14 samples exceeded the NAS Guideline and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels

	which are harmful to human health.
Evaluation Guideline:	100 ng/g [NAS Guideline (whole fish)].
Data Used to Assess Water Quality:	Nine out of 14 samples exceeded. A total of 13 whole fish composite samples of red shiner and one whole fish composite of flathead minnow were collected. Red shiner samples were collected in 1992-2002. Flathead minnow sample was collected in 2001. The guideline was exceeded in 1992-98 samples of red shiner. Samples from 1999-2002 did not exceed the guideline (TSMP, 2002).
Spatial Representation:	One station located upstream from Irvine Center Parkway Bridge.
Temporal Representation:	Samples were collected annually from 1992-2002.
Data Quality Assessment:	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 8

Water Segment: Rhine Channel

Pollutant: Copper

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.1 and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

Multiple lines of evidence are available in the administrative record to assess this pollutant including water, tissue and/or sediment data.

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

This conclusion is based on the staff findings that:
1. The sediment quality guideline used complies with the requirements of section 2.1.3 of the Policy.
2. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
3.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
4. Sixteen of 18 samples exceeded the dry weight ERM sediment quality guideline, and 12 of 18 samples exceeded the CTR saltwater chronic. Sediment toxicity has been documented in this water body and this pollutant could cause or contribute to the toxic effect. These samples exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
5. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence	Pollutant-Sediment
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Evaluation Guideline:	The ERM sediment quality guideline for copper is 270 ug/g (ppm) dry weight (Long et al., 1995).
Data Used to Assess Water Quality:	Two of 2 samples exceeded the ERM guideline (Bay and Greenstein, 2003).
Spatial Representation:	The samples were collected at one site (NB 3) in the Rhine Channel.
Temporal Representation:	The samples were collected in November 2001 and March 2002.
Data Quality Assessment:	SCCWRP QAPP was used.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	The CTR chronic saltwater criteria for copper is 3.1 ug/L (ppb) (USEPA, 2000). The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Data Used to Assess Water Quality:	Three of 3 samples exceeded the CTR criterion. Two of the samples were collected in the water column and one sample was collected in the sediment water interface (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected at one site (NB3) in the Rhine Channel.
Temporal Representation:	Two samples were collected in November 2001 (one from the water column and one from the sediment water interface. One water column sample was collected in March 2002.

Data Quality Assessment:	SCCWRP QAPP was used.

Numeric Line of Evidence	Pollutant-Sediment
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Evaluation Guideline:	The ERM sediment quality guideline for copper is 270 ug/g (ppm) dry weight (Long et al., 1995).
Data Used to Assess Water Quality:	Fourteen of 15 samples exceeded the ERM. Samples that exceeded the ERM were collected from stations RC1 - RC14 (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected from 15 stations in Rhine Channel, Newport Bay. These stations were distributed throughout the study area.
Temporal Representation:	Samples were collected on May 14, 2002.
Data Quality Assessment:	SCCWRP QAPP was used.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	The CTR chronic saltwater criteria for copper is 3.1 ug/L (ppb) (USEPA, 2000). The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Data Used to Assess Water Quality:	Nine of 15 samples exceeded the CTR criteria. Samples were collected from the sediment-water interface. Sample exceeding were from station RC1, RC7, RC8, RC9, RC10, RC11, RC12, and RC12 (Bay and Greenstein, 2003).

Spatial Representation:	Samples were collected from 15 stations in Rhine Channel, Newport Bay. These stations were distributed throughout the study area.
Temporal Representation:	Samples were collected on May 14, 2002
Data Quality Assessment:	SCCWRP QAPP was used.

Numeric Line of Evidence	Toxicity
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: Toxic substances. The concentration of toxic substances in the water column, sediments, biota shall not adversely affect beneficial uses.
Data Used to Assess Water Quality:	Toxicity Results (Bay and Greenstein, 2003). Two of 2 sediment samples were significant toxic to amphipods. Two of 2 pore water samples collected exhibited significant effect in Purple Urchin larval development. One of 1 sediment-water interface samples were was significantly toxic to Purple Sea Urchin. One of 1 sample exhibited significant toxic effect to Ampelisca.
Spatial Representation:	Samples were collected from one site in Newport Bay-Rhine Channel.
Temporal Representation:	One sample was collected in September 1994 and June 1996.
Data Quality Assessment:	Study was conducted by the California Department of Fish and Game.
QA/QC Equivalent:	QA/QC information is contained in the document .

Numeric Line of Evidence	Toxicity
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/	Narrative Water Quality Objective: The concentration of toxic substances

Water Quality Criterion:	in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Data Used to Assess Water Quality:	Eleven of 15 samples exhibited significant toxicity to Amphipods. In fact, one sample from station RC 5 had marginal toxicity and 10 samples collected from RC6 to RC15 had high toxicity (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected from 15 stations in Rhine Channel, Newport Bay. These stations were distributed throughout the study area.
Temporal Representation:	Samples were collected on May 14, 2002.
Data Quality Assessment:	SCCWRP QAPP was used.

Numeric Line of Evidence	Toxicity
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: The concentration of toxic substances in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Data Used to Assess Water Quality:	Ten of 15 samples exhibited significant toxicity effect to sea urchin development test in the sediment-water interface from stations RC2, RC3, RC4, RC7, RC8, RC9, RC11, RC12, RC13, and RC 14. In fact, all samples were high toxicity (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected from station RC1 - RC15 in Rhine Channel, Newport Bay.
Temporal Representation:	Samples were collected on May14, 2002.
Data Quality Assessment:	SCCWRP QAPP was used.

Region 8

Water Segment: Rhine Channel

Pollutant: Lead

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.1 and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing.

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

This conclusion is based on the staff findings:
1. The sediment quality guideline used complies with the requirements of section 6.1.3 of the Policy.
2. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
3.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
4. Nine of 15 samples exceeded the dry weight PEL sediment quality guideline. Sediment toxicity was documented and the pollutant could cause or contribute to the toxic effect. These samples exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
5. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Sediment

Beneficial Use: ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat

Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Evaluation Guideline:	The PEL sediment quality guideline for lead is 112.2 ug/g (ppm) dry weight (MacDonald et al., 1996).
Data Used to Assess Water Quality:	Nine of 15 samples exceeded the CTR criteria. Samples were collected from the sediment-water interface. Sample exceeding were from station RC3, RC4, RC5, RC6, RC7, RC8, RC9, and RC13 (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected from 15 stations in Rhine Channel, Newport Bay. These stations were distributed throughout the study area.
Temporal Representation:	Samples were collected on May 14, 2002.
Data Quality Assessment:	SCCWRP QAPP was used.

Numeric Line of Evidence	Toxicity
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: Toxic substances. The concentration of toxic substances in the water column, sediments, biota shall not adversely affect beneficial uses.
Data Used to Assess Water Quality:	Toxicity Results (Bay and Greenstein, 2003). Two of 2 sediment samples were significant toxic to amphipods. Two of 2 pore water samples collected exhibited significant effect in Purple Urchin larval development. One of 1 sediment-water interface samples were was significantly toxic to Purple Sea Urchin. One of 1 sample exhibited significant toxic effect to Ampelisca.
Spatial Representation:	Samples were collected from one site in Newport Bay-Rhine Channel.
Temporal Representation:	One sample was collected in September 1994 and June 1996.

Data Quality Assessment:	Study was conducted by the California Department of Fish and Game.
QA/QC Equivalent:	QA/QC information is contained in the document .

Numeric Line of Evidence	Toxicity
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: The concentration of toxic substances in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Data Used to Assess Water Quality:	Eleven of 15 samples exhibited significant toxicity to Amphipods. In fact, one sample from station RC 5 had marginal toxicity and 10 samples collected from RC6 to RC15 had high toxicity (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected from 15 stations in Rhine Channel, Newport Bay. These stations were distributed throughout the study area.
Temporal Representation:	Samples were collected on May 14, 2002.
Data Quality Assessment:	SCCWRP QAPP was used.

Numeric Line of Evidence	Toxicity
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: The concentration of toxic substances in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Data Used to Assess Water Quality:	Ten of 15 samples exhibited significant toxicity effect to sea urchin development test in the sediment-water interface from stations RC2, RC3, RC4, RC7, RC8, RC9, RC11, RC12, RC13, and RC 14. In fact, all samples were high toxicity (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected from station RC1 - RC15 in Rhine Channel.

Temporal Representation: Samples were collected on May14, 2002.

Data Quality Assessment: SCCWRP QAPP was used.

Region 8

Water Segment: Rhine Channel

Pollutant: Mercury

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under sections 3.1 and 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

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

This conclusion is based on the staff findings that:
1. The sediment quality guideline used complies with the requirements of section 6.1.3 of the Policy.
2. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
3.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
4. Fifteen of 15 samples exceeded the dry weight sediment quality guideline and 12 of 18 water samples exceeded the CTR saltwater chronic criteria. Sediment toxicity was documented in this water body and the pollutant could cause or contribute to the toxic effect. These samples exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
5. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence	Pollutant-Sediment
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Evaluation Guideline:	The sediment quality guideline for mercury is 2.1 ug/g (ppm) (PTI Environmental Services, 1991).
Data Used to Assess Water Quality:	Fifteen of 15 samples exceeded the sediment quality guideline. Samples were collected from station RC1 - RC15 (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected from 15 stations in Rhine Channel, Newport Bay. These stations were distributed throughout the study area.
Temporal Representation:	Samples were collected on May 14, 2002.
Data Quality Assessment:	SCCWRP QAPP was used.

Numeric Line of Evidence	Toxicity
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: Toxic substances. The concentration of toxic substances in the water column, sediments, biota shall not adversely affect beneficial uses.
Data Used to Assess Water Quality:	Toxicity Results (Bay and Greenstein, 2003). Two of 2 sediment samples were significant toxic to amphipods. Two of 2 pore water samples collected exhibited significant effect in Purple Urchin larval development. One of 1 sediment-water interface samples were was significantly toxic to Purple Sea Urchin. One of 1 sample exhibited significant toxic effect to Ampelisca.
Spatial Representation:	Samples were collected from one site in Newport Bay-Rhine Channel.

Temporal Representation:	One sample was collected in September 1994 and June 1996.
Data Quality Assessment:	Study was conducted by the California Department of Fish and Game.
QA/QC Equivalent:	QA/QC information is contained in the document .

Numeric Line of Evidence	Toxicity
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: The concentration of toxic substances in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Data Used to Assess Water Quality:	Eleven of 15 samples exhibited significant toxicity to Amphipods. In fact, one sample from station RC 5 had marginal toxicity and 10 samples collected from RC6 to RC15 had high toxicity (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected from 15 stations in Rhine Channel, Newport Bay. These stations were distributed throughout the study area.
Temporal Representation:	Samples were collected on May 14, 2002.
Data Quality Assessment:	SCCWRP QAPP was used.

Numeric Line of Evidence	Toxicity
Beneficial Use:	ES - Estuarine Habitat, MA - Marine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Narrative Water Quality Objective: The concentration of toxic substances in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Data Used to Assess Water Quality:	Ten of 15 samples exhibited significant toxicity effect to sea urchin development test in the sediment-water interface from stations RC2, RC3, RC4, RC7, RC8, RC9, RC11, RC12, RC13, and RC 14. In fact, all samples were high toxicity (Bay and Greenstein, 2003).

Spatial Representation: Samples were collected from station RC1 - RC15 in Rhine Channel, Newport Bay.

Temporal Representation: Samples were collected on May14, 2002.

Data Quality Assessment: SCCWRP QAPP was used.

Region 8

Water Segment: Rhine Channel

Pollutant: Polychlorinated biphenyls

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of the 2 samples exceeded the water quality objectives and this exceeds the allowable frequency of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health.
Evaluation Guideline:	20 ng/g (OEHHA Screening Value)
Data Used to Assess Water Quality:	Two out of 2 samples exceeded. Filet composite samples of chub mackerel and yellowfin croaker were collected. Chub mackerel were collected in 1997 and yellowfin croaker were collected in 1999. The guideline was exceeded in both samples (TSMP, 2002).
Spatial Representation:	One station located in the Rhine Channel by the Cannery Restaurant at the upper end of the channel.
Temporal Representation:	Samples were collected 7/11/97 and 8/10/99.
Data Quality Assessment:	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game

Region 8

Water Segment: San Diego Creek Reach 1

Pollutant: Fecal Coliform

Decision: List

Weight of Evidence: This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle.

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

SWRCB Staff Recommendation: After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	R1 - Water Contact Recreation
Information Used to Assess Water Quality:	TMDL completed in 2000 (SWRCB, 2003).

Region 8

Water Segment: San Diego Creek Reach 1

Pollutant: Nutrients

Decision: List

Weight of Evidence: This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle.

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

SWRCB Staff Recommendation: After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	WA - Warm Freshwater Habitat
Information Used to Assess Water Quality:	TMDL completed in 1999 (SWRCB, 2003).

Region 8

Water Segment:	San Diego Creek Reach 1
Pollutant:	Sedimentation/Siltation
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.
Lines of Evidence:	

Line of Evidence	Remedial Program in Place
Beneficial Use	WA - Warm Freshwater Habitat
Information Used to Assess Water Quality:	TMDL completed in 1999 (SWRCB, 2003).

Region 8

Water Segment: San Diego Creek Reach 1

Pollutant: Selenium

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A large number of samples exceed the California Toxic Rule (CTR) criteria.

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

This conclusion is based on the staff findings that:
1.The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Seven of 7 samples exceeded the CTR chronic saltwater criteria (USEPA, and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the CTR, the freshwater chronic standard for selenium is 5 ug/L (ppb) (USEPA, 2000). The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Data Used to Assess Water Quality:	Four of 4 samples exceeded the CTR criteria. Two samples were collected 3-4 hrs apart per sample event. Therefore, the results of the two samples were averaged per sample event (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected from Campus Drive Bridge at San Diego Creek, Reach 1.
Temporal Representation:	Samples were collected on March 7, May 25, August 12 and November 8, 2002.
Environmental Conditions:	Two averaged samples were collected during wet weather (March 7 and November 8, 2002) and two averaged samples were collected in dry weather (May 2, and August 12, 2002).
Data Quality Assessment:	SCCWRP QAPP was used.

Region 8

Water Segment: San Diego Creek Reach 1

Pollutant: Zinc

Decision: List

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

Currently San Diego Creek Reach 1 is listed for metals. It is not possible, in a general listing, to determine which specific pollutant is causing or contributing to a water quality impacts. There is sufficient justification for removing the general listings for metals from the 303(d) list and replace these general listings with the specific pollutants when found to be exceeding.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA -

	Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	The hardness adjusted CTR freshwater chronic for zinc is 528.5 ug/L (ppb) (USEPA, 2000). The hardness adjustment is based on the average hardness throughout the monitoring period. The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).
Data Used to Assess Water Quality:	Four of 4 samples exceeded the CTR criteria. Two samples were collected 3-4 hrs apart per sample event. Therefore, the results of the two samples were averaged per sample event (Bay and Greenstein, 2003).
Spatial Representation:	Samples were collected from Campus Drive Bridge at San Diego Creek, Reach 1.
Temporal Representation:	Samples were collected on March 7, May 2, August 12 and November 8, 2002.
Environmental Conditions:	Two averaged samples were collected during wet weather (March 7 and November 8, 2002) and two averaged samples were collected in dry weather (May 2, and August 12, 2002).
Data Quality Assessment:	SCCWRP QAPP was used.

Region 8

Water Segment: San Diego Creek Reach 2

Pollutant: Diazinon

Decision: List

Weight of Evidence: This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard.

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

SWRCB Staff Recommendation: After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	WA - Warm Freshwater Habitat
Information Used to Assess Water Quality:	A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Newport Bay Watershed Diazinon/Chlorpyrifos TMDL was approved by RWQCB on April 4, 2003 and subsequently approved by USEPA on February 13, 2004.
Non-Numeric Objective:	

Region 8

Water Segment: San Diego Creek Reach 2

Pollutant: Nutrients

Decision: List

Weight of Evidence: This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle.

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

SWRCB Staff Recommendation: After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence Remedial Program in Place

Beneficial Use WA - Warm Freshwater Habitat

Information Used to Assess Water Quality: TMDL completed in 1999 (SWRCB, 2003).

Non-Numeric Objective:

Region 8

Water Segment:	San Diego Creek Reach 2
Pollutant:	Sedimentation/Siltation
Decision:	List
Weight of Evidence:	This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status. One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the section 303(d) list.
SWRCB Staff Recommendation:	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.
Lines of Evidence:	

Line of Evidence	Remedial Program in Place
Beneficial Use	WA - Warm Freshwater Habitat
Information Used to Assess Water Quality:	TMDL completed in 1999 (SWRCB, 2003).

Region 8

Water Segment: San Diego Creek Reach 2

Pollutant: Unknown Toxicity

Decision: List

Weight of Evidence: This pollutant is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard.

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

SWRCB Staff Recommendation: After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because a TMDL has been approved by USEPA and an implementation plan has been approved.

Lines of Evidence:

Line of Evidence	Remedial Program in Place
Beneficial Use	WA - Warm Freshwater Habitat
Information Used to Assess Water Quality:	A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Newport Bay Watershed Diazinon/Chlorpyrifos TMDL was approved by RWQCB on April 4, 2003 and subsequently approved by USEPA on February 13, 2004.
Non-Numeric Objective:	The concentration of toxic substance in the water column, sediments or biota shall not adversely affect beneficial uses (SARWQCB, 1995).

Region 8

Water Segment: Santa Ana Delhi Channel

Pollutant: Toxaphene

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of the 7 samples exceeded the NAS guideline and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA), R1 - Water Contact Recreation

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels

	which are harmful to human health.
Evaluation Guideline:	100 ng/g - NAS Guideline (Whole fish)
Data Used to Assess Water Quality:	Two out of 7 samples exceeded. A total of 7 whole fish composite samples were collected: two red shiner (1997 & 2000), two mosquitofish (1999 & 200), one each, striped mullet (1998), tilapia (2000), and fathead minnow (2001). The guideline was exceeded in 1997 red shiner and 1998 striped mullet (TSMP, 2002).
Spatial Representation:	One station located at the Mesa Drive bridge.
Temporal Representation:	Samples were collected annually in 1997-2001.
Data Quality Assessment:	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program,1996-2000. Department of Fish and Game. Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

Region 8

Water Segment: Seal Beach

Pollutant: Polychlorinated biphenyls

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Five of the 5 samples exceeded the OEHHA Screening Value and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: Santa Ana River Basin RWQCB Basin Plan: Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels

	which are harmful to human health.
Evaluation Guideline:	20 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Five out of 5 samples exceeded. Three white croaker and two yellowfin croaker samples were collected. All samples were filet composites. All samples exceeded guideline (TSMP, 2002).
Spatial Representation:	One station at Seal Beach was sampled.
Temporal Representation:	Samples were collected in May and October 1999.
Data Quality Assessment:	CFCP 1998 Year 1 QA Summary: Pesticides and PCBs. California Department of Fish and Game. CDFG Fish and Wildlife Water Pollution Control Laboratory Data Quality Assurance Report. 1999 Coastal Fish Contamination Program (CFCP Year 2). California Department of Fish and Game.

Santa Ana Region (8)

DELIST

Recommendations to remove waters and pollutants from the section 303(d) List

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Region 8

Water Segment: Elsinore, Lake

Pollutant: Sedimentation/Siltation

Decision: Delist

Weight of Evidence: This pollutant is being considered for removal from the section 303(d) list under section 4 of the Listing Policy. The Policy calls for the delisting of waters if the decision is found to be faulty and it is demonstrated that the listing would not have occurred in the absence of such faulty data. One testimonial line of evidence is available in the administrative record to assess this pollutant.

The original listing was based on the assumption that nutrient impacts were associated with increases of sediment rates but recent nutrient TMDL implementation have shown that all nutrients are in the dissolved form and thus not associated with sediment inputs

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification for removing this listing from the water quality limited segment list for this water body pollutant combination.

This conclusion is based on the findings that the original listing assumption cannot be made and therefore listing is faulty. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

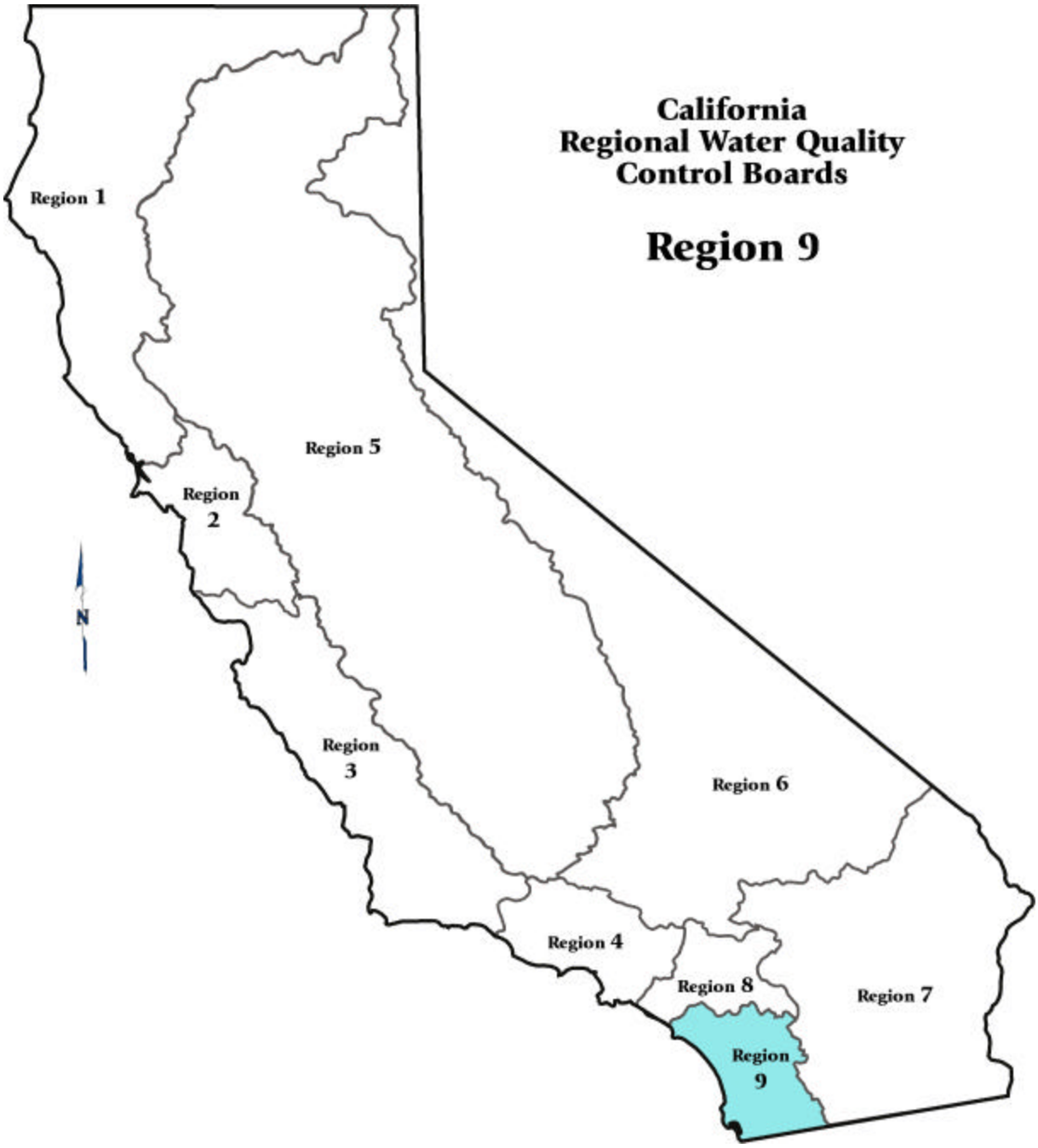
Line of Evidence Testimonial Evidence

Beneficial Use WA - Warm Freshwater Habitat

Non-Numeric Objective: Inland surface waters shall not contain suspended or settleable solids in amounts which causes a nuisance or adversely affect beneficial uses.

Data Used to Assess Water Quality:	Lake Elsinore was originally placed in the 303(d) list by the Regional Board for sedimentation and siltation because it was believed that since the lake is impacted by nutrients the impact were associated with increases of sediment rates to the lake. However, during recent lake nutrient TMDL implementation it was found that the all the nutrients were in the dissolved form and are thus not associated with sediments. Increased sediment rates have been documented in a recent study (3.6 mm/yr from 18th and 19th century and 12.7 mm/yr in the 20th century) but there is no evidence to support that beneficial uses are impacted as a result of this increase. The Regional Board staff believes that the original listing was faulty and the water body pollutant combination should be removed from the 303(d) list.

Fact Sheets Supporting
Revision of the Section 303(d) List



September 2005

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San Diego Region (9)

Recommendations to place waters and pollutants on the section 303(d) List

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Region 9

Water Segment: Agua Hedionda Creek

Pollutant: Manganese

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A sufficient number of samples exceed the Title 22 Secondary Drinking Water MCLs of 0.05 mg/l for Manganese.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	The water quality objective for manganese in Agua Hedionda Creek is 0.05 milligrams/liter (mg/l) according to Basin Plan, Table 3-2 entitled, Water Quality Objectives. This concentration is not be exceeded more than 10% of the time during any one year period
Data Used to Assess Water Quality:	Two of 4 samples exceeded the water quality standard (SWAMP, 2004).
Spatial Representation:	Samples taken at one station in Agua Hedionda Creek No. 33.14887 -117.29758.
Temporal Representation:	Samples were collected from March through September of 2002.
Environmental Conditions:	Agua Hedionda Creek, Part of the San Diego Coastal Streams: Hydrologic Unit Basin Number 4.32
Data Quality Assessment:	SWAMP Quality Assurance Plan

Region 9

Water Segment: Agua Hedionda Creek

Pollutant: Selenium

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A sufficient number of samples exceed the CTR Criterion Continuous Concentration for selenium of 5 ug/l.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	CTR Freshwater Chronic (CCC) 5 ug/L.
Data Used to Assess Water Quality:	Four water samples, three samples exceeding The CTR criteria (SWAMP, 2004).
Spatial Representation:	Samples were taken at one station in Agua Hedionda Creek No. 33.14887 -117.29758.
Temporal Representation:	Samples were collected from March through September of 2002.
Environmental Conditions:	Agua Hedionda Creek, Part of the San Diego Coastal Streams: Hydrologic Unit Basin Number 4.31
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: Agua Hedionda Creek

Pollutant: Sulfates

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Eight of 8 samples exceeded the Water Quality Control Plan WQO Title 22 Table 64449-B Secondary Maximum Contaminant Levels for sulfate and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	Water Quality Control Plan WQO from Title 22 Table 64449-B Secondary Maximum Contaminant Levels of 250 mg/l not to be exceeded ten percent of the time during one year period.
Data Used to Assess Water Quality:	Eight of 8 samples exceeded the basin plan objective (SWAMP, 2004).
Spatial Representation:	Samples taken from one sample site at Agua Hedionda Creek station No:33.14887 -117.29758
Temporal Representation:	Samples were collected from March through September of 2002.
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: Barrett Lake

Pollutant: Color

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Nine of 20 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Nuisance

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for color is 15 units.

Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept from 1996 to 2000. Nine of the 20 samples were in exceedance and 4 of 20 samples measured color levels at 15 color units (SWRCB, 2003).
Spatial Representation:	Samples were collected at Barrett Reservoir station BAA-0.
Temporal Representation:	Samples were collected on a quarterly basis from 03/1996 to 12/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Barrett Lake

Pollutant: Manganese

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Seven of 19 individual samples exceeded the Basin Plan criteria and the criteria was exceeded more than 10% of the time during the years 1996, 1997, 1998 and 1999. These exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: The water quality objective for manganese in Barrett Lake is 0.05 milligrams/liter (mg/l) according to Basin Plan, Table 3-2 entitled, Water Quality Objectives. This concentration is not be exceeded more than 10% of the

	time during any one year period.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. Seven of 19 samples exceeded 0.05 mg/L. This concentration was exceeded more than 10% of the time during the years 1996, 1997, 1998 and 1999 (SWRCB, 2003).
Spatial Representation:	Samples were collected at Barrett Reservoir site BAA-0.
Temporal Representation:	Samples were collected on a quarterly basis from 01/1996 to 09/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Barrett Lake

Pollutant: pH (high)

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Ten of 20 samples exceeded the Basin Plan objective, and these exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for pH is 6.5 (minimum) to 8.5 (maximum).

Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. Ten of 20 samples were in exceedance (SWRCB, 2003).
Spatial Representation:	Samples were collected at Barrett Reservoir station BAA-0.
Temporal Representation:	Samples were collected on a quarterly basis from 03/1996 to 12/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Batiquitos Lagoon

Pollutant: Phosphorus

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A large number of samples exceed the basin plan water quality goal of 0.1 mg/l in stream and flowing waters.

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

This conclusion is based on the staff findings that:
1.The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3.Four of 4 samples exceeded the basin plan water quality goal of 0.1 mg/l in stream and flowing waters and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4.Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, WA - Warm Freshwater Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisances or adversely affects beneficial uses. Water Quality Control Plan for the San Diego Basin Goal of 0.1 mg/l in stream and flowing waters. Threshold total phosphorus concentration shall not exceed 0.05 mg/L in any stream at the point where it enters any standing body of water, nor 0.025 mg/L in any standing body of water.
Data Used to Assess Water Quality:	Four samples; four samples exceeding (SWAMP, 2004).
Spatial Representation:	One Station at San Marcos Creek: 33.13027 -117.192.
Temporal Representation:	Four samples collected from March through September of 2002.
Environmental Conditions:	San Marcos Creek Watershed- Batiquitos Lagoon San Marcos Creek 904.52 (33.13027 -117.192).
Data Quality Assessment:	Swamp Quality Assurance Plan.

Region 9

Water Segment: Buena Creek

Pollutant: DDT

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A large number of samples exceed the California Toxic Rule: Human Health carcinogenic risk for consumption of water & organisms of 0.00059 ug/L.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	No individual pesticide or combination of pesticides shall be present in the water column, sediments or biota at concentration(s) that adversely affect beneficial uses. California Toxic Rule: Human Health carcinogenic risk for consumption of water & organisms, 0.00059 ug/L.
Data Used to Assess Water Quality:	Four of 4 samples exceeded the CTR criterion (SWAMP, 2004).
Spatial Representation:	One sample site in Buena Creek at 33.17225 - 117.20887.
Temporal Representation:	Samples were collected from March through September of 2002.
Environmental Conditions:	Buena Creek 904.32
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: Buena Creek

Pollutant: Nitrate and Nitrite

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A large number of samples exceed the MCL guideline.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	Waters designated for use as domestic or municipal supply shall not contain concentrations of nitrate and nitrite as nitrogen in excess of Maximum Contaminant Levels (MCL) set forth in title 22 of the CCR, Table 64431-A of section 64431.
Data Used to Assess Water Quality:	Four of 4 samples exceeded the MCLs (SWAMP, 2004).
Spatial Representation:	One sample site at Buena Creek: 33.17225 - 117.20887.
Temporal Representation:	Samples were collected from March through September of 2002.
Environmental Conditions:	Buena Creek 904.32.
Data Quality Assessment:	SWAMP Quality Assurance Plan

Region 9

Water Segment: Buena Creek

Pollutant: Phosphate

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A large number of samples exceed the water quality phosphate goal of 0.1 mg/l in stream and flowing waters.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisances or adversely affects beneficial uses. Water Quality Control Plan phosphate goal of 0.1 mg/l in stream and flowing waters.
Data Used to Assess Water Quality:	Four water samples, four samples exceeding the basin plan goal (SWAMP, 2004).
Spatial Representation:	One Station at Buena Creek: 33.17225 -117.20887.
Temporal Representation:	Samples were collected from March through September of 2002.
Environmental Conditions:	Buena Creek 904.32.
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: Buena Creek

Pollutant: Sulfates

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A large number of samples exceed the water quality objective Title 22 Table 64449-B Secondary Maximum Contaminant Levels for sulfate.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	Basin Plan WQO - Title 22 Table 64449-B Secondary Maximum Contaminant Levels of 250 mg/l; Upper Limit- 500 mg/l; Short Term- 1500 mg/l.
Data Used to Assess Water Quality:	Four of 4 samples exceeded the Basin Plan recommended secondary MCL (SWAMP, 2004).
Spatial Representation:	Two Stations at Buena Creek: 33.17225 -117.20887.
Temporal Representation:	Samples were collected from March through September of 2002.
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: Buena Vista Creek

Pollutant: Sediment Bioassays -- Chronic Toxicity -- Freshwater

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 a water segment can be placed on the 303(d) list if the water segment exhibits significant toxicity and the observed toxicity is associated with a pollutant or pollutants. The water body segment may also be listed for toxicity alone.

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

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

This conclusion is based on the staff findings that:
1.The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3.Two of 4 samples exhibited significant toxicity using the 10-day Hyalella azteca test and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Toxicity

Beneficial Use: RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Sediment

Water Quality Objective/ Water Quality Criterion:	All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration or other appropriate methods as specified by the Regional Board (Region 9 Basin Plan, pages 3-15 to 3-16; September 8, 1994).
Data Used to Assess Water Quality:	Two out of four samples displayed statistically significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%. All samples were tested using the 10-day Hyalella azteca test. Note that all four samples actually had significant toxicity relative to the control, but only the two samples without any QA qualifiers were considered as exceedances (SWAMP, 2004).
Spatial Representation:	All samples were collected from one station, Buena Vista Creek 4.
Temporal Representation:	Samples were collected from March 2002 through September 2002. Toxicity in the survival endpoint was detected in samples collected on March 12, 2002 and September 16, 2002.
Environmental Conditions:	San Diego County Coastal Stream: Buena Vista Creek, Hydrologic Unit Basin Number 904.21.
Data Quality Assessment:	SWAMP QAPP.

Region 9

Water Segment: Buena Vista Creek

Pollutant: Total Dissolved Solids

Decision: List

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

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

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for total dissolved solids is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water Quality:	Data were collected by RWQCB9 in 1998. Two of 2 samples were in exceedance (SWRCB, 2003).
Spatial Representation:	One set of samples were collected at Buena Vista Creek at South Vista Way. The other set were collected at Buena Vista Creek; exact location was not reported.
Temporal Representation:	Samples were collected once on 05/20/1998 and once on 06/29/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Cottonwood Creek (in west San Diego County)

Pollutant: DDT

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A sufficient number of samples exceed the CTR freshwater criteria .

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	No individual pesticide or combination of pesticides shall be present in the water column, sediments or biota at concentration(s) that adversely affect beneficial uses. California Toxic Rule: Freshwater Chronic .001 mg/L. Human Health-FW (water & organisms) .00059 mg/L.
Data Used to Assess Water Quality:	Four water samples, two samples exceeding (SWAMP, 2004).
Spatial Representation:	One station at Cottonwood Creek: 33.18147 -117.32893.
Temporal Representation:	Samples were collected from March through September of 2002.
Environmental Conditions:	San Marcos Creek Watershed 904.51.
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: Cottonwood Creek (in west San Diego County)

Pollutant: Phosphorus

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A large number of samples exceed the Basin Plan water quality goal of 0.1 mg/l in stream and flowing waters for Phosphorus.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisances or adversely affects beneficial uses.
Evaluation Guideline:	Water Quality Control Plan for the San Diego Basin Goal of 0.1 mg/l in stream and flowing waters.
Data Used to Assess Water Quality:	Four of 4 samples exceeding basin plan goal (SWAMP, 2004).
Spatial Representation:	One station in Cottonwood Creek: 33.18147 -117.32893
Temporal Representation:	Samples were collected from March through September of 2002.
Data Quality Assessment:	SWAMP Quality Assurance Plan

Region 9

Water Segment: Cottonwood Creek (in west San Diego County)

Pollutant: Sediment Bioassays -- Chronic Toxicity -- Freshwater

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Three samples were toxic.

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

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

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded.

Lines of Evidence:

Numeric Line of Evidence Toxicity

Beneficial Use: WA - Warm Freshwater Habitat

Matrix: Sediment

Water Quality Objective/ Water Quality Criterion: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use

	of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration or other appropriate methods as specified by the Regional Board (Region 9 Basin Plan, pages 3-15 to 3-16; September 8, 1994).
Data Used to Assess Water Quality:	Three out of four samples displayed statistically significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%. All samples were tested using the 10-day Hyalella azteca test. Note that all four samples actually had significant toxicity relative to the control, but only the three samples without any QA qualifiers were considered as exceedances (SWAMP, 2004).
Spatial Representation:	All samples were collected from one station, Cottonwood Creek 2.
Temporal Representation:	Samples were collected from March 2002 through September 2002. Toxicity in the survival endpoint was detected in samples collected on March 13, 2002, June 4, 2002 and September 17, 2002.
Environmental Conditions:	Cottonwood Creek = 904.51
Data Quality Assessment:	SWAMP QAPP.

Region 9

Water Segment: De Luz Creek

Pollutant: Iron

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Five of 9 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for iron is 0.3 mg/L.

Data Used to Assess Water Data were collected by LAW Crandall from 1997 to 2000. Five of 9 samples

Quality:	were in exceedance.
Spatial Representation:	Samples were collected at De Luz Creek near Fallbrook.
Temporal Representation:	Samples were collected on a quarterly basis from 12/1997 to 06/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: De Luz Creek

Pollutant: Manganese

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 9 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: The water quality objective for manganese in De Luz Creek is 0.05 milligrams/liter (mg/l) according to Basin Plan, Table 3-2 entitled, Water Quality Objectives. This concentration is not be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality:	Data were collected by LAW Crandall from 1997 to 2000. Two of 9 samples were in exceedance.
Spatial Representation:	Samples were collected at De Luz Creek near Fallbrook.
Temporal Representation:	Samples were collected on a quarterly basis from 12/1997 to 06/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: De Luz Creek

Pollutant: Sulfates

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 9 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial use, the WQO for Sulfate is 250 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality:	Data were collected by LAW Crandall from 1997 to 2000. Two of 9 samples were in exceedance.
Spatial Representation:	Samples were collected at DeLuz Creek near Fallbrook.
Temporal Representation:	Samples were collected on a quarterly basis from 12/1997 to 06/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Del Dios Creek

Pollutant: Sulfates

Decision: List

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

This conclusion is based on the staff findings that:

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for sulfate is 250 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality: Data were collected by the City of San Diego Water Dept. from 04/1999 to 06/1999. Three of 3 samples were in exceedance.

Spatial Representation:	Samples were collected at Del Dios Creek at the "Rd crossing res at entra."
Temporal Representation:	One sample per day was collected on 04/26/1999, 05/24/1999, and 06/21/1999.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: El Capitan Lake

Pollutant: Antimony

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 10 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For all waters with a municipal beneficial use, the WQO for Antimony is 0.006 mg/L.

Data Used to Assess Water Quality: Data were collected by the City of San Diego Water Dept. from 1996 to 2000. Two of 10 samples were in exceedance.

Spatial Representation: Samples were collected at El Capitan Reservoir station ECA-0.

Temporal Representation:	Samples were collected 1-4 times per year from 06/1996 to 05/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: El Capitan Lake

Pollutant: Beryllium

Decision: List

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

This conclusion is based on the staff findings that:

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For all waters with a municipal beneficial use, the WQO for Beryllium is 0.004 mg/L.

Data Used to Assess Water Quality: Data were collected by the City of San Diego Water Dept. from 1999 to 2000. Two of 2 samples were in exceedance.

Spatial Representation: Samples were collected at El Capitan Reservoir station ECA-0.

Temporal Representation: Samples were collected once each in 09/1999 and 05/2000.

QA/QC Equivalent: Data used in 2002 assessment.

Region 9

Water Segment: El Capitan Lake

Pollutant: Color

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. There were 1,376 out of 1,726 samples exceeding the Basin Plan objective, and these exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Nuisance

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.

Data Used to Assess Water Quality: Data were collected by the City of San Diego Water Dept. from 1996 to 1999. Sixty-five of 80 samples were in exceedance.

Spatial Representation: Samples were collected at El Capitan Reservoir station ECA-GA152.

Temporal Representation:	Samples were collected 3-5 times each month from 01/1996 to 01/1999.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 1998. Fifty-five of 62 samples were in exceedance.
Spatial Representation:	Samples were collected at El Capitan Reservoir station ECA-GA157.
Temporal Representation:	Samples were collected 3-5 times per month from 01/1996 to 10/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. in 1996. Six of 6 samples were in exceedance.
Spatial Representation:	Samples were collected at El Capitan Reservoir station ECA-GA177.
Temporal Representation:	Samples were collected 6 times (once each on different days) from 01/03/1996 to 02/07/1996.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. One-hundred and seventy-two out of 212 samples were in exceedance. An exceedance of standards occurred during all sampling years.
Spatial Representation:	Samples were collected at El Capitan Reservoir station ECA-0.
Temporal Representation:	Samples were collected 2-5 times per month from 01/1996 to 09/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. There were 171 out of 241 samples in exceedance.
Spatial Representation:	Samples were collected at El Capitan Reservoir station ECA-GA107.
Temporal Representation:	Samples were collected 1-5 times per month from 01/1996 to 12/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water

Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. There were 179 out of 241 samples that were in exceedance.
Spatial Representation:	Samples were collected at El Capitan Reservoir station ECA-GA82.
Temporal Representation:	Samples were collected 1-5 times per month from 01/1996 to 12/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 1999. There were 110 out of 135 samples that were in exceedance of 15 color units.
Spatial Representation:	Samples were collected at El Capitan Reservoir station ECA-GA127.
Temporal Representation:	Samples were collected 3-5 times per month from 01/1996 to 02/1999.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 1999. There were 121 out of 154 samples that were in exceedance.
Spatial Representation:	Samples were collected at El Capitan Reservoir station ECA-GA132.

Temporal Representation:	Samples were collected 3-5 times per month from 01/1996 to 08/1999.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 1999. There were 140 out of 162 samples that were in exceedance.
Spatial Representation:	Samples were collected at El Capitan Reservoir station ECA-GA102.
Temporal Representation:	Samples were collected 3-5 times per month from 01/1996 to 02/1999.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. There were 155 out of 192 samples that were in exceedance.
Spatial Representation:	Samples were collected at El Capitan Reservoir station ECA-0.
Temporal Representation:	Samples were collected 1-6 times per month from 01/1996 to 12/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Nuisance

Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. There were 202 out of 241 samples that were in exceedance.
Spatial Representation:	Samples were collected at El Capitan Reservoir station ECA-GA57.
Temporal Representation:	Samples were collected 1-5 times per month from 01/1996 to 12/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment:	El Capitan Lake
Pollutant:	Manganese
Decision:	List
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that: 1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy. 2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy. 3. Thirteen of 64 samples exceeded the Basin Plan criteria and 4 out of 5 years had exceedances more than 10% or the time. These exceed the allowable frequency listed in Table 3.1 of the Listing Policy. 4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem.
Lines of Evidence:	

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	The water quality objective for manganese in El Capitan Lake is 0.05 milligrams/liter (mg/l) according to Basin Plan, Table 3-2 entitled, Water Quality Objectives. This concentration is not be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water	Data were collected by the City of San Diego Water Dept. from 1996 to 2000.

Quality:	Thirteen of 64 samples were in exceedance of 0.05 mg/L. Four out of 5 years had exceedances more than 10% or the time.
Spatial Representation:	Samples were collected at El Capitan Reservoir station ECA-0.
Temporal Representation:	Samples were collected 1-2 times monthly from 01/1996 to 11/2000, with the exception of 01/1997.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: El Capitan Lake

Pollutant: Total Dissolved Solids

Decision: List

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

This conclusion is based on the staff findings that:

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 300 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality: Data were collected by the City of San Diego Water Dept. from 1998 to 2000. Seven of 30 samples were in exceedance.

Spatial Representation:	Samples were collected at El Capitan Reservoir station ECA-0.
Temporal Representation:	Samples were collected monthly from 07/1998 to 12/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: El Capitan Lake

Pollutant: pH (high)

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Ten of the 57 samples exceeded the Basin Plan objective, and these exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for pH is 6.5 (minimum) to 8.5 (maximum).

Data Used to Assess Water Quality: Data were collected by the City of San Diego Water Dept. from 1996 to 2000. Ten of 57 samples were in exceedance.

Spatial Representation: Samples were collected at El Capitan Reservoir station ECA-0.

Temporal Representation:	Samples were collected monthly from 01/1996 to 12/2000, except for 01/1997.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Encinitas Creek

Pollutant: Phosphorus

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A large number of samples exceed the Basin Plan water quality goal.

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

This conclusion is based on the staff findings that:
1.The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3.Four of 4 samples exceeded the 0.1mg/l basin plan water quality goal and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4.Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Waters shall not contain biostimulatory substances in concentrations that

Water Quality Criterion:	promote aquatic growth to the extent that such growth causes nuisances or adversely affects beneficial uses.
Evaluation Guideline:	Water Quality Control Plan for the San Diego Basin Goal of 0.1 mg/l in stream and flowing waters.
Data Used to Assess Water Quality:	Four water samples, 4 samples exceeding (SWAMP, 2004).
Spatial Representation:	One station at Encinitas Creek: 33.06828 -117.26261
Temporal Representation:	Samples were collected from March through September of 2002.
Environmental Conditions:	San Marcos Creek Watershed 904.51.
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: English Canyon

Pollutant: Benzo[b]fluoranthene

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A sufficient number of samples exceed the California Toxic Rule: Human Health-FW (water and organisms) .0044 mg/L.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	All waters shall be maintained free of toxic substances in concentrations that are toxic to or that produce detrimental physiological responses in human, plant, animal, or aquatic life.
Evaluation Guideline:	California Toxic Rule: Human Health-FW (water and organisms) .0044 mg/L.
Data Used to Assess Water Quality:	Four samples, two samples exceeding (SWAMP, 2004).
Spatial Representation:	One Station at English Creek: 33.62781 -117.68058.
Temporal Representation:	Samples were collected from October 2002 through May 2003.
Environmental Conditions:	Aliso Creek Watershed 901.11.
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: English Canyon

Pollutant: Dieldrin

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A sufficient number of samples exceed the California Toxic Rule-Human Health-FW (water and organisms) .00014 mg/L. .

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: WA - Warm Freshwater Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	California Toxic Rule-Human Health-FW (water and organisms) .00014 ug/L.
Data Used to Assess Water Quality:	Four samples, three samples exceeding (SWAMP, 2004).
Spatial Representation:	One Station at English Creek: 33.62781 -117.68058
Temporal Representation:	Samples were collected from October 2002 through May 2003.
Environmental Conditions:	Aliso Creek Watershed 901.11.
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: English Canyon

Pollutant: Sediment Bioassays -- Chronic Toxicity -- Freshwater

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

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

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

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

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded.

Lines of Evidence:

Numeric Line of Evidence Toxicity

Beneficial Use: WA - Warm Freshwater Habitat

Matrix: Sediment

Water Quality Objective/ Water Quality Criterion: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use

	of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration or other appropriate methods as specified by the Regional Board (Region 9 Basin Plan, pages 3-15 to 3-16; September 8, 1994).
Data Used to Assess Water Quality:	Two out of four samples displayed statistically significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%. All samples were tested using the 10-day Hyalella azteca test. All data points had no associated QA qualifiers (SWAMP, 2004).
Spatial Representation:	All samples were collected from one station, English Creek 2.
Temporal Representation:	Samples were collected from October 2002 through May 2003. Toxicity in the survival endpoint was detected in samples collected on October 28, 2002 and January 13, 2003.
Environmental Conditions:	English Canyon Creek is located in Hydrologic Unit 901.13.
Data Quality Assessment:	SWAMP QAPP.

Region 9

Water Segment: Escondido Creek

Pollutant: DDT

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A sufficient number of samples exceed the California Toxic Rule: Human Health-FW (water & organisms) criterion of 0.00059 mg/L.

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

This conclusion is based on the staff findings that:
1.The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3.Five of 8 samples exceeded the CTR criterion and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4.Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	San Diego RWQCB Basin Plan: No individual pesticide or combination of pesticides shall be present in the water column, sediments, or biota at concentration(s) that adversely affect beneficial uses. California Toxic Rule: Human Health-FW (water & organisms) .00059 mg/L
Data Used to Assess Water Quality:	Eight total samples taken at two stations, a total of five samples from two sampling stations exceeded the CTR criteria (SWAMP, 2004).
Spatial Representation:	Two Escondido Creek stations located at 33.03393 -117.23565 and at 33.08559 -117.15037.
Temporal Representation:	Eight samples collected from March through September of 2002.
Environmental Conditions:	Escondido Creek Watershed; Escondido Creek 904.61.
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: Escondido Creek

Pollutant: Manganese

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A sufficient number of samples exceed the Secondary Drinking Water MCLs of 0.05 mg/l.

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

This conclusion is based on the staff findings that:
1.The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3.Six of 12 samples exceeded the secondary MCL for manganese and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4.Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ The water quality objective for manganese in Escondido Creek is 0.05

Water Quality Criterion:	milligrams/liter (mg/l) according to Basin Plan, Table 3-2 entitled, Water Quality Objectives. This concentration is not be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water Quality:	Twelve water samples, six samples exceeding (SWAMP, 2004).
Spatial Representation:	Two stations at Escondido Creek ESC5, HBA 904.62 (33.08559 -117.15037) and ESC8, HBA 904.61(33.03393 -117.23565).
Temporal Representation:	Twelve samples collected from March through September of 2002.
Environmental Conditions:	Escondido Creek Watershed; Escondido Creek 904.61 and 904.62
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: Escondido Creek

Pollutant: Phosphate

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A sufficient number of samples exceed the water quality goal of 0.1 mg/l.

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

This conclusion is based on the staff findings that:
1.The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3.Six of 8 samples exceeded the basin plan water quality goal and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4.Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Control Plan for the San Diego Basin; 0.1 mg/l in stream and

Water Quality Criterion:	flowing waters.
Data Used to Assess Water Quality:	Eight water samples, six samples exceeding (SWAMP, 2004).
Spatial Representation:	Two stations at Escondido Creek ESC5, HBA 904.62 (33.08559 -117.15037) and at ESC8, HBA 904.61 (33.03393 -117.23565).
Temporal Representation:	Eight samples collected from March through September of 2002.
Environmental Conditions:	Escondido Creek Watershed; Escondido Creek 904.61 and 904.62.
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: Escondido Creek

Pollutant: Selenium

Decision: List

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

Two lines of evidence are available in the administrative record to assess this pollutant. In 1998 a single sample was collected and it did not exceed the Basin Plan water quality criteria. However, SWAMP data taken in 2002 documented a large number of samples exceeding the CTR freshwater CCC criterion of 5 mg/L for the protection of aquatic life.

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

This conclusion is based on the staff findings that:
1.The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3.Eight of 12 SWAMP samples exceeded the CTR chronic freshwater criterion and this exceeds the allowable frequency listed in Table 3.1 on the Listing Policy.
4.Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For all waters with a municipal beneficial use, the WQO for Selenium is 0.05 mg/L.
Data Used to Assess Water Quality:	Data were collected by RWQCB9 in 1998. One sample was collected, it was not in exceedance (SWAMP, 2004).
Spatial Representation:	Samples were collected at Escondidio Creek at the intersection of Elfin Forest and Harmony Grove.
Temporal Representation:	Samples were collected on 06/03/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	CTR Freshwater Chronic (CCC) 5 mg/l.
Data Used to Assess Water Quality:	Twelve water samples, eight samples exceeding (SWAMP, 2004).
Spatial Representation:	Two stations at Escondido Creek ESC5, HBA 904.62 (33.08559 -117.15037) and ESC8, HBA 904.61(33.03393 -117.23565).
Temporal Representation:	Twelve samples collected from March through September of 2002.
Environmental Conditions:	Escondido Creek Watershed; Escondido Creek 904.61 and 904.62
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: Escondido Creek

Pollutant: Sulfates

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Four of 5 DWR samples taken from 1998 to 2000 and 4 of 4 SWAMP samples taken from March through September 2002 exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for sulfate is 250 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Data were collected by DWR from 1998 to 2000. Four of 5 samples were in

Quality:	exceedance (S.D. Department of Water Resources, 2000).
Spatial Representation:	Samples were collected at Escondido Creek near Harmony Grove.
Temporal Representation:	Samples were collected once each in May and November each year from 05/1998 to 05/2000.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	The recommended secondary drinking water standard for sulfate is 250 mg/l with an upper limit of 500 (Basin Plan).
Data Used to Assess Water Quality:	Four water samples, four samples exceeding (SWAMP, 2004).
Spatial Representation:	One station at Escondido Creek: 33.03393 -117.23565.
Temporal Representation:	Four samples were collected from March through September of 2002.
Environmental Conditions:	Escondido Creek Watershed; Escondido Creek 904.61.
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: Escondido Creek

Pollutant: Total Dissolved Solids

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Five of 7 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Data were collected by RWQCB9 in 1998. One sample was collected, it was in

Quality:	exceedance.
Spatial Representation:	Samples were collected at Escondido Creek below Harmony Grove Bridge.
Temporal Representation:	Samples were collected on 06/03/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water Quality:	Data were collected by RWQCB9 in 1998. One sample was collected, it was in exceedance (SWRCB, 2003).
Spatial Representation:	Samples were collected at Escondido creek at the intersection of Elfin Forest and Harmony Grove.
Temporal Representation:	Samples were collected on 06/03/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water Quality:	Data were collected by DWR from 1998 to 2000. Three of 5 samples were in exceedance (SWRCB, 2003).

Spatial Representation:	Samples were collected at Escondido Creek near Harmony Grove.
Temporal Representation:	Samples were collected once each in May and November each year from 05/1998 to 11/2000.

Region 9

Water Segment: Felicita Creek

Pollutant: Aluminum

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 6 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Aluminum is 0.2 mg/L.

Data Used to Assess Water Quality: Data were collected by the City of San Diego Water Dept. from 02/2000 to 04/2000. Two of 6 samples were in exceedance.

Spatial Representation: Samples were collected at Felicita Creek site FEL3 at the road crossing above

	the water line.
Temporal Representation:	Samples were collected from 02/22/2000 to 04/18/2000. One sample was collected in 02/2000, 2 samples were collected in 03/2000, and 3 samples were collected in 04/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Forester Creek

Pollutant: Oxygen, Dissolved

Decision: List

Weight of Evidence: One line of evidence is available in the administrative record to assess this pollutant. Three of the 10 samples exceed the Basin Plan criteria (which is more than 10% of the time) and this exceeds the allowable frequency of the listing policy.

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: IN - Industrial Service Supply

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: Dissolved oxygen levels shall not be less than 5.0 mg/l in inland surface waters with designated MAR or WARM beneficial uses or less than 6.0 mg/l in waters with designated COLD beneficial uses. The annual mean dissolved oxygen concentrations shall not be less than 7 mg/l more than 10% of the time.

Data Used to Assess Water Quality: Data were collected at Forester Creek by the City of El Cajon in 09/1997 and monthly from 04/2000-12/2000. Three of 10 averages were below 7.0 mg/L, which is more than 10% of the time.

Spatial Representation: Samples were collected at Forester Creek. The exact sample location is unknown.

Temporal Representation:	Samples were collected in 09/1997 and monthly from 04/2000-12/2000. Averages were reported. It is unknown how many samples were collected per month.

Region 9

Water Segment: Forester Creek

Pollutant: Phosphorus

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Three of 10 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: IN - Industrial Service Supply

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters-streams and other flowing waters, with all beneficial uses, the WQO for total phosphorus is 0.1 mg/L. This appears to be desired goal in order to prevent plant nuisance in streams and other flowing waters; not to be exceeded more than 10% of the time.

Data Used to Assess Water Quality: Data were collected by the City of El Cajon in 09/1997 and monthly from 04/2000-12/2000. Only monthly averages were reported. Three of 10 averages

	were at or in exceedance of the standard.
Spatial Representation:	Samples were collected at Forester Creek. The exact sampling location was not reported.
Temporal Representation:	Samples were collected in 09/1997 and monthly from 04/2000-12/2000. Only monthly averages were reported. It is unknown how many samples the monthly average represents.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Green Valley Creek

Pollutant: Chloride

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Six of 13 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Chloride is 250 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality: Data were collected by the City of San Diego Water Dept. from 04/1999 to 04/2000. Six of 13 samples were in exceedance.

Spatial Representation:	Samples were collected at Green Valley Creek west of West Bernardo Drive.
Temporal Representation:	Samples were collected from 04/1999 to 04/2000. Three samples were collected in 1999 and 10 samples were collected in 2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Green Valley Creek

Pollutant: Manganese

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Four of 4 samples exceeded the Basin Plan criteria and both years had exceedances more than 10% or the time. These exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: The water quality objective for manganese in Green Valley Creek is 0.05 milligrams/liter (mg/l) according to Basin Plan, Table 3-2 entitled, Water Quality Objectives. This concentration is not be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Data were collected by the City of San Diego Water Dept. on four days from

Quality:	4/26/1999 to 4/18/2000. Four of 4 samples were in exceedance.
Spatial Representation:	Samples were collected at Green Valley Creek west of West Bernardo Drive.
Temporal Representation:	One sample per day was collected on 04/26/1999, 03/13/2000, 03/21/2000, and 04/18/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Green Valley Creek

Pollutant: Pentachlorophenol (PCP)

Decision: List

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

This conclusion is based on the staff findings that:

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Pentachlorophenol is 0.001 mg/L.

Data Used to Assess Water Quality: Data were collected by the City of San Diego Water Dept. on 02/15/2000 and 02/22/2000. Two of 2 samples were in exceedance.

Spatial Representation: Samples were collected at Green Valley Creek west of West Bernardo Drive.

Temporal Representation:	Samples were collected on 02/15/2000 and 02/22/2000. One sample was collected on each day.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Hodges, Lake

Pollutant: Manganese

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Nine of 19 samples exceeded the Basin Plan criteria and all 5 years had samples which exceeded 0.05 mg/L more than 10% of the time. These exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: The water quality objective for manganese in Hodges Lake is 0.05 milligrams/liter (mg/l) according to Basin Plan, Table 3-2 entitled, Water Quality Objectives. This concentration is not be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality: Data was collected at site HGA-0 by the City of San Diego Water Dept. between January 1996 and September 2000. Nine of 19 samples were in exceedance. All

	5 years had samples which exceeded 0.05 mg/L more than 10% of the time.
Spatial Representation:	Samples were collected at site HGA-0.
Temporal Representation:	Samples were collected on a quarterly basis from January 1996 to September 2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Hodges, Lake

Pollutant: Turbidity

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Eleven of the 20 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for turbidity is 5 units. For inland surface waters with all other beneficial uses, the WQO for turbidity is 20 ntu.

Data Used to Assess Water Data was collected at site HGA-0 by the City of San Diego Water Dept. from

Quality:	March 1996 to December 2000. 11 of 20 samples were in exceedance of the WQO for municipal beneficial uses.
Spatial Representation:	Samples were collected at site HGA-0.
Temporal Representation:	Samples were collected on a quarterly basis from March 1996 to December 2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Hodges, Lake

Pollutant: pH (high)

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Fourteen of the 20 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with all beneficial uses, the WQO for pH is 6.5 (minimum) to 8.5 (maximum).

Data Used to Assess Water Quality: Data was collected at site HGA-0 by the City of San Diego Water Dept. from March 1996 to December 2000. Fourteen of the 20 samples exceeded the

	maximum pH standard of 8.5.
Spatial Representation:	Data was collected at site HGA-0.
Temporal Representation:	Samples were collected on a quarterly basis between March 1996 and December 2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Imperial Beach Pier

Pollutant: Polychlorinated biphenyls

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: San Diego RWQCB Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life.

Evaluation Guideline:	20 ng/g (OEHHA Screening Value).
Data Used to Assess Water Quality:	Three out of 4 samples exceeded. All 4 samples were filet composites. Two samples of barred surfperch and two of walleye surfperch were collected. All exceeded guideline except one walleye sample (TSMP, 2002).
Spatial Representation:	One station was sampled on the Imperial Beach Pier.
Temporal Representation:	Samples were collected in March 1999 and April 2000.
Data Quality Assessment:	CFCP 1998 Year 1 QA Summary Pesticides and PCBs. California Department of Fish and Game. CDFG Fish and Wildlife Water Pollution Control Laboratory Data Quality Assurance Report. 1999 Coastal Fish Contamination Program (CFCP Year 2). California Department of Fish and Game.

Region 9

Water Segment: Kit Carson Creek

Pollutant: Pentachlorophenol (PCP)

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 2 samples exceeded the 0.001 mg/L MCL for pentachlorophenol in inland surface waters, water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for pentachlorophenol is 0.001 mg/L.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. in 2000. Two of 2 samples were in exceedance.
Spatial Representation:	Samples were collected at Kit Carson Creek at Sunset Dr.
Temporal Representation:	Samples were collected once each on 02/22/2000 and 03/06/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Laguna Canyon Channel

Pollutant: Sediment Bioassays -- Chronic Toxicity -- Freshwater

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Two measurements exhibit toxicity.

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

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

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded.

Lines of Evidence:

Numeric Line of Evidence Toxicity

Beneficial Use: WA - Warm Freshwater Habitat

Matrix: Sediment

Water Quality Objective/ Water Quality Criterion: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use

	of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration or other appropriate methods as specified by the Regional Board (Region 9 Basin Plan, pages 3-15 to 3-16; September 8, 1994).
Data Used to Assess Water Quality:	Two out of four samples displayed statistically significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%. All samples were tested using the 10-day Hyalella azteca test. All data points had no associated QA qualifiers (SWAMP, 2004).
Spatial Representation:	All samples were collected from one station, Laguna Canyon Creek 2.
Temporal Representation:	Samples were collected from October 2002 through May 2003. Toxicity in the survival endpoint was detected in samples collected on October 29, 2002 and January 14, 2003.
Data Quality Assessment:	SWAMP QAPP.

Region 9

Water Segment: Loma Alta Creek

Pollutant: Total Dissolved Solids

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of the 2 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Adverse Biological Responses

Beneficial Use: R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: -N/A

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with all beneficial uses, the WQO for Total Dissolved Solids is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality: The samples were collected by RWQCB9 on 5/20/1998 at two locations on Loma Alta Creek. Two of the 2 samples for TDS were in exceedance.

Spatial Representation:	Two samples were taken along Loma Alta Creek; one at College Blvd. and one at El Camino Real.
Temporal Representation:	One sample was taken at each of the two locations on one day, 5/20/1998.
QA/QC Equivalent:	Data was used in the 2002 assessment.

Region 9

Water Segment: Long Canyon Creek

Pollutant: Total Dissolved Solids

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data satisfies the requirements of section 6.1.5 of the Listing Policy.
3. Six of 25 samples exceeded the 500 mg/L TDS Basin Plan water quality objective and this exceeds the allowable frequency listed in Table 3.2 of the Listing Policy.
3. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. in 1997 and 1998. Six of the 25 samples were in exceedance. All 6 samples were collected on 01/29/1998.
Spatial Representation:	Samples were collected at Long Canyon Creek site LCC2.
Temporal Representation:	Samples were collected on 03/12/1997, 05/13/1997, 06/18/1997, and 01/29/1998. Five to nine of the samples were collected per day over a period of 3 minutes to 1.5 hours.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Los Penasquitos Creek

Pollutant: Phosphate

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A sufficient number of samples exceed the Water Quality Control Plan goal of 0.1 mg/l in stream and flowing waters .

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses. Water Quality Control Plan for the San Diego Basin Goal of 0.1 mg/l in stream and flowing waters
Data Used to Assess Water Quality:	Four water samples, two samples exceeding (SWAMP, 2004).
Spatial Representation:	One station at Los Penasquitos Creek: 32.90588 -117.22703.
Temporal Representation:	Four samples collected from March through September of 2002.
Environmental Conditions:	Los Penasquitos Creek, 906.10.
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: Los Penasquitos Creek

Pollutant: Total Dissolved Solids

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of the 2 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan, Table 3-2: For inland surface waters with all Beneficial Uses, the WQO for Total Dissolved Solids is 500mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality: Data is from samples collected by the RWQCB on 6/3/1998 in Los Penasquitos Creek. Samples were collected at two sites; upstream of Black Mountain Rd and

	at Cobblestone Creek Rd. Two of the 2 samples are in exceedance.
Spatial Representation:	Samples were collected at two locations in Los Penasquitos Creek: upstream of Black Mountain Rd. and at Cobblestone Creek Rd.
Temporal Representation:	Samples were collected on 6/3/1998 .
QA/QC Equivalent:	Data used in 2002 Assessment.

Region 9

Water Segment: Loveland Reservoir

Pollutant: Aluminum

Decision: List

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Aluminum is 0.2 mg/L.

Data Used to Assess Water Quality: Data were collected by Sweetwater Authority from 1997 to 2000, with one sample being collected per year. Two of the 4 samples were in exceedance.

Spatial Representation:	Samples were collected at Loveland Reservoir. Exact location was not reported.
Temporal Representation:	Samples were collected in 12/1997, 06/1998, 07/1999, and 02/2000. One sample was collected per year.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Loveland Reservoir

Pollutant: Manganese

Decision: List

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: The water quality objective for manganese in Loveland Reservoir is 0.05 milligrams/liter (mg/l) according to Basin Plan, Table 3-2 entitled, Water Quality Objectives. This concentration is not be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality: Data were collected by Sweetwater Authority from 1997 to 2000. Two of the 4 samples were in exceedance. Two years had samples which exceeded 0.05 mg/L more than 10% of the time.

Spatial Representation:	Samples were collected at Loveland Reservoir. Exact location was not reported.
Temporal Representation:	Samples were collected in 12/1997, 06/1998, 07/1999, and 02/2000. One sample was collected each year.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Loveland Reservoir

Pollutant: Oxygen, Dissolved

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Forty five of the 72 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat, MU - Municipal & Domestic, WA - Warm Freshwater Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with all beneficial uses except MAR, WARM, and COLD , the WQO for Dissolved Oxygen is 7.0 (minimum) mg/L. The annual mean concentration is not to be less than this more than 10% of the time.

Data Used to Assess Water Quality:	Data were collected by the USGS every other month from 09/1998 to 09/1999. For all sampling dates, dissolved oxygen concentration decreased as the depth increased. For all sampling days except 01/07/1999, at least the top 4 meters had DO concentrations that met standards. For samples in 09/1998, standards were not met at depths greater than 4m. For 11/1998, standards were not met in water deeper than 10m. Standards were not met in 01/1999. Standards were met until the water reached 26m deep in 03/1999. In 05/1999, standards were not met in water deeper than 7m. Waters deeper than 5m did not meet standards in 07/1999 sampling. In 09/1999, waters deeper than 8m did not meet standards (USGS, 2002).
Spatial Representation:	Samples were collected at Loveland Reservoir near the dam. Samples were collected at depths of 0.1m to 50m.
Temporal Representation:	Samples were collected on one day, every other month from 09/10/1998 to 09/21/1999.
Data Quality Assessment:	USGS :http://water.usgs.gov/owq/FieldManual/
QA/QC Equivalent:	Data is from USGS Water Quality Monitoring Study.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, MU - Municipal & Domestic, WA - Warm Freshwater Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with all beneficial uses except MAR, WARM, and COLD , the WQO for Dissolved Oxygen is 7.0 (minimum) mg/L. The annual mean concentration is not to be less than this more than 10% of the time.
Data Used to Assess Water Quality:	Data were collected by the USGS every other month from 09/1998 to 07/1999. For all sampling days, the DO concentration decreased as the water depth increased. For all sampling days, the dissolved oxygen concentration met standards at more shallow depths, but not in deeper waters. For all days, the top at least 3 meters met standards. Overall, including all depths, 45 of 72 samples were in exceedance (USGS, 2002).
Spatial Representation:	Samples were collected at Loveland Reservoir at the east end near the source inlet. Samples were collected at depths of 0.1m to 18.0 m.
Temporal Representation:	Samples were collected on one day, every other month from 09/10/1998 to 07/13/1999.
Data Quality Assessment:	USGS :http://water.usgs.gov/owq/FieldManual/

QA/QC Equivalent: Data is from USGS Water Quality Monitoring Study.

Region 9

Water Segment: Miramar Reservoir

Pollutant: Sulfates

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 21 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for Sulfate is 250 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Data were collected by the City of San Diego Water Dept. from 1996 to 2000.

Quality:	Two of 21 samples were in exceedance.
Spatial Representation:	Samples were collected at Miramar Reservoir station MMA-0.
Temporal Representation:	Samples were collected on a quarterly basis from 01/17/1996 to 12/05/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Miramar Reservoir

Pollutant: Total Dissolved Solids

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Seven of 13 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Data were collected by the City of San Diego Water Dept. from 1998 to 2001.

Quality:	Seven of the 13 samples were in exceedance.
Spatial Representation:	Samples were collected at Miramar Reservoir station MMA-0.
Temporal Representation:	Samples were collected on a quarterly basis from 09/01/1998 to 07/10/2001.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Morena Reservoir

Pollutant: Color

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Eleven of 20 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Nuisance

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for color is 15 units.

Data Used to Assess Water Quality: Data was collected at site MOA-0 by the City of San Diego Water Dept. between March 19996 and December 2000. Eleven of 20 samples were in exceedance.

Spatial Representation:	Samples were collected at site MOA-0.
Temporal Representation:	Samples were collected on a quarterly basis between March 1996 and December 2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Morena Reservoir

Pollutant: Manganese

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Five of 19 samples exceeded the Basin Plan's water quality objective and all five years had exceedances of 0.05 mg/L more than 10% of the time. This exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: The water quality objective for manganese in Morena Reservoir is 0.05 milligrams/liter (mg/l) according to Basin Plan, Table 3-2 entitled, Water Quality Objectives. This concentration is not be exceeded more than 10% of the

	time during any one year period.
Data Used to Assess Water Quality:	Data was collected at site MOA-0 by the City of San Diego Water Dept. between January 1996 and September 2000. Five of 19 samples were in exceedance and all five years had exceedances of 0.05 mg/L more than 10% of the time.
Spatial Representation:	Samples were collected at site MOA-0.
Temporal Representation:	Samples were collected on a quarterly basis between January 1996 and September 2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Morena Reservoir

Pollutant: pH (high)

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Ten of 19 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with all beneficial uses, the WQO for pH is 6.5 (minimum) to 8.5 (maximum).

Data Used to Assess Water Quality:	Data was collected at site MOA-0 by the City of San Diego Water Dept. between March 1996 and December 2000. Ten of 19 samples were in exceedance.
Spatial Representation:	Samples were collected at site MOA-0.
Temporal Representation:	Samples were collected on a quarterly basis between March 1996 and December 2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Murray Reservoir

Pollutant: Total Dissolved Solids

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Forty-seven of 72 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept in 09/1997. None of the 3 samples were in exceedance.
Spatial Representation:	Samples were collected in the Murray Watershed, MURDS drainage, station MBP5.
Temporal Representation:	Samples were collected on 09/25/1997 at 13:41.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. in 05/1997. Six of 6 samples were in exceedance.
Spatial Representation:	Samples were collected at the Murray watershed, drainage MURDS, station MUR1A.
Temporal Representation:	Samples were collected on 05/28/1997 from 7:35am to 7:42am.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. in 09/1997. None of the 3 samples were in exceedance.

Spatial Representation:	Samples were collected in the Murray watershed, drainage MURDS, station MUR1B.
Temporal Representation:	Samples were collected on 09/25/1997 at 12:28pm.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. in 03/1997 and 05/1997. Nine of 9 samples were in exceedance. Two of 2 averages were in exceedance (when averages are calculated for each the samples collected on each sampling day).
Spatial Representation:	Samples were collected in the Murray Watershed, drainage MURDS, station MUR4A.
Temporal Representation:	Samples were collected on 03/12/1997 at 13:54 and 13:55 and on 05/28/1997 from 8:03am to 8:08am.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. in 09/1997 and 01/1998. None of the 6 samples were in exceedance.

Spatial Representation:	Samples were collected in the Murray watershed, drainage MURDS, station MUR5B.
Temporal Representation:	Samples were collected on 09/25/1997 at 12:58 pm and 01/29/1998 at 15:13-15:16pm.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. in 03/1997 and 05/1997. Ten of 10 samples were in exceedance. Two of 2 averages were in exceedance (where averages were calculated for all samples collected each day. For 2 sampling days, 1 average was calculated for each day).
Spatial Representation:	Samples were collected in the Murray watershed, drainage MURDS, station MUR7.
Temporal Representation:	Samples were collected on 03/12/1997 at 14:47 and 14:48pm and 05/28/1997 at 8:41-8:48am.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. in 09/1997 to 02/1998. Fourteen of 20 samples were in exceedance. Samples collected on

	09/18/1997, 12/10/1997, and 02/04/1998 were in exceedance and those collected on other days were not.
Spatial Representation:	Samples were collected in the Murray Watershed, drainage MURDS, station MUR8b.
Temporal Representation:	Samples were collected on 09/18/1997 from 12:50 to 13:46pm and on 09/25/1997 at 13:17 and 13:18pm. Samples were also collected 3-6 times within 10 minutes on 12/10/1997, 01/29/1998, and 02/04/1998.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. in 1998. Five of 8 samples (1 of 2 averages) were in exceedance.
Spatial Representation:	Samples were collected at Murray Reservoir sites 2a and 2b.
Temporal Representation:	Samples were collected on 01/29/1998 and 02/04/1998 3-5 times within 5 minutes.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water	Data were collected by the City of San Diego Water Dept. from 1998 to 2000.

Quality:	Three of 7 samples were in exceedance.
Spatial Representation:	Samples were collected at Murray Reservoir site MUA-0.
Temporal Representation:	Samples were collected 1-4 times per year from 09/1998 to 12/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Murray Reservoir

Pollutant: pH

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Fourteen of 78 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for pH is 6.5 (maximum) to 8.5 (minimum).

Data Used to Assess Water Data were collected by the City of San Diego Water Dept. in 09/1997. None of

Quality:	the 3 samples were in exceedance.
Spatial Representation:	Samples were collected at Murray watershed, drainage MURDS, station MBP5.
Temporal Representation:	Samples were collected on 09/25/1997 at 13:41.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for pH is 6.5 (maximum) to 8.5 (minimum).
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. in 05/1997. None of the 6 samples were in exceedance.
Spatial Representation:	Samples were collected at Murray watershed, drainage MURDS, station MUR1A.
Temporal Representation:	Samples were collected on 05/28/1997 from 07:35am to 07:42am.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for pH is 6.5 (maximum) to 8.5 (minimum).
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. in 09/1997. None of the 3 samples were in exceedance.
Spatial Representation:	Samples were collected at the Murray watershed, drainage MURDS, station MUR1B.

Temporal Representation:	Samples were collected on 09/26/1997 at 12:28pm.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for pH is 6.5 (maximum) to 8.5 (minimum).
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. in 03/1997 and 05/1997. None of the 9 samples were in exceedance.
Spatial Representation:	Samples were collected in the Murray Watershed, drainage MURDS, station MUR4A.
Temporal Representation:	Samples were collected on 03/12/1997 at 13:54 and 13:55 and 05/28/1997 from 8:03am to 8:08am.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for pH is 6.5 (maximum) to 8.5 (minimum).
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. on 09/25/1997 and 01/29/1998. None of the 6 samples were in exceedance.
Spatial Representation:	Samples were collected in the Murray Watershed, drainage MURDS, station MUR5B.
Temporal Representation:	Samples were collected on 09/25/1997 at 12:58pm and on 01/29/1998 from 15:13-15:16pm.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for pH is 6.5 (maximum) to 8.5 (minimum).
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. in 03/1997 and 05/1997. Three of 10 samples were in exceedance.
Spatial Representation:	Samples were collected in the Murray Watershed, drainage MURDS, station MUR7.
Temporal Representation:	Samples were collected on 03/12/1997 at 14:47 and 14:48pm and on 05/28/1997 at 8:41-8:48pm.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for pH is 6.5 (maximum) to 8.5 (minimum).
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 09/1997 to 02/1998. Ten of 25 samples were in exceedance. The samples collected in 09/18/1997 and in 01/1998 were in exceedance, but those collected on all other days met standards.
Spatial Representation:	Samples were collected in Murray Watershed, drainage MURDS, station MUR8b.
Temporal Representation:	Samples were collected on 09/18/1997 and 09/25/1997. Samples were also collected on 12/10/1997, 01/29/1998, and 02/04/1998.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for pH is 6.5 (maximum) to 8.5 (minimum).
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. in 1998. None of the 8 samples were in exceedance.
Spatial Representation:	Samples were collected at Murray Reservoir stations 2a and 2b.
Temporal Representation:	Samples were collected on 01/29/1998 and on 02/04/1998. On each day, 3-5 samples were collected within 5 minutes.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PO - Hydroelectric Power Generation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for pH is 6.5 (maximum) to 8.5 (minimum).
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. One of 18 samples was in exceedance.
Spatial Representation:	Samples were collected at Murray Reservoir site MUA-0.
Temporal Representation:	Samples were collected 2-4 times per year from 03/1996 to 12/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Murrieta Creek

Pollutant: Arsenic

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 13 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For all waters with a municipal beneficial use, the WQO for Arsenic is 0.05 mg/L.

Data Used to Assess Water Quality: Data were collected by the RWQCB on 06/09/1998. One sample was collected, it was in exceedance.

Spatial Representation: Samples were collected at Murrieta Creek at Calle Del Oso Rd.

Temporal Representation:	One sample was collected on 06/09/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For all waters with a municipal beneficial use, the WQO for Arsenic is 0.05 mg/L.
Data Used to Assess Water Quality:	Data were collected by the RWQCB on 06/09/1998. One sample was collected, it was in exceedance.
Spatial Representation:	Samples were collected at Murrieta Creek behind the cement factory.
Temporal Representation:	One sample was collected on 06/09/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For all waters with a municipal beneficial use, the WQO for Arsenic is 0.05 mg/L.
Data Used to Assess Water Quality:	Data were collected by LAW Crandall from 1997 to 2000. None of the 11 samples were in exceedance.
Spatial Representation:	Samples were collected at Murrieta Creek at Temecula. Exact location was not reported.
Temporal Representation:	Samples were collected from 12/09/1997 to 06/01/2000. One to 4 samples were collected per year. One to 2 samples were reported per sampling day.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Murrieta Creek

Pollutant: Copper

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 13 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Copper is 1.0 mg/L.

Data Used to Assess Water Quality: Data were collected by RWQCB9 on 06/09/1998. One sample was collected, it was in exceedance.

Spatial Representation: Sample was collected at Murrieta Creek at Calle Del Oso Rd.

Temporal Representation:	One sample was collected on 06/09/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Copper is 1.0 mg/L.
Data Used to Assess Water Quality:	Data were collected by RWQCB9 on 06/09/1998. One sample was collected, it was in exceedance.
Spatial Representation:	Sample was collected at Murrieta Creek behind the cement factory.
Temporal Representation:	One sample was collected on 06/09/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Copper is 1.0 mg/L.
Data Used to Assess Water Quality:	Data were collected by LAW Crandall from 1997 to 2000. None of the 11 samples were in exceedance.
Spatial Representation:	Sample was collected at Murrieta Creek. Exact location was not reported.
Temporal Representation:	Samples were collected from 12/09/1997 to 06/01/2000. One to 4 samples were collected per year. One to 2 samples were reported per sampling day.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Murrieta Creek

Pollutant: Iron

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Five of 11 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for iron is 0.3 mg/L.

Data Used to Assess Water Quality: Data were collected by LAW Crandall from 1997 to 2000. Five of 11 samples were in exceedance.

Spatial Representation: Samples were collected at Murrieta Creek. Exact location was not given.

Temporal Representation:	Samples were collected from 12/09/1997 to 06/01/2000. One to 4 samples were collected per year. One to 2 samples were reported per sampling day.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Murrieta Creek

Pollutant: Manganese

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Seven of 11 samples exceeded the Basin Plan criteria and the criteria was exceeded more than 10% of the time during at least two years. These exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: The water quality objective for manganese in Murrieta Creek is 0.05 milligrams/liter (mg/l) according to Basin Plan, Table 3-2 entitled, Water Quality Objectives. This concentration is not be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Data were collected by LAW Crandall from 1997 to 2000. Seven of 11 samples

Quality:	were in exceedance.
Spatial Representation:	Samples were collected at Murrieta Creek. Exact location was not reported.
Temporal Representation:	Samples were collected from 12/09/1997 to 06/01/2000. One to 4 samples were collected per year. One to 2 samples were reported per sampling day.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Murrieta Creek

Pollutant: Nitrogen

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Thirty-nine of 164 samples exceeded the Basin Plan criteria and this exceeds the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, GW - Groundwater Recharge, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters, enclosed bays and estuaries, coastal lagoons, and ground waters and all beneficial uses, for Nitrogen, analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N:P = 10:1, on a weight to

	weight basis shall be used.
Data Used to Assess Water Quality:	Data were collected by the Rancho California Water District from 1999 to 2002. The N:P ratio was used to assess data. Thirty-nine of 160 samples exceeded the 10:1 ratio.
Spatial Representation:	Samples were collected at Murrieta Creek. Exact location was not reported.
Temporal Representation:	Samples were collected 4 times per month from 03/31/1999 to 04/17/2002.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, GW - Groundwater Recharge, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters, enclosed bays and estuaries, coastal lagoons, and ground waters for all beneficial uses, analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N:P = 10:1, on a weight to weight basis shall be used.
Data Used to Assess Water Quality:	Data were collected by LAW Crandall from 1997 to 1999. Four N:P ratios were calculated, according to days on which both Nitrogen and Phosphorus samples were collected. None of the 4 ratios were in exceedance of the 10:1 N:P ratio (SWRCB, 2003).
Spatial Representation:	Samples were collected at Murrieta Creek. Exact location was not given.
Temporal Representation:	Samples were collected from 12/09/1997 to 12/06/1999. One to 4 samples were collected per year. One sample was reported per sampling day.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Murrieta Creek

Pollutant: Zinc

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 13 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for zinc is 5.0 mg/L.

Data Used to Assess Water Quality: Data were collected by RWQCB9 on 06/09/1998. One sample was collected, it was in exceedance.

Spatial Representation: Samples were collected at Murrieta Creek at Calle Del Oso Rd.

Temporal Representation:	One sample was collected on 06/09/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for zinc is 5.0 mg/L.
Data Used to Assess Water Quality:	Data were collected by RWQCB9 on 06/09/1998. One sample was collected, it was in exceedance.
Spatial Representation:	Samples were collected at Murrieta Creek behind the cement factory.
Temporal Representation:	One sample was collected on 06/09/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for zinc is 5.0 mg/L.
Data Used to Assess Water Quality:	Data were collected by LAW Crandall from 1997 to 2000. None of the 11 samples were in exceedance.
Spatial Representation:	Samples were collected at Murrieta Creek. Exact location was not given.
Temporal Representation:	Samples were collected from 12/09/1997 to 06/01/2000. One to 4 samples were collected per year. One sample was reported per sampling day.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Oso Creek (at Mission Viejo Golf Course)

Pollutant: Chloride

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Twelve of 13 samples were in exceedance of the chloride water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply

Matrix: Water

Water Quality Objective/ From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for Chloride is 250 mg/L. This concentration is not to be exceeded more than

Water Quality Criterion:	10% of the time during any one year period.
Data Used to Assess Water Quality:	Data were collected by the Santa Margarita Water District in 1998-2001. Twelve of 13 samples were in exceedance.
Spatial Representation:	Samples were collected at Oso Creek at the Mission Valley Golf Course.
Temporal Representation:	Samples were collected on a quarterly basis from 01/15/1998 to 01/02/2001.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Oso Creek (at Mission Viejo Golf Course)

Pollutant: Sulfates

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Twelve of 13 samples were in exceedance of the WQO for Sulfate and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for Sulfate 250 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water Quality:	Data were collected by the Santa Margarita Water District from 1998 to 2001. Twelve of 13 samples were in exceedance.
Spatial Representation:	Samples were collected at Oso Creek at the Mission Viejo Golf Course.
Temporal Representation:	Samples were collected on a quarterly basis from 01/15/1998 to 01/02/2001.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Oso Creek (at Mission Viejo Golf Course)

Pollutant: Total Dissolved Solids

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Twelve of 13 samples were in exceedance of the TDS water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters in HSA 901.21, and all beneficial uses, the WQO for TDS is 750 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Evaluation Guideline:	These objectives apply to the lower portion of Murrieta Creek in the Wolf HSA (2.52) and the Santa Margarita River from its beginning at the confluence of Murrieta and Temecula Creeks, through the Gavilan HSA (2.22) and DeLuz HSA (2.21), to where it enters the Upper Ysidora HSA (2.13).
Data Used to Assess Water Quality:	Data were collected by the Santa Margarita Water District in 1998-2001. Twelve of 13 samples were in exceedance.
Spatial Representation:	Samples were collected at Oso Creek at the Mission Viejo Golf Course.
Temporal Representation:	Samples were collected on a quarterly basis from 01/15/1998 to 01/02/2001.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Otay Reservoir, Lower

Pollutant: Color

Decision: List

Weight of Evidence: Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination from the section 303(d) list.

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. There were 223 out of 423 samples that exceeded the Basin Plan water quality objective and this exceeds the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: The WQO for color in inland surface waters with a municipal beneficial use is 15 units.

Data Used to Assess Water Quality: Color data was collected at sample site OTA-0 by the City of San Diego Water. Dept. from March 1996 to December 2000. For the MUN beneficial use, there were 223 out of 423 samples in exceedance.

Spatial Representation: Samples were collected at sample site OTA-0 in the Lower Otay Reservoir near

	the outlet tower. Samples were collected at the water's surface and at depths of 106 ft., 117ft., 84ft., and 95ft. above the stream bed. Depth samples were also collected near the outlet tower.
Temporal Representation:	Samples were collected on a quarterly basis from January 1996 to December 2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Otay Reservoir, Lower

Pollutant: Iron

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Forty-four of 103 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: The WQO for iron for inland surface waters with a municipal beneficial use is 0.3 mg/L.

Data Used to Assess Water Quality: Iron data was collected by the City of San Diego Water Dept. at site OTA-0 from January 1996 to July 2001. Of 103 samples, 44 were in exceedance.

Spatial Representation: Samples were collected at site OTA-0 in the Lower Otay reservoir near the outlet tower. Samples were collected at the water's surface and at depths of 106

	ft., 117ft., 84ft., and 95ft. above the stream bed. Depth samples were also collected near the outlet tower.
Temporal Representation:	Samples were collected from January 1996 to July 2001. Samples were collected monthly.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Otay Reservoir, Lower

Pollutant: Manganese

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Nine of 26 samples exceeded the Basin Plan criteria and the criteria was exceeded more than 10% of the time during 4 of the years. These exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: The water quality objective for manganese in Lower Otay Reservoir is 0.05 milligrams/liter (mg/l) according to Basin Plan, Table 3-2 entitled, Water Quality Objectives. This concentration is not be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality: Manganese data was collected at site OTA-0 by the City of San Diego Water Dept. from January 1996 to June 2001. Nine of 26 samples were in exceedance

	and the criteria was exceeded more than 10% of the time on 4 of the years.
Spatial Representation:	Samples were collected at sample site OTA-0 in the Lower Otay Reservoir near the outlet tower. Samples were collected at the water's surface and at depths of 106 ft., 117ft., 84ft., and 95ft. above the stream bed. Depth samples were also collected near the outlet tower.
Temporal Representation:	Samples were collected on a quarterly basis from January 1996 to June 2001.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Otay Reservoir, Lower

Pollutant: Nitrogen, ammonia (Total Ammonia)

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Fifty-six of 104 samples exceeded the water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: 0.025 mg/L

Data Used to Assess Water Quality: Data was collected by the City of San Diego Water Dept. from December 1996 to July 2001. Fifty-six of 104 samples are in exceedance.

Spatial Representation:	Samples were collected from one location in the reservoir labeled OTA-0 in Lower Otay Reservoir near the outlet tower.
Temporal Representation:	Samples were collected from December 1996 to July 2001. Samples were collected monthly.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Otay Reservoir, Lower

Pollutant: pH (high)

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Ten of 24 samples had a pH higher than 8.5 (exceeding the Bain Plan criteria).
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with all beneficial uses, the WQO for pH is 6.5 (minimum) to 8.5 (maximum).

Data Used to Assess Water Quality: pH data was collected at site OTA-0 by the City of San Diego Water Dept. from March 1996 to December 2000. Ten of 24 samples exceeded 8.5 pH units. None

	of 24 samples were below 6.5 pH units.
Spatial Representation:	Samples were collected at site OTA-0 in the Lower Otay Reservoir near the outlet tower. Samples were collected at the water's surface and at depths of 106 ft., 117ft., 84ft., and 95ft. above the stream bed. Depth samples were also collected near the outlet tower.
Temporal Representation:	Samples were collected on a quarterly basis from March 1996 to December 2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Pine Valley Creek (Upper)

Pollutant: Phosphorus

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
2. Six of 51 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
3. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters-streams and other flowing waters and for all beneficial uses, the WQO for total phosphorus is 0.1 mg/L. This appears to be the desired goal in order to prevent plant nuisance in streams and other flowing waters; not to be exceeded more than 10% of the time.

Evaluation Guideline: Use unless studies of the specific water body in question clearly show that water

	quality objective changes are permissible and changes are approved by the Regional Board. Certain exceptions to these objectives are described in Chapter 4 of the Basin Plan in the sections titled "Discharges to Coastal Lagoons from Pilot Water Reclamation Projects" and "Discharges to Inland Surface Waters".
Data Used to Assess Water Quality:	Phosphorus data was collected at 5 sample sites by the City of San Diego Water Dept. from 1/14/1998 to 8/18/1998. At site NPC3A, 1 of 10 samples was in exceedance.
Spatial Representation:	Samples for this LOE were collected at site NPC3A in Pine Valley Creek. The exact location of this site is unknown. Samples were collected at 4 more sample sites in Pine Valley Creek.
Temporal Representation:	Samples were collected monthly from January 14, 1998 to August 18, 1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters-streams and other flowing waters and for all beneficial uses, the WQO for total phosphorus is 0.1 mg/L. This appears to be the desired goal in order to prevent plant nuisance in streams and other flowing waters; not to be exceeded more than 10% of the time.
Evaluation Guideline:	Use unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board.
Data Used to Assess Water Quality:	Phosphorus data was collected at 5 sample sites by the City of San Diego Water Dept. from 1/14/1998 to 8/18/1998. At site NPC3B, 2 of 10 samples were in exceedance (SWRCB, 2003).
Spatial Representation:	Phosphorus samples for this LOE were collected at site NPC3B. The exact location of this site is unknown. Samples were collected at 4 other sample sites in Pine Valley Creek. The proximity of the sites to each other is unknown.
Temporal Representation:	Samples were collected monthly from 1/14/1998 to 8/18/1998.

QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters-streams and other flowing waters and for all beneficial uses, the WQO for total phosphorus is 0.1 mg/L. This appears to be the desired goal in order to prevent plant nuisance in streams and other flowing waters; not to be exceeded more than 10% of the time.
Evaluation Guideline:	Use unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board.
Data Used to Assess Water Quality:	Phosphorus data was collected at 5 sample sites by the City of San Diego Water Dept. from 1/14/1998 to 8/18/1998. At site NPC3C, 0 of 10 samples were in exceedance.
Spatial Representation:	Phosphorus samples for this LOE were collected at site NPC3C. The exact location of this site is unknown. Samples were collected at 4 other sample sites in Pine Valley Creek. The proximity of the sites to each other is unknown.
Temporal Representation:	Samples were collected on a monthly basis from 1/14/1998 to 8/18/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters-streams and other flowing waters and for all beneficial uses, the WQO for total phosphorus is 0.1 mg/L. This appears to be the desired goal in order to prevent plant nuisance in streams and other flowing waters; not to be exceeded more than 10% of the time.

Evaluation Guideline:	Use unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board.
Data Used to Assess Water Quality:	Phosphorus data was collected at 5 sample sites by the City of San Diego Water Dept. from 1/14/1998 to 8/18/1998. At site NPC3D, 1 of 10 samples were in exceedance.
Spatial Representation:	Phosphorus samples for this LOE were collected at site NPC3D. The exact location of this site is unknown. Samples were collected at 4 other sample sites in Pine Valley Creek. The proximity of the sites to each other is unknown.
Temporal Representation:	Samples were collected on a monthly basis from 1/14/1998 to 8/18/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters-streams and other flowing waters and for all beneficial uses, the WQO for total phosphorus is 0.1 mg/L. This appears to be the desired goal in order to prevent plant nuisance in streams and other flowing waters; not to be exceeded more than 10% of the time.
Evaluation Guideline:	Use unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board.
Data Used to Assess Water Quality:	Phosphorus data was collected at 5 sample sites by the City of San Diego Water Dept. from 1/14/1998 to 9/15/1998. At site PVC1A, 2 of 11 samples were in exceedance.
Spatial Representation:	Phosphorus samples for this LOE were collected at site PVC1A. The exact location of this site is unknown. Samples were collected at 4 other sample sites in Pine Valley Creek. The proximity of the sites to each other is unknown.
Temporal Representation:	Samples were collected on a monthly basis from 1/14/1998 to 9/15/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Pine Valley Creek (Upper)

Pollutant: Turbidity

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
2. Eleven of 53 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
3. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for turbidity is 5 units. For inland surface waters and all other beneficial uses, the WQO for turbidity is 20 ntu.

Data Used to Assess Water Quality: Samples were collected at site NPC3A by the City of San Diego Water Dept. from 1/14/1998 to 8/18/1998. Of 10 samples, 1 exceeded the WQO for municipal beneficial uses.

Spatial Representation: Samples were collected at site NPC3A. The exact location of this site is

	unknown. Samples were collected at 4 other sites in the creek. The proximity of these sites to each other is unknown.
Temporal Representation:	Samples were collected monthly between 1/14/1998 and 8/18/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for turbidity is 5 units. For inland surface waters and all other beneficial uses, the WQO for turbidity is 20 ntu.
Data Used to Assess Water Quality:	Samples were collected at site NPC3B by the City of San Diego Water Dept. from 1/14/1998 to 8/18/1998. Of 10 samples, 1 exceeded the WQO for municipal beneficial uses (SWRCB, 2003).
Spatial Representation:	Samples were collected at site NPC3B. The exact location of this site is unknown. Samples were collected at 4 other sites in the creek. The proximity of these sites to each other is unknown.
Temporal Representation:	Samples were collected monthly between 1/14/1998 and 8/18/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for turbidity is 5 units. For inland surface waters and all other beneficial uses, the WQO for turbidity is 20 ntu.
Data Used to Assess Water Quality:	Samples were collected at site NPC3C by the City of San Diego Water Dept. from 1/14/1998 to 8/18/1998. Of 10 samples, 2 exceeded the WQO for municipal beneficial uses.
Spatial Representation:	Samples were collected at site NPC3C. The exact location of this site is

	unknown. Samples were collected at 4 other sites in the creek. The proximity of these sites to each other is unknown.
Temporal Representation:	Samples were collected monthly between 1/14/1998 to 8/18/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for turbidity is 5 units. For inland surface waters and all other beneficial uses, the WQO for turbidity is 20 ntu.
Data Used to Assess Water Quality:	Samples were collected at site NPC3D by the City of San Diego Water Dept. from 1/14/1998 to 7/14/1998. Of 9 samples, 4 exceeded the WQO for municipal beneficial uses.
Spatial Representation:	Samples were collected at site NPC3D. The exact location of this site is unknown. Samples were collected at 4 other sites in the creek. The proximity of these sites to each other is unknown.
Temporal Representation:	Samples were collected monthly between 1/14/1998 and 7/14/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for turbidity is 5 units. For inland surface waters and all other beneficial uses, the WQO for turbidity is 20 ntu.
Data Used to Assess Water Quality:	Samples were collected at site PVC1A by the City of San Diego Water Dept. from 1/14/1998 to 9/15/1998. Of 11 samples, 3 exceeded the WQO for municipal beneficial uses.
Spatial Representation:	Samples were collected at site PVC1A. The exact location of this site is

	unknown. Samples were collected at 4 other sites in the creek. The proximity of these sites to each other is unknown.
Temporal Representation:	Samples were collected monthly between 1/14/1998 and 9/15/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for turbidity is 5 units. For inland surface waters with all other beneficial uses, the WQO is 20 units.
Data Used to Assess Water Quality:	Samples were collected at site PVC1A by the City of San Diego Water Dept. on May 19, 1997 and October 9, 1997. Two samples were collected (one on each day) and none were in exceedance.
Spatial Representation:	Samples were collected at sample site PVC1A. Another sample was collected at site PVC1B.
Temporal Representation:	Samples were collected once on each day on May 19, 1997 and October 9, 1997.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for turbidity is 5 units. For inland surface waters with all other beneficial uses, the WQO is 20 units.
Data Used to Assess Water Quality:	One sample was collected at site PVC1B by the City of San Diego Water Dept. on May 20, 1997. The single sample was not in exceedance.
Spatial Representation:	The sample was collected at site PVC1B in Pine Valley Creek. Other samples were collected at PVC1A.

Temporal Representation: One sample was collected on May 20, 1997.

QA/QC Equivalent: Data used in 2002 assessment.

Region 9

Water Segment: Pogi Canyon Creek

Pollutant: DDT

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A sufficient number of samples exceed the California Toxic Rule: DDT human health carcinogenic risk for consumption of water & organisms of 0.00059 ug/L.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	No individual pesticide or combination or pesticides shall be present in concentrations that adversely affect beneficial uses. California Toxic Rule: DDT human health carcinogenic risk for consumption of water & organisms 0.00059 ug/L.
Data Used to Assess Water Quality:	Two of 3 sample exceeding CTR criterion (SWAMP, 2004).
Spatial Representation:	One sampling station at Pogi Creek: 32.6 -117.02114.
Temporal Representation:	Samples were collected from March through September of 2002.
Environmental Conditions:	Otay River Watershed: 910.20.
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: Rainbow Creek

Pollutant: Iron

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 11 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for iron is 0.3 mg/L.

Data Used to Assess Water Quality: Data were collected by RWQCB9 from 1997 to 2000. Two of 11 samples were in exceedance.

Spatial Representation: Samples were collected at Rainbow Creek near Fallbrook.

Temporal Representation:	Samples were collected on a quarterly basis from 12/1997 to 06/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Rainbow Creek

Pollutant: Sulfates

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Six of 11 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for sulfate is 250 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality:	Data were collected by RWQCB9 from 1997 to 2000. Six of 11 samples were in exceedance.
Spatial Representation:	Samples were collected at Rainbow Creek near Fallbrook.
Temporal Representation:	Samples were collected on a quarterly basis from 12/1997 to 06/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Rainbow Creek

Pollutant: Total Dissolved Solids

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Forty-nine of 51 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters in HSA 902.22, and all beneficial uses, the WQO for TDS is 750 mg/L.

Evaluation Guideline:	These objectives apply to the lower portion of Murrieta Creek in the Wolf HSA (2.52) and the Santa Margarita River from its beginning at the confluence of Murrieta and Temecula Creeks, through the Gavilan HSA (2.22) and DeLuz HSA (2.21), to where it enters the Upper Ysidora HSA (2.13).
Data Used to Assess Water Quality:	Data were collected by RWQCB9 in 2000. Nine of 9 samples were in exceedance.
Spatial Representation:	Samples were collected at Rainbow Creek station 6, Stage Coach.
Temporal Representation:	Samples were collected 2-4 times per month from 08/2000 to 10/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters in HSA 902.22 and all beneficial uses, the WQO for TDS is 500 mg/L.
Evaluation Guideline:	These objectives apply to the lower portion of Murrieta Creek in the Wolf HSA (2.52) and the Santa Margarita River from its beginning at the confluence of Murrieta and Temecula Creeks, through the Gavilan HSA (2.22) and DeLuz HSA (2.21), to where it enters the Upper Ysidora HSA (2.13).
Data Used to Assess Water Quality:	Data were collected from 1997 to 2000. Nine of 11 samples were in exceedance.
Spatial Representation:	Samples were collected at Rainbow Creek near Fallbrook.
Temporal Representation:	Samples were collected on a quarterly basis from 12/1997 to 06/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI -

	Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters in HSA 902.22, and all beneficial uses, the WQO for TDS is 500 mg/L.
Evaluation Guideline:	These objectives apply to the lower portion of Murrieta Creek in the Wolf HSA (2.52) and the Santa Margarita River from its beginning at the confluence of Murrieta and Temecula Creeks, through the Gavilan HSA (2.22) and DeLuz HSA (2.21), to where it enters the Upper Ysidora HSA (2.13).
Data Used to Assess Water Quality:	Data were collected by RWQCB9 in 2000. Twenty of 20 samples were in exceedance. One sample was also collected by RWQCB9 on 06/09/1998. This sample was in exceedance.
Spatial Representation:	Samples were collected at Rainbow Creek station 4, Willow Glen.
Temporal Representation:	Samples were collected 2-4 times per year from 03/2000 to 10/2000, and on 06/09/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters in HSA 902.22, and all beneficial uses, the WQO for TDS is 750 mg/L.
Evaluation Guideline:	These objectives apply to the lower portion of Murrieta Creek in the Wolf HSA (2.52) and the Santa Margarita River from its beginning at the confluence of Murrieta and Temecula Creeks, through the Gavilan HSA (2.22) and DeLuz HSA (2.21), to where it enters the Upper Ysidora HSA (2.13).
Data Used to Assess Water Quality:	Data were collected by RWQCB9 in 2000. Twenty of 20 samples were in exceedance.
Spatial Representation:	Samples were collected at Rainbow Creek at station 5, Riverhouse.
Temporal Representation:	Samples were collected 2-4 times per month from 03/2000 to 10/2000.

QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters in HSA 902.22, and all beneficial uses, the WQO for TDS is 750 mg/L.
Evaluation Guideline:	These objectives apply to the lower portion of Murrieta Creek in the Wolf HSA (2.52) and the Santa Margarita River from its beginning at the confluence of Murrieta and Temecula Creeks, through the Gavilan HSA (2.22) and DeLuz HSA (2.21), to where it enters the Upper Ysidora HSA (2.13).
Data Used to Assess Water Quality:	Data were collected by RWQCB9 in 2000. One sample was collected and was in exceedance.
Spatial Representation:	Samples were collected at Rainbow Creek at station 2, Hines Nurseries.
Temporal Representation:	One sample was collected on 09/19/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters in HSA 902.22, and all beneficial uses, the WQO for TDS is 750 mg/L.
Evaluation Guideline:	These objectives apply to the lower portion of Murrieta Creek in the Wolf HSA (2.52) and the Santa Margarita River from its beginning at the confluence of Murrieta and Temecula Creeks, through the Gavilan HSA (2.22) and DeLuz HSA (2.21), to where it enters the Upper Ysidora HSA (2.13).

Data Used to Assess Water Quality:	Data were collected by RWQCB9 in 2000. Nine of 9 samples were in exceedance.
Spatial Representation:	Samples were collected in Rainbow Creek at station 3, Oak Crest.
Temporal Representation:	Samples were collected 2-4 times per month from 08/2000 to 10/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Reidy Canyon Creek

Pollutant: Phosphorus

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 2 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan, the WQO for Total Phosphorus for inland surface waters-streams and other flowing waters is 0.1 mg/L. This appears to be desired goal in order to prevent plant nuisance in streams and other flowing waters; not to be exceeded more than 10% of the time.

Data Used to Assess Water Data was collected on 3/12/2001 at Reidy Creek near Mountain Meadow

Quality:	Mushroom Farm at two locations; one upstream and one downstream. Samples in exceedance: 2 of 2 (SDRWQCB, 2001).
Spatial Representation:	Samples were collected at Reidy Creek near Mountain Meadow Mushroom Farm at one upstream location and one downstream location.
Temporal Representation:	One sample was taken at each location on one day, 3/12/2001.

Region 9

Water Segment: Reidy Canyon Creek

Pollutant: Turbidity

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 2 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan, the Turbidity WQO for inland surface water with Municipal (MUN) Beneficial Uses is 5 units.
The Turbidity WQO for inland surface waters with all other beneficial uses is 20 NTU. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

Data Used to Assess Water Quality:	Data was obtained from samples collected on 3/12/2001 in Reidy Creek near the Mountain Meadow Mushroom Farm. One upstream sample and one downstream sample were collected. For the MUN beneficial use, 2 of 2 samples are in exceedance (SDRWQCB, 2001).
Spatial Representation:	Two samples, one upstream and one downstream, were collected at Reidy Creek near the Mountain Meadow Mushroom Farm.
Temporal Representation:	Samples were collected once on 3/12/2001.

Region 9

Water Segment: San Diego Bay

Pollutant: Polychlorinated biphenyls

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.5 of the Listing Policy. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Eleven of the 11 samples exceeded the OEHHA Screening Value and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue

Beneficial Use: CM - Commercial and Sport Fishing (CA)

Matrix: Tissue

Water Quality Objective/ Water Quality Criterion: San Diego RWQCB Basin Plan: No individual pesticide or combination of pesticides shall be present in the water column, sediments or biota that adversely affect beneficial uses. Pesticides shall not be present at levels which will bioaccumulate in aquatic organisms to levels which are harmful to human

	health, wildlife or aquatic organisms.
Evaluation Guideline:	20 ng/g (OEHHA Screening Value) (Brodberg & Pollock, 1999).
Data Used to Assess Water Quality:	Eleven out of 11 samples exceeded. All 11 samples were filet composites. Six out of the 11 samples were spotted sand bass collected at least once at each station. The remaining species included barred sand bass, black surfperch, diamond turbot, and shiner surfperch. All samples exceeded guideline (TSMP, 2002).
Spatial Representation:	Four stations was sampled: 5th Avenue Marina Pier, Coronado Pier, J Street Pier - Chula Vista, and Shelter Island Pier.
Temporal Representation:	Samples were collected in February, March, April, May, November 1999 and March 2000.
Data Quality Assessment:	CFCP 1998 Year 1 QA Summary: Pesticides and PCBs. California Department of Fish and Game. CDFG Fish and Wildlife Water Pollution Control Laboratory Data Quality Assurance Report. 1999 Coastal Fish Contamination Program (CFCP Year 2). California Department of Fish and Game.

Region 9

Water Segment: San Diego Bay Shoreline, Chula Vista Marina

Pollutant: Copper

Decision: List

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

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

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: ES - Estuarine Habitat, MA - Marine Habitat

Matrix: Water

Water Quality Objective/ From the CTR: the dissolved copper chronic criterion is 3.1 ppb, and the acute

Water Quality Criterion:	criterion is 4.8 ppb.
Data Used to Assess Water Quality:	Data were collected by the RWQCB in 03/2004. Two of 3 samples were in exceedance for both the acute and chronic criteria. The sample collected at the north end of marina next to bridge and third pier was in exceedance of chronic criteria, but not acute (SDRWQCB, 2004c).
Spatial Representation:	Samples were collected at the San Diego Bay at the Chula Vista Marina, at the north end of marina next to bridge and third pier, in front of public loading dock, and at the south end of marina.
Temporal Representation:	Data were collected on 03/20/2004.

Region 9

Water Segment: San Diego Bay Shoreline, at Americas Cup Harbor

Pollutant: Copper

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 5 samples exceeded the 3.1 ppb CTR chronic saltwater criteria and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, IN - Industrial Service Supply, MA - Marine Habitat, MI - Fish Migration, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat

Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the CTR: the dissolved copper chronic criterion is 3.1 ppb, and the acute criterion is 4.8 ppb.
Data Used to Assess Water Quality:	Two of 5 samples were in exceedance of the chronic criteria. Samples collected near the entrance, between piers 3 and 4, and at the west corner of the marina near piling 2 and the Shelter Island boatyard were in exceedance of the chronic criteria (SDRWQCB, 2004c).
Spatial Representation:	Samples were collected at the San Diego Bay, Americas Cup Harbor, near the entrance, between piers 3 and 4, by the bridge and the pier, near piling number 6 and Kettenberg marina, and at the west corner of the marina near piling 2 and the Shelter Island boatyard.
Temporal Representation:	Samples were collected on 03/15/2004.

Region 9

Water Segment: San Diego Bay Shoreline, at Coronado Cays

Pollutant: Copper

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements in section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Seven of 8 samples exceeded the 3.1 ppb CTR chronic saltwater criteria and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, IN - Industrial Service Supply, MA - Marine Habitat, MI - Fish Migration, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat

Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the CTR, the saltwater acute standard for copper is 4.8 ppb and the saltwater chronic standard is 3.1 ppb.
Data Used to Assess Water Quality:	Seven of 8 samples were in exceedance of the chronic standards. The location with no exceedances was at the Southern-most leg (SDRWQCB, 2004c).
Spatial Representation:	Samples were collected at the San Diego Bay shoreline, Coronado Cays, at the Southern-most leg, near Blue Anchor Cays street, next to the causeway, mid-area of Coronado Cays-south of causeway, next to sandy beach; NE leg and at the intersection of two waterways; North end of Cays.
Temporal Representation:	Samples were collected on 05/20/2004.

Region 9

Water Segment: San Diego Bay Shoreline, at Glorietta Bay

Pollutant: Copper

Decision: List

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

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

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, IN - Industrial Service Supply, MA - Marine Habitat, MI - Fish Migration, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat

Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the CTR, the saltwater chronic standard is 3.1 ppb, and the acute criterion is 4.8 ppb.
Data Used to Assess Water Quality:	Data were collected in 05/2004. Two of 3 samples were in exceedance of the chronic standard. The location where there were no exceedances was next to Buoy 13; near Avenida de las Arenas (SDRWQCB, 2004c).
Spatial Representation:	Samples were collected at the San Diego Bay Shoreline, Glorietta Bay, in front of Coronado Yacht Club, halfway down the main axis of Glorietta Bay, and next to Buoy 13; near Avenida de las Arenas
Temporal Representation:	Samples were collected on 05/20/2004.

Region 9

Water Segment: San Diego Bay Shoreline, at Harbor Island (East Basin)

Pollutant: Copper

Decision: List

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

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

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, IN - Industrial Service Supply, MA - Marine Habitat, MI - Fish Migration, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat

Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the CTR: The dissolved copper chronic criterion is 3.1 ppb and the acute criterion is 4.8 ppb.
Data Used to Assess Water Quality:	Data were collected by the RWQCB in 03/2004. Three of 3 samples (1 sample collected at each location) were in exceedance of the chronic standards (SDRWQCB, 2004c).
Spatial Representation:	Samples were collected at the San Diego Bay, Harbor Island East Basin, off of last pier in innermost marina, off pier no. 6 from entrance, and off pier no. 2 from entrance.
Temporal Representation:	Samples were collected on 03/15/2004.

Region 9

Water Segment: San Diego Bay Shoreline, at Harbor Island (West Basin)

Pollutant: Copper

Decision: List

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

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

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Eight of 10 samples exceeded the 3.1 ppb CTR chronic saltwater criteria and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, IN - Industrial Service Supply, MA - Marine Habitat, MI - Fish Migration, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat

Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the CTR: The dissolved copper chronic criterion is 3.1 ppb, and the acute criterion is 4.8 ppb.
Data Used to Assess Water Quality:	Data were collected by the RWQCB in 03/2004. Eight of 10 samples were in exceedance of the chronic standards. The samples collected between piers 24 and 25 were in exceedance of chronic criteria and samples collected in the main channel were not in exceedance. The sample collected at mid-channel, south of Tom Ham's was not in exceedance of the chronic standard (SDRWQCB, 2004c).
Spatial Representation:	Samples were collected at San Diego Bay at Harbor Island in the West Basin at the innermost location near the fence between the park and hotel, between piers 6 and 7, between piers 12 and 13, between piers 18 and 19, between piers 24 and 25, and in the main channel outside of Warbor Island West. On 03/20/2004 a sample was collected at Harbor Island West mid-channel, south of Tom Ham's.
Temporal Representation:	Samples were collected on 03/15/2004. One sample was also collected on 03/20/2004.

Region 9

Water Segment: San Diego Bay Shoreline, at Marriot Marina

Pollutant: Copper

Decision: List

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

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

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, IN - Industrial Service Supply, MA - Marine Habitat, MI - Fish Migration, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat

Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the CTR: the dissolved copper chronic criterion is 3.1 ppb and the acute criterion is 4.8 ppb.
Data Used to Assess Water Quality:	Data were collected by the RWQCB in 03/2004. Three of 4 samples were in exceedance of the chronic criteria. All samples in exceedance were collected in the Marina. The samples collected in the main channel were not in exceedance of the chronic criteria (SDRWQCB, 2004c).
Spatial Representation:	Samples were collected in the San Diego Bay at the Mariott Marina and in the Mariott Marina Main Channel. Samples collected at the marina were collected on the west and east sides of the marina and in the middle.
Temporal Representation:	Samples were collected on 03/115/2004.

Region 9

Water Segment: San Juan Creek

Pollutant: DDE

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A sufficient number of samples exceed the California Toxic Rule: Human Health-FW (water & organisms) criterion of 0.00059 mg/L.

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

This conclusion is based on the staff findings that:
1.The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3.Two of 4 samples exceeded the California Toxic Rule: Human Health-FW (water & organisms) criterion of 0.00059 mg/L and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4.Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CM - Commercial and Sport Fishing (CA), WA - Warm Freshwater Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	San Diego RWQCB Basin Plan: No individual pesticide or combination of pesticides shall be present in the water column, sediments, or biota at concentration(s) that adversely affect beneficial uses. California Toxic Rule: Human Health-FW (water & organisms) .00059 mg/L.
Data Used to Assess Water Quality:	Four samples, two exceeding (SWAMP, 2004).
Spatial Representation:	One station at San Juan Creek: 33.484429 -117.67577.
Temporal Representation:	Four samples collected from October 2002 through May of 2003.
Environmental Conditions:	San Juan Creek Watershed: 901.27.
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: San Marcos Creek

Pollutant: DDE

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.1 of the Listing Policy. Under section 3.1 a single line of evidence is necessary to assess listing status. One line of evidence is available in the administrative record to assess this pollutant.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Three of 4 samples exceeded the California Toxic Rule: Human Health-FW (water & organisms) criterion of 0.00059 mg/L. and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: CM - Commercial and Sport Fishing (CA), WA - Warm Freshwater Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: California Toxic Rule: Human Health-FW (water & organisms) .00059 mg/L.

San Diego RWQCB Basin Plan: No individual pesticide or combination of

	pesticides shall be present in the water column, sediments, or biota at concentration(s) that adversely affect beneficial uses.
Data Used to Assess Water Quality:	Four samples; three samples exceeding (SWAMP, 2004).
Spatial Representation:	One Station at San Marcos Creek: 33.13027 -117.192.
Temporal Representation:	Samples were collected from March through September of 2002.
Environmental Conditions:	San Marcos Creek Watershed 904.51.
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: San Marcos Creek

Pollutant: Phosphorus

Decision: List

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

One line of evidence is available in the administrative record to assess this pollutant. A large number of samples exceed the Water Quality Control Plan goal of 0.1 mg/L in streams and flowing waters..

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Eight of 8 samples exceeded the basin plan water quality goal and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisances or adversely affects beneficial uses. Water Quality Control Plan for the San Diego Basin Goal of 0.1 mg/L in stream and flowing waters.
Data Used to Assess Water Quality:	Eight water samples, eight samples exceeding (SWAMP, 2004).
Spatial Representation:	Two stations at San Marcos Creek: 33.13027 - 117.192 and at 33.08791 - 117.26933.
Temporal Representation:	Eight samples collected from March through September of 2002.
Environmental Conditions:	San Marcos Creek Watershed 904.5.
Data Quality Assessment:	SWAMP Quality Assurance Plan.

Region 9

Water Segment: San Marcos Creek

Pollutant: Sediment Bioassays -- Chronic Toxicity -- Freshwater

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 a water segment can be placed on the 303(d) list if the water segment exhibits significant toxicity and the observed toxicity is associated with a pollutant or pollutants. The water body segment may also be listed for toxicity alone.

One line of evidence is available in the administrative record to assess this pollutant. A sufficient number of samples exceed the 10-day Hyalella azteca test.

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

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

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

Lines of Evidence:

Numeric Line of Evidence Toxicity

Beneficial Use: WA - Warm Freshwater Habitat

Matrix: Sediment

Water Quality Objective/ Water Quality Criterion:	All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration or other appropriate methods as specified by the Regional Board (Region 9 Basin Plan, pages 3-15 to 3-16; September 8, 1994).
Data Used to Assess Water Quality:	Two out of four samples displayed statistically significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%. One of the four samples (collected April 23, 2002) also displayed statistically significant toxicity in the survival endpoint compared to the negative control, but this data point is not included in the total 'toxic' samples as it had a data qualifier. All samples were tested using the 10-day Hyalella azteca test (SWAMP, 2004).
Spatial Representation:	All samples were collected from one station, San Marcos Creek 3.
Temporal Representation:	Samples were collected from March 2002 through September 2002. Toxicity in the survival endpoint was detected in samples collected on March 12, 2002 and September 18, 2002.
Data Quality Assessment:	SWAMP QAPP.

Numeric Line of Evidence	Toxicity
Beneficial Use:	WA - Warm Freshwater Habitat
Matrix:	Sediment
Water Quality Objective/ Water Quality Criterion:	All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration or other appropriate methods as specified by the Regional Board (Region 9 Basin Plan, pages 3-15 to 3-16; September 8, 1994).
Data Used to Assess Water Quality:	Two out of four samples displayed statistically significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%. One of the four samples (collected April 23, 2002) also displayed statistically significant toxicity in the survival endpoint compared to the negative control, but this data point is not included in the total 'toxic' samples as it had a data qualifier. All samples were tested using the 10-day Hyalella azteca test (SWAMP, 2004).
Spatial Representation:	All samples were collected from one station, San Marcos Creek 6.

Temporal Representation:	Samples were collected from March 2002 through September 2002. Toxicity in the survival endpoint was detected in samples collected on March 13, 2002 and September 17, 2002.
Data Quality Assessment:	SWAMP QAPP.

Region 9

Water Segment: San Marcos Lake

Pollutant: Ammonia as Nitrogen

Decision: List

Weight of Evidence: One line of evidence is available in the administrative record to assess this pollutant. Three of the 3 samples exceeded the criteria, and this exceeds the allowable frequency of the Listing Policy.

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: Ammonia, unionized. Maximum 0.025 mg/L. Discharge of wastes shall not cause concentrations of NH3 to exceed this limit (as N) in these waters.

Data Used to Assess Water Quality: Three out of 3 samples were in exceedance. Samples were collected at the San Marcos Lake in May 2001, by the Lake San Marcos Community Association. Three samples were analyzed for Ammonia as N by Enviromatrix Analytical Inc (Lake San Marcos Community Association, 2001).

Spatial Representation: Three stations: outfall, cross bridge, and park dock were sampled.

Temporal Representation:	All samples were taken on one day in May 2001.

Line of Evidence	Narrative Description Data
Beneficial Use	AG - Agricultural Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Non-Numeric Objective:	The dissolved oxygen concentration in ocean waters shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.
Data Used to Assess Water Quality:	There is no numeric data concerning low dissolved oxygen. Information that low dissolved oxygen is potentially a problem was found in the conversation with D. Gibson on 10/2/01 (Lake San Marcos Community Association, 2001).
Spatial Representation:	The comments from citizens do not give a specific location on the lake.
Temporal Representation:	The notes concerning low DO are from a conversation on 10/2/01.

Line of Evidence	Narrative Description Data
Beneficial Use	AG - Agricultural Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Non-Numeric Objective:	The dissolved oxygen concentration in ocean waters shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.
Data Used to Assess Water Quality:	There was no numerical data pertaining to dissolved oxygen submitted. Information from the Lake San Marcos Community Association concerning a fish kill in the lake was dated May 9, 2001. The letter says that several fish kills occurred during summer months and that representatives from the California Fish and Game and the San Diego County Department of Health have confirmed that the fish kill was due to a lack of oxygen (Lake San Marcos Community Association, 2001).
Spatial Representation:	No specific locations of the lake were reported in the document.
Temporal Representation:	The document is dated May 9, 2001.

Line of Evidence	Adverse Biological Responses
Beneficial Use	AG - Agricultural Supply, R1 - Water Contact Recreation, R2 - Non-Contact

	Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Data Used to Assess Water Quality:	A photo of an abnormal growth on a fish gill plate was taken on April 15, 2001 and submitted in a letter dated May 9, 2001 by the Lake San Marcos Community Association. Other data concerning nutrients and solids was collected and analyzed in May 2001 (Lake San Marcos Community Association, 2001).
Spatial Representation:	No specific location is given as to where the fish was caught.
Temporal Representation:	The fish with an abnormal gill was caught on April 15, 2001.

Region 9

Water Segment: San Marcos Lake

Pollutant: Nutrients

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Six of 6 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply

Matrix: Water

Water Quality Objective/ Water Quality Criterion: Ammonia, unionized. Maximum 0.025 mg/L. Discharge of wastes shall not cause concentrations of NH3 to exceed this limit (as N) in these waters.

Data Used to Assess Water Quality: Three out of 3 samples were in exceedance. Samples were collected at the San Marcos Lake in May 2001, by the Lake San Marcis Community Association. Three samples were analyzed for Ammonia as N by Enviromatrix Analytical Inc (Lake San Marcos Community Association, 2001).

Spatial Representation:	Three stations: outfall, cross bridge, and park dock were sampled
Temporal Representation:	All samples were taken on one day in May 2001.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan. Total Phosphorus: The maximum, threshold - not to be exceeded more than 10% of the time is 0.025 mg/L for inland surface waters-any standing body of water.
Evaluation Guideline:	From the Basin Plan: Use unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board.
Data Used to Assess Water Quality:	Three out of 3 samples were in exceedance. The three samples were collected by the Lake San Marcos Community Association on May 9, 2001. The data was analyzed on May 12, 2001 by Environmatrix Analytical, Inc (Lake San Marcos Community Association, 2001).
Spatial Representation:	One sample was taken at each of three locations on the lake: Outfall, Cross Bridge, and Park Dock.
Temporal Representation:	Samples were collected on one day, May 9, 2001.

Line of Evidence	Narrative Description Data
Beneficial Use	AG - Agricultural Supply
Information Used to Assess Water Quality:	Information includes notes from a conversation with D. Gibson and a note from a citizen concerning nutrients and their sources. Notes mention that the water is potentially impaired but there doesn't appear to be enough data to support that it is impaired.
Non-Numeric Objective:	From the Basin Plan: Inland surface waters, bays and estuaries, and coastal lagoon 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. Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth.
Data Used to Assess Water	The data include notes from a conversation with D. Gibson on 10/1/01 and a

Quality:	note from a citizen (Thielen), submitted by the Lake San Marcos Community Association (Lake San Marcos Community Association, 2001).
Spatial Representation:	Descriptions seem to include the entire lake.
Temporal Representation:	Descriptions are dated from February 2001 to around November 2001.

Region 9

Water Segment: San Marcos Lake

Pollutant: Phosphorus

Decision: List

Weight of Evidence: Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category.
This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Three of the 3 samples exceeded the Basin Plan criteria, and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan. Total Phosphorus: The maximum, threshold - not to be exceeded more than 10% of the time is 0.025 mg/L for inland surface waters-any standing body of water.

Evaluation Guideline: From the Basin Plan: Use unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board.

Data Used to Assess Water Quality:	Three out of 3 samples were in exceedance. The three samples were collected by the Lake San Marcos Community Association on May 9, 2001. The data was analyzed on May 12, 2001 by Environmatrix Analytical, Inc (Lake San Marcos Community Association, 2001).
Spatial Representation:	One sample was taken at each of three locations on the lake: Outfall, Cross Bridge, and Park Dock.
Temporal Representation:	Samples were collected on one day, May 9, 2001.

Region 9

Water Segment: San Marcos Lake

Pollutant: Total Dissolved Solids

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Three of 3 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Sediment

Beneficial Use: AG - Agricultural Supply

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: Total Dissolved Solids: 500 units

Evaluation Guideline: Concentration not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Three out of 3 samples were in exceedance. Samples were collected by the Lake

Quality:	San Marcos Community Association on May 9, 2001. The samples were analyzed by Enviromatrix Analytical, Inc on May 14, 2001 (Lake San Marcos Community Association, 2001).
Spatial Representation:	Three samples were collected on the lake, one each at West Discovery Bridge, LMS Side Discovery Bridge, and LMS Wake Bridge.
Temporal Representation:	Samples were collected once on May 9, 2001.

Region 9

Water Segment:	San Vicente Reservoir
Pollutant:	Chloride
Decision:	List
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that: 1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy. 2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy. 3. Fifty-six of 60 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy. 4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem.
Lines of Evidence:	

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters in San Vicente HA and all beneficial uses, the WQO for Chloride is 50 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. Fifty-six of 60 samples were in exceedance (SWRCB, 2003).
Spatial Representation:	Samples were collected at San Vicente Reservoir site SVA-0.

Temporal Representation: Samples were collected on a monthly basis from 01/02/1996 to 12/04/2000.

Region 9

Water Segment: San Vicente Reservoir

Pollutant: Color

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. There were 701 out of 1,841 samples that exceeded the Basin Plan criteria, and these exceed the allowable frequency of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Nuisance

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.

Data Used to Assess Water Quality: Data were collected by the City of San Diego Water Dept. from 1996 to 2000. Forty-three of 235 samples were in exceedance.

Spatial Representation: Samples were collected at San Vicente Reservoir site SVA-GA110.

Temporal Representation:	Four to 5 samples were collected per month, monthly from 01/1996 to 12/2000.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. Fifty-eight of 175 samples were in exceedance.
Spatial Representation:	Samples were collected at San Vicente Reservoir site SVA-GA130.
Temporal Representation:	Four to 5 samples were collected monthly from 01/1996 to 03/2000.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. Sixty-six of 236 samples were in exceedance.
Spatial Representation:	Samples were collected at San Vicente Reservoir site SVA-GA140.
Temporal Representation:	One to 5 samples were collected monthly from 01/1996 to 12/2000.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/	From the Basin Plan: For inland surface waters with a municipal beneficial use,

Water Quality Criterion:	the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 1999. Sixty-eight of 109 samples were in exceedance.
Spatial Representation:	Samples were collected at San Vicente Reservoir site SVA-GA160.
Temporal Representation:	Three to 5 samples were collected monthly from 01/1996 to 02/1999.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 1999. Forty-two of 64 samples were in exceedance.
Spatial Representation:	Samples were collected at San Vicente Reservoir site SVA-GA170.
Temporal Representation:	Three to 5 samples were collected monthly from 01/1996 to 02/1999.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. There were 130 out of 236 samples that were in exceedance.
Spatial Representation:	Samples were collected at San Vicente Reservoir site SVA-GA50.
Temporal Representation:	One to 5 samples were collected monthly from 01/1996 to 12/2000.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 1999. Thirty-six of 92 samples were in exceedance.
Spatial Representation:	Samples were collected at San Vicente Reservoir site SVA-GA70.
Temporal Representation:	One to 5 samples were collected per month from 01/1996 to 02/1999.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. There were 87 out of 236 samples that were in exceedance.
Spatial Representation:	Samples were collected at San Vicente Reservoir site SVA-GA80.
Temporal Representation:	One to 5 samples were collected monthly from 01/1996 to 12/2000.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. There were 75 out of 189 samples that were in exceedance.

Spatial Representation:	Samples were collected at San Vicente Reservoir at site SVA-0.
Temporal Representation:	Samples were collected from 01/02/1996 to 12/04/2000. Samples were collected on a monthly basis, with multiple samples being collected in some months.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 1999. Forty-eight of 74 samples were in exceedance.
Spatial Representation:	Samples were collected at San Vicente Reservoir site SVA-GA160.
Temporal Representation:	Multiple samples were collected per month, monthly from 01/29/1996 to 02/16/1999.

Numeric Line of Evidence	Pollutant-Nuisance
Beneficial Use:	MU - Municipal & Domestic
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for Color is 15 units.
Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. Forty-eight of 195 samples were in exceedance.
Spatial Representation:	Samples were collected in San Vicente Reservoir site SVA-GA100.
Temporal Representation:	Samples were collected 4-5 times per month, monthly from 01/1996 to 09/2000.

Region 9

Water Segment: San Vicente Reservoir

Pollutant: Manganese

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Seven of 55 samples exceeded the Basin Plan criteria and the criteria was exceeded more than 10% of time during 3 years. These exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: The water quality objective for manganese in San Vicente Reservoir is 0.05 milligrams/liter (mg/l) according to Basin Plan, Table 3-2 entitled, Water Quality Objectives. This concentration is not be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Data were collected by the City of San Diego Water Dept. from 1996 to 2000.

Quality:	Seven of 55 samples were in exceedance. Three of the 5 years had exceedances more than 10% of the time.
Spatial Representation:	Samples were collected at San Vicente Reservoir site SVA-0.
Temporal Representation:	Samples were collected on a monthly basis from 01/02/1996 to 09/06/2000.

Region 9

Water Segment: San Vicente Reservoir

Pollutant: Sulfates

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Fifty-seven of 60 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters in the San Vicente HA and all beneficial uses, the WQO for sulfate is 65 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. from 1996 to 2000. Fifty-seven of 60 samples were in exceedance.
Spatial Representation:	Samples were collected at San Vicente Reservoir site SVA-0.
Temporal Representation:	Samples were collected on a monthly basis from 01/02/1996 to 12/04/2000.

Region 9

Water Segment: San Vicente Reservoir

Pollutant: Total Dissolved Solids

Decision: List

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

This conclusion is based on the staff findings that:

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters in the San Vicente HA, with all beneficial uses, the WQO for TDS is 300 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality:	Data were collected by the City of San Diego Water Dept. form 1998 to 2000. Twenty-nine of 30 samples were in exceedance.
Spatial Representation:	Samples were collected at San Vicente Reservoir site SVA-0.
Temporal Representation:	Samples were collected monthly from 07/06/1998 to 12/04/2000.

Region 9

Water Segment: San Vicente Reservoir

Pollutant: pH (high)

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Twenty-eight of 60 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for pH is 6.5 (minimum) to 8.5 (maximum).

Data Used to Assess Water Data were collected by the City of San Diego Water Dept. from 1996 to 2000.

Quality:	Twenty-eight of 60 samples were in exceedance of the maximum standard.
Spatial Representation:	Samples were collected at San Vicente Reservoir site SVA-0.
Temporal Representation:	Samples were collected on a monthly basis from 01/1996 to 12/2000.

Region 9

Water Segment: Sandia Creek

Pollutant: Iron

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Four of 11 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters with a municipal beneficial use, the WQO for iron is 0.3 mg/L.

Data Used to Assess Water Quality: Data were collected by LAW Crandall from 1997 to 2000. Four of 11 samples were in exceedance.

Spatial Representation: Samples were collected at Sandia Creek. Exact sampling location was not

reported.

Temporal Representation: Samples were collected on a quarterly basis from 12/1997 to 06/2000.

QA/QC Equivalent: Data used in 2002 assessment.

Region 9

Water Segment: Sandia Creek

Pollutant: Manganese

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of 11 samples exceeded the Basin Plan criteria and the criteria was exceeded more than 10% of the time during two of the years. These exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: The water quality objective for manganese in Sandia Creek is 0.05 milligrams/liter (mg/l) according to Basin Plan, Table 3-2 entitled, Water Quality Objectives. This concentration is not be exceeded more than 10% of the

	time during any one year period.
Data Used to Assess Water Quality:	Data were collected by LAW Crandall from 1997 to 2000. Two of 11 samples were in exceedance. The criteria was exceeded more than 10% of the time during 2 years.
Spatial Representation:	Samples were collected at Sandia Creek. Exact location was not reported.
Temporal Representation:	Samples were collected on a quarterly basis from 12/1997 to 06/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Sandia Creek

Pollutant: Nitrogen

Decision: List

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

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

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

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ From the Basin Plan: For inland surface waters, enclosed bays and estuaries,

Water Quality Criterion:	coastal lagoons, and ground waters and all beneficial uses, analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N:P = 10:1, on a weight to weight basis shall be used.
Data Used to Assess Water Quality:	Data were collected by LAW Crandall from 1997 to 2000. Although 6 samples were collected, only 4 samples were collected on the same day as phosphorus samples. From this data set, water quality was assessed using the N:P ratio from the 4 days on which both N and P samples were collected. Two of the 4 ratios were in exceedance of the 10:1 ratio.
Spatial Representation:	Samples were collected at Sandia Creek. Exact sampling location was not reported.
Temporal Representation:	Samples were collected 1-2 times per year from 12/1997 to 03/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Sandia Creek

Pollutant: Sulfates

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Five of 11 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for sulfate is 250 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality:	Data were collected by LAW Crandall from 1997 to 2001. Five of 11 samples were in exceedance.
Spatial Representation:	Samples were collected at Sandia Creek. Exact sample location was not reported.
Temporal Representation:	Samples were collected on a quarterly basis from 12/1997 to 06/2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment:	Santa Margarita River (Lower)
Pollutant:	Mercury
Decision:	List
Weight of Evidence:	Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that: 1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy. 2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy. 3. Two of 8 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy. 4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem.
Lines of Evidence:	

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA)
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	OEHHA screening value for mercury 0.3 mg/kg (ppm)
Data Used to Assess Water Quality:	Two of 8 samples for mercury in fish tissue taken between March 1979 and August 1999 exceeded the fish consumption standard (TSMP, 2002).

Region 9

Water Segment: Soledad Canyon

Pollutant: Sediment Bioassays -- Chronic Toxicity -- Freshwater

Decision: List

Weight of Evidence: This pollutant is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status.

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

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

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

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded.

Lines of Evidence:

Numeric Line of Evidence Toxicity

Beneficial Use: WA - Warm Freshwater Habitat

Matrix: Sediment

Water Quality Objective/ Water Quality Criterion: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use

	of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration or other appropriate methods as specified by the Regional Board (Region 9 Basin Plan, pages 3-15 to 3-16; September 8, 1994).
Data Used to Assess Water Quality:	Two out of four samples displayed statistically significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%. One of the four samples (collected April 24, 2002) also displayed statistically significant toxicity in the survival endpoint compared to the negative control, but this data point is not included in the total toxic samples as it had a data qualifier. All samples were tested using the 10-day Hyalella azteca test (SWAMP, 2004).
Spatial Representation:	All samples were collected from one station, Soledad Canyon Creek 2.
Temporal Representation:	Samples were collected from March 2002 through September 2002. Toxicity in the survival endpoint was detected in samples collected on March 13, 2002 and September 18, 2002.
Data Quality Assessment:	SWAMP QAPP.

Region 9

Water Segment: Sutherland Reservoir

Pollutant: Manganese

Decision: List

Weight of Evidence: Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination from the section 303(d) list.

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Seven of 19 samples exceeded the Basin Plan's water quality objective, and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: MU - Municipal & Domestic

Matrix: Water

Water Quality Objective/ Water Quality Criterion: The water quality objective for manganese in Sutherland Reservoir is 0.05 milligrams/liter (mg/l) according to Basin Plan, Table 3-2 entitled, Water Quality Objectives. This concentration is not be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality: Data was collected at site SUA-0 by the City of San Diego Water Dept. from January 1996 to September 2000. Seven of 19 samples were in exceedance and the criteria was exceeded more than 10% of the time in all 5 years.

Spatial Representation:	Samples were collected at site SUA-0 near the water's surface.
Temporal Representation:	Samples were collected on a quarterly basis between January 1996 and September 2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Sutherland Reservoir

Pollutant: pH (high)

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Ten of 19 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for pH is 6.5 (minimum) to 8.5 (maximum).

Data Used to Assess Water Data was collected at site SUA-0 by the City of San Diego Water Dept. between

Quality:	March 1996 and December 2000. Ten of 19 samples were in exceedance (SWRCB, 2003).
Spatial Representation:	Samples were collected at site SUA-0 near the water surface.
Temporal Representation:	Samples were collected on a quarterly basis between March 1996 and December 2000.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Sweetwater Reservoir

Pollutant: Oxygen, Dissolved

Decision: List

Weight of Evidence: Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against removing this water segment-pollutant combination from the section 303(d) list.

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. There were 324 out of 552 samples that exceeded the Basin Plan's water quality objective and this exceeds the allowable frequency for conventional pollutants from the Listing Policy.
4. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: Dissolved oxygen levels shall not be less than 5.0 mg/l in inland surface waters with designated MAR or WARM beneficial uses or less than 6.0 mg/l in waters with designated COLD beneficial uses. The annual mean dissolved oxygen concentrations shall not be less than 7 mg/l more than 10% of the time.

Data Used to Assess Water Quality:	Data were collected by the USGS on one day every other month for 10 months. All samples collected in 1998 were below the minimum standard. Samples collected in 1999 met the standards at sampling depths of at least 3m and shallower (often samples at 5 and 6 m still met stds.), but showed a decrease in DO concentration to below the minimum standard as the sample depth increased. Overall, with all sampling depths included, 40 of 70 samples were below the minimum WQO (USGS, 2002).
Spatial Representation:	Samples were collected at Sweetwater Reservoir near Gum Tree Cove Pond. Samples were collected at depths of 0.1-13.0 meters.
Temporal Representation:	Samples were collected on one day every other month for 10 months from 09/10/1998 to 07/12/1999. 12-15 samples were collected per sampling day.
Data Quality Assessment:	USGS :http://water.usgs.gov/owq/FieldManual/
QA/QC Equivalent:	Data is from USGS Water Quality Monitoring Study.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: Dissolved oxygen levels shall not be less than 5.0 mg/l in inland surface waters with designated MAR or WARM beneficial uses or less than 6.0 mg/l in waters with designated COLD beneficial uses. The annual mean dissolved oxygen concentrations shall not be less than 7 mg/l more than 10% of the time.
Data Used to Assess Water Quality:	Data were collected by Sweetwater Authority from 07/2000 to 06/2001. At a depth of 0 ft., none of the 6 samples were below the standard. At 5 ft., 2 of 6 samples were below the standard, and at 10 ft., one of 6 samples were below the standard (USGS, 2002).
Spatial Representation:	Samples were collected at Sweetwater Lake at the Log Boom..
Temporal Representation:	Samples were collected 07/18/2000 to 06/20/2001. Samples were collected a total of 6 times, 3 in 2000 and 3 in 2001. Multiple seasons are represented.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, IN - Industrial Service Supply, MU - Municipal &

	Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: Dissolved oxygen levels shall not be less than 5.0 mg/l in inland surface waters with designated MAR or WARM beneficial uses or less than 6.0 mg/l in waters with designated COLD beneficial uses. The annual mean dissolved oxygen concentrations shall not be less than 7 mg/l more than 10% of the time.
Data Used to Assess Water Quality:	Data were collected by Sweetwater Authority from 07/2000 to 06/2001. At a depth of 0 ft., 0 of 6 samples were below the standard. At 5 ft. in depth, one of 6 samples were below the standard, and at 10 ft. down, one of 6 samples was below the standard (USGS, 2002).
Spatial Representation:	Samples were collected at Sweetwater Lake at the Intake Tower.
Temporal Representation:	Samples were collected 07/18/2000 to 06/20/2001. Samples were collected a total of 6 times, 3 in 2000 and 3 in 2001. Multiple seasons are represented.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters with all beneficial uses except From the Basin Plan: Dissolved oxygen levels shall not be less than 5.0 mg/l in inland surface waters with designated MAR or WARM beneficial uses or less than 6.0 mg/l in waters with designated COLD beneficial uses. The annual mean dissolved oxygen concentrations shall not be less than 7 mg/l more than 10% of the time.
Data Used to Assess Water Quality:	Data were collected by the USGS once every two months for a year. At this location, all samples from 09/1998, 11/1998, and 09/1999 were at or below the standard. Samples collected in 01/1999, 03/1999, 05/1999, and 07/1999 showed DO levels above the standard at depths of less than 5 m. January samples showed DO levels meeting the WQO from 0.1 to 13.6 meters deep. In some cases, at depths deeper than 5.0 m, there is a more dramatic drop in DO. Overall, with samples at all depths included, 54 of 86 were below the minimum standard for dissolved oxygen (USGS, 2002).
Spatial Representation:	Samples were collected at Sweetwater Reservoir near the pump tower at depths ranging from 0.1-16.0 m.

Temporal Representation:	Samples were collected once every 2 months from 09/09/1998 to 09/20/1999. 5-20 samples were collected per day.
Data Quality Assessment:	USGS: http://water.usgs.gov/owq/FieldManual/
QA/QC Equivalent:	Data is from USGS Water Quality Monitoring Study.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: Dissolved oxygen levels shall not be less than 5.0 mg/l in inland surface waters with designated MAR or WARM beneficial uses or less than 6.0 mg/l in waters with designated COLD beneficial uses. The annual mean dissolved oxygen concentrations shall not be less than 7 mg/l more than 10% of the time.
Data Used to Assess Water Quality:	Data were collected by the USGS one day every other month for a year. For all sampling days , except 11/3/1998, at least the top 3 meters of sample depth showed DO samples above the minimum standard. For all sampling days, DO concentration declined as the sample depth increased. Overall, with all sample depths included, 72 of 112 samples were in exceedance (USGS, 2002).
Spatial Representation:	Samples were collected at Sweetwater Reservoir at the center of minimum pool. Samples were collected at depths of 0.1-17.0 meters.
Temporal Representation:	Samples were collected on one day every other month for a year from 09/09/1998 to 09/20/1999. There were 15-20 samples collected per day.
Data Quality Assessment:	USGS: http://water.usgs.gov/owq/FieldManual/
QA/QC Equivalent:	Data is from a USGS Water Quality Monitoring Study.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water

Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: Dissolved oxygen levels shall not be less than 5.0 mg/l in inland surface waters with designated MAR or WARM beneficial uses or less than 6.0 mg/l in waters with designated COLD beneficial uses. The annual mean dissolved oxygen concentrations shall not be less than 7 mg/l more than 10% of the time.
Data Used to Assess Water Quality:	Data were collected by the USGS on one day every other month for 10 months. No samples collected in 1998 were above the minimum standard. Samples collected in 1999 showed that at shallower sample depths, DO levels met the standard, but that as depth increased, DO levels decreased. Overall, with all sample depths included, 59 of 87 samples were below the minimum standard (USGS, 2002).
Spatial Representation:	Samples were collected at Sweetwater Reservoir near the recreation area. Samples were collected at depths of 0.1 to 16.0 meters.
Temporal Representation:	Samples were collected one day per month, every other month from 09/10/1998 to 07/12/1999. There were 10-17 samples collected per sampling day.
Data Quality Assessment:	USGS: http://water.usgs.gov/owq/FieldManual/
QA/QC Equivalent:	Data is from USGS Water Quality Monitoring Study.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: Dissolved oxygen levels shall not be less than 5.0 mg/l in inland surface waters with designated MAR or WARM beneficial uses or less than 6.0 mg/l in waters with designated COLD beneficial uses. The annual mean dissolved oxygen concentrations shall not be less than 7 mg/l more than 10% of the time.
Data Used to Assess Water Quality:	Data were collected by USGS from 09/1998 to 07/1999. All samples collected in 1998 were below the minimum standard. Samples collected in 1999 all met the standard within at least the top 3 m, but DO measurements decreased to below the minimum standard as the sample depth increased. Overall, with samples at all depths included, 41 of 68 samples were below the minimum standard. All samples that met the standard were within the top 5 m (USGS, 2002).
Spatial Representation:	Samples were collected at Sweetwater Reservoir near Vista del Lago Station at depths from 0.1 to 12.0 meters.

Temporal Representation:	Samples were collected once every other month from 09/10/1998 to 07/12/1999. Multiple (10-15) samples were collected per day.
Data Quality Assessment:	USGS: http://water.usgs.gov/owq/FieldManual/
QA/QC Equivalent:	Data is from a USGS Water Quality Monitoring Study.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: Dissolved oxygen levels shall not be less than 5.0 mg/l in inland surface waters with designated MAR or WARM beneficial uses or less than 6.0 mg/l in waters with designated COLD beneficial uses. The annual mean dissolved oxygen concentrations shall not be less than 7 mg/l more than 10% of the time.
Data Used to Assess Water Quality:	Data were collected by the USGS on one day every other month for a year. The samples collected in this set all met the standard except for those collected on 11/03/1998. Also, in 09/1998, as sample depth increased, the DO concentration decreased to below the minimum standard. This is the only sampling day on which there is an obvious trend that DO concentration decreases as depth increases. For other sampling days, samples were not collected at depths deeper than 5.7 meters, making it difficult to see an obvious trend of a decrease in DO concentration with an increase in sampling depth. Overall, with all sample depths included, 7 of 31 samples were below the minimum standard (USGS, 2002).
Spatial Representation:	Samples were collected at Sweetwater Reservoir east end reservoir fill boundary. Samples were collected at depths of 0.1-5.7 meters.
Temporal Representation:	Samples were collected on one day every other month for a year from 09/10/1998 to 09/20/1999. Approximately 5 samples were collected per sampling day.
Data Quality Assessment:	USGS: http://water.usgs.gov/owq/FieldManual/
QA/QC Equivalent:	Data used in USGS Water Quality Monitoring Study.

Numeric Line of Evidence	Pollutant-Water

Beneficial Use:	AG - Agricultural Supply, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: Dissolved oxygen levels shall not be less than 5.0 mg/l in inland surface waters with designated MAR or WARM beneficial uses or less than 6.0 mg/l in waters with designated COLD beneficial uses. The annual mean dissolved oxygen concentrations shall not be less than 7 mg/l more than 10% of the time.
Data Used to Assess Water Quality:	Data were collected by the USGS on one day every other month for 10 months. All samples, except those collected on 11/0/1998 showed that at shallower depths, the DO concentrations were above the minimum standard. All samples collected on 11/03/1998 were below the minimum standard. All sampling days showed that as depth increased, the DO concentration decreased. Samples collected in September and July showed more dramatic decreases in DO concentration as the depth increased. Overall, with all sampling depths included, 46 of 80 sample were below the minimum standard (USGS, 2002).
Spatial Representation:	Samples were collected at Sweetwater Reservoir minimum pool boundary East. Samples were collected at depths of 0.1 to 13.5 meters.
Temporal Representation:	Samples were collected on one day every other month for 10 months from 09/10/1998 to 07/12/1999. Approximately 12 samples were collected per sampling day.
Data Quality Assessment:	USGS: http://water.usgs.gov/owq/FieldManual/
QA/QC Equivalent:	Data is from USGS Water Quality Monitoring Study.

Region 9

Water Segment: Sweetwater Reservoir

Pollutant: Total Dissolved Solids

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Six of 8 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses is 500. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality: Data were collected by RWQCB9 from 07/1997 to 11/2000. Six of 8 samples were in exceedance.

Spatial Representation:	Samples were collected at Sweetwater Reservoir. Exact location was not reported.
Temporal Representation:	Samples were collected from 07/1997 to 11/2000 once per day on 8 days during this time span. Samples were collected mostly during the winter and summer months.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Tecolote Creek

Pollutant: Phosphorus

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Nine of 9 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: R2 - Non-Contact Recreation

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters-streams and other flowing waters with all beneficial uses, the WQO for total phosphorus is 0.1 mg/L. This appears to be the desired goal in order to prevent plant nuisance in streams and other flowing waters; not to be exceeded more than 10% of the time.

Data Used to Assess Water Quality: Data were collected by the City of San Diego from 11/1997 to 03/2000. Nine of 9 samples were in exceedance.

Spatial Representation:	Samples were collected in Tecolote Creek at site SD5. The exact location of this site is unknown.
Temporal Representation:	Samples were collected from 11/1997 to 03/2000. 2-3 samples were collected per year.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Tecolote Creek

Pollutant: Turbidity

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Seven of 9 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: R2 - Non-Contact Recreation

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for turbidity is 20 ntu.

Data Used to Assess Water Quality: Data were collected by the City of San Diego from 11/1997 to 03/2000. Seven of 9 samples were in exceedance.

Spatial Representation: Samples were collected at Tecolote Creek site SD5. The location of this site is

	unknown.
Temporal Representation:	Samples were collected from 11/1997 to 03/2000. Two to 3 samples were collected per year.
QA/QC Equivalent:	Data used in 2002 assessment.

Region 9

Water Segment: Temecula Creek

Pollutant: Nitrogen

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Nineteen of 160 samples exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, GW - Groundwater Recharge, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters, enclosed bays and estuaries, coastal lagoons, and ground waters and all beneficial uses, analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N:P = 10:1, on a weight to weight basis

	shall be used.
Data Used to Assess Water Quality:	Data were collected by Ranch California Water District from 1999 to 2002. Nineteen of 160 samples were in exceedance.
Spatial Representation:	Samples were collected at Temecula Creek.
Temporal Representation:	Samples were collected 4-5 times per month from 03/1999 to 04/2002

Region 9

Water Segment: Temecula Creek

Pollutant: Phosphorus

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. There were 139 of 160 samples that exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, GW - Groundwater Recharge, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters - streams and other flowing waters
and all beneficial uses, the WQO for total phosphorus is 0.1 mg/L. This appears to be desired goal in order to prevent plant nuisance in streams and other flowing

	waters; not to be exceeded more than 10% of the time.
Evaluation Guideline:	Use unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board.
Data Used to Assess Water Quality:	Data were collected by the Rancho California Water District in 1999-2002. There were 139 of 160 samples that were in exceedance.
Spatial Representation:	Samples were collected at Temecula Creek.
Temporal Representation:	Samples were collected 4-5 times per month from 03/31/1999 to 04/17/2002.

Region 9

Water Segment: Temecula Creek

Pollutant: Total Dissolved Solids

Decision: List

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. There were 157 of 161 samples that exceeded the Basin Plan criteria, and these exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, GW - Groundwater Recharge, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.

Data Used to Assess Water Quality:	Data were collected by RWQCB9 in 1998. One sample was collected and was in exceedance.
Spatial Representation:	Samples were collected at Temecula Creek east of the confluence, west of I-15.
Temporal Representation:	Samples were collected on 06/09/1998.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, GW - Groundwater Recharge, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For inland surface waters and all beneficial uses, the WQO for TDS is 500 mg/L. This concentration is not to be exceeded more than 10% of the time during any one year period.
Data Used to Assess Water Quality:	Data were collected by Rancho California Water District from 1999 to 2002. There were 156 of 160 samples that were in exceedance.
Spatial Representation:	Samples were collected at Temecula Creek.
Temporal Representation:	Samples were collected 4-5 times per month from 03/31/1999 to 04/17/2002.

Region 9

Water Segment: Tijuana River Estuary

Pollutant: Turbidity

Decision: List

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. There were 4965 of 28167 samples that exceeded the Basin Plan criteria, and these exceed the allowable frequency of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

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

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, MA - Marine Habitat, MI - Fish Migration, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion: From the Basin Plan: For lagoons and estuaries and all beneficial uses, the maximum increase when Natural Turbidity is 0-50 NTU is 20 % over natural turbidity. The Maximum Increase when Natural Turbidity is 50-100 NTU is 20 ntu. The Maximum Increase when Natural Turbidity is >100 NTU is 10 % over

	natural turbidity.
Evaluation Guideline:	The transparency of waters in lagoons and estuaries shall not be less than 50% of the depth at locations where measurement is made by means of standard Secchi disk, except where lesser transparency is caused by rainfall runoff from undisturbed natural areas and dredging projects conducted in conformance with waste discharge requirements of the Regional Board. With these two exceptions, increases in turbidity attributable to controllable water quality factors shall not exceed the above limits.
Data Used to Assess Water Quality:	Data were collected by the Tijuana River NERR in 1998. There were 7,055 of 8,559 samples that were 20 ntu or lower. There were 1,601 of 8,559 samples that were above 21 ntu. The highest turbidity recorded was 1,388 ntu. Some negative turbidities were recorded as well.
Spatial Representation:	Samples were collected at the Tijuana River Estuary site TL.
Temporal Representation:	Samples were collected every 30 minutes from 01/01/1998 to 12/27/1998. During the sampling months, data for some day were not recorded. During the months in which samples were collected, at least 2-3 days worth of data were recorded. Samples were not recorded in 08/1997, 09/1997, 03/1998, 04/1998, 08/1998, and 09/1998.
Environmental Conditions:	Possible storm event(s) occurred during some sampling months.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, MA - Marine Habitat, MI - Fish Migration, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For lagoons and estuaries and all beneficial uses, the maximum increase when Natural Turbidity is 0-50 NTU is 20 % over natural turbidity. The Maximum Increase when Natural Turbidity is 50-100 NTU is 20 ntu. The Maximum Increase when Natural Turbidity is >100 NTU is 10 % over natural turbidity.
Evaluation Guideline:	The transparency of waters in lagoons and estuaries shall not be less than 50% of the depth at locations where measurement is made by means of standard Secchi disk, except where lesser transparency is caused by rainfall runoff from undisturbed natural areas and dredging projects conducted in conformance with

	waste discharge requirements of the Regional Board. With these two exceptions, increases in turbidity attributable to controllable water quality factors shall not exceed the above limits.
Data Used to Assess Water Quality:	Data were collected by San Diego RWQCB in 1997 and 1998. Five monthly averages were reported. Average turbidity levels ranged from 23-130.
Spatial Representation:	Samples were collected at Tijuana River Estuary. Exact sample location was not reported.
Temporal Representation:	Samples were collected in 12/1997 and 02-04/1998 and 10/1998. Only averages were reported.
QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, MA - Marine Habitat, MI - Fish Migration, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For lagoons and estuaries and all beneficial uses, the maximum increase when Natural Turbidity is 0-50 NTU is 20 % over natural turbidity. The Maximum Increase when Natural Turbidity is 50-100 NTU is 20 ntu. The Maximum Increase when Natural Turbidity is >100 NTU is 10 % over natural turbidity.
Evaluation Guideline:	The transparency of waters in lagoons and estuaries shall not be less than 50% of the depth at locations where measurement is made by means of standard Secchi disk, except where lesser transparency is caused by rainfall runoff from undisturbed natural areas and dredging projects conducted in conformance with waste discharge requirements of the Regional Board. With these two exceptions, increases in turbidity attributable to controllable water quality factors shall not exceed the above limits.
Data Used to Assess Water Quality:	Data were collected by the Tijuana River NERR in 1999. There were 1,372 of 1,375 samples that ranged from 0-35 ntu. 3 of 1,375 samples were between 206 and 992 NTU.
Spatial Representation:	Samples were collected at Tijuana River Estuary site OS.
Temporal Representation:	Samples were collected every 30 minutes from 03/01/1999 to 03/29/1999.

QA/QC Equivalent:	Data used in 2002 assessment.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, MA - Marine Habitat, MI - Fish Migration, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From the Basin Plan: For lagoons and estuaries and all beneficial uses, the maximum increase when Natural Turbidity is 0-50 NTU is 20 % over natural turbidity. The Maximum Increase when Natural Turbidity is 50-100 NTU is 20 ntu. The Maximum Increase when Natural Turbidity is >100 NTU is 10 % over natural turbidity.
Evaluation Guideline:	The transparency of waters in lagoons and estuaries shall not be less than 50% of the depth at locations where measurement is made by means of standard Secchi disk, except where lesser transparency is caused by rainfall runoff from undisturbed natural areas and dredging projects conducted in conformance with waste discharge requirements of the Regional Board. With these two exceptions, increases in turbidity attributable to controllable water quality factors shall not exceed the above limits.
Data Used to Assess Water Quality:	Data were collected by the Tijuana River NERR in 1997 and 1998. There were 14,872 of 18228 samples that had turbidity levels of 20 ntu or lower. There were 3,356 of the 18,228 samples that had turbidity levels of 21ntu or higher. The highest turbidity reading occurred in 02/1998 with a reading of 998 NTU.
Spatial Representation:	Samples were collected at the Tijuana River Estuary site OS.
Temporal Representation:	Samples were collected in 30 minute intervals from 04/01/1997 to 09/29/1997 and 02/13/1998 to 12/31/1998. Samples were collected from 04/1997 to 09/1997 and during every month in 1998 except 01/1998 and 05/1998. Sampling represents at least 2 days in each sampling month, and usually were not collected during all days in the month.
QA/QC Equivalent:	Data used in 2002 assessment.

San Diego Region (9)

DELIST

Recommendations to remove waters and pollutants from the section 303(d) List

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Region 9

Water Segment: Chollas Creek

Pollutant: Cadmium

Decision: Delist

Weight of Evidence: This pollutant is being considered for removal from the section 303(d) list under section 4.1 of the Listing Policy. Under section 4.1 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. None of the samples exceed the CTR acute criterion and one sample exceeds the chronic criterion. Over 40 measurements are available.

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

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. One of 42 samples exceeded the chronic criterion and no samples out of the 47 exceeded the acute criterion. These do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
4. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

Water Quality Objective/ Water Quality Criterion:	CTR Dissolved Cadmium Criterion for continuous concentration (CCC) in water for the protection of aquatic life is expressed as a function of the total harness of the water body. The aquatic life criteria will vary depending of total hardness reported at the sampling site. The CCC for dissolved cadmium is the highest concentration to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects. This criterion is linked and applicable for the protection of aquatic life Beneficial Uses.
Data Used to Assess Water Quality:	One of 42 samples exceeded the CTR - CCC criteria for dissolved cadmium (San Diego RWQCB, 2001b).
Spatial Representation:	Six stations were sampled throughout the Chollas Creek watershed.
Temporal Representation:	Five samples were collected in June 1991 and March 1992. Forty-two samples were collected as part of the MS4 storm water permit between February 1994 and February 2003.
Environmental Conditions:	Chollas Creek is an urban creek that runs through portions of San Diego, La Mesa, and Lemon Grove before emptying into San Diego Bay.
Data Quality Assessment:	NPDES permit.

Region 9

Water Segment:	Mission Bay Shoreline
Pollutant:	Bacteria Indicators
Decision:	Delist
Weight of Evidence:	This pollutant is being considered for removal from the section 303(d) list under section 4.3 of the Listing Policy. Under section 4.3 a single line of evidence is necessary to assess delisting status. Two lines of evidence are available in the administrative record to assess this pollutant. One line of evidence is testimonial, the other is the combined total numeric bacterial indicator results from 45 stations sampled along the Mission Bay shoreline during 1999 to 2003. An insufficient number of total samples taken from stations along Mission Bay shoreline exceed the AB 411 bacteria indicator criteria. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification for removing this entire water segment-pollutant combination from the section 303(d) list. This conclusion is based on the staff findings that: 1.The data used satisfies the data quality requirements of section 6.1.4 of the Policy. 2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy. 3. Two thousand sixteen (2,016) of 17,847 samples taken from 37 stations along the Mission Bay shoreline from 1999 through 2003 exceeded the bacterial indicator criteria and these exceedances do not surpass the allowable frequency listed in Table 4.2 of the Listing Policy. A total of 45 sites were originally monitored along the Mission Bay shoreline. Eight of the 45 sites did not record any exceedances of bacterial indicators. 4.Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.
Lines of Evidence:	

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	R1 - Water Contact Recreation
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	From AB411: Enterococcus: 35 MPN/100 ml for 30-day average, single sample: 104MPN/100 ml. Fecal coliform: 200 MPN/100 ml 30-day average, single sample- 400 MPN/100mL. Total coliform: 1,000 MPN/100 ml 30-day average, single sample 1000 MPN/100 ml If the fecal is more than 10% of the total coliform MPNs or 10,000 MPN/100ml if the fecal coliform is less than 1% of the total coliform.
Data Used to Assess Water Quality:	Two thousand sixteen (2,016) of 17,847 taken at 37 stations along the Mission Bay shoreline from 1999 to 2003 exceeded the three bacterial indicators for enterococcus, fecal coliform and total coliform. The AB 411 single sample limits were used to determine the number of exceedances for a given sample size. A single sample was collected on a given day from a site and analyzed for the three indicators producing three different analyses. To asses the number of exceedances at a site, first the data were assessed to determine the total number of analyses for each indicator that exceeded the single sample limit at each site. The number of exceedances for each of the three indicators over the five year period were then summed for each site (City of San Diego, 2004).
Spatial Representation:	Thirty seven sample sites.
Temporal Representation:	Samples were taken from 1999 to 2003.
Environmental Conditions:	The shoreline of Mission Bay is listed on the 2002 303(d) list in its entirety. A total of 45 sites were monitored along the Mission Bay shoreline. Eight of the 45 sites sampled did not record any exceedances of the bacterial indicators. Southern California has three distinct weather/hydrological conditions: summer dry weather, winter dry weather, and storm events. The data set used in this analysis includes summer and winter season data. Whether or not storm event samples are included in the data set are not known. For future water quality assessments, the RWQCB may classify bacteria samples as summer dry, winter dry, or storm event samples to ensure adequate representation of all three weather/hydrological conditions.
QA/QC Equivalent:	City of San Diego or the County Department of Environmental Health QA/QC procedures

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Line of Evidence	Testimonial Evidence
Beneficial Use	R1 - Water Contact Recreation

Non-Numeric Objective:	From the Basin Plan: For Bays and estuaries and all beneficial uses, the WQO for coliform organisms states that MPN in the upper 60 ft. of water column shall be less than 1,000 per 100 mL (10 per mL); provided that not more than 20% of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 mL (10 per mL), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 mL (100 per mL).
Evaluation Guideline:	REC1- Fecal coliform objective is 200 colonies per 100 mL based on the log mean of no less than 5 samples over 30-day period or no more than 10% of total samples during any 30-day period to exceed 400 colonies per 100 mL. REC1 -Enterococci steady state in all areas is 35 colonies per 100 mL. Enterococci maximum in designated beaches is 104 colonies per 100 mL. Enterococci maximum in moderately or lightly used areas is 276 colonies per 100 mL. Enterococci maximum in infrequently used areas is 500 colonies per 100 mL.
Data Used to Assess Water Quality:	From the letter from the San Diego Baykeeper written on 06/14/2004: We recommend continued listing of Mission Bay for eutrophication, lead, and bacterial indicators (San Diego Baykeeper, 2004).
Spatial Representation:	The area is described as Mission Bay. Exact location was not given.
Temporal Representation:	The letter regarding possible impairments was written on 06/14/2004. No other dates were provided.

Region 9

Water Segment: Pacific Ocean Shoreline, Miramar Reservoir HA

Pollutant: Bacteria Indicators

Decision: Delist

Weight of Evidence: This pollutant is being considered for removal from the section 303(d) list under section 4.3 of the Listing Policy. Under section 4.3 a single line of evidence is necessary to assess delisting status.

One line of evidence is available in the administrative record to assess this pollutant. There was only one exceedance of total coliform, fecal coliform and enterococcus bacteriological standards recorded.

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

This conclusion is based on the staff findings that:
1. The data used may satisfy the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. One of 180 samples exceeded the bacteriological standards for all three indicators and these do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
4. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable bacteriological water quality standards are not exceeded.

Lines of Evidence:

Line of Evidence Pollutant-Water

Beneficial Use R1 - Water Contact Recreation, R2 - Non-Contact Recreation

Non-Numeric Objective: The objective is numeric.

Evaluation Guideline:	From AB411: Enterococcus: 35"per 100 ml for 30-day average", single sample: 104 per 100 ml. Fecal coliform: 30-day average- 200 colonies/100 mL. Single sample- 400 colonies/100mL. Total coliform: 30-day average: 1,000 colonies/100 mL, single sample: If FC/TC ratio is < 0.1, 10,000 colonies/100 mL, if FC/TC ratio is > 0.1, 1,000 colonies/100mL.
Data Used to Assess Water Quality:	A total of 180 analyses were performed from 1999 through 2003. Of these, there was only one exceedance of the bacterial standards for all three indicators: The Enterococcus standard of 104 MPN/100mL was exceeded in 10/2002 (City of San Diego, 2004).
Spatial Representation:	Two stations were monitored at Anderson Canyon during this time: one at the sampling site and one 75 feet to the left of the site.
Temporal Representation:	Data were available for this assessment from 01/2002 through 10/2004. The majority of samples were taken during the dry season, but samples were also taken during the wet season.

Region 9

Water Segment: Pacific Ocean Shoreline, Scripps HA

Pollutant: Bacteria Indicators

Decision: Delist

Weight of Evidence: This pollutant is being considered for removal from the section 303(d) list under section 4.3 of the Listing Policy. Under section 4.3 a single line of evidence is necessary to assess delisting status.

Nine individual lines of evidence are available in the administrative record to assess this pollutant. An insufficient number of samples exceed the bacteriological standards to warrant keeping this location on the section 303(d) list.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification for the removal of this water segment-pollutant combination from the section 303(d) list.

This conclusion is based on the staff findings that:
1. The data used may satisfy the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. There were 214 out of 3,770 samples that exceeded the total coliform, fecal coliform and enterococcus standards and these do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
4. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: R1 - Water Contact Recreation, R2 - Non-Contact Recreation

Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Bacteria Objective (AB411, 1997): Enterococcus: 35"per 100 ml for 30-day average", single sample: 104 per 100 ml. Fecal coliform: 30-day average- 200 colonies/100 mL. Single sample- 400 colonies/100mL. Total coliform: 30-day average: 1,000 colonies/100 mL, single sample: If FC/TC ratio is < 0.1, 10,000 colonies/100 mL, if FC/TC ratio is > 0.1, 1,000 colonies/100mL.
Data Used to Assess Water Quality:	A total of 412 analyses were performed from 1999 through 2003. Of these, there were seven exceedances of the bacterial standards for all 3 indicators: 2 exceedances of the fecal coliform standard and one exceedance of the enterococcus standard (City of San Diego, 2004).
Spatial Representation:	Tourmaline Surf Park. This site is located in Pacific Beach near the end of Turquoise Street. Eight stations were monitored at Tourmaline Surf Park during this time: one at the sampling point, five to the left, and two to the right of the site.
Temporal Representation:	Data were available for this assessment from 04/1999 through 05/2003. Samples were collected during the wet and dry seasons, but only limited data were available from 2002 and 2003.
Environmental Conditions:	There were no sewage spills that impacted the Tourmaline Surf Park site from 1999 through 2003. Southern California has three distinct weather/hydrological conditions: summer dry weather, winter dry weather, and storm events. The data set used in this analysis includes summer and winter season data. Whether or not storm event samples are included in the data set are not known. For future water quality assessments, the RWQCB may classify bacteria samples as summer dry, winter dry, or storm event samples to ensure adequate representation of all three weather/hydrological conditions.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	R1 - Water Contact Recreation, R2 - Non-Contact Recreation
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Bacterial Objective (AB411, 1997): Enterococcus: 35"per 100 ml for 30-day average", single sample: 104 per 100 ml. Fecal coliform: 30-day average- 200 colonies/100 mL. Single sample- 400 colonies/100mL. Total coliform: 30-day average: 1,000 colonies/100 mL, single sample: If FC/TC ratio is < 0.1, 10,000 colonies/100 mL, if FC/TC ratio is > 0.1, 1,000 colonies/100mL.
Data Used to Assess Water	A total of 381 analyses were performed from 1999 through 2003. Of these, there were only 9 exceedances of the bacterial standards for all 3

Quality:	indicators, all of which occurred in 1999 and 2000. Standards were exceeded for all 3 indicators, but there were no exceedance of any of the 3 indictors during 2003 (City of San Diego, 2004).
Spatial Representation:	Windansea Beach at Bonair Street. This site is located at Windansea Beach in La Jolla at the end of Bonair Street. Seven stations were monitored at Windansea Beach at Bonair St. during this time: one at the sampling site, three to the left, and three to the right.
Temporal Representation:	Data were available for this assessment from 01/2002 through 10/2004, although only limited data were available for this site from 04/2001 through 04/2003. The majority of samples were taken during the dry season, but samples were also taken during the wet season.
Environmental Conditions:	There was one sewage spill that impacted the Windansea Beach at Bonair Street site in 01/2001. It did not appear to have an impact on bacterial indicator levels relative to the standards. Southern California has three distinct weather/hydrological conditions: summer dry weather, winter dry weather, and storm events. The data set used in this analysis includes summer and winter season data. Whether or not storm event samples are included in the data set are not known. For future water quality assessments, the RWQCB may classify bacteria samples as summer dry, winter dry, or storm event samples to ensure adequate representation of all three weather/hydrological conditions.
	Southern California has three distinct weather/hydrological conditions: summer dry weather, winter dry weather, and storm events. The data set used in this analysis includes summer and winter season data. Whether or not storm event samples are included in the data set are not known. For future water quality assessments, the RWQCB may classify bacteria samples as summer dry, winter dry, or storm event samples to ensure adequate representation of all three weather/hydrological conditions.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	R1 - Water Contact Recreation, R2 - Non-Contact Recreation
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Bacteria Objective (AB411, 1997): Enterococcus: 35"per 100 ml for 30-day average", single sample: 104 per 100 ml. Fecal coliform: 30-day average- 200 colonies/100 mL. Single sample- 400 colonies/100mL. Total coliform: 30-day average: 1,000 colonies/100 mL, single sample: If FC/TC ratio is < 0.1, 10,000 colonies/100 mL, if FC/TC ratio is > 0.1, 1,000 colonies/100mL.
Data Used to Assess Water Quality:	A total of 604 analyses were performed from 1999 through 2003. Of these, there were 35 exceedances of the bacterial standards for all three indicators. Exceedances occurred for all three bacterial indicators,

	particularly in 1999 and 2000. However, there has been only one exceedance of any bacterial standard since 10/2000 (City of San Diego, 2004).
Spatial Representation:	Whispering Sands Beach at Ravina Street. This site is located south of Nicholson Point in La Jolla at Ravina Street. Four stations were monitored at this location during this time: one at the sampling site, one to the left, and two to the right of the site.
Temporal Representation:	Data were available for this assessment from 01/2002 through 10/2004. The majority of samples were taken during the dry season, but samples were also taken during the wet season, particularly in 1999 and 2000.
Environmental Conditions:	There were no sewage spills that impacted this site from 1999 through 2003. Southern California has three distinct weather/hydrological conditions: summer dry weather, winter dry weather, and storm events. The data set used in this analysis includes summer and winter season data. Whether or not storm event samples are included in the data set are not known. For future water quality assessments, the RWQCB may classify bacteria samples as summer dry, winter dry, or storm event samples to ensure adequate representation of all three weather/hydrological conditions.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	R1 - Water Contact Recreation, R2 - Non-Contact Recreation
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Bacteria Objective (AB411, 1997): Enterococcus: 35"per 100 ml for 30-day average", single sample: 104 per 100 ml. Fecal coliform: 30-day average- 200 colonies/100 mL. Single sample- 400 colonies/100mL. Total coliform: 30-day average: 1,000 colonies/100 mL, single sample: If FC/TC ratio is < 0.1, 10,000 colonies/100 mL, if FC/TC ratio is > 0.1, 1,000 colonies/100mL.
Data Used to Assess Water Quality:	A total of 278 analyses were performed from 1999 through 2003. Of these, there were only two exceedances of the bacterial standards for all 3 indicators: The fecal coliform standard was exceeded in 09/2003 and the enterococcus standard was exceeded in 07/2003 (City of San Diego, 2004).
Spatial Representation:	South Casa Beach at Coast Blvd. This site is located south of Point La Jolla at the southern end of Casa Beach. Three stations were monitored at South Casa Beach at Coast Blvd. site during this time: one at the sampling site, one 75 ft to the left and one 75 ft to the south of the site.

Temporal Representation:	Data were available for this assessment from 01/2002 through 10/2004. All but six of the analyses were conducted during the dry season.
Environmental Conditions:	There were no sewage spills that impacted this site from 1999 through 2003. Southern California has three distinct weather/hydrological conditions: summer dry weather, winter dry weather, and storm events. The data set used in this analysis includes summer and winter season data. Whether or not storm event samples are included in the data set are not known. For future water quality assessments, the RWQCB may classify bacteria samples as summer dry, winter dry, or storm event samples to ensure adequate representation of all three weather/hydrological conditions.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	R1 - Water Contact Recreation, R2 - Non-Contact Recreation
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Bacteria Objective (AB411, 1997): Enterococcus: 35"per 100 ml for 30-day average", single sample: 104 per 100 ml. Fecal coliform: 30-day average- 200 colonies/100 mL. Single sample- 400 colonies/100mL. Total coliform: 30-day average: 1,000 colonies/100 mL, single sample: If FC/TC ratio is < 0.1, 10,000 colonies/100 mL, if FC/TC ratio is > 0.1, 1,000 colonies/100mL.
Data Used to Assess Water Quality:	A total of 344 analyses were performed form 1999 through 2003. Of these, there were 99 exceedances of the bacterial standards for all three indicators, which equates to nearly 30% of the analyses conducted at this site. In contrast to most other sites, the majority of exceedances occurred for the total coliform and fecal coliform indicators. The Enterococcus standard was exceeded only 4 times during this time period (City of San Diego, 2004).
Spatial Representation:	Casa Beach (Children's Pool): This site is located just south of Point La Jolla at Children's Pool Beach: 12 stations were monitored at Children's Pool during this time: one at the sampling site, two to the left, and nine to the right of the site.
Temporal Representation:	Data were available for this assessment from 01/2002 through 10/2004. The majority of samples were taken during the dry season, but samples were also taken during the wet season.
Environmental Conditions:	There were no sewage spills that impacted the Children's Pool site from 1999 through 2003. Southern California has three distinct weather/hydrological conditions: summer dry weather, winter dry weather, and storm events. The data set

	used in this analysis includes summer and winter season data. Whether or not storm event samples are included in the data set are not known. For future water quality assessments, the RWQCB may classify bacteria samples as summer dry, winter dry, or storm event samples to ensure adequate representation of all three weather/hydrological conditions.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	R1 - Water Contact Recreation, R2 - Non-Contact Recreation
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Bacteria Objective (AB411, 1997): Enterococcus: 35"per 100 ml for 30-day average", single sample: 104 per 100 ml. Fecal coliform: 30-day average- 200 colonies/100 mL. Single sample- 400 colonies/100mL. Total coliform: 30-day average: 1,000 colonies/100 mL, single sample: If FC/TC ratio is < 0.1, 10,000 colonies/100 mL, if FC/TC ratio is > 0.1, 1,000 colonies/100mL.
Data Used to Assess Water Quality:	A total of 749 analyses were performed from 1999 through 2003. Of these, there were 41 exceedances of the bacterial standards for all three indicators (City of San Diego, 2004).
Spatial Representation:	La Jolla Shores at Avenida De La Playa, This site is located at La Jolla Shores Beach at Avenida Del La Playa: 14 stations were monitored at La Jolla Shores at Avenida De La Playa during this time: one at the sampling sire FM-080-0-M, six as far as 150 ft to the left, and 7 as far as 150 ft to the right of the site.
Temporal Representation:	A total of 749 analyses were performed from 1999 through 2003. Of these, there were 41 exceedances of the bacterial standards for all three indicators.
Environmental Conditions:	There was one sewage spill that impacted the La Jolla Shores at Avenue De La Playa site. There were 12 exceedances associated with the spill. Southern California has three distinct weather/hydrological conditions: summer dry weather, winter dry weather, and storm events. The data set used in this analysis includes summer and winter season data. Whether or not storm event samples are included in the data set are not known. For future water quality assessments, the RWQCB may classify bacteria samples as summer dry, winter dry, or storm event samples to ensure adequate representation of all three weather/hydrological conditions.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	R1 - Water Contact Recreation, R2 - Non-Contact Recreation

Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Bacteria Objective (AB411, 1997): Enterococcus: 35"per 100 ml for 30-day average", single sample: 104 per 100 ml. Fecal coliform: 30-day average- 200 colonies/100 mL. Single sample- 400 colonies/100mL. Total coliform: 30-day average: 1,000 colonies/100 mL, single sample: If FC/TC ratio is < 0.1, 10,000 colonies/100 mL, if FC/TC ratio is > 0.1, 1,000 colonies/100mL.
Data Used to Assess Water Quality:	A total of 84 analyses were performed from 1999 through 2003. Of these, there were 9 exceedances of the bacterial standards for all 3 indicators. All but one occurred in 01/2001 (City of San Diego, 2004).
Spatial Representation:	La Jolla Shores at Vallecitos, This site is located at La Jolla Shores Beach at Vallecits Street: Four stations were monitored at this location during this time.
Temporal Representation:	Data were available for this assessment from 1991 dry season and sporadic events in 2001 and 2003. The majority of samples were taken during the dry season, but some samples were also taken during the wet season.
Environmental Conditions:	There were no sewage spills that impacted the Vallecits site between 01/1999 and 10/2003. Southern California has three distinct weather/hydrological conditions: summer dry weather, winter dry weather, and storm events. The data set used in this analysis includes summer and winter season data. Whether or not storm event samples are included in the data set are not known. For future water quality assessments, the RWQCB may classify bacteria samples as summer dry, winter dry, or storm event samples to ensure adequate representation of all three weather/hydrological conditions.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	R1 - Water Contact Recreation, R2 - Non-Contact Recreation
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Bacterial Objective (AB411, 1997): Enterococcus: 35"per 100 ml for 30-day average", single sample: 104 per 100 ml. Fecal coliform: 30-day average- 200 colonies/100 mL. Single sample- 400 colonies/100mL. Total coliform: 30-day average: 1,000 colonies/100 mL, single sample: If FC/TC ratio is < 0.1, 10,000 colonies/100 mL, if FC/TC ratio is > 0.1, 1,000 colonies/100mL.
Data Used to Assess Water Quality:	A total of 51 analyses were performed from 1999 through 2003. Of these, there was only one exceedance of the bacterial standards for all three indicators: The enterococcus standard of 104MPN/100mL was exceeded

	in September 1999 (City of San Diego, 2004).
Spatial Representation:	La Jolla Shores at Caminito Del Oro. This site is located at La Jolla Shores Beach at El Paseo Grande Street: Four stations were monitored at Caminito Del Oro during this time: one at the center of the sampling site, two to the left of the site, and one to the right.
Temporal Representation:	Data were available for this assessment only from the dry season of 1999 and from two samples taken in the spring of 2003.
Environmental Conditions:	There were no sewage spills that impacted the Caminito Del Oro site between January 1999 and October 2003. Southern California has three distinct weather/hydrological conditions: summer dry weather, winter dry weather, and storm events. The data set used in this analysis includes summer and winter season data. Whether or not storm event samples are included in the data set are not known. For future water quality assessments, the RWQCB may classify bacteria samples as summer dry, winter dry, or storm event samples to ensure adequate representation of all three weather/hydrological conditions.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	R1 - Water Contact Recreation, R2 - Non-Contact Recreation
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Bacteria Objective (AB411, 1997): Enterococcus: 35"per 100 ml for 30-day average", single sample: 104 per 100 ml. Fecal coliform: 30-day average- 200 colonies/100 mL. Single sample- 400 colonies/100mL. Total coliform: 30-day average: 1,000 colonies/100 mL, single sample: If FC/TC ratio is < 0.1, 10,000 colonies/100 mL, if FC/TC ratio is > 0.1, 1,000 colonies/100mL.
Data Used to Assess Water Quality:	A total of 366 analyses were performed from 1999 through 2003. Of these, there were only 6 exceedances of the bacterial standards fro all 3 indicators: one for total coliform, three for fecal coliform, and two for enterococcus (City of San Diego, 2004).
Spatial Representation:	There were 11 stations that were monitored at the El Paseo Grande site during this time: the majority were taken at the sampling site and 75 to the left and right.
Temporal Representation:	Data were available for this assessment form 05/1999 through 10/2004. The majority of samples were taken during the dry season, but samples were also taken during the wet season in 2001, 2002, and 2003.
Environmental Conditions:	Two of the exceedances of Enterococcus standard were associated with a sewage spill that occurred in March 2001.

	Southern California has three distinct weather/hydrological conditions: summer dry weather, winter dry weather, and storm events. The data set used in this analysis includes summer and winter season data. Whether or not storm event samples are included in the data set are not known. For future water quality assessments, the RWQCB may classify bacteria samples as summer dry, winter dry, or storm event samples to ensure adequate representation of all three weather/hydrological conditions.

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	R1 - Water Contact Recreation, R2 - Non-Contact Recreation
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	Bacterial Objective (AB 411, 1997) : Enterococcus: 35"per 100 ml for 30-day average", single sample: 104 per 100 ml. Fecal coliform: 30-day average- 200 colonies/100 mL. Single sample- 400 colonies/100mL. Total coliform: 30-day average: 1,000 colonies/100 mL, single sample: If FC/TC ratio is < 0.1, 10,000 colonies/100 mL, if FC/TC ratio is > 0.1, 1,000 colonies/100mL.
Data Used to Assess Water Quality:	A total of 501 analyses were performed from 1999 through 2003. Of these, there were only 3 exceedances of the bacterial standards for all 3 indicators: one for fecal coliform in 2003 and two for enterococcus in 2000 (City of San Diego, 2004).
Spatial Representation:	Pacific Beach at Grand Avenue. This site is located just south of Crystal Pier at Grand Avenue in Pacific Beach. Three stations were monitored at Pacific Beach at Grand Avenue during this time: one at the sampling site, one 75 feet to the left, and one 75 feet to the right of the site.
Temporal Representation:	Data were available for this assessment from April 1999 through October 2003. The majority of samples were taken during the dry season, but samples were also taken during the wet season.
Environmental Conditions:	There were no sewage spills that impacted the Pacific Beach at Grand Avenue site. Southern California has three distinct weather/hydrological conditions: summer dry weather, winter dry weather, and storm events. The data set used in this analysis includes summer and winter season data. Whether or not storm event samples are included in the data set are not known. For future water quality assessments, the RWQCB may classify bacteria samples as summer dry, winter dry, or storm event samples to ensure adequate representation of all three weather/hydrological conditions.

Line of Evidence	Pollutant-Water

Beneficial Use	R1 - Water Contact Recreation, R2 - Non-Contact Recreation
Non-Numeric Objective:	
Evaluation Guideline:	From AB411: Enterococcus: 35"per 100 ml for 30-day average", single sample: 104 per 100 ml. Fecal coliform: 30-day average- 200 colonies/100 mL. Single sample- 400 colonies/100mL. Total coliform: 30-day average: 1,000 colonies/100 mL, single sample: If FC/TC ratio is < 0.1, 10,000 colonies/100 mL, if FC/TC ratio is > 0.1, 1,000 colonies/100mL.
Data Used to Assess Water Quality:	A total of 412 analyses were performed from 1999 through 2003. Of these, there were seven exceedances of the bacterial standards for all 3 indicators: 2 exceedances of the fecal coliform standard and one exceedance of the enterococcus standard (City of San Diego, 2004).
Spatial Representation:	Tourmaline Surf Park. This site is located in Pacific Beach near the end of Turquoise Street. Eight stations were monitored at Tourmaline Surf Park during this time: one at the sampling point, five to the left, and two to the right of the site."
Temporal Representation:	Data were available for this assessment from 04/1999 through 05/2003. Samples were collected during the wet and dry seasons, but only limited data were available from 2002 and 2003.

Line of Evidence	Pollutant-Water
Beneficial Use	R1 - Water Contact Recreation, R2 - Non-Contact Recreation
Non-Numeric Objective:	
Evaluation Guideline:	From AB411: Enterococcus: 35"per 100 ml for 30-day average", single sample: 104 per 100 ml. Fecal coliform: 30-day average- 200 colonies/100 mL. Single sample- 400 colonies/100mL. Total coliform: 30-day average: 1,000 colonies/100 mL, single sample: If FC/TC ratio is < 0.1, 10,000 colonies/100 mL, if FC/TC ratio is > 0.1, 1,000 colonies/100mL.
Data Used to Assess Water Quality:	A total of 381 analyses were performed from 1999 through 2003. Of these, there were only 9 exceedances of the bacterial standards for all 3 indicators, all of which occurred in 1999 and 2000. Standards were exceeded for all 3 indicators, but there were no exceedance of any of the 3 indictors during 2003 (City of San Diego, 2004).
Spatial Representation:	Windansea Beach at Bonair St. This site is located at WindanSea Beach in La Jolla at the end of Bonair Street. Seven stations were monitored at Windansea Beach at Bonair St. during this time: one at the sampling site, three to the left, and three to the right.

Temporal Representation:	Data were available for this assessment from 01/2002 through 10/2004, although only limited data were available for this site from 04/2001 through 04/2003. The majority of samples were taken during the dry season, but samples were also taken during the wet season.

Line of Evidence	Pollutant-Water
Beneficial Use	R1 - Water Contact Recreation, R2 - Non-Contact Recreation
Non-Numeric Objective:	
Evaluation Guideline:	From AB411: Enterococcus: 35"per 100 ml for 30-day average", single sample: 104 per 100 ml. Fecal coliform: 30-day average- 200 colonies/100 mL. Single sample- 400 colonies/100mL. Total coliform: 30-day average: 1,000 colonies/100 mL, single sample: If FC/TC ratio is < 0.1, 10,000 colonies/100 mL, if FC/TC ratio is > 0.1, 1,000 colonies/100mL.
Data Used to Assess Water Quality:	A total of 344 analyses were performed form 1999 through 2003. Of these, there were 99 exceedances of the bacterial standards for all three indicators, which equates to nearly 30% of the analyses conducted at this site. In contrast to most other sites, the majority of exceedances occurred for the total coliform and fecal coliform indicators. The Enterococcus standard was exceeded only 4 times during this time period (City of San Diego, 2004).
Spatial Representation:	Casa Beach (Children's Pool): This site is located just south of Point La Jolla at Children's Pool Beach: Twelve stations were monitored at Children's Pool during this time: one at the sampling site, two to the left, and nine to the right of the site.
Temporal Representation:	Data were available for this assessment from 01/2002 through 10/2004. The majority of samples were taken during the dry season, but samples were also taken during the wet season.

Region 9

Water Segment: San Diego Bay Shoreline, Chula Vista Marina

Pollutant: Bacteria Indicators

Decision: Delist

Weight of Evidence: This pollutant is being considered for removal from the section 303(d) list under section 4 of the Listing Policy. The Policy calls for the delisting of waters if the decision is found to be based faulty data and it is demonstrated that the listing would not have occurred in the absence of such faulty data. One line of evidence is available in the administrative record to assess this pollutant.

The bacteria indicators listing was based on a precautionary posting by the County Health Department and the posting was not backed by any data (section 3.3 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is insufficient justification for maintaining the listing for this water segment-pollutant combination.

This conclusion is based on the staff findings that no bacteria data are available to assess the status of this water body for this pollutant. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because it cannot be determined if applicable water quality standards for the pollutant are exceeded.

Lines of Evidence:

Line of Evidence Testimonial Evidence

Beneficial Use R1 - Water Contact Recreation

Information Used to Assess Water Quality: The Chula Vista Marina was placed on the 303(d) list for bacteria indicators in 1998. However, the area that was listed is actually south of the Chula Vista marina, rather than within the marina itself. The area south of the marina was listed in 1998 due to postings by the County

Department of Public Health. According to RWQCB staff, the Health Department posted the area as a precaution because of a nearby storm drain outlet, not because they had data showing elevated bacteria levels. To the knowledge of RWQCB staff, data were never collected from the water body. The RWQCB staff support delisting this site based on the lack of evidence to support the listing.

San Diego Region (9)

Area Change

Recommendations to change the area affected by pollutants on the section 303(d) List

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Region 9

Water Segment: Chollas Creek

Pollutant: None

Decision: Accept Area Change

Weight of Evidence: The data and information in the administrative record supports this change in estimated size affected.

Lines of Evidence:

Line of Evidence	-N/A
Beneficial Use	R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Non-Numeric Objective:	Map Changes-no objective available.
Data Used to Assess Water Quality:	Email from James Smith at RWQCB9. "Chollas Creek. Can we add about 0.5 miles of impairment to the Southern Fork? This fork joins the currently listed portion NW of the I5 / I15 interchange. "
Spatial Representation:	Chollas Creek at the Southern Fork
Temporal Representation:	The email was sent on 06/03/2004.

Region 9

Water Segment:	Green Valley Creek
Pollutant:	None
Decision:	Accept Area Change
Weight of Evidence:	The data and information in the administrative record supports this change in estimated size affected.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.
Lines of Evidence:	

Line of Evidence	-N/A
Beneficial Use	AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Information Used to Assess Water Quality:	Compared to the old shapefile (from shapefile R9_rivers_2002 303d), the new shapefiles (sent to SWRCB from Mettja Hong at RWQCB9 on 05/06/2003) show that Green Valley Creek was improperly represented in 2002 as being further south and west that it actually is. Please refer to the shapefiles for exact locations of the 2002 and new (2004) representations of Green Valley Creek.
Non-Numeric Objective:	Map changes-no objective available.
Data Used to Assess Water Quality:	From an email from James Smith at RWQCB9: Green Valley Creek is improperly represented. The correct shapefiles were emailed to you guys on 6 May 03 by Mettja Hong (former intern). Please update.
Spatial Representation:	Green Valley Creek

Region 9

Water Segment:	Kit Carson Creek
Pollutant:	None
Decision:	Accept Area Change
Weight of Evidence:	The data and information in the administrative record supports this change in estimated size affected.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.
Lines of Evidence:	

Line of Evidence	-N/A
Beneficial Use	AG - Agricultural Supply, IN - Industrial Service Supply, MU - Municipal & Domestic, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Non-Numeric Objective:	Map changes - no objective available.
Data Used to Assess Water Quality:	From an email from James Smith at RWQCB9: Kit Carson Creek is improperly named San Bernardo Valley.
Spatial Representation:	Map name changes address Kit Carson Creek.
Temporal Representation:	Email was dated 06/03/2004.

Region 9

Water Segment:	Mission Bay Shoreline
Pollutant:	None
Decision:	Accept Area Change
Weight of Evidence:	The data and information in the administrative record supports this change in estimated size affected.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.
Lines of Evidence:	

Line of Evidence	-N/A
Beneficial Use	CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, IN - Industrial Service Supply, MA - Marine Habitat, MI - Fish Migration, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat
Non-Numeric Objective:	Map changes- no objective.
Data Used to Assess Water Quality:	From email from James Smith at RWQCB9: Mission Bay should have just the shoreline listed for Bacterial Impairments and just the areas near the mouths of Rose and Tecolote Creek listed for eutrophic and lead. I understand that this my not be possible due to the constraints of 'one area represented for one water body' in the system.
Spatial Representation:	This map change request affects Mission Bay and the areas of Mission Bay at the mouths of Rose and Tecolote Creeks.
Temporal Representation:	Email from Jim Smith was dated 06/03/2004.

Region 9

Water Segment:	Pacific Ocean Shoreline, San Diego HU
Pollutant:	None
Decision:	Accept Area Change
Weight of Evidence:	The data and information in the administrative record supports this change in estimated size affected.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.
Lines of Evidence:	

Line of Evidence	-N/A
Beneficial Use	AQ - Aquaculture, BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), IN - Industrial Service Supply, MA - Marine Habitat, MI - Fish Migration, NA - Navigation, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, SP - Fish Spawning, WI - Wildlife Habitat
Non-Numeric Objective:	Map Changes-no objective available.
Data Used to Assess Water Quality:	From an email from James Smith at RWQCB9: The stretch of Pacific Ocean Shoreline, at Bermuda Avenue should not be listed. The following was emailed to Adam Morrill on 5 Nov 02: For the listing "Pacific Ocean Shoreline, San Diego HU" the extent of listing should include only Part 1 of 2 and not the more southern stretch identified as Part 2 of 2. If you have not yet digitized the maps, please exclude this southern extent of impairment. The total linear distance should only be 0.5 miles.
Spatial Representation:	Pacific Ocean Shoreline, San Diego HU at Bermuda Avenue.
Temporal Representation:	Email is dated 06/03/04.

Region 9

Water Segment: San Diego River (Lower)

Pollutant: None

Decision: Accept Area Change

Weight of Evidence: The data and information in the administrative record supports this change in estimated size affected.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.

Lines of Evidence:

Line of Evidence -N/A

Beneficial Use AG - Agricultural Supply, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Non-Numeric Objective: Map changes- no objective available.

Data Used to Assess Water Quality: From an email from James Smith of RWQCB9: The San Diego River should be a continuous line from Carlton Hills Blvd Bridge all the way down to the Pacific Ocean. The line currently is missing the upper portion and contains 4 other missing segments.

Spatial Representation: Map change request affects the San Diego River from Carlton Hills Blvd Bridge to the Pacific Ocean.

Temporal Representation: Email was dated 06/03/2004.

Line of Evidence -N/A

Beneficial Use AG - Agricultural Supply, IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Non-Numeric Objective:	Map changes- no objective available.
Data Used to Assess Water Quality:	From email from James Smith at RWQCB9: The upper most portion of the impaired segment of the San Diego River is improperly named Forrester Creek.
Spatial Representation:	Map changes affect the uppermost portion of the impaired segment of the San Diego River.
Temporal Representation:	Email is dated 06/03/2004.

Region 9

Water Segment:	Santa Margarita River (Upper)
Pollutant:	None
Decision:	Accept Area Change
Weight of Evidence:	The data and information in the administrative record supports this change in estimated size affected.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.
Lines of Evidence:	

Line of Evidence	-N/A
Beneficial Use	AG - Agricultural Supply, CO - Cold Freshwater Habitat, IN - Industrial Service Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Non-Numeric Objective:	Map change- no objective available.
Data Used to Assess Water Quality:	From an email from James Smith at RWQCB9: The upper portion of the Santa Margarita River (u/s of Rainbow Creek) is improperly named Temecula Creek.
Spatial Representation:	Map change request affects the upper Santa Margarita River.
Temporal Representation:	Email is dated 06/03/2004.

Region 9

Water Segment:	Tijuana River
Pollutant:	None
Decision:	Accept Area Change
Weight of Evidence:	The data and information in the administrative record supports this change in estimated size affected.
SWRCB Staff Recommendation:	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.
Lines of Evidence:	

Line of Evidence	-N/A
Beneficial Use	IN - Industrial Service Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Non-Numeric Objective:	Map Changes-no objective available.
Data Used to Assess Water Quality:	From an email from James Smith at RWQCB9: The Tijuana River should also be a continuous line, but it has 2 missing segments.
Spatial Representation:	Map change request affects the Tijuana River.
Temporal Representation:	Email was dated 06/03/2004.

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