

**STAFF REPORT  
VOLUME II**

**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

# DRAFT

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STATE WATER RESOURCES CONTROL BOARD  
DIVISION OF WATER QUALITY

STAFF REPORT

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

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

VOLUME II

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  
Revisions to the Section 303(d) List***

***Volume II***

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 II of the Staff Report. Changes proposed for the 2006 section 303(d) list are included for the following RWQCBs:

- North Coast (Region 1)
- San Francisco Bay (Region 2)
- Central Coast (Region 3)
- Los Angeles (Region 4)

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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# North Coast Region (1)

LIST

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

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Region 1

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**Water Segment:** Bodega HU, Bodega Harbor HA

**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. Over a nine-year period, experiments strongly indicated that non-native presence was responsible for sharp native benthic community abundance declines in Bodega Bay Harbor.

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 1989-1998, excluding 1992.
- 2) Path analysis was applied on and similar methods were used to measure abundance data.
- 3) The non-native European green crab exerted top-down control significantly reducing the abundances of several native invertebrate species monitored, which showed sharp declines within 3 years of green crab arrival.
- 4) Field and lab experiments indicated green crab predation was responsible for these declines.
- 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:**

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*Numeric Line of Evidence*                      Population/Community Degradation

<i>Beneficial Use:</i>	MA - Marine Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	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. 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 Water Board will determine compliance with this objective.
<i>Data Used to Assess Water Quality:</i>	Non-native green crab (Grosholz et al. 2000) was first observed in 1993 in Bodega Bay Harbor, CA. This study measured the impact of the green crab, <i>Carcinus maenus</i> , on a coastal marine food web and found this predator exerted strong top-down control significantly reducing the abundances of several native invertebrate species monitored over a nine year period, (Grosholz et al. 2000). Several native species showed sharp declines within three years of the arrival of green crabs. Field and lab experiments indicated that green crab predation was responsible for these declines. To analyze the strength of direct and indirect impacts of green crab predation, path analysis was employed on the abundance data.
<i>Spatial Representation:</i>	Bodega Bay Harbor in California is ~2 km squared in area. Abundance of all crab species was estimated using three pitfall traps at 50-m intervals along four transect lines parallel to the shoreline. Benthic invertebrate abundance and both native shore crab species were measured along the four transects. In April of each year, a total of six core samples were taken at 20-m intervals along these transects for both <i>Nutricola</i> species. The same method was used to estimate changes in selected invertebrates at other sites in BBH.
<i>Temporal Representation:</i>	The time period, unless otherwise specified is from 1989-1998, excluding 1992. Abundance of all crab species was estimated annually in late May to early June. Actual density of green crabs was estimated visually 2-4 times annually from 1994-1996. Invertebrate abundance was measured annually. Abundance for both native shore crab species was measured during April of each year. The same time period was used to estimate changes in selected invertebrates at other sites in BBH, and for 13 species of wintering shorebirds. For the shorebirds, data were collected three times annually (Aug 15 to Sept 30, Nov 15 to Dec 31, and Jan 15 to Feb 28).
<i>Environmental Conditions:</i>	Changes in relative diversity and abundance of native species may also be driven by habitat alteration, flow changes, or hydro-modification.
<i>Data Quality Assessment:</i>	Peer Reviewed Journal Article.

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## Region 1

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**Water Segment:** Clair Engle 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. Eleven of the 50 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* North Coast RWQCB Water Quality Control Plan: 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.

<i>Evaluation Guideline:</i>	0.3 ug/g (OEHHA Screening Value).
<i>Data Used to Assess Water Quality:</i>	Eleven out of 50 samples exceeded. Filet composite and individual samples were collected. Species collected were brown trout, rainbow trout, chinook salmon, largemouth bass, smallmouth bass, and white catfish. Two individual samples of chinook salmon, 8 individual samples of smallmouth bass, and 1 composite of smallmouth bass exceeded the guideline (TSMP, 2002).
<i>Spatial Representation:</i>	One station located along the east fork of the lake.
<i>Temporal Representation:</i>	Samples were collected in 9/24/2002, 9/25/2002, and 9/27/2002.
<i>Data Quality Assessment:</i>	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002, Department of Fish and Game.

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## Region 1

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**Water Segment:** Klamath River HU, Lower HA, Klamath Glen HSA

**Pollutant:** Sedimentation/Siltation

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3 of the Listing Policy. Under section 3 a single line of evidence is necessary to assess listing status.

Three lines of evidence are available in the administrative record to assess this pollutant. Two of these lines of evidence support placing this water body segment on the section 303(d) list. The narrative information, photos and study findings submitted supports the numerical information submitted in concluding that a sedimentation problem exists in this water body.

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 are 8 weekly averages out of 31 weeks of 7 consecutive day averages that exceeded the evaluation guideline for turbidity 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	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 beneficial uses. Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. Water shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	The evaluation guideline that has been used to help determine exceedance is from published-peer reviewed paper, Noggle (1978, cited in Meehan 1991) reported that suspended sediment concentrations of 300 mg/L caused reduced growth and feeding.
<i>Data Used to Assess Water Quality:</i>	When you consider the entire data set from the three creeks sampling locations the data only shows one exceedance of the evaluation guideline out of the 21 samples taken. The one Suspended Sediment Concentration (SSC) exceedance that was shown was on 12/14/02 at 12:45 at McGarvey Creek and the SSC was 307 mg/L. The other samples taken at McGarvey had an average of 231.5 mg/L for 12/14/02, 117 for the 1/13/ 03 Avg., and 8.39 mg/L for the April 2003 Avg. The Blue Creek location had an SSC average 5.05 mg/L for 4/28/03 and 9.97 mg/L average for samples taken on 12/9/03. The Turwar Creek only had samples on 4/29/03 with and average SSC of 3.46 mg/L (Yurok Tribe, 2003).
<i>Spatial Representation:</i>	Three sampling locations; Blue Creek, McGarvey Creek and Turwar Creek gauging stations are located in the Lower Klamath River Basin.
<i>Temporal Representation:</i>	The data were collected from only 6 days from 4 different months between 12/2002 and 12/2003. SSC Data was collected from the McGarvey Creek station on 12/14/02, 1/13/03, 4/4/03, and 4/30/03. Data were collected from this location between 12:28 pm and 13:45 pm on each of the respective sampling dates. SSC Data was collected from the Blue Creek Sampling location on 4/28/03 and 12/9/03. Data was collected from this location between 12:28pm on 4/28/03 and between 14:50 and 15:15pm on 12/29/03. SSC Data was collected from the Turwar location on 4/29/03 only between 12:00 and 12:20 pm.
<i>Environmental Conditions:</i>	Regional Water Board staff have long suggested that beneficial uses may be impaired in portions of the mainstem Klamath (particularly in the lower Klamath River) and tributaries to the Klamath River (Beaver Creek and tributaries to the Klamath below the confluence with the Trinity River have been specifically identified) due to excessive sediment loading and instream sediment conditions. Insufficient information was available in 2002 to make a listing determination. The Yurok Indian Reservation boundaries lie approximately one mile on either side of the Klamath River from the Pacific Ocean to the confluence with the Trinity River. The Yurok, Karuk, and Hoopa Tribes are very active throughout the Klamath basin in both fisheries and water quality monitoring efforts. The Yurok and Hoopa Tribe are actively pursuing approval of Clean Water Act authority from US EPA. Coordination among the Regional Water Board, State Water Board, the Tribes and US EPA is critical to successful development and implementation of TMDL's for the Klamath River basin.

*Data Quality Assessment:* "Sampling and Analysis Plan for the Yurok Reservation, May 2003." This plan includes the tribe's data quality objectives, sampling rationales and procedures, field methods and procedures, sample preservation and storage and quality control information. They also included Appendix-C of that plan in their submittal, which is their "Draft Water Quality Control Plan for the Yurok Indian Reservation, January 2003". These documents have been submitted to USEPA for approval.

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* 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 beneficial uses. Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. Water shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* The evaluation guideline that has been used to determine turbidity exceedance is from published-peer reviewed paper, "The Effects of Chronic Turbidity on Density and Growth of Steelheads and Coho Salmon", John W Sigler (1984). The guideline is "In our studies, as little as 25 NTUs of turbidity caused a reduction in fish growth."

*Data Used to Assess Water Quality:* Blue Creek: Nine weekly sample averages with 2 of those weeks with an average of 29.73 NTU and 223.36 NTU respectively, that were both in exceedance of the turbidity evaluation guideline. The other 7 weekly averages for the Blue Creek sampling location were below the 25 NTU guideline with a range of averages between 1.02 NTU and 13.16 NTU.  
Turwar Creek: Thirteen weekly sample averages with 1 of those weeks with an average of 136.88 NTU in exceedance of the turbidity evaluation guideline. The other 12 weekly averages for the Blue Creek sampling location were below the 25 NTU guideline with a range of averages between 0.40 NTU and 19.25 NTU.  
McGarvey Creek: Nine weekly samples averages with 5 of those weeks with averages of 25.31 NTU, 54.79 NTU, 69.03 NTU, 36.36 NTU, and 26.82 NTU respectively, that were all in exceedance of the turbidity evaluation guideline. The other 4 weekly samples averages that were below the 25 NTU guideline with a range of averages between 5.24 NTU and 19.13 NTU.  
These measurements considered collectively, there are 31 weeks of 7 consecutive days averages- over three locations with 8 of those weekly averages in exceedance of the 25 NTU evaluation guideline for turbidity (Yurok Tribe, 2003).

*Spatial Representation:* Three sampling locations; Blue Creek, McGarvey Creek and Turwar Creek gauging stations are within their respective watersheds within the located on the

Lower Klamath River Basin.

*Temporal Representation:* At the three sampling locations, turbidity data and stage feet data were collected every 15 minutes, over a 24 hour period, every day. Blue Station- Data was collected from 10/1/03 through 1/29/04. McGarvey Station- Data was collected from 10/1/03 through 2/3/04. Turwar Station- Data was collected from 10/1/03 through 1/5/04. Turbidity data and Stage feet data were collected.

*Environmental Conditions:* Regional Water Board staff have long suggested that beneficial uses may be impaired in portions of the mainstem Klamath (particularly in the lower Klamath River) and tributaries to the Klamath River (Beaver Creek and tributaries to the Klamath below the confluence with the Trinity River have been specifically identified) due to excessive sediment loading and instream sediment conditions. Insufficient information was available in 2002 to make a listing determination. The Yurok Indian Reservation boundaries lie approximately one mile on either side of the Klamath River from the Pacific Ocean to the confluence with the Trinity River. The Yurok, Karuk, and Hoopa Tribes are very active throughout the Klamath basin in both fisheries and water quality monitoring efforts. The Yurok and Hoopa Tribe are actively pursuing approval of Clean Water Act authority from US EPA. Coordination among the Regional Water Board, State Water Board, the Tribes and US EPA is critical to successful development and implementation of TMDLs for the Klamath River basin.

*Data Quality Assessment:* "Sampling and Analysis Plan for the Yurok Reservation, May 2003". This plan includes the tribe's data quality objectives, sampling rationales and procedures, field methods and procedures, sample preservation and storage and quality control information. They also included Appendix-C of that plan in their submittal, which is their "Draft Water Quality Control Plan for the Yurok Indian Reservation, January 2003". These documents have been submitted to USEPA for approval.

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*Line of Evidence* Visual

*Beneficial Use* CO - Cold Freshwater Habitat

*Information Used to Assess Water Quality:* Photographs show the Lower Klamath River in 1998, looking upstream from the Highway 101 Bridge. Sediment deposits in the margins show sediment accumulated. A second plate shows watershed conditions and land use management in lower Blue Creek contributes to sediment yields. High road densities contribute chronic fine sediment to Blue Creek and other Lower Klamath tributaries. Road failures during storm events may also lead to larger yields, which aggraded stream beds to the point where surface flows are sometimes lost. In this photograph, Blue Creek remains on the surface, but the lower creek is widened by sediment. An aerial photo shows tracks of debris torrents in Walker Creek, which buried the stream channel and extended all the way to the mainstem Klamath River. A photo at the mouth of Elk Creek shows the delta extending to the edge of the photo at right was aggraded more than ten feet after the January 1997 storm. A photo of the mainstem Scott River stream bed below Jones Beach has a high amount of decomposed granite sand, contributed from upland. This sand also makes its way into the Klamath River.

*Non-Numeric Objective:*

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 beneficial uses. Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. Water shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.

*Data Used to Assess Water Quality:*

The Long Range Plan for the Klamath River Basin Fishery Conservation Area Restoration Program (Kier Associates, 1991), presents considerable evidence that the mainstem Klamath River is impacted by sediment. With regard to the Lower Klamath Basin, the Long Range Plan noted huge contributions of sediment from tributaries. Contributed sediment is creating problems with fish passage and stream bed stability, and for the lower mainstem: Payne and Associates (1989) found that stream-mouth deltas, almost nonexistent prior to 1955, have grown to 500 and 700 feet in width since 1964. Delta widths changed dramatically after the 1964 flood, but increased even more after the high water of 1972. The initial incursion of sediment came with the 1964 flood but is still being delivered to the lower reaches of the streams. Streambed conditions near the mouths were found by Payne and Associates (1989) to be so unstable that no fish ways could be installed and the study concluded that no lasting solution, other than natural recovery, was possible. Logging in many of these drainages continues today. This delays their recovery and, according to Coats and Miller (1981), could lead to substantial new sediment loads in the event of a major flood. Voight and Gale (1998) noted that 17 of 23 tributaries to the Lower Klamath River remained underground, indicating lack of recovery and continuing contributions of sediment. The Long Range Plan (Kier Assoc., 1991) cites longer term sediment impacts noted by CalTrans (1989):

These stream sections (Lower Klamath) are thought to be in an aggraded condition: the Klamath River is reportedly aggrading at the rate of 100,000 to 150,000 cubic yards per year in the proposed reach while Turwar Creek has shown "substantial aggradations in the channel" over the last thirty years. The stream flow goes subsurface during the summer and early fall, posing a barrier to upstream migrants in the fall (CalTrans, 1989).

The Long Range Plan (Kier Associates, 1991) also made the case that the near extinction of the eulachon or candlefish (Larson and Belchik, 1998), a lower mainstem Klamath River spawner, was indicative of major problems with sediment supply, size and bed load movement.

The mid-term evaluation of the Klamath River Basin Fisheries Restoration Program (Kier Assoc., 1999) evaluated changes in the health of the Klamath River and its tributaries between the inception of the program in 1989 and 1998. They found evidence of continued sediment contributions from logging in the Lower Klamath basin, but also major pulses associated with the January 1997 storm in reaches further upstream. With regard to the Lower Klamath, Kier Associates (1999) found:

Channels of most Lower Klamath tributaries have continued to fill in as sediment yield in the watersheds remains high. Timber harvest in all Lower Klamath watersheds exceeds cumulative effect thresholds and all streams

(except upper Blue Creek) have been severely damaged during the evaluation period. Clear-cut timber harvest in riparian zones on the mainstem of lower Blue Creek and the mainstem Klamath River occurred since 1988 in inner gorge locations. Aggradations in salmon spawning reaches can be expected to persist for decades. Aggradations in salmon spawning reaches can be expected to persist for decades (Higgins, 2004).

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## Region 1

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**Water Segment:** Mendocino Coast HU, Albion River HA, Albion River

**Pollutant:** Temperature, water

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3 of the Listing Policy. Under section 3 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess temperature consistent with Listing Policy section 6.1.5.9. A large number of samples exceed the water quality objective. When compared to the 14.8 °C coho threshold, the sampling locations had a total of 342 measurements of which 245 exceeded the 14.8 °C evaluation 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. There were 245 of 342 samples that exceeded the 14.8 °C evaluation guideline used to interpret the temperature water quality objective and this exceeds the allowable frequency calculated from the equation 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: 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 thereto. A copy of this plan is included verbatim in the Appendix Section of this Plan. In addition, the following temperature objectives apply to surface waters: 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. At no time or place shall the temperature of any COLD water be increased by more than 5°F above natural receiving water temperature. At no time or place shall the temperature of WARM intrastate waters be increased more than 5°F above natural receiving water temperature.
<i>Evaluation Guideline:</i>	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 7-day Mean (maximum value of the 7-day moving average of the daily mean temperature) upper threshold criterion for coho salmon as 14.8°C and for steelhead trout as 17.0°C. The risk assessment approach used by Sullivan et al. (2000) suggests that an upper threshold for the 7-day average of 14.8°C for coho and 17.0°C for steelhead will reduce average growth 10% from optimum.
<i>Data Used to Assess Water Quality:</i>	The Albion River was sampled at Flynn Creek Road and below Railroad Gulch; and at Marsh Gulch at Flynn Creek Road. There were a total of 342 7-day average water temperature measurements taken at 3 separate locations. Of these, 245 measurements of 342 were in exceedance of the 14.8°C guideline for coho and 106 of the 342 exceeded the 17.0°C evaluation guideline for steelhead (Mendocino County Water Agency, 2003). Data were collected hourly from 5/23/2003 to 9/7/2003.
<i>Spatial Representation:</i>	There were three sampling locations: The Albion River at Flynn Creek Road; Albion River below Railroad Gulch; and Marsh Gulch at Flynn Creek Road.
<i>Temporal Representation:</i>	Temperature data was collected hourly at each of the three sampling locations between May 23, 2003 and September 7, 2003.
<i>Data Quality Assessment:</i>	No QAPP was provided. The data was collected from the Mendocino County Water Agency.

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## Region 1

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**Water Segment:** Mendocino Coast HU, Garcia River HA, Garcia River

**Pollutant:** Sediment

**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 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:

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* CO - Cold Freshwater Habitat

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Garcia River Sediment TMDL was approved by USEPA in March 2002.

The Garcia River was listed for sediment in 1992. The TMDL was adopted as a Basin Plan amendment by the NCRWQCB and approved by the SWRCB and

USEPA. The Garcia Sediment TMDL document indicates that impairments will persist for decades, even in the eventuality that all responsible land owners implement aggressive erosion control measures (North Coast RWQCB, 2004a)

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## Region 1

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**Water Segment:** Mendocino Coast HU, Noyo River HA, Noyo River

**Pollutant:** Temperature, water

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3 of the Listing Policy. Under section 3 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess temperature consistent with Listing Policy section 6.1.5.9. This decision is applicable to the 12 sampling locations on Hayshed Gulch at the confluence of the Noyo River; the mainstem at and upstream of Hayshed Gulch; Kass Creek; on the Little North Fork of the Noyo; and on Duffy Gulch. A large number of samples exceed the water quality objective. When compared to the 14.8°C threshold, were 3,376 exceedances out of 7,743 samples taken over all the sampling years at this location. When compared to the 17°C threshold there were 1,185 exceedances found out of all of the 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 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 3,376 of 7,743 samples that exceeded the 14.8 degree evaluation guideline used to interpret the water quality objective and this exceeds the allowable frequency calculated from the equation 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:**

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*Numeric Line of Evidence*

Pollutant-Water

<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: 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 thereto. A copy of this plan is included verbatim in the Appendix Section of this Plan. In addition, the following temperature objectives apply to surface waters: 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. At no time or place shall the temperature of any COLD water be increased by more than 5° F above natural receiving water temperature. At no time or place shall the temperature of WARM intrastate waters be increased more than 5° F above natural receiving water temperature.
<i>Evaluation Guideline:</i>	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 7-day Mean (maximum value of the 7-day moving average of the daily mean temperature) upper threshold criterion for coho salmon as 14.8°C and for steelhead trout as 17.0°C. The risk assessment approach used by Sullivan et al. (2000) suggests that an upper threshold for the for the 7-day average of 14.8°C for coho and 17.0°C for steelhead will reduce average growth 10% from optimum.
<i>Data Used to Assess Water Quality:</i>	When compared to the 14.8 °C coho threshold, were 3,376 exceedances out of 7,743 total samples taken over all the sampling years at the sampling locations on the Noyo River. When compared to the 17°C threshold there were 1,185 exceedances found out of all of the data. (Hawthorne Timber Co., 2003).
<i>Spatial Representation:</i>	There were 12 sampling locations on Hayshed Gulch at the confluence of the Noyo River; the mainstem at and upstream of Hayshed Gulch; Kass Creek; on the Little North Fork of the Noyo; and on Duffy Gulch. Hobo-Temps were placed in the pools near the bottom and towards the deepest portion to record the in-stream temperatures. In stream and riparian measurements were taken at all monitoring locations.
<i>Temporal Representation:</i>	There were samples taken over 9 years:1994,1997,1998,1999,2000,2001,2002, and 2003. Water temperature data were recorded at ninety-minute intervals, generally from June until Mid-October. Stream temperatures were measured continuously with temperature data loggers (Onset Computer Corp. model HOBO-Temp and OST temperature loggers) in Class 1 streams throughout the property from 1994 to 2003. Hobo-temps allowed uninterrupted data collection to occur throughout the critical summer period.
<i>Data Quality Assessment:</i>	QA/QC Information Summary was submitted. Installation of the temperature data logger (Onset Computer Corp. model HOBO-Temp and OST temperature loggers) in Class 1 streams throughout the property devices occurred one day

before the first day logged on the continuous temperature monitoring figures. This was done to allow the data loggers to reach equilibrium with the instream temperature regimes and to capture complete daily cycles. No information on equipment calibration, standard operating procedures or data protocols were included with the submittal.

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## Region 1

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**Water Segment:** Mendocino Coast HU, Noyo River HA, Pudding Creek

**Pollutant:** Temperature, water

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3 of the Listing Policy. Under section 3 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess temperature consistent with Listing Policy section 6.1.5.9. When compared to the 14.8°C coho threshold, there were 289 exceedances out of 1,391 total samples taken over all the sampling years in the middle to upper watershed of Pudding Creek. When compared to the 17°C steelhead threshold there were no exceedances found for any of the 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 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 289 of 1,391 samples that exceeded the Sullivan 14.8 degree evaluation guideline used to interpret the water quality objective and this exceeds the allowable frequency calculated from the equation 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:**

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: 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 thereto. A copy of this plan is included verbatim in the Appendix Section of this Plan. In addition, the following temperature objectives apply to surface waters: 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. At no time or place shall the temperature of any COLD water be increased by more than 5°F above natural receiving water temperature. At no time or place shall the temperature of WARM intrastate waters be increased more than 5°F above natural receiving water temperature.
<i>Evaluation Guideline:</i>	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 7-day Mean (maximum value of the 7-day moving average of the daily mean temperature) upper threshold criterion for coho salmon as 14.8°C and for steelhead trout as 17.0°C. The risk assessment approach used by Sullivan et al. (2000) suggests that an upper threshold for the for the 7-day average of 14.8°C for coho and 17.0°C for steelhead will reduce average growth 10% from optimum.
<i>Data Used to Assess Water Quality:</i>	When compared to the 14.8 °C coho threshold, there were 289 exceedances out of 1391 total samples taken over the all of the years at this location. When compared to the 17°C threshold there were no exceedances found for any of the data (Hawthorne Timber Co., 2003).
<i>Spatial Representation:</i>	There were 1,391 total samples taken at the middle to upper watershed of Pudding Creek. Hobo-Temps were placed in the pools near the bottom and towards the deepest portion to record the in-stream temperatures. In stream and riparian measurements were taken at all monitoring locations on Pudding Creek.
<i>Temporal Representation:</i>	Samples were recorded for 9 years between 1994 and 2001 and again in 2003. Water temperature data were recorded at 90-minute intervals, generally from June until Mid-October upstream temperatures were measured continuously with temperature data loggers (Onset Computer Corp. model HOBO-Temp and OST temperature loggers) in Class 1 streams throughout the property from 1994 to 2004. Hobo-temps allowed uninterrupted data collection to occur throughout the critical summer period.
<i>Data Quality Assessment:</i>	QA/QC Information Summary was submitted. Installation of the temperature data logger (Onset Computer Corp. model HOBO-Temp and OST temperature

loggers in Class 1 streams throughout the property devices occurred one day before the first day logged on the continuous temperature monitoring figures. This was done to allow the data loggers to reach equilibrium with the instream temperature regimes and to capture complete daily cycles. No information on equipment calibration, standard operating procedures or data protocols were included with the submittal.

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## Region 1

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<b>Water Segment:</b>	Russian River HU, Lower Russian River HA, Guerneville HSA
<b>Pollutant:</b>	pH
<b>Decision:</b>	List
<b>Weight of Evidence:</b>	<p>This pollutant is being considered for placement on the section 303(d) list under section 3 of the Listing Policy. Under section 3 a single line of evidence is necessary to assess listing status.</p> <p>One line of evidence is available in the administrative record to assess this pollutant. Six out of 27 samples did not meet the minimum of the pH water quality objective of 6.5.</p> <p>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.</p> <p>This conclusion is based on the staff findings that:</p> <ol style="list-style-type: none"><li>1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.</li><li>2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.</li><li>3. There were 6 out of the 27 samples that exceeded the pH water quality objective and this exceeds the allowable frequency listed in Table 3.2 of the Listing Policy.</li><li>4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.</li></ol>
<b>SWRCB Staff Recommendation:</b>	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:

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/</i>	Basin Plan: pH for Russian River shall not be depressed below 6.5 nor raised

<i>Water Quality Criterion:</i>	above 8.5. Changes in normal ambient pH levels shall not exceed 0.2 units in waters with designated marine (MAR) or saline (SAL) beneficial uses nor 0.5 units within the range specified above in fresh waters with designated COLD or WARM beneficial uses.
<i>Data Used to Assess Water Quality:</i>	Six out of 27 samples did not meet the minimum of the objective. The samples below 6.5 ranged from 6 to 6.4. (Sandler, 2004).
<i>Spatial Representation:</i>	Sampling was done in Pocket (Canyon) Creek a tributary to the lower Russian River within the greater Guerneville HSA. PCC020 is located in Guerneville, at 12170 Hwy 116, downstream of Inn and the tank in the creek. PCC030 is located in Guerneville, at 11900 Hwy 116, in the backyard. PCC040 is located in Guerneville, 50 feet upstream from bridge along Hwy 116 at May's Canyon Road.
<i>Temporal Representation:</i>	Samples were taken at all 3 sites once a month on the same days in January, February, March, May, and August through December 2003.
<i>Environmental Conditions:</i>	This listing should be focused on Pocket Canyon Creek because sampling was limited to Pocket Creek a tributary to the lower Russian River within the greater Guerneville HSA.
<i>Data Quality Assessment:</i>	Draft QAPP for Volunteer Water Quality Monitoring Project for the Community Clean Water Institute.

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## Region 1

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<b>Water Segment:</b>	Russian River HU, Middle Russian River HA, Big Sulphur Creek HSA
<b>Pollutant:</b>	Specific Conductance
<b>Decision:</b>	List
<b>Weight of Evidence:</b>	<p>This pollutant is being considered for placement on the section 303(d) list under section 3 of the Listing Policy. Under section 3 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.</p> <p>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.</p> <p>This conclusion is based on the staff findings that:</p> <ol style="list-style-type: none"><li>1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.</li><li>2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.</li><li>3. Five months of the 7 months of samples exceeded the specific conductance water quality objective and this exceeds the allowable frequency listed in Table 3.2 of the Listing Policy.</li><li>4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.</li></ol>
<b>SWRCB Staff Recommendation:</b>	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:

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Specific conductance- 50% upper and lower limits of 250 micromhos represent the 50 percentile values of the monthly means for a calendar year. 50% or more of the monthly means must be less than or equal to

an upper limit and greater than or equal to a lower limit. 90% upper and lower limits of 320 micromhos represent the 90 percentile values for a calendar year. 90% or more of the values must be less than or equal to an upper limit and greater than or equal to a lower limit.

*Data Used to Assess Water Quality:*

There was one sample taken on one day of each month for 7 months in 2003. Five months out of 7 months samples were above the 50% upper limit of 250 micromhos. No samples taken were above the 90% upper limit of 320 micromhos (Sandler, 2004).

*Spatial Representation:*

There was one sampling location, BSC010 that is located upstream of Laguna de Santa Rosa, 20 feet below River Rd. bridge.

*Temporal Representation:*

Samples were taken once a month, January through August 2003 with no samples taken in June.

*Data Quality Assessment:*

Draft QAPP for Volunteer Water Quality Monitoring Project for the Community Clean Water Institute.

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## Region 1

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**Water Segment:** Russian River HU, Middle Russian River HA, Laguna de Santa Rosa

**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 out of 17 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* North Coast RWQCB Basin Plan: 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.

<i>Evaluation Guideline:</i>	0.3 ug/g (OEHHA Screening Value)
<i>Data Used to Assess Water Quality:</i>	Three out of 17 samples exceeded. Individual and composite filet samples of the following species were collected: black bullhead, bluegill, carp, channel catfish, green sunfish, redear sunfish, Sacramento blackfish, and sucker. Samples were collected from 1996-2000. One 1996 (Stony Point) individual green sunfish sample, one 1999 (Stony Point) composite green sunfish sample, and one 2000 (Occidental Pond) individual bluegill sample exceeded the guideline (TSMP, 2002).
<i>Spatial Representation:</i>	Three stations were sampled: upstream of Occidental Road (Occidental Pond), adjacent to the sewage treatment plant in Sebastopol (Sebastopol Pond), and Laguna de Santa Rosa at Stony Point Road (Stony Point).
<i>Temporal Representation:</i>	Samples were collected 1996-2000.
<i>Data Quality Assessment:</i>	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 1996-2000. Department of Fish and Game.

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## Region 1

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**Water Segment:** Russian River HU, Middle Russian River HA, Santa Rosa Creek

**Pollutant:** Specific Conductance

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3 of the Listing Policy. Under section 3 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. There were 5 out of 6 samples that exceeded the specific conductance 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Specific conductance- 50% upper and lower limits of 250 micromhos represent the 50 percentile values of the monthly means for a calendar year. 50% or more of the monthly means must be less than or equal to

an upper limit and greater than or equal to a lower limit. 90% upper and lower limits of 320 micromhos represent the 90 percentile values for a calendar year. 90% or more of the values must be less than or equal to an upper limit and greater than or equal to a lower limit.

*Data Used to Assess Water Quality:*

Six samples were taken from site SRC040, of which 5 were greater than 320 micromhos; two samples were at 370 micromhos, the other exceedances were at 460, 510 and 520 micromhos. Five of the 6 samples were above the 50% upper limit of 250 micromhos and above the 90% upper limit of 320 micromhos as well (Sandler, 2004).

*Spatial Representation:*

There was one sampling site that was located at 3rd St., behind Vineyard Hotel, west of Highway 101 along the Prince George Greenway, Santa Rosa.

*Temporal Representation:*

Samples were taken once a month, on one day each month, from February through August 2003 with no samples taken in May 2003.

*Data Quality Assessment:*

Draft QAPP for Volunteer Water Quality Monitoring Project for the Community Clean Water Institute.

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## North Coast Region (1)

# DELIST

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

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## Region 1

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**Water Segment:** Klamath River HU, Lost River HA, Clear Lake, Boles HSAs

**Pollutant:** Nutrients

**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 this section a single line of evidence is necessary to assess listing status.

Five lines of evidence are available in the administrative record to assess this pollutant. There is no evidence that the biostimulatory narrative objective is exceeded. The NCWRQCB Staff summary of the Upper Lost River De-Listing Recommendation along with the TMDL Analysis Staff Report support the decision to remove nutrients from the 303(d) List for this water segment.

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 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. The results of the nutrient analysis on the nitrogen, chlorophyll-a, phosphorus samples show that there is no evidence that the bio-stimulatory narrative objective has been exceeded. The Dissolved oxygen samples show that the lowest values sampled are still above the minimum objective. These results do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
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:**

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<i>Numeric Line of Evidence</i>	Pollutant-Nuisance
<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Water shall not contain bio-stimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	The Bio-stimulatory WQO is inclusive of nutrients.
<i>Data Used to Assess Water Quality:</i>	<p>The TMDL Analysis was completed for Upper Lost River and Clear Lake Reservoir Watershed. The Chlorophyll-a in the water column was measured from monthly grab samples at the six sampling stations, for a total of 57 samples. The water samples were filtered in the field, rinsed with magnesium carbonate, and preserved on dry ice because full-volume samples could not be delivered to analytical laboratory within the recommended holding period. The chlorophyll-a concentrations showed variability ranging from below the analytical reporting limit (0.00050 mg/l) to 0.016 mg/l. Of the 57 samples, 38 were below the analytical reporting limit; for statistical analyses, these concentrations were assumed to be half of the reporting limit. The high measurement, 0.016 mg/l, was from a sample taken in October 2002 at Mowitz Creek. The median of all of the chlorophyll-a results was 0.00025 mg/l (the default value for samples below the reporting limit), and the 95% upper confidence limit is 0.00174 mg/l. The two stations on the Upper Lost River (WFLAT and LRCLDM) were analyzed separately from the four upstream stations on streams that lead to Clear Lake Reservoir (MOWCRK, BCFORD, WCGSB, and FCFORD).</p> <p>The 28 data points for the two Upper Lost River stations showed chlorophyll-a concentrations ranging from below the analytical reporting limit to 0.0032 mg/l, with a median of 0.00025 mg/l (the default value for samples below the reporting limit), and an 95% upper confidence limit of 0.00174 mg/l (including 21 nondetects assumed to be half of the reporting limit).</p> <p>The 29 points from the four stations on streams leading to Clear Lake Reservoir showed chlorophyll-a concentrations ranging from below the laboratory reporting limit to 0.016 mg/l, with a median of 0.00025 mg/l (this is half of the laboratory reporting limit), and a 95% upper confidence level of 0.00279 mg/l. Although most of the data points in this dataset are nondetects (17 non-detects out of 29 data points), for the statistical analysis, they were assumed to be half of the reporting limit.</p> <p>Using the 57 observations in the complete dataset, the relationship between total phosphorus and chlorophyll-a was weak. Neither visual observations nor water column chlorophyll-a measurements indicated impairment due to excess phosphorus. The lack of Chlorophyll-a in the</p>

water samples obtained for this analysis indicates that either the level of nutrients is too low to support excess algal growth or that some other factor is suppressing the algal growth. In either case, the beneficial uses of the Upper Lost River/Clear Lake Reservoir system are not impaired by nutrient concentrations (North Coast RWQCB, 2004d)

*Spatial Representation:*

The monitoring locations for the Upper Lost River/Clear Lake Reservoir area are:

1. Lost River below Clear Lake Reservoir dam, LRCLDM.
2. Lost River at Walter Flat, WFLAT.
3. Mowitz Creek just downstream of the 136 bridge, MOWCRK.
4. Boles Creek just upstream of the 136 ford, BCFORD.
5. No. Fork Willow Creek below the Great Society Bridge, WCGSB.
6. Fletcher Creek just upstream of the 73 ford, FCFORD.

Two stations are on the Upper Lost River mainstem, one is downstream of the dam and the other at Walter Flat. Station LRCLDM is at a point about 1,000 meters downstream of Clear Lake Reservoir dam. Station WFLAT is at a point about 10 meters downstream of the Walter Flat Bridge, about eight miles downstream of the dam. In addition to the two stations on the Upper Lost River, there were four monitoring locations in streams that lead to Clear Lake Reservoir, the source of the Lost River. One station was on North Fork Willow Creek, the main tributary to Clear Lake Reservoir and the primary spawning stream for the endangered Lost River and shortnose suckers. Two other sites, on Boles and Fletcher Creeks, drain into Willow Creek. The fourth site, on Mowitz Creek, drains directly into Clear Lake Reservoir but does not contribute much water to the reservoir. This site was added late in the investigation because of the opportunity to add to a sparse dataset. All of the sites, except the station below the dam, were accessible only during late spring to early fall because wet weather made the roads impassable. Sampling locations were limited to areas that could be reached by truck. Logistical issues precluded sampling in Clear Lake Reservoir.

*Temporal Representation:*

Sampling represents only one full season, late spring to early fall of one year. Sampling included monthly grab samples and instantaneous measurements for one season, continuous temperature monitoring for one season, and two short continuous multiparameter deployments. The sampling periods do not correspond to the time periods that the suckers are in the streams. There were limited spots at which the streams could be accessed; these might not correspond to the points that provide representative data. Drawing conclusions about the impact of water temperature and nutrients on suckers based on sampling during summer, however, is justified because those months represent the conditions worse than the fish encounter during their time in the streams.

*Environmental Conditions:*

There are no point source waste discharges within the watershed. The land use operations that may impact the Upper Lost River watershed as nonpoint sources of water pollution are livestock operations (grazing) and timber harvest.

*Data Quality Assessment:*

NCRWQCB QA Procedures followed for the TMDL analysis.

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	MU - Municipal & Domestic, WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Water shall not contain bio-stimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	The WQO for Bio-stimulatory substances includes Nitrogen. The USEPA concentration of 10 mg/l NO <sub>3</sub> -N set by the USEPA (1986) to protect human health consuming domestic water supplies.
<i>Data Used to Assess Water Quality:</i>	<p>Nitrogen concentration was measured from monthly grab samples at the six sampling stations, for a total of 57 samples. The system appears to be nitrogen limited with nitrogen levels far below levels expected to cause bio-stimulation in this system. There is no evidence that the bio-stimulatory narrative is exceeded. The total nitrogen concentrations were similar between the two Upper Lost River stations and the four stations upstream of Clear Lake Reservoir. The total nitrogen concentrations are well below the 10 mg/l NO<sub>3</sub>-N set by the U.S. EPA (1986) to protect human health consuming domestic water supplies. In other words, the nitrogen levels are below the concentration of concern for human health.</p> <p>The analytical laboratory measured ammonia, nitrate, nitrite and TKN. Total nitrogen was calculated from the sum of TKN, nitrate, and nitrite. The total nitrogen levels showed some variability ranging from below the analytical reporting limit of 0.05 mg/l to 1.85 mg/l. Of the 57 samples, 17 were below the analytical reporting limit. Since nitrogen was present in the system these were assumed to be half of the reporting limit for statistical analyses. The highest concentration of total nitrogen, 1.85 mg/l, consisted entirely of TKN (ammonia and organic nitrogen). It was from a sample taken in August 2002 at Boles Creek during a time when the creek had no surface flow. The median of all of the total nitrogen results was 0.69 mg/l, and the 95% upper confidence level was 0.77 mg/l.</p> <p>The two stations on the Upper Lost River (WFLAT and LRCLDM) were analyzed separately from the four upstream stations on streams that drain to Clear Lake Reservoir (MOWCRK, BCFORD, WCGSB, and FCFORD). The 28 data points for the two Upper Lost River stations showed total nitrogen concentrations ranging from below the laboratory-reporting limit to 1.65 mg/l, with a median of 0.76 (including 8 non-detects assumed to be half of the reporting limit for statistical analysis purposes). The 29 points from the four stations on streams leading to Clear Lake Reservoir showed total nitrogen concentrations ranging from below the laboratory-reporting limit to 1.85 mg/l, with a median of 0.57 (including 10 non-detects assumed to be half of the reporting limit for statistical analysis purposes). Ammonia concentrations are low or below the laboratory reporting level at the six sampling stations.</p>

Analysis of all six stations grouped together shows that of 57 samples, 37 were below the analytical reporting limit. If the non-detects are included at a concentration equal to half of the reporting limit, the median concentration of ammonia is 0.025 mg/l (the default level for the nondetect samples), and the range is from below the reporting limit to 0.23 mg/l NH<sub>4</sub>-N.

Separating the four upstream stations from the two Upper Lost River stations does not show a significant difference in ammonia concentrations. If the nondetects are included at a concentration equal to half of the laboratory reporting limit, both upstream stations and downstream stations have a median ammonia concentration of 0.025 NH<sub>4</sub>-N. There is a large proportion of samples with ammonia concentrations below the laboratory-reporting limit (29 total samples with 17 non-detects in the upstream stations and 20 non-detects out of 28 total samples in the downstream sites), so analysis of these data is difficult. Calculations of the percentage of ammonia present as the toxic un-ionized ammonia were not necessary because the concentration of total ammonia at all of the stations is well below the level needed to protect the sensitive life stages of the sucker population (North Coast RWQCB, 2004d).

*Spatial Representation:*

The monitoring locations for the Upper Lost River/Clear Lake Reservoir area are:

1. Lost River below Clear Lake Reservoir dam, LRCLDM.
2. Lost River at Walter Flat, WFLAT.
3. Mowitz Creek just downstream of the 136 bridge, MOWCRK.
4. Boles Creek just upstream of the 136 ford, BCFORD.
5. No. Fork Willow Creek below the Great Society Bridge, WCGSB.
6. Fletcher Creek just upstream of the 73 ford, FCFORD.

Two stations are on the Upper Lost River mainstem, one is downstream of the dam and the other at Walter Flat. Station LRCLDM is at a point about 1,000 meters downstream of Clear Lake Reservoir dam. Station WFLAT is at a point about 10 meters downstream of the Walter Flat Bridge, about eight miles downstream of the dam. In addition to the two stations on the Upper Lost River, there were four monitoring locations in streams that lead to Clear Lake Reservoir, the source of the Lost River. One station was on North Fork Willow Creek, the main tributary to Clear Lake Reservoir and the primary spawning stream for the endangered Lost River and shortnose suckers. Two other sites, on Boles and Fletcher Creeks, drain into Willow Creek. The fourth site, on Mowitz Creek, drains directly into Clear Lake Reservoir but does not contribute much water to the reservoir. This site was added late in the investigation because of the opportunity to add to a sparse dataset. All of the sites, except the station below the dam, were accessible only during late spring to early fall because wet weather made the roads impassable. Sampling locations were limited to areas that could be reached by truck. Logistical issues precluded sampling in Clear Lake Reservoir.

*Temporal Representation:*

Sampling represents only one full season, late spring to early fall of one year. Sampling included monthly grab samples and instantaneous measurements for one season, continuous temperature monitoring for one season, and two short continuous multi-parameter deployments. The sampling periods do not correspond to the time periods that the suckers

are in the streams. There were limited spots at which the streams could be accessed; these might not correspond to the points that provide representative data. Drawing conclusions about the impact of water temperature and nutrients on suckers based on sampling during summer, however, is justified because those months represent the conditions worse than the fish encounter during their time in the streams. Water temperature in the Upper Lost River/Clear Lake Reservoir watershed was investigated using: Remote continuous water and air temperature monitors (Optic stowaway data loggers) that took readings every 15 minutes from May through September 2002. Remote sensors that measured air temperature (Optic stowaway data loggers) and relative humidity (HOBO instruments) every 15 minutes for three days in June 2003. Solar pathfinder measurements to calculate solar radiation that reached stream surfaces. A thermal infrared aerial survey in July 2001 and computer simulation modeling using the SSTEMP model. The monitoring instrument at the Boles Creek station was out of the water during that period due to seasonal dewatering and the sampling at Mowitz Creek did not begin until the following month.

*Environmental Conditions:* There are no point source waste discharges within the watershed. The land use operations that may impact the Upper Lost River watershed as nonpoint sources of water pollution are livestock operations (grazing) and timber harvest.

*Data Quality Assessment:* NCRWQCB QA procedures followed in the TMDL analysis.

*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Dissolved Oxygen, Table 3.1 Specific Water Quality Objectives for North Coast Region Clear Lake, Upper & Lower Lost River, Tule Lake, Lower Klamath Lake:  
> 5.0 mg/l, minimum 8.0 mg/l, 50% lower limit (this means that 50% or more of the monthly mean values must be equal to or greater than 8.0 mg/l).  
Other Streams in Upper Lost River HA:  
> 7.0 mg/l, minimum 8.0 mg/l, 50% lower limit (this means that 50% or more of the monthly mean values must be equal to or greater than 8.0 mg/l).

*Evaluation Guideline:* Specific WQOs in the Basin Plan Table 3.1.

*Data Used to Assess Water Quality:* The TMDL Analysis was completed for Upper Lost River and Clear Lake Reservoir Watershed. The Upper Lost River/Clear Lake Reservoir area is not listed for dissolved oxygen. This parameter, however, can be impacted by excessive biomass growth related to high nutrient concentrations. Diurnal cycles of algal respiration can lead to water that is



photosynthetically supersaturated with dissolved oxygen in late afternoons and depressed in very early mornings by overnight respiration.

The most sensitive beneficial use that could be impacted by low dissolved oxygen concentrations is the ESA-listed sucker species. The amount of dissolved oxygen in water at 100% saturation is partly dependent on the altitude; the sampling stations in this analysis ranged in altitude from 4,163 to 4,921 feet above sea level. The water at this altitude can hold less dissolved oxygen, at 100% saturation, than water at lower elevations. Dissolved oxygen data at the six sampling stations consisted of instantaneous measurements at the time that grab samples were obtained and of two brief periods of continuous measurement. The Basin Plan objectives for dissolved oxygen in the Upper Lost River/Clear Lake Reservoir area are 5.0 mg/l as a minimum and 8.0 as a 50% lower limit.

There were 57 instantaneous measurements of dissolved oxygen ranging from 6.1 mg/l to 13.02 mg/l. The mean value of these measurements is 8.83 mg/l, with a median of 8.53 mg/l, and a lower 95% confidence level of 8.44 mg/l. The high value of 13.02 mg/l was obtained at the Boles Creek station in October 2002 at a time when there was no surface flow; this value was taken at 14:30 and may represent a photosynthetically supersaturated condition. Field notes state that heavy algal growth was noted in the pool upstream of the dewatered area where samples were taken. The lowest values were still above the minimum required by the Basin Plan. The lowest value, 6.1 mg/l was obtained at 17:30 in June 2003 at Walter Flat. The next lowest value, 6.55 mg/l was obtained at 08:30 in August 2001 at the station just downstream of Clear Lake Reservoir dam.

Continuous dissolved oxygen measurements using a YSI Datasonde 6600 that measured dissolved oxygen, pH, specific conductivity, and water temperature at 15-minute increments were made in the Upper Lost River at Walter Flat from September 30 to October 2, 2002. The data show a diurnal variation with a low of 9.59 mg/l and a high of 12.11 mg/l. The mean is 10.47 mg/l, the median is 10.34 mg/l, and the 95% lower confidence level is 10.38 mg/l. A Datasonde also was deployed at this station from June 9 through June 11, 2003. Again, a diurnal cycle is seen. The data from this sampling episode show warmer temperatures and lower dissolved oxygen concentrations, ranging from a low of 5.42 mg/l to a high of 6.32 mg/l. The mean of the measurements is 5.87 mg/l, the median is 5.85 mg/l, and the lower 95% confidence interval is 5.82 mg/l.

Similarly, continuous dissolved oxygen measurements using a YSI Datasonde 6600 that measured dissolved oxygen, pH, specific conductivity, and water temperature at 15-minute increments were made in the Willow Creek sampling station from September 30 to October 2, 2002. The data show variation with a low of 10.03 mg/l and a high of 13.74 mg/l. The mean is 12.03 mg/l, the median is 12.11 mg/l, and the 95% lower confidence level is 11.89 mg/l. A Datasonde also was deployed at this station from June 10 through June 12, 2003. Again, a diurnal cycle is seen. The data from this sampling episode show warmer temperatures and lower dissolved oxygen concentrations, ranging from a low of 3.61 mg/l to a high of 12.1 mg/l. The mean of the measurements is 7.09 mg/l, the median is 6.69 mg/l, and the lower 95% confidence interval is 6.69 mg/l (North Coast RWQCB, 2004d).

<i>Spatial Representation:</i>	<p>The monitoring locations for the Upper Lost River/Clear Lake Reservoir area are:</p> <ol style="list-style-type: none"> <li>1. Lost River below Clear Lake Reservoir dam, LRCLDM.</li> <li>2. Lost River at Walter Flat, WFLAT.</li> <li>3. Mowitz Creek just downstream of the 136 bridge, MOWCRK.</li> <li>4. Boles Creek just upstream of the 136 ford, BCFORD.</li> <li>5. No. Fork Willow Creek below the Great Society Bridge, WCGSB.</li> <li>6. Fletcher Creek just upstream of the 73 ford, FCFORD.</li> </ol> <p>Two stations are on the Upper Lost River mainstem, one is downstream of the dam and the other at Walter Flat. Station LRCLDM is at a point about 1,000 meters downstream of Clear Lake Reservoir dam. Station WFLAT is at a point about 10 meters downstream of the Walter Flat Bridge, about eight miles downstream of the dam. In addition to the two stations on the Upper Lost River, there were four monitoring locations in streams that lead to Clear Lake Reservoir, the source of the Lost River. One station was on North Fork Willow Creek, the main tributary to Clear Lake Reservoir and the primary spawning stream for the endangered Lost River and shortnose suckers. Two other sites, on Boles and Fletcher Creeks, drain into Willow Creek. The fourth site, on Mowitz Creek, drains directly into Clear Lake Reservoir but does not contribute much water to the reservoir. This site was added late in the investigation because of the opportunity to add to a sparse dataset. All of the sites, except the station below the dam, were accessible only during late spring to early fall because wet weather made the roads impassable. Sampling locations were limited to areas that could be reached by truck. Logistical issues precluded sampling in Clear Lake Reservoir.</p>
<i>Temporal Representation:</i>	<p>Data from August 2001 through June 2003 at different stations. Continuous dissolved oxygen measurements using a YSI Datasonde 6600 that measured dissolved oxygen, pH, specific conductivity, and water temperature at 15-minute increments were made in the Upper Lost River at Walter Flat, Willow Creek Sampling Station, from September 30 to October 2, 2002. A Datasonde also was deployed at Upper Lost River at Walter Flat station from June 9 through June 11, 2003. Measurements taken at Boles Creek station in October 2002 at a time when there was no surface flow. Measurements taken at August 2001 at the station just downstream of Clear Lake Reservoir dam.</p>
<i>Environmental Conditions:</i>	<p>There are no point source waste discharges within the watershed. The land use operations that may impact the Upper Lost River watershed as nonpoint sources of water pollution are livestock operations (grazing) and timber harvest.</p>
<i>Data Quality Assessment:</i>	<p>NCRQWQCB QA procedures followed for the TMDL analysis.</p>
<hr/>	
<i>Numeric Line of Evidence</i>	<p>Pollutant-Water</p>
<i>Beneficial Use:</i>	<p>WA - Warm Freshwater Habitat</p>

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	The WQO for Biostimulatory substances includes Phosphorus. The USEPA phosphorus 0.05-mg/l level suggested by the USEPA to control eutrophication in streams that enter lakes (USEPA 1986).
<i>Data Used to Assess Water Quality:</i>	<p>The TMDL Analysis was completed for Upper Lost River and Clear Lake Reservoir Watershed. Total phosphorus was measured from monthly grab samples at the six sampling stations, for a total of 57 samples. The total phosphorus levels showed variability ranging from below the analytical reporting level to 4.5 mg/l. Of the 57 samples, 26 were below the analytical reporting limit; since phosphorus was present in the system these concentrations were assumed to be half of the reporting limit for statistical analyses. The high measurement, 4.5 mg/l, was from a sample taken in May 2002 at Fletcher Creek. The median of all of the total phosphorus results was 0.068 mg/l, and the 95% upper confidence limit is 0.35 mg/l, a level influenced by the abnormally high concentration at Fletcher Creek in May 2002.</p> <p>The two stations on the Upper Lost River (WFLAT and LRCLDM) were analyzed separately from the four upstream stations on streams that drain to Clear Lake Reservoir (MOWCRK, BCFORD, WCGSB, and FCFORD). The 28 data points for the two Upper Lost River stations showed total phosphorus concentrations ranging from below the laboratory reporting limit to 0.37 mg/l, with a median of 0.20 mg/l, and a 95% upper confidence level of 0.23 mg/l (including four nondetects assumed to be half of the reporting limit). The 29 points from the four stations on streams leading to Clear Lake Reservoir showed total phosphorus concentrations ranging from below the laboratory-reporting limit to 4.5 mg/l, with a median of 0.025 mg/l (this is half of the laboratory reporting limit), and a 95% upper confidence level of 0.51 mg/l. Although most of the data points in this dataset are nondetects (22 nondetects out of 29 data points), for the complete dataset analysis, they were assumed to be half of the reporting limit. Total phosphorus levels were higher in the two downstream stations than in the stream stations upstream of Clear Lake Reservoir.</p> <p>Median total phosphorus concentrations in the two Upper Lost River stations were above the 0.05-mg/l level suggested by the USEPA to control eutrophication in streams that enter lakes (USEPA 1986). Soil particles from discharged water from Clear Lake Reservoir may transport soil-organic-matter phosphorus and inorganic-soil/rock phosphorus to the Upper Lost River. The levels do not appear to present a eutrophication problem in the Upper Lost River or in Clear Lake Reservoir, probably because the high turbidity reduces sunlight penetration. The USBR (2000) indicated that there has been extensive siltation of Clear Lake Reservoir. Although, phosphorus levels are elevated in comparison to USEPA suggested levels, these suggested levels are not relevant because there is no evidence of excessive algal growth in the reservoir (perhaps due to</p>

turbidity levels that control light availability) and the system appears to be nitrogen limited.

In the 57 observations in this dataset, the ratio between total nitrogen and total phosphorus ranged from 0 to 74. The value of R-Squared, the proportion of variation in total nitrogen that can be accounted for by variation in total phosphorus, is 0.0001; the correlation between total nitrogen and total phosphorus is -0.0097. There is no correlation between the values. These values are slightly different if the nitrogen nondetect values were reported as zero rather than half of the reporting limit. If the data sets with nondetects and the outlier are removed, there are 21 data points available for analysis of the nitrogen/phosphorus ratio. The N/P ratio for these points is shown in the third graph. A line showing an N/P of 10 is drawn for reference. Of the 21 data points, 18 have an N/P ratio of less than 10 this indicates a system that is nitrogen limited (North Coast RWQCB, 2004d).

*Spatial Representation:*

The monitoring locations for the Upper Lost River/Clear Lake Reservoir area are shown in Map 2 and are listed below with their station designations:

1. Lost River below Clear Lake Reservoir dam, LRCLDM.
2. Lost River at Walter Flat, WFLAT.
3. Mowitz Creek just downstream of the 136 bridge, MOWCRK.
4. Boles Creek just upstream of the 136 ford, BCFORD.
5. No. Fork Willow Creek below the Great Society Bridge, WCGSB.
6. Fletcher Creek just upstream of the 73 ford, FCFORD.

Two stations are on the Upper Lost River mainstem, one is downstream of the dam and the other at Walter Flat. Station LRCLDM is at a point about 1,000 meters downstream of Clear Lake Reservoir dam. Station WFLAT is at a point about 10 meters downstream of the Walter Flat Bridge, about eight miles downstream of the dam. In addition to the two stations on the Upper Lost River, there were four monitoring locations in streams that lead to Clear Lake Reservoir, the source of the Lost River. One station was on North Fork Willow Creek, the main tributary to Clear Lake Reservoir and the primary spawning stream for the endangered Lost River and shortnose suckers. Two other sites, on Boles and Fletcher Creeks, drain into Willow Creek. The fourth site, on Mowitz Creek, drains directly into Clear Lake Reservoir but does not contribute much water to the reservoir. This site was added late in the investigation because of the opportunity to add to a sparse dataset. All of the sites, except the station below the dam, were accessible only during late spring to early fall because wet weather made the roads impassable. Sampling locations were limited to areas that could be reached by truck. Logistical issues precluded sampling in Clear Lake Reservoir.

*Temporal Representation:*

Sampling represents only one full season, late spring to early fall of one year. Sampling included monthly grab samples and instantaneous measurements for one season, continuous temperature monitoring for one season, and two short continuous multiparameter deployments. The sampling periods do not correspond to the time periods that the suckers are in the streams. There were limited spots at which the streams could be accessed; these might not correspond to the points that provide representative data. Drawing conclusions about the impact of water

temperature and nutrients on suckers based on sampling during summer is justified, because those months represent the conditions worse than the fish encounter during their time in the streams. Water temperature in the Upper Lost River/Clear Lake Reservoir watershed was investigated using: Remote continuous water and air temperature monitors (Optic stowaway dataloggers) that took readings every 15 minutes from May through September 2002. Remote sensors that measured air temperature (Optic stowaway dataloggers) and relative humidity (HOBO instruments) every 15 minutes for three days in June 2003. Solar pathfinder measurements to calculate solar radiation that reached stream surfaces. A thermal infrared aerial survey in July 2001 and computer simulation modeling using the SSTEMP model. The monitoring instrument at the Boles Creek station was out of the water during that period due to seasonal dewatering and the sampling at Mowitz Creek did not begin until the following month.

*Environmental Conditions:* There are no point source waste discharges within the watershed. The land use operations that may impact the Upper Lost River watershed as nonpoint sources of water pollution are livestock operations (grazing) and timber harvest.

*Data Quality Assessment:* NCRWQCB QA Procedures followed for the TMDL analysis.

*Line of Evidence* Pollutant-Water

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* The Upper Lost River/Clear Lake Reservoir area is listed for nutrients and temperature in accordance with Section 303(d) of the federal Clean Water Act (CWA). The listing of the Upper Lost River/Clear Lake Reservoir watershed as impaired because of biostimulatory substances (nutrients) and high water temperature was made in 1996. In accordance with a consent decree, January 2005 is the deadline for adoption or de-listing of the TMDL's for the Upper Lost River/Clear Lake Reservoir area by the State of California. Investigation into the basis of the listings revealed that the listings were apparently conferred from the Klamath River listings and not based on data or information specific to the Upper Lost River and Clear Lake Reservoir watershed. The appropriateness of the nutrients and temperature listings in the Upper Lost River is explored in the TMDL analysis. If the listings had been confirmed a TMDL would have been developed, however, the listings were not confirmed and de-listing for the watershed (including Clear Lake Reservoir, the streams draining to Clear Lake Reservoir and the Upper Lost River between the Clear Lake Reservoir dam and the Oregon border) is recommended by the NCRWQCB staff.

*Non-Numeric Objective:* Basin Plan: Water shall not contain bio-stimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* The WQO for Bio-stimulatory Substances is inclusive of nutrients for the

NCRWQCB.

*Data Used to Assess Water Quality:*

Measurement of nutrient species was planned because the Lost River is listed on the State 303(d) list for nutrients and this information is needed for system description. Ammonia, total Kjeldahl nitrogen (TKN), nitrate and nitrite were analytically determined. Total nitrogen was calculated from TKN, nitrate and nitrite. Total phosphorus and ortho-phosphate were analytically determined. The reasons for the recommendation to de-list the watershed include:

There is no evidence that the biostimulatory narrative objective is exceeded. The system appears to be nitrogen limited and nitrogen levels are far below levels expected to cause biostimulation in this system. Although, phosphorus levels are elevated in comparison to U.S. EPA suggested levels, these suggested levels are not relevant because there is no evidence of excessive algal growth in the reservoir (perhaps due to turbidity levels that control light availability) and the system appears to be nitrogen limited. Dissolved oxygen levels are above the existing numeric water quality objectives. The nitrogen levels are below the concentration of concern for human health. There is no evidence of impacts from nutrients, dissolved oxygen, or other nutrient related effects on the sensitive species of concern. The beneficial uses appear to be unaffected by water temperature. The natural range of water temperatures and nutrient concentrations above Clear Lake Reservoir do not appear to be affected by anthropogenic activities (North Coast RWQCB, 2004d)

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*Line of Evidence*

Pollutant-Water

*Beneficial Use*

MU - Municipal & Domestic, WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:*

The Upper Lost River/Clear Lake Reservoir area is listed as impaired for nutrients and temperature in accordance with Section 303(d) of the federal Clean Water Act (CWA). The listing of the Upper Lost River/Clear Lake Reservoir watershed as impaired because of biostimulatory substances (nutrients) and high water temperature was made in 1996. In accordance with a consent decree, January 2005 is the deadline for adoption or de-listing of the TMDLs for the Upper Lost River/Clear Lake Reservoir area by the State of California. Investigation into the basis of the listings revealed that the listings were apparently conferred from the Klamath River listings and not based on data or information specific to the Upper Lost River and Clear Lake Reservoir watershed. The appropriateness of the nutrients and temperature listings in the Upper Lost River is explored in the TMDL analysis. If the listings had been confirmed a TMDL would have been developed, however, the listings were not confirmed and de-listing for the watershed (including Clear Lake Reservoir, the streams draining to Clear Lake Reservoir and the Upper Lost River between the Clear Lake Reservoir dam and the Oregon border) is recommended by the NCRWQCB staff.

*Non-Numeric Objective:*

Basin Plan: Water shall not contain bio-stimulatory substances in

concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:*

The WQO for Bio-stimulatory Substances is inclusive of nutrients.

*Data Used to Assess Water Quality:*

Measurement of nutrient species was planned because the Lost River is listed on the State 303(d) list for nutrients and this information is needed for system description. Ammonia, total Kjeldahl nitrogen (TKN), nitrate and nitrite were analytically determined. Total nitrogen was calculated from TKN, nitrate and nitrite. Total phosphorus and ortho-phosphate were analytically determined. The reasons for the recommendation to de-list the watershed include:

There is no evidence that the biostimulatory narrative objective is exceeded. The system appears to be nitrogen limited and nitrogen levels are far below levels expected to cause biostimulation in this system. Although, phosphorus levels are elevated in comparison to U.S. EPA suggested levels, these suggested levels are not relevant because there is no evidence of excessive algal growth in the reservoir and the system appears to be nitrogen limited. Dissolved oxygen levels are above the existing numeric water quality objectives. The nitrogen levels are below the concentration of concern for human health. There is no evidence of impacts from nutrients, dissolved oxygen, or other nutrient related effects on the sensitive species of concern. The beneficial uses appear to be unaffected by water temperature. The natural range of water temperatures and nutrient concentrations above Clear Lake Reservoir do not appear to be affected by anthropogenic activities. The temperatures below Clear Lake Reservoir are affected by anthropogenic activities (i.e., the dam and water flow fluctuations) but these activities are not addressed by a TMDL (North Coast RWQCB, 2004d)

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*Line of Evidence*

Pollutant-Water

*Beneficial Use*

WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:*

The Upper Lost River/Clear Lake Reservoir area is listed as impaired for nutrients and temperature in accordance with Section 303(d) of the federal Clean Water Act (CWA). The listing of the Upper Lost River/Clear Lake Reservoir watershed as impaired because of biostimulatory substances (nutrients) and high water temperature was made in 1996. In accordance with a consent decree, January 2005 is the deadline for adoption or de-listing of the TMDLs for the Upper Lost River/Clear Lake Reservoir area by the State of California. Investigation into the basis of the listings revealed that the listings were apparently conferred from the Klamath River listings and not based on data or information specific to the Upper Lost River and Clear Lake Reservoir watershed. The appropriateness of the nutrients and temperature listings in the Upper Lost River is explored in the TMDL analysis. If the listings had been confirmed a TMDL would have been developed, however, the listings were not confirmed and de-listing for the watershed (including Clear Lake Reservoir, the streams

draining to Clear Lake Reservoir and the Upper Lost River between the Clear Lake Reservoir dam and the Oregon border) is recommended by NCWRQCB staff.

*Non-Numeric Objective:* Basin Plan: Table 3.1, Specific Water Quality Objectives for North Coast Region Clear Lake, Upper & Lower Lost River, Tule Lake, Lower Klamath Lake:  
> 5.0 mg/l, minimum 8.0 mg/l, 50% lower limit (this means that 50% or more of the monthly mean values must be equal to or greater than 8.0 mg/l).  
Other Streams in Upper Lost River HA:  
> 7.0 mg/l, minimum 8.0 mg/l, 50% lower limit (this means that 50% or more of the monthly mean values must be equal to or greater than 8.0 mg/l).

*Data Used to Assess Water Quality:* Dissolved oxygen levels are above the existing numeric water quality objectives. There is no evidence of impacts from nutrients, dissolved oxygen, or other nutrient related effects on the sensitive species of concern. The beneficial uses appear to be unaffected by water temperature. The natural range of water temperatures and nutrient concentrations above Clear Lake Reservoir do not appear to be affected by anthropogenic activities. There is no evidence that the biostimulatory narrative objective is exceeded. The system appears to be nitrogen limited and nitrogen levels are far below levels expected to cause biostimulation in this system. Although, phosphorus levels are elevated in comparison to U.S. EPA suggested levels, these suggested levels are not relevant because there is no evidence of excessive algal growth in the reservoir and the system appears to be nitrogen limited.

*Spatial Representation:* Continuous dissolved oxygen measurements made in the Upper Lost River at Walter Flat from September 30 to October 2, 2002.

*Temporal Representation:* Continuous dissolved oxygen measurements using a YSI Datasonde 6600 that measured dissolved oxygen in 15-minute increments were made in the Upper Lost River at Walter Flat from September 30 to October 2, 2002.

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*Line of Evidence* Pollutant-Water

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* The Upper Lost River/Clear Lake Reservoir area is listed for nutrients and temperature in accordance with Section 303(d) of the federal Clean Water Act (CWA). The listing of the Upper Lost River/Clear Lake Reservoir watershed as impaired because of biostimulatory substances (nutrients) and high water temperature was made in 1996. In accordance with a consent decree, January 2005 is the deadline for adoption or de-listing of the TMDLs for the Upper Lost River/Clear Lake Reservoir area by the State of California. Investigation into the basis of the listings revealed that the listings were apparently conferred from the Klamath River listings and not based on data or information specific to the Upper Lost River and



Clear Lake Reservoir watershed. The appropriateness of the nutrients and temperature listings in the Upper Lost River is explored in the TMDL analysis. If the listings had been confirmed a TMDL would have been developed, however, the listings were not confirmed and de-listing for the watershed (including Clear Lake Reservoir, the streams draining to Clear Lake Reservoir and the Upper Lost River between the Clear Lake Reservoir dam and the Oregon border) is recommended by the NCRWQCB staff.

*Non-Numeric Objective:*

Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:*

The WQO for Biostimulatory Substances is inclusive of nutrients.

*Data Used to Assess Water Quality:*

Measurement of nutrient species was planned because the Lost River is listed on the State 303(d) list for nutrients and this information is needed for system description. Ammonia, total Kjeldahl nitrogen (TKN), nitrate and nitrite were analytically determined. Total nitrogen was calculated from TKN, nitrate and nitrite. Total phosphorus and ortho-phosphate were analytically determined. The reasons for the recommendation to de-list the watershed include:

There is no evidence that the biostimulatory narrative objective is exceeded. The system appears to be nitrogen limited and nitrogen levels are far below levels expected to cause biostimulation in this system. Although, phosphorus levels are elevated in comparison to U.S. EPA suggested levels, these suggested levels are not relevant because there is no evidence of excessive algal growth in the reservoir (perhaps due to turbidity levels that control light availability) and the system appears to be nitrogen limited. Dissolved oxygen levels are above the existing numeric water quality objectives. The nitrogen levels are below the concentration of concern for human health. There is no evidence of impacts from nutrients, dissolved oxygen, or other nutrient related effects on the sensitive species of concern. The beneficial uses appear to be unaffected by water temperature. The natural range of water temperatures and nutrient concentrations above Clear Lake Reservoir do not appear to be affected by anthropogenic activities. The temperatures below Clear Lake Reservoir are affected by anthropogenic activities (i.e., the dam and water flow fluctuations) but these activities are not addressed by a TMDL (North Coast RWQCB, 2004d).

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## Region 1

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**Water Segment:** Klamath River HU, Lost River HA, Clear Lake, Boles HSAs

**Pollutant:** Temperature, water

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 4.2 of the Listing Policy. Under section 4.2 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess temperature consistent with Listing Policy section 6.1.5.9. None of the MWAT values exceeded evaluation guidelines selected to interpret 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 removing this water segment-pollutant combination from the section 303(d) list. The water temperature of the watershed supports the most sensitive beneficial use, the endangered sucker species.

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 remote continuous water and air temperature monitors that took readings every 15 minutes from May through September 2002. Of the estimated 3,000 MWATs calculated (Temperature measurements from 4 stations taken over a 5 month period considered together), none of the MWATs exceeded the water quality objective and this does not exceed the allowable frequency listed in Table 4.2 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 removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded

**Lines of Evidence:**

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	<p>Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan).</p> <p>Lost River:</p> <ol style="list-style-type: none"> <li>1. Cold Interstate Waters: A. Elevated temperature waste discharges into cold interstate waters are prohibited.</li> <li>2. Warm Interstate Waters: A. Thermal waste discharges having a maximum temperature greater than 5°F above natural receiving water temperature are prohibited. B. Elevated temperature wastes shall not cause the temperature of warm interstate waters to increase by more than 5°F above natural temperature at any time or place. D. Lost River, Elevated temperature wastes discharged to the Lost River shall not cause the temperature of the receiving water to increase by more than 2°F when the receiving water temperature is less than 62°F, and 0°F when the receiving water temperature exceeds 62°F.</li> </ol>
<i>Evaluation Guideline:</i>	<p>The maximum weekly average temperatures (MWATs) were used from the water body to determine if the Objective was being exceeded. The Lost River Suckers and Shortnose Suckers species are listed under the Endangered Species Act and they are found in the study area. The Critical Thermal Maxima for Shortnose suckers is between the range of 32.1 to 33.3 °C (Castleberry and Cech 1993). The 96-Hour Mean Lethal Concentration (LC50) for Lost River Suckers (LRS) is 31.2 °C for juveniles (with a 95% Confidence Interval range of 30.8 to 31.5 °C for juveniles) and for the Shortnose Suckers (SNS) it is 31.9°C for larva and 31.2 °C for juveniles (with a 95% Confidence Interval range of 30.8 to 31.6 °C for juveniles), (Bellerud and Saiki 1995), (page 34, TMDL).</p>
<i>Data Used to Assess Water Quality:</i>	<p>The TMDL Analysis was completed for Upper Lost River and Clear Lake Reservoir Watershed. The most sensitive beneficial uses of Clear Lake most likely relate to the protection of the endangered sucker species. The sensitivity analysis using SSTEMP showed that daily average water temperature at the sampling stations in the streams that drain to Clear Lake Reservoir is most sensitive to influence by air temperature, solar radiation, and relative humidity. In the two Upper Lost River stations downstream of Clear Lake Reservoir, water temperature is most sensitive to inflow temperature, that is, the temperature of the water released from the Clear Lake Reservoir. The warmest stream temperatures during the data collection period were found during the week of July 15, 2002. The maximum weekly average temperatures (MWAT) at the sampling stations for that week were: WFLAT, 27.40°C; LRCLDM, 26.64°C; WCGSB, 27.63°C; FCFORD, 22.75°C. These MWATs are well below the Critical Thermal Maxima for Shortnose Suckers (32.1 to 33.3 °C) and also well below the 96-Hour Mean Lethal Concentration for both Long River Suckers and Short Nose Suckers juveniles at 31.2 °C. The water temperature of the watershed supports the most sensitive beneficial use,</p>

the endangered sucker species (North Coast RWQCB, 2004d)

*Spatial Representation:*

The monitoring locations for the Upper Lost River/Clear Lake Reservoir area are shown in Map 2 and are listed below with their station designations:

1. Lost River below Clear Lake Reservoir dam, LRCLDM.
2. Lost River at Walter Flat, WFLAT.
3. Mowitz Creek just downstream of the 136 bridge, MOWCRK.
4. Boles Creek just upstream of the 136 ford, BCFORD.
5. No. Fork Willow Creek below the Great Society Bridge, WCGSB.
6. Fletcher Creek just upstream of the 73 ford, FCFORD.

Two stations are on the Upper Lost River mainstem; one is downstream of the dam and the other at Walter Flat. Station LRCLDM is at a point about 1,000 meters downstream of Clear Lake Reservoir dam. Station WFLAT is at a point about 10 meters downstream of the Walter Flat Bridge, about eight miles downstream of the dam. In addition to the two stations on the Upper Lost River, there were four monitoring locations in streams that lead to Clear Lake Reservoir, the source of the Lost River. One station was on North Fork Willow Creek, the main tributary to Clear Lake Reservoir and the primary spawning stream for the endangered Lost River and Shortnose suckers. Two other sites, on Boles and Fletcher Creeks, drain into Willow Creek. The fourth site, on Mowitz Creek, drains directly into Clear Lake Reservoir but does not contribute much water to the reservoir. This site was added late in the investigation because of the opportunity to add to a sparse dataset. All of the sites, except the station below the dam, were accessible only during late spring to early fall because wet weather made the roads impassable. Sampling locations were limited to areas that could be reached by truck. Logistical issues precluded sampling in Clear Lake Reservoir.

*Temporal Representation:*

Sampling represents only one full season late spring to early fall. Sampling included monthly grab samples and instantaneous measurements for one season, continuous temperature monitoring for one season, and two short continuous multiparameter deployments. The sampling periods do not correspond to the time periods that the suckers are in the streams. There were limited spots at which the streams could be accessed; these might not correspond to the points that provide representative data. Drawing conclusions about the impact of water temperature and nutrients on suckers based on sampling during summer, however, is justified because those months represent the conditions worse than the fish encounter during their time in the streams. Water temperature in the Upper Lost River/Clear Lake Reservoir watershed was investigated using: Remote continuous water and air temperature monitors (Optic stowaway data loggers) that took readings every 15 minutes from May through September 2002. Remote sensors that measured air temperature (Optic stowaway data loggers) and relative humidity (HOBO instruments) every 15 minutes for three days in June 2003. Solar pathfinder measurements to calculate solar radiation that reached stream surfaces. A thermal infrared aerial survey in July 2001 and computer simulation modeling using the SSTEMP model. The monitoring instrument at the Boles Creek station was out of the water during that period due to seasonal dewatering and the sampling at Mowitz Creek did not begin until the following month.

*Environmental Conditions:* There are no point source waste discharges within the watershed. The land use operations that may impact the Upper Lost River watershed as nonpoint sources of water pollution are livestock operations (grazing) and timber harvest.

*Data Quality Assessment:* NCRWQCB QA Procedures followed in the TMDL analysis.

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*Line of Evidence* Pollutant-Water

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* The Upper Lost River/Clear Lake Reservoir area is listed for nutrients and temperature in accordance with Section 303(d) of the federal Clean Water Act (CWA). The listing of the Upper Lost River/Clear Lake Reservoir watershed as impaired because of bio-stimulatory substances (nutrients) and high water temperature was made in 1996. In accordance with a consent decree, January 2005 is the deadline for adoption or de-listing of the TMDL's for the Upper Lost River/Clear Lake Reservoir area by the State of California. Investigation into the basis of the listings revealed that the listings were apparently conferred from the Klamath River listings and not based on data or information specific to the Upper Lost River and Clear Lake Reservoir watershed. The appropriateness of the nutrients and temperature listings in the Upper Lost River is explored in the TMDL analysis. If the listings had been confirmed a TMDL would have been developed, however, the listings were not confirmed and de-listing for the watershed (including Clear Lake Reservoir, the streams draining to Clear Lake Reservoir and the Upper Lost River between the Clear Lake Reservoir dam and the Oregon border) is recommended by NCRWQCB staff.

*Non-Numeric Objective:* Basin Plan: 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. At no time or place shall the temperature of any COLD water be increased by more than 5°F above natural receiving water temperature. At no time or place shall the temperature of WARM intrastate waters be increased more than 5°F above natural receiving water temperature.

*Evaluation Guideline:* The data collection effort associated with this analysis consisted of three components: collection and review of existing data, water quality grab samples (and associated instantaneous field measurements), and the short-term use of continuous monitoring devices. Neither visual observations nor water quality sampling indicated impairment due to excess nutrients, although the turbidity levels in the reservoir and in the Upper Lost River probably suppress primary production. The high level of turbidity noted in the Upper Lost River is of concern, but was not the subject of this analysis.

*Data Used to Assess Water* Species listed under the federal Endangered Species Act are found in the

*Quality:*

study area, Lost River Suckers and Shortnose Suckers are classified as endangered species. The most sensitive beneficial uses most likely relate to the protection of the endangered sucker species. These fish can tolerate poor water quality such as low dissolved oxygen, high water temperature, and elevated pH levels, but the fish may not thrive at long-term, continual poor conditions resulting from habitat fragmentation, hydrologic regime alterations, and water diversion. Clear Lake Reservoir appears to possess a healthy population of Lost River and Shortnose suckers compared to other populations in the Klamath and Lost River Basin. The water quality and habitat conditions in the reservoir and its tributaries are better than elsewhere in the Klamath River and Lost River basins. Although the North Coast Regional Water Quality Control Board Water Quality Control Plan (Basin Plan) lists a cold-water fishery beneficial use for the study area, the current or historical presence of cold-water fish could not be confirmed. Computer simulation modeling suggests that decreasing solar radiation by increasing shade over the streams that drain into Clear Lake Reservoir could decrease water temperatures. The potential for increasing the shade due to riparian vegetation, however, is unlikely in all of these streams except for Willow Creek because of the inability of the soils to support increased vegetative growth. The Upper Lost River is more sensitive to the water temperature of the water released from Clear Lake Reservoir than to solar radiation. Even at current shade levels, the water temperature in the watershed supports the most sensitive beneficial use, the endangered sucker species. The relative health of the Clear Lake Reservoir Shortnose and Lost River sucker population is notable. Given the significance of the Clear Lake Reservoir watershed to preserving the Lost River and Shortnose sucker populations, it is necessary to preserve the aquatic habitat from any harmful effects related to land use activities. Willow Creek and its tributaries (primarily Boles Creek) are the only spawning sites for the sucker populations; it is especially important to protect valuable properly functioning riparian conditions in this stream. Regional Water Board staff has seen no information showing that the natural range of water temperature or nutrient concentrations in the streams draining into Clear Lake Reservoir are outside of the natural range for that environment due to anthropogenic causes (North Coast RWQCB, 2004d).

*Spatial Representation:*

There are six monitoring locations total. Two stations are on the Upper Lost River mainstem, one is downstream of the dam and the other at Walter Flat. Station LRCLDM is at a point about 1,000 meters downstream of Clear Lake Reservoir dam. Station WFLAT is at a point about 10 meters downstream of the Walter Flat Bridge, about eight miles downstream of the dam. In addition to the two stations on the Upper Lost River, there were four monitoring locations in streams that lead to Clear Lake Reservoir, the source of the Lost River. One station was on North Fork Willow Creek, the main tributary to Clear Lake Reservoir and the primary spawning stream for the endangered Lost River and Shortnose suckers. Two other sites, on Boles and Fletcher Creeks, drain into Willow Creek. The fourth site, on Mowitz Creek, drains directly into Clear Lake Reservoir but does not contribute much water to the reservoir. This site was added late in the investigation because of the opportunity to add to a sparse dataset. Logistical issues precluded sampling in Clear Lake Reservoir.

*Temporal Representation:*

Water temperature in the Upper Lost River/Clear Lake Reservoir watershed was investigated using: Remote continuous water and air temperature monitors (Optic stowaway data loggers) that took readings every 15 minutes from May through September 2002. Remote sensors that measured air temperature (Optic stowaway dataloggers) and relative humidity (HOBO instruments) every 15 minutes for three days in June 2003. Solar pathfinder measurements to calculate solar radiation that reached stream surfaces. A thermal infrared aerial survey in July 2001 and computer simulation modeling using the SSTEMP model. All of the sites, except the station below the dam, were accessible only during late spring to early fall because wet weather made the roads impassable. Sampling locations were limited to areas that could be reached by truck.

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## Region 1

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**Water Segment:** Klamath River HU, Salmon River HA

**Pollutant:** Nutrients

**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 this section a single line of evidence is necessary to assess listing status.

There are nine lines of evidence that are available in the administrative record to assess the existing nutrients listing. The Salmon River was added to the 303(d) List for nutrients in 1992. Regional Board staff conducted a water quality monitoring effort to evaluate the impact of nutrients in the Salmon River watershed. Based on these eight lines of evidence that there is no indication that nutrients are impacting the Salmon River HA. NCRWQCB staff recommends that the Salmon River be delisted for nutrients.

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 narrative nutrient information as well as the observations of attached algae indicates that nutrients are not reaching nuisance levels in the Salmon River HA. Analytical results of nutrient grab samples were generally non-detect and they did 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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	CO - Cold Freshwater Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	There is no NCRWQCB Basin Plan Water Quality Objective for TOC for Salmon River HA.
<b><i>Data Used to Assess Water Quality:</i></b>	The grab samples were analyzed for TOC in addition to pH, dissolved oxygen, temperatures and specific conductance. There were 22 TOC measurements in total. The average of the samples taken was 1.10. The range of the measurements taken between June and October 2002 was 0.9 to 1.7 (North Coast RWQCB, 2004c).
<b><i>Spatial Representation:</i></b>	There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.
<b><i>Temporal Representation:</i></b>	The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October 2002 at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.
<b><i>Data Quality Assessment:</i></b>	NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure with acceptable results.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	CO - Cold Freshwater Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	There is no NCRWQCB Basin Plan Water Quality Objective for Chlorophyll-a applicable to Salmon River HA.
<b><i>Evaluation Guideline:</i></b>	There are no applicable criteria for Chlorophyll-a that could be used for the Salmon River.
<b><i>Data Used to Assess Water</i></b>	The grab samples were analyzed for Chlorophyll-a in addition to pH,

<i>Quality:</i>	dissolved oxygen, temperatures and specific conductance. There were 55 measurements the majority of which were non detects (North Coast RWQCB, 2004c).
<i>Spatial Representation:</i>	There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.
<i>Temporal Representation:</i>	The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October 2002 at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.
<i>Data Quality Assessment:</i>	NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure with acceptable results.

<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	Phosphorus is considered in the narrative objective for bio-stimulatory substances. There are no applicable criteria for Phosphorus that could be used for the Salmon River. In 2002, SWRCB staff recommended not listing for elemental phosphorus for Laguna de Santa Rosa because there was no appropriate phosphorus objective or evaluation guideline to interpret the narrative objective that was available to the NCRWQCB.
<i>Data Used to Assess Water Quality:</i>	The grab samples were analyzed for Phosphorus in addition to pH, dissolved oxygen, temperatures and specific conductance. There were 55 measurements in total the majority of which were non detects. With all non-detect values at the Mainstem Salmon River at USGS Gage Station; All non-detects and a value of 0 on 6/10/2002 at Wooley Creek Station; With all non-detects at Mainstem Salmon River at Forks of Salmon Station; All non-detects at North Fork Salmon at Sawyers Bar Station; and all non-detect values at South Fork Salmon at Cecilville (North Coast RWQCB, 2004c).

*Spatial Representation:* There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.

*Temporal Representation:* The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October 2002 at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.

*Data Quality Assessment:* NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure with acceptable results.

*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* There is no NCRWQCB Basin Plan Water Quality Objective for Ammonia as Nitrogen applicable to Salmon River HA.

*Evaluation Guideline:* There are no applicable criteria for Ammonia as Nitrogen that applies.

*Data Used to Assess Water  
Quality:* The grab samples were analyzed for Ammonia as Nitrogen in addition to pH, dissolved oxygen, temperatures and specific conductance. There were 55 measurements in total the majority of which were non detects. With non-detect values and a value at 0.052 on 6/10/2002, and another at 0.062 on 7/23/2002 at the mainstem Salmon River at USGS Gage Station; Non-detects and a value of 0.056 on 6/10/2002 and 0.052 on 7/22/2002 at Wooley Creek Station; With all non-detects at mainstem Salmon River at Forks of Salmon Station; All non-detects at North Fork Salmon at Sawyers Bar Station; and all non-detect values at South Fork Salmon at Cecilville (North Coast RWQCB, 2004c).

*Spatial Representation:* There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.

*Temporal Representation:* The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October 2002 at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.

*Data Quality Assessment:* NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure with acceptable results.

*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* There is no NCRWQCB Basin Plan Water Quality Objective for Nitrate/Nitrite as Nitrogen applicable to Salmon River HA. There is a Municipal Beneficial Use for Salmon River HA.

*Evaluation Guideline:* With regards to the Municipal beneficial use applicable to Salmon River. The MCL Criteria for Nitrate/Nitrite as Nitrogen apply. Title 22(www.calregs.com) Table 64431-A lists the MCL--Inorganic Chemicals criteria for Nitrate/Nitrite as Nitrogen as 10.0 mg/L.

*Data Used to Assess Water  
Quality:* The grab samples were analyzed for Nitrate/Nitrite as Nitrogen in addition to pH, dissolved oxygen, temperatures and specific conductance. There were 55 measurements in total the majority of which were non detects. With all non-detect values at the Mainstem Salmon River at USGS Gage Station; All non-detects at Wooley Creek Station; With non-detects and one value of 0.15 on 6/11/02 at Mainstem Salmon River at Forks of Salmon Station; All non-detects at North Fork Salmon at Sawyers Bar Station; and non-detect values and one value at 0.058 at South Fork Salmon at Cecilville (North Coast RWQCB, 2004c).

*Spatial Representation:* There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.

*Temporal Representation:* The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October 2002 at locations in the

Salmon River watershed located immediately downstream of community centers within the watershed.

*Data Quality Assessment:* NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure with acceptable results.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* There is no NCRWQCB Basin Plan Water Quality Objective for Total Kjeldahl Nitrogen (TKN) applicable to Salmon River HA.

*Data Used to Assess Water Quality:* The grab samples were analyzed for TKN in addition to pH, dissolved oxygen, temperatures and specific conductance. There were 55 measurements in total the majority of which were non detects. With non detect values and one value of 0.7 on 7/23/02 at the Mainstem Salmon River at USGS Gage Station; All non-detects at Wooley Creek Station; With non-detects and one value of 0.6 on 7/23/02 at Mainstem Salmon River at Forks of Salmon Station; All non-detects at North Fork Salmon at Sawyers Bar Station; and non-detect values and one value at 0.8 at South Fork Salmon at Cecilville (North Coast RWQCB, 2004c).

*Spatial Representation:* There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.

*Temporal Representation:* The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impact of the nutrients in the Salmon River. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October 2002 at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.

*Data Quality Assessment:* NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure with acceptable results.

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***Numeric Line of Evidence*** Pollutant-Nuisance

<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	-N/A
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Water shall not contain bio-stimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	The rationale for conducting the survey was to evaluate the "nuisance" growths of aquatic plants, in relation to the narrative objective for bio-stimulatory substances in the Basin Plan.
<i>Data Used to Assess Water Quality:</i>	In all but a few cases, all nutrient parameters were non detect. Based on the available data, there is no indication that nutrients are impairing the Salmon river watershed. Analytical results of nutrient grab samples were generally non-detect. Observations of attached algae, presence of which represents a primary biological response to nutrient concentrations in streams, indicate that aquatic plants do not reach nuisance levels (North Coast RWQCB, 2004c).
<i>Spatial Representation:</i>	There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.
<i>Temporal Representation:</i>	The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.
<i>Data Quality Assessment:</i>	NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Nuisance
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: The pH shall conform to those limits listed in Table 3-1. For waters not listed in Table 3-1 and where pH objectives are not prescribed, the pH shall not be depressed below 6.5 nor raised above 8.5. Changes in

normal ambient pH levels shall not exceed 0.2 units in waters with designated marine (MAR) or saline (SAL) beneficial uses nor 0.5 units within the range specified above in fresh waters with designated COLD or WARM beneficial uses.

<i>Evaluation Guideline:</i>	Table 3-1 in the NCRWQCB Basin Plan lists the Salmon River HA (All streams) WQO for pH as a minimum at 7.0 and the maximum at 8.5.
<i>Data Used to Assess Water Quality:</i>	The grab samples were analyzed for pH in addition to dissolved oxygen, temperatures and specific conductance. They were measured using an YSI 600XL Datasonde when grab samples were collected. There were 25 pH measurements in total with an average pH of 7.55. The WQO for Salmon River is attained by all samples except for one measurement taken on 6/11/02 that was below the 7.0 WQO at 6.97 (North Coast RWQCB, 2004c).
<i>Spatial Representation:</i>	There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.
<i>Temporal Representation:</i>	The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October 2002 at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.
<i>Data Quality Assessment:</i>	NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure with acceptable results.

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<b><i>Line of Evidence</i></b>	Pollutant-Nuisance
<b><i>Beneficial Use</i></b>	CO - Cold Freshwater Habitat
<b><i>Information Used to Assess Water Quality:</i></b>	The Salmon River, tributary to the Klamath River in Siskiyou County, was included in a nutrient impaired listing of Hydrologic Unit 105.00 (Klamath River Basin) pursuant to the requirements of CWA 303(d). The Klamath River mainstem is the subject of separate analysis and TMDL development for impairments, of which nutrients is one.
<b><i>Non-Numeric Objective:</i></b>	Basin Plan: Water shall not contain bio-stimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

<i>Evaluation Guideline:</i>	The rationale for conducting the survey was to evaluate the "nuisance" growths of aquatic plants, in relation to the narrative objective for bio-stimulatory substances in the Basin Plan.
<i>Data Used to Assess Water Quality:</i>	In all but a few cases, all nutrient parameters were non detect. There is no indication that the Salmon River Watershed is impaired by nutrients. Observations of attached algae indicate that aquatic plants do not reach nuisance levels. Quasi-Quantitative surveys of the percent cover of attached algae in the river at the monitoring location were conducted in July and August 2002. The surveys involved making visual assessments of the percent cover of attached algae and the conditions of the algal community within the immediate vicinity of the monitoring locations (North Coast RWQCB, 2004c).
<i>Spatial Representation:</i>	There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.
<i>Temporal Representation:</i>	The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.

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## Region 1

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**Water Segment:** Russian River HU, Lower Russian River HA, Guerneville HSA

**Pollutant:** Turbidity

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 4.2 of the Listing Policy. Under section 4.2 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. None of the samples out of 27 samples collected for Pocket Canyon Creek a tributary of the Russian River HU exceeded the 25 NTU turbidity evaluation guideline used to interpret the water quality objective. Only the Pocket Canyon Creek portion that was sampled for the Guerneville HSA should be removed from the list. The other lines of evidence collected from Dutch Bill Creek, Lancel Creek, and Jenner Creek did not have enough samples to be considered for a delisting in the Guerneville HSA. These segments should remain listed on the 303(d) List as they are currently listed for sedimentation for this water segment.

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 for Pocket Canyon Creek portion of this HSA only, 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 27 samples collected for Pocket Canyon Creek exceeded the turbidity water quality objective and this does not exceed the allowable frequency listed in Table 4.2 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 for the Pocket Canyon Creek portion of the Guerneville HSA should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded. The rest of the segments currently listed under the Russian River HU, Lower Russian River HA, Guerneville HSA should remain on the 303(d) List as they are currently.

## Lines of Evidence:

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	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 beneficial uses. Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. Water shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	The evaluation guideline that has been used to determine turbidity exceedance is from published-peer reviewed paper, "The Effects of Chronic Turbidity on Density and Growth of Steelheads and Coho Salmon", John W Sigler (1984). The guideline is "In our studies, as little as 25 NTUs of turbidity caused a reduction in fish growth."
<i>Data Used to Assess Water Quality:</i>	None of the turbidity samples were in exceedance of the turbidity evaluation guideline of 25 NTU.
<i>Spatial Representation:</i>	All samples were taken at sampling location Lancel Creek a tributary to Dutch Bill Creek which is tributary to the Russian River. The sampling location LAN010 is located at Occidental.
<i>Temporal Representation:</i>	Samples were taken once a month in April, May, June, September, October and December 2003.
<i>Data Quality Assessment:</i>	Draft QAPP for Volunteer Water Quality Monitoring Project for the Community Clean Water Institute.

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
<i>Matrix:</i>	Water

*Water Quality Objective/  
Water Quality Criterion:* 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 beneficial uses. Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. Water shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* The evaluation guideline that has been used to determine turbidity exceedance is from published-peer reviewed paper, "The Effects of Chronic Turbidity on Density and Growth of Steelheads and Coho Salmon", John W Sigler (1984). The guideline is "In our studies, as little as 25 NTUs of turbidity caused a reduction in fish growth."

*Data Used to Assess Water Quality:* There were no exceedances at the JEN020 location. There were 2 exceedances of the evaluation guideline at the RUS010 location. These exceedances were on 1/29/2003 at 42.1 NTU and on 4/30/2003 at 35.3 NTU. The two locations considered for Jenner Creek there were 12 turbidity samples total with 2 exceedances (Sandler, 2004).

*Spatial Representation:* There were two sampling locations. All samples were along Jenner Creek, a tributary to the lower Russian River. JEN020 is located by fish ladder, Jenner. RUS010 is located near a boat house, Jenner.

*Temporal Representation:* Samples were taken once a month, a single measurement on one day at each site during January, February, April, May, August and November 2003.

*Data Quality Assessment:* Draft QAPP for Volunteer Water Quality Monitoring Project for the Community Clean Water Institute.

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* 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 beneficial uses. Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. Water shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.

<i>Evaluation Guideline:</i>	The evaluation guideline that has been used to determine turbidity exceedance is from published-peer reviewed paper, "The Effects of Chronic Turbidity on Density and Growth of Steelheads and Coho Salmon", John W Sigler (1984). The guideline is "In our studies, as little as 25 NTUs of turbidity caused a reduction in fish growth."
<i>Data Used to Assess Water Quality:</i>	There were no exceedances of the turbidity evaluation guideline. All of the turbidity samples were well below the evaluation guideline (Sandler, 2004).
<i>Spatial Representation:</i>	All samples were along Dutch Bill Creek. There were five sampling locations. These locations are: DBC010 is located near the fish ladder at Occidental.  DBC020 is located at Westminster, downstream from Bohemian Ranch, Occidental. DBC030 is located at Camp Meeker dam. DBC050 is located 75 yards downstream from pump station, Occidental. DBC060 is located at Graton Rd. and Main St., at bridge, Occidental.
<i>Temporal Representation:</i>	Samples were taken once a month, a single measurement on one day at each station during April, May, June, September, October and December 2003.  Samples were taken at DBC050 and DBC060 once a month, a single measurement on one day at each station during April, May, June, September and December 2003.
<i>Data Quality Assessment:</i>	Draft QAPP for Volunteer Water Quality Monitoring Project for the Community Clean Water Institute.

<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	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 beneficial uses. Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. Water shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	The evaluation guideline that has been used to determine turbidity exceedance is from published-peer reviewed paper, "The Effects of Chronic Turbidity on Density and Growth of Steelheads and Coho

Salmon", John W Sigler (1984). The guideline is "In our studies, as little as 25 NTUs of turbidity caused a reduction in fish growth."

*Data Used to Assess Water Quality:*

All of the samples are below the 25 NTU turbidity evaluation guideline with a range of measurements from 0.4 NTU to 6.54 NTU (Sandler, 2004).

*Spatial Representation:*

Sampling was done at three locations in Pocket Creek a tributary to the lower Russian River within the greater Guerneville HSA. PCC020 is located in Guerneville, at 12170 Hwy 116, downstream of Inn and the tank in the creek. PCC030 is located in Guerneville, at 11900 Hwy 116, in the backyard. PCC040 is located in Guerneville, 50 feet upstream from bridge along Hwy 116 at May's Canyon Road.

*Temporal Representation:*

Samples were taken once a month on the same days at each station during January, February, March, May, and August through December 2003.

*Data Quality Assessment:*

Draft QAPP for Volunteer Water Quality Monitoring Project for the Community Clean Water Institute.

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## Region 1

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**Water Segment:** Russian River HU, Middle Russian River HA, Laguna de Santa Rosa

**Pollutant:** Nitrogen

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 4.2 of the Listing Policy. Under this section a single line of evidence is necessary to assess listing status. Thirteen 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. There were six lines of evidence for Nitrogen in the Laguna de Santa Rosa. There were two lines of evidence for Nitrogen-Nitrate. There was one line of evidence for Nitrite. There were three lines of evidence for Ammonia as Nitrogen. For all of these constituents there is no guideline available to interpret the narrative objective so it cannot be determined if the data exceed the allowable frequency listed in Table 4.1 of the Listing Policy.

The single line of evidence for nitrate, collected by the RWQCB Nutrient TMDL Monitoring Program, shows no exceedance of the MCL 45 mg/L criteria applied through the Municipal and Domestic Beneficial Use for the Laguna De Santa Rosa. This nitrate information 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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	AG - Agricultural Supply
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<b><i>Evaluation Guideline:</i></b>	Data is recorded as TIN:TP ratio. TIN:TP ratio is considered in the narrative objective for biostimulatory substances. However, there is no applicable numeric water quality criterion for TIN:TP ratio. Therefore, it is difficult to determine that the concentration of TIN:TP ratio exceeds standards.
<b><i>Data Used to Assess Water Quality:</i></b>	Twenty-five sampling events were completed by the City of Santa Rosa NPDES Program. The TIN:TP ratios for the 101 samples taken ranged from 2.5 to 29.1667 with an average value of 4.365 and a standard deviation of 3.282. There was a 99% confidence interval of 0.841. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare to the TIN:TP ratios. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is due solely to the TIN:TP ratio levels (Scoles, 2004).
<b><i>Spatial Representation:</i></b>	Samples were collected at up to 4 sampling sites: Laguna at Todd Road, Upstream at Delta, Laguna upstream of D-Pond Incline pump, and Laguna upstream of Llano Rd. Bridge.
<b><i>Temporal Representation:</i></b>	Samples were collected between 1/2003 and 12/2003.
<b><i>Data Quality Assessment:</i></b>	City of Santa Rosa Quality Assurance Manual.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	AG - Agricultural Supply
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<b><i>Evaluation Guideline:</i></b>	Total Inorganic Nitrogen was measured and is considered in the narrative objective for biostimulatory substances. However, there is no applicable

numeric water quality criterion for total inorganic nitrogen. Therefore, it is difficult to determine that the concentration of total inorganic nitrogen exceeds standards.

*Data Used to Assess Water Quality:*

Sixty sampling events were completed by the City of Santa Rosa NPDES Program. The values of the total inorganic nitrogen ranged from 0.3 to 12.2. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare to the concentration of total inorganic nitrogen. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is solely due to the total inorganic nitrogen levels (Scoles, 2004).

*Spatial Representation:*

Samples were collected from up to 12 sites: Laguna at Llano Road, Laguna at Todd Road, Laguna at Hwy 12, and Laguna at Occidental Bridge, Laguna 100 feet upstream of D-Pond Incline Pump, Laguna 150 feet downstream of D-Pond Incline Pump, Laguna at La Franchi, Laguna-approximately 100 feet upstream of Llano Rd. Bridge, Laguna upstream of D-Pond 36, upstream Laguna at Delta, Russian River at Wohler Bridge, Russian River at Mirabel, upstream Roseland Cr. at Llano Rd., downstream Roseland Cr. at Summer Crossing/South of Alpha Bldg., upstream Kelly-downstream confluence of Duer Creek and Kelly Farm Drainage, downstream Duer Creek at Kelly, Colgan Creek upstream confluence with Laguna.

*Temporal Representation:*

Samples were collected between 10/1995 and 3/2004.

*Data Quality Assessment:*

City of Santa Rosa Quality Assurance Manual.

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***Numeric Line of Evidence***

Pollutant-Water

*Beneficial Use:*

AG - Agricultural Supply

*Matrix:*

Water

*Water Quality Objective/  
Water Quality Criterion:*

Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:*

Total Organic Nitrogen was measured and is considered in the narrative objective for biostimulatory substances. However, there is no numeric water quality criterion for total organic nitrogen. Therefore, it is difficult to determine that the concentration of total organic nitrogen exceeds standards.

*Data Used to Assess Water Quality:*

Twenty-five sampling events were conducted by the City of Santa Rosa NPDES Program. The samples ranged from values of 0.2 mg/L to 2.3 mg/L total organic nitrogen. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare to the concentration of total organic nitrogen. Therefore, it is



difficult to determine whether the decrease in dissolved oxygen is solely due to the total organic nitrogen levels (Scoles, G. 2004).

*Spatial Representation:* Sample were collected at up to 4 sites: Laguna at Todd Road, Upstream at Delta, Laguna upstream of D-Pond Incline pump, and Laguna upstream of Llano Rd. Bridge.

*Temporal Representation:* Sample were collected between 1/2003 and 12/2003.

*Data Quality Assessment:* City of Santa Rosa Quality Assurance Manual.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* Data is reported in TIN: 0.80 TP (Bioavailable N:P ratio). TIN: 0.80 TP is considered in the narrative objective for biostimulatory substances. However, there is no applicable numeric water quality criterion for TIN: 0.80 TP. Therefore, it is difficult to determine that the concentration of TIN: 0.80 TP exceeds standards.

*Data Used to Assess Water Quality:* Sixty sampling events were completed by the City of Santa Rosa NPDES Program. The range of measured values for the ratio of TIN: 0.80 TP was from 0.3 to 16.9. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare to the concentration of TIN: 0.80 TP. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is due solely to the TIN: 0.80 TP levels (Scoles, 2004).

*Spatial Representation:* Samples were collected from up to 12 sites: Laguna at Llano Road, Laguna at Todd Road, Laguna at Hwy 12, and Laguna at Occidental Bridge, Laguna 100 feet upstream of D-Pond Incline Pump, Laguna 150 feet downstream of D-Pond Incline Pump, Laguna at La Franchi, Laguna-approximately 100 feet upstream of Llano Rd. Bridge, Laguna upstream of D-Pond 36, upstream Laguna at Delta, Russian River at Wohler Bridge, Russian River at Mirabel, upstream Roseland Cr. at Llano Rd., downstream Roseland Cr. at Summer Crossing/South of Alpha Bldg., upstream Kelly-downstream confluence of Duer Creek and Kelly Farm Drainage, downstream Duer Creek at Kelly, Colgan Creek upstream confluence with Laguna.

*Temporal Representation:* Samples were collected between 10/1995 and 3/2004.

*Data Quality Assessment:* City of Santa Rosa Quality Assurance Manual.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* Data is reported in TIN: 0.80 TP (Bioavailable N:P ratio). TIN: 0.80 TP is considered in the narrative objective for biostimulatory substances. However, there is no applicable numeric water quality criterion for TIN: 0.80 TP. Therefore, it is difficult to determine that the concentration of TIN: 0.80 TP exceeds standards.

*Data Used to Assess Water Quality:* Eighty-Six sampling events were conducted by the RWQCB Nutrient TMDL Program. The values of the TIN: 0.80 TP recorded ranged from 0.03 up to 20.02. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare to the measurement of TIN: 0.80 TP. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is due solely to the TIN: 0.80 TP levels (Scoles, 2004).

*Spatial Representation:* Up to four sample sites: Laguna at Guernville Road, Laguna at Occidental Road, Laguna at Stony Point Road and Laguna at Trenton-Healdsburg Road.

*Temporal Representation:* Samples were collected between 7/1997 and 11/2000.

*Data Quality Assessment:* Nutrient TMDL Program.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WI - Wildlife Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* Nitrate-Nitrogen is considered in the narrative objective for biostimulatory substances. However, there is no numeric water quality criterion for nitrate-nitrogen. Therefore, it is difficult to determine that the concentration of nitrate-nitrogen exceeds standards.

*Data Used to Assess Water Quality:* Sixty sampling events were conducted by the City of Santa Rosa NPDES Program. The sample values ranged from 0.2 mg/L to 9.7 mg/L and the values were presented as monthly averages of weekly observations. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare to the concentration of nitrate-nitrogen. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is solely to the nitrate-nitrogen levels (Scoles, G. 2004).

*Spatial Representation:* Samples were collected from up to 12 sites: Laguna at Llano Road, Laguna at Todd Road, Laguna at Hwy 12, and Laguna at Occidental Bridge, Laguna 100 feet upstream of D-Pond Incline Pump, Laguna 150 feet downstream of D-Pond Incline Pump, Laguna at La Franchi, Laguna-approximately 100 feet upstream of Llano Rd. Bridge, Laguna upstream of D-Pond 36, upstream Laguna at Delta, Russian River at Wohler Bridge, Russian River at Mirabel, upstream Roseland Cr. at Llano Rd., downstream Roseland Cr. at Summer Crossing/South of Alpha Bldg., upstream Kelly-downstream confluence of Duer Creek and Kelly Farm Drainage, downstream Duer Creek at Kelly, Colgan Creek upstream confluence with Laguna.

*Temporal Representation:* Samples were collected between 10/1995 and 3/2004.

*Data Quality Assessment:* City of Santa Rosa QA Manual.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WI - Wildlife Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* There is no applicable criteria available for Ammonia-Nitrogen.

*Data Used to Assess Water Quality:* Twenty-five sampling events were completed by the City of Santa Rosa NPDES Program. There were 101 samples taken for Ammonia-Nitrogen, the values ranged from 0.2 mg/L to 1.1mg/L. The number of exceedances of the standard was not possible to calculate due to the lack of an applicable criterion for Ammonia-Nitrogen to compare to the measured values (Scoles, 2004).

*Spatial Representation:* Samples were collected at up to 4 sampling sites: Laguna at Todd Road, Upstream at Delta, Laguna upstream of D-Pond Incline pump, and Laguna

upstream of Llano Rd. Bridge.

*Temporal Representation:* Samples were collected between 1/2003 and 12/2003.

*Data Quality Assessment:* City of Santa Rosa QA Manual.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat, MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* Nitrate is considered in the narrative objective for biostimulatory substances. There not a nitrate numeric water quality criterion for the Cold Water Beneficial Use. However, for the beneficial use of Municipal and Domestic Supply (MUN), the MCL Criteria for Nitrates is 45 mg/L (ppm) can be considered.

*Data Used to Assess Water Quality:* Eighty-six sampling events were conducted by the RWQCB Nutrient TMDL Monitoring Program. There were no samples that exceeded the 45 mg/L MCL criteria (Scoles, 2004).

*Spatial Representation:* Samples were collected from up to 4 sample sites: Laguna at Guernville Road, Laguna at Occidental Road, Laguna at Stony Point Road, and Laguna at Trenton-Healdsburg Road.

*Temporal Representation:* Samples were collected between 7/1997 and 11/2000.

*Data Quality Assessment:* RWQCB TMDL Monitoring Program

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat, MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* Nitrite is considered in the narrative objective for biostimulatory substances. However, there is no applicable numeric water quality criterion for nitrite. Therefore, it is difficult to determine that the concentration of nitrite exceeds standards.

*Data Used to Assess Water Quality:* Eighty-six sampling events were completed by the RWQCB Nutrient TMDL Program. The nitrite values ranged from 0.025mg/L to 0.28 mg/L. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective/criteria to compare the concentration of nitrite. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is due solely to the nitrite levels (Scoles, 2004).

*Spatial Representation:* Up to four sample sites: Laguna at Guernville Road, Laguna at Occidental Road, Laguna at Stony Point Road, and Laguna at Trenton-Healdsburg Road.

*Temporal Representation:* Samples were collected between 7/1997 - 11/2000.

*Data Quality Assessment:* Nutrient TMDL Program.

***Numeric Line of Evidence*** Pollutant-Water

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

*Matrix:* Water

*Water Quality Objective/ Water Quality Criterion:* There is no applicable criteria available for Ammonia-Nitrogen.

*Data Used to Assess Water Quality:* There were 86 sampling events completed by the RWQCB TMDL Monitoring Program. The range of values measured was from 0.025 mg/L to 3.24 mg/L. There is not a numeric objective or criteria to compare to the concentration of ammonia-nitrogen in the samples. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is due solely to the ammonia-nitrogen concentration levels (Scoles, G. 2004).

*Spatial Representation:* Up to four sample sites: Laguna at Guernville Road, Laguna at Occidental Road, Laguna at Stony Point Road and Laguna at Trenton-Healdsburg Road.

*Temporal Representation:* Samples were collected between 7/1997 and 11/2000.

*Data Quality Assessment:* RWQCB Nutrient TMDL Program.

***Numeric Line of Evidence*** Pollutant-Water

<i>Beneficial Use:</i>	AG - Agricultural Supply, CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	There is no applicable criteria available for Ammonia-Nitrogen.
<i>Data Used to Assess Water Quality:</i>	Twenty-five sampling events were conducted by the City of Santa Rosa NPDES Program. The values of the measurements ranged from 0.2 mg/L to 1.1 mg/L. The number of exceedances of the standard was not calculated due to the lack of an applicable criterion for Ammonia-Nitrogen to compare to the measured values (Scoles, 2004).
<i>Spatial Representation:</i>	Samples were collected at up to 4 sites: Laguna at Todd Road, Upstream at Delta, Laguna upstream of D-Pond Incline pump, and Laguna upstream of Llano Rd. Bridge.
<i>Temporal Representation:</i>	Samples were collected between 1/2003 and 12/2003.
<i>Data Quality Assessment:</i>	City of Santa Rosa QA Manual.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	AG - Agricultural Supply, CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	There is no applicable criteria available for Ammonia-Nitrogen.
<i>Data Used to Assess Water Quality:</i>	There were sixty samples events from the City of Santa Rosa NPDES Program. The measured values ranged from 0.1 mg/L to 6.8 mg/L. The number of exceedances of the standard was not calculated due to the lack of an applicable criterion for Ammonia-Nitrogen to compare to the measured values (Scoles, G. 2004).
<i>Spatial Representation:</i>	Samples were collected from up to 12 sites: Laguna at Llano Road, Laguna at Todd Road, Laguna at Hwy 12, and Laguna at Occidental Bridge, Laguna 100 feet upstream of D-Pond incline Pump, Laguna 150 feet downstream of D-Pond Incline Pump, Laguna at La Franchi, Laguna-approximately 100 feet upstream of Llano Rd. Bridge, Laguna upstream of D-Pond 36, upstream Laguna at Delta, Russian River at Wohler Bridge, Russian River at Mirabel, upstream Roseland Cr. at Llano Rd., downstream Roseland Cr. at Summer Crossing/South of Alpha Bldg., upstream Kelly-downstream confluence of Duer Creek and Kelly Farm Drainage, downstream Duer Creek at Kelly, Colgan Creek upstream confluence with Laguna.

*Temporal Representation:* Samples were collected between 12/1995 and 3/2004.

*Data Quality Assessment:* City of Santa Rosa QA Manual.

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***Line of Evidence*** Pollutant-Water

*Beneficial Use* AG - Agricultural Supply

*Information Used to Assess Water Quality:* More information is needed to determine whether eliminating as many of the nitrogen pollution sources as possible would control the Ludwigia abundance, and whether reducing phosphorus will result in improving dissolved oxygen and controlling Ludwigia in the Laguna.

*Non-Numeric Objective:* Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Data Used to Assess Water Quality:* The ratio of N to P in the Laguna for data collected by the Regional Board is part of its nitrogen TMDL monitoring. The City of Santa Rosa collects nitrogen and phosphorus data as part of its NPDES discharge permit compliance monitoring. For both the Regional Board data set and the City's NPDES data set, total phosphorus was measured, but dissolved P was not measured (Scoles, 2004).

Since the City's NPDES Nitrogen to Phosphorus (N:P) ratios are derived from monthly averages, an evaluation was completed by the City of Santa Rosa to come up with N:P ratios determined from monthly averaged nitrogen and phosphorus data are representative of N:P ratios from individual measurements. The individual sample data for 2003, which had 101 measurements, were used to calculate individual N:P ratios for comparison to the monthly average values. The average of these individual N:P ratios was 4.4 with a 99 percent confidence interval of  $\pm 0.8$  compared to the average of the monthly average N:P ratios for the same period of 3.9. No statistically significant difference exists between the monthly and the daily data (Mann Whitney Rank Sum test  $p = 0.683$ .) The City determined that the N:P ratios based on monthly average values are representative of nutrient conditions in the Laguna.

*Spatial Representation:* The data from the NCRWQCB Nutrient TMDL monitoring were collected in the Laguna at Stony Point, Occidental, Guerneville, and Trenton Healdsburg roads.

*Temporal Representation:* The Nutrient TMDL monitoring program has had no phosphorus samples collected since November 2000. The City of Santa Rosa collected nutrient data during the discharge season between December 1995 and March 2004.

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## Region 1

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**Water Segment:** Russian River HU, Middle Russian River HA, Laguna de Santa Rosa

**Pollutant:** Phosphorus

**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 this section a single line of evidence is necessary to assess listing status. Eight 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. There is no numerical guideline available for phosphorus 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. There is no guideline available that is applicable to the NCRWQCB to interpret the narrative biostimulatory objective as it is considered for phosphorus. It is not possible to determine if the information exceeds the allowable frequency listed in Table 4.1 of the Listing Policy. The phosphorus listing made by USEPA for this water segment in July of 2003 relied upon the nitrogen and phosphorus targets in the Malibu Creek TMDL which is not appropriate nor is it in accordance with the Listing Policy.
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:**

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*Numeric Line of Evidence*      Pollutant-Water



<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	Phosphorus is considered in the narrative objective for biostimulatory substances. The RWQCB initially used a USEPA goal for phosphorus to interpret the data. The use of the phosphorus goal does not address the conditions present in the Laguna de Santa Rosa. There is significant disagreement over phosphorus limitation in the Laguna. The response of water bodies to nutrient enrichment differ among water bodies and one applicable nutrient objective is not available. USEPA and the state are in the process of developing nutrient objectives for the bioregions of California.
<i>Data Used to Assess Water Quality:</i>	Even though there are 10 water chemistry samples, there is no applicable guideline that can be used to interpret the narrative standard. Even though a phosphorus goal is not applicable in this specific situation, it is clear that the Laguna de Santa Rosa does not meet standards for low dissolved oxygen. It is also clear that nutrient concentrations are a probable cause of the low oxygen concentrations. New monitoring should be completed that identifies the contribution of nutrients and their relationship to the observed low oxygen concentrations (SWRCB, 2003).
<i>Spatial Representation:</i>	There were 10 targeted sites along the creek.
<i>Temporal Representation:</i>	The Data was collected over 5-6 Years between 1995 and 2001, and it was collected over four seasons.
<i>Data Quality Assessment:</i>	This data came from the NCRWQCB 2002 Listing Update.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	Phosphorus is considered in the narrative objective for biostimulatory substances. In 2002, SWRCB staff recommended not listing for elemental phosphorus because there was not an appropriate phosphorus objective available for Laguna de Santa Rosa. However, USEPA listed Laguna de

Santa Rosa for phosphorus by determining exceedances using criteria from another Region. Since there is not appropriate criteria, it is difficult to determine whether the concentration of total phosphorus exceeded standards.

<i>Data Used to Assess Water Quality:</i>	There were 86 sampling events conducted by the RWQCB TMDL Monitoring Program at the 3 to 4 sampling sites between 7/1997 and 11/2000. The data range for values of total phosphorus was between 0.113 mg/L and 1.87 mg/L. Even though there is a narrative objective for biostimulatory substance, there is not a numeric objective or criteria to compare to the concentration of total phosphorus measured. Exceedance of the water quality standard can not be determined (Scoles, G. 2004).
<i>Spatial Representation:</i>	Three to four sample sites (Laguna at Guernville Road, Laguna at Occidental Road, Laguna at Stony Point Road and Laguna at Trenton-Healdsburg Road.
<i>Temporal Representation:</i>	Samples were collected between 7/1997 and 11/2000.
<i>Data Quality Assessment:</i>	Nutrient TMDL Program.

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	Phosphorus is considered in the narrative objective for biostimulatory substances. In 2002, SWRCB staff recommended not listing for elemental phosphorus because there was not an appropriate phosphorus objective available for Laguna de Santa Rosa. However, USEPA listed Laguna de Santa Rosa for phosphorus by determining exceedances using criteria from another Region. Since there is not appropriate criteria, it is difficult to determine whether the concentration of total phosphorus exceeded standards.
<i>Data Used to Assess Water Quality:</i>	There were sixty sampling events completed by the City of Santa Rosa NPDES Program at up to 12 sample sites between 12/1995 and 3/2004. The data range for values of total phosphorus was between 0.1 mg/L and 3.9 mg/L. Even though there is a narrative objective for biostimulatory substance, there is not a numeric objective or criteria to compare to the concentration of total phosphorus measured. Exceedance of the water quality standard can not be determined (Scoles, 2004).

*Spatial Representation:* Samples were collected from 2 to 12 sites (Laguna at Llano Road, Laguna at Todd Road, Laguna at Hwy 12, and Laguna at Occidental Bridge, Laguna 100' upstream of D-Pond Incline Pump, Laguna 150' downstream of D-Pond Incline Pump, Laguna at La Franchi, Laguna-approx 100' upstream of Llano Rd. Bridge, Laguna upstream of D-Pond 36", upstream Laguna @ Delta, Russian River at Wohler Bridge, Russian River at Mirabel, upstream Roseland Cr. @ Llano Rd., downstream Roseland Cr. @ Summer Crossing/South of Alpha Bldg., upstream Kelly-downstream confluence of Duer Creek and Kelly Farm Drainage, downstream Duer Creek at Kelly, Colgan Creek upstream confluence with Laguna.

*Temporal Representation:* Samples were collected during 12/95 through 3/04.

*Data Quality Assessment:* City of Santa Rosa QA Manual.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* Data reported in 80% TP (total phosphorus). 80% TP is considered in the narrative objective for biostimulatory substances. There is no numeric water quality criterion for 80% TP. Therefore, it is difficult to determine that the concentration of nitrate-nitrogen exceeds standards.

*Data Used to Assess Water  
Quality:* Eighty-six sampling events were conducted by the RWQCB TMDL Program. The range of values of 80% TP was between 0.02 and 2.38. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare the concentration of 80% TP. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is solely due to the 80% TP (SWRCB, 2003).

*Spatial Representation:* Three to four sample sites (Laguna at Guernville Road, Laguna at Occidental Road, Laguna at Stony Point Road and Laguna at Trenton-Healdsburg Road.

*Temporal Representation:* Samples were collected between 7/1997 and 11/2000.

*Data Quality Assessment:* NCRWQCB Nutrient TMDL Program.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	CO - Cold Freshwater Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<b><i>Evaluation Guideline:</i></b>	Phosphorus is considered in the narrative objective for biostimulatory substances. In 2002, SWRCB staff recommended not listing for elemental phosphorus because there was not an appropriate phosphorus objective available for Laguna de Santa Rosa. However, USEPA listed Laguna de Santa Rosa for phosphorus by determining exceedances using criteria from another Region. Since there is not appropriate criteria, it is difficult to determine whether the concentration of total phosphorus exceeded standards.
<b><i>Data Used to Assess Water Quality:</i></b>	Twenty-five sampling events were completed by the City of Santa Rosa NPDES at up to 5 sample site between 1/2003 and 12/2003. The range of values for total phosphorus measured was between 0.4 mg/L and 1.6 mg/L. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare to the concentration of total phosphorus (Scoles, G. 2004).
<b><i>Spatial Representation:</i></b>	Samples were collected up to 4 sites: Laguna at Todd Road, upstream at Delta, Laguna upstream of D-Pond Incline pump, and Laguna upstream of Llano Rd. Bridge.
<b><i>Temporal Representation:</i></b>	Samples were collected between 1/2003 and 12/2003.
<b><i>Data Quality Assessment:</i></b>	City of Santa Rosa QA Manual.

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<b><i>Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use</i></b>	CO - Cold Freshwater Habitat
<b><i>Information Used to Assess Water Quality:</i></b>	More information is needed to determine whether elevated phosphorus in the Laguna is the cause of the low dissolved oxygen and increased Ludwigia abundance, and whether reducing phosphorus will result in improving dissolved oxygen and controlling Ludwigia in the Laguna.
<b><i>Non-Numeric Objective:</i></b>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

<i>Evaluation Guideline:</i>	Phosphorus is considered in the narrative objective for biostimulatory substances. In 2002, SWRCB staff recommended not listing for elemental phosphorus because there was not an appropriate phosphorus objective available for Laguna de Santa Rosa. USEPA listed Laguna de Santa Rosa for phosphorus by determining exceedances using criteria from another Region. Since there is not appropriate criteria, it is difficult to determine whether the concentration of total phosphorus exceeded standards.
<i>Data Used to Assess Water Quality:</i>	<p>The ratio of N to P in the Laguna for data collected by the Regional Board as part of its nitrogen TMDL monitoring program was presented by the City of Santa Rosa. The City collects nitrogen and phosphorus data as part of its NPDES discharge permit compliance monitoring. For both the Regional Board data set and the City's NPDES data set, total phosphorus was measured, but dissolved P was not measured (Scoles, 2004).</p> <p>Since the City's NPDES Nitrogen to Phosphorus (N:P) ratios are derived from monthly averages, an evaluation was completed by the City of Santa Rosa to come up with N:P ratios determined from monthly averaged nitrogen and phosphorus data are representative of N:P ratios from individual measurements. The individual sample data for 2003, which had 101 measurements, were used to calculate individual N:P ratios for comparison to the monthly average values. The average of these individual N:P ratios was 4.4 with a 99 percent confidence interval of <math>\pm 0.8</math> compared to the average of the monthly average N:P ratios for the same period of 3.9. No statistically significant difference exists between the monthly and the daily data (Mann Whitney Rank Sum test <math>p = 0.683</math>.) The City determined that the N:P ratios based on monthly average values are representative of nutrient conditions in the Laguna.</p>
<i>Spatial Representation:</i>	The data from the NCRWQCB Nutrient TMDL monitoring were collected in the Laguna at Stony Point, Occidental, Guerneville, and Trenton Healdsburg roads.
<i>Temporal Representation:</i>	The RWQCB Nutrient TMDL monitoring program samples were collected from July 1997 through November of 2000, no phosphorus samples have been collected since November 2000 for this program. The City of Santa Rosa collected nutrient data during the discharge season between December 1995 and March 2004.

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## Region 1

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**Water Segment:** Klamath River HU, Lost River HA, Clear Lake, Boles HSAs

**Pollutant:** Nutrients

**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 this section a single line of evidence is necessary to assess listing status.

Five lines of evidence are available in the administrative record to assess this pollutant. There is no evidence that the biostimulatory narrative objective is exceeded. The NCWRQCB Staff summary of the Upper Lost River De-Listing Recommendation along with the TMDL Analysis Staff Report support the decision to remove nutrients from the 303(d) List for this water segment.

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 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. The results of the nutrient analysis on the nitrogen, chlorophyll-a, phosphorus samples show that there is no evidence that the bio-stimulatory narrative objective has been exceeded. The dissolved oxygen samples show that the lowest values sampled are still above the minimum objective. These results do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
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:**

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<i>Numeric Line of Evidence</i>	Pollutant-Nuisance
<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Water shall not contain bio-stimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	The Bio-stimulatory WQO is inclusive of nutrients.
<i>Data Used to Assess Water Quality:</i>	<p>The TMDL Analysis was completed for Upper Lost River and Clear Lake Reservoir Watershed. The Chlorophyll-a in the water column was measured from monthly grab samples at the six sampling stations, for a total of 57 samples. The water samples were filtered in the field, rinsed with magnesium carbonate, and preserved on dry ice because full-volume samples could not be delivered to analytical laboratory within the recommended holding period. The chlorophyll-a concentrations showed variability ranging from below the analytical reporting limit (0.00050 mg/l) to 0.016 mg/l. Of the 57 samples, 38 were below the analytical reporting limit; for statistical analyses, these concentrations were assumed to be half of the reporting limit. The high measurement, 0.016 mg/l, was from a sample taken in October 2002 at Mowitz Creek. The median of all of the chlorophyll-a results was 0.00025 mg/l (the default value for samples below the reporting limit), and the 95% upper confidence limit is 0.00174 mg/l. The two stations on the Upper Lost River (WFLAT and LRCLDM) were analyzed separately from the four upstream stations on streams that lead to Clear Lake Reservoir (MOWCRK, BCFORD, WCGSB, and FCFORD).</p> <p>The 28 data points for the two Upper Lost River stations showed chlorophyll-a concentrations ranging from below the analytical reporting limit to 0.0032 mg/l, with a median of 0.00025 mg/l (the default value for samples below the reporting limit), and an 95% upper confidence limit of 0.00174 mg/l (including 21 nondetects assumed to be half of the reporting limit).</p> <p>The 29 points from the four stations on streams leading to Clear Lake Reservoir showed chlorophyll-a concentrations ranging from below the laboratory reporting limit to 0.016 mg/l, with a median of 0.00025 mg/l (this is half of the laboratory reporting limit), and a 95% upper confidence level of 0.00279 mg/l. Although most of the data points in this dataset are nondetects (17 non-detects out of 29 data points), for the statistical analysis, they were assumed to be half of the reporting limit.</p> <p>Using the 57 observations in the complete dataset, the relationship between total phosphorus and chlorophyll-a was weak. Neither visual observations nor water column chlorophyll-a measurements indicated impairment due to excess phosphorus. The lack of Chlorophyll-a in the</p>

water samples obtained for this analysis indicates that either the level of nutrients is too low to support excess algal growth or that some other factor is suppressing the algal growth. In either case, the beneficial uses of the Upper Lost River/Clear Lake Reservoir system are not impaired by nutrient concentrations (North Coast RWQCB, 2004d)

*Spatial Representation:*

The monitoring locations for the Upper Lost River/Clear Lake Reservoir area are:

1. Lost River below Clear Lake Reservoir dam, LRCLDM.
2. Lost River at Walter Flat, WFLAT.
3. Mowitz Creek just downstream of the 136 bridge, MOWCRK.
4. Boles Creek just upstream of the 136 ford, BCFORD.
5. No. Fork Willow Creek below the Great Society Bridge, WCGSB.
6. Fletcher Creek just upstream of the 73 ford, FCFORD.

Two stations are on the Upper Lost River mainstem, one is downstream of the dam and the other at Walter Flat. Station LRCLDM is at a point about 1,000 meters downstream of Clear Lake Reservoir dam. Station WFLAT is at a point about 10 meters downstream of the Walter Flat Bridge, about eight miles downstream of the dam. In addition to the two stations on the Upper Lost River, there were four monitoring locations in streams that lead to Clear Lake Reservoir, the source of the Lost River. One station was on North Fork Willow Creek, the main tributary to Clear Lake Reservoir and the primary spawning stream for the endangered Lost River and shortnose suckers. Two other sites, on Boles and Fletcher Creeks, drain into Willow Creek. The fourth site, on Mowitz Creek, drains directly into Clear Lake Reservoir but does not contribute much water to the reservoir. This site was added late in the investigation because of the opportunity to add to a sparse dataset. All of the sites, except the station below the dam, were accessible only during late spring to early fall because wet weather made the roads impassable. Sampling locations were limited to areas that could be reached by truck. Logistical issues precluded sampling in Clear Lake Reservoir.

*Temporal Representation:*

Sampling represents only one full season, late spring to early fall of one year. Sampling included monthly grab samples and instantaneous measurements for one season, continuous temperature monitoring for one season, and two short continuous multiparameter deployments. The sampling periods do not correspond to the time periods that the suckers are in the streams. There were limited spots at which the streams could be accessed; these might not correspond to the points that provide representative data. Drawing conclusions about the impact of water temperature and nutrients on suckers based on sampling during summer, however, is justified because those months represent the conditions worse than the fish encounter during their time in the streams.

*Environmental Conditions:*

There are no point source waste discharges within the watershed. The land use operations that may impact the Upper Lost River watershed as nonpoint sources of water pollution are livestock operations (grazing) and timber harvest.

*Data Quality Assessment:*

NCRWQCB QA Procedures followed for the TMDL analysis.



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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	MU - Municipal & Domestic, WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Water shall not contain bio-stimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	The WQO for Bio-stimulatory substances includes Nitrogen. The USEPA concentration of 10 mg/l NO <sub>3</sub> -N set by the USEPA (1986) to protect human health consuming domestic water supplies.
<i>Data Used to Assess Water Quality:</i>	<p>Nitrogen concentration was measured from monthly grab samples at the six sampling stations, for a total of 57 samples. The system appears to be nitrogen limited with nitrogen levels far below levels expected to cause bio-stimulation in this system. There is no evidence that the bio-stimulatory narrative is exceeded. The total nitrogen concentrations were similar between the two Upper Lost River stations and the four stations upstream of Clear Lake Reservoir. The total nitrogen concentrations are well below the 10 mg/l NO<sub>3</sub>-N set by the U.S. EPA (1986) to protect human health consuming domestic water supplies. In other words, the nitrogen levels are below the concentration of concern for human health.</p> <p>The analytical laboratory measured ammonia, nitrate, nitrite and TKN. Total nitrogen was calculated from the sum of TKN, nitrate, and nitrite. The total nitrogen levels showed some variability ranging from below the analytical reporting limit of 0.05 mg/l to 1.85 mg/l. Of the 57 samples, 17 were below the analytical reporting limit. Since nitrogen was present in the system these were assumed to be half of the reporting limit for statistical analyses. The highest concentration of total nitrogen, 1.85 mg/l, consisted entirely of TKN (ammonia and organic nitrogen). It was from a sample taken in August 2002 at Boles Creek during a time when the creek had no surface flow. The median of all of the total nitrogen results was 0.69 mg/l, and the 95% upper confidence level was 0.77 mg/l.</p> <p>The two stations on the Upper Lost River (WFLAT and LRCLDM) were analyzed separately from the four upstream stations on streams that drain to Clear Lake Reservoir (MOWCRK, BCFORD, WCGSB, and FCFORD). The 28 data points for the two Upper Lost River stations showed total nitrogen concentrations ranging from below the laboratory-reporting limit to 1.65 mg/l, with a median of 0.76 (including 8 non-detects assumed to be half of the reporting limit for statistical analysis purposes). The 29 points from the four stations on streams leading to Clear Lake Reservoir showed total nitrogen concentrations ranging from below the laboratory-reporting limit to 1.85 mg/l, with a median of 0.57 (including 10 non-detects assumed to be half of the reporting limit for statistical analysis purposes). Ammonia concentrations are low or below the laboratory reporting level at the six sampling stations.</p>

Analysis of all six stations grouped together shows that of 57 samples, 37 were below the analytical reporting limit. If the non-detects are included at a concentration equal to half of the reporting limit, the median concentration of ammonia is 0.025 mg/l (the default level for the nondetect samples), and the range is from below the reporting limit to 0.23 mg/l NH<sub>4</sub>-N.

Separating the four upstream stations from the two Upper Lost River stations does not show a significant difference in ammonia concentrations. If the nondetects are included at a concentration equal to half of the laboratory reporting limit, both upstream stations and downstream stations have a median ammonia concentration of 0.025 NH<sub>4</sub>-N. There is a large proportion of samples with ammonia concentrations below the laboratory-reporting limit (29 total samples with 17 non-detects in the upstream stations and 20 non-detects out of 28 total samples in the downstream sites), so analysis of these data is difficult. Calculations of the percentage of ammonia present as the toxic un-ionized ammonia were not necessary because the concentration of total ammonia at all of the stations is well below the level needed to protect the sensitive life stages of the sucker population (North Coast RWQCB, 2004d).

*Spatial Representation:*

The monitoring locations for the Upper Lost River/Clear Lake Reservoir area are:

1. Lost River below Clear Lake Reservoir dam, LRCLDM.
2. Lost River at Walter Flat, WFLAT.
3. Mowitz Creek just downstream of the 136 bridge, MOWCRK.
4. Boles Creek just upstream of the 136 ford, BCFORD.
5. No. Fork Willow Creek below the Great Society Bridge, WCGSB.
6. Fletcher Creek just upstream of the 73 ford, FCFORD.

Two stations are on the Upper Lost River mainstem, one is downstream of the dam and the other at Walter Flat. Station LRCLDM is at a point about 1,000 meters downstream of Clear Lake Reservoir dam. Station WFLAT is at a point about 10 meters downstream of the Walter Flat Bridge, about eight miles downstream of the dam. In addition to the two stations on the Upper Lost River, there were four monitoring locations in streams that lead to Clear Lake Reservoir, the source of the Lost River. One station was on North Fork Willow Creek, the main tributary to Clear Lake Reservoir and the primary spawning stream for the endangered Lost River and shortnose suckers. Two other sites, on Boles and Fletcher Creeks, drain into Willow Creek. The fourth site, on Mowitz Creek, drains directly into Clear Lake Reservoir but does not contribute much water to the reservoir. This site was added late in the investigation because of the opportunity to add to a sparse dataset. All of the sites, except the station below the dam, were accessible only during late spring to early fall because wet weather made the roads impassable. Sampling locations were limited to areas that could be reached by truck. Logistical issues precluded sampling in Clear Lake Reservoir.

*Temporal Representation:*

Sampling represents only one full season, late spring to early fall of one year. Sampling included monthly grab samples and instantaneous measurements for one season, continuous temperature monitoring for one season, and two short continuous multi-parameter deployments. The sampling periods do not correspond to the time periods that the suckers

are in the streams. There were limited spots at which the streams could be accessed; these might not correspond to the points that provide representative data. Drawing conclusions about the impact of water temperature and nutrients on suckers based on sampling during summer, however, is justified because those months represent the conditions worse than the fish encounter during their time in the streams. Water temperature in the Upper Lost River/Clear Lake Reservoir watershed was investigated using: Remote continuous water and air temperature monitors (Optic stowaway data loggers) that took readings every 15 minutes from May through September 2002. Remote sensors that measured air temperature (Optic stowaway data loggers) and relative humidity (HOBO instruments) every 15 minutes for three days in June 2003. Solar pathfinder measurements to calculate solar radiation that reached stream surfaces. A thermal infrared aerial survey in July 2001 and computer simulation modeling using the SSTEMP model. The monitoring instrument at the Boles Creek station was out of the water during that period due to seasonal dewatering and the sampling at Mowitz Creek did not begin until the following month.

*Environmental Conditions:* There are no point source waste discharges within the watershed. The land use operations that may impact the Upper Lost River watershed as nonpoint sources of water pollution are livestock operations (grazing) and timber harvest.

*Data Quality Assessment:* NCRWQCB QA procedures followed in the TMDL analysis.

*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Dissolved Oxygen, Table 3.1 Specific Water Quality Objectives for North Coast Region Clear Lake, Upper & Lower Lost River, Tule Lake, Lower Klamath Lake:  
> 5.0 mg/l, minimum 8.0 mg/l, 50% lower limit (this means that 50% or more of the monthly mean values must be equal to or greater than 8.0 mg/l).  
Other Streams in Upper Lost River HA:  
> 7.0 mg/l, minimum 8.0 mg/l, 50% lower limit (this means that 50% or more of the monthly mean values must be equal to or greater than 8.0 mg/l).

*Evaluation Guideline:* Specific WQOs in the Basin Plan Table 3.1.

*Data Used to Assess Water Quality:* The TMDL Analysis was completed for Upper Lost River and Clear Lake Reservoir Watershed. The Upper Lost River/Clear Lake Reservoir area is not listed for dissolved oxygen. This parameter, however, can be impacted by excessive biomass growth related to high nutrient concentrations. Diurnal cycles of algal respiration can lead to water that is

photosynthetically supersaturated with dissolved oxygen in late afternoons and depressed in very early mornings by overnight respiration.

The most sensitive beneficial use that could be impacted by low dissolved oxygen concentrations is the ESA-listed sucker species. The amount of dissolved oxygen in water at 100% saturation is partly dependent on the altitude; the sampling stations in this analysis ranged in altitude from 4,163 to 4,921 feet above sea level. The water at this altitude can hold less dissolved oxygen, at 100% saturation, than water at lower elevations. Dissolved oxygen data at the six sampling stations consisted of instantaneous measurements at the time that grab samples were obtained and of two brief periods of continuous measurement. The Basin Plan objectives for dissolved oxygen in the Upper Lost River/Clear Lake Reservoir area are 5.0 mg/l as a minimum and 8.0 as a 50% lower limit.

There were 57 instantaneous measurements of dissolved oxygen ranging from 6.1 mg/l to 13.02 mg/l. The mean value of these measurements is 8.83 mg/l, with a median of 8.53 mg/l, and a lower 95% confidence level of 8.44 mg/l. The high value of 13.02 mg/l was obtained at the Boles Creek station in October 2002 at a time when there was no surface flow; this value was taken at 14:30 and may represent a photosynthetically supersaturated condition. Field notes state that heavy algal growth was noted in the pool upstream of the dewatered area where samples were taken. The lowest values were still above the minimum required by the Basin Plan. The lowest value, 6.1 mg/l was obtained at 17:30 in June 2003 at Walter Flat. The next lowest value, 6.55 mg/l was obtained at 08:30 in August 2001 at the station just downstream of Clear Lake Reservoir dam.

Continuous dissolved oxygen measurements using a YSI Datasonde 6600 that measured dissolved oxygen, pH, specific conductivity, and water temperature at 15-minute increments were made in the Upper Lost River at Walter Flat from September 30 to October 2, 2002. The data show a diurnal variation with a low of 9.59 mg/l and a high of 12.11 mg/l. The mean is 10.47 mg/l, the median is 10.34 mg/l, and the 95% lower confidence level is 10.38 mg/l. A Datasonde also was deployed at this station from June 9 through June 11, 2003. Again, a diurnal cycle is seen. The data from this sampling episode show warmer temperatures and lower dissolved oxygen concentrations, ranging from a low of 5.42 mg/l to a high of 6.32 mg/l. The mean of the measurements is 5.87 mg/l, the median is 5.85 mg/l, and the lower 95% confidence interval is 5.82 mg/l.

Similarly, continuous dissolved oxygen measurements using a YSI Datasonde 6600 that measured dissolved oxygen, pH, specific conductivity, and water temperature at 15-minute increments were made in the Willow Creek sampling station from September 30 to October 2, 2002. The data show variation with a low of 10.03 mg/l and a high of 13.74 mg/l. The mean is 12.03 mg/l, the median is 12.11 mg/l, and the 95% lower confidence level is 11.89 mg/l. A Datasonde also was deployed at this station from June 10 through June 12, 2003. Again, a diurnal cycle is seen. The data from this sampling episode show warmer temperatures and lower dissolved oxygen concentrations, ranging from a low of 3.61 mg/l to a high of 12.1 mg/l. The mean of the measurements is 7.09 mg/l, the median is 6.69 mg/l, and the lower 95% confidence interval is 6.69 mg/l (North Coast RWQCB, 2004d).

<i>Spatial Representation:</i>	<p>The monitoring locations for the Upper Lost River/Clear Lake Reservoir area are:</p> <ol style="list-style-type: none"> <li>1. Lost River below Clear Lake Reservoir dam, LRCLDM.</li> <li>2. Lost River at Walter Flat, WFLAT.</li> <li>3. Mowitz Creek just downstream of the 136 bridge, MOWCRK.</li> <li>4. Boles Creek just upstream of the 136 ford, BCFORD.</li> <li>5. No. Fork Willow Creek below the Great Society Bridge, WCGSB.</li> <li>6. Fletcher Creek just upstream of the 73 ford, FCFORD.</li> </ol> <p>Two stations are on the Upper Lost River mainstem, one is downstream of the dam and the other at Walter Flat. Station LRCLDM is at a point about 1,000 meters downstream of Clear Lake Reservoir dam. Station WFLAT is at a point about 10 meters downstream of the Walter Flat Bridge, about eight miles downstream of the dam. In addition to the two stations on the Upper Lost River, there were four monitoring locations in streams that lead to Clear Lake Reservoir, the source of the Lost River. One station was on North Fork Willow Creek, the main tributary to Clear Lake Reservoir and the primary spawning stream for the endangered Lost River and shortnose suckers. Two other sites, on Boles and Fletcher Creeks, drain into Willow Creek. The fourth site, on Mowitz Creek, drains directly into Clear Lake Reservoir but does not contribute much water to the reservoir. This site was added late in the investigation because of the opportunity to add to a sparse dataset. All of the sites, except the station below the dam, were accessible only during late spring to early fall because wet weather made the roads impassable. Sampling locations were limited to areas that could be reached by truck. Logistical issues precluded sampling in Clear Lake Reservoir.</p>
<i>Temporal Representation:</i>	<p>Data from August 2001 through June 2003 at different stations. Continuous dissolved oxygen measurements using a YSI Datasonde 6600 that measured dissolved oxygen, pH, specific conductivity, and water temperature at 15-minute increments were made in the Upper Lost River at Walter Flat, Willow Creek Sampling Station, from September 30 to October 2, 2002. A Datasonde also was deployed at Upper Lost River at Walter Flat station from June 9 through June 11, 2003. Measurements taken at Boles Creek station in October 2002 at a time when there was no surface flow. Measurements taken at August 2001 at the station just downstream of Clear Lake Reservoir dam.</p>
<i>Environmental Conditions:</i>	<p>There are no point source waste discharges within the watershed. The land use operations that may impact the Upper Lost River watershed as nonpoint sources of water pollution are livestock operations (grazing) and timber harvest.</p>
<i>Data Quality Assessment:</i>	<p>NCRQWQCB QA procedures followed for the TMDL analysis.</p>
<hr/>	
<i>Numeric Line of Evidence</i>	<p>Pollutant-Water</p>
<i>Beneficial Use:</i>	<p>WA - Warm Freshwater Habitat</p>

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	The WQO for Biostimulatory substances includes Phosphorus. The USEPA phosphorus 0.05-mg/l level suggested by the USEPA to control eutrophication in streams that enter lakes (USEPA 1986).
<i>Data Used to Assess Water Quality:</i>	<p>The TMDL Analysis was completed for Upper Lost River and Clear Lake Reservoir Watershed. Total phosphorus was measured from monthly grab samples at the six sampling stations, for a total of 57 samples. The total phosphorus levels showed variability ranging from below the analytical reporting level to 4.5 mg/l. Of the 57 samples, 26 were below the analytical reporting limit; since phosphorus was present in the system these concentrations were assumed to be half of the reporting limit for statistical analyses. The high measurement, 4.5 mg/l, was from a sample taken in May 2002 at Fletcher Creek. The median of all of the total phosphorus results was 0.068 mg/l, and the 95% upper confidence limit is 0.35 mg/l, a level influenced by the abnormally high concentration at Fletcher Creek in May 2002.</p> <p>The two stations on the Upper Lost River (WFLAT and LRCLDM) were analyzed separately from the four upstream stations on streams that drain to Clear Lake Reservoir (MOWCRK, BCFORD, WCGSB, and FCFORD). The 28 data points for the two Upper Lost River stations showed total phosphorus concentrations ranging from below the laboratory reporting limit to 0.37 mg/l, with a median of 0.20 mg/l, and a 95% upper confidence level of 0.23 mg/l (including four nondetects assumed to be half of the reporting limit). The 29 points from the four stations on streams leading to Clear Lake Reservoir showed total phosphorus concentrations ranging from below the laboratory-reporting limit to 4.5 mg/l, with a median of 0.025 mg/l (this is half of the laboratory reporting limit), and a 95% upper confidence level of 0.51 mg/l. Although most of the data points in this dataset are nondetects (22 nondetects out of 29 data points), for the complete dataset analysis, they were assumed to be half of the reporting limit. Total phosphorus levels were higher in the two downstream stations than in the stream stations upstream of Clear Lake Reservoir.</p> <p>Median total phosphorus concentrations in the two Upper Lost River stations were above the 0.05-mg/l level suggested by the USEPA to control eutrophication in streams that enter lakes (USEPA 1986). Soil particles from discharged water from Clear Lake Reservoir may transport soil-organic-matter phosphorus and inorganic-soil/rock phosphorus to the Upper Lost River. The levels do not appear to present a eutrophication problem in the Upper Lost River or in Clear Lake Reservoir, probably because the high turbidity reduces sunlight penetration. The U.S. BOR (2000) indicated that there has been extensive siltation of Clear Lake Reservoir. Although, phosphorus levels are elevated in comparison to U.S. EPA suggested levels, these suggested levels are not relevant because there is no evidence of excessive algal growth in the reservoir (perhaps</p>

due to turbidity levels that control light availability) and the system appears to be nitrogen limited.

In the 57 observations in this dataset, the ratio between total nitrogen and total phosphorus ranged from 0 to 74. The value of R-Squared, the proportion of variation in total nitrogen that can be accounted for by variation in total phosphorus, is 0.0001; the correlation between total nitrogen and total phosphorus is -0.0097. There is no correlation between the values. These values are slightly different if the nitrogen nondetect values were reported as zero rather than half of the reporting limit. If the data sets with nondetects and the outlier are removed, there are 21 data points available for analysis of the nitrogen/phosphorus ratio. The N/P ratio for these points is shown in the third graph. A line showing an N/P of 10 is drawn for reference. Of the 21 data points, 18 have an N/P ratio of less than 10 this indicates a system that is nitrogen limited (North Coast RWQCB, 2004d).

*Spatial Representation:*

The monitoring locations for the Upper Lost River/Clear Lake Reservoir area are shown in Map 2 and are listed below with their station designations:

1. Lost River below Clear Lake Reservoir dam, LRCLDM.
2. Lost River at Walter Flat, WFLAT.
3. Mowitz Creek just downstream of the 136 bridge, MOWCRK.
4. Boles Creek just upstream of the 136 ford, BCFORD.
5. No. Fork Willow Creek below the Great Society Bridge, WCGSB.
6. Fletcher Creek just upstream of the 73 ford, FCFORD.

Two stations are on the Upper Lost River mainstem, one is downstream of the dam and the other at Walter Flat. Station LRCLDM is at a point about 1,000 meters downstream of Clear Lake Reservoir dam. Station WFLAT is at a point about 10 meters downstream of the Walter Flat Bridge, about eight miles downstream of the dam. In addition to the two stations on the Upper Lost River, there were four monitoring locations in streams that lead to Clear Lake Reservoir, the source of the Lost River. One station was on North Fork Willow Creek, the main tributary to Clear Lake Reservoir and the primary spawning stream for the endangered Lost River and shortnose suckers. Two other sites, on Boles and Fletcher Creeks, drain into Willow Creek. The fourth site, on Mowitz Creek, drains directly into Clear Lake Reservoir but does not contribute much water to the reservoir. This site was added late in the investigation because of the opportunity to add to a sparse dataset. All of the sites, except the station below the dam, were accessible only during late spring to early fall because wet weather made the roads impassable. Sampling locations were limited to areas that could be reached by truck. Logistical issues precluded sampling in Clear Lake Reservoir.

*Temporal Representation:*

Sampling represents only one full season, late spring to early fall of one year. Sampling included monthly grab samples and instantaneous measurements for one season, continuous temperature monitoring for one season, and two short continuous multiparameter deployments. The sampling periods do not correspond to the time periods that the suckers are in the streams. There were limited spots at which the streams could be accessed; these might not correspond to the points that provide representative data. Drawing conclusions about the impact of water

temperature and nutrients on suckers based on sampling during summer is justified, because those months represent the conditions worse than the fish encounter during their time in the streams. Water temperature in the Upper Lost River/Clear Lake Reservoir watershed was investigated using: Remote continuous water and air temperature monitors (Optic stowaway dataloggers) that took readings every 15 minutes from May through September 2002. Remote sensors that measured air temperature (Optic stowaway dataloggers) and relative humidity (HOBO instruments) every 15 minutes for three days in June 2003. Solar pathfinder measurements to calculate solar radiation that reached stream surfaces. A thermal infrared aerial survey in July 2001 and computer simulation modeling using the SSTEMP model. The monitoring instrument at the Boles Creek station was out of the water during that period due to seasonal dewatering and the sampling at Mowitz Creek did not begin until the following month.

*Environmental Conditions:* There are no point source waste discharges within the watershed. The land use operations that may impact the Upper Lost River watershed as nonpoint sources of water pollution are livestock operations (grazing) and timber harvest.

*Data Quality Assessment:* NCRWQCB QA Procedures followed for the TMDL analysis.

*Line of Evidence* Pollutant-Water

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* The Upper Lost River/Clear Lake Reservoir area is listed for nutrients and temperature in accordance with Section 303(d) of the federal Clean Water Act (CWA). The listing of the Upper Lost River/Clear Lake Reservoir watershed as impaired because of biostimulatory substances (nutrients) and high water temperature was made in 1996. In accordance with a consent decree, January 2005 is the deadline for adoption or de-listing of the TMDL's for the Upper Lost River/Clear Lake Reservoir area by the State of California. Investigation into the basis of the listings revealed that the listings were apparently conferred from the Klamath River listings and not based on data or information specific to the Upper Lost River and Clear Lake Reservoir watershed. The appropriateness of the nutrients and temperature listings in the Upper Lost River is explored in the TMDL analysis. If the listings had been confirmed a TMDL would have been developed, however, the listings were not confirmed and de-listing for the watershed (including Clear Lake Reservoir, the streams draining to Clear Lake Reservoir and the Upper Lost River between the Clear Lake Reservoir dam and the Oregon border) is recommended by the NCRWQCB staff.

*Non-Numeric Objective:* Basin Plan: Water shall not contain bio-stimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* The WQO for Bio-stimulatory Substances is inclusive of nutrients for the



NCRWQCB.

*Data Used to Assess Water Quality:*

Measurement of nutrient species was planned because the Lost River is listed on the State 303(d) list for nutrients and this information is needed for system description. Ammonia, total Kjeldahl nitrogen (TKN), nitrate and nitrite were analytically determined. Total nitrogen was calculated from TKN, nitrate and nitrite. Total phosphorus and ortho-phosphate were analytically determined. The reasons for the recommendation to de-list the watershed include:

There is no evidence that the biostimulatory narrative objective is exceeded. The system appears to be nitrogen limited and nitrogen levels are far below levels expected to cause biostimulation in this system. Although, phosphorus levels are elevated in comparison to U.S. EPA suggested levels, these suggested levels are not relevant because there is no evidence of excessive algal growth in the reservoir (perhaps due to turbidity levels that control light availability) and the system appears to be nitrogen limited. Dissolved oxygen levels are above the existing numeric water quality objectives. The nitrogen levels are below the concentration of concern for human health. There is no evidence of impacts from nutrients, dissolved oxygen, or other nutrient related effects on the sensitive species of concern. The beneficial uses appear to be unaffected by water temperature. The natural range of water temperatures and nutrient concentrations above Clear Lake Reservoir do not appear to be affected by anthropogenic activities (North Coast RWQCB, 2004d).

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*Line of Evidence*

Pollutant-Water

*Beneficial Use*

MU - Municipal & Domestic, WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:*

The Upper Lost River/Clear Lake Reservoir area is listed as impaired for nutrients and temperature in accordance with Section 303(d) of the federal Clean Water Act (CWA). The listing of the Upper Lost River/Clear Lake Reservoir watershed as impaired because of biostimulatory substances (nutrients) and high water temperature was made in 1996. In accordance with a consent decree, January 2005 is the deadline for adoption or de-listing of the TMDLs for the Upper Lost River/Clear Lake Reservoir area by the State of California. Investigation into the basis of the listings revealed that the listings were apparently conferred from the Klamath River listings and not based on data or information specific to the Upper Lost River and Clear Lake Reservoir watershed. The appropriateness of the nutrients and temperature listings in the Upper Lost River is explored in the TMDL analysis. If the listings had been confirmed a TMDL would have been developed, however, the listings were not confirmed and de-listing for the watershed (including Clear Lake Reservoir, the streams draining to Clear Lake Reservoir and the Upper Lost River between the Clear Lake Reservoir dam and the Oregon border) is recommended by the NCRWQCB staff.

*Non-Numeric Objective:*

Basin Plan: Water shall not contain bio-stimulatory substances in

concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:*

The WQO for Bio-stimulatory Substances is inclusive of nutrients.

*Data Used to Assess Water Quality:*

Measurement of nutrient species was planned because the Lost River is listed on the State 303(d) list for nutrients and this information is needed for system description. Ammonia, total Kjeldahl nitrogen (TKN), nitrate and nitrite were analytically determined. Total nitrogen was calculated from TKN, nitrate and nitrite. Total phosphorus and ortho-phosphate were analytically determined. The reasons for the recommendation to de-list the watershed include:

There is no evidence that the biostimulatory narrative objective is exceeded. The system appears to be nitrogen limited and nitrogen levels are far below levels expected to cause biostimulation in this system. Although, phosphorus levels are elevated in comparison to U.S. EPA suggested levels, these suggested levels are not relevant because there is no evidence of excessive algal growth in the reservoir and the system appears to be nitrogen limited. Dissolved oxygen levels are above the existing numeric water quality objectives. The nitrogen levels are below the concentration of concern for human health. There is no evidence of impacts from nutrients, dissolved oxygen, or other nutrient related effects on the sensitive species of concern. The beneficial uses appear to be unaffected by water temperature. The natural range of water temperatures and nutrient concentrations above Clear Lake Reservoir do not appear to be affected by anthropogenic activities. The temperatures below Clear Lake Reservoir are affected by anthropogenic activities (i.e., the dam and water flow fluctuations) but these activities are not addressed by a TMDL (North Coast RWQCB, 2004d).

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*Line of Evidence*

Pollutant-Water

*Beneficial Use*

WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:*

The Upper Lost River/Clear Lake Reservoir area is listed as impaired for nutrients and temperature in accordance with Section 303(d) of the federal Clean Water Act (CWA). The listing of the Upper Lost River/Clear Lake Reservoir watershed as impaired because of biostimulatory substances (nutrients) and high water temperature was made in 1996. In accordance with a consent decree, January 2005 is the deadline for adoption or de-listing of the TMDLs for the Upper Lost River/Clear Lake Reservoir area by the State of California. Investigation into the basis of the listings revealed that the listings were apparently conferred from the Klamath River listings and not based on data or information specific to the Upper Lost River and Clear Lake Reservoir watershed. The appropriateness of the nutrients and temperature listings in the Upper Lost River is explored in the TMDL analysis. If the listings had been confirmed a TMDL would have been developed, however, the listings were not confirmed and de-listing for the watershed (including Clear Lake Reservoir, the streams

draining to Clear Lake Reservoir and the Upper Lost River between the Clear Lake Reservoir dam and the Oregon border) is recommended by NCWRQCB staff.

*Non-Numeric Objective:* Basin Plan: Table 3.1, Specific Water Quality Objectives for North Coast Region Clear Lake, Upper & Lower Lost River, Tule Lake, Lower Klamath Lake:  
> 5.0 mg/l, minimum 8.0 mg/l, 50% lower limit (this means that 50% or more of the monthly mean values must be equal to or greater than 8.0 mg/l).  
Other Streams in Upper Lost River HA:  
> 7.0 mg/l, minimum 8.0 mg/l, 50% lower limit (this means that 50% or more of the monthly mean values must be equal to or greater than 8.0 mg/l).

*Data Used to Assess Water Quality:* Dissolved oxygen levels are above the existing numeric water quality objectives. There is no evidence of impacts from nutrients, dissolved oxygen, or other nutrient related effects on the sensitive species of concern. The beneficial uses appear to be unaffected by water temperature. The natural range of water temperatures and nutrient concentrations above Clear Lake Reservoir do not appear to be affected by anthropogenic activities. There is no evidence that the biostimulatory narrative objective is exceeded. The system appears to be nitrogen limited and nitrogen levels are far below levels expected to cause biostimulation in this system. Although, phosphorus levels are elevated in comparison to U.S. EPA suggested levels, these suggested levels are not relevant because there is no evidence of excessive algal growth in the reservoir and the system appears to be nitrogen limited.

*Spatial Representation:* Continuous dissolved oxygen measurements made in the Upper Lost River at Walter Flat from September 30 to October 2, 2002.

*Temporal Representation:* Continuous dissolved oxygen measurements using a YSI Datasonde 6600 that measured dissolved oxygen in 15-minute increments were made in the Upper Lost River at Walter Flat from September 30 to October 2, 2002.

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*Line of Evidence* Pollutant-Water

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* The Upper Lost River/Clear Lake Reservoir area is listed for nutrients and temperature in accordance with Section 303(d) of the federal Clean Water Act (CWA). The listing of the Upper Lost River/Clear Lake Reservoir watershed as impaired because of biostimulatory substances (nutrients) and high water temperature was made in 1996. In accordance with a consent decree, January 2005 is the deadline for adoption or de-listing of the TMDLs for the Upper Lost River/Clear Lake Reservoir area by the State of California. Investigation into the basis of the listings revealed that the listings were apparently conferred from the Klamath River listings and not based on data or information specific to the Upper Lost River and

Clear Lake Reservoir watershed. The appropriateness of the nutrients and temperature listings in the Upper Lost River is explored in the TMDL analysis. If the listings had been confirmed a TMDL would have been developed, however, the listings were not confirmed and de-listing for the watershed (including Clear Lake Reservoir, the streams draining to Clear Lake Reservoir and the Upper Lost River between the Clear Lake Reservoir dam and the Oregon border) is recommended by the NCRWQCB staff.

*Non-Numeric Objective:*

Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:*

The WQO for Biostimulatory Substances is inclusive of nutrients.

*Data Used to Assess Water Quality:*

Measurement of nutrient species was planned because the Lost River is listed on the State 303(d) list for nutrients and this information is needed for system description. Ammonia, total Kjeldahl nitrogen (TKN), nitrate and nitrite were analytically determined. Total nitrogen was calculated from TKN, nitrate and nitrite. Total phosphorus and ortho-phosphate were analytically determined. The reasons for the recommendation to de-list the watershed include:

There is no evidence that the biostimulatory narrative objective is exceeded. The system appears to be nitrogen limited and nitrogen levels are far below levels expected to cause biostimulation in this system. Although, phosphorus levels are elevated in comparison to U.S. EPA suggested levels, these suggested levels are not relevant because there is no evidence of excessive algal growth in the reservoir (perhaps due to turbidity levels that control light availability) and the system appears to be nitrogen limited. Dissolved oxygen levels are above the existing numeric water quality objectives. The nitrogen levels are below the concentration of concern for human health. There is no evidence of impacts from nutrients, dissolved oxygen, or other nutrient related effects on the sensitive species of concern. The beneficial uses appear to be unaffected by water temperature. The natural range of water temperatures and nutrient concentrations above Clear Lake Reservoir do not appear to be affected by anthropogenic activities. The temperatures below Clear Lake Reservoir are affected by anthropogenic activities (i.e., the dam and water flow fluctuations) but these activities are not addressed by a TMDL (North Coast RWQCB, 2004d).

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## Region 1

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**Water Segment:** Klamath River HU, Lost River HA, Clear Lake, Boles HSAs

**Pollutant:** Temperature, water

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 4.2 of the Listing Policy. Under section 4.2 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess temperature consistent with Listing Policy section 6.1.5.9. None of the MWAT values exceeded evaluation guidelines selected to interpret 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 removing this water segment-pollutant combination from the section 303(d) list. The water temperature of the watershed supports the most sensitive beneficial use, the endangered sucker species.

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 remote continuous water and air temperature monitors that took readings every 15 minutes from May through September 2002. Of the estimated 3,000 MWATs calculated (Temperature measurements from 4 stations taken over a 5 month period considered together), none of the MWATs exceeded the water quality objective and this does not exceed the allowable frequency listed in Table 4.2 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 removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded

**Lines of Evidence:**

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	<p>Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan).</p> <p>Lost River:</p> <ol style="list-style-type: none"> <li>1. Cold Interstate Waters: A. Elevated temperature waste discharges into cold interstate waters are prohibited.</li> <li>2. Warm Interstate Waters: A. Thermal waste discharges having a maximum temperature greater than 5°F above natural receiving water temperature are prohibited. B. Elevated temperature wastes shall not cause the temperature of warm interstate waters to increase by more than 5°F above natural temperature at any time or place. D. Lost River, Elevated temperature wastes discharged to the Lost River shall not cause the temperature of the receiving water to increase by more than 2°F when the receiving water temperature is less than 62°F, and 0°F when the receiving water temperature exceeds 62°F.</li> </ol>
<i>Evaluation Guideline:</i>	<p>The maximum weekly average temperatures (MWATs) were used from the water body to determine if the Objective was being exceeded. The Lost River Suckers and Shortnose Suckers species are listed under the Endangered Species Act and they are found in the study area. The Critical Thermal Maxima for Shortnose suckers is between the range of 32.1 to 33.3 °C (Castleberry and Cech 1993). The 96-Hour Mean Lethal Concentration (LC50) for Lost River Suckers (LRS) is 31.2 °C for juveniles (with a 95% Confidence Interval range of 30.8 to 31.5 °C for juveniles) and for the Shortnose Suckers (SNS) it is 31.9°C for larva and 31.2 °C for juveniles (with a 95% Confidence Interval range of 30.8 to 31.6 °C for juveniles), (Bellerud and Saiki 1995), (page 34, TMDL).</p>
<i>Data Used to Assess Water Quality:</i>	<p>The TMDL Analysis was completed for Upper Lost River and Clear Lake Reservoir Watershed. The most sensitive beneficial uses of Clear Lake most likely relate to the protection of the endangered sucker species. The sensitivity analysis using SSTEMP showed that daily average water temperature at the sampling stations in the streams that drain to Clear Lake Reservoir is most sensitive to influence by air temperature, solar radiation, and relative humidity. In the two Upper Lost River stations downstream of Clear Lake Reservoir, water temperature is most sensitive to inflow temperature, that is, the temperature of the water released from the Clear Lake Reservoir. The warmest stream temperatures during the data collection period were found during the week of July 15, 2002. The maximum weekly average temperatures (MWAT) at the sampling stations for that week were: WFLAT, 27.40°C; LRCLDM, 26.64°C; WCGSB, 27.63°C; FCFORD, 22.75°C. These MWATs are well below the Critical Thermal Maxima for Shortnose Suckers (32.1 to 33.3 °C) and also well below the 96-Hour Mean Lethal Concentration for both Long River Suckers and Short Nose Suckers juveniles at 31.2 °C. The water temperature of the watershed supports the most sensitive beneficial use,</p>

the endangered sucker species (North Coast RWQCB, 2004d)

*Spatial Representation:*

The monitoring locations for the Upper Lost River/Clear Lake Reservoir area are shown in Map 2 and are listed below with their station designations:

1. Lost River below Clear Lake Reservoir dam, LRCLDM.
2. Lost River at Walter Flat, WFLAT.
3. Mowitz Creek just downstream of the 136 bridge, MOWCRK.
4. Boles Creek just upstream of the 136 ford, BCFORD.
5. No. Fork Willow Creek below the Great Society Bridge, WCGSB.
6. Fletcher Creek just upstream of the 73 ford, FCFORD.

Two stations are on the Upper Lost River mainstem; one is downstream of the dam and the other at Walter Flat. Station LRCLDM is at a point about 1,000 meters downstream of Clear Lake Reservoir dam. Station WFLAT is at a point about 10 meters downstream of the Walter Flat Bridge, about eight miles downstream of the dam. In addition to the two stations on the Upper Lost River, there were four monitoring locations in streams that lead to Clear Lake Reservoir, the source of the Lost River. One station was on North Fork Willow Creek, the main tributary to Clear Lake Reservoir and the primary spawning stream for the endangered Lost River and Shortnose suckers. Two other sites, on Boles and Fletcher Creeks, drain into Willow Creek. The fourth site, on Mowitz Creek, drains directly into Clear Lake Reservoir but does not contribute much water to the reservoir. This site was added late in the investigation because of the opportunity to add to a sparse dataset. All of the sites, except the station below the dam, were accessible only during late spring to early fall because wet weather made the roads impassable. Sampling locations were limited to areas that could be reached by truck. Logistical issues precluded sampling in Clear Lake Reservoir.

*Temporal Representation:*

Sampling represents only one full season late spring to early fall. Sampling included monthly grab samples and instantaneous measurements for one season, continuous temperature monitoring for one season, and two short continuous multiparameter deployments. The sampling periods do not correspond to the time periods that the suckers are in the streams. There were limited spots at which the streams could be accessed; these might not correspond to the points that provide representative data. Drawing conclusions about the impact of water temperature and nutrients on suckers based on sampling during summer, however, is justified because those months represent the conditions worse than the fish encounter during their time in the streams. Water temperature in the Upper Lost River/Clear Lake Reservoir watershed was investigated using: Remote continuous water and air temperature monitors (Optic stowaway data loggers) that took readings every 15 minutes from May through September 2002. Remote sensors that measured air temperature (Optic stowaway data loggers) and relative humidity (HOBO instruments) every 15 minutes for three days in June 2003. Solar pathfinder measurements to calculate solar radiation that reached stream surfaces. A thermal infrared aerial survey in July 2001 and computer simulation modeling using the SSTEMP model. The monitoring instrument at the Boles Creek station was out of the water during that period due to seasonal dewatering and the sampling at Mowitz Creek did not begin until the following month.

*Environmental Conditions:* There are no point source waste discharges within the watershed. The land use operations that may impact the Upper Lost River watershed as nonpoint sources of water pollution are livestock operations (grazing) and timber harvest.

*Data Quality Assessment:* NCRWQCB QA Procedures followed in the TMDL analysis.

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*Line of Evidence* Pollutant-Water

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* The Upper Lost River/Clear Lake Reservoir area is listed for nutrients and temperature in accordance with Section 303(d) of the federal Clean Water Act (CWA). The listing of the Upper Lost River/Clear Lake Reservoir watershed as impaired because of bio-stimulatory substances (nutrients) and high water temperature was made in 1996. In accordance with a consent decree, January 2005 is the deadline for adoption or de-listing of the TMDL's for the Upper Lost River/Clear Lake Reservoir area by the State of California. Investigation into the basis of the listings revealed that the listings were apparently conferred from the Klamath River listings and not based on data or information specific to the Upper Lost River and Clear Lake Reservoir watershed. The appropriateness of the nutrients and temperature listings in the Upper Lost River is explored in the TMDL analysis. If the listings had been confirmed a TMDL would have been developed, however, the listings were not confirmed and de-listing for the watershed (including Clear Lake Reservoir, the streams draining to Clear Lake Reservoir and the Upper Lost River between the Clear Lake Reservoir dam and the Oregon border) is recommended by NCRWQCB staff.

*Non-Numeric Objective:* Basin Plan: 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. At no time or place shall the temperature of any COLD water be increased by more than 5°F above natural receiving water temperature. At no time or place shall the temperature of WARM intrastate waters be increased more than 5°F above natural receiving water temperature.

*Evaluation Guideline:* The data collection effort associated with this analysis consisted of three components: collection and review of existing data, water quality grab samples (and associated instantaneous field measurements), and the short-term use of continuous monitoring devices. Neither visual observations nor water quality sampling indicated impairment due to excess nutrients, although the turbidity levels in the reservoir and in the Upper Lost River probably suppress primary production. The high level of turbidity noted in the Upper Lost River is of concern, but was not the subject of this analysis.

*Data Used to Assess Water* Species listed under the federal Endangered Species Act are found in the



*Quality:*

study area, Lost River Suckers and Shortnose Suckers are classified as endangered species. The most sensitive beneficial uses most likely relate to the protection of the endangered sucker species. These fish can tolerate poor water quality such as low dissolved oxygen, high water temperature, and elevated pH levels, but the fish may not thrive at long-term, continual poor conditions resulting from habitat fragmentation, hydrologic regime alterations, and water diversion. Clear Lake Reservoir appears to possess a healthy population of Lost River and Shortnose suckers compared to other populations in the Klamath and Lost River Basin. The water quality and habitat conditions in the reservoir and its tributaries are better than elsewhere in the Klamath River and Lost River basins. Although the North Coast Regional Water Quality Control Board Water Quality Control Plan (Basin Plan) lists a cold-water fishery beneficial use for the study area, the current or historical presence of cold-water fish could not be confirmed. Computer simulation modeling suggests that decreasing solar radiation by increasing shade over the streams that drain into Clear Lake Reservoir could decrease water temperatures. The potential for increasing the shade due to riparian vegetation, however, is unlikely in all of these streams except for Willow Creek because of the inability of the soils to support increased vegetative growth. The Upper Lost River is more sensitive to the water temperature of the water released from Clear Lake Reservoir than to solar radiation. Even at current shade levels, the water temperature in the watershed supports the most sensitive beneficial use, the endangered sucker species. The relative health of the Clear Lake Reservoir Shortnose and Lost River sucker population is notable. Given the significance of the Clear Lake Reservoir watershed to preserving the Lost River and Shortnose sucker populations, it is necessary to preserve the aquatic habitat from any harmful effects related to land use activities. Willow Creek and its tributaries (primarily Boles Creek) are the only spawning sites for the sucker populations; it is especially important to protect valuable properly functioning riparian conditions in this stream. Regional Water Board staff has seen no information showing that the natural range of water temperature or nutrient concentrations in the streams draining into Clear Lake Reservoir are outside of the natural range for that environment due to anthropogenic causes (North Coast RWQCB, 2004d).

*Spatial Representation:*

There are six monitoring locations total. Two stations are on the Upper Lost River mainstem, one is downstream of the dam and the other at Walter Flat. Station LRCLDM is at a point about 1,000 meters downstream of Clear Lake Reservoir dam. Station WFLAT is at a point about 10 meters downstream of the Walter Flat Bridge, about eight miles downstream of the dam. In addition to the two stations on the Upper Lost River, there were four monitoring locations in streams that lead to Clear Lake Reservoir, the source of the Lost River. One station was on North Fork Willow Creek, the main tributary to Clear Lake Reservoir and the primary spawning stream for the endangered Lost River and Shortnose suckers. Two other sites, on Boles and Fletcher Creeks, drain into Willow Creek. The fourth site, on Mowitz Creek, drains directly into Clear Lake Reservoir but does not contribute much water to the reservoir. This site was added late in the investigation because of the opportunity to add to a sparse dataset. Logistical issues precluded sampling in Clear Lake Reservoir.

*Temporal Representation:*

Water temperature in the Upper Lost River/Clear Lake Reservoir watershed was investigated using: Remote continuous water and air temperature monitors (Optic stowaway data loggers) that took readings every 15 minutes from May through September 2002. Remote sensors that measured air temperature (Optic stowaway dataloggers) and relative humidity (HOBO instruments) every 15 minutes for three days in June 2003. Solar pathfinder measurements to calculate solar radiation that reached stream surfaces. A thermal infrared aerial survey in July 2001 and computer simulation modeling using the SSTEMP model. All of the sites, except the station below the dam, were accessible only during late spring to early fall because wet weather made the roads impassable. Sampling locations were limited to areas that could be reached by truck.

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## Region 1

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**Water Segment:** Klamath River HU, Salmon River HA

**Pollutant:** Nutrients

**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 this section a single line of evidence is necessary to assess listing status.

There are nine lines of evidence that are available in the administrative record to assess the existing nutrients listing. The Salmon River was added to the 303(d) List for nutrients in 1992. Regional Board staff conducted a water quality monitoring effort to evaluate the impact of nutrients in the Salmon River watershed. Based on these eight lines of evidence that there is no indication that nutrients are impacting the Salmon River HA. NCRWQCB staff recommends that the Salmon River be delisted for nutrients.

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 narrative nutrient information as well as the observations of attached algae indicates that nutrients are not reaching nuisance levels in the Salmon River HA. Analytical results of nutrient grab samples were generally non-detect and they did 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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	CO - Cold Freshwater Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	There is no NCRWQCB Basin Plan Water Quality Objective for TOC for Salmon River HA.
<b><i>Data Used to Assess Water Quality:</i></b>	The grab samples were analyzed for TOC in addition to pH, dissolved oxygen, temperatures and specific conductance. There were 22 TOC measurements in total. The average of the samples taken was 1.10. The range of the measurements taken between June and October 2002 was 0.9 to 1.7 (North Coast RWQCB, 2004c)
<b><i>Spatial Representation:</i></b>	There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.
<b><i>Temporal Representation:</i></b>	The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October 2002 at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.
<b><i>Data Quality Assessment:</i></b>	NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure with acceptable results.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	CO - Cold Freshwater Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	There is no NCRWQCB Basin Plan Water Quality Objective for Chlorophyll-a applicable to Salmon River HA.
<b><i>Evaluation Guideline:</i></b>	There are no applicable criteria for Chlorophyll-a that could be used for the Salmon River.
<b><i>Data Used to Assess Water</i></b>	The grab samples were analyzed for Chlorophyll-a in addition to pH,

<i>Quality:</i>	dissolved oxygen, temperatures and specific conductance. There were 55 measurements the majority of which were non detects (North Coast RWQCB, 2004c)
<i>Spatial Representation:</i>	There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.
<i>Temporal Representation:</i>	The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October 2002 at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.
<i>Data Quality Assessment:</i>	NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure with acceptable results.

<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	Phosphorus is considered in the narrative objective for bio-stimulatory substances. There are no applicable criteria for Phosphorus that could be used for the Salmon River. In 2002, SWRCB staff recommended not listing for elemental phosphorus for Laguna de Santa Rosa because there was no appropriate phosphorus objective or evaluation guideline to interpret the narrative objective that was available to the NCRWQCB.
<i>Data Used to Assess Water Quality:</i>	The grab samples were analyzed for Phosphorus in addition to pH, dissolved oxygen, temperatures and specific conductance. There were 55 measurements in total the majority of which were non detects. With all non-detect values at the Mainstem Salmon River at USGS Gage Station; All non-detects and a value of 0 on 6/10/2002 at Wooley Creek Station; With all non-detects at Mainstem Salmon River at Forks of Salmon Station; All non-detects at North Fork Salmon at Sawyers Bar Station; and all non-detect values at South Fork Salmon at Cecilville (North Coast RWQCB, 2004c)

*Spatial Representation:* There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.

*Temporal Representation:* The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October 2002 at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.

*Data Quality Assessment:* NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure with acceptable results.

*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* There is no NCRWQCB Basin Plan Water Quality Objective for Ammonia as Nitrogen applicable to Salmon River HA.

*Evaluation Guideline:* There are no applicable criteria for Ammonia as Nitrogen that applies.

*Data Used to Assess Water  
Quality:* The grab samples were analyzed for Ammonia as Nitrogen in addition to pH, dissolved oxygen, temperatures and specific conductance. There were 55 measurements in total the majority of which were non detects. With non-detect values and a value at 0.052 on 6/10/2002, and another at 0.062 on 7/23/2002 at the mainstem Salmon River at USGS Gage Station; Non-detects and a value of 0.056 on 6/10/2002 and 0.052 on 7/22/2002 at Wooley Creek Station; With all non-detects at mainstem Salmon River at Forks of Salmon Station; All non-detects at North Fork Salmon at Sawyers Bar Station; and all non-detect values at South Fork Salmon at Cecilville (North Coast RWQCB, 2004c).

*Spatial Representation:* There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.

*Temporal Representation:* The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October 2002 at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.

*Data Quality Assessment:* NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure with acceptable results.

*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* There is no NCRWQCB Basin Plan Water Quality Objective for Nitrate/Nitrite as Nitrogen applicable to Salmon River HA. There is a Municipal Beneficial Use for Salmon River HA.

*Evaluation Guideline:* With regards to the Municipal beneficial use applicable to Salmon River. The MCL Criteria for Nitrate/Nitrite as Nitrogen apply. Title 22(www.calregs.com) Table 64431-A lists the MCL--Inorganic Chemicals criteria for Nitrate/Nitrite as Nitrogen as 10.0 mg/L.

*Data Used to Assess Water  
Quality:* The grab samples were analyzed for Nitrate/Nitrite as Nitrogen in addition to pH, dissolved oxygen, temperatures and specific conductance. There were 55 measurements in total the majority of which were non detects. With all non-detect values at the Mainstem Salmon River at USGS Gage Station; All non-detects at Wooley Creek Station; With non-detects and one value of 0.15 on 6/11/02 at Mainstem Salmon River at Forks of Salmon Station; All non-detects at North Fork Salmon at Sawyers Bar Station; and non-detect values and one value at 0.058 at South Fork Salmon at Cecilville (North Coast RWQCB, 2004c).

*Spatial Representation:* There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.

*Temporal Representation:* The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October 2002 at locations in the

Salmon River watershed located immediately downstream of community centers within the watershed.

*Data Quality Assessment:* NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure with acceptable results.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* There is no NCRWQCB Basin Plan Water Quality Objective for Total Kjeldahl Nitrogen (TKN) applicable to Salmon River HA.

*Data Used to Assess Water  
Quality:* The grab samples were analyzed for TKN in addition to pH, dissolved oxygen, temperatures and specific conductance. There were 55 measurements in total the majority of which were non detects. With non detect values and one value of 0.7 on 7/23/02 at the Mainstem Salmon River at USGS Gage Station; All non-detects at Wooley Creek Station; With non-detects and one value of 0.6 on 7/23/02 at Mainstem Salmon River at Forks of Salmon Station; All non-detects at North Fork Salmon at Sawyers Bar Station; and non-detect values and one value at 0.8 at South Fork Salmon at Cecilville (North Coast RWQCB, 2004c).

*Spatial Representation:* There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.

*Temporal Representation:* The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impact of the nutrients in the Salmon River. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October 2002 at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.

*Data Quality Assessment:* NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure with acceptable results.

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***Numeric Line of Evidence*** Pollutant-Nuisance



<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	-N/A
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Water shall not contain bio-stimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	The rationale for conducting the survey was to evaluate the "nuisance" growths of aquatic plants, in relation to the narrative objective for bio-stimulatory substances in the Basin Plan.
<i>Data Used to Assess Water Quality:</i>	In all but a few cases, all nutrient parameters were non detect. Based on the available data, there is no indication that nutrients are impairing the Salmon river watershed. Analytical results of nutrient grab samples were generally non-detect. Observations of attached algae, presence of which represents a primary biological response to nutrient concentrations in streams, indicate that aquatic plants do not reach nuisance levels (North Coast RWQCB, 2004c).
<i>Spatial Representation:</i>	There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.
<i>Temporal Representation:</i>	The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.
<i>Data Quality Assessment:</i>	NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Nuisance
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: The pH shall conform to those limits listed in Table 3-1. For waters not listed in Table 3-1 and where pH objectives are not prescribed, the pH shall not be depressed below 6.5 nor raised above 8.5. Changes in

normal ambient pH levels shall not exceed 0.2 units in waters with designated marine (MAR) or saline (SAL) beneficial uses nor 0.5 units within the range specified above in fresh waters with designated COLD or WARM beneficial uses.

<i>Evaluation Guideline:</i>	Table 3-1 in the NCRWQCB Basin Plan lists the Salmon River HA (All streams) WQO for pH as a minimum at 7.0 and the maximum at 8.5.
<i>Data Used to Assess Water Quality:</i>	The grab samples were analyzed for pH in addition to dissolved oxygen, temperatures and specific conductance. They were measured using an YSI 600XL Datasonde when grab samples were collected. There were 25 pH measurements in total with an average pH of 7.55. The WQO for Salmon River is attained by all samples except for one measurement taken on 6/11/02 that was below the 7.0 WQO at 6.97 (North Coast RWQCB, 2004c).
<i>Spatial Representation:</i>	There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.
<i>Temporal Representation:</i>	The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October 2002 at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.
<i>Data Quality Assessment:</i>	NCRWQCB QA. Data were collected compliant with a quality assurance plan. Blind duplicate samples were collected as a data quality control measure with acceptable results.

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<b><i>Line of Evidence</i></b>	Pollutant-Nuisance
<b><i>Beneficial Use</i></b>	CO - Cold Freshwater Habitat
<b><i>Information Used to Assess Water Quality:</i></b>	The Salmon River, tributary to the Klamath River in Siskiyou County, was included in a nutrient impaired listing of Hydrologic Unit 105.00 (Klamath River Basin) pursuant to the requirements of CWA 303(d). The Klamath River mainstem is the subject of separate analysis and TMDL development for impairments, of which nutrients is one.
<b><i>Non-Numeric Objective:</i></b>	Basin Plan: Water shall not contain bio-stimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

<i>Evaluation Guideline:</i>	The rationale for conducting the survey was to evaluate the "nuisance" growths of aquatic plants, in relation to the narrative objective for bio-stimulatory substances in the Basin Plan.
<i>Data Used to Assess Water Quality:</i>	In all but a few cases, all nutrient parameters were non detect. There is no indication that the Salmon River Watershed is impaired by nutrients. Observations of attached algae indicate that aquatic plants do not reach nuisance levels. Quasi-Quantitative surveys of the percent cover of attached algae in the river at the monitoring location were conducted in July and August 2002. The surveys involved making visual assessments of the percent cover of attached algae and the conditions of the algal community within the immediate vicinity of the monitoring locations (North Coast RWQCB, 2004c).
<i>Spatial Representation:</i>	There were 5 sampling locations. The sampling locations included the North Fork downstream of Sawyers Bar, the South Fork downstream of Cecilville, the Salmon River downstream of Forks of Salmon and Salmon River near the mouth. In addition, grab samples were collected near the mouth of Wooley Creek; this site was considered a control site, as the sub-watershed is a wilderness area.
<i>Temporal Representation:</i>	The Salmon River was added to the list for nutrients in 1992. In the summer of 2002 NCRWQCB Staff conducted a water quality monitoring effort to evaluate impairment of the Salmon River by nutrients. The monitoring plan involved collecting grab samples on three consecutive days once per month in June through October at locations in the Salmon River watershed located immediately downstream of community centers within the watershed.

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## Region 1

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**Water Segment:** Russian River HU, Lower Russian River HA, Guerneville HSA

**Pollutant:** Turbidity

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 4.2 of the Listing Policy. Under section 4.2 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. None of the samples out of 27 samples collected for Pocket Canyon Creek a tributary of the Russian River HU exceeded the 25 NTU turbidity evaluation guideline used to interpret the water quality objective. Only the Pocket Canyon Creek portion that was sampled for the Guerneville HSA should be removed from the list. The other lines of evidence collected from Dutch Bill Creek, Lancel Creek, and Jenner Creek did not have enough samples to be considered for a delisting in the Guerneville HSA. These segments should remain listed on the 303(d) List as they are currently listed for sedimentation for this water segment.

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 for Pocket Canyon Creek portion of this HSA only, 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 27 samples collected for Pocket Canyon Creek exceeded the turbidity water quality objective and this does not exceed the allowable frequency listed in Table 4.2 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 for the Pocket Canyon Creek portion of the Guerneville HSA should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded. The rest of the segments currently listed under the Russian River HU, Lower Russian River HA, Guerneville HSA should remain on the 303(d) List as they are currently.

## Lines of Evidence:

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	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 beneficial uses. Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. Water shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	The evaluation guideline that has been used to determine turbidity exceedance is from published-peer reviewed paper, "The Effects of Chronic Turbidity on Density and Growth of Steelheads and Coho Salmon", John W Sigler (1984). The guideline is "In our studies, as little as 25 NTUs of turbidity caused a reduction in fish growth."
<i>Data Used to Assess Water Quality:</i>	None of the turbidity samples were in exceedance of the turbidity evaluation guideline of 25 NTU.
<i>Spatial Representation:</i>	All samples were taken at sampling location Lancel Creek a tributary to Dutch Bill Creek which is tributary to the Russian River. The sampling location LAN010 is located at Occidental.
<i>Temporal Representation:</i>	Samples were taken once a month in April, May, June, September, October and December 2003.
<i>Data Quality Assessment:</i>	Draft QAPP for Volunteer Water Quality Monitoring Project for the Community Clean Water Institute.

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
<i>Matrix:</i>	Water

*Water Quality Objective/  
Water Quality Criterion:* 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 beneficial uses. Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. Water shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* The evaluation guideline that has been used to determine turbidity exceedance is from published-peer reviewed paper, "The Effects of Chronic Turbidity on Density and Growth of Steelheads and Coho Salmon", John W Sigler (1984). The guideline is "In our studies, as little as 25 NTUs of turbidity caused a reduction in fish growth."

*Data Used to Assess Water Quality:* There were no exceedances at the JEN020 location. There were 2 exceedances of the evaluation guideline at the RUS010 location. These exceedances were on 1/29/2003 at 42.1 NTU and on 4/30/2003 at 35.3 NTU. The two locations considered for Jenner Creek there were 12 turbidity samples total with 2 exceedances (Sandler, 2004).

*Spatial Representation:* There were two sampling locations. All samples were along Jenner Creek, a tributary to the lower Russian River. JEN020 is located by fish ladder, Jenner. RUS010 is located near a boat house, Jenner.

*Temporal Representation:* Samples were taken once a month, a single measurement on one day at each site during January, February, April, May, August and November 2003.

*Data Quality Assessment:* Draft QAPP for Volunteer Water Quality Monitoring Project for the Community Clean Water Institute.

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* 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 beneficial uses. Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. Water shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.

<i>Evaluation Guideline:</i>	The evaluation guideline that has been used to determine turbidity exceedance is from published-peer reviewed paper, "The Effects of Chronic Turbidity on Density and Growth of Steelheads and Coho Salmon", John W Sigler (1984). The guideline is "In our studies, as little as 25 NTUs of turbidity caused a reduction in fish growth."
<i>Data Used to Assess Water Quality:</i>	There were no exceedances of the turbidity evaluation guideline. All of the turbidity samples were well below the evaluation guideline (Sandler, 2004).
<i>Spatial Representation:</i>	All samples were along Dutch Bill Creek. There were five sampling locations. These locations are: DBC010 is located near the fish ladder at Occidental.  DBC020 is located at Westminster, downstream from Bohemian Ranch, Occidental. DBC030 is located at Camp Meeker dam. DBC050 is located 75 yards downstream from pump station, Occidental. DBC060 is located at Graton Rd. and Main St., at bridge, Occidental.
<i>Temporal Representation:</i>	Samples were taken once a month, a single measurement on one day at each station during April, May, June, September, October and December 2003.  Samples were taken at DBC050 and DBC060 once a month, a single measurement on one day at each station during April, May, June, September and December 2003.
<i>Data Quality Assessment:</i>	Draft QAPP for Volunteer Water Quality Monitoring Project for the Community Clean Water Institute.

<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	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 beneficial uses. Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. Water shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	The evaluation guideline that has been used to determine turbidity exceedance is from published-peer reviewed paper, "The Effects of Chronic Turbidity on Density and Growth of Steelheads and Coho

Salmon", John W Sigler (1984). The guideline is "In our studies, as little as 25 NTUs of turbidity caused a reduction in fish growth."

*Data Used to Assess Water Quality:*

All of the samples are below the 25 NTU turbidity evaluation guideline with a range of measurements from 0.4 NTU to 6.54 NTU (Sandler, 2004).

*Spatial Representation:*

Sampling was done at three locations in Pocket Creek a tributary to the lower Russian River within the greater Guerneville HSA. PCC020 is located in Guerneville, at 12170 Hwy 116, downstream of Inn and the tank in the creek.

PCC030 is located in Guerneville, at 11900 Hwy 116, in the backyard. PCC040 is located in Guerneville, 50 feet upstream from bridge along Hwy 116 at May's Canyon Road.

*Temporal Representation:*

Samples were taken once a month on the same days at each station during January, February, March, May, and August through December 2003.

*Data Quality Assessment:*

Draft QAPP for Volunteer Water Quality Monitoring Project for the Community Clean Water Institute.

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## Region 1

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**Water Segment:** Russian River HU, Middle Russian River HA, Laguna de Santa Rosa

**Pollutant:** Nitrogen

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 4.2 of the Listing Policy. Under this section a single line of evidence is necessary to assess listing status. Thirteen 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. There were six lines of evidence for Nitrogen in the Laguna de Santa Rosa. There were two lines of evidence for Nitrogen-Nitrate. There was one line of evidence for Nitrite. There were three lines of evidence for Ammonia as Nitrogen. For all of these constituents there is no guideline available to interpret the narrative objective so it cannot be determined if the data exceed the allowable frequency listed in Table 4.1 of the Listing Policy.

The single line of evidence for nitrate, collected by the RWQCB Nutrient TMDL Monitoring Program, shows no exceedance of the MCL 45 mg/L criteria applied through the Municipal and Domestic Beneficial Use for the Laguna De Santa Rosa. This nitrate information 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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	AG - Agricultural Supply
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<b><i>Evaluation Guideline:</i></b>	Data is recorded as TIN:TP ratio. TIN:TP ratio is considered in the narrative objective for biostimulatory substances. However, there is no applicable numeric water quality criterion for TIN:TP ratio. Therefore, it is difficult to determine that the concentration of TIN:TP ratio exceeds standards.
<b><i>Data Used to Assess Water Quality:</i></b>	Twenty-five sampling events were completed by the City of Santa Rosa NPDES Program. The TIN:TP ratios for the 101 samples taken ranged from 2.5 to 29.1667 with an average value of 4.365 and a standard deviation of 3.282. There was a 99% confidence interval of 0.841. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare to the TIN:TP ratios. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is due solely to the TIN:TP ratio levels (Scoles, 2004).
<b><i>Spatial Representation:</i></b>	Samples were collected at up to 4 sampling sites: Laguna at Todd Road, Upstream at Delta, Laguna upstream of D-Pond Incline pump, and Laguna upstream of Llano Rd. Bridge.
<b><i>Temporal Representation:</i></b>	Samples were collected between 1/2003 and 12/2003.
<b><i>Data Quality Assessment:</i></b>	City of Santa Rosa Quality Assurance Manual.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	AG - Agricultural Supply
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<b><i>Evaluation Guideline:</i></b>	Total Inorganic Nitrogen was measured and is considered in the narrative objective for biostimulatory substances. However, there is no applicable

numeric water quality criterion for total inorganic nitrogen. Therefore, it is difficult to determine that the concentration of total inorganic nitrogen exceeds standards.

*Data Used to Assess Water Quality:*

Sixty sampling events were completed by the City of Santa Rosa NPDES Program. The values of the total inorganic nitrogen ranged from 0.3 to 12.2. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare to the concentration of total inorganic nitrogen. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is solely due to the total inorganic nitrogen levels (Scoles, G. 2004).

*Spatial Representation:*

Samples were collected from up to 12 sites: Laguna at Llano Road, Laguna at Todd Road, Laguna at Hwy 12, and Laguna at Occidental Bridge, Laguna 100 feet upstream of D-Pond Incline Pump, Laguna 150 feet downstream of D-Pond Incline Pump, Laguna at La Franchi, Laguna-approximately 100 feet upstream of Llano Rd. Bridge, Laguna upstream of D-Pond 36, upstream Laguna at Delta, Russian River at Wohler Bridge, Russian River at Mirabel, upstream Roseland Cr. at Llano Rd., downstream Roseland Cr. at Summer Crossing/South of Alpha Bldg., upstream Kelly-downstream confluence of Duer Creek and Kelly Farm Drainage, downstream Duer Creek at Kelly, Colgan Creek upstream confluence with Laguna.

*Temporal Representation:*

Samples were collected between 10/1995 and 3/2004.

*Data Quality Assessment:*

City of Santa Rosa Quality Assurance Manual.

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***Numeric Line of Evidence***

Pollutant-Water

*Beneficial Use:*

AG - Agricultural Supply

*Matrix:*

Water

*Water Quality Objective/  
Water Quality Criterion:*

Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:*

Total Organic Nitrogen was measured and is considered in the narrative objective for biostimulatory substances. However, there is no numeric water quality criterion for total organic nitrogen. Therefore, it is difficult to determine that the concentration of total organic nitrogen exceeds standards.

*Data Used to Assess Water Quality:*

Twenty-five sampling events were conducted by the City of Santa Rosa NPDES Program. The samples ranged from values of 0.2 mg/L to 2.3 mg/L total organic nitrogen. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare to the concentration of total organic nitrogen. Therefore, it is

difficult to determine whether the decrease in dissolved oxygen is solely due to the total organic nitrogen levels (Scoles, G. 2004).

*Spatial Representation:* Sample were collected at up to 4 sites: Laguna at Todd Road, Upstream at Delta, Laguna upstream of D-Pond Incline pump, and Laguna upstream of Llano Rd. Bridge.

*Temporal Representation:* Sample were collected between 1/2003 and 12/2003.

*Data Quality Assessment:* City of Santa Rosa Quality Assurance Manual.

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* Data is reported in TIN: 0.80 TP (Bioavailable N:P ratio). TIN: 0.80 TP is considered in the narrative objective for biostimulatory substances. However, there is no applicable numeric water quality criterion for TIN: 0.80 TP. Therefore, it is difficult to determine that the concentration of TIN: 0.80 TP exceeds standards.

*Data Used to Assess Water Quality:* Sixty sampling events were completed by the City of Santa Rosa NPDES Program. The range of measured values for the ratio of TIN: 0.80 TP was from 0.3 to 16.9. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare to the concentration of TIN: 0.80 TP. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is due solely to the TIN: 0.80 TP levels (Scoles, 2004).

*Spatial Representation:* Samples were collected from up to 12 sites: Laguna at Llano Road, Laguna at Todd Road, Laguna at Hwy 12, and Laguna at Occidental Bridge, Laguna 100 feet upstream of D-Pond Incline Pump, Laguna 150 feet downstream of D-Pond Incline Pump, Laguna at La Franchi, Laguna-approximately 100 feet upstream of Llano Rd. Bridge, Laguna upstream of D-Pond 36, upstream Laguna at Delta, Russian River at Wohler Bridge, Russian River at Mirabel, upstream Roseland Cr. at Llano Rd., downstream Roseland Cr. at Summer Crossing/South of Alpha Bldg., upstream Kelly-downstream confluence of Duer Creek and Kelly Farm Drainage, downstream Duer Creek at Kelly, Colgan Creek upstream confluence with Laguna.

*Temporal Representation:* Samples were collected between 10/1995 and 3/2004.

*Data Quality Assessment:* City of Santa Rosa Quality Assurance Manual.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* Data is reported in TIN: 0.80 TP (Bioavailable N:P ratio). TIN: 0.80 TP is considered in the narrative objective for biostimulatory substances. However, there is no applicable numeric water quality criterion for TIN: 0.80 TP. Therefore, it is difficult to determine that the concentration of TIN: 0.80 TP exceeds standards.

*Data Used to Assess Water Quality:* Eighty-Six sampling events were conducted by the RWQCB Nutrient TMDL Program. The values of the TIN: 0.80 TP recorded ranged from 0.03 up to 20.02. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare to the measurement of TIN: 0.80 TP. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is due solely to the TIN: 0.80 TP levels (Scoles, 2004).

*Spatial Representation:* Up to four sample sites: Laguna at Guernville Road, Laguna at Occidental Road, Laguna at Stony Point Road and Laguna at Trenton-Healdsburg Road.

*Temporal Representation:* Samples were collected between 7/1997 and 11/2000.

*Data Quality Assessment:* Nutrient TMDL Program.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WI - Wildlife Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* Nitrate-Nitrogen is considered in the narrative objective for biostimulatory substances. However, there is no numeric water quality criterion for nitrate-nitrogen. Therefore, it is difficult to determine that the concentration of nitrate-nitrogen exceeds standards.

*Data Used to Assess Water Quality:* Sixty sampling events were conducted by the City of Santa Rosa NPDES Program. The sample values ranged from 0.2 mg/L to 9.7 mg/L and the values were presented as monthly averages of weekly observations. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare to the concentration of nitrate-nitrogen. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is solely to the nitrate-nitrogen levels (Scoles, 2004).

*Spatial Representation:* Samples were collected from up to 12 sites: Laguna at Llano Road, Laguna at Todd Road, Laguna at Hwy 12, and Laguna at Occidental Bridge, Laguna 100 feet upstream of D-Pond Incline Pump, Laguna 150 feet downstream of D-Pond Incline Pump, Laguna at La Franchi, Laguna-approximately 100 feet upstream of Llano Rd. Bridge, Laguna upstream of D-Pond 36, upstream Laguna at Delta, Russian River at Wohler Bridge, Russian River at Mirabel, upstream Roseland Cr. at Llano Rd., downstream Roseland Cr. at Summer Crossing/South of Alpha Bldg., upstream Kelly-downstream confluence of Duer Creek and Kelly Farm Drainage, downstream Duer Creek at Kelly, Colgan Creek upstream confluence with Laguna.

*Temporal Representation:* Samples were collected between 10/1995 and 3/2004.

*Data Quality Assessment:* City of Santa Rosa QA Manual.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WI - Wildlife Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* There is no applicable criteria available for Ammonia-Nitrogen.

*Data Used to Assess Water Quality:* Twenty-five sampling events were completed by the City of Santa Rosa NPDES Program. There were 101 samples taken for Ammonia-Nitrogen, the values ranged from 0.2 mg/L to 1.1mg/L. The number of exceedances of the standard was not possible to calculate due to the lack of an applicable criterion for Ammonia-Nitrogen to compare to the measured values (Scoles, 2004).

*Spatial Representation:* Samples were collected at up to 4 sampling sites: Laguna at Todd Road, Upstream at Delta, Laguna upstream of D-Pond Incline pump, and Laguna

upstream of Llano Rd. Bridge.

*Temporal Representation:* Samples were collected between 1/2003 and 12/2003.

*Data Quality Assessment:* City of Santa Rosa QA Manual.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat, MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* Nitrate is considered in the narrative objective for biostimulatory substances. There not a nitrate numeric water quality criterion for the Cold Water Beneficial Use. However, for the beneficial use of Municipal and Domestic Supply (MUN), the MCL Criteria for Nitrates is 45 mg/L (ppm) can be considered.

*Data Used to Assess Water  
Quality:* Eighty-six sampling events were conducted by the RWQCB Nutrient TMDL Monitoring Program. There were no samples that exceeded the 45 mg/L MCL criteria (Scoles, 2004).

*Spatial Representation:* Samples were collected from up to 4 sample sites: Laguna at Guernville Road, Laguna at Occidental Road, Laguna at Stony Point Road, and Laguna at Trenton-Healdsburg Road.

*Temporal Representation:* Samples were collected between 7/1997 and 11/2000.

*Data Quality Assessment:* RWQCB TMDL Monitoring Program

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat, MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

<i>Evaluation Guideline:</i>	Nitrite is considered in the narrative objective for biostimulatory substances. However, there is no applicable numeric water quality criterion for nitrite. Therefore, it is difficult to determine that the concentration of nitrite exceeds standards.
<i>Data Used to Assess Water Quality:</i>	Eighty-six sampling events were completed by the RWQCB Nutrient TMDL Program. The nitrite values ranged from 0.025mg/L to 0.28 mg/L. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective/criteria to compare the concentration of nitrite. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is due solely to the nitrite levels (Scoles, G. 2004).
<i>Spatial Representation:</i>	Up to four sample sites: Laguna at Guernville Road, Laguna at Occidental Road, Laguna at Stony Point Road, and Laguna at Trenton-Healdsburg Road.
<i>Temporal Representation:</i>	Samples were collected between 7/1997 - 11/2000.
<i>Data Quality Assessment:</i>	Nutrient TMDL Program.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	AG - Agricultural Supply, CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	There is no applicable criteria available for Ammonia-Nitrogen.
<i>Data Used to Assess Water Quality:</i>	There were 86 sampling events completed by the RWQCB TMDL Monitoring Program. The range of values measured was from 0.025 mg/L to 3.24 mg/L. There is not a numeric objective or criteria to compare to the concentration of ammonia-nitrogen in the samples. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is due solely to the ammonia-nitrogen concentration levels (Scoles, 2004).
<i>Spatial Representation:</i>	Up to four sample sites: Laguna at Guernville Road, Laguna at Occidental Road, Laguna at Stony Point Road and Laguna at Trenton-Healdsburg Road.
<i>Temporal Representation:</i>	Samples were collected between 7/1997 and 11/2000.
<i>Data Quality Assessment:</i>	RWQCB Nutrient TMDL Program.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
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<i>Beneficial Use:</i>	AG - Agricultural Supply, CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	There is no applicable criteria available for Ammonia-Nitrogen.
<i>Data Used to Assess Water Quality:</i>	Twenty-five sampling events were conducted by the City of Santa Rosa NPDES Program. The values of the measurements ranged from 0.2 mg/L to 1.1 mg/L. The number of exceedances of the standard was not calculated due to the lack of an applicable criterion for Ammonia-Nitrogen to compare to the measured values (Scoles, 2004).
<i>Spatial Representation:</i>	Samples were collected at up to 4 sites: Laguna at Todd Road, Upstream at Delta, Laguna upstream of D-Pond Incline pump, and Laguna upstream of Llano Rd. Bridge.
<i>Temporal Representation:</i>	Samples were collected between 1/2003 and 12/2003.
<i>Data Quality Assessment:</i>	City of Santa Rosa QA Manual.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	AG - Agricultural Supply, CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	There is no applicable criteria available for Ammonia-Nitrogen.
<i>Data Used to Assess Water Quality:</i>	There were sixty samples events from the City of Santa Rosa NPDES Program. The measured values ranged from 0.1 mg/L to 6.8 mg/L. The number of exceedances of the standard was not calculated due to the lack of an applicable criterion for Ammonia-Nitrogen to compare to the measured values (Scoles, 2004).
<i>Spatial Representation:</i>	Samples were collected from up to 12 sites: Laguna at Llano Road, Laguna at Todd Road, Laguna at Hwy 12, and Laguna at Occidental Bridge, Laguna 100 feet upstream of D-Pond incline Pump, Laguna 150 feet downstream of D-Pond Incline Pump, Laguna at La Franchi, Laguna-approximately 100 feet upstream of Llano Rd. Bridge, Laguna upstream of D-Pond 36, upstream Laguna at Delta, Russian River at Wohler Bridge, Russian River at Mirabel, upstream Roseland Cr. at Llano Rd., downstream Roseland Cr. at Summer Crossing/South of Alpha Bldg., upstream Kelly-downstream confluence of Duer Creek and Kelly Farm Drainage, downstream Duer Creek at Kelly, Colgan Creek upstream confluence with Laguna.

*Temporal Representation:* Samples were collected between 12/1995 and 3/2004.

*Data Quality Assessment:* City of Santa Rosa QA Manual.

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***Line of Evidence*** Pollutant-Water

*Beneficial Use* AG - Agricultural Supply

*Information Used to Assess Water Quality:* More information is needed to determine whether eliminating as many of the nitrogen pollution sources as possible would control the Ludwigia abundance, and whether reducing phosphorus will result in improving dissolved oxygen and controlling Ludwigia in the Laguna.

*Non-Numeric Objective:* Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Data Used to Assess Water Quality:* The ratio of N to P in the Laguna for data collected by the Regional Board is part of its nitrogen TMDL monitoring. The City of Santa Rosa collects nitrogen and phosphorus data as part of its NPDES discharge permit compliance monitoring. For both the Regional Board data set and the City's NPDES data set, total phosphorus was measured, but dissolved P was not measured (Scoles, 2004).

Since the City's NPDES Nitrogen to Phosphorus (N:P) ratios are derived from monthly averages, an evaluation was completed by the City of Santa Rosa to come up with N:P ratios determined from monthly averaged nitrogen and phosphorus data are representative of N:P ratios from individual measurements. The individual sample data for 2003, which had 101 measurements, were used to calculate individual N:P ratios for comparison to the monthly average values. The average of these individual N:P ratios was 4.4 with a 99 percent confidence interval of  $\pm 0.8$  compared to the average of the monthly average N:P ratios for the same period of 3.9. No statistically significant difference exists between the monthly and the daily data (Mann Whitney Rank Sum test  $p = 0.683$ .) The City determined that the N:P ratios based on monthly average values are representative of nutrient conditions in the Laguna.

*Spatial Representation:* The data from the NCRWQCB Nutrient TMDL monitoring were collected in the Laguna at Stony Point, Occidental, Guerneville, and Trenton Healdsburg roads.

*Temporal Representation:* The Nutrient TMDL monitoring program has had no phosphorus samples collected since November 2000. The City of Santa Rosa collected nutrient data during the discharge season between December 1995 and March 2004.

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## Region 1

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**Water Segment:** Russian River HU, Middle Russian River HA, Laguna de Santa Rosa

**Pollutant:** Phosphorus

**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 this section a single line of evidence is necessary to assess listing status. Eight 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. There is no numerical guideline available for phosphorus 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. There is no guideline available that is applicable to the NCRWQCB to interpret the narrative biostimulatory objective as it is considered for phosphorus. It is not possible to determine if the information exceeds the allowable frequency listed in Table 4.1 of the Listing Policy. The phosphorus listing made by USEPA for this water segment in July of 2003 relied upon the nitrogen and phosphorus targets in the Malibu Creek TMDL which is not appropriate nor is it in accordance with the Listing Policy.
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:**

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*Numeric Line of Evidence*      Pollutant-Water

<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	Phosphorus is considered in the narrative objective for biostimulatory substances. The RWQCB initially used a USEPA goal for phosphorus to interpret the data. The use of the phosphorus goal does not address the conditions present in the Laguna de Santa Rosa. There is significant disagreement over phosphorus limitation in the Laguna. The response of water bodies to nutrient enrichment differ among water bodies and one applicable nutrient objective is not available. USEPA and the state are in the process of developing nutrient objectives for the bioregions of California.
<i>Data Used to Assess Water Quality:</i>	Even though there are 10 water chemistry samples, there is no applicable guideline that can be used to interpret the narrative standard. Even though a phosphorus goal is not applicable in this specific situation, it is clear that the Laguna de Santa Rosa does not meet standards for low dissolved oxygen. It is also clear that nutrient concentrations are a probable cause of the low oxygen concentrations. New monitoring should be completed that identifies the contribution of nutrients and their relationship to the observed low oxygen concentrations (SWRCB, 2003).
<i>Spatial Representation:</i>	There were 10 targeted sites along the creek.
<i>Temporal Representation:</i>	The Data was collected over 5-6 Years between 1995 and 2001, and it was collected over four seasons.
<i>Data Quality Assessment:</i>	This data came from the NCRWQCB 2002 Listing Update.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	Phosphorus is considered in the narrative objective for biostimulatory substances. In 2002, SWRCB staff recommended not listing for elemental phosphorus because there was not an appropriate phosphorus objective available for Laguna de Santa Rosa. However, USEPA listed Laguna de

Santa Rosa for phosphorus by determining exceedances using criteria from another Region. Since there is not appropriate criteria, it is difficult to determine whether the concentration of total phosphorus exceeded standards.

*Data Used to Assess Water Quality:*

There were 86 sampling events conducted by the RWQCB TMDL Monitoring Program at the 3 to 4 sampling sites between 7/1997 and 11/2000. The data range for values of total phosphorus was between 0.113 mg/L and 1.87 mg/L. Even though there is a narrative objective for biostimulatory substance, there is not a numeric objective or criteria to compare to the concentration of total phosphorus measured. Exceedance of the water quality standard can not be determined (Scoles, 2004).

*Spatial Representation:*

Three to four sample sites (Laguna at Guernville Road, Laguna at Occidental Road, Laguna at Stony Point Road and Laguna at Trenton-Healdsburg Road).

*Temporal Representation:*

Samples were collected between 7/1997 and 11/2000.

*Data Quality Assessment:*

Nutrient TMDL Program.

***Numeric Line of Evidence***

Pollutant-Water

*Beneficial Use:*

CO - Cold Freshwater Habitat

*Matrix:*

Water

*Water Quality Objective/  
Water Quality Criterion:*

Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:*

Phosphorus is considered in the narrative objective for biostimulatory substances. In 2002, SWRCB staff recommended not listing for elemental phosphorus because there was not an appropriate phosphorus objective available for Laguna de Santa Rosa. However, USEPA listed Laguna de Santa Rosa for phosphorus by determining exceedances using criteria from another Region. Since there is not appropriate criteria, it is difficult to determine whether the concentration of total phosphorus exceeded standards.

*Data Used to Assess Water Quality:*

There were sixty sampling events completed by the City of Santa Rosa NPDES Program at up to 12 sample sites between 12/1995 and 3/2004. The data range for values of total phosphorus was between 0.1 mg/L and 3.9 mg/L. Even though there is a narrative objective for biostimulatory substance, there is not a numeric objective or criteria to compare to the concentration of total phosphorus measured. Exceedance of the water quality standard can not be determined (Scoles, 2004).

*Spatial Representation:* Samples were collected from 2 to 12 sites (Laguna at Llano Road, Laguna at Todd Road, Laguna at Hwy 12, and Laguna at Occidental Bridge, Laguna 100' upstream of D-Pond Incline Pump, Laguna 150' downstream of D-Pond Incline Pump, Laguna at La Franchi, Laguna-approx 100' upstream of Llano Rd. Bridge, Laguna upstream of D-Pond 36", upstream Laguna @ Delta, Russian River at Wohler Bridge, Russian River at Mirabel, upstream Roseland Cr. @ Llano Rd., downstream Roseland Cr. @ Summer Crossing/South of Alpha Bldg., upstream Kelly-downstream confluence of Duer Creek and Kelly Farm Drainage, downstream Duer Creek at Kelly, Colgan Creek upstream confluence with Laguna.

*Temporal Representation:* Samples were collected during 12/95 through 3/04.

*Data Quality Assessment:* City of Santa Rosa QA Manual.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

*Evaluation Guideline:* Data reported in 80% TP (total phosphorus). 80% TP is considered in the narrative objective for biostimulatory substances. There is no numeric water quality criterion for 80% TP. Therefore, it is difficult to determine that the concentration of nitrate-nitrogen exceeds standards.

*Data Used to Assess Water  
Quality:* Eighty-six sampling events were conducted by the RWQCB TMDL Program. The range of values of 80% TP was between 0.02 and 2.38. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare the concentration of 80% TP. Therefore, it is difficult to determine whether the decrease in dissolved oxygen is solely due to the 80% TP (SWRCB, 2003).

*Spatial Representation:* Three to four sample sites (Laguna at Guernville Road, Laguna at Occidental Road, Laguna at Stony Point Road and Laguna at Trenton-Healdsburg Road.

*Temporal Representation:* Samples were collected between 7/1997 and 11/2000.

*Data Quality Assessment:* NCRWQCB Nutrient TMDL Program.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	CO - Cold Freshwater Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
<b><i>Evaluation Guideline:</i></b>	Phosphorus is considered in the narrative objective for biostimulatory substances. In 2002, SWRCB staff recommended not listing for elemental phosphorus because there was not an appropriate phosphorus objective available for Laguna de Santa Rosa. However, USEPA listed Laguna de Santa Rosa for phosphorus by determining exceedances using criteria from another Region. Since there is not appropriate criteria, it is difficult to determine whether the concentration of total phosphorus exceeded standards.
<b><i>Data Used to Assess Water Quality:</i></b>	Twenty-five sampling events were completed by the City of Santa Rosa NPDES at up to 5 sample site between 1/2003 and 12/2003. The range of values for total phosphorus measured was between 0.4 mg/L and 1.6 mg/L. Even though there is a narrative objective for biostimulatory substance there is not a numeric objective or criteria to compare to the concentration of total phosphorus (Scoles, 2004).
<b><i>Spatial Representation:</i></b>	Samples were collected up to 4 sites: Laguna at Todd Road, upstream at Delta, Laguna upstream of D-Pond Incline pump, and Laguna upstream of Llano Rd. Bridge.
<b><i>Temporal Representation:</i></b>	Samples were collected between 1/2003 and 12/2003.
<b><i>Data Quality Assessment:</i></b>	City of Santa Rosa QA Manual.

<b><i>Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use</i></b>	CO - Cold Freshwater Habitat
<b><i>Information Used to Assess Water Quality:</i></b>	More information is needed to determine whether elevated phosphorus in the Laguna is the cause of the low dissolved oxygen and increased Ludwigia abundance, and whether reducing phosphorus will result in improving dissolved oxygen and controlling Ludwigia in the Laguna.
<b><i>Non-Numeric Objective:</i></b>	Basin Plan: Water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

<i>Evaluation Guideline:</i>	Phosphorus is considered in the narrative objective for biostimulatory substances. In 2002, SWRCB staff recommended not listing for elemental phosphorus because there was not an appropriate phosphorus objective available for Laguna de Santa Rosa. USEPA listed Laguna de Santa Rosa for phosphorus by determining exceedances using criteria from another Region. Since there is not appropriate criteria, it is difficult to determine whether the concentration of total phosphorus exceeded standards.
<i>Data Used to Assess Water Quality:</i>	<p>The ratio of N to P in the Laguna for data collected by the Regional Board as part of its nitrogen TMDL monitoring program was presented by the City of Santa Rosa. The City collects nitrogen and phosphorus data as part of its NPDES discharge permit compliance monitoring. For both the Regional Board data set and the City's NPDES data set, total phosphorus was measured, but dissolved P was not measured (Scoles, G. 2004).</p> <p>Since the City's NPDES Nitrogen to Phosphorus (N:P) ratios are derived from monthly averages, an evaluation was completed by the City of Santa Rosa to come up with N:P ratios determined from monthly averaged nitrogen and phosphorus data are representative of N:P ratios from individual measurements. The individual sample data for 2003, which had 101 measurements, were used to calculate individual N:P ratios for comparison to the monthly average values. The average of these individual N:P ratios was 4.4 with a 99 percent confidence interval of <math>\pm 0.8</math> compared to the average of the monthly average N:P ratios for the same period of 3.9. No statistically significant difference exists between the monthly and the daily data (Mann Whitney Rank Sum test <math>p = 0.683</math>.) The City determined that the N:P ratios based on monthly average values are representative of nutrient conditions in the Laguna.</p>
<i>Spatial Representation:</i>	The data from the NCRWQCB Nutrient TMDL monitoring were collected in the Laguna at Stony Point, Occidental, Guerneville, and Trenton Healdsburg roads.
<i>Temporal Representation:</i>	The RWQCB Nutrient TMDL monitoring program samples were collected from July 1997 through November of 2000, no phosphorus samples have been collected since November 2000 for this program. The City of Santa Rosa collected nutrient data during the discharge season between December 1995 and March 2004.

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



September 2005



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# San Francisco Bay Region (2)

LIST

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

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## Region 2

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**Water Segment:** Anderson Reservoir

**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. Seven out of 9 samples exceeded the OEHHHA 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:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered.

<i>Evaluation Guideline:</i>	0.3 ug/g Hg (OEHHA Screening Value) (Brodberg and Pollock, 1999).
<i>Data Used to Assess Water Quality:</i>	Seven out of 9 samples exceeded. A total of 9 composite samples were collected and analyzed from Anderson Reservoir: 3 black crappie, 3 carp, and 3 largemouth bass. Two black crappie samples did not exceed (TSMP, 2002).
<i>Spatial Representation:</i>	One station located near the face of dam.
<i>Temporal Representation:</i>	All samples were collected on 9/13/2001.
<i>Data Quality Assessment:</i>	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

---

## Region 2

---

**Water Segment:** Anderson Reservoir

**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 out of 6 samples exceeded the OEHHHA 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:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:*

20.0 ng/g PCB (OEHHA Screening Value) (Brodberg and Pollock, 1999),

*Data Used to Assess Water Quality:*

Three out of 6 samples exceeded. A total of 6 composite samples were collected and analyzed from Anderson Reservoir 3 black crappie and 3 carp. All carp samples exceeded guideline (TSMP, 2002).

*Spatial Representation:*

One station located near the face of dam.

*Temporal Representation:*

All samples were collected on 9/13/2001.

*Data Quality Assessment:*

Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

---

## Region 2

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**Water Segment:** Bon Tempe Reservoir

**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. 2 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:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

<i>Evaluation Guideline:</i>	0.3 ug/g Hg - OEHHA Screening Value (Interim Health Advisory for Hg, Marin County), (Brodberg and Pollock, 1999).
<i>Data Used to Assess Water Quality:</i>	Two out of 2 samples exceeded. Two individual samples of largemouth bass were collected and analyzed from Bon Tempe Reservoir. Both exceeded the guideline (TSMP, 2002).
<i>Spatial Representation:</i>	One station located around the shoreline of the lake.
<i>Temporal Representation:</i>	All samples were collected on 9/20/2001.
<i>Data Quality Assessment:</i>	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

---

**Water Segment:** Del Valle Reservoir

**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. Four of the 12 samples exceeded the OEHHHA 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 Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:* 0.3 ug/g Hg - OEHHA Screening Value (Interim Health Advisory for Hg and PCB, Alameda County) (Brodberg and Pollock, 1999).

*Data Used to Assess Water Quality:* Four out of 12 samples exceeded. A total of 12 composite samples were collected and analyzed from Del Valle Reservoir 3 bluegill, 3 channel catfish, 3 largemouth bass, and 3 redear sunfish. One catfish and all three largemouth bass samples exceeded the Hg guideline (TSMP, 2002).

*Spatial Representation:* One station located in upper end of reservoir south of boat ramp.

*Temporal Representation:* All samples were collected on 4/25/2001.

*Data Quality Assessment:* Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Del Valle Reservoir

**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 3 samples exceeded the OEHHHA 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 Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

<i>Evaluation Guideline:</i>	20.0 ng/g PCB - OEHHA Screening Value (Interim Health Advisory for Hg and PCB, Alameda County) (Brodberg and Pollock, 1999).
<i>Data Used to Assess Water Quality:</i>	Three out of 3 samples exceeded. A total of 3 channel catfish composite samples were collected and analyzed from Del Valle Reservoir. All samples exceeded guideline (TSMP, 2002).
<i>Spatial Representation:</i>	One station located in upper end of reservoir south of boat ramp.
<i>Temporal Representation:</i>	All samples were collected on 4/25/2001.
<i>Data Quality Assessment:</i>	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Hill Slough

**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:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:*

0.3 ug/g (OEHHA Screening Value) (Brodberg and Pollock, 1999).

*Data Used to Assess Water Quality:*

Two out of 2 samples exceeded. Two filet individual samples of striped bass were collected in 1997. Both samples exceeded the guideline (TSMP, 2002).

*Spatial Representation:*

One station located upstream of McCoy Ditch near Suisun City.

*Temporal Representation:*

Samples were collected 2/27/97.

*Data Quality Assessment:*

Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 1996-2000. Department of Fish and Game

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## Region 2

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**Water Segment:** Islais Creek

**Pollutant:** Sediment Bioassays for Estuarine and Marine Water

**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. Under section 3.6 a water body segment may also be listed for toxicity alone.

Two toxicity lines of evidence are available in the administrative record to assess this pollutant. A sufficient number of toxicity samples exceed the water quality guidelines.

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 22 samples exhibited significant amphipod toxicity, 4 of five samples exhibited significant sea urchin toxicity, the benthic community is considered to be degraded 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 toxicity guidelines are exceeded and a pollutant contributes to or causes the problem.

### **Lines of Evidence:**

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*Numeric Line of Evidence* Population/Community Degradation

*Beneficial Use:* ES - Estuarine Habitat, MA - Marine Habitat

<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. the index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community.
<i>Data Used to Assess Water Quality:</i>	Relative benthic index = 0.22, 0.25, 0.43 (3 benthic gradient samples) (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data was synoptically collected with benthic community and toxicity measurements over the length of the creek.
<i>Temporal Representation:</i>	Data was collected from 9/94 - 9/97.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat, MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms (SFBRWQCB, 1995).
<i>Evaluation Guideline:</i>	BPTCP Reference envelope approach used (SWRCB, 1997).
<i>Data Used to Assess Water Quality:</i>	Significant amphipod toxicity in 3 of 4 samples (75%), Significant urchin toxicity in 4 of 5 samples (80%) (Hunt et al., 1998-b).
<i>Spatial Representation:</i>	Data was synoptically collected with benthic community and toxicity measurements over the length of the creek.
<i>Temporal Representation:</i>	Data was collected from 9/94 - 9/97.

*Data Quality Assessment:* BPTCP Quality Assurance Project Plan (Stephenson et al., 1994).

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*Numeric Line of Evidence* Toxicity

*Beneficial Use:* ES - Estuarine Habitat, MA - Marine Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms (SFBRWQCB, 1995).

There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.

*Evaluation Guideline:* BPTCP Reference envelope approach used (SWRCB, 1997).

*Data Used to Assess Water  
Quality:* Significant amphipod toxicity in 7 of 18 samples (Battelle Memorial Institute, 2002).

*Spatial Representation:* Data was synoptically collected with benthic community and toxicity measurements over the length of the creek.

*Temporal Representation:* Data were collected between 1998 and 2000.

*Environmental Conditions:* Samples were collected in both wet and dry seasons.

*Data Quality Assessment:* Methods used were equivalent to those used in the BPTCP QAPP (Stephenson, et al., 1994). All reported data met QA requirements.

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## Region 2

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**Water Segment:** Lafayette Reservoir

**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. Five of the 10 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.



Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:* 0.3 ug/g Hg - OEHHA Screening Value (Interim Health Advisory for Hg and PCB, Contra Costa County) (Brodberg and Pollock, 1999).

*Data Used to Assess Water Quality:* Five out of 10 samples exceeded. A total of 10 composite samples were collected and analyzed from Lafayette Reservoir 3 black crappie, 1 channel catfish, 3 largemouth bass, and 3 goldfish. Three goldfish and two largemouth bass samples exceeded the guideline (TSMP, 2002).

*Spatial Representation:* One station located around perimeter of lake.

*Temporal Representation:* All samples were collected on 9/9/2002.

*Data Quality Assessment:* Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Lafayette Reservoir

**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 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:* 20.0 ng/g PCB - OEHHA Screening Value (Interim Health Advisory for Hg and PCB, Contra Costa County) (Brodberg and Pollock, 1999).

*Data Used to Assess Water Quality:* Two out of 3 samples exceeded. A total of 3 composite samples were collected and analyzed from Lafayette Reservoir 1 each: channel catfish, goldfish, and largemouth bass. Channel catfish and goldfish samples exceeded guideline (TSMP, 2002).

*Spatial Representation:* One station located around perimeter of lake.

*Temporal Representation:* All samples were collected on 9/9/2002.

*Data Quality Assessment:* Environmental Chemical Quality Assurance and Data Report for the Toxic Substances Monitoring Program. 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Lake Chabot (Solano Co)

**Pollutant:** Chlordane

**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 9 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:**

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*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:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:* 30.0 ng/g Total Chlordane - OEHHA Screening Value  
(Interim Health Advisory for Hg and PCB, Alameda County) (Brodberg and Pollock, 1999).

*Data Used to Assess Water Quality:* Three out of 9 samples exceeded. A total of 9 composite samples were collected and analyzed from Lake Chabot: 3 channel catfish, 3 largemouth bass, and 3 carp. Three carp samples exceeded guideline (TSMP, 2002).

*Spatial Representation:* One station located around the entire lake.

*Temporal Representation:* Samples were collected on 4/24/2001 and 6/6/2001.

*Data Quality Assessment:* Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Lake Chabot (Solano Co)

**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 9 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:**

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*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:* San Francisco Bay Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic

organisms, wildlife, and human health will be considered.

<i>Evaluation Guideline:</i>	100.0 ng/g Total DDT - OEHHA Screening Value (Brodberg and Pollock, 1999).
<i>Data Used to Assess Water Quality:</i>	Two out of 9 samples exceeded. A total of 9 composite samples were collected and analyzed from Lake Chabot: 3 channel catfish, 3 largemouth bass, and 3 carp. Two carp samples exceeded guideline (TSMP, 2002).
<i>Spatial Representation:</i>	One station located around the entire lake.
<i>Temporal Representation:</i>	Samples were collected on 4/24/2001 and 6/6/2001.
<i>Data Quality Assessment:</i>	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Lake Chabot (Solano Co)

**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. Six of the 9 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:

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*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:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.



Effects on aquatic organisms, wildlife, and human health will be considered.

<i>Evaluation Guideline:</i>	2.0 ng/g Dieldrin - OEHHA Screening Value (Brodberg and Pollock, 1999).
<i>Data Used to Assess Water Quality:</i>	Six out of 9 samples exceeded. A total of 9 composite samples were collected and analyzed from Lake Chabot 3 channel catfish, 3 largemouth bass, and 3 carp. Three carp and three channel catfish samples exceeded guideline (TSMP, 2002).
<i>Spatial Representation:</i>	One station located around the entire lake.
<i>Temporal Representation:</i>	Samples were collected on 4/24/2001 and 6/6/2001.
<i>Data Quality Assessment:</i>	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Lake Chabot (Solano Co)

**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. Six 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:

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*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:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:*

0.3 ug/g Hg - OEHHA Screening Value (Brodberg and Pollock, 1999).

*Data Used to Assess Water Quality:*

Six out of 11 samples exceeded. A total of 11 composite samples were collected and analyzed from Lake Chabot 3 black crappie, 1 channel catfish, 3 largemouth bass, and 3 goldfish. Three goldfish and two largemouth bass samples exceeded the guideline (TSMP, 2002).

*Spatial Representation:*

One station located around the entire lake.

*Temporal Representation:*

Samples were collected on 4/24/2001 and 6/6/2001.

*Data Quality Assessment:*

Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Lake Chabot (Solano Co)

**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 9 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:

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*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:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:* 20.0 ng/g PCB - OEHHA Screening Value (Interim Health Advisory for Hg and PCB, Alameda County) (Brodberg and Pollock, 1999).

*Data Used to Assess Water Quality:* Five out of 9 samples exceeded. A total of 9 composite samples were collected and analyzed from Lake Chabot: 3 channel catfish, 3 largemouth bass, and 3 carp. Two carp and three channel catfish samples exceeded guideline (TSMP, 2002).

*Spatial Representation:* One station located around the entire lake.

*Temporal Representation:* Samples were collected on 4/24/2001 and 6/6/2001.

*Data Quality Assessment:* Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Napa 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 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:*

0.3 ug/g (OEHHA Screening Value).

*Data Used to Assess Water Quality:*

Two out of 3 samples exceeded. One file composite sample of bluegill (1995) and two individual samples of brown bullhead (1995) and Sacramento pike minnow (1997) were collected. The 1995 samples taken near Elm Street exceeded the guideline. The 1997 pike minnow taken near the J.F.K. boat ramp did not exceed (TSMP, 2002).

*Spatial Representation:*

Two stations were sampled: in Calistoga at Elm Street and 1/2 mile upstream from the J.F.K. Park boat ramp.

*Temporal Representation:*

Samples were collected in 1995 and 1997.

*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.

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## Region 2

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**Water Segment:** Nicasio Reservoir

**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 9 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.



Effects on aquatic organisms, wildlife, and human health will be considered.

<i>Evaluation Guideline:</i>	0.3 ug/g Hg - OEHHA Screening Value (Interim Health Advisory for Hg, Marin County).
<i>Data Used to Assess Water Quality:</i>	Two out of 9 samples exceeded. A total of 9 composite samples were collected and analyzed from Nicasio Reservoir: 3 bluegill, 3 carp, and 3 largemouth bass. Two largemouth bass samples exceeded guideline (TSMP, 2002).
<i>Spatial Representation:</i>	One station located around margin of lake.
<i>Temporal Representation:</i>	All samples were collected on 9/19/2001.
<i>Data Quality Assessment:</i>	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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<b>Water Segment:</b>	Oakland Inner Harbor (Fruitvale Site, part of SF Bay, Central)
<b>Pollutant:</b>	Sediment Bioassays for Estuarine and Marine Water
<b>Decision:</b>	List
<b>Weight of Evidence:</b>	<p>Toxicity is being considered for placement on the section 303(d) list under section 3.6 of the Listing Policy. Under section 3.6 a minimum of one line of evidence is necessary to assess listing status.</p> <p>One line of evidence is available in the administrative record to assess this pollutant. Both amphipod toxicity samples exhibit significant toxicity.</p> <p>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.</p> <p>This conclusion is based on the staff findings that:</p> <ol style="list-style-type: none"><li>1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.</li><li>2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.</li><li>3. Two of 2 samples exceeded the water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.</li><li>4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.</li></ol>
<b>SWRCB Staff Recommendation:</b>	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 toxicity contributes to or causes the problem.

### Lines of Evidence:

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<i>Numeric Line of Evidence</i>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.

<i>Water Quality Criterion:</i>	There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	Reference envelope approach used.
<i>Data Used to Assess Water Quality:</i>	Significant amphipod toxicity in 2 of 2 samples. No significant toxicity in two urchin toxicity tests (Hunt et al., 1998b)
<i>Spatial Representation:</i>	Data were synoptically collected with chemical measurements in sediments.
<i>Temporal Representation:</i>	Data collected between April 1995 and April 1997.
<i>Data Quality Assessment:</i>	Methods used were equivalent to those used in the BPTCP QAPP. All reported data met QA requirements.

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## Region 2

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**Water Segment:** San Leandro Bay (part of SF Bay, Central)

**Pollutant:** Chlordane

**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.

Four 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. The benthic community is not impacted. The general listing for "Pesticides" should be replaced with specific pesticides exceeding standards.

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. All 7 samples exceeded the sediment guideline, 3 of 7 samples exhibit toxicity, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy. The benthic community in this water body is not impacted.
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:

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*Numeric Line of Evidence*                      Toxicity

<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP Reference envelope approach (SWRCB, 1997).
<i>Data Used to Assess Water Quality:</i>	Significant amphipod toxicity in 3 of 7 tests. Significant sea urchin toxicity in 3 of 7 tests (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data was synoptically collected with chemical and toxicity measurements.
<i>Temporal Representation:</i>	Samples were collected in April 1995 and April 1997.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

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<b><i>Numeric Line of Evidence</i></b>	Population/Community Degradation
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	Evaluations of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community.
<i>Data Used to Assess Water Quality:</i>	BPTCP benthic index values were 0.60, 0.60, 0.67, 1.0, and 0.66.(Hunt et al, 1998-b).

*Spatial Representation:* Five stations. Data was synoptically collected with chemical and toxicity measurements.

*Temporal Representation:* Samples were collected in April 1995 and April 1997.

*Data Quality Assessment:* BPTCP Quality Assurance Project Plan.

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***Numeric Line of Evidence*** Pollutant-Sediment

*Beneficial Use:* ES - Estuarine Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.

There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.

*Evaluation Guideline:* Effects Range-Median of 6 ng/g was used (Long and Morgan, 1990).

*Data Used to Assess Water Quality:* Seven of 7 measurements exceed the ERM (Hunt et al., 1998b).

*Spatial Representation:* Data was synoptically collected with benthic community and toxicity measurements.

*Temporal Representation:* Samples were collected in April 1995 and April 1997.

*Data Quality Assessment:* BPTCP Quality Assurance Project Plan.

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***Line of Evidence*** Narrative Description Data

*Beneficial Use* ES - Estuarine Habitat

*Information Used to Assess Water Quality:* The 2002 section 303(d) listing for Pesticides is too general to be reviewed. In the data and information available there are many measurements of pesticides. Only Chlordane and Dieldrin have numeric guidelines. The data for these chemicals are presented in fact sheets.

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## Region 2

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**Water Segment:** San Leandro Bay (part of SF Bay, Central)

**Pollutant:** Dieldrin

**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.

Four 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. The benthic community is not impacted. The general listing for "Pesticides" should be replaced with specific pesticides exceeding standards.

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 7 samples exceeded the sediment guideline, 3 of 7 samples exhibit toxicity, 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:**

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*Numeric Line of Evidence*                      Toxicity

<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP Reference envelope approach (SWRCB, 1997).
<i>Data Used to Assess Water Quality:</i>	Significant amphipod toxicity in 3 of 7 tests. Significant sea urchin toxicity in 3 of 7 tests (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data was synoptically collected with chemical and toxicity measurements.
<i>Temporal Representation:</i>	Samples were collected in April 1995 and April 1997.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

<b><i>Numeric Line of Evidence</i></b>	Population/Community Degradation
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	Evaluations of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community.
<i>Data Used to Assess Water Quality:</i>	BPTCP benthic index values were 0.60, 0.60, 0.67, 1.0, and 0.66.(Hunt et al., 1998b).



*Spatial Representation:* Five stations. Data was synoptically collected with chemical and toxicity measurements.

*Temporal Representation:* Samples were collected in April 1995 and April 1997.

*Data Quality Assessment:* BPTCP Quality Assurance Project Plan.

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***Numeric Line of Evidence*** Pollutant-Sediment

*Beneficial Use:* ES - Estuarine Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.

There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.

*Evaluation Guideline:* Effects Range-Median of 8 ng/g was used (Long et al., 1995).

*Data Used to Assess Water Quality:* Four of 7 measurements exceed the ERM (Hunt et al., 1998b).

*Spatial Representation:* Data was synoptically collected with benthic community and toxicity measurements.

*Temporal Representation:* Samples were collected in April 1995 and April 1997.

*Data Quality Assessment:* BPTCP Quality Assurance Project Plan.

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***Line of Evidence*** Narrative Description Data

*Beneficial Use* ES - Estuarine Habitat

*Information Used to Assess Water Quality:* The 2002 section 303(d) listing for Pesticides is too general to be reviewed. In the data and information available there are many measurements of pesticides. Only Chlordane and Dieldrin have numeric guidelines. The data for these chemicals are presented in fact sheets.

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## Region 2

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**Water Segment:** San Mateo Coast

**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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:*

0.3 ug/g (OEHHA Screening Value).

*Data Used to Assess Water Quality:*

Three out of 5 samples exceeded. Five filet composite samples were collected from the following species: brown rockfish, lingcod, rosethorn rockfish, black rockfish, and spotfin surfperch. Brown rockfish, rosethorn rockfish, and lingcod exceeded guideline (TSMP, 2002).

*Spatial Representation:*

One station was sampled: San Mateo Coast.

*Temporal Representation:*

Samples were collected on May 9 and 23, 2000.

*Data Quality Assessment:*

Data and Quality Assurance/Quality Control Report For Trace Metals - Coastal Fish Contaminant Project Year 2, 1999-2000. Department of Fish and Game.

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## Region 2

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**Water Segment:** San Pablo Reservoir

**Pollutant:** Chlordane

**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 30 ng/l OEHHA tissue screening value of total chlordane. 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.Six of 9 samples exceeded the 30 ng/l OEHHA tissue-screening value of total chlordane 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

<i>Matrix:</i>	Tissue
<i>Water Quality Objective/ Water Quality Criterion:</i>	Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered.
<i>Evaluation Guideline:</i>	30.0 ng/g Total Chlordane - OEHHA Screening Value (Interim Health Advisory for Hg and PCB, Contra Costa County)
<i>Data Used to Assess Water Quality:</i>	Six out of 9 samples exceeded. A total of 9 composite samples were collected and analyzed from San Pablo Reservoir 3 black crappie, 3 channel catfish and 3 carp. Three carp and three channel catfish samples exceeded guideline (TSMP, 2002).
<i>Spatial Representation:</i>	One station located in upper half of the reservoir
<i>Temporal Representation:</i>	All samples were collected on 4/17/2000.
<i>Data Quality Assessment:</i>	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** San Pablo Reservoir

**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. Nine of the 9 samples exceeded the OEHHHA 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:

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:*

2.0 ng/g Dieldrin (OEHHA Screening Value).

*Data Used to Assess Water Quality:*

Nine out of 9 samples exceeded. A total of 9 composite samples were collected and analyzed from Lake Chabot: 3 channel catfish, 3 largemouth bass, and 3 carp. All samples exceeded guideline (TSMP, 2002).

*Spatial Representation:*

One station located in upper half of the reservoir.

*Temporal Representation:*

All samples were collected on 4/17/2000.

*Data Quality Assessment:*

Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** San Pablo Reservoir

**Pollutant:** Heptachlor epoxide

**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 9 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and



human health will be considered.

*Evaluation Guideline:*

4.0 ng/g Heptachlor Epoxide (OEHHA Screening Value)

*Data Used to Assess Water Quality:*

Four out of 9 samples exceeded. A total of 9 composite samples were collected and analyzed from San Pablo Reservoir 3 black crappie, 3 channel catfish and 3 carp. Two carp and two channel catfish samples exceeded guideline (TSMP, 2002).

*Spatial Representation:*

One station located in upper half of the reservoir.

*Temporal Representation:*

All samples were collected on 4/17/2000.

*Data Quality Assessment:*

Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** San Pablo Reservoir

**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. Six of the 9 samples exceeded the OEHHHA 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:

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:*

20.0 ng/g PCB (OEHHA Screening Value)

*Data Used to Assess Water Quality:*

Six out of 9 samples exceeded. A total of 9 composite samples were collected and analyzed from San Pablo Reservoir 3 black crappie, 3 channel catfish and 3 carp. Three carp and three channel catfish samples exceeded guideline (TSMP, 2002).

*Spatial Representation:*

One station located in upper half of the reservoir.

*Temporal Representation:*

All samples were collected on 4/17/2000.

*Data Quality Assessment:*

Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** San Pablo Reservoir

**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. Four of the 9 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:*

30.0 ng/g Toxaphene (OEHHA Screening Value)

*Data Used to Assess Water Quality:*

Four out of 9 samples exceeded. A total of 9 composite samples were collected and analyzed from San Pablo Reservoir: 3 black crappie, 3 channel catfish and 3 carp. Two carp and two channel catfish samples exceeded guideline (TSMP, 2002).

*Spatial Representation:*

One station located in upper half of the reservoir.

*Temporal Representation:*

All samples were collected on 4/17/2000.

*Data Quality Assessment:*

Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Shadow Cliffs Reservoir

**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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

<i>Evaluation Guideline:</i>	0.3 ug/g Hg - OEHHA Screening Value (Interim Health Advisory for Hg and PCB, Alameda County).
<i>Data Used to Assess Water Quality:</i>	Two out of 4 samples exceeded. A total of 2 composite samples, 1 carp and 1 channel catfish, along with 2 individual samples of largemouth bass were collected and analyzed from Shadow Cliffs Reservoir. Both largemouth bass samples exceeded guideline (TSMP, 2002).
<i>Spatial Representation:</i>	One station located around perimeter of lake.
<i>Temporal Representation:</i>	All samples were collected on 8/13/2002.
<i>Data Quality Assessment:</i>	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Shadow Cliffs Reservoir

**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 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.



Effects on aquatic organisms, wildlife, and human health will be considered.

<i>Evaluation Guideline:</i>	20.0 ng/g PCB - OEHHA Screening Value (Interim Health Advisory for Hg and PCB, Alameda County).
<i>Data Used to Assess Water Quality:</i>	Two out of 2 samples exceeded. A total of 2 composite samples were collected and analyzed from Shadow Cliffs Reservoir 1 carp and 1 channel catfish. Both samples exceeded guideline (TSMP, 2002).
<i>Spatial Representation:</i>	One station located around perimeter of lake.
<i>Temporal Representation:</i>	All samples were collected on 8/13/2002.
<i>Data Quality Assessment:</i>	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Soulejule Reservoir

**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. Twelve of the 14 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:*

0.3 ug/g Hg (OEHHA Screening Value).

*Data Used to Assess Water Quality:*

Twelve out of 14 samples exceeded. A total of 8 composite samples were collected and analyzed from Soulejule Reservoir 3 black crappie and 5 largemouth bass. In addition, 4 individual largemouth bass and 2 individual channel catfish were sampled. Two channel catfish samples did not exceed (TSMP, 2002).

*Spatial Representation:*

One station located along shoreline of the entire lake.

*Temporal Representation:*

All samples were collected on 9/20/2001.

*Data Quality Assessment:*

Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Soulejule Reservoir

**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.
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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:*

0.3 ug/g Hg (OEHHA Screening Value).

*Data Used to Assess Water Quality:*

Two out of 2 samples exceeded. Representation: Two individual channel catfish samples were collected and analyzed from Soulejule Reservoir. Both channel catfish samples exceeded guideline (TSMP, 2002).

*Spatial Representation:*

One station located along shoreline of the entire lake.

*Temporal Representation:*

All samples were collected on 9/20/2001.

*Data Quality Assessment:*

Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Stege Marsh

**Pollutant:** Chlordane

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2, 3.6, and 3.10 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status while under section 3.10, a minimum of two lines of evidence are needed to assess listing status.

Four 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. The benthic community is impacted and may be impacted by this pollutant. The RWQCB has adopted a cleanup order that will result in attainment of the water quality 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 Being Addressed 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. Three of 3 samples exceeded the 6 ng/g ERM sediment quality guideline, 5 of 5 samples exhibit toxicity, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy. The benthic community in this water body is impacted and this pollutant is associated with this impact.
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 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 applicable water quality standards are exceeded and another program is addressing the problem.

**Lines of Evidence:**

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*Numeric Line of Evidence*                      Pollutant-Sediment

<i>Beneficial Use:</i>	WE - Wetland Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	ERM of 6 ng/g used (Long and Morgan, 1990).
<i>Data Used to Assess Water Quality:</i>	Three of 3 samples exceeded the 6 ng/g ERM sediment quality guideline (Hunt et al., 1988b).
<i>Spatial Representation:</i>	Data was synoptically collected with benthic community and toxicity measurements.
<i>Temporal Representation:</i>	Data was collected from 10/97-12/97.
<i>Data Quality Assessment:</i>	Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	WE - Wetland Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP reference envelope approach (SWRCB,1997).
<i>Data Used to Assess Water Quality:</i>	0-1% amphipod survival in 5 of 5 tests. Three of 3 samples with significant urchin toxicity (Hunt et al., 1988-b).

*Spatial Representation:* Data was spatially collected.

*Temporal Representation:* Data was collected from 10/97-12/97.

*Data Quality Assessment:* Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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***Numeric Line of Evidence*** Population/Community Degradation

*Beneficial Use:* WE - Wetland Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.

Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.

*Evaluation Guideline:* Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community.

*Data Used to Assess Water Quality:* Relative benthic index = 0.00 (2 benthic samples) (Hunt et al., 1998).

*Spatial Representation:* Data was spatially collected.

*Temporal Representation:* Data was collected from 10/97-12/97.

*Data Quality Assessment:* Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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***Line of Evidence*** Remedial Program in Place

*Beneficial Use* WE - Wetland Habitat



*Information Used to Assess  
Water Quality:*

Stege Marsh is identified as a toxic hot spot in the SWRCB Consolidated Toxic Hot Spot Cleanup Plan (SWRCB Resolution No. 99-065). This plan is being implemented by the San Francisco Bay RWQCB through Cleanup and Abatement Orders.

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## Region 2

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**Water Segment:** Stege Marsh

**Pollutant:** Copper

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2, 3.6, and 3.10 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status while under section 3.10, a minimum of two lines of evidence are needed to assess listing status.

Four 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. The benthic community is impacted and may be impacted by this pollutant. The RWQCB has adopted a cleanup order that will result in attainment of the water quality 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 Being Attained 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. Three of 3 samples exceeded the 270 ug/g ERM sediment quality guideline, 5 of 5 samples exhibit toxicity, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy. The benthic community in this water body is impacted and this pollutant is associated with this impact.
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 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 applicable water quality standards are exceeded and another program is addressing the problem.

**Lines of Evidence:**

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*Numeric Line of Evidence*                      Pollutant-Sediment

<i>Beneficial Use:</i>	WE - Wetland Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	ERM of 270 ug/g was used (Long et al., 1995).
<i>Data Used to Assess Water Quality:</i>	Three of 3 samples exceeded 270 ug/g ERM sediment quality guideline (Hunt et al., 1988b).
<i>Spatial Representation:</i>	Data was synoptically collected with benthic community and toxicity measurements.
<i>Temporal Representation:</i>	Data was collected from 10/97-12/97.
<i>Data Quality Assessment:</i>	Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	WE - Wetland Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP reference envelope approach (SWRCB,1997).
<i>Data Used to Assess Water Quality:</i>	0-1% amphipod survival in 5 of 5 tests. Three of 3 samples with significant urchin toxicity (Hunt et al., 1988b).

*Spatial Representation:* Data was spatially collected.

*Temporal Representation:* Data was collected from 10/97-12/97.

*Data Quality Assessment:* Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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***Numeric Line of Evidence*** Population/Community Degradation

*Beneficial Use:* WE - Wetland Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.

Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.

*Evaluation Guideline:* Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community.

*Data Used to Assess Water Quality:* Relative benthic index = 0.00 (2 benthic samples) (Hunt et al., 1998).

*Spatial Representation:* Data was spatially collected.

*Temporal Representation:* Data was collected from 10/97-12/97.

*Data Quality Assessment:* Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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***Line of Evidence*** Remedial Program in Place

*Beneficial Use* WE - Wetland Habitat

*Information Used to Assess Water Quality:* Stege Marsh is identified as a toxic hot spot on the SWRCB Consolidated Toxic Hot Spots Cleanup Plan (SWRCB Resolution No. 99-065). This plan is being implemented through Cleanup and Abatement Orders.

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* WE - Wetland Habitat

*Information Used to Assess Water Quality:* Stege Marsh is identified as a toxic hot spot in the SWRCB Consolidated Toxic Hot Spot Cleanup Plan (SWRCB Resolution No. 99-065). This plan is being implemented by the San Francisco Bay RWQCB through Cleanup and Abatement Orders.

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## Region 2

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**Water Segment:** Stege Marsh

**Pollutant:** Dieldrin

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2, 3.6, and 3.10 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status while under section 3.10, a minimum of two lines of evidence are needed to assess listing status.

Four 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. 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. Two of 3 samples exceeded the sediment guideline, 5 of 5 samples exhibit toxicity, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy. The benthic community in this water body is impacted and this pollutant is associated with this impact.
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 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 applicable water quality standards are exceeded and another program is addressing the problem.

**Lines of Evidence:**

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*Numeric Line of Evidence*

Pollutant-Sediment

<i>Beneficial Use:</i>	WE - Wetland Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	ERM of 8 ng/g was used (Long et al., 1995).
<i>Data Used to Assess Water Quality:</i>	Two of 3 samples exceeded the ERM sediment quality guideline (Hunt et al., 1988b).
<i>Spatial Representation:</i>	Data was synoptically collected with benthic community and toxicity measurements.
<i>Temporal Representation:</i>	Data was collected from 10/97-12/97.
<i>Data Quality Assessment:</i>	Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	WE - Wetland Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP reference envelope approach (SWRCB,1997).
<i>Data Used to Assess Water Quality:</i>	0-1% amphipod survival in 5 of 5 tests. Three of 3 samples with significant urchin toxicity (Hunt et al., 1988-b).

*Spatial Representation:* Data was spatially collected.

*Temporal Representation:* Data was collected from 10/97-12/97.

*Data Quality Assessment:* Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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***Numeric Line of Evidence*** Population/Community Degradation

*Beneficial Use:* WE - Wetland Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.

Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.

*Evaluation Guideline:* Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community.

*Data Used to Assess Water Quality:* Relative benthic index = 0.00 (2 benthic samples) (BPTCP, 1998).

*Spatial Representation:* Data was spatially collected.

*Temporal Representation:* Data was collected from 10/97-12/97.

*Data Quality Assessment:* Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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***Line of Evidence*** Remedial Program in Place

*Beneficial Use* WE - Wetland Habitat



*Information Used to Assess  
Water Quality:*

Stege Marsh is identified as a toxic hot spot in the SWRCB Consolidated Toxic Hot Spot Cleanup Plan (SWRCB Resolution No. 99-065). This plan is being implemented by the San Francisco Bay RWQCB through Cleanup and Abatement Orders.

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## Region 2

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**Water Segment:** Stege Marsh

**Pollutant:** Mercury

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2, 3.6, and 3.10 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status while under section 3.10, a minimum of two lines of evidence are needed to assess listing status.

Four 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. The benthic community is impacted and may be impacted by this pollutant. The RWQCB has adopted a cleanup order that will result in attainment of the water quality 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 Being Addressed 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. Two of 3 samples exceeded the sediment guideline, 5 of 5 samples exhibit toxicity, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy. The benthic community in this water body is impacted and this pollutant is associated with this impact.
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 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 applicable water quality standards are exceeded and another program is addressing the problem.

**Lines of Evidence:**

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*Numeric Line of Evidence*                      Pollutant-Sediment

<i>Beneficial Use:</i>	WE - Wetland Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	Sediment guideline of 2.1 ug/g was used (PTI Environmental Services, 1991).
<i>Data Used to Assess Water Quality:</i>	Two of 3 samples exceeded guideline (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data was synoptically collected with benthic community and toxicity measurements.
<i>Temporal Representation:</i>	Data was collected from 10/97-12/97.
<i>Data Quality Assessment:</i>	Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	WE - Wetland Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP reference envelope approach (SWRCB,1997).
<i>Data Used to Assess Water Quality:</i>	0-1% amphipod survival in 5 of 5 tests. Three of 3 samples with significant urchin toxicity (Hunt et al., 1998b).

*Spatial Representation:* Data was spatially collected.

*Temporal Representation:* Data was collected from 10/97-12/97.

*Data Quality Assessment:* Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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***Numeric Line of Evidence*** Population/Community Degradation

*Beneficial Use:* WE - Wetland Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.

Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.

*Evaluation Guideline:* Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community.

*Data Used to Assess Water Quality:* Relative benthic index = 0.00 (2 benthic samples) (Hunt et al., 1998).

*Spatial Representation:* Data was spatially collected.

*Temporal Representation:* Data was collected from 10/97-12/97.

*Data Quality Assessment:* Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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***Line of Evidence*** Remedial Program in Place

*Beneficial Use* WE - Wetland Habitat

*Information Used to Assess Water Quality:* Stege Marsh is identified as a toxic hot spot on the SWRCB Consolidated Toxic Hot Spots Cleanup Plan (SWRCB Resolution No. 99-065). This plan is being implemented through Cleanup and Abatement Orders.

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* WE - Wetland Habitat

*Information Used to Assess Water Quality:* Stege Marsh is identified as a toxic hot spot in the SWRCB Consolidated Toxic Hot Spot Cleanup Plan (SWRCB Resolution No. 99-065). This plan is being implemented by the San Francisco Bay RWQCB through Cleanup and Abatement Orders.

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## Region 2

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**Water Segment:** Stege Marsh

**Pollutant:** Polychlorinated biphenyls

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2, 3.6, and 3.10 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status while under section 3.10, a minimum of two lines of evidence are needed to assess listing status.

Four 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. The benthic community is impacted and may be impacted by this pollutant. The RWQCB has adopted a cleanup order that will result in attainment of the water quality 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 Being Addressed 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. Two of 3 samples exceeded the sediment guideline, 5 of 5 samples exhibit toxicity, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy. The benthic community in this water body is impacted and this pollutant is associated with this impact.
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 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 applicable water quality standards are exceeded and another program is addressing the problem.

**Lines of Evidence:**

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*Numeric Line of Evidence*                      Pollutant-Sediment

<i>Beneficial Use:</i>	WE - Wetland Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	Sediment guideline of 400 ng/g was used (MacDonald et al., 2000).
<i>Data Used to Assess Water Quality:</i>	Two of 3 samples exceeded sediment guideline (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data was synoptically collected with benthic community and toxicity measurements.
<i>Temporal Representation:</i>	Data was collected from 10/97-12/97.
<i>Data Quality Assessment:</i>	Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	WE - Wetland Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP reference envelope approach (SWRCB,1997).
<i>Data Used to Assess Water Quality:</i>	0-1% amphipod survival in 5 of 5 tests. Three of 3 samples with significant urchin toxicity (Hunt et al., 1988b).

*Spatial Representation:* Data was spatially collected.

*Temporal Representation:* Data was collected from 10/97-12/97.

*Data Quality Assessment:* Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

***Numeric Line of Evidence*** Population/Community Degradation

*Beneficial Use:* WE - Wetland Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.

Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.

*Evaluation Guideline:* Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community.

*Data Used to Assess Water Quality:* Relative benthic index = 0.00 (2 benthic samples) (Hunt et al., 1998b).

*Spatial Representation:* Data was spatially collected.

*Temporal Representation:* Data was collected from 10/97-12/97.

*Data Quality Assessment:* Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

***Line of Evidence*** Remedial Program in Place

*Beneficial Use* WE - Wetland Habitat



*Information Used to Assess  
Water Quality:*

Stege Marsh is identified as a toxic hot spot in the SWRCB Consolidated Toxic Hot Spot Cleanup Plan (SWRCB Resolution No. 99-065). This plan is being implemented by the San Francisco Bay RWQCB through Cleanup and Abatement Orders.

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## Region 2

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**Water Segment:** Stege Marsh

**Pollutant:** Zinc

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2, 3.6, and 3.10 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status while under section 3.10, a minimum of two lines of evidence are needed to assess listing status.

Four 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. The benthic community is impacted and may be impacted by this pollutant. The RWQCB has adopted a cleanup order that will result in attainment of the water quality 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 Being Addressed 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. Two of 3 samples exceeded the sediment guideline, 5 of 5 samples exhibit toxicity, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy. The benthic community in this water body is impacted and this pollutant is associated with this impact.
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 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 applicable water quality standards are exceeded and another program is addressing the problem.

**Lines of Evidence:**

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*Numeric Line of Evidence*                      Pollutant-Sediment

<i>Beneficial Use:</i>	WE - Wetland Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	ERM of 410 ug/g used (Long et al., 1995).
<i>Data Used to Assess Water Quality:</i>	Two of 3 samples exceed ERM (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data was synoptically collected with benthic community and toxicity measurements.
<i>Temporal Representation:</i>	Data was collected from 10/97-12/97.
<i>Data Quality Assessment:</i>	Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	WE - Wetland Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP reference envelope approach (SWRCB,1997).
<i>Data Used to Assess Water Quality:</i>	0-1% amphipod survival in 5 of 5 tests. Three of 3 samples with significant urchin toxicity (Hunt et al., 1998b).

*Spatial Representation:* Data was spatially collected.

*Temporal Representation:* Data was collected from 10/97-12/97.

*Data Quality Assessment:* Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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***Numeric Line of Evidence*** Population/Community Degradation

*Beneficial Use:* WE - Wetland Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.

Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.

*Evaluation Guideline:* Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community.

*Data Used to Assess Water Quality:* Relative benthic index = 0.00 (2 benthic samples) (Hunt et al, 1998b).

*Spatial Representation:* Data was spatially collected.

*Temporal Representation:* Data was collected from 10/97-12/97.

*Data Quality Assessment:* Used BPTCP QA/QC. Data evaluation was based on USEPA guidelines for 305(b) reports, that uses a hierarchy of water quality data levels. Only data of higher overall level of information (Levels 3 and 4) were used to list a water body.

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***Line of Evidence*** Remedial Program in Place

*Beneficial Use* WE - Wetland Habitat

*Information Used to Assess  
Water Quality:*

Stege Marsh is identified as a toxic hot spot in the SWRCB Consolidated Toxic Hot Spot Cleanup Plan (SWRCB Resolution No. 99-065). This plan is being implemented by the San Francisco Bay RWQCB through Cleanup and Abatement Orders.

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## Region 2

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**Water Segment:** Stevens Creek

**Pollutant:** Chlordane

**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 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:*

30.0 ng/g Total Chlordane (OEHHA Screening Value).

*Data Used to Assess Water Quality:*

Three out of 6 samples exceeded. A total of 6 composite samples were collected and analyzed from Stevens Creek Reservoir: 3 channel catfish and 3 largemouth bass. Three channel catfish samples exceeded guideline (TSMP, 2002).

*Spatial Representation:*

One station located off the point on the west shore of the lake 600 yards upstream of the dam.

*Temporal Representation:*

Samples were collected on 5/4/2001 and 6/6/2001.

*Data Quality Assessment:*

Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Stevens Creek

**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. Three 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.



Effects on aquatic organisms, wildlife, and human health will be considered.

<i>Evaluation Guideline:</i>	2.0 ng/g Dieldrin - OEHHA Screening Value (Interim Health Advisory for Hg and PCB, Santa Clara County).
<i>Data Used to Assess Water Quality:</i>	Three out of 6 samples exceeded. A total of 6 composite samples were collected and analyzed from Stevens Creek Reservoir: 3 channel catfish and 3 largemouth bass. Three channel catfish samples exceeded guideline (TSMP, 2002).
<i>Spatial Representation:</i>	One station located off the point on the west shore of the lake 600 yards upstream of the dam.
<i>Temporal Representation:</i>	Samples were collected on 5/4/2001 and 6/6/2001.
<i>Data Quality Assessment:</i>	Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Stevens Creek

**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 10 samples exceeded the OEHHHA 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:* 0.3 ug/g Hg - OEHHA Screening Value (Interim Health Advisory for Hg and PCB, Santa Clara County).

*Data Used to Assess Water Quality:* Nine out of 10 samples exceeded. A total of 7 composite samples, 4 each black crappie and 3 largemouth bass, along with 3 individual samples of channel catfish were collected and analyzed from Stevens Creek Reservoir. One channel catfish sample did not exceed guideline (TSMP, 2002).

*Spatial Representation:* One station located off the point on the west shore of the lake 600 yards upstream of the dam.

*Temporal Representation:* Samples were collected on 5/4/2001 and 6/6/2001.

*Data Quality Assessment:* Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Stevens Creek

**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. Six 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* San Francisco Bay RWQCB Basin Plan: Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered.

*Evaluation Guideline:* 20.0 ng/g PCB - OEHHA Screening Value (Interim Health Advisory for Hg and PCB, Santa Clara County).

*Data Used to Assess Water Quality:* Six out of 6 samples exceeded. A total of 6 composite samples were collected and analyzed from Stevens Creek Reservoir: 3 channel catfish and 3 largemouth bass. All exceeded guideline (TSMP, 2002).

*Spatial Representation:* One station located off the point on the west shore of the lake 600 yards upstream of the dam.

*Temporal Representation:* Samples were collected on 5/4/2001 and 6/6/2001.

*Data Quality Assessment:* Environmental Chemistry Quality Assurance and Data Report for the Toxic Substances Monitoring Program, 2001-2002. Department of Fish and Game.

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## Region 2

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**Water Segment:** Stevens Creek

**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.

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 6 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:**

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*Numeric Line of Evidence* Toxicity

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

*Matrix:* Water

*Water Quality Objective/* Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in

<i>Water Quality Criterion:</i>	aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. Acute toxicity is defined as a median of less than 90 percent survival, or less than 70 percent survival, 10 percent of the time, of test organisms in a 96-hour static or continuous flow test.
<i>Data Used to Assess Water Quality:</i>	Two out of six samples displayed significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%, and less than the evaluation threshold (both criteria were met). The toxic Belleville/Barranca samples of April 2002 and January 2003 were 7 day tests for % survival of Pimephales promelas and Ceriodaphnia dubia, respectively. Please see also the QA qualifier below for the January 2003. toxic Belleville/Barranca sample (TSMP, 2002).
<i>Spatial Representation:</i>	The samples were collected from two stations along Stevens Creek: Belleville/Barranca and La Avenida. Toxicity was detected in samples collected from the Belleville/Barranca site.
<i>Temporal Representation:</i>	Samples were collected at the two different stations on three dates, June 17, 2002, April 11, 2002, and January 23, 2003, for a total of six samples. Toxicity in the survival endpoint was detected in samples collected in April 2002 and January 2003.
<i>Environmental Conditions:</i>	Sub-Basin: Stevens Creek is in the Santa Clara Basin.
<i>Data Quality Assessment:</i>	SWAMP QAPP. QA qualifier of Minor deviations in water quality. parameters for the toxic January 2003 Barranca sample.

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## San Francisco Bay Region (2)

DELIST

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

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## Region 2

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**Water Segment:** Carquinez Strait

**Pollutant:** Diazinon

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the 303(d) list under section 4.6 of the Listing Policy. Under section 4.6 a single line of evidence is necessary to assess listing status.

Three lines of evidence are available in the administrative record to assess this pollutant. The basis for listing in 1998 was ambient water toxicity and detections of diazinon in Bay waters. In the current assessment, the evaluation guideline available may not satisfy the requirements of the Listing Policy but even if the guideline were used all measurements are much lower than the recommended concentration. Recent measures of toxicity show that ambient water toxicity no longer exists in Bay waters. The RWQCB is also developing a Water Quality Attainment Strategy that calls for preventive actions to keep diazinon from entering the Bay.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification available 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. An evaluation guideline may not comply 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 samples exceeded the draft guideline and ambient water toxicity in the Bay appears to have disappeared. These frequencies do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
5. Pursuant to section 4.1.1 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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters (SFBRWQCB, 1995).
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 400 ng/L (chronic) (USEPA, 2000). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.
<b><i>Data Used to Assess Water Quality:</i></b>	The maximum concentration observed in Regional Monitoring Program samples was 44 ng/L (Mean 6.6 ng/L) (Ogle, 2004).
<b><i>Spatial Representation:</i></b>	One station.
<b><i>Temporal Representation:</i></b>	Samples were collected between 1993 and 2001.
<b><i>Data Quality Assessment:</i></b>	SFEI Regional Monitoring Program QAPP (Lowe, S.R., et al., 1998), (Ogle, 2004).

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<b><i>Line of Evidence</i></b>	Narrative Description Data
<b><i>Beneficial Use</i></b>	ES - Estuarine Habitat
<b><i>Information Used to Assess Water Quality:</i></b>	In response to the RMP observations of ambient water toxicity, and given the linkage established between similar toxicity and pesticides in upstream ambient water, the SFBRWQCB identified all San Francisco Bay segments as being impaired due to Pesticides in 1998: Pesticides have been added as a cause of impairment to all Bay segments. The pesticide diazinon has been measured at levels that cause water column toxicity. The pesticide chlorpyrifos may also be a problem. This listing is consistent with listing of the Delta for these pesticides by the Central Valley Regional Water Quality Control Board. This listing was subsequently made specific for the OP pesticide diazinon by the USEPA.

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***Line of Evidence***                      Toxicity

*Beneficial Use*

ES - Estuarine Habitat

*Information Used to Assess  
Water Quality:*

Ambient water toxicity in San Francisco Bay appears to have disappeared. The results of ambient water toxicity monitoring at Mallard Island indicate a significant reduction in the frequency, duration, and magnitude of toxicity: 4-5% of the ambient water samples were toxic in 1998-99 (34 total samples) and 1999-2000 (23 samples), relative to 14% toxicity frequency observed in 1997-98 (27 samples); none of the 28 samples collected during the 2000-2001 season were significantly toxic.

In addition, the 1998-2000 and 2000-2001 monitoring at Mallard Island did not document any sets of consecutively toxic samples indicative of an extended period of ambient water toxicity, such as were observed in February and May of 1998. Moreover, the magnitude of toxicity (as reflected by the degree [or percentage] of test organism mortality) is also markedly reduced in the later years, again suggesting a reduction in the degree of ambient water toxicity. Subsequent RMP monitoring of ambient water toxicity in water samples collected from October, 2001 through April 2003, also indicated an absence of toxicity to the test organisms.

*Non-Numeric Objective:*

Basin Plan: There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.

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## Region 2

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**Water Segment:** Central Basin, San Francisco (part of SF Bay, Central)

**Pollutant:** Diazinon

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.1 and 3.1 of the Listing Policy. Under section 3.1 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. The basis for listing in 1998 was ambient water toxicity and detections of diazinon in Bay waters. In the current assessment, the evaluation guideline available may not satisfy the requirements of the Listing Policy but even if the guideline were used all measurements are much lower than the recommended concentration. Recent measures of toxicity show that ambient water toxicity no longer exists in Bay waters. The RWQCB is also developing a Water Quality Attainment Strategy that calls for preventive actions to keep diazinon from entering the Bay.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification available 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 evaluation guideline may not comply 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 samples exceeded the draft guideline and ambient water toxicity in the Bay appears to have disappeared. These frequencies do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.
<b><i>Data Used to Assess Water Quality:</i></b>	1st sample site: None of the 17 samples exceeded, pollutant range: 240-32,000 pg/l, average: 3,555.0. 2nd sample site: None of the 16 samples exceeded, pollutant range: 370-13,000 pg/l, average: 2,898.0 (SFEI, 2001).
<b><i>Spatial Representation:</i></b>	Two sample sites.
<b><i>Temporal Representation:</i></b>	1st sample site: Date Range: 02/07/94-08/02/01. 2nd sample site: Date Range: 03/03/93-08/03/01
<b><i>Data Quality Assessment:</i></b>	SFEI RMP QA/QC program.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.

<i>Data Used to Assess Water Quality:</i>	1st sample site: None of the 18 samples exceeded, pollutant range: 240-32,000 pg/l, average: 3,492.8. 2nd sample site: None of the 16 viable samples exceeded, pollutant range: 370-13,000 pg/l, average: 2,907.5 (SFEI, 2001).
<i>Spatial Representation:</i>	Two sample sites.
<i>Temporal Representation:</i>	1st sample site: Date Range: 02/07/94-08/02/01. 2nd sample site: Date Range: 03/03/93-08/03/01.
<i>Data Quality Assessment:</i>	SFEI RMP QA/QC program.

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<b><i>Line of Evidence</i></b>	Narrative Description Data
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Information Used to Assess Water Quality:</i>	Diazinon is one of the pollutants listed for this segment on the 2002 section 303(d) list. The data and information used to assess this pollutant-water segment is subsumed in diazinon listing for San Francisco Bay, Central. The conclusions drawn for San Francisco Bay, Central should be applied to this segment.

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<b><i>Line of Evidence</i></b>	Toxicity
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Non-Numeric Objective:</i>	Basin Plan: There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<i>Data Used to Assess Water Quality:</i>	<p>Ambient water toxicity in San Francisco Bay appears to have disappeared. The results of ambient water toxicity monitoring at Mallard Island indicate a significant reduction in the frequency, duration, and magnitude of toxicity: 4-5% of the ambient water samples were toxic in 1998-99 (34 total samples) and 1999-2000 (23 samples), relative to 14% toxicity frequency observed in 1997-98 (27 samples); none of the 28 samples collected during the 2000-2001 season were significantly toxic.</p> <p>In addition, the 1998-2000 and 2000-2001 monitoring at Mallard Island did not document any sets of consecutively toxic samples indicative of an extended period of ambient water toxicity, such as were observed in February and May of 1998. The magnitude of toxicity (as reflected by the degree [or percentage] of test organism mortality) is also markedly reduced in the later years, indicating a reduction in the degree of ambient water toxicity. Subsequent RMP monitoring of ambient water toxicity in water samples collected from 10/2001 through 4/2003 also indicated an absence of toxicity to the test organisms (Ogle, 2004).</p>



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*Line of Evidence*

Narrative Description Data

*Beneficial Use*

ES - Estuarine Habitat

*Information Used to Assess  
Water Quality:*

In response to the RMP observations of ambient water toxicity, and given the linkage established between similar toxicity and pesticides in upstream ambient water, the SFBRWQCB identified all San Francisco Bay segments as being impaired due to 'Pesticides' in 1998:

'Pesticides have been added as a cause of impairment to all Bay segments. The pesticide diazinon has been measured at levels that cause water column toxicity. The pesticide chlorpyrifos may also be a problem. This listing is consistent with listing of the Delta for these pesticides by the Central Valley Regional Water Quality Control Board.' This listing was subsequently made specific for the Organophosphate pesticide diazinon by the USEPA.

*Non-Numeric Objective:*

All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.

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## Region 2

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**Water Segment:** Islais Creek

**Pollutant:** Endosulfan sulfate

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 4.6 of the Listing Policy. Under section 4.6 two lines of evidence are necessary to assess listing status.

Five lines of evidence is available in the administrative record to assess this pollutant. A sediment guideline is not available and it cannot be determined if the pollutant is likely to cause or contribute to the toxic effect or tot he benthic effects.

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. A sediment quality guideline that complies with the requirements of section 6.1.3 of the Policy is not available.
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. 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 are not attained.

### Lines of Evidence:

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*Numeric Line of Evidence*      Pollutant-Sediment

*Beneficial Use:*                      ES - Estuarine Habitat

*Matrix:*                                  Sediment

<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	No applicable sediment guideline is available.
<i>Data Used to Assess Water Quality:</i>	Three measurements. Concentration ranges from 3.96 ng/g to 21 ng/g (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data was collected over the length of the Creek concurrently with benthic community and toxicity samples.
<i>Temporal Representation:</i>	Data was collected in 1997.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat, MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms (SFBRWQCB, 1995).
<i>Evaluation Guideline:</i>	BPTCP Reference envelope approach used (SWRCB, 1997).
<i>Data Used to Assess Water Quality:</i>	Significant amphipod toxicity in 3 of 4 samples (75%), Significant urchin toxicity in 4 of 5 samples (80%) (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data was synoptically collected with benthic community and toxicity measurements over the length of the creek.
<i>Temporal Representation:</i>	Data was collected from 9/94 - 9/97.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan (Stephenson et al., 1994).

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat, MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms (SFBRWQCB, 1995).  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP Reference envelope approach used (SWRCB, 1997).
<i>Data Used to Assess Water Quality:</i>	Significant amphipod toxicity in 7 of 18 samples (Battelle Memorial Institute, 2002).
<i>Spatial Representation:</i>	Data was synoptically collected with benthic community and toxicity measurements over the length of the creek.
<i>Temporal Representation:</i>	Data were collected between 1998 and 2000.
<i>Environmental Conditions:</i>	Samples were collected in both wet and dry seasons.
<i>Data Quality Assessment:</i>	Methods used were equivalent to those used in the BPTCP QAPP (Stephenson, et al., 1994). All reported data met QA requirements.

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<b><i>Numeric Line of Evidence</i></b>	Population/Community Degradation
<i>Beneficial Use:</i>	ES - Estuarine Habitat, MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.

<i>Evaluation Guideline:</i>	Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. the index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community.
<i>Data Used to Assess Water Quality:</i>	Relative benthic index = 0.22, 0.25, 0.43 (3 benthic gradient samples) (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data was synoptically collected with benthic community and toxicity measurements over the length of the creek.
<i>Temporal Representation:</i>	Data was collected from 9/94 - 9/97.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

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<i>Line of Evidence</i>	Remedial Program in Place
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Information Used to Assess Water Quality:</i>	The BPTCP Consolidated Toxic Hot Spots Cleanup Plan presents a variety of corrective actions that need to be completed in order for the cove to be remediated. Responsible parties have been identified.

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## Region 2

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**Water Segment:** Mission Creek

**Pollutant:** Chlorpyrifos

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 4.6 of the Listing Policy. Under section 4.6 two lines of evidence are necessary to assess listing status.

Four lines of evidence are available in the administrative record to assess this pollutant. A sediment guideline is not available and it cannot be determined if 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 removing this water segment-pollutant combination from the section 303(d) list.

This conclusion is based on the staff findings that:

1. A sediment quality guideline that complies with the requirements of section 6.1.3 of the Policy is not available.
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. 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 are attained.

### **Lines of Evidence:**

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*Numeric Line of Evidence*      Pollutant-Sediment

*Beneficial Use:*                      ES - Estuarine Habitat

*Matrix:*                                  Sediment

<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	No applicable sediment guideline is available.
<i>Data Used to Assess Water Quality:</i>	Three measurements (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data were collected concurrently with benthic community and toxicity measurements.
<i>Temporal Representation:</i>	Data was collected, from 5/95-4/97.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

<i>Numeric Line of Evidence</i>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP reference envelope approach used.
<i>Data Used to Assess Water Quality:</i>	BPTCP Data: Significant amphipod toxicity, 3 of 5 tests (60%) significant urchin toxicity (Hunt et al., 1998b). SWRCB received "Sediment Investigations at Islais Creek and Mission Creek-1998-1999-2000" provided by SFPUC. Six transects were monitored over three years and at corresponding North and South sampling stations for each transect (i.e. 1N, 1S). Excluding stations 5 and 6 (No data for 1999 and 2000), the data shows 4 of 20 sampling stations (1N/S-4N/S) indicate sediment toxicity and amphipod survival below the

BPTCP reference tolerance limit (Battelle Memorial Institute, 2002).

*Spatial Representation:* Data were collected concurrently with benthic and chemical measurements.

*Temporal Representation:* Data was collected from 5/95-4/97.

*Data Quality Assessment:* BPTCP Quality Assurance Project Plan. SWRCB received "Sediment Investigations at Islais Creek and Mission Creek-1998-1999-2000" provided by SFPUC. Appropriate QA procedures were followed.

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***Numeric Line of Evidence*** Toxicity

*Beneficial Use:* ES - Estuarine Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.

There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community (Hunt et al., 1998).

*Evaluation Guideline:* BPTCP reference envelope approach used.

*Data Used to Assess Water Quality:* Significant amphipod toxicity was observed in 4 of 21 samples. Observed toxicity was recorded in the year 2000 only (Battelle Memorial Institute, 2002).

*Spatial Representation:* Data was synoptically collected with benthic community and toxicity measurements over the length of the creek.

*Temporal Representation:* Data were collected between 1998 and 2000.

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***Numeric Line of Evidence*** Population/Community Degradation

*Beneficial Use:* ES - Estuarine Habitat

*Matrix:* Sediment

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



<i>Water Quality Criterion:</i>	that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. the index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community (BPTCP, 1998).
<i>Data Used to Assess Water Quality:</i>	Relative benthic index = 0.00, 0.34, and 0.65 (3 benthic gradient samples) (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data were collected concurrently with toxicity and chemical samples.
<i>Temporal Representation:</i>	Data was collected, from 5/95-4/97.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

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## Region 2

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**Water Segment:** Mission Creek

**Pollutant:** Chromium (total)

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 4.6 and 4.9 of the Listing Policy. Under section 4.6 a single line of evidence is necessary to assess listing status while under section 4.9, a minimum of two lines of evidence are needed to assess listing status.

Six lines of evidence are available in the administrative record to assess this pollutant. Based on section 4.6, the site has significant sediment toxicity but the pollutant is not likely to cause or contribute to any toxic effect. The benthic community is impacted but is not associated with 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 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. One of 47 samples exceeded the 370 ug/g ERM sediment quality guideline and this does not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
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:**

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*Numeric Line of Evidence*      Pollutant-Sediment

<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	ERM of 370 ug/g was used (Long et al., 1995).
<i>Data Used to Assess Water Quality:</i>	One of 3 samples exceeded the sediment guideline (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data were collected concurrently with benthic community and toxicity measurements.
<i>Temporal Representation:</i>	Data was collected in 1997.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Sediment
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	ERM of 370 ug/g was used (Long et al., 1995).
<i>Data Used to Assess Water Quality:</i>	None of 44 samples exceeded the ERM (Battelle Memorial Institute, 2002).

*Spatial Representation:* Data was synoptically collected with benthic community and toxicity measurements over the length of the creek.

*Temporal Representation:* Data were collected between 1998 and 2000.

*Data Quality Assessment:* Methods used were equivalent to those used in the BPTCP QAPP. All reported data met QA requirements.

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***Numeric Line of Evidence*** Toxicity

*Beneficial Use:* ES - Estuarine Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.

There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.

*Evaluation Guideline:* BPTCP reference envelope approach used.

*Data Used to Assess Water Quality:* BPTCP Data: Significant amphipod toxicity, 3 of 5 tests (60%) significant urchin toxicity (Hunt et al., 1998b). SWRCB received "Sediment Investigations at Islais Creek and Mission Creek-1998-1999-2000" provided by SFPUC. Six transects were monitored over three years and at corresponding North and South sampling stations for each transect (i.e. 1N, 1S). Excluding stations 5 and 6 (No data for 1999 and 2000), the data shows 4 of 20 sampling stations (1N/S-4N/S) indicate sediment toxicity and amphipod survival below the BPTCP reference tolerance limit (Battelle Memorial Institute, 2002).

*Spatial Representation:* Data were collected concurrently with benthic and chemical measurements.

*Temporal Representation:* Data was collected from 5/95-4/97.

*Data Quality Assessment:* BPTCP Quality Assurance Project Plan. SWRCB received "Sediment Investigations at Islais Creek and Mission Creek-1998-1999-2000" provided by SFPUC. Appropriate QA procedures were followed.

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Sediment
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community (Hunt et al., 1998).
<b><i>Evaluation Guideline:</i></b>	BPTCP reference envelope approach used.
<b><i>Data Used to Assess Water Quality:</i></b>	Significant amphipod toxicity was observed in 4 of 21 samples. Observed toxicity was recorded in the year 2000 only (Battelle Memorial Institute, 2002).
<b><i>Spatial Representation:</i></b>	Data was synoptically collected with benthic community and toxicity measurements over the length of the creek.
<b><i>Temporal Representation:</i></b>	Data were collected between 1998 and 2000.

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<b><i>Numeric Line of Evidence</i></b>	Population/Community Degradation
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Sediment
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<b><i>Evaluation Guideline:</i></b>	Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. the index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication

that pollutants or other factors are negatively impacting the benthic community (BPTCP, 1998).

*Data Used to Assess Water Quality:* Relative benthic index = 0.00, 0.34, and 0.65 (3 benthic gradient samples) (Hunt et al., 1998b).

*Spatial Representation:* Data were collected concurrently with toxicity and chemical samples.

*Temporal Representation:* Data was collected, from 5/95-4/97.

*Data Quality Assessment:* BPTCP Quality Assurance Project Plan.

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***Line of Evidence*** Remedial Program in Place

***Beneficial Use*** ES - Estuarine Habitat

***Information Used to Assess Water Quality:*** The BPTCP Consolidated Toxic Hot Spots Cleanup Plan presents a variety of corrective actions that need to be completed in order for the cove to be remediated. Responsible parties have been identified.

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## Region 2

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**Water Segment:** Mission Creek

**Pollutant:** Copper

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 4.6 and 4.9 of the Listing Policy. Under section 4.6 a single line of evidence is necessary to assess listing status while under section 4.9, a minimum of two lines of evidence are needed to assess listing status.

Six lines of evidence are available in the administrative record to assess this pollutant. Based on section 4.6, the site has significant sediment toxicity but the pollutant is not likely to cause or contribute to any toxic effect. The benthic community is impacted but is not associated with 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 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. One of 47 samples exceeded the 270 ug/g ERM sediment quality guideline and this does not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
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:**

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*Numeric Line of Evidence*      Pollutant-Sediment

<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	ERM of 270 ug/g was used (Long et al., 1995).
<i>Data Used to Assess Water Quality:</i>	One of 3 samples exceeded the sediment guideline (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data were collected concurrently with benthic community and toxicity measurements.
<i>Temporal Representation:</i>	Data was collected in 1997.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Sediment
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	ERM of 270 ug/g was used (Long et al., 1995).
<i>Data Used to Assess Water Quality:</i>	None of 44 samples exceeded the ERM (Hunt et al., 1998b).



*Spatial Representation:* Data was synoptically collected with benthic community and toxicity measurements over the length of the creek.

*Temporal Representation:* Data were collected between 1998 and 2000.

*Data Quality Assessment:* Methods used were equivalent to those used in the BPTCP QAPP. All reported data met QA requirements.

***Numeric Line of Evidence*** Toxicity

*Beneficial Use:* ES - Estuarine Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.

There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.

*Evaluation Guideline:* BPTCP reference envelope approach used.

*Data Used to Assess Water Quality:* BPTCP Data: Significant amphipod toxicity, 3 of 5 tests (60%) significant urchin toxicity (Hunt et al., 1998b). SWRCB received "Sediment Investigations at Islais Creek and Mission Creek-1998-1999-2000" provided by SFPUC. Six transects were monitored over three years and at corresponding North and South sampling stations for each transect (i.e. 1N, 1S). Excluding stations 5 and 6 (No data for 1999 and 2000), the data shows 4 of 20 sampling stations (1N/S-4N/S) indicate sediment toxicity and amphipod survival below the BPTCP reference tolerance limit (Battelle Memorial Institute, 2002).

*Spatial Representation:* Data were collected concurrently with benthic and chemical measurements.

*Temporal Representation:* Data was collected from 5/95-4/97.

*Data Quality Assessment:* BPTCP Quality Assurance Project Plan. SWRCB received "Sediment Investigations at Islais Creek and Mission Creek-1998-1999-2000" provided by SFPUC. Appropriate QA procedures were followed.

<b><i>Numeric Line of Evidence</i></b>	Toxicity
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Sediment
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community (Hunt et al., 1998b).
<b><i>Evaluation Guideline:</i></b>	BPTCP reference envelope approach used.
<b><i>Data Used to Assess Water Quality:</i></b>	Significant amphipod toxicity was observed in 4 of 21 samples. Observed toxicity was recorded in the year 2000 only (Battelle Memorial Institute, 2002).
<b><i>Spatial Representation:</i></b>	Data was synoptically collected with benthic community and toxicity measurements over the length of the creek.
<b><i>Temporal Representation:</i></b>	Data were collected between 1998 and 2000.

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<b><i>Numeric Line of Evidence</i></b>	Population/Community Degradation
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Sediment
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<b><i>Evaluation Guideline:</i></b>	Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. the index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication

that pollutants or other factors are negatively impacting the benthic community (BPTCP, 1998).

*Data Used to Assess Water Quality:* Relative benthic index = 0.00, 0.34, and 0.65 (3 benthic gradient samples) (Hunt et al., 1998-b).

*Spatial Representation:* Data were collected concurrently with toxicity and chemical samples.

*Temporal Representation:* Data was collected, from 5/95-4/97.

*Data Quality Assessment:* BPTCP Quality Assurance Project Plan.

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***Line of Evidence*** Remedial Program in Place

***Beneficial Use*** ES - Estuarine Habitat

***Information Used to Assess Water Quality:*** The BPTCP Consolidated Toxic Hot Spots Cleanup Plan presents a variety of corrective actions that need to be completed in order for the cove to be remediated. Responsible parties have been identified.

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## Region 2

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**Water Segment:** Mission Creek

**Pollutant:** Mirex

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 4.6 of the Listing Policy. Under section 4.6 two lines of evidence are necessary to assess listing status.

Four lines of evidence is available in the administrative record to assess this pollutant. A sediment guideline is not available and it cannot be determined if 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 removing this water segment-pollutant combination from the section 303(d) list.

This conclusion is based on the staff findings that:

1. A sediment quality guideline that complies with the requirements of section 6.1.3 of the Policy is not available.
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. Even though the sediments are toxic and benthos is impacted, this pollutant cannot be associated with the effects.
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 it cannot be determined if applicable water quality standards are not attained.

### Lines of Evidence:

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*Numeric Line of Evidence*      Pollutant-Sediment

*Beneficial Use:*                      ES - Estuarine Habitat

<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community (Hunt et al., 1998b).
<i>Evaluation Guideline:</i>	No applicable guideline is available.
<i>Data Used to Assess Water Quality:</i>	Three measurements (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data were collected concurrently with benthic and toxicity measurements.
<i>Temporal Representation:</i>	Data was collected, from 5/95-4/97.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

<i>Numeric Line of Evidence</i>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP reference envelope approach used.
<i>Data Used to Assess Water Quality:</i>	BPTCP Data: Significant amphipod toxicity, 3 of 5 tests (60%) significant urchin toxicity (Hunt et al., 1998b).  SWRCB received "Sediment Investigations at Islais Creek and Mission Creek-1998-1999-2000" provided by SFPUC. Six transects were monitored over three years and at corresponding North and South

sampling stations for each transect (i.e. 1N, 1S). Excluding stations 5 and 6 (No data for 1999 and 2000), the data shows 4 of 20 sampling stations (1N/S-4N/S) indicate sediment toxicity and amphipod survival below the BPTCP reference tolerance limit (Battelle Memorial Institute, 2002).

*Spatial Representation:* Data were collected concurrently with benthic and chemical measurements.

*Temporal Representation:* Data was collected from 5/95-4/97.

*Data Quality Assessment:* BPTCP Quality Assurance Project Plan. SWRCB received "Sediment Investigations at Islais Creek and Mission Creek-1998-1999-2000" provided by SFPUC. Appropriate QA procedures were followed.

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***Numeric Line of Evidence*** Toxicity

*Beneficial Use:* ES - Estuarine Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.

There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community (Hunt et al., 1998b).

*Evaluation Guideline:* BPTCP reference envelope approach used.

*Data Used to Assess Water Quality:* Significant amphipod toxicity was observed in 4 of 21 samples. Observed toxicity was recorded in the year 2000 only (Battelle Memorial Institute, 2002).

*Spatial Representation:* Data was synoptically collected with benthic community and toxicity measurements over the length of the creek.

*Temporal Representation:* Data were collected between 1998 and 2000.

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***Numeric Line of Evidence*** Population/Community Degradation

*Beneficial Use:* ES - Estuarine Habitat

<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	<p>All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.</p> <p>There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.</p>
<i>Evaluation Guideline:</i>	Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. the index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community (Hunt et al., 1998b).
<i>Data Used to Assess Water Quality:</i>	Relative benthic index = 0.00, 0.34, and 0.65 (3 benthic gradient samples) (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data were collected concurrently with toxicity and chemical samples.
<i>Temporal Representation:</i>	Data was collected, from 5/95-4/97.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

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## Region 2

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**Water Segment:** Oakland Inner Harbor (Fruitvale Site, part of SF Bay, Central)

**Pollutant:** Diazinon

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 4.1 of the Listing Policy. Under section 4.1 a single line of evidence is necessary to assess listing status.

Five lines of evidence are available in the administrative record to assess this pollutant. The basis for listing in 1998 was ambient water toxicity and detections of diazinon in Bay waters. In the current assessment, the evaluation guideline available may not satisfy the requirements of the Listing Policy but even if the guideline were used all measurements are much lower than the recommended concentration. Recent measures of toxicity show that ambient water toxicity no longer exists in Bay waters. The RWQCB is also developing a Water Quality Attainment Strategy that calls for preventive actions to keep diazinon from entering the Bay.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification available 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 evaluation guideline may not comply 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 samples exceeded the draft guideline and ambient water toxicity in the Bay appears to have disappeared. These frequencies do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
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:**



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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.
<b><i>Data Used to Assess Water Quality:</i></b>	1st sample site: None of the 17 samples exceeded, pollutant range: 240-32,000 pg/l, average: 3,555.0. 2nd sample site: None of the 16 samples exceeded, pollutant range: 370-13,000 pg/l, average: 2,898.0 (SFEI, 2001).
<b><i>Spatial Representation:</i></b>	Two sample sites.
<b><i>Temporal Representation:</i></b>	1st sample site: Date Range: 02/07/94-08/02/01. 2nd sample site: Date Range: 03/03/93-08/03/01
<b><i>Data Quality Assessment:</i></b>	SFEI RMP QA/QC program.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.

<i>Data Used to Assess Water Quality:</i>	1st sample site: None of the 18 samples exceeded, pollutant range: 240-32,000 pg/l, average: 3,492.8. 2nd sample site: None of the 16 viable samples exceeded, pollutant range: 370-13,000 pg/l, average: 2,907.5 (SFEI, 2001).
<i>Spatial Representation:</i>	Two sample sites.
<i>Temporal Representation:</i>	1st sample site: Date Range: 02/07/94-08/02/01. 2nd sample site: Date Range: 03/03/93-08/03/01.
<i>Data Quality Assessment:</i>	SFEI RMP QA/QC program.

<b><i>Line of Evidence</i></b>	Narrative Description Data
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Information Used to Assess Water Quality:</i>	Diazinon is one of the pollutants listed for this segment on the 2002 section 303(d) list. The data and information used to assess this pollutant-water segment is subsumed in diazinon listing for San Francisco Bay, Central. The conclusions drawn for San Francisco Bay, Central should be applied to this segment.

<b><i>Line of Evidence</i></b>	Toxicity
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Non-Numeric Objective:</i>	Basin Plan: There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<i>Data Used to Assess Water Quality:</i>	<p>Ambient water toxicity in San Francisco Bay appears to have disappeared. The results of ambient water toxicity monitoring at Mallard Island indicate a significant reduction in the frequency, duration, and magnitude of toxicity: 4-5% of the ambient water samples were toxic in 1998-99 (34 total samples) and 1999-2000 (23 samples), relative to 14% toxicity frequency observed in 1997-98 (27 samples); none of the 28 samples collected during the 2000-2001 season were significantly toxic.</p> <p>In addition, the 1998-2000 and 2000-2001 monitoring at Mallard Island did not document any sets of consecutively toxic samples indicative of an extended period of ambient water toxicity, such as were observed in February and May of 1998. The magnitude of toxicity (as reflected by the degree [or percentage] of test organism mortality) is also markedly reduced in the later years, indicating a reduction in the degree of ambient water toxicity. Subsequent RMP monitoring of ambient water toxicity in water samples collected from 10/2001 through 4/2003 also indicated an absence of toxicity to the test organisms (Ogle, 2004).</p>

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*Line of Evidence*

Narrative Description Data

*Beneficial Use*

ES - Estuarine Habitat

*Information Used to Assess  
Water Quality:*

In response to the RMP observations of ambient water toxicity, and given the linkage established between similar toxicity and pesticides in upstream ambient water, the SFBRWQCB identified all San Francisco Bay segments as being impaired due to 'Pesticides' in 1998:

'Pesticides have been added as a cause of impairment to all Bay segments. The pesticide diazinon has been measured at levels that cause water column toxicity. The pesticide chlorpyrifos may also be a problem. This listing is consistent with listing of the Delta for these pesticides by the Central Valley Regional Water Quality Control Board.' This listing was subsequently made specific for the Organophosphate pesticide diazinon by the USEPA.

*Non-Numeric Objective:*

All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.

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## Region 2

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**Water Segment:** Oakland Inner Harbor (Pacific Dry-dock Yard 1 Site, part of SF Bay, Central)

**Pollutant:** Chlorpyrifos

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 4.6 of the Listing Policy. Under section 4.6 two lines of evidence are necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. A sediment guideline is not available and it cannot be determined if 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 removing this water segment-pollutant combination from the section 303(d) list.

This conclusion is based on the staff findings that:

1. A sediment quality guideline that complies with the requirements of section 6.1.3 of the Policy is not available.
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. 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 are not attained.

### Lines of Evidence:

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*Numeric Line of Evidence*      Pollutant-Sediment

*Beneficial Use:*                      ES - Estuarine Habitat

*Matrix:*                                  Sediment

<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	No applicable sediment quality guideline is available.
<i>Data Used to Assess Water Quality:</i>	Two measurements.(Hunt et al., 1998b).
<i>Spatial Representation:</i>	Spatial distribution of samples is described in the report
<i>Temporal Representation:</i>	Data collected during 1995.
<i>Data Quality Assessment:</i>	Used BPTCP QA/QC.

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms (BPTCP, 1998).  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP reference envelope approach used.
<i>Data Used to Assess Water Quality:</i>	Significant amphipod toxicity in 2 of 4 tests. No significant urchin toxicity (4 tests) (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Spatial distribution of samples is described in the report
<i>Temporal Representation:</i>	Data collected during 4/95- 4/97.

*Data Quality Assessment:* Used BPTCP QA/QC.

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## Region 2

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**Water Segment:** Oakland Inner Harbor (Pacific Dry-dock Yard 1 Site, part of SF Bay, Central)

**Pollutant:** Diazinon

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 4.1 of the Listing Policy. Under section 4.1 a single line of evidence is necessary to assess listing status.

Five lines of evidence are available in the administrative record to assess this pollutant. The basis for listing in 1998 was ambient water toxicity and detections of diazinon in Bay waters. In the current assessment, the evaluation guideline available may not satisfy the requirements of the Listing Policy. Even if the guideline were used, all measurements are much lower than the recommended concentration. Recent measures of toxicity show that ambient water toxicity no longer exists in Bay waters. The RWQCB is also developing a Water Quality Attainment Strategy that calls for preventive actions to keep diazinon from entering the Bay.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification available 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. An evaluation guideline may not comply 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 samples exceeded the draft guideline and ambient water toxicity in the Bay appears to have disappeared. These frequencies do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.
<b><i>Data Used to Assess Water Quality:</i></b>	1st sample site: None of the 17 samples exceeded, pollutant range: 240-32,000 pg/l, average: 3,555.0. 2nd sample site: None of the 16 samples exceeded, pollutant range: 370-13,000 pg/l, average: 2,898.0 (SFEI, 2001).
<b><i>Spatial Representation:</i></b>	Two sample sites.
<b><i>Temporal Representation:</i></b>	1st sample site: Date Range: 02/07/94-08/02/01. 2nd sample site: Date Range: 03/03/93-08/03/01
<b><i>Data Quality Assessment:</i></b>	SFEI RMP QA/QC program.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.



<i>Data Used to Assess Water Quality:</i>	1st sample site: None of the 18 samples exceeded, pollutant range: 240-32,000 pg/l, average: 3,492.8. 2nd sample site: None of the 16 viable samples exceeded, pollutant range: 370-13,000 pg/l, average: 2,907.5 (SFEI, 2001).
<i>Spatial Representation:</i>	Two sample sites.
<i>Temporal Representation:</i>	1st sample site: Date Range: 02/07/94-08/02/01. 2nd sample site: Date Range: 03/03/93-08/03/01.
<i>Data Quality Assessment:</i>	SFEI RMP QA/QC program.

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<b><i>Line of Evidence</i></b>	Narrative Description Data
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Information Used to Assess Water Quality:</i>	Diazinon is one of the pollutants listed for this segment on the 2002 section 303(d) list. The data and information used to assess this pollutant-water segment is subsumed in diazinon listing for San Francisco Bay, Central. The conclusions drawn for San Francisco Bay, Central should be applied to this segment (SFEI, 2001).

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<b><i>Line of Evidence</i></b>	Toxicity
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Non-Numeric Objective:</i>	Basin Plan: There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<i>Data Used to Assess Water Quality:</i>	<p>Ambient water toxicity in San Francisco Bay appears to have disappeared. The results of ambient water toxicity monitoring at Mallard Island indicate a significant reduction in the frequency, duration, and magnitude of toxicity: 4-5% of the ambient water samples were toxic in 1998-99 (34 total samples) and 1999-2000 (23 samples), relative to 14% toxicity frequency observed in 1997-98 (27 samples); none of the 28 samples collected during the 2000-2001 season were significantly toxic.</p> <p>In addition, the 1998-2000 and 2000-2001 monitoring at Mallard Island did not document any sets of consecutively toxic samples indicative of an extended period of ambient water toxicity, such as were observed in February and May of 1998. The magnitude of toxicity (as reflected by the degree [or percentage] of test organism mortality) is also markedly reduced in the later years, indicating a reduction in the degree of ambient water toxicity. Subsequent RMP monitoring of ambient water toxicity in water samples collected from 10/2001 through 4/2003 also indicated an absence of toxicity to the test organisms (Ogle, 2004).</p>

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*Line of Evidence*

Narrative Description Data

*Beneficial Use*

ES - Estuarine Habitat

*Information Used to Assess  
Water Quality:*

In response to the RMP observations of ambient water toxicity, and given the linkage established between similar toxicity and pesticides in upstream ambient water, the SFBRWQCB identified all San Francisco Bay segments as being impaired due to 'Pesticides' in 1998:

'Pesticides have been added as a cause of impairment to all Bay segments. The pesticide diazinon has been measured at levels that cause water column toxicity. The pesticide chlorpyrifos may also be a problem. This listing is consistent with listing of the Delta for these pesticides by the Central Valley Regional Water Quality Control Board.' This listing was subsequently made specific for the Organophosphate pesticide diazinon by the USEPA.

*Non-Numeric Objective:*

All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.

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## Region 2

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**Water Segment:** Oakland Inner Harbor (Pacific Dry-dock Yard 1 Site, part of SF Bay, Central)

**Pollutant:** Mirex

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 4.6 and 4.10 of the Listing Policy.

Two lines of evidence are available in the administrative record to assess this pollutant. The site has significant sediment toxicity but it cannot be determined if 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 not 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. A sediment quality guideline is not 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 number of samples is insufficient to determine with the confidence and power required by 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 not be removed from the section 303(d) list because it cannot be determined if applicable water quality standards are attained.

### **Lines of Evidence:**

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*Numeric Line of Evidence*      Pollutant-Sediment

*Beneficial Use:*                      ES - Estuarine Habitat

*Matrix:*                                  Sediment

<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	There is no applicable sediment quality guideline available.
<i>Data Used to Assess Water Quality:</i>	Three measurements (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Spatial distribution of samples is described in the report: Sediment quality and biological effects in San Francisco Bay (Bay Protection and Toxic Cleanup Program), dated August 1998.
<i>Temporal Representation:</i>	Data collected during 4/95- 4/97.
<i>Data Quality Assessment:</i>	Used BPTCP QA/QC.

<i>Numeric Line of Evidence</i>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP reference envelope approach used.
<i>Data Used to Assess Water Quality:</i>	Significant amphipod toxicity in 2 of 4 tests. No significant urchin toxicity (4 tests) (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Spatial distribution of samples is described in the report
<i>Temporal Representation:</i>	Data collected during 4/95- 4/97.

*Data Quality Assessment:* Used BPTCP QA/QC.

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## Region 2

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<b>Water Segment:</b>	Oakland Inner Harbor (Pacific Dry-dock Yard 1 Site, part of SF Bay, Central)
<b>Pollutant:</b>	Tributyltin TBT (Tributylstanne)
<b>Decision:</b>	Delist
<b>Weight of Evidence:</b>	<p>This pollutant is being considered for removal from the section 303(d) list under section 4.6 of the Listing Policy. Under section 4.6 two lines of evidence are necessary to assess listing status.</p> <p>Two lines of evidence are available in the administrative record to assess this pollutant. A sediment guideline is not available and it cannot be determined if the pollutant is likely to cause or contribute to the toxic effect.</p> <p>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.</p> <p>This conclusion is based on the staff findings that:</p> <ol style="list-style-type: none"><li>1. A sediment quality guideline that complies with the requirements of section 6.1.3 of the Policy is not available.</li><li>2. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.</li><li>3. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.</li><li>4. The sediments are toxic in 2 of 4 tests.</li><li>5. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.</li></ol>
<b>SWRCB Staff Recommendation:</b>	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 are not attained.

### Lines of Evidence:

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<i>Numeric Line of Evidence</i>	Pollutant-Sediment
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment

<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	No applicable sediment guideline available.
<i>Data Used to Assess Water Quality:</i>	Two measurements (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Spatial distribution of samples is described in the report
<i>Temporal Representation:</i>	Data collected in 1995.
<i>Data Quality Assessment:</i>	Used BPTCP QA/QC.

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms (BPTCP, 1998).  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP reference envelope approach used.
<i>Data Used to Assess Water Quality:</i>	Significant amphipod toxicity in 2 of 4 tests. No significant urchin toxicity (4 tests) (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Spatial distribution of samples is described in the report
<i>Temporal Representation:</i>	Data collected during 4/95- 4/97.

*Data Quality Assessment:*      Used BPTCP QA/QC.

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## Region 2

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<b>Water Segment:</b>	Oakland Inner Harbor (Pacific Dry-dock Yard 1 Site, part of SF Bay, Central)
<b>Pollutant:</b>	ppDDE
<b>Decision:</b>	Delist
<b>Weight of Evidence:</b>	<p>This pollutant is being considered for removal from the section 303(d) list under section 4.6 of the Listing Policy. Under section 4.6 two lines of evidence are necessary to assess listing status.</p> <p>Two lines of evidence are available in the administrative record to assess this pollutant. A sediment guideline is not available and it cannot be determined if the pollutant is likely to cause or contribute to the toxic effect.</p> <p>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.</p> <p>This conclusion is based on the staff findings that:</p> <ol style="list-style-type: none"><li>1. A sediment quality guideline that complies with the requirements of section 6.1.3 of the Policy is not available.</li><li>2. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.</li><li>3. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.</li><li>4. The sediments are toxic in 2 of 4 tests.</li><li>5. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.</li></ol>
<b>SWRCB Staff Recommendation:</b>	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 are not attained.

### Lines of Evidence:

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<i>Numeric Line of Evidence</i>	Pollutant-Sediment
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment

<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	No applicable sediment guideline available.
<i>Data Used to Assess Water Quality:</i>	Two measurements ranging in concentration from ND to 51.2 ng/g (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Spatial distribution of samples is described in the report
<i>Temporal Representation:</i>	Data collected in 1995.
<i>Data Quality Assessment:</i>	Used BPTCP QA/QC.

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP reference envelope approach used.
<i>Data Used to Assess Water Quality:</i>	Significant amphipod toxicity in 2 of 4 tests. No significant urchin toxicity (4 tests) (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Spatial distribution of samples is described in the report
<i>Temporal Representation:</i>	Data collected during 4/95- 4/97.

*Data Quality Assessment:*      Used BPTCP QA/QC.

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## Region 2

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**Water Segment:** Sacramento San Joaquin Delta

**Pollutant:** Diazinon

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the 303(d) list under section 4.6 of the Listing Policy. Under section 4.6 a single line of evidence is necessary to assess listing status.

Three lines of evidence are available in the administrative record to assess this pollutant. The basis for listing in 1998 was ambient water toxicity and detections of diazinon in Bay waters. In the current assessment, the evaluation guideline available may not satisfy the requirements of the Listing Policy but even if the guideline were used all measurements are much lower than the recommended concentration. Recent measures of toxicity show that ambient water toxicity no longer exists in Bay waters. The RWQCB is also developing a Water Quality Attainment Strategy that calls for preventive actions to keep diazinon from entering the Bay.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification available 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 evaluation guideline may not comply 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 83 samples exceeded the criteria and ambient water toxicity in the Bay appears to have disappeared. These frequencies do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	<p>All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters (SFBRWQCB, 1995).</p> <p>For salt water, USEPA has developed a draft water quality criteria of 400 ng/L (chronic) (USEPA, 2000). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.</p>
<b><i>Evaluation Guideline:</i></b>	CDFG Hazard Assessment Criteria 0.16 ug/L 1-hour average (acute), 0.10 ug/L 4-day (chronic) average.
<b><i>Data Used to Assess Water Quality:</i></b>	The maximum concentration observed in Regional Monitoring Program samples at the Sacramento River station was 46.6 ng/L (Mean 8.5 ng/L). The maximum concentration observed in Regional Monitoring Program samples at the San Joaquin River station was 35.2 ng/L (Mean 8.4 ng/L) (SFEI, 2001).
<b><i>Spatial Representation:</i></b>	Two stations.
<b><i>Temporal Representation:</i></b>	Samples were collected between 1993 and 2001.
<b><i>Data Quality Assessment:</i></b>	SFEI Regional Monitoring Program QAPP (Lowe et al., 1998).

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<b><i>Line of Evidence</i></b>	Narrative Description Data
<b><i>Beneficial Use</i></b>	ES - Estuarine Habitat
<b><i>Information Used to Assess Water Quality:</i></b>	<p>In response to the RMP observations of ambient water toxicity, and given the linkage established between similar toxicity and pesticides in upstream ambient water, the SFBRWQCB identified all San Francisco Bay segments as being impaired due to Pesticides in 1998:</p> <p>Pesticides have been added as a cause of impairment to all Bay segments. The pesticide diazinon has been measured at levels that cause water column toxicity. The pesticide chlorpyrifos may also be a problem. This listing is consistent with listing of the Delta for these pesticides by the</p>

Central Valley Regional Water Quality Control Board. This listing was subsequently made specific for the OP pesticide diazinon by the USEPA.

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<i>Line of Evidence</i>	Toxicity
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Non-Numeric Objective:</i>	Basin Plan: There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters (SFBRWQCB, 1995).
<i>Data Used to Assess Water Quality:</i>	<p>Ambient water toxicity in San Francisco Bay appears to have disappeared. The results of ambient water toxicity monitoring at Mallard Island indicate a significant reduction in the frequency, duration, and magnitude of toxicity: 4-5% of the ambient water samples were toxic in 1998-99 (34 total samples) and 1999-2000 (23 samples), relative to 14% toxicity frequency observed in 1997-98 (27 samples); none of the 28 samples collected during the 2000-2001 season were significantly toxic.</p> <p>In addition, the 1998-2000 and 2000-2001 monitoring at Mallard Island did not document any sets of consecutively toxic samples indicative of an extended period of ambient water toxicity, such as were observed in February and May of 1998. Moreover, the magnitude of toxicity (as reflected by the degree [or percentage] of test organism mortality) is also markedly reduced in the later years, again suggesting a reduction in the degree of ambient water toxicity. Subsequent RMP monitoring of ambient water toxicity in water samples collected from October, 2001 through April 2003, also indicated an absence of toxicity to the test organisms (Ogle, 2004).</p>

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## Region 2

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**Water Segment:** San Francisco Bay, Central

**Pollutant:** Diazinon

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 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. The basis for listing in 1998 was ambient water toxicity and detections of diazinon in Bay waters. In the current assessment, the evaluation guideline available may not satisfy the requirements of the Listing Policy but even if the guideline were used all measurements are much lower than the recommended concentration. Recent measures of toxicity show that ambient water toxicity no longer exists in Bay waters. The RWQCB is also developing a Water Quality Attainment Strategy that calls for preventive actions to keep diazinon from entering the Bay.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification available 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 evaluation guideline may not comply 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 samples exceeded the draft guideline and ambient water toxicity in the Bay appears to have disappeared. These frequencies do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.
<b><i>Data Used to Assess Water Quality:</i></b>	1st sample site: None of the 17 samples exceeded, pollutant range: 240-32,000 pg/l, average: 3,555.0. 2nd sample site: None of the 16 samples exceeded, pollutant range: 370-13,000 pg/l, average: 2,898.0 (SFEI, 2001).
<b><i>Spatial Representation:</i></b>	Two sample sites.
<b><i>Temporal Representation:</i></b>	1st sample site: Date Range: 02/07/94-08/02/01. 2nd sample site: Date Range: 03/03/93-08/03/01
<b><i>Data Quality Assessment:</i></b>	SFEI RMP QA/QC program.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.



<i>Data Used to Assess Water Quality:</i>	1st sample site: None of the 18 samples exceeded, pollutant range: 240-32,000 pg/l, average: 3,492.8. 2nd sample site: None of the 16 viable samples exceeded, pollutant range: 370-13,000 pg/l, average: 2,907.5 (SFEI, 2001).
<i>Spatial Representation:</i>	Two sample sites.
<i>Temporal Representation:</i>	1st sample site: Date Range: 02/07/94-08/02/01. 2nd sample site: Date Range: 03/03/93-08/03/01.
<i>Data Quality Assessment:</i>	SFEI RMP QA/QC program.

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<i>Line of Evidence</i>	Toxicity
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Non-Numeric Objective:</i>	Basin Plan: There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<i>Data Used to Assess Water Quality:</i>	<p>Ambient water toxicity in San Francisco Bay appears to have disappeared. The results of ambient water toxicity monitoring at Mallard Island indicate a significant reduction in the frequency, duration, and magnitude of toxicity: 4-5% of the ambient water samples were toxic in 1998-99 (34 total samples) and 1999-2000 (23 samples), relative to 14% toxicity frequency observed in 1997-98 (27 samples); none of the 28 samples collected during the 2000-2001 season were significantly toxic.</p> <p>In addition, the 1998-2000 and 2000-2001 monitoring at Mallard Island did not document any sets of consecutively toxic samples indicative of an extended period of ambient water toxicity, such as were observed in February and May of 1998. The magnitude of toxicity (as reflected by the degree [or percentage] of test organism mortality) is also markedly reduced in the later years, indicating a reduction in the degree of ambient water toxicity. Subsequent RMP monitoring of ambient water toxicity in water samples collected from 10/2001 through 4/2003 also indicated an absence of toxicity to the test organisms (Ogle, 2004).</p>

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<i>Line of Evidence</i>	Narrative Description Data
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Information Used to Assess Water Quality:</i>	In response to the RMP observations of ambient water toxicity, and given the linkage established between similar toxicity and pesticides in upstream ambient water, the SFBRWQCB identified all San Francisco Bay segments as being impaired due to 'Pesticides' in 1998:

'Pesticides have been added as a cause of impairment to all Bay segments. The pesticide diazinon has been measured at levels that cause water column toxicity. The pesticide chlorpyrifos may also be a problem. This listing is consistent with listing of the Delta for these pesticides by the Central Valley Regional Water Quality Control Board.' This listing was subsequently made specific for the Organophosphate pesticide diazinon by the USEPA.

*Non-Numeric Objective:*

All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.

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## Region 2

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**Water Segment:** San Francisco Bay, Lower

**Pollutant:** Diazinon

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 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. The basis for listing in 1998 was ambient water toxicity and detections of diazinon in Bay waters. In the current assessment, the evaluation guideline available may not satisfy the requirements of the Listing Policy but even if the guideline were used all measurements are much lower than the recommended concentration. Recent measures of toxicity show that ambient water toxicity no longer exists in Bay waters. The RWQCB is also developing a Water Quality Attainment Strategy that calls for preventive actions to keep diazinon from entering the Bay.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification available 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. An evaluation guideline may not comply 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 samples exceeded the draft guideline and ambient water toxicity in the Bay appears to have disappeared. These frequencies do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.
<b><i>Data Used to Assess Water Quality:</i></b>	None of the 15 samples exceeded, pollutant range: 620-9,500 pg/l, average: 2,801.1 (SFEI, 2001).
<b><i>Spatial Representation:</i></b>	One sample site.
<b><i>Temporal Representation:</i></b>	Date Range: 2/3/94-8/3/01.
<b><i>Data Quality Assessment:</i></b>	SFEI RMP QA/QC program.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.
<b><i>Data Used to Assess Water</i></b>	17 samples, pollutant range: 52-9,537 pg/l, average: 2,600.1 (SFEI, 2001).

*Quality:*

*Spatial Representation:* One sample site.

*Temporal Representation:* Date Range: 2/3/94-8/3/01.

*Data Quality Assessment:* SFEI RMP QA/QC program.

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*Line of Evidence* Narrative Description Data

*Beneficial Use* ES - Estuarine Habitat

*Information Used to Assess Water Quality:* In response to the RMP observations of ambient water toxicity, and given the linkage established between similar toxicity and pesticides in upstream ambient water, the SFBRWQCB identified all San Francisco Bay segments as being impaired due to 'Pesticides' in 1998:

'Pesticides have been added as a cause of impairment to all Bay segments. The pesticide diazinon has been measured at levels that cause water column toxicity. The pesticide chlorpyrifos may also be a problem. This listing is consistent with listing of the Delta for these pesticides by the Central Valley Regional Water Quality Control Board.' This listing was subsequently made specific for the OP pesticide diazinon by the USEPA.

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*Line of Evidence* Toxicity

*Beneficial Use* ES - Estuarine Habitat

*Non-Numeric Objective:* Basin Plan: There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.

*Data Used to Assess Water Quality:* Ambient water toxicity in San Francisco Bay appears to have disappeared. The results of ambient water toxicity monitoring at Mallard Island indicate a significant reduction in the frequency, duration, and magnitude of toxicity: 4-5% of the ambient water samples were toxic in 1998-99 (34 total samples) and 1999-2000 (23 samples), relative to 14% toxicity frequency observed in 1997-98 (27 samples); none of the 28 samples collected during the 2000-2001 season were significantly toxic.

In addition, the 1998-2000 and 2000-2001 monitoring at Mallard Island did not document any sets of consecutively toxic samples indicative of an extended period of ambient water toxicity, such as those which were observed in February and May of 1998. The magnitude of toxicity (as reflected by the degree [or percentage] of test organism mortality) is also markedly reduced in the later years, indicating a reduction in the degree of ambient water toxicity. Subsequent RMP monitoring of ambient water

toxicity in water samples collected from 10/2001 through 4/2003 also indicated an absence of toxicity to the test organisms (Ogle, 2004).

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## Region 2

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**Water Segment:** San Francisco Bay, South

**Pollutant:** Diazinon

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.1 and 3.1 of the Listing Policy. Under section 3.1 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. The basis for listing in 1998 was ambient water toxicity and detections of diazinon in Bay waters. In the current assessment, the evaluation guideline available may not satisfy the requirements of the Listing Policy but even if the guideline were used all measurements are much lower than the recommended concentration. Recent measures of toxicity show that ambient water toxicity no longer exists in Bay waters. The RWQCB is also developing a Water Quality Attainment Strategy that calls for preventive actions to keep diazinon from entering the Bay.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification available 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 evaluation guideline may not comply 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 samples exceeded the draft guideline and ambient water toxicity in the Bay appears to have disappeared. These frequencies do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.
<b><i>Data Used to Assess Water Quality:</i></b>	1st sample site: 16 samples, pollutant range: 2,500-97,628 pg/l, average: 10,862.3 2nd sample site: 17 samples, pollutant range: 610-18,426 pg/l, average: 5,814.1. 3rd sample site: 15 samples, pollutant range: 520-7,120 pg/l, average: 3,274.4. 4th sample site: 17 samples, pollutant range: 6,500-36,000 pg/l, average: 14,867.1 (SFEI, 2001).
<b><i>Spatial Representation:</i></b>	Four sample sites.
<b><i>Temporal Representation:</i></b>	1st sample site: Date Range: 2/1/94-7/31/01. 2nd sample site: Date Range: 03/02/93-08/01/01 3rd sample site: Date Range: 03/02/93-07/31/01 4th sample site: Date Range: 02/06/96-08/01/01
<b><i>Data Quality Assessment:</i></b>	SFEI RMP QA/QC program.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or



indicator species. There shall be no acute toxicity in ambient waters.  
There shall be no chronic toxicity in ambient waters.

*Evaluation Guideline:* For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.

*Data Used to Assess Water Quality:* 1st sample site: 16 samples, pollutant range: 2,500-98,002 pg/l, average: 11,066.5  
2nd sample site: 17 samples, pollutant range: 610-18,469 pg/l, average: 5,881.1.  
3rd sample site: 15 viable samples, pollutant range: 520-7,133 pg/l, average: 3,288.8.  
4th sample site: 12 viable samples, pollutant range: 6,500-36,150 pg/l, average: 15,207.8 (SFEI, 2001).

*Spatial Representation:* Four sample sites.

*Temporal Representation:* 1st sample site: Date Range: 2/1/94-7/31/01.  
2nd sample site: Date Range: 03/02/93-08/01/01  
3rd sample site: Date Range: 03/02/93-07/31/01  
4th sample site: Date Range: 02/06/96-08/01/01

*Data Quality Assessment:* SFEI RMP QA/QC program.

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***Line of Evidence*** Narrative Description Data

***Beneficial Use*** ES - Estuarine Habitat

***Information Used to Assess Water Quality:*** In response to the RMP observations of ambient water toxicity, and given the linkage established between similar toxicity and pesticides in upstream ambient water, the SFBRWQCB identified all San Francisco Bay segments as being impaired due to Pesticides in 1998:

Pesticides have been added as a cause of impairment to all Bay segments. The pesticide diazinon has been measured at levels that cause water column toxicity. The pesticide chlorpyrifos may also be a problem. This listing is consistent with listing of the Delta for these pesticides by the Central Valley Regional Water Quality Control Board. This listing was subsequently made specific for the OP pesticide diazinon by the USEPA.

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***Line of Evidence*** Toxicity

***Beneficial Use*** ES - Estuarine Habitat

*Non-Numeric Objective:*

Basin Plan: There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.

*Data Used to Assess Water Quality:*

Ambient water toxicity in San Francisco Bay appears to have disappeared. The results of ambient water toxicity monitoring at Mallard Island indicate a significant reduction in the frequency, duration, and magnitude of toxicity: 4-5% of the ambient water samples were toxic in 1998-99 (34 total samples) and 1999-2000 (23 samples), relative to 14% toxicity frequency observed in 1997-98 (27 samples); none of the 28 samples collected during the 2000-2001 season were significantly toxic.

In addition, the 1998-2000 and 2000-2001 monitoring at Mallard Island did not document any sets of consecutively toxic samples indicative of an extended period of ambient water toxicity, such as were observed in February and May of 1998. Moreover, the magnitude of toxicity (as reflected by the degree [or percentage] of test organism mortality) is also markedly reduced in the later years, again suggesting a reduction in the degree of ambient water toxicity. Subsequent RMP monitoring of ambient water toxicity in water samples collected from October, 2001 through April 2003, also indicated an absence of toxicity to the test organisms (Ogle, 2004).

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## Region 2

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**Water Segment:** San Leandro Bay (part of SF Bay, Central)

**Pollutant:** DDT

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 4.6 and 4.9 of the Listing Policy. Under section 4.6 a single line of evidence is necessary to assess listing status while under section 4.9, 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. Based on section 4.6, the site has significant sediment toxicity but it cannot be determined if the pollutant is likely to cause or contribute to any toxic effect. The benthic community is not impacted.

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. No 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. 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 are attained.

### Lines of Evidence:

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*Numeric Line of Evidence* Toxicity

*Beneficial Use:* ES - Estuarine Habitat

<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP Reference envelope approach (SWRCB, 1997).
<i>Data Used to Assess Water Quality:</i>	Significant amphipod toxicity in 3 of 7 tests. Significant sea urchin toxicity in 3 of 7 tests (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data was synoptically collected with chemical and toxicity measurements.
<i>Temporal Representation:</i>	Samples were collected in April 1995 and April 1997.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

<b><i>Numeric Line of Evidence</i></b>	Population/Community Degradation
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	Evaluations of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community.
<i>Data Used to Assess Water</i>	BPTCP benthic index values were 0.60, 0.60, 0.67, 1.0, and 0.66 (Hunt et

<i>Quality:</i>	al., 1998b).
<i>Spatial Representation:</i>	Five stations. Data was synoptically collected with chemical and toxicity measurements.
<i>Temporal Representation:</i>	Samples were collected in April 1995 and April 1997.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Sediment
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	No sediment quality guideline is available that meets the requirements of section 6.1.3 of the Listing Policy.
<i>Data Used to Assess Water Quality:</i>	Seven measurements ranging in concentrations from 31.26 to 211.23 ppb (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data was synoptically collected with benthic community and toxicity measurements.
<i>Temporal Representation:</i>	Samples were collected in April 1995 and April 1997.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

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## Region 2

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**Water Segment:** San Leandro Bay (part of SF Bay, Central)

**Pollutant:** Diazinon

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 4.1 of the Listing Policy. Under section 4.1 a single line of evidence is necessary to assess listing status.

Five lines of evidence are available in the administrative record to assess this pollutant. The basis for listing in 1998 was ambient water toxicity and detections of diazinon in Bay waters. In the current assessment, the evaluation guideline available may not satisfy the requirements of the Listing Policy. Even if the guideline were used, all measurements are much lower than the recommended concentration. Recent measures of toxicity show that ambient water toxicity no longer exists in Bay waters. The RWQCB is also developing a Water Quality Attainment Strategy that calls for preventive actions to keep diazinon from entering the Bay.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification available 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 evaluation guideline may not comply 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 samples exceeded the draft guideline and ambient water toxicity in the Bay appears to have disappeared. These frequencies do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.
<b><i>Data Used to Assess Water Quality:</i></b>	1st sample site: None of the 17 samples exceeded, pollutant range: 240-32,000 pg/l, average: 3,555.0. 2nd sample site: None of the 16 samples exceeded, pollutant range: 370-13,000 pg/l, average: 2,898.0 (SFEI, 2001).
<b><i>Spatial Representation:</i></b>	Two sample sites.
<b><i>Temporal Representation:</i></b>	1st sample site: Date Range: 02/07/94-08/02/01. 2nd sample site: Date Range: 03/03/93-08/03/01
<b><i>Data Quality Assessment:</i></b>	SFEI RMP QA/QC program.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.

<i>Data Used to Assess Water Quality:</i>	1st sample site: None of the 18 samples exceeded, pollutant range: 240-32,000 pg/l, average: 3,492.8. 2nd sample site: None of the 16 viable samples exceeded, pollutant range: 370-13,000 pg/l, average: 2,907.5 (SFEI, 2001).
<i>Spatial Representation:</i>	Two sample sites.
<i>Temporal Representation:</i>	1st sample site: Date Range: 02/07/94-08/02/01. 2nd sample site: Date Range: 03/03/93-08/03/01.
<i>Data Quality Assessment:</i>	SFEI RMP QA/QC program.

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<b><i>Line of Evidence</i></b>	Narrative Description Data
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Information Used to Assess Water Quality:</i>	Diazinon is one of the pollutants listed for this segment on the 2002 section 303(d) list. The data and information used to assess this pollutant-water segment is subsumed in diazinon listing for San Francisco Bay, Central. The conclusions drawn for San Francisco Bay, Central should be applied to this segment.

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<b><i>Line of Evidence</i></b>	Toxicity
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Non-Numeric Objective:</i>	Basin Plan: There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<i>Data Used to Assess Water Quality:</i>	<p>Ambient water toxicity in San Francisco Bay appears to have disappeared. The results of ambient water toxicity monitoring at Mallard Island indicate a significant reduction in the frequency, duration, and magnitude of toxicity: 4-5% of the ambient water samples were toxic in 1998-99 (34 total samples) and 1999-2000 (23 samples), relative to 14% toxicity frequency observed in 1997-98 (27 samples); none of the 28 samples collected during the 2000-2001 season were significantly toxic.</p> <p>In addition, the 1998-2000 and 2000-2001 monitoring at Mallard Island did not document any sets of consecutively toxic samples indicative of an extended period of ambient water toxicity, such as were observed in February and May of 1998. The magnitude of toxicity (as reflected by the degree [or percentage] of test organism mortality) is also markedly reduced in the later years, indicating a reduction in the degree of ambient water toxicity. Subsequent RMP monitoring of ambient water toxicity in water samples collected from 10/2001 through 4/2003 also indicated an absence of toxicity to the test organisms (Ogle, 2004).</p>



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*Line of Evidence*

Narrative Description Data

*Beneficial Use*

ES - Estuarine Habitat

*Information Used to Assess  
Water Quality:*

In response to the RMP observations of ambient water toxicity, and given the linkage established between similar toxicity and pesticides in upstream ambient water, the SFBRWQCB identified all San Francisco Bay segments as being impaired due to 'Pesticides' in 1998:

'Pesticides have been added as a cause of impairment to all Bay segments. The pesticide diazinon has been measured at levels that cause water column toxicity. The pesticide chlorpyrifos may also be a problem. This listing is consistent with listing of the Delta for these pesticides by the Central Valley Regional Water Quality Control Board.' This listing was subsequently made specific for the Organophosphate pesticide diazinon by the USEPA.

*Non-Numeric Objective:*

All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.

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## Region 2

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**Water Segment:** San Leandro Bay (part of SF Bay, Central)

**Pollutant:** Selenium

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 4.6 and 4.9 of the Listing Policy. Under section 4.6 a single line of evidence is necessary to assess listing status while under section 4.9, 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. Based on section 4.6, the site does has significant sediment toxicity but it cannot be determined if the pollutant is likely to cause or contribute to any toxic effect.

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. No 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. 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 are attained.

### Lines of Evidence:

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*Numeric Line of Evidence* Toxicity

*Beneficial Use:* ES - Estuarine Habitat

<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	BPTCP Reference envelope approach (SWRCB, 1997).
<i>Data Used to Assess Water Quality:</i>	Significant amphipod toxicity in 3 of 7 tests. Significant sea urchin toxicity in 3 of 7 tests (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data was synoptically collected with chemical and toxicity measurements.
<i>Temporal Representation:</i>	Samples were collected in April 1995 and April 1997.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

<b><i>Numeric Line of Evidence</i></b>	Population/Community Degradation
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	Evaluations of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community.
<i>Data Used to Assess Water</i>	BPTCP benthic index values were 0.60, 0.60, 0.67, 1.0, and 0.66 (Hunt et

<i>Quality:</i>	al., 1998b).
<i>Spatial Representation:</i>	Five stations. Data was synoptically collected with chemical and toxicity measurements.
<i>Temporal Representation:</i>	Samples were collected in April 1995 and April 1997.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Sediment
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.  There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
<i>Evaluation Guideline:</i>	No sediment quality guideline is available that meets the requirements of section 6.1.3 of the Listing Policy.
<i>Data Used to Assess Water Quality:</i>	Seven measurements ranging in concentrations from 0.528 to 2.830 ppm (Hunt et al., 1998b).
<i>Spatial Representation:</i>	Data was synoptically collected with benthic community and toxicity measurements.
<i>Temporal Representation:</i>	Samples were collected in April 1995 and April 1997.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

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## Region 2

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**Water Segment:** San Pablo Bay

**Pollutant:** Diazinon

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the 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. The basis for listing in 1998 was ambient water toxicity and detections of diazinon in Bay waters. In the current assessment, the evaluation guideline available may not satisfy the requirements of the Listing Policy but even if the guideline were used all measurements are much lower than the recommended concentration. Recent measures of toxicity show that ambient water toxicity no longer exists in Bay waters. The RWQCB is also developing a Water Quality Attainment Strategy that calls for preventive actions to keep diazinon from entering the Bay.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification available 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 evaluation guideline may not comply 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 samples exceeded the draft guideline and ambient water toxicity in the Bay appears to have disappeared. These frequencies do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.
<b><i>Data Used to Assess Water Quality:</i></b>	1st sample site: 19 samples, pollutant range: 200-44,000 pg/l, average: 6,236.5. 2nd sample site: 18 samples, pollutant range: 260-43,902 pg/l, average: 8,809.1. 3rd sample site: 15 samples, pollutant range: 370-31,000 pg/l, average: 5,918.5 (SFEI, 2001).
<b><i>Spatial Representation:</i></b>	Three sample sites.
<b><i>Temporal Representation:</i></b>	1st sample site: Date Range: 03/04/93-08/06/01. 2nd sample site: Date Range: 03/04/93-08/06/01 3rd sample site: Date Range: 03/04/93-08/06/01
<b><i>Data Quality Assessment:</i></b>	SFEI RMP QA/QC program.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.

<i>Evaluation Guideline:</i>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.
<i>Data Used to Assess Water Quality:</i>	1st sample site: 19 samples, pollutant range: 450-44,320 pg/l, average: 6,339.4. 2nd sample site: 18 samples, pollutant range: 260-43,958 pg/l, average: 8,897.5. 3rd sample site: 15 samples, pollutant range: 370-31,190 pg/l, average: 6,028.4. (SFEI, 2001).
<i>Spatial Representation:</i>	Three sample sites.
<i>Temporal Representation:</i>	1st sample site: Date Range: 03/04/93-08/06/01. 2nd sample site: Date Range: 03/04/93-08/06/01 3rd sample site: Date Range: 03/04/93-08/06/01
<i>Data Quality Assessment:</i>	SFEI RMP QA/QC program.

<i>Line of Evidence</i>	Narrative Description Data
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Information Used to Assess Water Quality:</i>	In response to the RMP observations of ambient water toxicity, and given the linkage established between similar toxicity and pesticides in upstream ambient water, the SFBRWQCB identified all San Francisco Bay segments as being impaired due to Pesticides in 1998:  Pesticides have been added as a cause of impairment to all Bay segments. The pesticide diazinon has been measured at levels that cause water column toxicity. The pesticide chlorpyrifos may also be a problem. This listing is consistent with listing of the Delta for these pesticides by the Central Valley Regional Water Quality Control Board. This listing was subsequently made specific for the OP pesticide diazinon by the USEPA.

<i>Line of Evidence</i>	Toxicity
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Non-Numeric Objective:</i>	Basin Plan: There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<i>Data Used to Assess Water Quality:</i>	Ambient water toxicity in San Francisco Bay appears to have disappeared. The results of ambient water toxicity monitoring at Mallard Island indicate

a significant reduction in the frequency, duration, and magnitude of toxicity: 4-5% of the ambient water samples were toxic in 1998-99 (34 total samples) and 1999-2000 (23 samples), relative to 14% toxicity frequency observed in 1997-98 (27 samples); none of the 28 samples collected during the 2000-2001 season were significantly toxic.

In addition, the 1998-2000 and 2000-2001 monitoring at Mallard Island did not document any sets of consecutively toxic samples indicative of an extended period of ambient water toxicity, such as were observed in February and May of 1998. Moreover, the magnitude of toxicity (as reflected by the degree [or percentage] of test organism mortality) is also markedly reduced in the later years, again suggesting a reduction in the degree of ambient water toxicity. Subsequent RMP monitoring of ambient water toxicity in water samples collected from October, 2001 through April 2003, also indicated an absence of toxicity to the test organisms.

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## Region 2

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**Water Segment:** Suisun Bay

**Pollutant:** Diazinon

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the 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. The basis for listing in 1998 was ambient water toxicity and detections of diazinon in Bay waters. In the current assessment, the evaluation guideline available may not satisfy the requirements of the Listing Policy but even if the guideline were used all measurements are much lower than the recommended concentration. Recent measures of toxicity show that ambient water toxicity no longer exists in Bay waters. The RWQCB is also developing a Water Quality Attainment Strategy that calls for preventive actions to keep diazinon from entering the Bay.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification available 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 evaluation guideline may not comply 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 samples exceeded the draft guideline and ambient water toxicity in the Bay appears to have disappeared. These frequencies do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.
<b><i>Data Used to Assess Water Quality:</i></b>	17 samples, pollutant range: 540-58,000 pg/l, average: 7,288.6 (SFEI, 2001).
<b><i>Spatial Representation:</i></b>	One sample site.
<b><i>Temporal Representation:</i></b>	Date Range: 03/05/93-08/08/01.
<b><i>Data Quality Assessment:</i></b>	SFEI RMP QA/QC program.

---

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.
<b><i>Evaluation Guideline:</i></b>	For salt water, USEPA has developed a draft water quality criteria of 820 ng/L (acute) and 400 ng/L (chronic). The use of these values may not comply all the requirements of section 6.1.3 of the Listing Policy.
<b><i>Data Used to Assess Water</i></b>	17 samples, pollutant range: 540-58,350 pg/l, average: 7,332.4 (SFEI,

*Quality:* 2001).

*Spatial Representation:* One sample site.

*Temporal Representation:* Date Range: 03/05/93-08/08/01.

*Data Quality Assessment:* SFEI RMP QA/QC program.

---

***Line of Evidence*** Narrative Description Data

*Beneficial Use* ES - Estuarine Habitat

*Information Used to Assess Water Quality:* In response to the RMP observations of ambient water toxicity, and given the linkage established between similar toxicity and pesticides in upstream ambient water, the SFBRWQCB identified all San Francisco Bay segments as being impaired due to Pesticides in 1998:

Pesticides have been added as a cause of impairment to all Bay segments. The pesticide diazinon has been measured at levels that cause water column toxicity. The pesticide chlorpyrifos may also be a problem. This listing is consistent with listing of the Delta for these pesticides by the Central Valley Regional Water Quality Control Board. This listing was subsequently made specific for the organophosphate pesticide diazinon by the USEPA.

---

***Line of Evidence*** Toxicity

*Beneficial Use* ES - Estuarine Habitat

*Non-Numeric Objective:* Basin Plan: . There shall be no acute toxicity in ambient waters. There shall be no chronic toxicity in ambient waters.

*Data Used to Assess Water Quality:* Ambient water toxicity in San Francisco Bay appears to have disappeared. The results of ambient water toxicity monitoring at Mallard Island indicate a significant reduction in the frequency, duration, and magnitude of toxicity: 4-5% of the ambient water samples were toxic in 1998-99 (34 total samples) and 1999-2000 (23 samples), relative to 14% toxicity frequency observed in 1997-98 (27 samples); none of the 28 samples collected during the 2000-2001 season were significantly toxic.

In addition, the 1998-2000 and 2000-2001 monitoring at Mallard Island did not document any sets of consecutively toxic samples indicative of an extended period of ambient water toxicity, such as were observed in February and May of 1998. Moreover, the magnitude of toxicity (as reflected by the degree [or percentage] of test organism mortality) is also markedly reduced in the later years, again suggesting a reduction in the

degree of ambient water toxicity. Subsequent RMP monitoring of ambient water toxicity in water samples collected from October, 2001 through April 2003, also indicated an absence of toxicity to the test organisms (Ogle, 2004).

---

## San Francisco Bay Region (2)

# Area Change

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

## Region 2

---

**Water Segment:** San Francisco Bay, Lower

**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* Narrative Description Data

*Beneficial Use* ES - Estuarine Habitat, WI - Wildlife Habitat

*Data Used to Assess Water Quality:* This spatial definitions of San Francisco Bay, Lower and San Francisco Bay, South should be changed to conform with the NHD and CalWater 2.2 definitions of those two bay segments (i.e., make the border between the two at the Dumbarton Bridge). The attached shapefile is in Teale Albers, NAD27 and should be easily merged into the existing GeoWBS bay shapefile.

---

## Region 2

---

**Water Segment:** San Francisco Bay, South

**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* Narrative Description Data

*Beneficial Use* ES - Estuarine Habitat, WI - Wildlife Habitat

*Data Used to Assess Water Quality:* The spatial definitions of San Francisco Bay, Lower and San Francisco Bay, South should be changed to conform with the NHD and CalWater 2.2 definitions of those two bay segments (i.e., make the border between the two at the Dumbarton Bridge). The attached shapefile is in Teale Albers, NAD27 and should be easily merged into the existing GeoWBS bay shapefile.

---

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



September 2005





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# Central Coast Region (3)

LIST

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

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## Region 3

---

**Water Segment:** Arroyo Paredon

**Pollutant:** Boron

**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. Nine of 16 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

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Waters shall not contain concentrations of chemical constituents in amounts which adversely affect the agricultural beneficial use. In addition, waters used for irrigation and livestock watering shall not exceed concentrations for those



chemicals listed in Table 3-4 (Region 3 Basin Plan, Section II.A.2 Objectives for all inland surface waters, enclosed bay, and estuaries, page III-5). In Table 3-4 of the Basin Plan (page III-9), the maximum concentration for boron for irrigation supply is 0.75 mg/L.

*Data Used to Assess Water Quality:* Nine out of 16 samples exceeded the water quality objective for agricultural water use/ irrigation supply for boron (SWAMP, 2004; CCAMP, 2004).

*Spatial Representation:* Samples were collected from one site.

*Temporal Representation:* Samples were collected from January 2001 through March 2002.

*Environmental Conditions:* The water body is located in the South Coast hydrologic unit, South Coast hydrologic area, and Carpinteria hydrologic subarea. The site location is Arroyo Paredon Creek at Via Real (315APC).

*Data Quality Assessment:* CCAMP, SWAMP QAPP.

---

## Region 3

---

**Water Segment:** Arroyo Paredon

**Pollutant:** Nitrate as Nitrate (NO3)

**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 16 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/* Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter

<i>Water Quality Criterion:</i>	15, Section 64435, Tables 2 and 3 as listed in Table 3-2 (Region 3 Basin Plan, p III-3; In Table 3-2, the MCL for Nitrate (as NO <sub>3</sub> ) in Domestic or Municipal Supply is 45 mg/L.
<i>Data Used to Assess Water Quality:</i>	Fourteen out of 16 samples exceeded the water quality objective for nitrate (as NO <sub>3</sub> ) for municipal and domestic supply (SWAMP, 2004; CCAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from one site.
<i>Temporal Representation:</i>	Samples were collected from January 2001 through March 2002.
<i>Environmental Conditions:</i>	The water body is located in the South Coast hydrologic unit, South Coast hydrologic area, and Carpinteria hydrologic subarea. The site location is Arroyo Paredon Creek at Via Real (315APC).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

---

## Region 3

---

**Water Segment:** Arroyo Paredon

**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.

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 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:* RA - Rare & Endangered Species, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Matrix:* Water

*Water Quality Objective/* Basin Plan: All waters shall be maintained free of toxic substances in

*Water Quality Criterion:* concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal, or aquatic life. Compliance with this objective shall be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods as specified by the Regional Board.

Survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality conditions, shall not be less than that for the same water body in areas unaffected by the waste discharge or, when necessary, for other control water . . . .

*Data Used to Assess Water Quality:* Two out of two samples displayed significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%, and less than the evaluation threshold (both criteria met). Both toxic samples were tested using the 7-day Ceriodaphnia dubia test (SWAMP, 2004). Please note QA qualifier under Data Quality Assessment section below.

*Spatial Representation:* Both samples were collected from the same station, (Arroyo Paredon) Paredon Creek at Via Real.

*Temporal Representation:* Samples were collected December 3, 2001 and March 19, 2002. Toxicity in the survival endpoint was detected in both these samples.

*Environmental Conditions:* Arroyo Paredon is in the South Coast Hydrologic Unit.

*Data Quality Assessment:* SWAMP; QA qualifier indicated for the sample collected March 19, 2002 reported "minor deviations in water quality parameters".

---

## Region 3

---

**Water Segment:** Bell Creek (Santa Barbara Co)

**Pollutant:** Nitrate as Nitrate (NO3)

**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. Fifteen of 17 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:* CM - Commercial and Sport Fishing (CA), MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter

<i>Water Quality Criterion:</i>	15, Section 64435, Tables 2 and 3 as listed in Table 3-2 (Region 3 Basin Plan, p III-3). In Table 3-2, the MCL for Nitrate (as NO <sub>3</sub> ) in Domestic or Municipal Supply is 45 mg/L.
<i>Data Used to Assess Water Quality:</i>	Fifteen out of 17 samples exceeded the water quality objective for nitrate (as NO <sub>3</sub> ) for municipal and domestic supply (SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from one site.
<i>Temporal Representation:</i>	Samples were collected from January 2001 through March 2002.
<i>Environmental Conditions:</i>	The water body is located in the South Coast hydrologic unit, Arguello hydrologic area, Arguello hydrologic subarea. The monitoring site is located at Bell Creek on Bacara Resort Access Road (315BEL).
<i>Data Quality Assessment:</i>	SWAMP QAPP.

---

## Region 3

---

**Water Segment:** Bradley Canyon Creek

**Pollutant:** Ammonia (Unionized) - Toxin

**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. Three of 7 samples exceeded the criterion for unionized ammonia 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 discharge of wastes shall not cause concentrations of unionized ammonia (NH<sub>3</sub>) to exceed 0.025 mg/L (as N) in receiving waters (Region 3 Basin Plan,



<i>Water Quality Criterion:</i>	Section II.A.2. Objectives for All Inland Surface Waters, Enclosed Bays, and Estuaries, II.A.2.a. General Objectives, page III-4).
<i>Data Used to Assess Water Quality:</i>	Three out of seven samples exceeded the general water quality objective (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Data were collected at site 312BCF on Bradley Canyon Creek, in Santa Barbara County.
<i>Temporal Representation:</i>	Samples were collected from April 2000 to December 2000.
<i>Environmental Conditions:</i>	Water body is located in the Santa Maria Hydrologic Unit. The site is identified as Bradley Canyon Diversion Channel at Foxen Canyon Road (312BCF).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.
<i>QA/QC Equivalent:</i>	Samples were taken according to CCAMP protocols.

---

## Region 3

---

**Water Segment:** Bradley Canyon Creek

**Pollutant:** Nitrate as Nitrate (NO3)

**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. Four 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. Four of 9 samples exceeded the MCL 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:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter

<i>Water Quality Criterion:</i>	15, Section 64435, Tables 2 and 3 as listed in Table 3-2 (Region 3 Basin Plan, p III-3; In Table 3-2, the MCL for Nitrate (as NO <sub>3</sub> ) in Domestic or Municipal Supply is 45 mg/L).
<i>Data Used to Assess Water Quality:</i>	Four out of nine samples exceeded the water quality objective for nitrate (as NO <sub>3</sub> ) for municipal and domestic supply (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from 2 sites. All samples with exceedances were collected from one site (312BCF).
<i>Temporal Representation:</i>	Samples were collected from March 2000 to December 2000.
<i>Environmental Conditions:</i>	The water body is located in the Santa Maria hydrologic unit, Guadalupe hydrologic subarea. The site is located at Bradley Canyon Diversion Channel (312BCF) and Bradley Canyon Creek at Orcut-Garey Road (312BCG).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

---

## Region 3

---

**Water Segment:** Bradley Channel

**Pollutant:** Nitrate as Nitrate (NO3)

**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. Three of 15 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter

<i>Water Quality Criterion:</i>	15, Section 64435, Tables 2 and 3 as listed in Table 3-2 (Region 3 Basin Plan, p III-3; In Table 3-2, the MCL for Nitrate (as NO <sub>3</sub> ) in Domestic or Municipal Supply is 45 mg/L).
<i>Data Used to Assess Water Quality:</i>	Three out of 15 samples exceeded the water quality objective for nitrate (as NO <sub>3</sub> ) for municipal and domestic supply (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from one site.
<i>Temporal Representation:</i>	Samples were collected from January 2000 to February 2001.
<i>Environmental Conditions:</i>	The water body is located in the Santa Maria hydrologic unit, Guadalupe hydrologic subarea. The site is located at Bradley Channel upstream of ponds (312BCU).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Canada De La Gaviota

**Pollutant:** Boron

**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. About half of the 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. Fifteen of 32 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in amounts which adversely affect the agricultural beneficial use. In addition, waters used

<i>Water Quality Criterion:</i>	for irrigation and livestock watering shall not exceed concentrations for those chemicals listed in Table 3-4 (Region 3 Basin Plan, Section II.A.2 Objectives for all inland surface waters, enclosed bay, and estuaries, page III-5). In Table 3-4 of the Basin Plan (page III-9), the maximum concentration for boron for irrigation supply is 0.75 mg/L.
<i>Data Used to Assess Water Quality:</i>	Fifteen out of 32 samples exceeded the water quality objective for agricultural water use/ irrigation supply for boron (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from two sites. Exceedances were detected in samples collected from both sites.
<i>Temporal Representation:</i>	Samples were collected from January 2001 to July 2002.
<i>Environmental Conditions:</i>	The water body is located in the South Coast hydrologic unit, Arguello hydrologic area, Arguello hydrologic subarea. The monitoring sites are located at Canada de la Gaviota at State Park Entrance (315GAV) and Canada de la Gaviota at Highway 1 (315GAI).
<i>Data Quality Assessment:</i>	CCAMP and SWAMP QAPP.

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## Region 3

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**Water Segment:** Carbonera Creek

**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.

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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* A TMDL was approved by USEPA on January 14, 2003. The RWQCB is tracking the implementation of the TMDL through the Nitrate Management Plan being implemented by Santa Cruz County.

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## Region 3

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**Water Segment:** Carneros Creek

**Pollutant:** Ammonia (Unionized) - Toxin

**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 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. Three of 9 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat, MI - Fish Migration, RA - Rare & Endangered Species, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Matrix:* Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	The discharge of wastes shall not cause concentrations of unionized ammonia (NH <sub>3</sub> ) to exceed 0.025 mg/L (as N) in receiving waters (Region 3 Basin Plan, Section II.A.2. Objectives for All Inland Surface Waters, Enclosed Bays, and Estuaries, II.A.2.a. General Objectives, page III-4)
<i>Data Used to Assess Water Quality:</i>	Three out of 9 samples exceeded the general water quality objective (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from one site.
<i>Temporal Representation:</i>	Samples were collected from March 1999 to March 2000.
<i>Environmental Conditions:</i>	Water body is located in the Bolsa Nueva hydrologic unit. The site is Carneros Creek in Los Lomas at Blohm Road (306CAR).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Casmalia Canyon Creek

**Pollutant:** Sedimentation/Siltation

**Decision:** List

**Weight of Evidence:** The data and information in the administrative record supports this change in the original listing recommendation. There was a misunderstanding of the applicable water body recommended for listing by staff. This change will correct that mistake.

The correction is requested for San Antonio Creek (South Coast Watershed) Sedimentation/Siltation. This water body was incorrectly assigned to a sedimentation/siltation problem. The correct water bodies are Shuman Canyon Creek and Casmalia Canyon Creek. The 303(d) List Table should be revised to remove San Antonio Creek (South Coast Watershed) for Sedimentation/Siltation and add Casmalia Canyon Creek (4.5 miles) and Shuman Canyon Creek (3.0 miles) (313004) for Sedimentation/Siltation. The original listing recommendation originated with Regional Board staff, however there was a misunderstanding of the applicable water body recommended for listing by staff. This change will correct that mistake.

**SWRCB Staff Recommendation:** After review of the available data and information, SWRCB staff concludes that a water body was incorrectly assigned to a sedimentation/siltation problem and that the listing should be revised with this water body and the listing should be changed as presented.

### **Lines of Evidence:**

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*Line of Evidence* Pollutant-Water

*Beneficial Use* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Information Used to Assess Water Quality:*

*Data Used to Assess Water Quality:* The correction is requested for San Antonio Creek (South Coast Watershed) Sedimentation/Siltation. This water body was incorrectly assigned to a sedimentation/siltation problem. The correct water bodies are Shuman Canyon Creek and Casmalia Canyon Creek.

The 303(d) List Table should be revised to remove San Antonio Creek (South Coast Watershed) for Sedimentation/Siltation and add Casmalia Canyon Creek (4.5 miles) and Shuman Canyon Creek (3.0 miles) (313004) for Sedimentation/Siltation.

The original listing recommendation originated with Regional Board staff, however there was a misunderstanding of the applicable water body recommended for listing by staff. This change will correct that mistake.

*Spatial Representation:* The sampling site was 4.5 miles.

*Temporal Representation:* Correction Submittal on 6/14/2004.

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## Region 3

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**Water Segment:** Chorro Creek

**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 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. Five of 10 samples exceeded the COLD dissolved oxygen 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:**

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*Numeric Line of Evidence* Adverse Biological Responses

*Beneficial Use:* AG - Agricultural Supply, BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MI - Fish Migration, 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

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	COLD dissolved oxygen water quality objective of 7.0 mg/l.
<i>Data Used to Assess Water Quality:</i>	<p>Regional Board staff is proposing that Chorro Creek (downstream of Chorro Creek Road) be listed as impaired for dissolved oxygen. The impairment is evidenced by depressed levels of dissolved oxygen measured during pre-dawn and 24-hour sampling periods.</p> <p>Continuous depressed levels of dissolved oxygen (&lt; 7.0 mg/l) were found in Chorro Creek at TWB (approximately between 12a.m-8a.m.) during three 24-hour hourly sampling periods in July, August and September, 2003. Continuous depressed levels of oxygen were also found between 5 p.m. and 7 a.m. at site added in September, 2003 upstream of TWB (usTWB), (CCRWQCB, 2004o).</p> <p>Dissolved oxygen levels were within the COLD water quality objective at CAN during three 24-hour hourly sampling periods in July, August and September, 2003 (CCAMP, 2004). Dissolved oxygen levels just under the COLD water quality objective (6.81-6.99 mg/l) were found during one of three sampling periods at an upstream site (CHO) in August, 2003. Regional Board staff does not consider the segment upstream of CAN (and CHO) as impaired.</p> <p>Regional Board staff considers the segment between usTWB and TWB (downstream of Chorro Creek Road) as impaired for dissolved oxygen. The level of impairment between CAN and usTWB is unknown.</p>
<i>Spatial Representation:</i>	Chorro Creek (Calwater watershed no. 31022012) downstream of Chorro Creek Road. Measurements were taken in Chorro Creek at four locations (CHO, CAN, usTWB, and TWB).
<i>Temporal Representation:</i>	Hourly measurements were taken in three 24-hour hourly sampling periods in July, August, and September, 2003.
<i>Environmental Conditions:</i>	Hourly dissolved oxygen measurements were taken using a recording dissolved oxygen meter.
<i>Data Quality Assessment:</i>	Dissolved oxygen measurements in Chorro Creek were taken according to CCAMP 24-hour hourly recording meter sampling protocols. Morro Bay Volunteer Monitoring Program.

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## Region 3

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**Water Segment:** Chorro Creek

**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. 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:**

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*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 Morro Bay Sediment TMDL was approved by RWQCB on May 16, 2003 and subsequently approved by USEPA on January 20, 2004.

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## Region 3

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**Water Segment:** Cuyama River

**Pollutant:** Boron

**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. Six 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. Six of 35 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in amounts which adversely affect the agricultural beneficial use. In addition, waters used



<i>Water Quality Criterion:</i>	for irrigation and livestock watering shall not exceed concentrations for those chemicals listed in Table 3-4 (Region 3 Basin Plan, Section II.A.2 Objectives for all inland surface waters, enclosed bay, and estuaries, page III-5). In Table 3-4 of the Basin Plan (page III-9), the maximum concentration for boron for irrigation supply is 0.75 mg/L.
<i>Data Used to Assess Water Quality:</i>	Six out of 35 samples exceeded the water quality objective for agricultural water use/ irrigation supply for boron (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from four sites. Exceedances were detected from samples collected at one station (312CCC).
<i>Temporal Representation:</i>	Samples were collected from January 2000 to April 2001.
<i>Environmental Conditions:</i>	The water body is located in the Santa Maria hydrologic unit, Cuyama Valley hydrologic area, Cuyama Valley hydrologic subarea. The monitoring sites are located at Cuyama River at Highway 33 (312CAV), Cuyama River above Lockwood turnoff (312CUL), Cuyama River downstream Buckhorn Road (312CUY), and Cuyama River downstream Cottonwood Canyon (312CCC).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP

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## Region 3

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**Water Segment:** Franklin Creek

**Pollutant:** Nitrate as Nitrate (NO3)

**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. Most of the 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. Twenty-six of 28 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter

<i>Water Quality Criterion:</i>	15, Section 64435, Tables 2 and 3 as listed in Table 3-2 (Region 3 Basin Plan, p III-3; In Table 3-2, the MCL for Nitrate (as NO <sub>3</sub> ) in Domestic or Municipal Supply is 45 mg/L).
<i>Data Used to Assess Water Quality:</i>	Twenty-six out of 28 samples exceeded the water quality objective for nitrate (as NO <sub>3</sub> ) for municipal and domestic supply (CCAMP, 2004, SWAMP, 2004).
<i>Spatial Representation:</i>	Samples collected from one site.
<i>Temporal Representation:</i>	Samples were collected from January 2001 to March 2003.
<i>Environmental Conditions:</i>	Water body is located in the South Coast hydrologic unit, Carpinteria hydrologic subarea. The site location is Franklin Creek at Carpinteria Ave (315FRC).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Gabilan Creek

**Pollutant:** Nitrate as Nitrate (NO3)

**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 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. Two of the 6 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter

<i>Water Quality Criterion:</i>	15, Section 64435, Tables 2 and 3 as listed in Table 3-2 (Region 3 Basin Plan, p III-3; In Table 3-2, the MCL for Nitrate (as NO <sub>3</sub> ) in Domestic or Municipal Supply is 45 mg/L.)
<i>Data Used to Assess Water Quality:</i>	There were 6 total samples taken by CCAMP staff. Out of the 6 samples, 2 exceeded the water quality objective for nitrate (as NO <sub>3</sub> ) for municipal and domestic supply (CCAMP, 2004, SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from two sites.
<i>Temporal Representation:</i>	Samples were collected from July 1999 to February 2000.
<i>Environmental Conditions:</i>	The water body is located in the Salinas hydrologic unit, Gabilan Range hydrologic subarea. The sites are Gabilan Creek at Independence Road and East Boranda Road (309GAB), City of Salinas Urban GC1-M.
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Glen Annie Canyon

**Pollutant:** Nitrate as Nitrate (NO3)

**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. The majority of 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. Twelve of 15 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter

<i>Water Quality Criterion:</i>	15, Section 64435, Tables 2 and 3 as listed in Table 3-2 (Region 3 Basin Plan, p III-3; In Table 3-2, the MCL for Nitrate (as NO <sub>3</sub> ) in Domestic or Municipal Supply is 45 mg/L).
<i>Data Used to Assess Water Quality:</i>	Twelve out of 15 samples exceeded the water quality objective for nitrate (as NO <sub>3</sub> ) for municipal and domestic supply (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples collected from one site.
<i>Temporal Representation:</i>	Samples were collected from February 2001 to March 2002.
<i>Environmental Conditions:</i>	The water body is located in the South Coast hydrologic area, Goleta hydrologic subarea. The site is located at Glenn Annie upstream Hollister Road (Site I.D. #315ANN).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Llagas Creek

**Pollutant:** Nitrate as Nitrate (NO3)

**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. Half of the 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. Thirty-three of 69 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter



<i>Water Quality Criterion:</i>	15, Section 64435, Tables 2 and 3 as listed in Table 3-2 (Region 3 Basin Plan, p III-3; In Table 3-2, the MCL for Nitrate (as NO <sub>3</sub> ) in Domestic or Municipal Supply is 45 mg/L).
<i>Data Used to Assess Water Quality:</i>	Thirty-three out of 69 samples exceeded the water quality objective for nitrate (as NO <sub>3</sub> ) for municipal and domestic supply (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from six sites. Exceedances were detected in samples collected from three of the six sites.
<i>Temporal Representation:</i>	Samples were collected from December 1997 to January 1999.
<i>Environmental Conditions:</i>	This water body was listed for nutrients in 2002 but not for nitrate specifically.  The water body is located in the Pajaro River hydrologic unit, South Santa Clara Valley hydrologic area, South Santa Clara Valley hydrologic subarea. The sites are located at Llagas Creek at Holsclaw and Leavesley Roads (305HOL), Llagas Creek at Bloomfield Avenue (305LLA), Llagas Creek at Luchessa Avenue/Southside Drive (305LUC), Llagas Creek at Monterey Road (305MON) Llagas Creek at Oak Glen Avenue (305OAK), Llagas Creek at Buena Vista Avenue (305VIS).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Lompico Creek

**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.

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:**

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*Line of Evidence* Remedial Program in Place

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

*Information Used to Assess Water Quality:* A TMDL was approved by USEPA on January 14, 2003. The RWQCB is tracking the implementation of the TMDL through the Nitrate Management Plan being implemented by Santa Cruz County.

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## Region 3

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**Water Segment:** Los Osos Creek

**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. 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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation, R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Morro Bay Pathogens TMDL was approved by RWQCB on May 16, 2003 and subsequently approved by USEPA on January 20, 2004.

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## Region 3

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**Water Segment:** Los Osos Creek

**Pollutant:** Sediment

**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 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:**

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*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 Morro Bay Sediment TMDL was approved by RWQCB on May 16, 2003 and subsequently approved by USEPA on January 20, 2004.

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## Region 3

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**Water Segment:** Main Street Canal

**Pollutant:** Ammonia (Unionized) - Toxin

**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. Ten of 11 samples exceeded the unionized ammonia numeric 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:**

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*Numeric Line of Evidence* Pollutant-Water

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

*Matrix:* Water

*Water Quality Objective/* The discharge of wastes shall not cause concentrations of unionized ammonia

<i>Water Quality Criterion:</i>	(NH3) to exceed 0.025 mg/L (as N) in receiving waters (Region 3 Basin Plan, Section II.A.2. Objectives for All Inland Surface Waters, Enclosed Bays, and Estuaries, II.A.2.a. General Objectives, page III-4)
<i>Data Used to Assess Water Quality:</i>	Ten out of 11 samples exceeded the general water quality objective (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Data were collected at site 312MSD on Main Street Canal, in Santa Barbara County.
<i>Temporal Representation:</i>	Samples were collected from February 2000 to January 2001.
<i>Environmental Conditions:</i>	<p>Water body is located on the Santa Maria hydrologic unit, Guadalupe hydrologic subarea. The site is called Main Street Canal upstream Ray Road at Hwy 166 (Site #312MSD).</p> <p>In 2000, this site was an open agriculture ditch downstream of the city stormwater drain. This year (2005) the channel is being reconstructed to flow underground through pipes to a location approximately 100 feet downstream of this monitoring site.</p>
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.
<i>QA/QC Equivalent:</i>	Samples were taken according to CCAMP protocols.

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## Region 3

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**Water Segment:** Moro Cojo Slough

**Pollutant:** Ammonia (Unionized) - Toxin

**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. Several 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. Four of 18 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat, ES - Estuarine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Matrix:* Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	The discharge of wastes shall not cause concentrations of unionized ammonia (NH <sub>3</sub> ) to exceed 0.025 mg/L (as N) in receiving waters (Region 3 Basin Plan, Section II.A.2. Objectives for All Inland Surface Waters, Enclosed Bays, and Estuaries, II.A.2.a. General Objectives, page III-4)
<i>Data Used to Assess Water Quality:</i>	Four out of 18 samples exceeded the general water quality objective (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from two sites. All exceedances were detected in samples collected from one site (Site 306MOR). This site is tidally influenced and flow was observed moving into the slough out of the harbor (instead of flowing out to the harbor) on numerous occasions.
<i>Temporal Representation:</i>	Samples were collected from March 1999 to March 2000.
<i>Environmental Conditions:</i>	Water body is located in the Bolsa Nueva (Elkhorn Slough) Hydrologic Unit, Bolsa Nueva hydrologic subarea, Moro Cojo Slough planning watershed. The sites are located at Moro Cojo Slough at Moss Landing Harbor (306MCM) and Moro Cojo Slough at Highway 1 (306MOR).  Note: in the Region 3 Basin Plan, Moro Cojo Slough is listed under the Salinas Hydrologic Unit (309). The Region 3 CCAMP/SWAMP Monitoring classifies this water body under the Bolsa Nueva hydrologic unit (306) to be in agreement with the CalWater designation.
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Morro Bay

**Pollutant:** Arsenic

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under sections 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. Based on section 3.5 a sufficient number of samples exceed the USEPA and OEHHA 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 CTR, USEPA and OEHHA screening values 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 five water column samples exceeded the CTR Saltwater acute (CMC) and saltwater chronic (CCC) criteria, but two out of 12 tissue samples exceeded the USEPA and OEHHA screening values 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:**

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*Numeric Line of Evidence* Pollutant-Water

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

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses. Material Waters shall not contain settleable material in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses.
<i>Evaluation Guideline:</i>	CTR Saltwater acute 69 ug/l Criterion Maximum Concentration (CMC) and saltwater chronic 36 ug/l Criterion Continuous Concentration (CCC) criteria are applicable for the protection of aquatic life.
<i>Data Used to Assess Water Quality:</i>	None of the five samples taken at the 5 stations exceeded any of the CTR dissolved arsenic criteria in the water column (Keeling, 2003).
<i>Spatial Representation:</i>	Water was sampled from five (5) separate locations representing the back, middle and front of the Bay including inflows from the mouth Chorro and the mouth Los Osos Creeks that feed the Bay. These stations were: Back Bay, Mouth Los Osos, Mouth Chorro, Middle Bay and Front Bay.
<i>Temporal Representation:</i>	Water was sampled on March 8, 2001.
<i>Environmental Conditions:</i>	This is one of five metals originally included in the 1996-303(d) metals listing. The listing was originally based on exceedances of Median International Standards (MIS) and Elevated Data Levels (EDL) guidelines for State Mussel Watch tissue data. The MIS and EDL guidelines do not meet the requirements of the Listing Policy.
<i>Data Quality Assessment:</i>	Battelle Laboratory Quality Assurance Plan.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Tissue
<i>Beneficial Use:</i>	CM - Commercial and Sport Fishing (CA), MA - Marine Habitat
<i>Matrix:</i>	Tissue
<i>Evaluation Guideline:</i>	The USEPA criteria for inorganic arsenic is 1.2 ppm wet weight and the OEHHA criteria is 1.0 ppm wet weight for total arsenic.
<i>Data Used to Assess Water Quality:</i>	Evaluation of the tissue data using the USEPA and OEHHA criteria resulted in two of 12 samples exceeding. Sampling stations 429.0, outside of the mouth of the Bay recorded levels of 1.95 ppm and 3.43 ppm wet weight (Keeling, 2003).
<i>Spatial Representation:</i>	Four sites were sampled on Morro Bay. One station was used to list: 429.0. There were a total of 4 sampling stations: 427.0, 428.5, 429.0 and 429.2.
<i>Temporal Representation:</i>	Site 429.0 was sampled on 6/28/1982, 1/21/1983 and 5/3/1983. Sampling

occurred from 5-30-1980 to 1-20-93.

*Environmental Conditions:* This is one of five metals originally included in the 1996-303(d) metals listing. The listing was originally based on exceedances of Median International Standards (MIS) and Elevated Data Levels (EDL) guidelines for State Mussel Watch tissue data. The MIS and EDL guidelines do not meet the requirements of the Listing Policy.

*Data Quality Assessment:* State Mussel Watch Program Quality Assurance Plan.

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## Region 3

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**Water Segment:** Morro Bay

**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. Two-hundred thirty- one of 283 samples exceeded 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:

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*Numeric Line of Evidence* Adverse Biological Responses

*Beneficial Use:* CO - Cold Freshwater Habitat

*Matrix:* -N/A

*Water Quality Objective/* MAR = Marine Habitat

*Water Quality Criterion:*

*Evaluation Guideline:*

COLD Dissolved Oxygen = 7.0 mg/L.

*Data Used to Assess Water Quality:*

Regional Board staff is proposing that Morro Bay be listed as impaired for dissolved oxygen. The impairment is evidenced by depressed levels of dissolved oxygen measured during pre-dawn and 24-hour sampling periods. Two Hundred and thirty one data points (of a total 283 data points) collected between 1997 and 2002 fell below the water quality objective of 7.0 mg/L (CCRWQCB, 2004o). Depressed oxygen levels were found at all sampling locations except for EEL.

*Spatial Representation:*

Morro Bay Estuary (Calwater watershed no. 31023012), San Luis Obispo County. Samples were collected at 8 locations throughout the bay: ATP, SPM, Lo2, PSP, EEL, Ch1, CSI, and SHI.

*Temporal Representation:*

Single measurements were taken in the Morro Bay estuary using a hand-held meter. Measurements were taken during pre-dawn conditions from 4/17/1997 through 12/13/2002.

*Environmental Conditions:*

Samples were primarily taken during pre-dawn conditions, when dissolved oxygen levels are expected to be lowest.

*QA/QC Equivalent:*

Samples were taken according to the Morro Bay Volunteer Monitoring Program protocols for pre-dawn sampling in the Morro Bay National Estuary Programs Quality Assurance Program Plan.

The Morro Bay Volunteer Monitoring Program staff have monthly correspondence with volunteers regarding data review, meter operation, and safety. Volunteer monitors collect dissolved oxygen data according to the Morro Bay National Estuary Programs Quality Assurance Program Plan.

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## Region 3

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**Water Segment:** Morro Bay

**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. 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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation, R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Morro Bay Pathogens TMDL was approved by RWQCB on May 16, 2003 and subsequently approved by USEPA on January 20, 2004.

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## Region 3

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**Water Segment:** Morro Bay

**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. 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:**

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*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 Morro Bay Sediment TMDL was approved by RWQCB on May 16, 2003 and subsequently approved by USEPA on January 20, 2004.

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## Region 3

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**Water Segment:** Natividad Creek

**Pollutant:** Nitrate as Nitrate (NO3)

**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 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 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter



<i>Water Quality Criterion:</i>	15, Section 64435, Tables 2 and 3 as listed in Table 3-2 (Region 3 Basin Plan, p III-3). In Table 3-2, the MCL for Nitrate (as NO <sub>3</sub> ) in Domestic or Municipal Supply is 45 mg/L.
<i>Data Used to Assess Water Quality:</i>	Three out of five samples exceeded the water quality objective for nitrate (as NO <sub>3</sub> ) for municipal and domestic supply (CCAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from one site.
<i>Temporal Representation:</i>	Samples were collected January 2000 to May 2000. This site is a City of Salinas Storm water permit monitoring site and therefore it is monitored during storm water events.
<i>Environmental Conditions:</i>	The water body is located in the Salinas hydrologic unit, Gabilan range hydrologic area, Gabilan range hydrologic subarea. NC1_M is identified as City of Salinas Urban NC1_M.
<i>Data Quality Assessment:</i>	City of Salinas MS4 Permit Monitoring. CCAMP data.

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## Region 3

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**Water Segment:** Old Salinas River Estuary

**Pollutant:** Ammonia (Unionized) - Toxin

**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. Six 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. Six of 48 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:

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*Numeric Line of Evidence* Pollutant-Water

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

*Matrix:* Water

*Water Quality Objective/* The discharge of wastes shall not cause concentrations of unionized ammonia (NH<sub>3</sub>) to exceed 0.025 mg/L (as N) in receiving waters (Region 3 Basin Plan,

<i>Water Quality Criterion:</i>	Section II.A.2. Objectives for All Inland Surface Waters, Enclosed Bays, and Estuaries, II.A.2.a. General Objectives, page III-4)
<i>Data Used to Assess Water Quality:</i>	Six out of 48 samples exceeded the general water quality objective (SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from two sites. Exceedances were detected in water samples collected from one (site ID #309OLD) of the two sites.
<i>Temporal Representation:</i>	Samples were collected from March 1999 to March 2003.
<i>Environmental Conditions:</i>	The water body is located in the Salinas hydrologic unit. The sites are located at Old Salinas River at Monterey Dunes Way (309OLD) and Old Salinas River at Potrero Road (309POT).
<i>Data Quality Assessment:</i>	SWAMP QAPP.

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## Region 3

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**Water Segment:** Orcutt Creek

**Pollutant:** Ammonia (Unionized) - Toxin

**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. 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. Fifteen of 59 total water samples exceeded the water quality objective of 0.025 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:**

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*Numeric Line of Evidence*                      Pollutant-Water

*Beneficial Use:*                                      AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, ES - Estuarine Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WI - Wildlife Habitat

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	The discharge of wastes shall not cause concentrations of unionized ammonia (NH <sub>3</sub> ) to exceed 0.025 mg/L (as N) in receiving waters (Region 3 Basin Plan, Section II.A.2. Objectives for All Inland Surface Waters, Enclosed Bays, and Estuaries, II.A.2.a. General Objectives, page III-4).
<i>Data Used to Assess Water Quality:</i>	<p>From new listing proposal: Regional Board staff is proposing that multiple water bodies (including Orcutt Solomon Creek) within the Santa Maria watershed be listed for unionized ammonia. The impairment is evidenced by levels of unionized ammonia greater than the general numeric water quality objective of 0.025 mg/l. The Regional Board assessed CCAMP data and results are as follows for two sites on Orcutt Solomon Creek: 3 of 11 and 5 of 12 data points exceed the criterion.</p> <p>See CCAMP data for further information (CCAMP, 2004). This constituent was not included in the last (2002) data evaluation because data had not been processed in time to meet the 2002 deadline.</p>
<i>Spatial Representation:</i>	Data were collected at sites 312ORB and 312ORI on Orcutt Solomon Creek, in Santa Barbara County.
<i>Temporal Representation:</i>	Unknown - see CCAMP data.
<i>QA/QC Equivalent:</i>	Samples were taken according to CCAMP protocols.
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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, ES - Estuarine Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WI - Wildlife Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	The discharge of wastes shall not cause concentrations of unionized ammonia (NH <sub>3</sub> ) to exceed 0.025 mg/L (as N) in receiving waters (Region 3 Basin Plan, Section II.A.2. Objectives for All Inland Surface Waters, Enclosed Bays, and Estuaries, II.A.2.a. General Objectives, page III-4).
<i>Data Used to Assess Water Quality:</i>	Seven out of 36 samples exceeded the water quality objective (SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from three sites. Exceedances were detected in water samples collected from all sites.

*Temporal Representation:* Samples were collected from January 2000 to April 2001.

*Environmental Conditions:* The water body is located in the Santa Maria hydrologic unit, Guadalupe hydrologic subarea, Orcutt Creek planning watershed. Monitoring sites are located at Orcutt Solomon Creek at Black Road (#312ORB), Orcutt Solomon Creek upstream Santa Maria River (#312ORC) and Orcutt Solomon Creek at Highway 1 (312ORI).

*Data Quality Assessment:* SWAMP QAPP.

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## Region 3

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**Water Segment:** Orcutt 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. 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. Four of 4 samples exceeded the Basin Plan general water quality objective; 2 of 2 samples were in exceedance of the aquatic life 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, ES - Estuarine Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WI - Wildlife Habitat

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	<p>General WQOs: 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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.</p> <p>No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.</p> <p>CDFG Hazardous Assessment Criteria for Aquatic Life: 4-day average = 0.014 ppb, 1-hour day average = 0.025 ppb.</p>
<i>Data Used to Assess Water Quality:</i>	<p>Water was sampled at Orcutt Creek (ORC) and in the Santa Maria River (SMA) on four separate occasions (June 2002, September 2002, March 2003, and May 2003), (SWAMP, 2004). Water was toxic at both stations in September 2002 and May 2003 (4 exceedances of 4 measurements). Analysis of chlorpyrifos in water showed that on all occasions when water toxicity was observed, concentrations of chlorpyrifos exceeded the LC 50 for this pesticide for toxicity to <i>Ceriodaphnia dubia</i>. Toxicity Identification Evaluations of water samples from Orcutt Creek and the Santa Maria River showed toxicity to <i>C. dubia</i> was due to chlorpyrifos.</p> <p>At the station on Orcutt Creek, 2 of 2 samples were in exceedance of the aquatic life criteria.</p>
<i>Spatial Representation:</i>	Samples were collected at one station on Orcutt Creek (a tributary to the Santa Maria River).
<i>Temporal Representation:</i>	Samples were collected on 9/3/2002 and 5/28/2003.
<i>QA/QC Equivalent:</i>	Quality assurance and quality control procedures were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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<i>Numeric Line of Evidence</i>	Pollutant-Sediment
<i>Beneficial Use:</i>	AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, ES - Estuarine Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WI - Wildlife Habitat
<i>Matrix:</i>	Sediment



*Water Quality Objective/  
Water Quality Criterion:*

General WQOs: 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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

*Data Used to Assess Water  
Quality:*

Sediment was sampled at Orcutt Creek (ORC) and in the Santa Maria River (SMA) on two separate occasions (June 2002 and May 2003). Sediment was toxic at both stations in both samples (SWAMP, 2004). Analysis of chlorpyrifos in sediment porewater showed that on all occasions when water toxicity was observed, concentrations of chlorpyrifos exceeded the LC50 for this pesticide to the amphipod *Hyalella azteca*. Toxicity Identification Evaluations of sediment samples from Orcutt Creek and the Santa Maria River showed toxicity was due to a combination of chlorpyrifos and other pesticides, likely pyrethroid pesticides (refer to attached excel spreadsheet file). Sediment bulk-phase chemical analyses showed elevated concentrations of chlorpyrifos.

*Spatial Representation:*

Samples were collected at one station on Orcutt Creek (a tributary to the Santa Maria River).

*Temporal Representation:*

Samples were collected in 5/28/2003.

*QA/QC Equivalent:*

Quality assurance and quality control procedures for the primary study were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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## Region 3

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**Water Segment:** Orcutt 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.

Six lines of evidence are available in the administrative record to assess this pollutant. Three lines of evidence pertain to the pollutant in water and three pertain to the pollutant in sediment. A sufficient number of samples exceed the Human Health criteria for the different types of degradation products of 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 in the Water Quality Limited Segments category.

This conclusion is based on the staff findings that:

1. The water 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. Samples were taken in 2002 and 2003. Two of 2 samples (2002 and 2003) exceeded the total DDT, 2 of 2 samples exceeded 4,4' DDD, and 2 of 2 samples exceeded the 4,4' DDE Human Health (water consumption) criteria and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy. Even though sediment toxicity was found in 2003 the measurements of these chemicals in the sediment did not exceed the sediment guideline.
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:**

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*Numeric Line of Evidence*                      Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, ES - Estuarine Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WI - Wildlife Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* General WQOs:  
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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

CTR criteria for:  
Freshwater acute = 1.1 ppb for 4,4'-DDT and DDTs (total).  
Human Health (water consumption) = 0.00059 ppb for 4,4'-DDT.  
Human Health (water consumption) = 0.0059 ppb for DDTs (total).

*Data Used to Assess Water Quality:* Samples were collected on Orcutt Creek on two occasions: in 2002 and 2003 (SWAMP, 2004). Both measurements for total DDTs and 4,4'-DDT were below freshwater acute criteria, however both measurements exceeded human health criteria for water consumption for both 4,4'-DDT and DDTs (total).

*Spatial Representation:* Samples were collected at one station on Orcutt Creek (a tributary to the Santa Maria River).

*Temporal Representation:* Samples were collected on 9/3/2002 and 5/28/2003.

*QA/QC Equivalent:* Quality assurance and quality control procedures were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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*Numeric Line of Evidence* Pollutant-Sediment

*Beneficial Use:* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, ES - Estuarine Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WI - Wildlife Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:*

General WQOs:

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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

Freshwater Sediment Criteria (Policy):

DDT(sum) = 62.9 ppb

DDTs(total) = 572

*Data Used to Assess Water  
Quality:*

Sediment was sampled at Orcutt Creek (ORC) and in the Santa Maria River (SMA) in 2002 and 2003 (SWAMP, 2004). In the Orcutt Creek sample, the sediment criterion for DDT (sum) was exceeded (62.9 ppb) in the 2003 sample, but not in 2002 sample. The DDTs (total) criterion (572 ppb) was not exceeded on either occasion.

*Spatial Representation:*

Samples were collected at one station on Orcutt Creek (a tributary to the Santa Maria River).

*Temporal Representation:*

Samples were collected on 6/28/2002 and 5/28/2003.

*QA/QC Equivalent:*

Quality assurance and quality control procedures for the primary study were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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***Numeric Line of Evidence***

Pollutant-Water

*Beneficial Use:*

AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, ES - Estuarine Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WI - Wildlife Habitat

*Matrix:*

Water

*Water Quality Objective/  
Water Quality Criterion:*

General WQOs:

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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other

appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

CTR criteria for:

Human Health (water consumption) = 0.00083 ppb for 4,4'-DDD.

*Data Used to Assess Water Quality:*

Samples were collected on Orcutt Creek on two occasions: in 2002 and 2003 (SWAMP, 2004). Both measurements for 4,4'-DDD exceeded the human health criteria for water consumption (0.00083 ppb).

*Spatial Representation:*

Samples were collected at one station on Orcutt Creek (a tributary to the Santa Maria River).

*Temporal Representation:*

Samples were collected on 9/3/2002 and 5/28/2003.

*QA/QC Equivalent:*

Quality assurance and quality control procedures were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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***Numeric Line of Evidence***

Pollutant-Sediment

*Beneficial Use:*

AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, ES - Estuarine Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WI - Wildlife Habitat

*Matrix:*

Sediment

*Water Quality Objective/  
Water Quality Criterion:*

General WQOs:

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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

Freshwater Sediment Criteria (Policy):

DDD(sum) = 28.0 ppb.

*Data Used to Assess Water*

Sediment was sampled at Orcutt Creek (ORC) and in the Santa Maria River

*Quality:* (SMA) in 2002 and 2003 (SWAMP, 2004). In the Orcutt Creek sample, the sediment criterion for DDD (sum) was not exceeded on either occasion.

*Spatial Representation:* Samples were collected at one station on Orcutt Creek (a tributary to the Santa Maria River).

*Temporal Representation:* Samples were collected on 6/28/2002 and 5/28/2003.

*QA/QC Equivalent:* Quality assurance and quality control procedures for the primary study were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, ES - Estuarine Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WI - Wildlife Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* General WQOs:  
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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

CTR criteria for:  
Human Health (water consumption) = 0.00059 ppb for 4,4'-DDE.

*Data Used to Assess Water Quality:* Samples were collected on Orcutt Creek on two occasions: in 2002 and 2003 (SWAMP, 2004). Both measurements for 4,4'-DDE exceeded the human health criteria for water consumption (0.00059 ppb).

*Spatial Representation:* Samples were collected at one station on Orcutt Creek (a tributary to the Santa Maria River).

*Temporal Representation:* Samples were collected on 9/3/2002 and 5/28/2003.

*QA/QC Equivalent:* Quality assurance and quality control procedures were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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*Numeric Line of Evidence* Pollutant-Sediment

*Beneficial Use:* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, ES - Estuarine Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WI - Wildlife Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* General WQOs:  
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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

Freshwater Sediment Criteria:  
DDE(sum) = 31.3 ppb

*Data Used to Assess Water Quality:* Sediment was sampled at Orcutt Creek (ORC) and in the Santa Maria River (SMA) in 2002 and 2003 (SWAMP, 2004). In the Orcutt Creek sample, the sediment criterion for DDE (sum) was exceeded in 2003, but not in 2002.

*Spatial Representation:* Samples were collected at one station on Orcutt Creek (a tributary to the Santa Maria River).

*Temporal Representation:* Samples were collected on 6/28/2002 and 5/28/2003.

*QA/QC Equivalent:* Quality assurance and quality control procedures for the primary study were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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## Region 3

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**Water Segment:** Orcutt Creek

**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.

Two lines of evidence are available in the administrative record to assess this pollutant. A sufficient number of samples exceed the CTR Human Health 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 2 samples exceeded the CTR Human Health criteria and this exceeds the allowable frequency listed in Table 3.1. Sediment samples were taken but dieldrin results were below the detection limits.
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:**

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*Numeric Line of Evidence* Pollutant-Sediment

*Beneficial Use:* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, ES - Estuarine Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WI - Wildlife Habitat



<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	<p>General WQOs: 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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.</p> <p>No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.</p> <p>Freshwater Sediment criterion: max Dieldrin = 6.18 ppm.</p>
<i>Data Used to Assess Water Quality:</i>	Sediment was sampled at Orcutt Creek (ORC) in May 2003 and the dieldrin level was below the detection limit (SWAMP, 2004).
<i>Spatial Representation:</i>	The sample was collected at one station on Orcutt Creek (a tributary to the Santa Maria River).
<i>Temporal Representation:</i>	One sample was collected on 5/28/2003.
<i>QA/QC Equivalent:</i>	Quality assurance and quality control procedures for the primary study were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, ES - Estuarine Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WI - Wildlife Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	<p>General WQOs: 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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.</p>

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

CTR Human Health Criterion for consumption of Water & Organisms = 0.00014 ppb.

*Data Used to Assess Water Quality:*

Samples were collected on Orcutt Creek in September 2002 and May 2003 (SWAMP, 2004). Two of 2 samples were in exceedance of the CTR Human Health criterion for water consumption.

*Spatial Representation:*

Samples were collected at one station on Orcutt Creek (a tributary to the Santa Maria River).

*Temporal Representation:*

Samples were collected on 9/3/2002 and 5/28/2003.

*QA/QC Equivalent:*

Quality assurance and quality control procedures were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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## Region 3

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**Water Segment:** Oso Flaco Creek

**Pollutant:** Ammonia (Unionized) - Toxin

**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. Nine of 12 samples exceeded the water quality objective of 0.025 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply, BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), FR - Freshwater Replenishment, GW - Groundwater Recharge, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	The discharge of wastes shall not cause concentrations of unionized ammonia (NH <sub>3</sub> ) to exceed 0.025 mg/L (as N) in receiving waters (Region 3 Basin Plan, Section II.A.2. Objectives for All Inland Surface Waters, Enclosed Bays, and Estuaries, II.A.2.a. General Objectives, page III-4).
<i>Data Used to Assess Water Quality:</i>	Levels of unionized ammonia greater than the general numeric water quality objective of 0.025 mg/l (CCAMP, 2004; SWAMP, 2004). Nine of 12 data points exceed the water quality objective.
<i>Spatial Representation:</i>	Data were collected at site 312OFC on Oso Flaco Creek, in San Luis Obispo County.
<i>Temporal Representation:</i>	Samples were collected from February 2000 to January 2001.
<i>Environmental Conditions:</i>	Water body is located in the Santa Maria hydrologic unit, Guadalupe hydrologic subarea. Monitoring site is located at Oso Flaco Creek at Oso Flaco Lake Road (#312OFC).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Oso Flaco Lake

**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. Three out of 3 samples exceeded the OEHHHA 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* Central Coast RWQCB Basin Plan: No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

<i>Evaluation Guideline:</i>	2 ng/g (OEHHA Screening Value).
<i>Data Used to Assess Water Quality:</i>	Three out of 3 samples exceeded (TSMP, 2002). A total of 2 filet composite samples of bluegill and one filet composite of hitch were collected. Bluegill were collected from 1993. Hitch were collected 2001. The guideline was exceeded in all samples.
<i>Spatial Representation:</i>	One station located in lake at foot of Oso Flaco Road.
<i>Temporal Representation:</i>	Samples were collected 1993 and 2001.
<i>Data Quality Assessment:</i>	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.

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## Region 3

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**Water Segment:** Pajaro River

**Pollutant:** Boron

**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. Most 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. Ten of 16 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in amounts which adversely affect the agricultural beneficial use. In addition, waters used

<i>Water Quality Criterion:</i>	for irrigation and livestock watering shall not exceed concentrations for those chemicals listed in Table 3-4 (Region 3 Basin Plan, Section II.A.2 Objectives for all inland surface waters, enclosed bay, and estuaries, page III-5). In Table 3-4 of the Basin Plan (page III-9), the maximum concentration for boron for irrigation supply is 0.75 mg/L.
<i>Data Used to Assess Water Quality:</i>	Ten out of 16 samples exceeded the water quality objective for agricultural water use/ irrigation supply for boron (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from one site.
<i>Temporal Representation:</i>	Samples were collected from January 2001 through March 2002.
<i>Environmental Conditions:</i>	The water body is located in Pajaro River Hydrologic Unit, Watsonville Hydrologic Subarea. The monitoring site is located on the Pajaro River at Thurwachter Bridge (305THU).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Pennington Creek

**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. 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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation, R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Morro Bay Pathogens TMDL was approved by RWQCB on May 16, 2003 and subsequently approved by USEPA on January 20, 2004.

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## Region 3

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**Water Segment:** Prefumo Creek

**Pollutant:** Nitrate as Nitrate (NO3)

**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. Nearly all 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 15 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter

<i>Water Quality Criterion:</i>	15, Section 64435, Tables 2 and 3 as listed in Table 3-2 (Region 3 Basin Plan, p III-3; In Table 3-2, the MCL for Nitrate (as NO <sub>3</sub> ) in Domestic or Municipal Supply is 45 mg/L).
<i>Data Used to Assess Water Quality:</i>	Fourteen out of 15 samples exceeded the water quality objective for nitrate (as NO <sub>3</sub> ) for municipal and domestic supply (CCAMP, 2004, SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from one site.
<i>Temporal Representation:</i>	Samples were collected from January 2002 through March 2003.
<i>Environmental Conditions:</i>	Water body is located in the Estero Bay hydrologic unit, Point Buchon hydrologic area, San Luis Obispo Creek hydrologic subarea. Monitoring site is located at Prefumo Creek Calle Joaquin (310PRE).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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<b>Water Segment:</b>	Quail Creek
<b>Pollutant:</b>	Nitrate as Nitrate (NO3)
<b>Decision:</b>	List
<b>Weight of Evidence:</b>	<p>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.</p> <p>One line of evidence is available in the administrative record to assess this pollutant. Half of the measurements exceed the water quality objective.</p> <p>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.</p> <p>This conclusion is based on the staff findings that:</p> <ol style="list-style-type: none"><li>1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.</li><li>2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.</li><li>3. Four of 8 samples exceeded the water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.</li><li>4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.</li></ol>
<b>SWRCB Staff Recommendation:</b>	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:

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	MU - Municipal & Domestic
<i>Matrix:</i>	Water
<i>Water Quality Objective/</i>	Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter

<i>Water Quality Criterion:</i>	15, Section 64435, Tables 2 and 3 as listed in Table 3-2 (Region 3 Basin Plan, p III-3; In Table 3-2, the MCL for Nitrate (as NO <sub>3</sub> ) in Domestic or Municipal Supply is 45 mg/L).
<i>Data Used to Assess Water Quality:</i>	Four out of eight samples exceeded the water quality objective for nitrate (as NO <sub>3</sub> ) for municipal and domestic supply (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from two sites. Exceedances were detected in samples collected at one site (309QUA).
<i>Temporal Representation:</i>	Samples were collected from February 1999 through February 2000.
<i>Environmental Conditions:</i>	The water body is located in the Salinas Bay hydrologic unit, Chualar hydrologic area, and Chualar hydrologic subarea. The monitoring sites area located at Quail Creek at Old Stage Road (309UQA) and Quail Creek at Potter Road (309QUA).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Rincon Creek

**Pollutant:** Boron

**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. Seven of 21 samples exceeded the boron 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in amounts which adversely affect the agricultural beneficial use. In addition, waters used

<i>Water Quality Criterion:</i>	for irrigation and livestock watering shall not exceed concentrations for those chemicals listed in Table 3-4 (Region 3 Basin Plan, Section II.A.2 Objectives for all inland surface waters, enclosed bay, and estuaries, page III-5). In Table 3-4 of the Basin Plan (page III-9), the maximum concentration for boron for irrigation supply is 0.75 mg/L.
<i>Data Used to Assess Water Quality:</i>	Seven out of 21 samples exceeded the water quality objective for agricultural water use/ irrigation supply for boron (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from one site.
<i>Temporal Representation:</i>	Samples were collected from January 2001 through July 2002.
<i>Environmental Conditions:</i>	The water body is located in the South Coast hydrologic unit, South Coast hydrologic area, Carpinteria hydrologic subarea. The monitoring site is located at Rincon Creek at Bates Road, upstream of Highway 101 (315RIN).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Rincon Creek

**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 toxicity single line of evidence is can be used 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 2 samples displayed significant toxicity in the survival endpoint using the 7-day Pimephales promelas test. This exceeded the narrative water quality objective and 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:**

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*Numeric Line of Evidence* Toxicity

*Beneficial Use:* CO - Cold Freshwater Habitat, MI - Fish Migration, RA - Rare & Endangered Species, SP - Fish Spawning, 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 aquatic life. Compliance with this objective shall be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods as specified by the Regional Board.

Survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality conditions, shall not be less than that for the same water body in areas unaffected by the waste discharge or, when necessary, for other control water . . . .

*Data Used to Assess Water  
Quality:*

Two out of two samples displayed significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5% and is less than the evaluation threshold (both criteria are met). Both samples were tested using the 7-day Pimephales promelas test (SWAMP, 2004). Please note QA qualifier under Data Quality Assessment section below.

*Spatial Representation:*

Both samples were collected from the same station, Rincon Creek at Bates Road.

*Temporal Representation:*

Samples were collected December 3, 2001 and March 19, 2002. Toxicity in the survival endpoint was detected in both these samples.

*Environmental Conditions:*

Rincon Creek is in the South Coast Hydrologic Unit.

*Data Quality Assessment:*

SWAMP; QA qualifier indicated for the sample collected March 19, 2002. This is reported as minor deviations in water quality parameters.

## Region 3

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**Water Segment:** Salinas Reclamation Canal

**Pollutant:** Ammonia (Unionized) - Toxin

**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. Five of 14 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Matrix:* Water

*Water Quality Objective/* The discharge of wastes shall not cause concentrations of unionized ammonia (NH<sub>3</sub>) to exceed 0.025 mg/L (as N) in receiving waters (Region 3 Basin Plan,

<i>Water Quality Criterion:</i>	Section II.A.2. Objectives for All Inland Surface Waters, Enclosed Bays, and Estuaries, II.A.2.a. General Objectives, page III-4)
<i>Data Used to Assess Water Quality:</i>	Five of 14 total samples collected by CCAMP staff exceeded the water quality objective (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected at site 309ALD by CCAMP staff. This water body is located in the Salinas hydrologic unit, Chualar hydrologic subarea. The site is located at Salinas Reclamation Canal at Boranda Road (309ALD).
<i>Temporal Representation:</i>	Samples were collected from February 1999 to February 2000.
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP used to evaluate.

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## Region 3

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**Water Segment:** Salinas River (lower, estuary to near Gonzales Rd crossing, watersheds 30910 and 30920)

**Pollutant:** Nitrate as Nitrate (NO3)

**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. Seventeen of 47 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in excess of the

<i>Water Quality Criterion:</i>	limits specified in California Code of Regulations, Title 22, Article 4, Chapter 15, Section 64435, Tables 2 and 3 as listed in Table 3-2 (Region 3 Basin Plan, p III-3; In Table 3-2, the MCL for Nitrate (as NO <sub>3</sub> ) in Domestic or Municipal Supply is 45 mg/L).
<i>Data Used to Assess Water Quality:</i>	Seventeen out of 47 samples exceeded the water quality objective for nitrate (as NO <sub>3</sub> ) for municipal and domestic supply (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from two sites. Exceedances were detected in samples collected from both sites.
<i>Temporal Representation:</i>	Samples were collected from February 1999 through March 2003.
<i>Environmental Conditions:</i>	This water body is already listed for nutrients, but not for nitrate specifically.  The water body is located in the Salinas hydrologic unit, and Lower Salinas Valley hydrologic area. The sampling sites are located at Salinas River at Davis Road (309DAV), and Salinas River at Highway 1 (309SBR).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Salinas River (lower, estuary to near Gonzales Rd crossing, watersheds 30910 and 30920)

**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. It is recommended that this new pollutant listing replace the current pesticides listing for this water body.

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 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:

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* Central Coast 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.

<i>Evaluation Guideline:</i>	100 ng/g - NAS Guideline (whole fish).
<i>Data Used to Assess Water Quality:</i>	Two out of 2 samples exceeded (TSMP, 2002). One whole fish composite sample of hitch and of sucker was collected. Hitch was collected in 1992 and suckers were collected in 1998. The guideline was exceeded in both samples.
<i>Spatial Representation:</i>	Two stations were sampled: about 1/2 mile downstream of the Blanco Drain discharge to the Salinas River and at the Davis Road crossing.
<i>Temporal Representation:</i>	Samples were collected in 1992 and 1998.
<i>Data Quality Assessment:</i>	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.

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## Region 3

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<b>Water Segment:</b>	San Antonio Creek (San Antonio Watershed, Rancho del las Flores Bridge at Hwy 135 to downstream at Railroad Bridge)
<b>Pollutant:</b>	Ammonia as Nitrogen
<b>Decision:</b>	List
<b>Weight of Evidence:</b>	<p>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.</p> <p>One line of evidence is available in the administrative record to assess this pollutant. A large number of samples exceed the water quality objective.</p> <p>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.</p> <p>This conclusion is based on the staff findings that:</p> <ol style="list-style-type: none"><li>1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.</li><li>2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.</li><li>3. Seven of 52 samples exceeded the ammonia water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.</li><li>4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.</li></ol>
<b>SWRCB Staff Recommendation:</b>	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:

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat, MI - Fish Migration, RA - Rare & Endangered Species, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
<i>Matrix:</i>	Water



<i>Water Quality Objective/ Water Quality Criterion:</i>	The discharge of wastes shall not cause concentrations of unionized ammonia (NH <sub>3</sub> ) to exceed 0.025 mg/L (as N) in receiving waters (Region 3 Basin Plan, Section II.A.2. Objectives for All Inland Surface Waters, Enclosed Bays, and Estuaries, II.A.2.a. General Objectives, page III-4)
<i>Data Used to Assess Water Quality:</i>	Seven out of 52 samples exceeded the general water quality objective (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from four sites. Exceedances were detected in samples collected from one (site #313SAI) of the four sites.
<i>Temporal Representation:</i>	Samples were collected from January 2001 to March 2003.
<i>Environmental Conditions:</i>	The water body is located in the San Antonio hydrologic unit, San Antonio hydrologic subarea. Monitoring sites are located at San Antonio Creek at Rancho de las Flores Bridge and Highway 135 (313SAB), San Antonio Creek at Railroad Bridge, upstream of lagoon (313SAC), San Antonio Creek at San Antonio Road East (313SAE), and San Antonio Creek at San Antonio Road West (313SAI).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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<b>Water Segment:</b>	San Antonio Creek (San Antonio Watershed, Rancho del las Flores Bridge at Hwy 135 to downstream at Railroad Bridge)
<b>Pollutant:</b>	Boron
<b>Decision:</b>	List
<b>Weight of Evidence:</b>	<p>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.</p> <p>One line of evidence is available in the administrative record to assess this pollutant. Most of the measurements exceed the water quality objective.</p> <p>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.</p> <p>This conclusion is based on the staff findings that:</p> <ol style="list-style-type: none"><li>1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.</li><li>2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.</li><li>3. Thirty-one of 45 samples exceeded the water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.</li><li>4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.</li></ol>
<b>SWRCB Staff Recommendation:</b>	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:

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	AG - Agricultural Supply
<i>Matrix:</i>	Water
<i>Water Quality Objective/</i>	Waters shall not contain concentrations of chemical constituents in amounts

<i>Water Quality Criterion:</i>	which adversely affect the agricultural beneficial use. In addition, waters used for irrigation and livestock watering shall not exceed concentrations for those chemicals listed in Table 3-4 (Region 3 Basin Plan, Section II.A.2 Objectives for all inland surface waters, enclosed bay, and estuaries, page III-5). In Table 3-4 of the Basin Plan (page III-9), the maximum concentration for boron for irrigation supply is 0.75 mg/L.
<i>Data Used to Assess Water Quality:</i>	Thirty-one out of 45 samples exceeded the water quality objective for agricultural water use/ irrigation supply for boron (SWAMP, 2004; CCAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from four sites. Exceedances were detected in samples collected from three of the four sites (313SAB, 313SAC, 313SAI).
<i>Temporal Representation:</i>	Samples were collected from January 2001 through July 2002.
<i>Environmental Conditions:</i>	The water body is located in the San Antonio hydrologic unit, San Antonio hydrologic subarea. Monitoring sites are located at San Antonio Creek at Rancho de las Flores Bridge and Highway 135 (313SAB), San Antonio Creek at Railroad Bridge, upstream of lagoon (313SAC), San Antonio Creek at San Antonio Road East (313SAE), and San Antonio Creek at San Antonio Road West (313SAI).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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<b>Water Segment:</b>	San Antonio Creek (San Antonio Watershed, Rancho del las Flores Bridge at Hwy 135 to downstream at Railroad Bridge)
<b>Pollutant:</b>	Nitrogen, Nitrite
<b>Decision:</b>	List
<b>Weight of Evidence:</b>	<p>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.</p> <p>One line of evidence is available in the administrative record to assess this pollutant. Five measurements exceed the water quality objective.</p> <p>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.</p> <p>This conclusion is based on the staff findings that:</p> <ol style="list-style-type: none"><li>1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.</li><li>2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.</li><li>3. Five of 52 samples exceeded the water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.</li><li>4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.</li></ol>
<b>SWRCB Staff Recommendation:</b>	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:

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	MU - Municipal & Domestic
<i>Matrix:</i>	Water
<i>Water Quality Objective/</i>	Drinking Water MCL for nitrite = 1 mg/L (Title 22 Table 64431-A Primary

<i>Water Quality Criterion:</i>	(inorganics) 64444A (organics)).
<i>Data Used to Assess Water Quality:</i>	Five out of 52 samples exceeded the general water quality objective (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from four sites. Exceedances were detected in samples collected from one (site #313SAI) of the four sites.
<i>Temporal Representation:</i>	Samples were collected from January 2001 to March 2003.
<i>Environmental Conditions:</i>	The water body is located in the San Antonio hydrologic unit, San Antonio hydrologic subarea. Monitoring sites are located at San Antonio Creek at Rancho de las Flores Bridge and Highway 135 (313SAB), San Antonio Creek at Railroad Bridge, upstream of lagoon (313SAC), San Antonio Creek at San Antonio Road East (313SAE), and San Antonio Creek at San Antonio Road West (313SAI).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** San Benito River

**Pollutant:** Fecal Coliform

**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. Five of 12 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* R1 - Water Contact Recreation

*Matrix:* Water

*Water Quality Objective/* Basin Plan: Fecal coliform concentration, based on minimum of not less than five samples or any 30-day period, shall not exceed a log mean of 200/100 ml,

<i>Water Quality Criterion:</i>	nor shall more than ten percent of the total samples during any 30-day period exceed 400/100 ml.
<i>Data Used to Assess Water Quality:</i>	Five of 12 samples exceeded the water quality objective (CCAMP, 2004).
<i>Spatial Representation:</i>	2 stations.
<i>Temporal Representation:</i>	Monthly sampling events. Samples taken from 12/1997 to 12/1998; 12 sampling dates).
<i>Data Quality Assessment:</i>	Central Coast Ambient Monitoring Program (CCAMP) QA/QC.

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## Region 3

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**Water Segment:** San Bernardo Creek

**Pollutant:** Fecal Coliform

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under section 2.2 and 3.2 of the Listing Policy. Under these sections 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 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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation, R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Morro Bay Pathogens TMDL was approved by RWQCB on May 16, 2003 and subsequently approved by USEPA on January 20, 2004.

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## Region 3

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**Water Segment:** San Diego Creek

**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. 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 100 ng/g NAS Guideline for the protection of aquatic life from bioaccumulation of toxic substances. 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.Nine of 25 samples exceeded the NAS guideline for Toxaphene 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:**

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*Numeric Line of Evidence*                      Pollutant-Tissue

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

<i>Matrix:</i>	Tissue
<i>Water Quality Objective/ Water Quality Criterion:</i>	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.
<i>Evaluation Guideline:</i>	100 ng/g [NAS Guideline (whole fish)].
<i>Data Used to Assess Water Quality:</i>	Nine out of 25 samples exceeded (TSMP, 2002). A total of 25 whole fish composite samples were collected: 19 red shiner, 4 fathead minnow, and 2 California killifish. Red shiner were collected from 1992-2001. Fathead minnow were collected in 2001-02. California killifish were collected in 1993. The guideline was exceeded in red shiner from 1992 through 1997. Samples from 1998-2002 did not exceed the guideline.
<i>Spatial Representation:</i>	Three stations were sampled: in the riffle 150 yards upstream from the confluence of San Diego Creek and Peters Canyon Creek (Barranca Parkway), upstream of Michelson Drive, and in small ponds adjacent to the Upper Newport Bay Ecological Reserve.
<i>Temporal Representation:</i>	Samples were collected from 1992-2002.
<i>Data Quality Assessment:</i>	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.

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## Region 3

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**Water Segment:** San Lorenzo Creek

**Pollutant:** Fecal Coliform

**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 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. 9 of 15 samples 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 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

**SWRCB Staff Recommendation:** One line of evidence is available in the administrative record to assess this pollutant. A TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard.

### **Lines of Evidence:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* R1 - Water Contact Recreation

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Fecal coliform concentration, based on minimum of not less than five samples or any 30-day period, shall not exceed a log mean of 200/100 ml, nor shall more than ten percent of the total samples during any 30-day period

exceed 400/100 ml.

*Data Used to Assess Water Quality:* Nine of 15 samples exceeded the water quality objective (CCAMP, 2004).

*Spatial Representation:* 1 site.

*Temporal Representation:* Monthly sampling events.

*Data Quality Assessment:* Central Coast Ambient Monitoring Program (CCAMP) QA/QC.

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## Region 3

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**Water Segment:** San Lorenzo River

**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.

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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* A TMDL was approved by USEPA on January 14, 2003. The RWQCB is tracking the implementation of the TMDL through the Nitrate Management Plan (adopted into the Basin Plan) being implemented by Santa Cruz County.

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## Region 3

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**Water Segment:** San Lorenzo River

**Pollutant:** Sediment

**Decision:** List

**Weight of Evidence:** One line of evidence is available in the administrative record to assess this pollutant. A TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard.

**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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* AG - Agricultural Supply

*Information Used to Assess Water Quality:* A TMDL for this water segment-pollutant combination was approved by the RWQCB in May 2003. USEPA approved the TMDL on February 19, 2004.

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## Region 3

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**Water Segment:** San Luis Obispo Creek

**Pollutant:** Nitrate as Nitrate (NO3)

**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. Thirty-five of 66 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter

<i>Water Quality Criterion:</i>	15, Section 64435, Tables 2 and 3 as listed in Table 3-2 (Region 3 Basin Plan, p III-3; In Table 3-2, the MCL for Nitrate (as NO <sub>3</sub> ) in Domestic or Municipal Supply is 45 mg/L).
<i>Data Used to Assess Water Quality:</i>	Thirty-five out of 66 samples exceeded the water quality objective for nitrate (as NO <sub>3</sub> ) for municipal and domestic supply (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from four sites. Exceedances were detected in samples collected from two of the four sites (310SLB, 310SLV).
<i>Temporal Representation:</i>	Samples were collected from April 2001 through March 2003.
<i>Environmental Conditions:</i>	<p>Water body is located in Estero Bay Hydrologic Unit, Point Buchon hydrologic area, San Luis Obispo Creek Hydrologic Subarea. The monitoring sites are located at San Luis Obispo Creek at San Luis Bay Drive (310SLB), San Luis Obispo Creek at Cuesta Park (310SLC), San Luis Obispo Creek at Mission Plaza (310SLM), San Luis Obispo Creek at Los Osos Valley Road (310SLV).</p> <p>The Basin Plan differentiates beneficial uses for this water body depending on whether it is above or below W. Marsh St. Two of the sites are located above W. Marsh St (310SLM and 310SLC) and two are located below W. Marsh St (310SLV and 310SLB). The sites with exceedances are located below W. Marsh St.</p>
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** San Luisito Creek

**Pollutant:** Total 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. 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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation, R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Morro Bay Pathogens TMDL was approved by RWQCB on May 16, 2003 and subsequently approved by USEPA on January 20, 2004.

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## Region 3

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**Water Segment:** San Vicente Creek

**Pollutant:** Turbidity

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under sections 2.1, 3.6, 3.7 and 3.10 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status while under section 3.10, a minimum of two lines of evidence are needed to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Based on section 3.1 the site exceeds the drinking water 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. Twenty two of 91 measurements were in exceedance of the Title 22 Secondary MCL criterion for turbidity, 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:*

Title 22 Secondary MCL = 5 Units

*Data Used to Assess Water  
Quality:*

The Davenport Sanitation District (DSD), which withdraws water from San Vicente Creek to serve the town of Davenport (adjacent to San Vicente Creek) has been unable to produce potable drinking water during periods of heavy rainfall due to high levels of turbidity. Turbidity levels at the influent were measured for 31 days in December 2001, 30 days in January 2002, and 30 days in December 2002 by the County of Santa Cruz Water and Wastewater Division at the Davenport Water influent. Twenty two of 91 measurements were in exceedance of the criterion (Frediani, J. 2004).

*Spatial Representation:*

Samples were collected in San Vicente Creek at the Davenport water treatment plant intake point.

*Temporal Representation:*

Samples were collected daily in December 2001, January 2002, and December 2002. Other data have been collected, but were available at time of data solicitation.

*Environmental Conditions:*

Records state that standards are exceeded "during periods of heavy rainfall". The watershed is primarily privately owned and is managed for timber production, open pit mining, cattle grazing, urbanization and water diversion.

*QA/QC Equivalent:*

State Board was unable to obtain any QA/QC information.

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## Region 3

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**Water Segment:** Santa Maria River

**Pollutant:** Ammonia (Unionized) - Toxin

**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. Five of 59 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, IN - Industrial Service Supply, MI - Fish Migration, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	The discharge of wastes shall not cause concentrations of unionized ammonia (NH <sub>3</sub> ) to exceed 0.025 mg/L (as N) in receiving waters (Region 3 Basin Plan, Section II.A.2. Objectives for All Inland Surface Waters, Enclosed Bays, and Estuaries, II.A.2.a. General Objectives, page III-4)
<i>Data Used to Assess Water Quality:</i>	Levels of unionized ammonia greater than the general numeric water quality objective of 0.025 mg/l. Five of 59 samples exceeded the water quality objective (CCAMP, 2004, SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from three sites. Exceedances were detected in samples collected from two of the three sites.
<i>Temporal Representation:</i>	Samples were collected from February 2000 to March 2003.
<i>Environmental Conditions:</i>	Santa Maria River is located in the Santa Maria hydrologic unit, Guadalupe Hydrologic subarea. Sites are located at Santa Maria River at Bull Canyon Road (312SBC), Santa Maria River at Estuary (312SMA), and Santa Maria River at Highway 1 (312SMI).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Santa Maria River

**Pollutant:** Chlorpyrifos

**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 3.10 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status while under section 3.10, 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 sediment 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. Two of 2 samples were in exceedance of the aquatic life criteria, 2 of 2 sediment bulk-phase chemical analyses showed elevated concentrations of chlorpyrifos, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy. The benthic community in this water body is impacted and this pollutant is associated with this impact.
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:**

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*Numeric Line of Evidence*                      Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, IN - Industrial Service Supply, MI - Fish Migration, 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:* General WQOs:  
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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

CDFG Hazardous Assessment Criteria for Aquatic Life: 4-day average = 0.014 ppb, 1-hour day average = 0.025 ppb.

*Data Used to Assess Water Quality:* Water was sampled at Orcutt Creek (ORC) and in the Santa Maria River (SMA) on two separate occasions (September 2002 and May 2003). Water was toxic at both stations in September 2002 and May 2003. Analysis of chlorpyrifos in water showed that on all occasions when water toxicity was observed, concentrations of chlorpyrifos exceeded the LC 50 for this pesticide for toxicity to *Ceriodaphnia dubia* (SWAMP, 2004). Toxicity Identification Evaluations of water samples from Orcutt Creek and the Santa Maria River showed toxicity to *C. dubia* was due to chlorpyrifos.

At the station on the Santa Maria River, 2 of 2 samples were in exceedance of the aquatic life criteria.

*Spatial Representation:* Lower Santa Maria River (Hydrologic Unit 31201) from its confluence with Orcutt Creek to the mouth of the Santa Maria River estuary where it enters the Pacific Ocean.

*Temporal Representation:* Samples were collected on 9/3/2002 and 5/28/2003

*QA/QC Equivalent:* Quality assurance and quality control procedures were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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*Numeric Line of Evidence* Pollutant-Sediment

<i>Beneficial Use:</i>	AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, IN - Industrial Service Supply, MI - Fish Migration, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	<p>General WQOs: 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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.</p> <p>No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.</p>
<i>Data Used to Assess Water Quality:</i>	<p>Sediment was sampled at Orcutt Creek (ORC) and in the Santa Maria River (SMA) in 2002 and 2003. Sediment was toxic at both stations in both samples. Analysis of chlorpyrifos in sediment porewater showed that on all occasions when water toxicity was observed, concentrations of chlorpyrifos exceeded the LC50 for this pesticide to the amphipod <i>Hyaella azteca</i> (SWAMP, 2004). Toxicity Identification Evaluations of sediment samples from Orcutt Creek and the Santa Maria River showed toxicity was due to a combination of chlorpyrifos and other pesticides, likely pyrethroid pesticides (refer to attached excel spreadsheet file). Sediment bulk-phase chemical analyses showed elevated concentrations of chlorpyrifos.</p>
<i>Spatial Representation:</i>	Lower Santa Maria River (Hydrologic Unit 31201) from its confluence with Orcutt Creek to the mouth of the Santa Maria River estuary where it enters the Pacific Ocean.
<i>Temporal Representation:</i>	Samples were collected on 10/22/2003.
<i>QA/QC Equivalent:</i>	Quality assurance and quality control procedures for the primary study were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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## Region 3

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**Water Segment:** Santa Maria River

**Pollutant:** DDT

**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 3.10 of the Listing Policy. Under section 3.6 a single line of evidence is necessary to assess listing status while under section 3.10, 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. Based on section 3.6 the site has significant water toxicity 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 CTR 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. Two of 2 total DDTs and 4,4'-DDT samples were below freshwater acute criteria, 1 of 2 measurements for 4,4'-DDD exceeded the human health criteria for water consumption, and 2 of 2 measurements for 4,4'-DDE exceeded the human health criteria for water consumption. 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:**

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*Numeric Line of Evidence*                      Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, IN - Industrial Service Supply, MI - Fish Migration, 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:* 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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

CTR criteria for:

Freshwater acute = 1.1 ppb for 4,4'-DDT and DDTs (total).

Human Health (water consumption) = 0.00059 ppb for 4,4'-DDT.

Human Health (water consumption) = 0.0059 ppb for DDTs (total).

*Data Used to Assess Water Quality:* Samples were collected on Orcutt Creek on two occasions: in 2002 and 2003. Both measurements for total DDTs and 4,4'-DDT were below freshwater acute criteria, however both measurements exceeded human health criteria for water consumption for both 4,4'-DDT and DDTs (total), (SWAMP, 2004).

*Spatial Representation:* Lower Santa Maria River (Hydrologic Unit 31201) from its confluence with Orcutt Creek to the mouth of the Santa Maria River estuary where it enters the Pacific Ocean.

*Temporal Representation:* Samples were collected on 9/3/2002 and 5/28/2003.

*QA/QC Equivalent:* Quality assurance and quality control procedures for chemistry, toxicity testing and TIEs for the primary study were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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*Numeric Line of Evidence* Pollutant-Sediment

*Beneficial Use:* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, IN - Industrial Service Supply, MI - Fish Migration, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife

Habitat

*Matrix:*

Sediment

*Water Quality Objective/  
Water Quality Criterion:*

General WQOs:

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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

Freshwater Sediment Criteria (Policy):

DDT(sum) = 62.9 ppb

DDTs(total) = 572

*Data Used to Assess Water  
Quality:*

Sediment was sampled at Orcutt Creek (ORC) and in the Santa Maria River (SMA) on two separate occasions (June 2002 and May 2003). Sediment was toxic at both stations in both samples (SWAMP, 2004). Sediment bulk-phase chemical analyses showed elevated concentrations of DDTs. In the Santa Maria River sample, the sediment criterion for DDT (sum) was exceeded (62.9 ppb) in 2002, but not in 2003. The DDTs (total) criterion (572 ppb) was not exceeded on either occasion.

*Spatial Representation:*

Lower Santa Maria River (Hydrologic Unit 31201) from its confluence with Orcutt Creek to the mouth of the Santa Maria River estuary where it enters the Pacific Ocean.

*Temporal Representation:*

Samples were collected on 6/28/2002 and 10/22/2003.

*QA/QC Equivalent:*

Quality assurance and quality control procedures for chemistry, toxicity testing and TIEs for the primary study were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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*Numeric Line of Evidence*

Pollutant-Tissue

*Beneficial Use:*

AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, IN - Industrial Service Supply, MI - Fish Migration, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

<i>Matrix:</i>	Tissue
<i>Water Quality Objective/ Water Quality Criterion:</i>	Central Coast RWQCB Basin Plan: No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.
<i>Evaluation Guideline:</i>	1000 ng/g NAS Guideline (whole fish).
<i>Data Used to Assess Water Quality:</i>	Two out of 2 samples exceeded (TSMP, 2002). A total of 2 whole fish composite samples of starry flounder and threespine stickleback were collected. The flounder sample was collected in 1992 and the stickleback in 1999. The guideline was exceeded in both samples.
<i>Spatial Representation:</i>	One station located just above the beach area at the mouth of the river.
<i>Temporal Representation:</i>	Samples were collected in 1992 and 1999.
<i>Data Quality Assessment:</i>	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.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, IN - Industrial Service Supply, MI - Fish Migration, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.  No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.  CTR criteria for: Human Health (water consumption) = 0.00083 ppb for 4,4'-DDD.
<i>Data Used to Assess Water</i>	Samples were collected on the Santa Maria River on two occasions: in 2002 and

*Quality:* 2003. One of 2 measurements for 4,4'-DDD exceeded the human health criteria for water consumption (0.00083 ppb), (SWAMP, 2004).

*Spatial Representation:* Lower Santa Maria River (Hydrologic Unit 31201) from its confluence with Orcutt Creek to the mouth of the Santa Maria River estuary where it enters the Pacific Ocean.

*Temporal Representation:* Samples were collected on 9/3/2002 and 5/28/2003.

*QA/QC Equivalent:* Quality assurance and quality control procedures for chemistry, toxicity testing and TIEs for the primary study were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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*Numeric Line of Evidence* Pollutant-Sediment

*Beneficial Use:* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, IN - Industrial Service Supply, MI - Fish Migration, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* General WQOs:  
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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

Freshwater Sediment Criteria:  
DDD(sum) = 28.0 ppb

*Data Used to Assess Water Quality:* Sediment was sampled at Orcutt Creek (ORC) and in the Santa Maria River (SMA) in 2002 and 2003 (SWAMP, 2004). Sediment was toxic at both stations in both samples. Sediment bulk-phase chemical analyses showed elevated concentrations of DDTs. In the Santa Maria River sample, the sediment criterion for DDD (sum) was not exceeded on either occasion.

*Spatial Representation:* Lower Santa Maria River (Hydrologic Unit 31201) from its confluence with Orcutt Creek to the mouth of the Santa Maria River estuary where it enters the

Pacific Ocean.

*Temporal Representation:* Samples were collected on 6/28/2002 and 10/22/2003.

*QA/QC Equivalent:* Quality assurance and quality control procedures for chemistry, toxicity testing and TIEs for the primary study were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, IN - Industrial Service Supply, MI - Fish Migration, 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:* 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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

CTR criteria for:

Human Health (water consumption) = 0.00059 ppb for 4,4'-DDE.

*Data Used to Assess Water Quality:* Samples were collected on the Santa Maria River on two occasions: in 2002 and 2003 (SWAMP, 2004). Two of 2 measurements for 4,4'-DDE exceeded the human health criteria for water consumption (0.00059 ppb).

*Spatial Representation:* Lower Santa Maria River (Hydrologic Unit 31201) from its confluence with Orcutt Creek to the mouth of the Santa Maria River estuary where it enters the Pacific Ocean.

*Temporal Representation:* Samples were collected on 9/3/2002 and 5/28/2003.

*QA/QC Equivalent:* Quality assurance and quality control procedures for chemistry, toxicity testing and TIEs for the primary study were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the

SWAMP QAPP, and are the labs participating in the SWAMP program.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Sediment
<b><i>Beneficial Use:</i></b>	AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, IN - Industrial Service Supply, MI - Fish Migration, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
<b><i>Matrix:</i></b>	Sediment
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	<p>General WQOs: 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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.</p> <p>No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.</p> <p>Freshwater Sediment Criteria (Policy): DDE(sum) = 31.3 ppb</p>
<b><i>Data Used to Assess Water Quality:</i></b>	Sediment was sampled at Orcutt Creek (ORC) and in the Santa Maria River (SMA) in 2002 and 2003 (SWAMP, 2004). Sediment was toxic at both stations in both samples. Sediment bulk-phase chemical analyses showed elevated concentrations of DDTs. In the Santa Maria River samples, the sediment criterion for DDE (sum) was exceeded in 2003, but not in 2002.
<b><i>Spatial Representation:</i></b>	Lower Santa Maria River (Hydrologic Unit 31201) from its confluence with Orcutt Creek to the mouth of the Santa Maria River estuary where it enters the Pacific Ocean.
<b><i>Temporal Representation:</i></b>	Samples were collected on 6/28/2002 and 10/22/2003.
<b><i>QA/QC Equivalent:</i></b>	Quality assurance and quality control procedures for chemistry, toxicity testing and TIEs for the primary study were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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***Line of Evidence***                      Pollutant-Tissue

*Beneficial Use*

AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, IN - Industrial Service Supply, MI - Fish Migration, 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:*

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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

*Data Used to Assess Water Quality:*

Concentrations of pesticides were measured in sand crabs (*Emerita analoga*) collected at the mouth of the Santa Maria River estuary in August 2000 (Dugan et al. 2004). These samples were collected as part of a larger coastline survey in Region 3 that collected sand crabs from a number of beaches. The range of sampling extended from Carpinteria Beach in Ventura County at the southern end of Region 3 to Scott Creek in Santa Cruz County at the northern end of Region 3. Concentrations of DDT in sand crab tissues at the mouth of the Santa Maria River were higher than any other site measured in Region 3, and were as high as 556 ng/g dry wt in samples nearest the Santa Maria River estuary. Mean concentrations of total DDT in sand crabs from the Santa Maria River area were 350 ng/g (dry wt). Results of a gradient study of tissues loads in sand crabs collected north and south of the river mouth confirmed that the Santa Maria River was the source of DDT in sand crab tissues.

These results are consistent with previous BPTCP studies that found DDT in sediments from the Santa Maria River estuary were among the highest measured in the state (Total DDT = 679.5 ug/kg dry wt., Downing et al. 1998 Section VII). High total DDT in the sediment sample from this station corresponded with high sediment toxicity to amphipods (amphipod *Eohaustorius estuarius* mortality = 98%; Downing et al. 1998, Section II).

*Spatial Representation:*

Lower Santa Maria River (Hydrologic Unit 31201) from its confluence with Orcutt Creek to the mouth of the Santa Maria River estuary where it enters the Pacific Ocean. Samples were collected at 4 sites at the mouth of the Santa Maria River: 150S, 300S, 450S, and 600S (river).

*Temporal Representation:*

Samples were collected during May and August 2000 and February 2001.



## Region 3

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**Water Segment:** Santa Maria River

**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 can be used to assess listing status.

Three lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.1 There are sufficient number of samples exceeding the CTR Human Health Criteria for consumption of water and organisms. The site does not show significant sediment toxicity and the benthic community is not impacted.

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 is a water column guideline available 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. Two of 2 samples were in exceedance of the CTR Human Health water and organism consumption criterion this exceed the allowable frequency listed in Table 3.1 of the Listing Policy. However, sediment samples were below the detection limit, and the benthic community in this water body is not impacted.
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 for the pollutant are exceeded.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater

Recharge, IN - Industrial Service Supply, MI - Fish Migration, 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:*

General WQOs:

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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

CTR Human Health Criterion for consumption of Water & Organisms = 0.00014 ppb.

*Data Used to Assess Water  
Quality:*

Samples were collected on the Lower Santa Maria River in September 2002 and May 2003 (SWAMP, 2004). Two of 2 samples were in exceedance of the criterion for water consumption, however both samples were below the freshwater acute criterion (0.24 ppb).

*Spatial Representation:*

Lower Santa Maria River (Hydrologic Unit 31201) from its confluence with Orcutt Creek to the mouth of the Santa Maria River estuary where it enters the Pacific Ocean.

*Temporal Representation:*

Samples were collected on 9/3/2002 and 5/28/2003.

*QA/QC Equivalent:*

Quality assurance and quality control procedures for chemistry, toxicity testing and TIEs for the primary study were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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*Numeric Line of Evidence*

Pollutant-Sediment

*Beneficial Use:*

AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, IN - Industrial Service Supply, MI - Fish Migration, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Matrix:*

Sediment

*Water Quality Objective/  
Water Quality Criterion:*

General WQOs:

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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

Freshwater Sediment criterion: max Dieldrin = 6.18 ppm

*Data Used to Assess Water  
Quality:*

Sediment was sampled in the Santa Maria River (SMA) in October 2003 and the dieldrin level was below the detection limit ((SWAMP, 2004).

*Spatial Representation:*

Lower Santa Maria River (Hydrologic Unit 31201) from its confluence with Orcutt Creek to the mouth of the Santa Maria River estuary where it enters the Pacific Ocean.

*Temporal Representation:*

One sample was collected on 10/22/2003.

*QA/QC Equivalent:*

Quality assurance and quality control procedures for chemistry, toxicity testing and TIEs for the primary study were identical to those used in the Surface Water Ambient Monitoring Program (SWAMP). The toxicity and chemistry laboratories participating in this study are the same labs responsible for the SWAMP QAPP, and are the labs participating in the SWAMP program.

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*Line of Evidence*

Pollutant-Tissue

*Beneficial Use*

AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, IN - Industrial Service Supply, MI - Fish Migration, 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:*

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 aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

NAS Tissue guideline = 100 ppb

*Data Used to Assess Water Quality:*

Concentrations of pesticides were measured in sand crabs (*Emerita analoga*) collected at the mouth of the Santa Maria River estuary in August 2000 (Dugan et al. 2004). These samples were collected as part of a larger coastline survey in Region 3 that collected sand crabs from a number of beaches. The range of sampling extended from Carpinteria Beach in Ventura County at the southern end of Region 3 to Scott Creek in Santa Cruz County at the northern end of Region 3.

Samples were all below the numeric criterion.

*Spatial Representation:*

Lower Santa Maria River (Hydrologic Unit 31201) from its confluence with Orcutt Creek to the mouth of the Santa Maria River estuary where it enters the Pacific Ocean. Samples were collected at 4 sites at the mouth of the Santa Maria River: 150S, 300S, 450S, and 600S (river).

*Temporal Representation:*

Samples were collected during May and August 2000 and February 2001.

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## Region 3

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**Water Segment:** Santa Maria River

**Pollutant:** Endrin

**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 out of 2 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* Central Coast RWQCB Basin Plan: No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

<i>Evaluation Guideline:</i>	100 ng/g NAS guideline (whole fish).
<i>Data Used to Assess Water Quality:</i>	Two out of 2 samples exceeded (TSMP, 2002). A total of 2 whole fish composite samples of starry flounder and threespine stickleback and were collected. The flounder was collected in 1992 and the stickleback in 1999. The guideline was exceeded in both samples.
<i>Spatial Representation:</i>	One station located just above the beach area at the mouth of the river.
<i>Temporal Representation:</i>	Samples were collected in 1992 and 1999.
<i>Data Quality Assessment:</i>	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

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## Region 3

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**Water Segment:** Santa Rita Creek (San Luis Obispo County)

**Pollutant:** Nitrate as Nitrate (NO3)

**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 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. Three of 12 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/* Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter

<i>Water Quality Criterion:</i>	15, Section 64435, Tables 2 and 3 as listed in Table 3-2 (Region 3 Basin Plan, p III-3; In Table 3-2, the MCL for Nitrate (as NO <sub>3</sub> ) in Domestic or Municipal Supply is 45 mg/L).
<i>Data Used to Assess Water Quality:</i>	Three out of 12 samples exceeded the water quality objective for nitrate (as NO <sub>3</sub> ) for municipal and domestic supply (CCAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from one site, SR1. Note that this site is a City of Salinas stormwater permit monitoring site and therefore, it is monitored during storm water events.
<i>Temporal Representation:</i>	Samples were collected from December 1999 through November 2000.
<i>Environmental Conditions:</i>	Water body is located in the Salinas hydrologic unit.
<i>Data Quality Assessment:</i>	City of Salinas stormwater permit monitoring site. CCAMP, SWAMP.

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## Region 3

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**Water Segment:** Santa Ynez River (below city of Lompoc to Ocean)

**Pollutant:** Nitrate as Nitrate (NO3)

**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, Santa Ynez River (below the City of Lompoc to Ocean) is listed for nutrients. 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 nutrients 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 have exceedances. Water toxicity has been documented in this water body. Fifteen of 84 samples 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.

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Fifteen of the 84 water samples exceeded the water quality guideline 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 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:**

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*Numeric Line of Evidence*

Pollutant-Water

<i>Beneficial Use:</i>	MU - Municipal & Domestic
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter 15, Section 64435, Tables 2 and 3 as listed in Table 3-2 (Region 3 Basin Plan, p III-3; In Table 3-2, the MCL listed for Nitrate (as NO <sub>3</sub> ) in Domestic or Municipal Supply is 45 mg/L).
<i>Data Used to Assess Water Quality:</i>	Fifteen of 40 samples collected at both sampling sites exceeded the water quality objective for nitrate (as NO <sub>3</sub> ) for municipal and domestic supply (CCAMP, 2004; SWAMP, 2004). Forty four samples were collected at 3 sites located between the upper reach of the City of Lompoc and the Highway 154 crossing below the Lake Cachuma dam. There were no exceedances out of these 44 samples at these 3 sites.
<i>Spatial Representation:</i>	Samples were collected from five sites. Exceedances were detected in samples collected from two of the five sites (314SYF, 314SYN). These two sites showing exceedances also have extremely high ortho-phosphate levels. Upstream sites did not have exceedances. The sampling area with exceedances was below the City of Lompoc to the ocean.
<i>Temporal Representation:</i>	Samples were collected from January 2001 through March 2003.
<i>Environmental Conditions:</i>	The water body is located in the Santa Ynez hydrologic unit, Lompoc hydrologic area, Lompoc hydrologic subarea. The sites are located at Santa Ynez River at Highway 101 (314SYI), Santa Ynez River at Paradise Road (314SYP), Santa Ynez River downstream of Lake Cachuma (314SYC), Santa Ynez River downstream Lompoc at Floordale (314SYF), Santa Ynez River upstream Lompoc at Highway 246 (314SYL).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Shingle Mill Creek

**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.

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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* A TMDL was approved by USEPA on January 14, 2003. The RWQCB is tracking the implementation of the TMDL through the Nitrate Management Plan being implemented by Santa Cruz County.

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## Region 3

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**Water Segment:** Shuman Canyon Creek

**Pollutant:** Sedimentation/Siltation

**Decision:** List

**Weight of Evidence:** The data and information in the administrative record supports this change in the original listing recommendation. There was a misunderstanding of the applicable water body recommended for listing by staff. This change will correct that mistake.

The correction is requested for San Antonio Creek (South Coast Watershed) Sedimentation/Siltation. This water body was incorrectly assigned to a sedimentation/siltation problem. The correct water bodies are Shuman Canyon Creek and Casmalia Canyon Creek. The 303(d) List Table should be revised to remove San Antonio Creek (South Coast Watershed) for Sedimentation/Siltation and add Casmalia Canyon Creek (4.5 miles) and Shuman Canyon Creek (3.0 miles) (313004) for Sedimentation/Siltation. The original listing recommendation originated with Regional Board staff, however there was a misunderstanding of the applicable water body recommended for listing by staff. This change will correct that mistake.

**SWRCB Staff Recommendation:** After review of the available data and information, SWRCB staff concludes that a water body was incorrectly assigned to a sedimentation/siltation problem and that the listing should be revised with this water body and the listing should be changed as presented.

### **Lines of Evidence:**

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*Line of Evidence* Pollutant-Water

*Beneficial Use* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, FR - Freshwater Replenishment, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Information Used to Assess Water Quality:* See file: "FS - Correction-San Antonio Creek.doc" for further information.

*Data Used to Assess Water Quality:* The correction is requested for San Antonio Creek (South Coast Watershed) Sedimentation/Siltation. This water body was incorrectly assigned to a sedimentation/siltation problem. The correct water bodies are Shuman Canyon Creek and Casmalia Canyon Creek.

The 303(d) List Table should be revised to remove San Antonio Creek (South Coast Watershed) for Sedimentation/Siltation and add Casmalia Canyon Creek (4.5 miles) and Shuman Canyon Creek (3.0 miles) (313004) for Sedimentation/Siltation.

The original listing recommendation originated with Regional Board staff, however there was a misunderstanding of the applicable water body recommended for listing by staff. This change will correct that mistake.

*Spatial Representation:* 3.0 miles.

*Temporal Representation:* Correction Submittal on 6/14/2004.

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## Region 3

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**Water Segment:** Soda Lake

**Pollutant:** Ammonia (Unionized) - Toxin

**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 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. Three of 7 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat, MI - Fish Migration, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/* The discharge of wastes shall not cause concentrations of unionized ammonia

<i>Water Quality Criterion:</i>	(NH3) to exceed 0.025 mg/L (as N) in receiving waters (Region 3 Basin Plan, Section II.A.2. Objectives for All Inland Surface Waters, Enclosed Bays, and Estuaries, II.A.2.a. General Objectives, page III-4)
<i>Data Used to Assess Water Quality:</i>	Three out of seven samples exceeded the general water quality objective (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from two sites. Exceedances were detected in samples collected from both sites.
<i>Temporal Representation:</i>	Samples were collected from January 2000 to May 2000.
<i>Environmental Conditions:</i>	The water body is located in the Carrizo Plain hydrologic unit, Carrizo Plain hydrologic subarea. Sites are located at Soda Lake Northeast (311SLE) and Soda Lake Culverts at Seven Mile Road (311SLN).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Tembladero Slough

**Pollutant:** Ammonia (Unionized) - Toxin

**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. Six 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. Six of 40 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* ES - Estuarine Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Matrix:* Water

*Water Quality Objective/* The discharge of wastes shall not cause concentrations of unionized ammonia



<i>Water Quality Criterion:</i>	(NH3) to exceed 0.025 mg/L (as N) in receiving waters (Region 3 Basin Plan, Section II.A.2. Objectives for All Inland Surface Waters, Enclosed Bays, and Estuaries, II.A.2.a. General Objectives, page III-4)
<i>Data Used to Assess Water Quality:</i>	Six out of 40 samples exceeded the general water quality objective (CCAMP, 2004; SWAMP, 2004).
<i>Spatial Representation:</i>	Samples were collected from two sites. Exceedances were detected in water samples collected from both sites.
<i>Temporal Representation:</i>	Samples were collected from March 1999 to March 2003.
<i>Environmental Conditions:</i>	Water body is located in the Salinas hydrologic unit, Lower Salinas hydrologic subarea. The sites are located at Tembladero Slough at Monterey Dunes Way (309TDW) and Tembladero Slough at Preston (309TEM).
<i>Data Quality Assessment:</i>	CCAMP, SWAMP QAPP.

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## Region 3

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**Water Segment:** Warden Creek

**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. 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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation, R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Morro Bay Pathogens TMDL was approved by RWQCB on May 16, 2003 and subsequently approved by USEPA on January 20, 2004.

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## Central Coast Region (3)

# DELIST

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

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## Region 3

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**Water Segment:** Blosser Channel

**Pollutant:** Fecal Coliform

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 4.3 (Bacteria) of the Listing Policy. Under section 4.3 a single line of evidence is adequate to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. This data represents only the retention pond overflow as the up stream channel was dry most of the year. The original listing was faulty. Data were not representative of ambient water quality.

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. This data represents only the retention pond overflow as the up stream channel was dry most of the year. The original listing was faulty. Data were not representative of ambient water quality.
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 the original listing was faulty.

### **Lines of Evidence:**

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*Numeric Line of Evidence*      Pollutant-Water

*Beneficial Use:*                      R1 - Water Contact Recreation

*Matrix:*                                  Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Fecal coliform concentration, based on minimum of not less than five samples or any 30-day period, shall not exceed a log mean of 200/100 ml, nor shall more than ten percent of the total samples during any 30-day period exceed 400/100 ml.
<i>Data Used to Assess Water Quality:</i>	Five of 10 samples exceed the water quality objectives (CCAMP, 2004).
<i>Spatial Representation:</i>	There was one sampling site. This data represents only the retention pond overflow as the upstream channel was dry most of the year.
<i>Temporal Representation:</i>	There were monthly sampling events. All 3 exceedances of the objective were during summer months when flows were primarily from the retention basin overflow. Since 2002 a new housing development is being built at the site location and the retention basin has been drained (since 2004).
<i>Data Quality Assessment:</i>	CCAMP

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## Region 3

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**Water Segment:** Carpinteria Marsh (El Estero Marsh)

**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 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 data cannot be found that was used to list this pollutant.

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 data is 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 no data are available to support the listing.

### **Lines of Evidence:**

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***Line of Evidence*** Pollutant-Water

***Beneficial Use*** BI - Preserva.of Bio.Hab.of Spec.Signif., ES - Estuarine Habitat, MI - Fish Migration, SP - Fish Spawning, WA - Warm Freshwater Habitat

***Information Used to Assess Water Quality:*** Carpinteria Marsh was originally listed on the section 303(d) list because Regional Board staff observed erosion and sedimentation in the 1980s. This listing basis is faulty because it is not based on any data. Regional Board staff is not aware of evidence to indicate current water quality standard exceedances or beneficial use impacts related to the listing for this pollutant.



*Non-Numeric Objective:*

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 beneficial uses.

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## Region 3

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**Water Segment:** Chumash Creek

**Pollutant:** Oxygen, Dissolved

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 4.2 of the Listing Policy. Under section 4.2 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. An insufficient number 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 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.Forty of 245 samples taken over a period of 10 years exceeded the DO cold fresh water quality objective of 7 mg/l and this does not exceed the allowable frequency listed in Table 4.2 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 removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

### Lines of Evidence:

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*Numeric Line of Evidence* Adverse Biological Responses

*Beneficial Use:* CO - Cold Freshwater Habitat

*Matrix:* Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	COLD freshwater habitat water quality objective for D.O. = 7 mg/l (minimum).
<i>Data Used to Assess Water Quality:</i>	Chumash Creek was placed on the 2002 303(d) list as impaired from dissolved oxygen because levels fell below the COLD freshwater habitat water quality objective of 7 mg/l. Forty samples of a total of 245 samples taken between 1993 and 2003 fall below this value (CCRWQCB, 2004k).
<i>Spatial Representation:</i>	Measurements were taken at 310CHU on Chumash Creek, Calwater watershed no. 31022012.
<i>Temporal Representation:</i>	Two hundred forty five samples were collected over a ten year period of 6/8/1993-7/16/2003. Samples were collected on a monthly or bi-monthly basis.
<i>QA/QC Equivalent:</i>	<p>Water column data collected by RWQCB staff in 1993-2001 were taken according to the National Monitoring Program Quality Assurance Program Plan. Samples taken in 2003 by the Morro Bay Volunteer Monitoring Program were taken according to protocols for dissolved oxygen sampling in the Morro Bay National Estuary Program's Quality Assurance Program Plan.</p> <p>The Morro Bay Volunteer Monitoring Program staff have routine correspondence with volunteers regarding data review, meter operation, and safety. Volunteer monitors collect dissolved oxygen data according to the Morro Bay National Estuary Program's Quality Assurance Program Plan.</p>

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## Region 3

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**Water Segment:** Espinosa Slough

**Pollutant:** Nutrients

**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.

No lines of evidence are available in the administrative record to assess this pollutant. This water body pollutant combination was originally listed without any supporting data. There has never been nor is there currently any data to support listing of this water body combination.

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 no samples were ever taken to determine if the nutrient water quality objective were exceeded. 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 it cannot be determined if applicable water quality standards are not attained.

### **Lines of Evidence:**

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*Line of Evidence* -N/A

*Beneficial Use* CM - Commercial and Sport Fishing (CA), R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Non-Numeric Objective:* Request for delisting - Applicable water quality objectives include nutrient related water quality objectives, including: 1) the water quality objective for unionized ammonia of 0.025 mg/L-N, and 2) the narrative objective for biostimulatory substances stating that substances cannot cause

nuisance aquatic growths.

*Data Used to Assess Water Quality:*

From delisting report: "The Espinosa Slough is currently listed on the 303(d) list as impaired for nutrients. Regional board staff propose delisting this water body. The Espinosa Slough is located in the lower Salinas River watershed. It was originally placed on the 303(d) list in 1994. At that time, virtually all water bodies located in the lower Salinas valley were listed for nutrients, and often without any supporting data. The listing was based on fact that the surrounding land use is irrigated agriculture, and was therefore believed to be impaired for nutrients. There has never been, nor is there currently, any data for this body of water. In addition, there exists no anecdotal information to suggest or support impairment."

*Spatial Representation:*

Espinosa Slough (Calwater watershed: 30911010) in Monterey County

*Temporal Representation:*

Submittal on 6/14/2004.

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## Region 3

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**Water Segment:** Goleta Slough/Estuary

**Pollutant:** Metals

**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 data cannot be found that was used to list this pollutant.

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 data is 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 no data are available to support the listing.

### **Lines of Evidence:**

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*Line of Evidence* Pollutant-Water

*Beneficial Use* ES - Estuarine Habitat, WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* RWQCB staff have stated that State Mussel Watch, Toxic Substances Monitoring Programs and Regional Board sampling were probably used to develop this listing. The specific sample data referenced cannot be located in Regional Board files and exceedances cannot be verified. According to Dave Hubbard (UCSB), the fact that silver and copper associate with industrial activities was a possible reason the Slough was listed. However, these types of practices have not been occurring since the 1980s and are

probably not a source of impairment any longer.

It is unknown why the Slough was listed as impaired for metals in the first place.

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## Region 3

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**Water Segment:** Goleta Slough/Estuary

**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 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 data cannot be found that was used to list this pollutant.

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 data is 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 no data are available to support the listing.

### **Lines of Evidence:**

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*Line of Evidence* Adverse Biological Responses

*Beneficial Use* ES - Estuarine Habitat, WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* Goleta Slough was placed on the section 303(d) list because Regional Board Staff observed erosion and sedimentation in the 1980s.

This listing is faulty because no data is available to support the listing. Regional Board staff are not aware of evidence to indicate current water quality standards exceedances or beneficial use impacts related to the listing for this pollutant.



*Non-Numeric Objective:*

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 beneficial uses.

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## Region 3

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**Water Segment:** Monterey Bay South (Coastline)

**Pollutant:** Metals

**Decision:** Delist

**Weight of Evidence:** One line of evidence is available in the administrative record to assess this pollutant. The listing is faulty. The listing has been cited as metals rather than listing for the pollutant responsible for the impairment. There is no guideline for metals and it cannot be determined if 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 removing this water segment-pollutant combination from the section 303(d) list.

This conclusion is based on the staff findings that:

1. The listing was based on EDLs that do not comply with the requirements of section 6.1.3 of the Policy and a water quality guideline for metals is not available that complies with the requirements of section 6.1.3 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Pursuant to section 4.1.1 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 not exceeded.

### **Lines of Evidence:**

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*Line of Evidence* -N/A

*Beneficial Use* BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), MA - Marine Habitat, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WI - Wildlife Habitat

*Non-Numeric Objective:* Request to delist - Delisting report refers to OEHHA and USEPA tissue guidance values.

*Data Used to Assess Water Quality:*

There is a proposal to Delist Monterey Bay - South (shoreline) for Metals. The existing 1994 listing is based on State Mussel Watch (SMW) metals data from within Monterey Harbor (SMWP, 2004). No metals impairment exists outside of Monterey Harbor and Monterey Harbor is on the 303(d) List as a separate metals impairment listing (and will remain on the list).

Regional Board files indicate State Mussel Watch Program data from 1982 through 1993 was used as the basis for listing Monterey Bay South for metals impairment. The available data from 1982 through 1993 were compared to Elevated Data Levels (EDLs) and Median International Standards (MIS). EDLs are no longer considered valid guidelines for determining attainment of water quality standards. The MIS values that were used as indicator values were derived from freshwater fish and therefore were not appropriate comparison values for mussel tissue data. MIS values also are not regulatory values or criteria in the United States. Subsequent to the 1994 listing, additional State Mussel Watch data from 1994 through 1997 has become available. All of the available data were compiled for this evaluation of Monterey Bay - South with respect to metals impairment.

*Spatial Representation:*

Monterey Bay - South coastline: 3309.5004, at Pacific Grove SMW station (SMW #414.0).

*Temporal Representation:*

Submittal on 6/14/2004. State Mussel Watch data from 1977 through 1997.

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## Region 3

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**Water Segment:** Monterey Bay South (Coastline)

**Pollutant:** Pesticides

**Decision:** Delist

**Weight of Evidence:** One line of evidence is available in the administrative record to assess this pollutant. The listing is faulty. The listing has been cited as pesticides rather than listing for the pollutant responsible for the impairment. There is no guideline for pesticides and it cannot be determined if 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 removing this water segment-pollutant combination from the section 303(d) list.

This conclusion is based on the staff findings that:

1. The listing was based on EDLs that do not comply with the requirements of section 6.1.3 of the Policy and a water quality guideline for pesticides is not available that complies with the requirements of section 6.1.3 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. 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 not exceeded.

### Lines of Evidence:

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*Line of Evidence* -N/A

*Beneficial Use* BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), MA - Marine Habitat, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WI - Wildlife Habitat

*Non-Numeric Objective:* Request to delist - Delisting report refers to OEHHA and USEPA tissue guidance values.

*Data Used to Assess Water Quality:*

There is a proposal to Delist Monterey Bay - South (shoreline) for Pesticides. The existing 1994 listing is based on State Mussel Watch (SMW) pesticides data that was compared to Elevated Data Levels (EDLs - which are now considered inappropriate comparison values), (SMWP, 2004). The pesticide data from 1988 to present does not exceed current applicable guidance values and, in fact, the only station sampled since 1988 is the station that is used by the SMW program as a reference site for the central coast (presumed to be relatively unimpaired). No pesticide impairment exists outside of Moss Landing Harbor and Moss Landing Harbor will remain on the List as a separate pesticide impairment.

*Spatial Representation:*

Monterey Bay - South coastline: 3309.5004, at Pacific Grove SMW station (SMW #414.0).

*Temporal Representation:*

Submittal on 6/14/2004. State Mussel Watch data from 1982 through 1997.

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## Region 3

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**Water Segment:** Morro Bay

**Pollutant:** Metals

**Decision:** Delist

**Weight of Evidence:** This combined pollutant listing 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. Five different lines of evidence are available in the administrative record to assess this pollutant listing. The listing included Aluminum, Arsenic, Cadmium, Chromium, and Mercury, which were combined into one listing originally included in the 1996-303(d) metals listing. The listing was originally based on exceedances of Median International Standards (MIS) and Elevated Data Levels (EDL) guidelines for State Mussel Watch tissue data. The MIS and EDL guidelines do not meet the requirements of section 6.1.3 the Listing Policy.

With the exception of Arsenic, determination of exceedances for the remaining metals (individually evaluated) were either not possible because no criteria or guidelines were available but also no exceedances were recorded when compared with applicable acceptable standards either.

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-pollutants combination for metals from the section 303(d) list in the Water Quality Limited Segments category.

This conclusion is based on the staff findings that the guidelines used to assess the status of this water body for the set of metals evaluated does not meet the requirement of the Listing Policy but no exceedances were recorded when each metal was evaluated using acceptable guidelines. 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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Tissue
<b><i>Beneficial Use:</i></b>	CM - Commercial and Sport Fishing (CA), MA - Marine Habitat
<b><i>Matrix:</i></b>	Tissue
<b><i>Evaluation Guideline:</i></b>	OEHHA screening values of 0.3 ppm.
<b><i>Data Used to Assess Water Quality:</i></b>	None of the 12 samples exceeded the OEHHA screening value at the 4 sampling stations (Keeling, 2003).
<b><i>Spatial Representation:</i></b>	Four sites were sampled on Morro Bay: 427.0, 428.5, 429.0, and 429.2.
<b><i>Temporal Representation:</i></b>	Sampling occurred from 5-30-1980 to 1-20-1993.
<b><i>Environmental Conditions:</i></b>	This is one of five metals originally included in the 1996-303(d) metals listing. The listing was originally based on exceedances of Median International Standards (MIS) and Elevated Data Levels (EDL) guidelines for State Mussel Watch tissue data. The MIS and EDL guidelines do not meet the requirements of the Listing Policy. Two samples out of eight were found to be above the EDL 85 values (0.06 ppm) with concentrations of 0.136 ppm and 0.061 ppm wet weight on 1/26/1987 and 1/20/1993 respectively. Both samples were taken at site 429.2.
<b><i>Data Quality Assessment:</i></b>	State Mussel Watch Program Quality Assurance Plan.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	CM - Commercial and Sport Fishing (CA), MA - Marine Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses. Waters shall not contain settleable material in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses. Water quality objective in marine environment for total mercury is 0.1 ppb. Total mercury should not exceed 0.05ug/l as an average value; maximum acceptable concentration of total mercury in any aquatic organisms is a total BOD burden of 0.05 ug/l net weight.
<b><i>Evaluation Guideline:</i></b>	There are no acute or chronic criteria for dissolved mercury in saltwater that meets the requirements of the Listing Policy .
<b><i>Data Used to Assess Water Quality:</i></b>	None of the five samples taken in Morro Bay exceeded because there are no guidelines for dissolved mercury in the saltwater column that meet the

requirements of the Listing Policy (Keeling, 2003).

*Spatial Representation:* Water was sampled from five (5) separate locations meant to represent the back, middle and front of the Bay and were also meant to represent the flow from the two creeks that feed the Bay (sites were Front Bay, Middle Bay, Back Bay, Mouth Chorro and Mouth Los Osos. The stations are: Back Bay, Mouth Los Osos, Mouth Chorro, Middle Bay and Front Bay.

*Temporal Representation:* Water was sampled on March 8, 2001.

*Data Quality Assessment:* Battelle Laboratory Quality Assurance Plan.

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*Numeric Line of Evidence* Pollutant-Water

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

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan numeric water quality objective for total chromium for the protection of marine habitats is 0.05 mg/l.

*Evaluation Guideline:* There is no evaluation guideline for the dissolved fraction of chromium for the protection of aquatic like in marine waters that meets the requirements of the Listing Policy.

*Data Used to Assess Water  
Quality:* None of the five samples taken can be compared with the established water quality objective because the established water quality objective is in the total form of chromium and the available data is reported in the dissolved fraction (Keeling, 2003).

*Spatial Representation:* Water was sampled from five (5) separate locations representing the back, middle and front of the Bay including inflows from the mouth of Chorro and the mouth of Los Osos creeks that feed into the Bay. The stations are: Back Bay, Mouth Los Osos, Mouth Chorro, Middle Bay and Front Bay.

*Temporal Representation:* Water was sampled on March 8, 2001.

*Environmental Conditions:* This is one of five metals originally included in the 1996-303(d) metals listing. The listing was originally based on exceedances of Median International Standards (MIS) and Elevated Data Levels (EDL) guidelines for State Mussel Watch tissue data. The MIS and EDL guidelines do not meet the requirements of the Listing Policy.

*Data Quality Assessment:* Battelle Laboratory Quality Assurance Plan.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Tissue
<i>Beneficial Use:</i>	CM - Commercial and Sport Fishing (CA), MA - Marine Habitat
<i>Matrix:</i>	Tissue
<i>Evaluation Guideline:</i>	There is no numeric criteria or guideline that meets the requirements of the Listing Policy for chromium in tissue.
<i>Data Used to Assess Water Quality:</i>	None of the 12 samples could not be evaluated because there is no numeric criteria or guideline that meets the requirements of the Listing Policy for chromium in tissue (Keeling, 2003).
<i>Spatial Representation:</i>	Four sites were sampled on Morro Bay: 427.0, 428.5, 429.0, and 429.2.
<i>Temporal Representation:</i>	Site 429.0 was sampled on 6/28/1982, 1/21/1983 and 5/3/1983. Site 429.2 was sampled on 1/26/1987, 3/14/1988, 12/19/1988, 2/2/1990 and 1/20/1993. Sampling for all other sites occurred from 5-30-98 to 1-20-93.
<i>Environmental Conditions:</i>	This is one of five metals originally included in the 1996-303(d) metals listing. The listing was originally based on exceedances of Median International Standards (MIS) and Elevated Data Levels (EDL) guidelines for State Mussel Watch tissue data. The MIS and EDL guidelines do not meet the requirements of the Listing Policy.
<i>Data Quality Assessment:</i>	State Mussel Watch Program Quality Assurance Plan.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	CM - Commercial and Sport Fishing (CA), MA - Marine Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses. Material Waters shall not contain settleable material in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses.  Water quality objective in marine environment - total concentration 0.2 ppb.
<i>Evaluation Guideline:</i>	CTR Saltwater acute 42 ug/l Criterion Maximum Concentration (CMC) and saltwater chronic 9.3 ug/l Criterion Continuous Concentration (CCC) criteria is applicable.
<i>Data Used to Assess Water</i>	None of five samples taken in Morro Bay exceeded any CTR criteria for

<i>Quality:</i>	dissolved cadmium in saltwater. Cadmium concentrations ranged from 0.0686 to 0.0349 ug/l (Keeling, 2003).
<i>Spatial Representation:</i>	Water was sampled from five (5) separate locations representing the back, middle and front of the Bay including the inflows from the mouth Chorro and the mouth of Los Osos creeks that feed into the Bay. The stations were: Back Bay, Mouth Los Osos, Mouth Chorro, Middle Bay and Front Bay.
<i>Temporal Representation:</i>	Water was sampled on March 8, 2001.
<i>Environmental Conditions:</i>	This is one of five metals originally included in the 1996-303(d) metals listing. The listing was originally based on exceedances of Median International Standards (MIS) and Elevated Data Levels (EDL) guidelines for State Mussel Watch tissue data. The MIS and EDL guidelines do not meet the requirements of the Listing Policy.
<i>Data Quality Assessment:</i>	Battelle Laboratory Quality Assurance Plan.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Tissue
<i>Beneficial Use:</i>	CM - Commercial and Sport Fishing (CA), MA - Marine Habitat
<i>Matrix:</i>	Tissue
<i>Evaluation Guideline:</i>	USEPA standard of 4.0 ppm (wet weight) and OEHHA standard of 3.0 ppm (wet weight).
<i>Data Used to Assess Water Quality:</i>	None of 12 samples from the 4 stations were in exceedance when the data was reevaluated using USEPA and OEHHA criteria (Keeling, S. 2003).
<i>Spatial Representation:</i>	Four sites were sampled on Morro Bay: 427.0, 428.5, 429.0, and 429.2.
<i>Temporal Representation:</i>	Sampling occurred from 5-30-1980 to 1-20-1993.
<i>Environmental Conditions:</i>	This is one of five metals originally included in the 1996-303(d) metals listing. The listing was originally based on exceedances of Median International Standards (MIS) and Elevated Data Levels (EDL) guidelines for State Mussel Watch tissue data. The MIS and EDL guidelines do not meet the requirements of the Listing Policy. Site 429.2, on 1/26/1987, 3/14/1988, 12/19/1988, 2/2/1990 and 1/20/1993 had levels over the MIS values (levels ranged from 1.01 1.23 ppm wet weight). Five out of five samples at site 429.2 were over MIS. One out of three samples were above MIS values at site 429.0 (6/28/1982, 1.17 ppm wet weight).
<i>Data Quality Assessment:</i>	State Mussel Watch Program Quality Assurance Plan.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	CM - Commercial and Sport Fishing (CA), MA - Marine Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses. Waters shall not contain settleable material in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses.
<i>Evaluation Guideline:</i>	The CTR criteria for the dissolved fraction of selected metals are applicable for the protection of aquatic life but there are no criterion or guidelines for the dissolved fraction of aluminum that meet the requirements of the Listing Policy.
<i>Data Used to Assess Water Quality:</i>	No exceedances were recorded for all 5 samples because there are no criterion or guidelines for the dissolved fraction of aluminum that meet the requirements of the Listing Policy (Keeling, 2003).
<i>Spatial Representation:</i>	There were five sampling sites samples throughout Morro Bay. Locations represented the back, middle, and front of the Bay including inflows from Chorro and Los Osos Creeks. The stations were: Back Bay, Mouth Los Osos, Mouth Chorro, Middle Bay and Front Bay.
<i>Temporal Representation:</i>	Water was sampled on March 8, 2001.
<i>Environmental Conditions:</i>	This is one of five metals originally included in the 1996-303(d) metals listing. The listing was originally based on exceedances of Median International Standards (MIS) and Elevated Data Levels (EDL) guidelines for State Mussel Watch tissue data. The MIS and EDL guidelines do not meet the requirements of the Listing Policy.
<i>Data Quality Assessment:</i>	Battelle Laboratory Quality Assurance Plan.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Tissue
<i>Beneficial Use:</i>	CM - Commercial and Sport Fishing (CA), MA - Marine Habitat
<i>Matrix:</i>	Tissue
<i>Evaluation Guideline:</i>	There is no tissue criteria for Aluminum.
<i>Data Used to Assess Water Quality:</i>	Originally, one out of 12 analyzed samples exceeded the EDL 85 of 138.43 ppm. However, no exceedances are currently recorded because there are no criterion or guidelines for aluminum in tissue that meet the

requirements of the Listing Policy (Keeling, 2003).

- Spatial Representation:* There were four stations sampled: 427.0, 428.5, 429.0 and 429.2.
- Temporal Representation:* Site 429.0 was sampled on 6/28/1982, 1/21/1983 and 5/3/1983. Site 429.2 was sampled on 1/26/1987, 3/14/1988, 12/19/1988, 2/2/1990 and 1/20/1993. Site 427.0 was sampled 5-30-1980 and 12-14-1980. Site 428.5 was sampled 5-30-1980 and 12-14-1980.
- Environmental Conditions:* This is one of five metals originally included in the 1996-303(d) metals listing. The listing was originally based on exceedances of Median International Standards (MIS) and Elevated Data Levels (EDL) guidelines for State Mussel Watch tissue data. The MIS and EDL guidelines do not meet the requirements of the Listing Policy (section 6.1.3.2).
- Data Quality Assessment:* State Mussel Watch Program Quality Assurance Plan.
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- Line of Evidence* -N/A
- Beneficial Use* CM - Commercial and Sport Fishing (CA), MA - Marine Habitat
- Non-Numeric Objective:* Request for delisting. Applicable WQO or criterion:  
·Basin Plans water quality objectives for marine water  
·Basin Plans narrative objective for settleable and suspended material  
·California Toxics Rule (Federal Register. Volume 65, No. 97. Part III. Environmental Protection Agency, 40 CFR Part 131. Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule. Thursday, May 18, 2000.)
- Data Used to Assess Water Quality:* Regional Board staff recommends delisting Morro Bay for metals based on the fact that (Keeling, S. 2003):  
·Water quality objectives are currently being met in the water column,  
·Metals present in the sediment appear to be the natural result of local geology and do not represent pollution,  
·Levels of metals in tissue appear to be at reasonable levels considering the natural geology of the area, and  
·There appears to be no correlation between the concentration of metals in the sediment and the water above it.
- Spatial Representation:* Morro Bay (Calwater watershed 31023012), located on the central coast of California, about 60 miles north of Point Conception and about 100 miles south of Monterey Bay in San Luis Obispo County.
- Temporal Representation:* Submittal on 6/14/2004.
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## Region 3

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**Water Segment:** Salinas Reclamation Canal

**Pollutant:** Nitrogen, Nitrate

**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 listing can be removed from the list if it was based on faulty 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 the water body was erroneously designated to support the MUN beneficial use, the water quality objective therefore does not apply and applicable water quality standards for the pollutant are not exceeded.

### Lines of Evidence:

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*Line of Evidence* -N/A

*Beneficial Use* CM - Commercial and Sport Fishing (CA), R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Information Used to Assess Water Quality:* CCAMP and CCoWS datasets.

*Non-Numeric Objective:* From the delisting report: "Applicable water quality objectives: the 303(d) listing is for nitrate, which is protected by the nitrate water quality objective protecting the MUN beneficial use. Since the water body is not designated to support the MUN beneficial use, the nitrate water quality objective does not apply."

*Data Used to Assess Water Quality:* The Salinas Reclamation Canal is currently listed on the 303(d) list as impaired for nitrate. Regional Board staff propose delisting this water body for nitrate. The Salinas Reclamation Canal is located in the lower Salinas River watershed. It was placed on the 303(d) list in 2002. The Salinas Reclamation Canal was listed as impaired for nitrate because data indicated that the nitrate water quality objective protecting the MUN beneficial use was being exceeded. The nitrate water quality objective

protecting the MUN beneficial use is 10 mg/L-N. The Salinas Reclamation Canal was erroneously listed as impaired for nitrate because it was assumed that this water body is designated to support the MUN beneficial use. However, the Salinas Reclamation Canal is not designated to support the MUN beneficial use, and the nitrate water quality objective therefore does not apply.

*Spatial Representation:* Salinas Reclamation Canal (Calwater watershed: 30911010) in Monterey County.

*Temporal Representation:* Submittal on 6/14/2004.

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## Region 3

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<b>Water Segment:</b>	Salinas River (lower, estuary to near Gonzales Rd crossing, watersheds 30910 and 30920)
<b>Pollutant:</b>	Sedimentation/Siltation
<b>Decision:</b>	Delist
<b>Weight of Evidence:</b>	<p>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.</p> <p>The data cannot be found that was used to list this pollutant originally.</p> <p>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.</p> <p>This conclusion is based on the staff findings that no data is 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.</p>
<b>SWRCB Staff Recommendation:</b>	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 no data are available to support the listing.

### Lines of Evidence:

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<i>Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use</i>	WA - Warm Freshwater Habitat
<i>Information Used to Assess Water Quality:</i>	<p>No data are available to assess this listing.</p> <p>This listing is faulty because no data are available to support the listing. 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.</p>

*Non-Numeric Objective:*

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 beneficial uses.

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## Region 3

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<b>Water Segment:</b>	Salinas River (middle, near Gonzales Rd crossing to confluence with Nacimiento River)
<b>Pollutant:</b>	Sedimentation/Siltation
<b>Decision:</b>	Delist
<b>Weight of Evidence:</b>	<p>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.</p> <p>The data cannot be found that was used to list this pollutant originally.</p> <p>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.</p> <p>This conclusion is based on the staff findings that no data is 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.</p>
<b>SWRCB Staff Recommendation:</b>	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 no data are available to support the listing.

### Lines of Evidence:

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<i>Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use</i>	WA - Warm Freshwater Habitat
<i>Information Used to Assess Water Quality:</i>	<p>No data are available to assess this listing.</p> <p>This listing is faulty because no data area available to support the listing. 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.</p>

*Non-Numeric Objective:*

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 beneficial uses.

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## Region 3

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<b>Water Segment:</b>	Salinas River Lagoon (North)
<b>Pollutant:</b>	Sedimentation/Siltation
<b>Decision:</b>	Delist
<b>Weight of Evidence:</b>	<p>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.</p> <p>The original listing was based on visual observations. No data was used to list this pollutant.</p> <p>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.</p> <p>This conclusion is based on the staff findings that no data is 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.</p>
<b>SWRCB Staff Recommendation:</b>	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 no data are available to support the listing.

### Lines of Evidence:

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<i>Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Information Used to Assess Water Quality:</i>	<p>Original listing was based on Regional Board staff visual observations of erosion. No data or QA/QC information available.</p> <p>The basis for this listing basis is faulty because no data are available to support the listing. Regional Board staff is not aware of evidence to indicate current water quality standards exceedances or beneficial use</p>

impacts related to the listing for this pollutant.

*Non-Numeric Objective:*

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 beneficial uses.

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## Region 3

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**Water Segment:** Salinas River Refuge Lagoon (South)

**Pollutant:** Nutrients

**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. There has never been, nor is there currently, any data for this body of water.

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.

**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:**

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*Line of Evidence* -N/A

*Beneficial Use* BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, MI - Fish Migration, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SH - Shellfish Harvesting, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Non-Numeric Objective:* From delisting report: No applicable water quality objectives apply because the area cannot support beneficial uses as described in the Water Quality Control Plan. This is contradictory to the current Water Quality Control Plan that articulates beneficial uses to be supported; the Water Quality Control Plan will need to be amended.

*Data Used to Assess Water* The Salinas River Refuge Lagoon (South) is currently listed on the 303(d) list as impaired for nutrients. Regional Board staff propose delisting this

*Quality:* water body. The Salinas River Refuge Lagoon (South) is located in the lower Salinas River watershed. It was originally placed on the 303(d) list in 1994. At that time, virtually all water bodies located in the lower Salinas valley were listed for nutrients, and often without any supporting data. The listing was based on fact that the surrounding land use is irrigated agriculture, and was therefore believed to be impaired for nutrients. There has never been, nor is there currently, any data for this body of water. In addition, there exists no anecdotal information to suggest or support impairment. Most importantly, the Salinas River Refuge Lagoon (South) is not a receiving water body of water flowing in the Salinas River Watershed. Rather, it is a depression in the land adjacent to the Pacific Ocean. The depression sporadically retains water during and after some high tide events and extreme rain events, and then soon returns to a terrestrial land area thereafter.

*Spatial Representation:* Salinas River Refuge Lagoon (South) (Calwater watershed: 30911010) in Monterey County.

*Temporal Representation:* Submittal on 6/14/2004.

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## Region 3

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**Water Segment:** Salinas River Refuge Lagoon (South)

**Pollutant:** Pesticides

**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 data cannot be found that was used to list this pollutant originally.

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 data is 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 no data are available to support the listing.

### **Lines of Evidence:**

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*Line of Evidence* Testimonial Evidence

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* No data are available. 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.

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## Region 3

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**Water Segment:** Salinas River Refuge Lagoon (South)

**Pollutant:** Salinity/TDS/Chlorides

**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 data cannot be found that was used to list this pollutant originally.

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 data is 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 no data are available to support the listing.

### **Lines of Evidence:**

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*Line of Evidence* Testimonial Evidence

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* No data are available. 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.

The Refuge Lagoon experiences a wide range of salinities depending on the stage of the Salinas River. During high flows, the Refuge Lagoon may be inundated by the Salinas River and therefore may experience salinities



comparable to freshwater (<1 ppt). During high surf, breakers may overtop the dunes to the west of the refuge lagoon and it may experience salinities comparable to seawater (~35 ppt). During the summer, the refuge lagoon may evaporate, raising salinity concentrations to over 150 ppt. These are all natural states for the water body as it's configured today therefore the Salinas River Refuge Lagoon (South) should be delisted for Salinity/TDS/Chlorides.

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## Region 3

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<b>Water Segment:</b>	San Antonio Creek (South Coast Watershed)
<b>Pollutant:</b>	Sedimentation/Siltation
<b>Decision:</b>	Delist
<b>Weight of Evidence:</b>	The data and information in the administrative record supports this change to correct an incorrectly assigned pollutant/water body combination.
<b>SWRCB Staff Recommendation:</b>	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:

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<i>Line of Evidence</i>	-N/A
<i>Beneficial Use</i>	AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), GW - Groundwater Recharge, MI - Fish Migration, 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
<i>Information Used to Assess Water Quality:</i>	
<i>Non-Numeric Objective:</i>	
<i>Data Used to Assess Water Quality:</i>	<p>The correction is requested for San Antonio Creek (South Coast Watershed) Sedimentation/Siltation. This water body was incorrectly assigned to a sedimentation/siltation problem. The correct water bodies are Shuman Canyon Creek and Casmalia Canyon Creek.</p> <p>The 303(d) List Table should be revised to remove San Antonio Creek (South Coast Watershed) for Sedimentation/Siltation and add Casmalia Canyon Creek (4.5 miles) and Shuman Canyon Creek (3.0 miles) (313004) for Sedimentation/Siltation.</p> <p>The original listing recommendation originated with Regional Board staff,</p>

however there was a misunderstanding of the applicable water body recommended for listing by staff. This change will correct that mistake.

*Spatial Representation:* San Antonio Creek (South Coast Watershed)

*Temporal Representation:* Correction Submittal on 6/14/2004.

---

## Region 3

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**Water Segment:** San Luis Obispo Creek (Below W Marsh Street)

**Pollutant:** Priority Organics

**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. One 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 removing this water segment-pollutant combination from the section 303(d) list.

This conclusion is based on the staff findings that:

1. The guidelines used do not satisfy the requirements of section 6.1.3 of the Policy.
2. The listing was based on MTRLs and EDLs which are not allowed by the Listing Policy.
3. 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 the applicable water quality standards for the pollutant are exceeded.

### **Lines of Evidence:**

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*Line of Evidence* -N/A

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

*Non-Numeric Objective:* Request for delisting - document mentions criteria based on:

OEHHA and USEPA tissue guidance values  
CTR for water column data

*Data Used to Assess Water  
Quality:*

This is a proposal to remove San Luis Obispo Creek from the 303(d) list for priority organics. San Luis Obispo Creek (Creek) was placed on the 1998 303(d) list as impaired from priority organics because levels of PCB, HCH (lindane) and chlordane exceeded MTRLS and EDLs. A total of two tissue samples were used to list the Creek as impaired (CVRWQCB, 2004N).

MTRLS and EDLs are no longer considered criteria for placing water bodies on the 303(d) list. RWQCB staff have therefore developed a listing rationale for organic compounds. The rationale is largely based on efforts by Dave Smith and Peter Kozelka of EPA and their work on the Newport Bay/San Diego Creek toxicity TMDL. The rationale is compiled in a document held in Region-3 titled Decision Document for the Elkhorn Slough. The rationale is used herein as support for recommending that the Creek be delisted for priority organics.

The RWQCB of the Central Coast Region recommends delisting San Luis Obispo Creek as impaired by priority organics. RWCB staff make this recommendation based on the analysis presented in the delisting report concluding that there exists insufficient evidence suggesting that the constituents of concern (PCB, chlordane, and HCH) are present at levels posing a risk to humans or wildlife.

*Spatial Representation:*

San Luis Obispo Creek in San Luis Obispo County near and including the City of San Luis Obispo - Hydrologic Unit 310.240

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## Region 3

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**Water Segment:** Waddell Creek, East Branch

**Pollutant:** Nutrients

**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 water quality objective.

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 54 samples exceeded the unionized ammonia water quality objective 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:

---

*Line of Evidence* -N/A

*Beneficial Use* BI - Preserva.of Bio.Hab.of Spec.Signif., CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MI - Fish Migration, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SP - Fish Spawning, WI -

## Wildlife Habitat

### *Non-Numeric Objective:*

From delisting report:

The Water Quality Control Plan, Central Coast Region (Basin Plan), contains the following unionized ammonia objective:

The discharge of wastes shall not cause concentrations of unionized ammonia (NH<sub>3</sub>) to exceed 0.025 mg/l (as N) in receiving waters.

The Water Quality Control Plan, Central Coast Region (Basin Plan), contains the following narrative objective:

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 beneficial uses.

This objective does not prohibit biostimulatory substances; it only prohibits biostimulatory substances that cause nuisance or adversely affect beneficial uses.

### *Data Used to Assess Water Quality:*

Fifty four samples were collected and the objective was never violated (CVRWQCB, 2004B).

From Report:

"The east fork of the Waddell Creek was listed as impaired for nutrients in 1990. The creek was listed because of ammonia violations at the NPDES facility, California Department of Parks and Recreation, Big Basin Redwoods State Park Wastewater Treatment Plant. Another reason for the listing was the California Department of Fish and Game issued a report in 1980 indicating dense growths of filamentous algae were growing downstream of the treatment plant in sunlight areas. They attributed the algal growth to nutrients."

"Ammonia discharge violations have reoccurred in the past but no violations have occurred since 2002. Ammonia is converted to nitrate through the nitrogen cycle and becomes available as a possible promoter of plant growth. Since the listing in 1990, the treatment plant has been upgraded. The upgrade included the addition of clinoptilite filtration for ammonia removal." Ammonia violations have dramatically decreased since 1998.

### *Spatial Representation:*

Waddell Creek, East Branch (Calwater Watershed: 30411010), located in Santa Cruz County, California approximately two-thirds of the way from San Francisco to Monterey Bay. Samples were collected at: West Waddell Creek upstream confluence of East Waddell Creek; Opal Creek upstream confluence of East Waddell Creek; Blooms Creek upstream confluence of East Waddell Creek; East Branch of Waddell Creek 145 feet upstream of NPDES discharge; East Branch of Waddell Creek 100 feet downstream of NPDES discharge; East Branch of Waddell Creek approximately 1000 feet upstream of old Last Chance Road bridge crossing; East Branch of Waddell Creek at old Last Chance Road bridge crossing; East Waddell Creek upstream confluence of West Waddell Creek; Lower Waddell Creek ~ one mile downstream confluence of East and West Waddell Creek; Lower Waddell @ Alder Camp; Lower Waddell @ bridge; Lower Waddell @ Marsh Trail.

*Temporal Representation:*

Started sampling and collecting information on September 24, 2002. We completed the sampling and collection on October 7, 2003.

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## Region 3

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**Water Segment:** Watsonville Slough

**Pollutant:** Sedimentation/Siltation

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 4.9 of the Listing Policy. Under section 4.9, 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. No data is presented to show impacts or lack of impacts on aquatic life populations or communities. Suspended solids concentrations are well below the level that may impact at least one species present in Watsonville Slough. Visual assessment of sedimentation did not reveal any probable impacts.

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 guideline used complies generally 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 338 samples exceeded the evaluation guideline. No data are available to show impacts on aquatic life.
5. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.

### **Lines of Evidence:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	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 surface waters.
<i>Evaluation Guideline:</i>	Three spine stickleback occurs in the Slough and in studies no mortality was observed in a test to identify the lethal threshold for sediment at a concentration of 28,000 mg/L (LeGore and Des Voigne, 1973).
<i>Data Used to Assess Water Quality:</i>	Sediment concentration has been studied by many investigators. All available data was reviewed and summarized by (Hager, J. and F. Watson 2005).  For suspended sediment concentration, 338 representative measurements are available. None of the measurements exceed the sediment threshold.
<i>Spatial Representation:</i>	Samples were collected at least 13 stations throughout the slough system.
<i>Temporal Representation:</i>	Samples were collected between 1976 and 2004 during all seasons.
<i>Data Quality Assessment:</i>	Most of the data were collected under a Quality Assurance Project Plan prepared by Central Coast Watershed Studies, The Watershed Institute at California State University Monterey Bay.

<i>Line of Evidence</i>	Narrative Description Data
<i>Beneficial Use</i>	WA - Warm Freshwater Habitat
<i>Information Used to Assess Water Quality:</i>	Smothering of benthic habitat by sedimentation was not significantly evident, but was also difficult to study. A visual reconnaissance was conducted for signs of excessive recent sedimentation. Unequivocal smothering of habitat could only be documented photographically in small portions of the Watsonville Slough system. Other areas were either stable, contained coarse sediment, contained fine sediment in amounts that did not contradict the expectation of a natural system, were under water, or were not accessible (Hager, J. and F. Watson 2005).
<i>Non-Numeric Objective:</i>	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 surface waters.

<i>Line of Evidence</i>	Narrative Description Data
<i>Beneficial Use</i>	WA - Warm Freshwater Habitat
<i>Information Used to Assess</i>	Long-term aggregation of sediments and reduction in aquatic habitat volume was not evident. Aquatic habitat volume appears to be increasing

*Water Quality:*

due to land subsidence associated with de-watering of the area for peat mining and agriculture in the early 1900s, ground water pumping, and possibly local seismic activity. Scientists re-surveyed an old road survey across Struve Slough and Watsonville Slough, and found evidence of subsidence on the order of 10 to 20 mm/year since 1952. Obtained sediment cores in the tidal marsh of lower Watsonville Slough dating back to the 1400s and they were analyzed using radiocarbon dating, pollen, and lead-210. The data suggested an anthropogenic increase in sedimentation surrounding the expansion of agriculture in the first half of the 1900s, but net sedimentation rates since about 1950 appear to have been lower than in pre-historic times. This is likely attributed to decreased sediment supply to the lower reaches resulting from subsidence and the construction of the tide gates in the 1940s (Hager, J. and F. Watson 2005).

*Non-Numeric Objective:*

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 surface waters.

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## Central Coast Region (3)

# Area Change

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

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## Region 3

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<b>Water Segment:</b>	Alamo Creek
<b>Pollutant:</b>	Fecal Coliform
<b>Decision:</b>	Accept Area Change
<b>Weight of Evidence:</b>	The data and information in the administrative record supports this change in estimated size affected.
<b>SWRCB Staff Recommendation:</b>	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.
<b>Lines of Evidence:</b>	

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<i>Line of Evidence</i>	-N/A
<i>Beneficial Use</i>	AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, GW - Groundwater Recharge, 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
<i>Data Used to Assess Water Quality:</i>	Email from Lisa McCann of RWQCB3 including the following files: "FS - Correction-maps Rec Canal-Alamo-Or-Sol-LosOsosRevised.doc" and "Map_Alamo Creek, Orcutt Solomon_correction.doc". The map shows requested changes and states "Include this reach for Alamo Creek" (the reach above 312ALA). This reach has been identified as an incorrect reach identified as a listed water body on the shapefile for all listed pollutants.
<i>Spatial Representation:</i>	Alamo Creek (312) in Santa Barbara County.
<i>Temporal Representation:</i>	Email from Lisa McCann dated 7/14/2004.

---

## Region 3

---

**Water Segment:** Los Osos Creek

**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* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, ES - Estuarine Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MI - Fish Migration, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Information Used to Assess Water Quality:* See files: "FS - Correction-maps Rec Canal-Alamo-Or-Sol-LosOsosRevised.doc" and "Map\_Los Osos Creek\_correction\_Revised.doc".

*Non-Numeric Objective:* Map changes-no objective.

*Data Used to Assess Water Quality:* Email from Lisa McCann of RWQCB3 including the following files: "FS - Correction-maps Rec Canal-Alamo-Or-Sol-LosOsosRevised.doc" and "Map\_Los Osos Creek\_correction\_Revised.doc". The map shows requested changes and states "Remove upper reaches of Los Osos Creek From 303(d) shapefile". This reach has been identified as an incorrect reach identified as a listed water body on the shapefile for all listed pollutants.

*Spatial Representation:* This map change request affects the upper reaches of Los Osos Creek in San Luis Obispo County.

*Temporal Representation:* Email from Lisa McCann dated 7/14/2004.





## Region 3

---

**Water Segment:** Orcutt Creek

**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* AG - Agricultural Supply, CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, ES - Estuarine Habitat, FR - Freshwater Replenishment, GW - Groundwater Recharge, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WI - Wildlife Habitat

*Data Used to Assess Water Quality:* Email from Lisa McCann of RWQCB3 including the following files: "FS - Correction-maps Rec Canal-Alamo-Or-Sol-LosOsosRevised.doc" and "Map\_Alamo Creek, Orcutt Solomon\_correction.doc". The map shows requested changes and states "Add the reach between 3120RC and 3120RI to shape file and listing for fecal and nitrate".

*Spatial Representation:* Orcutt-Solomon Creek (312) in Santa Barbara County.

*Temporal Representation:* Email from Lisa McCann dated 7/14/2004.

---

## Region 3

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<b>Water Segment:</b>	Pacific Ocean at Arroyo Burro Beach (Santa Barbara County)
<b>Pollutant:</b>	Total Coliform
<b>Decision:</b>	Accept Area Change
<b>Weight of Evidence:</b>	The data and information in the administrative record supports this change in correctly assigning the water body pollutant combination to this area.
<b>SWRCB Staff Recommendation:</b>	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.

### Lines of Evidence:

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<i>Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use</i>	R1 - Water Contact Recreation
<i>Information Used to Assess Water Quality:</i>	See file: "3-5u_FS - Correction-Arroyo Burro Creek pathogens.doc" for further information.
<i>Data Used to Assess Water Quality:</i>	<p>The correction is requested for Arroyo Burro Creek Pathogens (Cal Watershed 31532010). This water body was incorrectly assigned to a pathogen problem. The correct water body is the Pacific Ocean at Arroyo Burro Beach (Santa Barbara County). Arroyo Burro Creek was listed in 1998 because of beach closures. Therefore, the beach, rather than the creek, should have been listed.</p> <p>The Pacific Ocean at Arroyo Burro Creek is on the 2002 303(d) List (for Total Coliform). Therefore the only correction necessary is to delete Arroyo Burro Creek.</p>
<i>Spatial Representation:</i>	Pacific Ocean at Arroyo Burro Beach (Santa Barbara County)
<i>Temporal Representation:</i>	Correction Submittal on 6/14/2004. Original listing in 1998.

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<i>Line of Evidence</i>	Pollutant-Water
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*Beneficial Use*

R1 - Water Contact Recreation

*Information Used to Assess Water Quality:*

See file: "3-5t\_FS - Correction- Santa Barbara Co Beaches.doc" for further information.

*Data Used to Assess Water Quality:*

There are three beaches in Santa Barbara County that have a larger impacted size than most of the other beaches. We believe the extent of impairment should be similar to the convention used for most Santa Barbara County beaches. There is no evidence in the record to support the larger areal extent indicated on the current list. Please reduce the size for Pacific Ocean at Arroyo Burro Beach from 3.1 miles to 0.06 miles.

*Spatial Representation:*

Pacific Ocean at Arroyo Burro Beach, in Santa Barbara County (31532010). Change from 3.1 miles to 0.06 miles.

*Temporal Representation:*

Correction Submittal on 6/14/2004.

---

## Region 3

---

**Water Segment:** Pacific Ocean at Carpinteria State Beach (Carpinteria Creek mouth, Santa Barbara County)

**Pollutant:** Coliform Bacteria

**Decision:** Accept Area Change

**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. The available line of evidence requests a correction in the aerial extent of coliform bacteria impairment. There are three beaches in Santa Barbara County that have a larger impacted size than most of the other beaches. The extent of impairment should be similar to the convention used for most Santa Barbara County beaches. There is no evidence to support the larger aerial extent indicated on the current list. The extent of impairment for Pacific Ocean at Carpinteria State Beach should be reduced from 0.35 miles to 0.06 miles.

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 but the size extent of the impairment should be reduced from 0.35 miles to 0.06 miles. 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 not be removed from on the section 303(d) list because applicable water quality standards are exceeded but the size of the impaired area is smaller than originally listed.

### **Lines of Evidence:**

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*Line of Evidence* Pollutant-Water

*Beneficial Use* AG - Agricultural Supply

*Information Used to Assess Water Quality:* See file: "3-5t\_FS - Correction- Santa Barbara Co Beaches.doc" for further information.

*Non-Numeric Objective:*

Correction - no objective.

*Data Used to Assess Water Quality:*

There are three beaches in Santa Barbara County that have a larger impacted size than most of the other beaches. We believe the extent of impairment should be similar to the convention used for most Santa Barbara County beaches. There is no evidence in the record to support the larger aerial extent indicated on the current list. Please reduce the size for Pacific Ocean at Carpinteria State Beach from 0.35 miles to 0.06 miles.

*Spatial Representation:*

Pacific Ocean at Carpinteria State Beach, Carpinteria Creek mouth in Santa Barbara County (31534020). Change from 0.35 miles to 0.06 miles.

*Temporal Representation:*

Correction Submittal on 6/14/2004.

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## Region 3

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<b>Water Segment:</b>	Pacific Ocean at Jalama Beach (Santa Barbara County)
<b>Pollutant:</b>	Bacteria
<b>Decision:</b>	Accept Area Change
<b>Weight of Evidence:</b>	The data and information in the administrative record supports this change in estimated size affected.
<b>SWRCB Staff Recommendation:</b>	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.

### Lines of Evidence:

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<i>Line of Evidence</i>	-N/A
<i>Beneficial Use</i>	AQ - Aquaculture
<i>Information Used to Assess Water Quality:</i>	See file: "3-5t_FS - Correction- Santa Barbara Co Beaches.doc" for further information.
<i>Data Used to Assess Water Quality:</i>	There are three beaches in Santa Barbara County that have a larger impacted size than most of the other beaches. We believe the extent of impairment should be similar to the convention used for most Santa Barbara County beaches. There is no evidence in the record to support the larger aerial extent indicated on the current list. Please reduce the size for Pacific Ocean at Jalama Beach from 3.3 miles to 0.06 miles.
<i>Spatial Representation:</i>	Pacific Ocean at Jalama Beach, in Santa Barbara County (31510051). Change from 3.3 miles to 0.06 miles.
<i>Temporal Representation:</i>	Correction Submittal on 6/14/2004.

---

## Region 3

---

**Water Segment:** Rider Creek

**Pollutant:**

**Decision:** Accept Area Change

**Weight of Evidence:** The data and information in the administrative record supports this change in water body name.

**SWRCB Staff Recommendation:** After review of the available data and information, SWRCB staff concludes that the water body name should be changed as presented.

**Lines of Evidence:**

---

*Line of Evidence* -N/A

*Beneficial Use* CM - Commercial and Sport Fishing (CA), CO - Cold Freshwater Habitat, GW - Groundwater Recharge, MI - Fish Migration, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WI - Wildlife Habitat

*Information Used to Assess Water Quality:* See files: "3-5s\_FS - Correction- Rider Creek.doc", "3-5kk\_Map\_Rider Creek1.jpg", and "3-5ll\_Map\_Rider Creek2 - topo.jpg" for further information.

*Data Used to Assess Water Quality:* This submission is a request to correct the name of a listed water body. The incorrect name of the listed water body is Rider Gulch Creek. This name should be corrected to Rider Creek.

Associated figures included a photocopy of USGS 7.5-minute quadrangle map, Loma Prieta, California (1996) and a GIS figure that was derived from the CALWTR3 dataset. The CALWATER watershed number that is referenced on the 303d list is correct (30510010).

*Spatial Representation:* Rider Creek (CAL Watershed 30510010).

*Temporal Representation:* Correction Submittal on 6/14/2004.

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## Region 3

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<b>Water Segment:</b>	Salinas Reclamation Canal
<b>Pollutant:</b>	None
<b>Decision:</b>	Accept Area Change
<b>Weight of Evidence:</b>	The data and information in the administrative record supports this change in estimated size affected.
<b>SWRCB Staff Recommendation:</b>	After review of the available data and information, SWRCB staff concludes that the estimated size affected should be changed as presented.

### Lines of Evidence:

---

<i>Line of Evidence</i>	-N/A
<i>Beneficial Use</i>	CM - Commercial and Sport Fishing (CA), R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
<i>Data Used to Assess Water Quality:</i>	The Salinas Reclamation Canal is not identified, nor is it included in the Reach3 file. This water body needs to be added to the shapefile and identified as listed. The map shows the reaches to be added and states "Add Water body and show listing. Salinas Reclamation Canal flows parallel to Alisal Slough."
<i>Spatial Representation:</i>	Salinas Reclamation Canal (309) in Monterey County.
<i>Temporal Representation:</i>	Request submitted via email on 7/14/2004.

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



September 2005



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# Los Angeles Region (4)

LIST

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

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## Region 4

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**Water Segment:** Aliso Canyon Wash

**Pollutant:** Bacteria Indicators

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under sections 3.3 the Listing Policy. Three lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.3 the site exceeds the Total and Fecal coliform WQO for the protection of REC1 beneficial Uses. 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 six samples exceeded the Basin Plan WQOs for total and fecal coliform bacteria to protect REC1 beneficial uses, and these exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. The REC1 beneficial uses are being impacted in this water body by bacteriological pollutants.

**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

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Fecal Coliform data linked and applicable to REC 1 Beneficial use.

*Data Used to Assess Water* Six Fecal Coliform samples, 6 of which exceeded the WQO (LACDPW, 2003a).



*Quality:*

*Spatial Representation:* One sample site.

*Temporal Representation:* Approximate monthly sampling events. 5 samples taken during the wet season (11/08/2003 - 3/15/2003 and one sample taken during the dry season (04/30/2003).

*Environmental Conditions:* Data age 1-2 years old.

*Data Quality Assessment:* QA/QC used by the Los Angeles County Department of Public Works - Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde Consultants, 1996).

---

***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* R1 - Water Contact Recreation

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Total Coliform linked and applicable to REC-1

*Data Used to Assess Water  
Quality:* Six bacterial samples, 6 exceeding the WQO (LACDPW, 2003a).

*Spatial Representation:* One sample site

*Temporal Representation:* Monthly sampling events. Five( 5) samples taken during the wet season (11/ 8/ 2002 - 03 / 15 / 2003) and one (1) sample taken during the dry season (04 / 30 / 2003).

*Environmental Conditions:* Data Age 1 to 2 years.

*Data Quality Assessment:* Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

---

***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* R1 - Water Contact Recreation

*Matrix:* Water

*Water Quality Objective/* There is no WQO for enterococcus linked or applicable to fresh water

<i>Water Quality Criterion:</i>	REC-1 Beneficial Uses.
<i>Data Used to Assess Water Quality:</i>	Six samples collected (LACDPW, 2003a).
<i>Spatial Representation:</i>	One sampling site.
<i>Temporal Representation:</i>	Five samples taken during the wet season (11/08/2002-03/15/2003) and one sample taken during the dry season (04/30/2003).
<i>Environmental Conditions:</i>	Data age 1-2 years.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

---

**Water Segment:** Aliso Canyon Wash

**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.

Two lines of evidence are 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 six samples exceeded the CTR criterion continuous concentration for dissolved copper for protection of aquatic life 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 CTR criteria continuous concentration is 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

<i>Water Quality Objective/ Water Quality Criterion:</i>	CTR criteria linked and applicable to Warm Fresh Water Habitat BUs.
<i>Data Used to Assess Water Quality:</i>	Five samples, 2 exceeded the CTR criteria (LACDPW, 2003a).
<i>Spatial Representation:</i>	One sampling site.
<i>Temporal Representation:</i>	Five monthly samples taken during the wet season (11/08/2002- 3/15/2003) and one sample taken during the dry season (04/30/2003).
<i>Environmental Conditions:</i>	Data Age 1-2 years.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** Ballona Creek

**Pollutant:** Cyanide

**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. There were sufficient number of exceedances of the CTR Cyanide criteria continuous concentration to 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 18 samples exceeded the CTR Cyanide criteria continuous concentration 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/* CTR Criteria Continuous Concentration of 0.0052 mg/l is the highest

<i>Water Quality Criterion:</i>	concentration of Cyanide to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects applicable to protect aquatic life BUs.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 18 samples out of which Three samples exceeded the CTR Criteria Continuous Concentration of 0.0052 mg/l for protection of aquatic life (LACDPW, 2004c).
<i>Spatial Representation:</i>	One sample site sampled during the dry and wet season beginning on 10/12/00 through 04/30/2003 at approximately one to two-week sampling interval.
<i>Temporal Representation:</i>	Eighteen samples were taken during the wet and dry season from 10/12/00 to 4/30/03 at approximately one to two-week sampling interval as part of the Los Angeles County Storm water Monitoring report prepared by the Los Angeles County Department of Public Works.
<i>Environmental Conditions:</i>	Data Age is 1 to 4 years old. The Ballona Creek monitoring station is located at the existing stream gage station (Stream Gage No. F38C-R) between Sawtelle Boulevard and Sepulveda Boulevard in the City of Los Angeles. At this location, which was chosen to avoid tidal influences, the upstream tributary watershed of Ballona Creek is 88.8 square miles. The entire Ballona Creek Watershed is 127.1 square miles. At the gauging station, Ballona Creek is a concrete lined trapezoidal channel.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

---

**Water Segment:** Ballona Creek

**Pollutant:** Trash

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2 and 3.11 of the Listing Policy. Under these sections 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 only because a TMDL had been completed. No substantial evidence in the record shows that standards are met.

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, an implementation plan has been approved, and applicable water quality standards are exceeded.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* TMDL completed.

---

## Region 4

---

**Water Segment:** Ballona Creek Estuary

**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 access 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. Ten of 48 samples exceeded the copper water quality 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:* ES - Estuarine Habitat, MA - Marine Habitat

*Matrix:* Water

*Water Quality Objective/* CTR Copper Criterion for continuous concentration in water for the protection



<i>Water Quality Criterion:</i>	of marine aquatic life. The value used was 3.1 ug/L.
<i>Data Used to Assess Water Quality:</i>	Forty-eight samples with 10 exceeding the water quality criterion. Detection limits was 10 ug/L (USEPA and LARWQCB, 2005).
<i>Spatial Representation:</i>	The metals data from the City of Los Angeles were from four locations along Ballona Creek at National Boulevard, Overland Avenue, Centinela Boulevard, and Pacific Avenue. The data from Centinela Boulevard and Pacific Avenue are representative of the estuary and these data were used to assess conditions in the estuary.
<i>Temporal Representation:</i>	Sampled on a monthly basis between January 2002 through May 2003.
<i>Environmental Conditions:</i>	Data are representative of dry-weather conditions.
<i>Data Quality Assessment:</i>	City of Los Angeles.

---

## Region 4

---

**Water Segment:** Burbank Western Channel

**Pollutant:** Ammonia

**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. It was not possible to determine any exceedances in the first line of evidence because of insufficient data. However, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the nutrient 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:**

---

*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* R2 - Non-Contact Recreation

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* One hour average Basin Plan Water Quality Objectives for ammonia-N was revised in 2002. For freshwaters not designated COLD and/or MIGR the ammonia WQO is dependent on pH and fish species, but not temperature. The 30-day average WQO for waters not designated for spawning are dependent on pH and temperature. These WQOs have been adopted into the basin plan and are linked and applicable to protection of aquatic live beneficial uses.

<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 27 samples taken from 5/7/02 to 5/25/04 at two to three monthly intervals. No sample exceeded the basin plan ammonia WQO. Data was compared against 2002 adopted ammonia WQO of which the 1-hour average objective is dependent on pH and fish species and the 30-day average is dependent on pH and temperature. It was not possible to determine any exceedances of the 1-hour average WQO or the 30-day average because pH and temperature data was not provided (City of Burbank, 2004).
<i>Spatial Representation:</i>	Three sample sites sampled from May 2002 through May 2004 at two to three monthly intervals.
<i>Temporal Representation:</i>	Twenty seven samples were taken at three sampling stations.
<i>Environmental Conditions:</i>	Data was collected from May 2002 through May 2004 at 3 sampling stations. Sampling R1 is located at the confluence of Burbank Western Channel and Lockheed Channel about 50 feet above the Burbank Reclamation Plant. Station R2 is located at Burbank Western Wash at Verdugo Avenue. Station R5 is located at Burbank Western Wash just upstream from the confluence with the L.A. River.
<i>Data Quality Assessment:</i>	Standard Operating Procedures for Receiving Water Monitoring, Burbank Western Channel (United Water Burbank Water Reclamation Plant).

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<i>Line of Evidence</i>	Remedial Program in Place
<i>Beneficial Use</i>	R2 - Non-Contact Recreation
<i>Data Used to Assess Water Quality:</i>	A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004.

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## Region 4

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**Water Segment:** Burbank Western Channel

**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. Three samples exceeded the CTR dissolved copper criterion 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. Three of six samples exceeded the CTR dissolved copper criterion for continuous concentration in water 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/* CTR Dissolved Copper Criterion for continuous concentration (CCC) in water for the protection of aquatic life is expressed as a function of the total hardness

<i>Water Quality Criterion:</i>	of the water body. The aquatic life criteria will vary depending of total hardness reported at the sampling site. The CCC for dissolved copper 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.
<i>Data Used to Assess Water Quality:</i>	Data generated from six samples out of which three samples exceeded CTR criteria values (LACDPW, 2003a).
<i>Spatial Representation:</i>	One sample site.
<i>Temporal Representation:</i>	Six monthly samples, Five (5) taken during the wet season (11/08/2002-03/15/2003) and one (1) sample taken during the dry season (04/30/2003).
<i>Environmental Conditions:</i>	Data age 1-2 years. Data taken during the wet and dry seasons.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program(Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** Burbank Western Channel

**Pollutant:** Cyanide

**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 CTR Criteria Continuous Concentration of 0.0052 mg/l which is the highest concentration of Cyanide to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects applicable to protect aquatic life BUs.

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 six samples exceeded the CTR Criteria Continuous Concentration of 0.0052 mg/l for Cyanide 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	CTR Criteria Continuous Concentration of 0.0052 mg/l is the highest concentration of Cyanide to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects applicable to protect aquatic life BUs.
<i>Data Used to Assess Water Quality:</i>	Data generated from six samples out of which 2 samples exceeded the CTR Criteria Continuous Concentration guideline for the protection of aquatic life (LACDPW, 2003a).
<i>Spatial Representation:</i>	One (1) sample site.
<i>Temporal Representation:</i>	Six monthly samples, Five (5) taken during the wet season (11/08/2002-03/15/2003) and one (1) sample taken during the dry season (04/30/2003).
<i>Environmental Conditions:</i>	Age of data 1-2- years.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** Burbank Western Channel

**Pollutant:** Fecal Coliform

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3.3 of the Listing Policy. Under section 3.3 a single line of evidence is necessary to assess listing status. Three lines of evidence are available in the administrative record to assess this pollutant but only exceedance in the fecal coliform samples could be determined because a WQO has been already established in the basin plan. There are no applicable WQO or criteria with which determine exceedances in the other two lines of evidence in fresh water.

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 six samples exceeded the Fecal Coliform 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* R1 - Water Contact Recreation

*Matrix:* Water

*Water Quality Objective/* There is no fresh water WQO or criteria for Total Coliform applicable with



<i>Water Quality Criterion:</i>	protection of REC 1 BUs.
<i>Data Used to Assess Water Quality:</i>	Six samples out of which exceedances could not be determined because there are no applicable WQOs for total coliform density in fresh waters (LACDPW, 2003a).
<i>Spatial Representation:</i>	One (1) sample site.
<i>Temporal Representation:</i>	Six monthly samples, Five taken during the wet season (11/08/2002-03/15/2003) and one sample taken during the dry season (04/30/2003).
<i>Environmental Conditions:</i>	Data age 1-2 years. Taken during the wet and dry season.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	R1 - Water Contact Recreation
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan WQO for single sample fecal coliform density shall not exceed 400/100ml. This WQO is linked and applicable to protection of REC-1 beneficial uses in fresh water.
<i>Data Used to Assess Water Quality:</i>	Six samples out of which six samples exceeded the WQO for protection of REC-1 in fresh water (LACDPW, 2003a).
<i>Spatial Representation:</i>	One (1) sampling site.
<i>Temporal Representation:</i>	Six monthly samples, Five taken during the wet season (11/08/2002-03/15/2003) and one sample taken during the dry season (04/30/2003).
<i>Environmental Conditions:</i>	Data age 1-2 years. Data taken during the wet and dry seasons.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	R1 - Water Contact Recreation
<i>Matrix:</i>	Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	There is no fresh water basin plan WQOs or criteria for enterococcus applicable to the protection of REC 1 BUs in fresh water.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from six samples out of which exceedances could not be determined because there are no applicable WQOs for enterococcus density in fresh waters (LACDWPW, 2003a).
<i>Spatial Representation:</i>	One sample site.
<i>Temporal Representation:</i>	Six monthly samples, Five (5) taken during the wet season (11/08/2002-03/15/2003) and one (1) sample taken during the dry season (04/30/2003).
<i>Environmental Conditions:</i>	Data age 1-2 years. Data taken during the wet and dry seasons.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** Burbank Western Channel

**Pollutant:** Nitrite

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under section 3.1 of the Listing Policy. Under this section of the Policy, 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 sufficient number of samples exceed the water quality objective. In addition, a TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard for Nitrite.

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.

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of Listing Policy section 6.1.4.
2. The data used satisfies the data quantity requirements of Listing Policy section 6.1.5.
3. Four of 33 samples exceeded the water quality 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 for this recommendation, SWRCB staff conclude that the water body should be placed in the Water Quality Limited Segments being addressed category because a TMDL is in place and is expected to result in attainment of the standard.

**Lines of Evidence:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	MU - Municipal & Domestic
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	WQO is linked and applicable to MUN BUs
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from six samples out of which one sample exceeded the WQO for protection MUN (SWRCB, 2003).
<i>Spatial Representation:</i>	One sampling site.
<i>Temporal Representation:</i>	Six monthly samples, Five taken during the wet season (11/08/2002-03/15/2003) and one sample taken during the dry season (04/30/2003).
<i>Environmental Conditions:</i>	Data age 1-2 years. Data taken during the wet and dry seasons. Documented exceedance recorded in 2/25/2003 (wet season).
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	MU - Municipal & Domestic
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	The Basin Plan Water Quality Objective for Nitrite-Nitrogen of 1 mg/l is linked and applicable for the protection of drinking water supplies.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 27 samples taken from 3/6/02 to 5/25/04 at two to three monthly intervals. Three samples exceeded the Basin Plan Nitrite-N WQO (City of Burbank, 2004).
<i>Spatial Representation:</i>	Three sample sites at receiving water stations consistent with the Burbank Water Reclamation Plant NPDES permit which included receiving water stations both upstream (R1) and downstream (R2, and R5) of the reclamation plant and the BWP power plan discharges.
<i>Temporal Representation:</i>	Twenty-seven samples were taken from 5/7/02 through 5/25/04 at quarterly intervals from three sampling stations (R1, R2, and R5).
<i>Environmental Conditions:</i>	Data was collected from 3/02 through 5/04 at three sampling stations. Sampling station R1 is located at the confluence of Burbank Western Channel and

Lockheed Channel about 50 feet above the Burbank Reclamation Plant.  
Sampling station R2 is located at Burbank Western Wash at Verdugo Avenue.  
Sampling station R5 is located at Burbank Western Wash just upstream from the  
confluence with the Los Angeles River.

*Data Quality Assessment:*

Standard Operating Procedures for Receiving Water Monitoring, Burbank  
Western Channel (United Water Burbank Water Reclamation Plant).

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## Region 4

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**Water Segment:** Burbank Western Channel

**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. Two lines of evidence are available in the administrative record to assess this pollutant. One line of evidence pertains to the dissolved portion of zinc and the other pertains to the total fraction in water. Three exceedances of CTR guidelines were recorded in the dissolve zinc data set. The total zinc data set was compared to secondary MCLs and none were in exceedances.

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 on the section 303(d) list for dissolved zinc but not for total Zinc 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 six dissolved zinc samples exceeded the CTR guidelines and none of the total zinc samples exceeded the secondary MCL for the protection of drinking water supplies. The dissolved zinc fraction 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:**

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*Numeric Line of Evidence* Pollutant-Water

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

*Matrix:* Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	CTR Dissolved Zinc Criterion for continuous concentration (CCC) in water for the protection of aquatic life is expressed as a function of the total hardness of the water body. The aquatic life criteria will vary depending of total hardness reported at the sampling site. The CCC for dissolved zinc 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.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from six samples out of which three samples exceeded the CTR criteria for protection of aquatic life (LACDPW, 2003a).
<i>Spatial Representation:</i>	One sampling site.
<i>Temporal Representation:</i>	Six monthly samples, Five (5) taken during the wet season (11/08/2002-03/15/2003) and one (1) sample taken during the dry season (04/30/2003).
<i>Environmental Conditions:</i>	Data age 1-2 years. Data was taken during the wet and dry seasons.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	MU - Municipal & Domestic, WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Secondary MCL guideline for Zinc of 5 mg/l shall not be exceeded to protect MUN beneficial uses in accordance with Title 22 of the California Code of regulation table 64449-A of section 64449.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from six samples out of which none exceeded the Secondary MCL guideline for protection of marine aquatic life (LACDPW, 2003a).
<i>Spatial Representation:</i>	One sample site.
<i>Temporal Representation:</i>	Six monthly samples, Five (5) taken during the wet season (11/08/2002-03/15/2003) and one (1) sample taken during the dry season (04/30/2003).
<i>Environmental Conditions:</i>	Six monthly samples, Five (5) taken during the wet season (11/08/2002-03/15/2003) and one (1) sample taken during the dry season (04/30/2003).
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

## Region 4

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**Water Segment:** Calleguas Creek Reach 3 (Potrero Road upstream to confluence with Conejo Creek on 1998 303d list)

**Pollutant:** Chlordane

**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 (whole 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:

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*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:* Los Angeles RWQCB Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.



<i>Evaluation Guideline:</i>	100 ng/g NAS Guideline (whole fish).
<i>Data Used to Assess Water Quality:</i>	Two out of 7 samples exceeded the NAS Guideline. A total of 7 whole fish composite samples of fathead minnows and arroyo chub were collected. Fathead minnows were collected in 1992-97. Arroyo chub were collected in 2000-01. The guideline was exceeded in 1993 and 1997 samples of fathead minnows (TSMP, 2002).
<i>Spatial Representation:</i>	One station located downstream of Lewis Road crossing.
<i>Temporal Representation:</i>	Samples were collected annually 1992 - 94, 1997, and 2000-01.
<i>Data Quality Assessment:</i>	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.

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## Region 4

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**Water Segment:** Calleguas Creek Reach 3 (Potrero Road upstream to confluence with Conejo Creek on 1998 303d list)

**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 3 samples exceeded the OEHHA Screening Value and 6 out of 7 samples exceeded NAS Guidelines (whole fish). 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:

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* Los Angeles RWQCB Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.

<i>Evaluation Guideline:</i>	100 ng/g-OEHHA Screening Value. 1000 ng/g NAS Guideline (Whole Fish).
<i>Data Used to Assess Water Quality:</i>	Three out of 3 samples exceeded OEHHA Screening Value. Six out of 7 samples exceeded NAS Guidelines. A total of 3 filet composite samples were collected: one fathead minnow (1994), one brown bullhead (1999), and one black bullhead (2001). All three samples exceeded the guidelines. A total of 7 whole fish composite samples were collected: five fathead minnow (1992-94 & 1997) and two arroyo chub (2000-01). All but one arroyo chub sample exceeded the guidelines (TSMP, 2002).
<i>Spatial Representation:</i>	One station located downstream of Lewis Road crossing.
<i>Temporal Representation:</i>	Samples were collected annually 1992-94, 1997, 1999 -2001.
<i>Data Quality Assessment:</i>	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.

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## Region 4

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**Water Segment:** Calleguas Creek Reach 3 (Potrero Road upstream to confluence with Conejo Creek on 1998 303d list)

**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 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:

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* Los Angeles RWQCB Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.

<i>Evaluation Guideline:</i>	2 ng/g - OEHHA Screening Value.
<i>Data Used to Assess Water Quality:</i>	Two out of 3 samples exceeded. A total of 3 filet composite samples were collected: one fathead minnow (1994), one brown bullhead (1999), and one black bullhead sample (2001). Fathead minnow and brown bullhead exceeded the guideline (TSMP, 2002).
<i>Spatial Representation:</i>	One station located downstream of Lewis Road crossing.
<i>Temporal Representation:</i>	Samples were collected 1994, 1999, 2001.
<i>Data Quality Assessment:</i>	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.

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## Region 4

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**Water Segment:** Calleguas Creek Reach 3 (Potrero Road upstream to confluence with Conejo Creek on 1998 303d list)

**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 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:

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* Los Angeles RWQCB Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.

<i>Evaluation Guideline:</i>	30 ng/g OEHHA Screening Value. 100 ng/g NAS Guideline (Whole Fish).
<i>Data Used to Assess Water Quality:</i>	Two out of 2 samples exceeded OEHHA Screening Value. Eight out of 8 samples exceeded NAS Guidelines (TSMP, 2002).
<i>Spatial Representation:</i>	One station located downstream of Lewis Road crossing.
<i>Temporal Representation:</i>	Samples were collected annually 1992-94, 1997, 1999 -2001.
<i>Data Quality Assessment:</i>	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.

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## Region 4

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**Water Segment:** Coyote Creek

**Pollutant:** Ammonia

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2 and 3.1 of the Listing Policy. Under each of these sections 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 standard. This water segment-pollutant combination was moved off the section 303(d) list during the 2002 listing cycle. Data collected since the initiation of the remedial program show that the ammonia water quality objective is not met.

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.

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 18 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 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 standards are not met and a program is in place to address this water quality problem.

**Lines of Evidence:**



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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	In order to protect aquatic life, ammonia concentrations in inland surface waters characteristic of freshwater shall not exceed the values calculated for the appropriate instream conditions [both pH and temperature] shown in Tables 3-1 to 3-3 [in the Basin Plan] (per U.S. EPA's most recent criteria guidance document, '1999 Update of Ambient Water Quality Criteria for Ammonia').
<i>Data Used to Assess Water Quality:</i>	Based on 30-day average concentrations of ammonia, 10 samples out of 18 total samples exceed the ammonia objective. Ambient measurements of pH and temperature (30-day averages) were used to calculate the water quality objective (LACSD, 2004a).
<i>Spatial Representation:</i>	Three stations.
<i>Temporal Representation:</i>	Samples were collected from June 2003 through November 2004. New management practices were begun at the beginning of this period and may have resulted in a change in water quality. Water quality measurements collected before the implementation of management measures were not considered representative of current conditions.
<i>Data Quality Assessment:</i>	NPDES quality assurance.

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<i>Line of Evidence</i>	Remedial Program in Place
<i>Beneficial Use</i>	WA - Warm Freshwater Habitat
<i>Information Used to Assess Water Quality:</i>	<p>An alternative enforceable program is in place that will address ammonia water quality standards exceedances for this Reach. In June 1995, the seven water reclamation plants discharging in the San Gabriel River and Santa Clara River watersheds received NPDES permits containing requirements regarding compliance with the Basin Plan water quality objectives for ammonia. In accordance with these permits, the Los Angeles County Sanitation Districts have been pursuing the addition of nitrification and denitrification facilities at each of these plants to comply with the ammonia objectives. By June 2003, it is expected that these new facilities will be operational and ammonia will be drastically reduced.</p> <p>Research facility operation shows that the monthly average ammonia concentration will fully comply with the chronic ammonia objective that are expected to be applicable in June 2003.</p>

It is probable that the majority of ammonia discharged to this water body was contributed by POTWs. Information in the record indicates that the majority (over 95%) of the ammonia in the Los Angeles River was contributed by POTWs. It is probable that the contribution in the San Gabriel River watershed is dominated by contributions from POTWs as well. Generally, concentrations of ammonia upstream of the treatment plants is much lower than downstream concentrations (up to an order of magnitude difference).

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## Region 4

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**Water Segment:** Coyote Creek

**Pollutant:** Cyanide

**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. Four samples taken from 11/2001 to 4/2003 exceeded the Cyanide CTR Criteria Continuous Concentration.

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 9 samples exceeded the Cyanide CTR Criteria Continuous Concentration 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/* CTR Criteria Continuous Concentration of 0.0052 mg/l is the highest

<i>Water Quality Criterion:</i>	concentration of Cyanide to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects applicable to protect aquatic life BUs.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 9 samples taken from 11/24/01 to 4/30/03 at one to two-week sampling interval. Four (4) samples exceeded the Cyanide Continuous Criterion Concentration, which equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects (LACDPW, 2004c).
<i>Spatial Representation:</i>	One sample site sampled during the dry and wet season beginning from 11/24/01 through 4/30/03 at approximately one to two week intervals.
<i>Temporal Representation:</i>	Nine samples were taken during the wet and dry season from 11/24/01 to 4/30/03 at approximately one to two week intervals as part of the Los Angeles County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.
<i>Environmental Conditions:</i>	The Coyote Creek Monitoring Station (S13) is located at the existing ACOE stream gage station (Stream Gage No. F354-R) below Spring Street in the lower San Gabriel River watershed. The site assists in determining mass loading for the San Gabriel River watershed. At this location, the upstream tributary area is 150 square miles (extending into Orange County). The sampling site was chosen to avoid backwater effects from the San Gabriel River. Coyote Creek, at the gauging station, is a concrete lined trapezoidal channel. The Coyote Creek sampling location has been an active stream gauging station since 1963.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** Coyote Creek

**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 number of samples exceed the Diazinon DFG fresh water hazard assessment 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 20 samples exceeded the Diazinon DFG fresh water 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan narrative WQO for Pesticides.
<i>Evaluation Guideline:</i>	Numerical Diazinon guideline used to interpret Basin Plan narrative pesticide WQO. The numeric guidelines are 0.10 ug/l 4-day average and 0.16 ug/l 1-hour average generated by DFG as a fresh water hazard assessment criteria for the protection of aquatic life.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 22 samples taken from 10/12/00 to 4/30/03 at one to two-week sampling interval. Two samples out 22 exceeded the acute DFG fresh water hazard assessment criteria for the protection of aquatic life (LACDPW, 2004c).
<i>Spatial Representation:</i>	One sample site sampled during the dry and wet season beginning from 10/12/00 through 4/30/03 at approximately one to two week intervals.
<i>Temporal Representation:</i>	Twenty-one samples were taken during the wet season and one sample was taken during the dry season from 10/12/00 to 4/30/03 at approximately one to two week intervals as part of the Los Angeles County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.
<i>Environmental Conditions:</i>	The Coyote Creek Monitoring Station (S13) is located at the existing ACOE stream gage station (Stream Gage No. F354-R) below Spring Street in the lower San Gabriel River watershed. The site assists in determining mass loading for the San Gabriel River watershed. At this location, the upstream tributary area is 150 square miles (extending into Orange County). The sampling site was chosen to avoid backwater effects from the San Gabriel River. Coyote Creek, at the gauging station, is a concrete lined trapezoidal channel. The Coyote Creek sampling location has been an active stream gauging station since 1963.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** Coyote Creek

**Pollutant:** Nitrogen, 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. 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 21 samples taken from 10/00 to 10/3 exceeded the nitrite - nitrogen 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	The Basin Plan Water Quality Objective for Nitrite-Nitrogen of 1 mg/L.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 21 samples taken from 10/30/00 to 4/30/03 at one to two-week sampling interval. Two samples exceeded the Basin Plan WQO for Nitrite-Nitrogen (LACPWD, 2004c).
<i>Spatial Representation:</i>	One sample site sampled during the dry and wet season beginning from 10/12/00 through 4/30/03 at approximately one to two week intervals.
<i>Temporal Representation:</i>	Twenty-one samples were taken during the wet and dry season from 10/12/00 to 4/30/03 at approximately one to two week intervals as part of the Los Angeles County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.
<i>Environmental Conditions:</i>	The Coyote Creek Monitoring Station (S13) is located at the existing ACOE stream gage station (Stream Gage No. F354-R) below Spring Street in the lower San Gabriel River watershed. The site assists in determining mass loading for the San Gabriel River watershed. At this location, the upstream tributary area is 150 square miles (extending into Orange County). The sampling site was chosen to avoid backwater effects from the San Gabriel River. Coyote Creek, at the gauging station, is a concrete lined trapezoidal channel. The Coyote Creek sampling location has been an active stream gauging station since 1963.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** Coyote Creek

**Pollutant:** pH

**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. 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. One of 15 samples taken during 10/00 and 1/02 was below the 6.5 pH WQO. However, 97 of 229 samples taken from 6/03 and 11/04 exceeded the pH water quality objective at three sampling stations 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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	WA - Warm Freshwater Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	Basin Plan WQO for inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waster discharges to protect aquatic life BUs.
<b><i>Data Used to Assess Water Quality:</i></b>	Numeric data generated from 15 samples taken from 10/12/00 to 1/28/02 at one to two-week sampling interval. One sample was below the 6.5 pH basin plan WQO for the protection of aquatic life beneficial uses (LACDPW, 2003a).
<b><i>Spatial Representation:</i></b>	One sample site sampled during the dry and wet season beginning from 10/12/00 through 1/28/02 at approximately one to two week intervals.
<b><i>Temporal Representation:</i></b>	Fifteen samples where taken during the wet and dry season from 10/12/00 to 1/28/02 at approximately one to two week intervals as part of the Los Angeles County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.
<b><i>Environmental Conditions:</i></b>	The Coyote Creek Monitoring Station (S13) is located at the existing ACOE stream gage station (Stream Gage No. F354-R) below Spring Street in the lower San Gabriel River watershed. The site assists in determining mass loading for the San Gabriel River watershed. At this location, the upstream tributary area is 150 square miles (extending into Orange County). The sampling site was chosen to avoid backwater effects from the San Gabriel River. Coyote Creek, at the gauging station, is a concrete lined trapezoidal channel. The Coyote Creek sampling location has been an active stream gauging station since 1963.
<b><i>Data Quality Assessment:</i></b>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	WA - Warm Freshwater Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	Basin Plan: The pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be changed more than 0.5 units from natural conditions as a result of waste discharge.
<b><i>Data Used to Assess Water</i></b>	Ninety-seven samples out of 229 total samples exceed the pH objective.

*Quality:*

*Spatial Representation:* Three stations.

*Temporal Representation:* Samples were collected weekly between June 2003 and November 2004.

*Data Quality Assessment:* NPDES quality assurance.

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## Region 4

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**Water Segment:** Dominguez Channel (lined portion above Vermont Ave)

**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.

Two lines of evidence are available in the administrative record to assess this pollutant. One line of evidence from sampling station S23 showed two exceedances, the other line of evidence from sampling station S28 showed one exceedance of the primary MCL.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing the water segment-pollutant combination corresponding to sampling station S23 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 18 samples exceeded the primary MCL for aluminum of 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Table 64431A of Title 22 of the California Code of Regulation has been incorporated by reference into the Basin Plan to protect MUN beneficial uses. This table contains the primary MCL standards for inorganic chemicals. The primary MCL for aluminum is 1 mg/l.
<i>Data Used to Assess Water Quality:</i>	Two out of 12 samples exceeded the 1 mg/L primary MCL for aluminum. Samples exceeding the primary MCL were taken in 10/00, and 1/01 (LACDPW, 2003a).
<i>Spatial Representation:</i>	Samples were taken at the Dominguez Channel Monitoring Station (S23) which is located within the Dominguez Channel/Los Angeles Harbor watershed in Lennox, near Los Angeles International Airport (LAX). The monitoring station is near the intersection of 116th Street and Isis Avenue. The overall watershed land use is predominantly transportation, and includes areas of LAX and Interstate 105.
<i>Temporal Representation:</i>	Samples were taken in October 2000, and in January through April 2001.
<i>Environmental Conditions:</i>	According to the County of Los Angeles, Department of Public Works, Stormwater Monitoring Reports, 2000-2001 Monitoring Report samples were taken during storm events, the amount of rainfall was not noted.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works. The reported detection limit is not consistent with the analytical results. Sample results were quantified down to 103.9 ug/L, however the detection limit is listed as 1,000 ug/L.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Table 64431A of Title 22 of the California Code of Regulation has been incorporated by reference into the Basin Plan to protect MUN beneficial uses. This table contains the primary MCL standards for inorganic chemicals. The primary MCL for aluminum is 1 mg/l.
<i>Data Used to Assess Water Quality:</i>	One out of 6 samples exceeded the 1 mg/L primary MCL for aluminum. The sample exceeding the primary MCL was taken on 11/8/02 (LACDPW, 2003a).
<i>Spatial Representation:</i>	Samples were taken at the Dominguez Channel Monitoring Station (S28) which is located at Dominguez Channel and Artesia Boulevard in the City of Torrance.

At this location, which was chosen to avoid tidal influence, the upstream tributary area is 33 square miles. The portion of the river where the monitoring site is located is a concrete-lined rectangular channel.

*Temporal Representation:* Samples were taken in October, November and December 2002, and in February, March and April 2003.

*Environmental Conditions:* According to the County of Los Angeles, Department of Public Works, Stormwater Monitoring Reports, 2002-2003 Monitoring Report samples were taken during storm events, the amount of rainfall was not noted.

*Data Quality Assessment:* Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** Dominguez Channel (lined portion above Vermont Ave)

**Pollutant:** Enterococcus

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3.3 of the Listing Policy. Under section 3.3 a single line of evidence is necessary to assess listing status.

Three lines of evidence are available in the administrative record to assess this pollutant. All samples exceed the 17 CCR 7958 minimum protective enterococcus standards .

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 12 samples taken exceeded the minimum protective enterococcus standards 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Matrix:* Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	The minimum protective enterococcus standards for waters adjacent to public beaches and public water-contact sports areas shall be 104 MPN/100 milliliters in accordance with Title 17 section 7958 of the California Code of regulation.
<i>Data Used to Assess Water Quality:</i>	Six of six samples exceeded the 104 MPN/100 ml. standard. Samples exceeding the objective ranged from 170 to 210,000 MPN/100 ml (LACDPW, 2003a).
<i>Spatial Representation:</i>	Samples were taken at the Dominguez Channel Monitoring Station (S28) which is located at Dominguez Channel and Artesia Boulevard in the City of Torrance. At this location, which was chosen to avoid tidal influence, the upstream tributary area is 33 square miles. The portion of the river where the monitoring site is located is a concrete-lined rectangular channel.
<i>Temporal Representation:</i>	Samples were taken on 10/10/02, 11/8/02, 12/16/02, 2/11/03, 3/15/03 and 4/30/03; all exceeded the US EPA criteria.
<i>Environmental Conditions:</i>	According to the County of Los Angeles, Department of Public Works, Stormwater Monitoring Reports, 2002-2003 Monitoring Report samples were taken during storm events, the amount of rainfall was not noted. The REC-1 BU does not apply (effective early 2004) under certain conditions. "The High Flow Suspension shall apply on days with rainfall greater than or equal to 1/2 inch and the 24 hours following the end of the 1/2-inch or greater rain event, as measured at the nearest local rain gauge, using local Doppler radar, or using widely accepted rainfall estimation methods. The High Flow Suspension only applies to engineered channels, defined as inland, flowing surface water bodies with a box, V-shaped or trapezoidal configuration that have been lined on the sides and/or bottom with concrete." The sampling data is from prior to implementation of the High Flow Suspension. While the samples were reported as taken during rainfall, the amount of rainfall was not recorded.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	The minimum protective enterococcus standards for waters adjacent to public beaches and public water-contact sports areas shall be 104 MPN/100 milliliters in accordance with Title 17 section 7958 of the California Code of regulation.
<i>Data Used to Assess Water Quality:</i>	Four out of four samples exceeded the 104 MPN/100 ml. standard. Samples exceeding the objective ranged from 1,700 to 30,000 MPN (LACDPW, 2003a).



*Spatial Representation:* Samples were taken at the Dominguez Channel Monitoring Station (S23) which is located within the Dominguez Channel/Los Angeles Harbor watershed in Lennox, near Los Angeles International Airport (LAX). The monitoring station is near the intersection of 116th Street and Isis Avenue. The overall watershed land use is predominantly transportation, and includes areas of LAX and Interstate 105.

*Temporal Representation:* Samples were taken 1/30/01, 2/15/01, 2/28/01, and 3/7/01.

*Environmental Conditions:* According to the County of Los Angeles, Department of Public Works, Stormwater Monitoring Reports, 2000-2001 Monitoring Report samples were taken during storm events, the amount of rainfall was not noted. The REC-1 BU does not apply (effective early 2004) under certain conditions. "The High Flow Suspension shall apply on days with rainfall greater than or equal to 1/2 inch and the 24 hours following the end of the 1/2-inch or greater rain event, as measured at the nearest local rain gauge, using local Doppler radar, or using widely accepted rainfall estimation methods. The High Flow Suspension only applies to engineered channels, defined as inland, flowing surface water bodies with a box, V-shaped or trapezoidal configuration that have been lined on the sides and/or bottom with concrete." The sampling data is from prior to implementation of the High Flow Suspension. While the samples were reported as taken during rainfall, the amount of rainfall was not recorded.

*Data Quality Assessment:* Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* 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 minimum protective enterococcus standards for waters adjacent to public beaches and public water-contact sports areas shall be 104 MPN/100 milliliters in accordance with Title 17 section 7958 of the California Code of regulation.

*Data Used to Assess Water Quality:* Two of 2 samples exceeded the 104 MPN/100 ml. standard. One sample was 11,000, the other 30,000 MPN (LACDPW, 2003a).

*Spatial Representation:* Samples were taken at the Dominguez Channel Monitoring Station (S28) which is located at Dominguez Channel and Artesia Boulevard in the City of Torrance. At this location, which was chosen to avoid tidal influence, the upstream tributary area is 33 square miles. The portion of the river where the monitoring site is located is a concrete-lined rectangular channel.

*Temporal Representation:* Samples were taken on 1/28/02 and 3/19/02.

*Environmental Conditions:*

According to the County of Los Angeles, Department of Public Works, Stormwater Monitoring Reports, 2001-2002 Monitoring Report samples were taken during storm events, the amount of rainfall was not noted. The REC-1 BU does not apply (effective early 2004) under certain conditions. "The High Flow Suspension shall apply on days with rainfall greater than or equal to 1/2 inch and the 24 hours following the end of the 1/2-inch or greater rain event, as measured at the nearest local rain gauge, using local Doppler radar, or using widely accepted rainfall estimation methods. The High Flow Suspension only applies to engineered channels, defined as inland, flowing surface water bodies with a box, V-shaped or trapezoidal configuration that have been lined on the sides and/or bottom with concrete." The sampling data is from prior to implementation of the High Flow Suspension. While the samples were reported as taken during rainfall, the amount of rainfall was not recorded.

*Data Quality Assessment:*

Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** Dominguez Channel (lined portion above Vermont Ave)

**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.

Three lines of evidence are available in the administrative record to assess this pollutant. A number of samples exceed the CTR criteria for the protection of aquatic life. This water body pollutant was placed in the 2002 303(d) list for zinc in tissue in both segments (S23 and S28) of Dominguez Channel sampling stations.

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 for the dissolved zinc.

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 12 samples at sampling station S23 and two of six samples in 2002-2003 at sampling station S28 exceeded the CTR criteria and both lines of evidence 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 in both S23 and S28 sampling stations within Dominguez Channel and a pollutant contributes to or causes the problem.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* 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:*

CTR dissolved zinc criteria for continuous concentration (CCC) and maximum concentration (CMC) in water for the protection of aquatic life are expressed as a function of the total hardness of the water body. The aquatic life criteria will vary depending of total hardness reported at the sampling site. The CCC for dissolved zinc is the highest concentration to which aquatic life can be exposed for an extended period of time (e.g., four days) without deleterious effects. The CMC for dissolved zinc is the highest concentration to which aquatic life can be exposed for a short period of time (e.g., one hour) without deleterious effects. These criteria are linked and applicable for the protection of aquatic life beneficial uses. Calculation of the criteria based on ambient hardness at the time of sampling resulted in a zinc CCC of 65.22 ug/l; and a CMC of 64.69 ug/L.

*Data Used to Assess Water  
Quality:*

The single sample exceeded both the CCC and CMC (LACDPW, 2003a).

*Spatial Representation:*

Samples were taken at the Dominguez Channel Monitoring Station (S28) which is located at Dominguez Channel and Artesia Boulevard in the City of Torrance. At this location, which was chosen to avoid tidal influence, the upstream tributary area is 33 square miles. The portion of the river where the monitoring site is located is a concrete-lined rectangular channel.

*Temporal Representation:*

The single sample was taken on 1/28/02.

*Environmental Conditions:*

According to the County of Los Angeles, Department of Public Works, Stormwater Monitoring Reports, 2001-2002 Monitoring Report samples were taken during storm events, the amount of rainfall was not noted.

*Data Quality Assessment:*

Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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*Numeric Line of Evidence*

Pollutant-Water

*Beneficial Use:*

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:*

CTR dissolved zinc criteria for continuous concentration (CCC) and maximum concentration (CMC) in water for the protection of aquatic life are expressed as a function of the total hardness of the water body. The aquatic life criteria will vary depending of total hardness reported at the sampling site.

The CCC for dissolved zinc is the highest concentration to which aquatic life can

be exposed for an extended period of time (e.g., four days) without deleterious effects. The CMC for dissolved zinc is the highest concentration to which aquatic life can be exposed for a short period of time (e.g., one hour) without deleterious effects. These criteria are linked and applicable for the protection of aquatic life beneficial uses.

Calculation of the criteria based on ambient hardness at the time of sampling resulted in zinc CCCs ranging from 30.21 to 221.52 ug/l; and CMCs ranging from 29.97 to 219.72 ug/L.

*Data Used to Assess Water Quality:*

Twelve out of 12 samples exceed both the CCC and CMC (LACDPW, 2003a).

*Spatial Representation:*

Samples were taken at the Dominguez Channel Monitoring Station (S23) which is located within the Dominguez Channel/Los Angeles Harbor watershed in Lennox, near Los Angeles International Airport (LAX). The monitoring station is near the intersection of 116th Street and Isis Avenue. The overall watershed land use is predominantly transportation, and includes areas of LAX and Interstate 105.

*Temporal Representation:*

Samples were taken in October 2000, and in January through April 2001.

*Environmental Conditions:*

According to the County of Los Angeles, Department of Public Works, Stormwater Monitoring Reports, 2000-2001 Monitoring Report samples were taken during storm events, the amount of rainfall was not noted.

*Data Quality Assessment:*

Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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*Numeric Line of Evidence*

Pollutant-Water

*Beneficial Use:*

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:*

CTR dissolved zinc criteria for continuous concentration (CCC) and maximum concentration (CMC) in water for the protection of aquatic life are expressed as a function of the total hardness of the water body. The aquatic life criteria will vary depending of total hardness reported at the sampling site.

The CCC for dissolved zinc is the highest concentration to which aquatic life can be exposed for an extended period of time (e.g., four days) without deleterious effects. The CMC for dissolved zinc is the highest concentration to which aquatic life can be exposed for a short period of time (e.g., one hour) without deleterious effects. These criteria are linked and applicable for the protection of aquatic life beneficial uses.

Calculation of the criteria based on ambient hardness at the time of sampling resulted in zinc CCCs ranging from 23.94 to 239.27 ug/l; and CMCs ranging from 23.75 to 237.33 ug/L.

*Data Used to Assess Water Quality:*

Two out of 6 samples exceeded both the CCC and CMC. The positive quantification limit (PQL) of 50 ug/L was too high to determine compliance of the sample taken on 3/15/03. If the PQL is used to determine compliance, then the sample taken on 3/15/03 also exceeded the criteria (LACDPW, 2003a).

*Spatial Representation:*

Samples were taken at the Dominguez Channel Monitoring Station (S28) which is located at Dominguez Channel and Artesia Boulevard in the City of Torrance. At this location, which was chosen to avoid tidal influence, the upstream tributary area is 33 square miles. The portion of the river where the monitoring site is located is a concrete-lined rectangular channel.

*Environmental Conditions:*

According to the County of Los Angeles, Department of Public Works, Stormwater Monitoring Reports, 2002-2003 Monitoring Report samples were taken during storm events, the amount of rainfall was not noted.

*Data Quality Assessment:*

Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** Dominguez Channel Estuary (unlined portion below Vermont Ave)

**Pollutant:** Benzo(a)pyrene (PAHs)

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3.9 of the Listing Policy. Under section 3.9 two lines of evidence are necessary to assess listing status.

Three lines of evidence are available in the administrative record to assess this pollutant. A sufficient number of samples exceeded the sediment quality guideline. Although sediment toxicity has been observed it is not enough to establish a sufficiently strong association with the sediment pollutant concentration. However, significant benthic degradation has been recorded and this may be linked with this pollutant concentration in this water body segment.

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. 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 41 samples exceeded the sediment quality guideline. These data exceed the allowable frequency listed in Table 3.1 of the Listing Policy. Based on section 3.9 of the Listing Policy significant benthic impact has been documented and the pollutant in sediment may be linked to the observed impacts.
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:**

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat, MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	The data were analyzed using the BPTCP reference envelope approach.
<i>Data Used to Assess Water Quality:</i>	One toxicity sample that showed 61 percent survival (Anderson et al., 1998).
<i>Spatial Representation:</i>	One station at H. Ford Bridge (BPTCP station 47010.0).
<i>Temporal Representation:</i>	The sample was collected in 1996.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program.

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<b><i>Numeric Line of Evidence</i></b>	Population/Community Degradation
<i>Beneficial Use:</i>	ES - Estuarine Habitat, MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community (Anderson et al., 1998).
<i>Data Used to Assess Water Quality:</i>	One benthic community sample with a benthic index of 0.21 (Anderson et al., 1998).
<i>Spatial Representation:</i>	One station at H. Ford Bridge (BPTCP station 47010.0).



*Temporal Representation:* The sample was collected in 1996.

*Environmental Conditions:* Adjacent waters (Consolidated Slip) also has degraded benthic communities.

*Data Quality Assessment:* Bay Protection and Toxic Cleanup Program (Stephenson et al., 1994).

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***Numeric Line of Evidence*** Pollutant-Sediment

*Beneficial Use:* ES - Estuarine Habitat, MA - Marine Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.

*Evaluation Guideline:* A sediment quality guideline of 763.22 ng/g was used (MacDonald et al., 1996).

*Data Used to Assess Water  
Quality:* Of 41 sediment core samples, 7 exceeded the sediment quality guideline (LARWQCB and CCC, 2004).

*Spatial Representation:* Forty-one samples are spread throughout the water body.

*Temporal Representation:* The samples were collected in 2002.

*Data Quality Assessment:* Quality assurance is described in the Contaminated Sediments Task Force Database.

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## Region 4

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**Water Segment:** Dominguez Channel Estuary (unlined portion below Vermont Ave)

**Pollutant:** Chrysene (C1-C4)

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3.9 of the Listing Policy. Under section 3.9 two lines of evidence are necessary to assess listing status.

Three lines of evidence are available in the administrative record to assess this pollutant. A sufficient number of samples exceeded the sediment quality guideline. Although sediment toxicity has been observed it is not enough to establish a sufficiently strong association with the sediment pollutant concentration. However, significant benthic degradation has been recorded and this may be linked with this pollutant concentration in this water body segment.

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. 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 41 samples exceeded the sediment quality guideline. These data exceed the allowable frequency listed in Table 3.1 of the Listing Policy. Based on section 3.9 of the Listing Policy significant benthic impact has been documented and the pollutant in sediment may be linked to the observed impacts.
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:**

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat, MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	The data were analyzed using the BPTCP reference envelope approach.
<i>Data Used to Assess Water Quality:</i>	One toxicity sample that showed 61 percent survival (Anderson et al., 1998).
<i>Spatial Representation:</i>	One station at H. Ford Bridge (BPTCP station 47010.0).
<i>Temporal Representation:</i>	The sample was collected in 1996.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program.

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<b><i>Numeric Line of Evidence</i></b>	Population/Community Degradation
<i>Beneficial Use:</i>	ES - Estuarine Habitat, MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community (Anderson et al., 1998).
<i>Data Used to Assess Water Quality:</i>	One benthic community sample with a benthic index of 0.21 (Anderson et al., 1998).
<i>Spatial Representation:</i>	One station at H. Ford Bridge (BPTCP station 47010.0).
<i>Temporal Representation:</i>	The sample was collected in 1996.

*Environmental Conditions:* Adjacent waters (Consolidated Slip) also has degraded benthic communities.

*Data Quality Assessment:* Bay Protection and Toxic Cleanup Program (Stephenson et al., 1994).

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***Numeric Line of Evidence*** Pollutant-Sediment

*Beneficial Use:* ES - Estuarine Habitat, MA - Marine Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.

*Evaluation Guideline:* A sediment quality guideline of 845.98 ng/g was used (MacDonald et al., 1996).

*Data Used to Assess Water  
Quality:* Of 41 sediment core samples, 8 exceeded the sediment quality guideline (LARWQCB and CCC, 2004).

*Spatial Representation:* Forty-one samples are spread throughout the water body.

*Temporal Representation:* The samples were collected in 2002.

*Data Quality Assessment:* Quality assurance is described in the Contaminated Sediments Task Force Database.

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## Region 4

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**Water Segment:** Dominguez Channel Estuary (unlined portion below Vermont Ave)

**Pollutant:** Phenanthrene

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3.9 of the Listing Policy. Under section 3.9 two lines of evidence are necessary to assess listing status.

Three lines of evidence are available in the administrative record to assess this pollutant. A sufficient number of samples exceeded the sediment quality guideline. Although sediment toxicity has been observed it is not enough to establish a sufficiently strong association with the sediment pollutant concentration. However, significant benthic degradation has been recorded and this may be linked with this pollutant concentration in this water body segment.

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. 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 41 samples exceeded the sediment quality guideline. These data exceed the allowable frequency listed in Table 3.1 of the Listing Policy. Based on section 3.9 of the Listing Policy significant benthic impact has been documented and the pollutant in sediment may be linked to the observed impacts.
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:**

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat, MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	The data were analyzed using the BPTCP reference envelope approach.
<i>Data Used to Assess Water Quality:</i>	One toxicity sample that showed 61 percent survival (Anderson et al., 1998).
<i>Spatial Representation:</i>	One station at H. Ford Bridge (BPTCP station 47010.0).
<i>Temporal Representation:</i>	The sample was collected in 1996.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program.

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<b><i>Numeric Line of Evidence</i></b>	Population/Community Degradation
<i>Beneficial Use:</i>	ES - Estuarine Habitat, MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community (Anderson et al., 1998).
<i>Data Used to Assess Water Quality:</i>	One benthic community sample with a benthic index of 0.21 (Anderson et al., 1998).
<i>Spatial Representation:</i>	One station at H. Ford Bridge (BPTCP station 47010.0).
<i>Temporal Representation:</i>	The sample was collected in 1996.

*Environmental Conditions:* Adjacent waters (Consolidated Slip) also has degraded benthic communities.

*Data Quality Assessment:* Bay Protection and Toxic Cleanup Program (Stephenson et al., 1994).

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***Numeric Line of Evidence*** Pollutant-Sediment

*Beneficial Use:* ES - Estuarine Habitat, MA - Marine Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.

*Evaluation Guideline:* A sediment quality guideline of 543.53 ng/g was used (MacDonald et al., 1996).

*Data Used to Assess Water  
Quality:* Of 41 sediment core samples, 9 exceeded the sediment quality guideline (LARWQCB and CCC, 2004).

*Spatial Representation:* Forty-one samples are spread throughout the water body.

*Temporal Representation:* The samples were collected in 2002.

*Data Quality Assessment:* Quality assurance is described in the Contaminated Sediments Task Force Database.

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## Region 4

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**Water Segment:** Dominguez Channel Estuary (unlined portion below Vermont Ave)

**Pollutant:** Polychlorinated biphenyls

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3.9 of the Listing Policy. Under section 3.9 two lines of evidence are necessary to assess listing status.

Three lines of evidence are available in the administrative record to assess this pollutant. A sufficient number of samples exceeded the sediment quality guideline. Although sediment toxicity has been observed it is not enough to establish a sufficiently strong association with the sediment pollutant concentration. However, significant benthic degradation has been recorded and this may be linked with this pollutant concentration in this water body segment.

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. Data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Fifteen of 41 samples exceeded the sediment quality guideline. These data exceed the allowable frequency listed in Table 3.1 of the Listing Policy. Based on section 3.9 of the Listing Policy significant benthic impact has been documented and the pollutant in sediment may be linked to the observed impacts.
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:**



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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat, MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	The data were analyzed using the BPTCP reference envelope approach.
<i>Data Used to Assess Water Quality:</i>	One toxicity sample that showed 61 percent survival (Anderson et al., 1998).
<i>Spatial Representation:</i>	One station at H. Ford Bridge (BPTCP station 47010.0).
<i>Temporal Representation:</i>	The sample was collected in 1996.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program.

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<b><i>Numeric Line of Evidence</i></b>	Population/Community Degradation
<i>Beneficial Use:</i>	ES - Estuarine Habitat, MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community (Anderson et al., 1998).
<i>Data Used to Assess Water Quality:</i>	One benthic community sample with a benthic index of 0.21 (Anderson et al., 1998).
<i>Spatial Representation:</i>	One station at H. Ford Bridge (BPTCP station 47010.0).

*Temporal Representation:* The sample was collected in 1996.

*Environmental Conditions:* Adjacent waters (Consolidated Slip) also has degraded benthic communities.

*Data Quality Assessment:* Bay Protection and Toxic Cleanup Program (Stephenson et al., 1994).

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***Numeric Line of Evidence*** Pollutant-Sediment

*Beneficial Use:* ES - Estuarine Habitat, MA - Marine Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.

*Evaluation Guideline:* A sediment quality guideline of 400 ng/g was used (Fairey et al., 2001).

*Data Used to Assess Water  
Quality:* Of 42 sediment core samples, 15 exceeded the sediment quality guideline (LARWQCB and CCC, 2004).

*Spatial Representation:* Forty-two samples are spread throughout the water body.

*Temporal Representation:* The samples were collected in 2002.

*Data Quality Assessment:* Quality assurance is described in the Contaminated Sediments Task Force Database.

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## Region 4

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**Water Segment:** Dominguez Channel Estuary (unlined portion below Vermont Ave)

**Pollutant:** Pyrene

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3.9 of the Listing Policy. Under section 3.9 two lines of evidence are necessary to assess listing status.

Three lines of evidence are available in the administrative record to assess this pollutant. A sufficient number of samples exceeded the sediment quality guideline. Although sediment toxicity has been observed it is not enough to establish a sufficiently strong association with the sediment pollutant concentration. However, significant benthic degradation has been recorded and this may be linked with this pollutant concentration in this water body segment.

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. 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 41 samples exceeded the sediment quality guideline. These data exceed the allowable frequency listed in Table 3.1 of the Listing Policy. Based on section 3.9 of the Listing Policy significant benthic impact has been documented and the pollutant in sediment may be linked to the observed impacts.
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:**

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat, MA - Marine Habitat
<b><i>Matrix:</i></b>	Sediment
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<b><i>Evaluation Guideline:</i></b>	The data were analyzed using the BPTCP reference envelope approach.
<b><i>Data Used to Assess Water Quality:</i></b>	One toxicity sample that showed 61 percent survival (Anderson et al., 1998).
<b><i>Spatial Representation:</i></b>	One station at H. Ford Bridge (BPTCP station 47010.0).
<b><i>Temporal Representation:</i></b>	The sample was collected in 1996.
<b><i>Data Quality Assessment:</i></b>	Bay Protection and Toxic Cleanup Program.

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<b><i>Numeric Line of Evidence</i></b>	Population/Community Degradation
<b><i>Beneficial Use:</i></b>	ES - Estuarine Habitat, MA - Marine Habitat
<b><i>Matrix:</i></b>	Sediment
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<b><i>Evaluation Guideline:</i></b>	Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community (Anderson et al., 1998).
<b><i>Data Used to Assess Water Quality:</i></b>	One benthic community sample with a benthic index of 0.21 (Anderson et al., 1998).
<b><i>Spatial Representation:</i></b>	One station at H. Ford Bridge (BPTCP station 47010.0).
<b><i>Temporal Representation:</i></b>	The sample was collected in 1996.

*Environmental Conditions:* Adjacent waters (Consolidated Slip) also has degraded benthic communities.

*Data Quality Assessment:* Bay Protection and Toxic Cleanup Program (Stephenson et al., 1994).

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***Numeric Line of Evidence*** Pollutant-Sediment

*Beneficial Use:* ES - Estuarine Habitat, MA - Marine Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.

*Evaluation Guideline:* A sediment quality guideline of 1,397.4 ng/g was used (MacDonald et al., 1996).

*Data Used to Assess Water  
Quality:* Of 41 sediment core samples, 13 exceeded the sediment quality guideline (LARWQCB and CCC, 2004).

*Spatial Representation:* Forty-one samples are spread throughout the water body.

*Temporal Representation:* The samples were collected in 2002.

*Data Quality Assessment:* Quality assurance is described in the Contaminated Sediments Task Force Database.

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## Region 4

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**Water Segment:** Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No 2

**Pollutant:** Chlordane

**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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* Los Angeles RWQCB Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.

<i>Evaluation Guideline:</i>	30 ng/g (OEHHA Screening Value).
<i>Data Used to Assess Water Quality:</i>	Two out of 2 samples exceeded. A total of 2 filet composite samples of goldfish and brown bullhead were collected. Goldfish sample was collected in 1993 and brown bullhead was collected in 1994. The guideline was exceeded in both samples. In addition, one whole fish sample of fathead minnow was collected in 1994 and exceeded the guideline (TSMP, 2002).
<i>Spatial Representation:</i>	One station located above culvert in Oxnard Drain #2 at Perimeter Road crossing.
<i>Temporal Representation:</i>	Samples were collected annually 1993-94.
<i>Data Quality Assessment:</i>	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports.

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## Region 4

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**Water Segment:** Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No 2

**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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* Los Angeles RWQCB Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.



<i>Evaluation Guideline:</i>	100 ng/g (OEHHA Screening Value).
<i>Data Used to Assess Water Quality:</i>	Two out of 2 samples exceeded (note: Whole fish sample of fathead minnow exceeded NAS Guideline in 1994). A filet composite sample of goldfish and one individual sample of brown bullhead were collected. Goldfish were collected in 1993 while brown bullhead were collected in 1994. The guideline was exceeded in both samples (TSMP, 2002).
<i>Spatial Representation:</i>	One station located above culvert in Oxnard Drain 2 at Perimeter Road crossing.
<i>Temporal Representation:</i>	Samples were collected in 1993-94.
<i>Data Quality Assessment:</i>	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports.

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## Region 4

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**Water Segment:** Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No 2

**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 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* Los Angeles RWQCB Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.

<i>Evaluation Guideline:</i>	30 ng/g (OEHHA Screening Value).
<i>Data Used to Assess Water Quality:</i>	Two out of 2 samples exceeded. A total of 2 filet composite samples of goldfish and brown bullhead were collected. Goldfish sample was collected in 1993 and brown bullhead was collected in 1994. The guideline was exceeded in both samples. In addition, one whole fish sample of fathead minnow was collected in 1994 and exceeded the NAS Guideline (TSMP, 2002).
<i>Spatial Representation:</i>	One station located above culvert in Oxnard Drain #2 at Perimeter Road crossing.
<i>Temporal Representation:</i>	Samples were collected annually 1993-94.
<i>Data Quality Assessment:</i>	Toxic Substances Monitoring Program 1992-93 and 1994-95 Data Reports.

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## Region 4

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**Water Segment:** Echo Park Lake

**Pollutant:** Trash

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2 and 3.11 of the Listing Policy. Under these sections 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 only because a TMDL had been completed. No substantial evidence in the record shows that standards are met.

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, an implementation plan has been approved, and applicable water quality standards are exceeded.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* TMDL completed.

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## Region 4

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**Water Segment:** Lake Lindero

**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. 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* Los Angeles RWQCB Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.

<i>Evaluation Guideline:</i>	2 ug/g (OEHHA Screening Value).
<i>Data Used to Assess Water Quality:</i>	Two out of 2 samples exceeded. Two filet samples of largemouth bass and carp were collected. Bass were collected in 1992 and carp in 1998. Both samples exceeded the guideline (TSMP, 2002).
<i>Spatial Representation:</i>	One station located at Mainsail Cul-de-Sac off Lake Lindero Drive.
<i>Temporal Representation:</i>	Samples were collected in 1992 and 1998.
<i>Data Quality Assessment:</i>	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.

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## Region 4

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**Water Segment:** Leo Carillo Beach (South of County Line)

**Pollutant:** Coliform Bacteria

**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. 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. The beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 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 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 and pollutant (coliform) 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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Lincoln Park Lake

**Pollutant:** Trash

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2 and 3.11 of the Listing Policy. Under these sections 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 only because a TMDL had been completed. No substantial evidence in the record shows that standards are met.

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, an implementation plan has been approved, and applicable water quality standards are exceeded.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* TMDL completed (SWRCB, 2003).

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## Region 4

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**Water Segment:** Los Angeles Harbor - Cabrillo Marina

**Pollutant:** DDT

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3.4 of the Listing Policy. Under section 3.4 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 OEHHA fish consumption advisory has been established in this water body segment. Under section 3.4 of the Listing Policy any water body segment where a health advisory against consumption of edible resident organisms has been issued 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 an OEHHA fish consumption advisory has been established for this pollutant. 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 an OEHHA fish consumption advisory has been established in this water body segment. Applicable water quality standards or guidelines are exceeded and this pollutant contributes to or causes the problem.

**Lines of Evidence:**

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<i>Line of Evidence</i>	Health Advisories
<i>Beneficial Use</i>	CM - Commercial and Sport Fishing (CA)
<i>Information Used to Assess Water Quality:</i>	A fish consumption advisory has been established for the DDT in the Los Angeles/Long Beach Harbor area. The advisory was established by the Office of Environmental Health Hazard Assessment.
<i>Data Used to Assess Water Quality:</i>	This pollutant has been detected in samples collected in this water segment.

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## Region 4

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**Water Segment:** Los Angeles Harbor - Cabrillo Marina

**Pollutant:** Polychlorinated biphenyls

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3.4 of the Listing Policy. Under section 3.4 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 OEHHA fish consumption advisory has been established in this water body segment. Under section 3.4 of the Listing Policy any water body segment where a health advisory against consumption of edible resident organisms has been issued 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 an OEHHA fish consumption advisory has been established for this pollutant. 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 OEHHA fish consumption advisory has been established in this water body segment. Applicable water quality standards or guidelines are exceeded and this pollutant contributes to or causes the problem.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Sediment

*Beneficial Use:* CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat

*Matrix:* Sediment

*Water Quality Objective/* Basin Plan: Surface waters shall not contain concentrations of chemical

<i>Water Quality Criterion:</i>	constituents in amounts that adversely affect any designated beneficial use (LARWQCB, 1995)
<i>Evaluation Guideline:</i>	A sediment quality guideline of 400 ug/g was used (MacDonald et al., 2000).
<i>Data Used to Assess Water Quality:</i>	Of the 11 sediment core samples available, none exceeded the sediment quality guideline (LARWQCB and CCC, 2004).
<i>Spatial Representation:</i>	The 11 samples are spread throughout the marina.
<i>Temporal Representation:</i>	The samples were collected in 1995 and 2001.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program QAPP (Stephenson et al., 1994) Quality assurance for other samples presented in the Contaminated Sediments Task Force Database.

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<i>Line of Evidence</i>	Health Advisories
<i>Beneficial Use</i>	CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat
<i>Information Used to Assess Water Quality:</i>	A fish consumption advisory has been established for the PCBs in the Los Angeles/Long Beach Harbor area. The advisory was established by the Office of Environmental Health Hazard Assessment.

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## Region 4

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**Water Segment:** Los Angeles Harbor - Inner Cabrillo Beach Area

**Pollutant:** Bacteria Indicators

**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. Of the 3,362 samples, 1,729 exceeded the bacteriological standard 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 and a pollutant contributes to or causes the problem.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* R1 - Water Contact Recreation

*Matrix:* Water

*Water Quality Objective/* The minimum protective bacteriological standards for waters adjacent to public beaches and public water-contact sports areas shall be as follows:

<i>Water Quality Criterion:</i>	(1) Based on a single sample, the density of bacteria in water from each sampling station at a public beach or public water contact sports area shall not exceed: (A) 1,000 total coliform bacteria per 100 milliliters, if the ratio of fecal/total coliform bacteria exceeds 0.1; or (B) 10,000 total coliform bacteria per 100 milliliters; or (C) 400 fecal coliform bacteria per 100 milliliters; or (D) 104 enterococcus bacteria per 100 milliliters (LARWQCB, 1995)
<i>Data Used to Assess Water Quality:</i>	Of the 3,362 samples, 1,729 exceed the standards (Anderson et al., 1998; LARWQCB, 2004f).
<i>Spatial Representation:</i>	Two shoreline stations.
<i>Temporal Representation:</i>	Samples were collected between April 1998 and December 2002.
<i>Data Quality Assessment:</i>	Los Angeles Harbor Bacteria TMDL -- Inner Cabrillo Beach and Main Ship Channel. April 30, 2004.

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## Region 4

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**Water Segment:** Los Angeles Harbor - Inner Cabrillo Beach Area

**Pollutant:** Copper

**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.

Two lines of evidence are available in the administrative record to assess this pollutant. A sufficient number of samples exceeded the sediment quality guideline and significant. Sediment toxicity has been documented within the water body segment.

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 16 samples exceeded the 270 ug/g ERM sediment quality guideline and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. Based on section 3.6 of the Listing Policy sediment toxicity has been documented and the pollutant in sediment may be linked to the observed toxicity.
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:**

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*Numeric Line of Evidence*                      Pollutant-Sediment

*Beneficial Use:*                                      ES - Estuarine Habitat, MA - Marine Habitat

<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use (LARWQCB, 1995)
<i>Evaluation Guideline:</i>	An Effects Range-Median of 270 ug/g was used (Long et al., 1995).
<i>Data Used to Assess Water Quality:</i>	Of the 16 sediment grab samples, 14 exceeded the sediment quality guideline (LARWQCB and CCC, 2004).
<i>Spatial Representation:</i>	The samples were spread throughout the Inner Cabrillo Beach area.
<i>Temporal Representation:</i>	Samples were collected between 1992 and 1994.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program QAPP (Stephenson et al., 1994).

<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat, MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use (LARWQCB, 1995)
<i>Evaluation Guideline:</i>	Toxicity was assessed by statistical comparison to test control.
<i>Data Used to Assess Water Quality:</i>	Seven of 52 sediment samples were toxic as compared to toxicity test controls (Anderson et al., 1998).
<i>Spatial Representation:</i>	The 52 samples were spread throughout the Inner Cabrillo Beach area.
<i>Temporal Representation:</i>	The samples were collected between 1992 and 1997.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program QAPP (Stephenson et al., 1994).



## Region 4

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**Water Segment:** Los Angeles Harbor - Inner Cabrillo Beach Area

**Pollutant:** DDT

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3.4 of the Listing Policy. Under section 3.4 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. OEHHA fish consumption advisory has been established in this water body segment. Under section 3.4 of the Listing Policy any water body segment where a health advisory against consumption of edible resident organisms has been issued 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 an OEHHA fish consumption advisory has been established for this pollutant. 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 OEHHA fish consumption advisory has been established in this water body segment. Applicable water quality standards or guidelines are exceeded and this pollutant contributes to or causes the problem.

### **Lines of Evidence:**

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*Numeric Line of Evidence* Pollutant-Sediment

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

*Matrix:* Sediment

*Water Quality Objective/* Basin Plan: Surface waters shall not contain concentrations of chemical

<i>Water Quality Criterion:</i>	constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	A sediment quality guideline for this pollutant is not available that satisfies the requirements of section 6.1.3 of the Listing Policy.
<i>Data Used to Assess Water Quality:</i>	Eighteen sediment grab samples are available (Anderson et al., 1998).
<i>Spatial Representation:</i>	The 18 samples were collected throughout the Cabrillo Beach area (Anderson et al, 1998).
<i>Temporal Representation:</i>	The samples were collected between 1992 and 1997.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program.

<b><i>Line of Evidence</i></b>	Health Advisories
<i>Beneficial Use</i>	CM - Commercial and Sport Fishing (CA)
<i>Information Used to Assess Water Quality:</i>	A fish consumption advisory has been established for the DDT in the Los Angeles/Long Beach Harbor area. The advisory was established by the Office of Environmental Health Hazard Assessment.

## Region 4

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**Water Segment:** Los Angeles Harbor - Inner Cabrillo Beach Area

**Pollutant:** Polychlorinated biphenyls

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3.4 of the Listing Policy. Under section 3.4 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. OEHHA fish consumption advisory has been established in this water body segment. Under section 3.4 of the Listing Policy any water body segment where a health advisory against consumption of edible resident organisms has been issued 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 an OEHHA fish consumption advisory has been established for this pollutant. 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 OEHHA fish consumption advisory has been established in this water body segment. Applicable water quality standards or guidelines are exceeded and this pollutant contributes to or causes the problem.

### **Lines of Evidence:**

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*Line of Evidence* Health Advisories

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

*Information Used to Assess Water Quality:* A fish consumption advisory has been established for the PCBs in the Los Angeles/Long Beach Harbor area. The advisory was established by the Office of Environmental Health Hazard Assessment.

*Data Used to Assess Water  
Quality:*

After review of the Bay Protection and Toxic Cleanup Program data, PCBs have been detected in sediments in the Cabrillo Beach area and other surrounding locations (Anderson et al., 1998).

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## Region 4

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**Water Segment:** Los Angeles River Estuary (Queensway Bay)

**Pollutant:** Trash

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3.11 of the Listing Policy. Under section 3.11 listing may be proposed based on the situation-specific weight of evidence.

Three lines of evidence are available in the administrative record to assess this pollutant. The first line of evidence is data on the tonnage of trash collected by the City of Long Beach from the Los Angeles River Estuary for the period from 1995-1999. The second line of evidence is photographic documentation of trash in the Los Angeles River estuary, which extends the assessment period into 2001. Based on this information the water segment is impaired. A TMDL and implementation plan has also been completed and is expected to correct the impairment. Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification to place this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments Being Addressed category.

This conclusion is based on the staff findings that:

1. Data hand information has been evaluated that supports this decision.
2. The trash data over a period of four years exceeded the narrative objective in the estuary for protection of navigation, industrial, aquatic life and contact and non-contact recreational beneficial uses.
3. Pursuant to section 3.11 of the Listing Policy, additional photographic documentation from 2001 is available indicating that the 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 standards are exceeded and a pollutant contributes to or causes the problem.

### **Lines of Evidence:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* IND, NAV, REC-1, REC-2, COMM, EST, MAR, WILD, RARE, MIGR, SPWN, SHELL, WET

*Matrix:* Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	Evaluation of applicable narrative water quality objective.
<i>Data Used to Assess Water Quality:</i>	Sixteen quarterly samples measured the tonnage of trash collected from the estuary. Debris collection ranged from 3,091 to 4,162 tons per year (Long Beach, 2000).
<i>Spatial Representation:</i>	One sampling site in the estuary.
<i>Temporal Representation:</i>	Quarterly samples taken over four years (1995-1999).
<i>Data Quality Assessment:</i>	City of Long Beach, Department of Parks, Recreation and Marine –Storm Debris Removal Operations

<b><i>Line of Evidence</i></b>	Visual Assessment
<i>Beneficial Use:</i>	IND, NAV, REC-1, REC-2, COMM, EST, MAR, WILD, RARE, MIGR, SPWN, SHELL, WET
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Narrative objective evaluated using numeric target of zero trash in estuary established in Los Angeles River Trash TMDL and other regional trash TMDLs.
<i>Data Used to Assess Water Quality:</i>	Photographic documentation shows accumulations of trash along a beach, near a boat mooring location, and in channels near Long Beach (LARWQCB, 2001).
<i>Spatial Representation:</i>	Photographs from various points in Los Angeles River estuary including Belmont Shores, City of Long Beach and Queensway Bay.
<i>Temporal Representation:</i>	February 16, 17, 2000 and January 12, 22, 24, 2001.
<i>Data Quality Assessment:</i>	Photographs taken by various entities including: Rick Meyer (Los Angeles Times, January 22, 2001) and Lisa Billings (Long Beach Press Telegram February 17, 2000).

<b><i>Line of Evidence</i></b>	Remedial Program in Place
<i>Beneficial Use</i>	R2 - Non-Contact Recreation
<i>Information Used to Assess Water Quality:</i>	TMDL completed (USEPA, 2002).

## Region 4

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**Water Segment:** Los Angeles River Reach 1 (Estuary to Carson Street)

**Pollutant:** Cyanide

**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 -CCC concentration of 0.0052 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. Seven of 17 samples exceeded the CTR Criteria continuous Concentration 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/* CTR Criteria Continuous Concentration of 0.0052 mg/l is the highest concentration of Cyanide to which aquatic life can be exposed for an extended

<i>Water Quality Criterion:</i>	period of time (four days) without deleterious effects applicable to protect aquatic life BUs.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 17 samples taken from 10/30/00 to 4/30/03 at one to two-week sampling interval. Seven (7) samples exceeded the CTR continuous cyanide concentration criterion (LACDPW, 2003).
<i>Spatial Representation:</i>	One sample site sampled during the dry and wet season beginning from 10/30/00 through 4/30/03 at approximately one to two week intervals.
<i>Temporal Representation:</i>	Seventeen samples were taken during the wet and dry season from 10/30/00 to 4/30/03 at approximately one to two week intervals as part of the Los Angeles County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.
<i>Environmental Conditions:</i>	The Los Angeles River Monitoring Station is located at the existing stream gage station (Stream Gage No. F319-R) between Willow Street and Wardlow Road in the City of Long Beach. At this location, which was chosen to avoid tidal influences, the total upstream tributary drainage area for the Los Angeles River is 825 square miles. This river is the largest watershed outlet to the Pacific Ocean in Los Angeles County. At the site, the river is a concrete lined trapezoidal channel.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** Los Angeles River Reach 1 (Estuary to Carson Street)

**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 sufficient number of samples exceed the DFG Diazinon fresh water hazard assessment criteria used to interpret the basin plan narrative 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 22 samples exceeded the chronic DFG Diazinon fresh water 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:*

Basin Plan Narrative WQO for pesticides

*Evaluation Guideline:*

Numerical Diazinon guideline used to interpret Basin Plan narrative pesticide WQO. The numeric guidelines are 0.10 ug/l 4-day average and 0.16 ug/l 1-hour average generated by DFG as a fresh water hazard assessment criteria for the protection of aquatic life.

*Data Used to Assess Water  
Quality:*

Numeric data generated from 22 samples taken from 10/12/00 to 4/30/03 at one to two-week sampling interval. All of the data reported from 2000 through the end of 2002 did not detect Diazinon. In 10/10/02 during the dry season, and 2/11/03 during the wet season, two (2) samples exceeded the chronic DFG fresh water hazard assessment criteria (one of which also exceeded the acute criteria) for the protection of aquatic life (LACDPW, 2004c).

*Spatial Representation:*

One sample site sampled during the dry and wet season beginning from 10/12/00 through 4/30/03 at approximately one to two week intervals.

*Temporal Representation:*

Twenty two samples were taken during the wet and dry season from 10/12/00 to 4/30/03 at approximately one to two week intervals as part of the Los Angeles County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.

*Environmental Conditions:*

The Los Angeles River Monitoring Station is located at the existing stream gage station (Stream Gage No. F319-R) between Willow Street and Wardlow Road in the City of Long Beach. At this location, which was chosen to avoid tidal influences, the total upstream tributary drainage area for the Los Angeles River is 825 square miles. This river is the largest watershed outlet to the Pacific Ocean in Los Angeles County. At the site, the river is a concrete lined trapezoidal channel.

*Data Quality Assessment:*

Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

## Region 4

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**Water Segment:** Los Angeles River Reach 1 (Estuary to Carson Street)

**Pollutant:** Nutrients (Algae)

**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.

Other related lines of evidence are available in the administrative record to assess this pollutant. A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004. This TMDL will address this water body condition. The approved implementation plan is expected to result in attainment of the standard. The nutrients (algae), foam, and odor information should not be placed on the section 303(d) list because is not a pollutant or toxicity (section 2 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 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 and pollutant 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:

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*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 Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Los Angeles River Reach 1 (Estuary to Carson Street)

**Pollutant:** Trash

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2 and 3.11 of the Listing Policy. Under these sections 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 only because a TMDL had been completed. No substantial evidence in the record shows that standards are met.

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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* TMDL completed (SWRCB, 2003).

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## Region 4

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**Water Segment:** Los Angeles River Reach 2 (Carson to Figueroa Street)

**Pollutant:** Trash

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2 and 3.11 of the Listing Policy. Under these sections 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 only because a TMDL had been completed. No substantial evidence in the record shows that standards are met.

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, an implementation plan has been approved, and applicable water quality standards are exceeded.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WE - Wetland Habitat, WI - Wildlife Habitat

*Information Used to Assess Water Quality:* TMDL completed (SWRCB, 2003).

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## Region 4

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**Water Segment:** Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.)

**Pollutant:** Ammonia

**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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004.

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## Region 4

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**Water Segment:** Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.)

**Pollutant:** Trash

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2 and 3.11 of the Listing Policy. Under these sections 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 only because a TMDL had been completed. No substantial evidence in the record shows that standards are met.

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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WE - Wetland Habitat

*Information Used to Assess Water Quality:* TMDL completed (SWRCB, 2003).

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## Region 4

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**Water Segment:** Los Angeles River Reach 4 (Sepulveda Dr. to Sepulveda Dam)

**Pollutant:** Trash

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2 and 3.11 of the Listing Policy. Under these sections 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 only because a TMDL had been completed. No substantial evidence in the record shows that standards are met.

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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WE - Wetland Habitat, WI - Wildlife Habitat

*Information Used to Assess Water Quality:* TMDL completed (SWRCB, 2003).

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## Region 4

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**Water Segment:** Los Angeles River Reach 5 ( within Sepulveda Basin)

**Pollutant:** Trash

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2 and 3.11 of the Listing Policy. Under these sections 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 only because a TMDL had been completed. No substantial evidence in the record shows that standards are met.

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, SWRCB staff concludes that the water body-pollutant combination should be placed on the TMDL completed category.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* CO - Cold Freshwater Habitat, ES - Estuarine Habitat, MA - Marine Habitat, MI - Fish Migration, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SA - Saline Water Habitat, SP - Fish Spawning, WA - Warm Freshwater Habitat, WE - Wetland Habitat, WI - Wildlife Habitat

*Information Used to Assess Water Quality:* Visual trash assessment-TMDL completed (SWRCB, 2003).

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## Region 4

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**Water Segment:** Los Angeles/Long Beach Inner Harbor

**Pollutant:** Copper

**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.

Two lines of evidence are available in the administrative record to assess this pollutant. A sufficient number of samples exceeded the sediment quality guideline and significant sediment toxicity has been documented within the water body segment.

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. One hundred three of 605 sediment samples exceeded the sediment quality guideline and 9 of 84 sediment samples were toxic and these data exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. Based on section 3.6 of the Listing Policy sediment toxicity has been documented and the pollutant in sediment may be linked to the observed toxicity. The Listing Policy requires evidence of observed toxicity to establish a connection between the pollutant in the sediment and toxicity impacts to the aquatic habitat in the water body segment.
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:

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*Numeric Line of Evidence*

Pollutant-Sediment

<i>Beneficial Use:</i>	MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	An Effects Range-Median of 270 ug/g was used (Long et al., 1995).
<i>Data Used to Assess Water Quality:</i>	Of the 605 core and grab samples available, 103 exceed the sediment quality guideline (Los Angeles RWQCB & CCC, 2004).
<i>Spatial Representation:</i>	The 605 samples are spread through out the water segment.
<i>Temporal Representation:</i>	The samples were collected between 1992 and 2001.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program QAPP. Quality assurance for other samples presented in the Contaminated Sediments Task Force Database.

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	Measures of significant toxicity relative to control were used.
<i>Data Used to Assess Water Quality:</i>	Nine of 84 bedded sediment samples were toxic as compared to the toxicity test control (Anderson et al., 1998).
<i>Spatial Representation:</i>	The 84 samples were spread throughout the Inner Harbor.
<i>Temporal Representation:</i>	The samples were collected between 1992 and 1997.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program QAPP.

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## Region 4

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**Water Segment:** Los Angeles/Long Beach Inner Harbor

**Pollutant:** DDT

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3.4 of the Listing Policy. Under section 3.4 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 hundred and fourteen (714) samples were taken between 1992 and 2001, DDT was detected in the majority of samples. A sediment quality guideline for DDT is not available that satisfies the conditions of section 6.1.3 of the Listing Policy. Nevertheless, OEHHA fish consumption advisory has been established in this water body segment. Under section 3.4 of the Listing Policy any water body segment where a health advisory against consumption of edible resident organisms has been issued 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 an OEHHA fish consumption advisory has been established for this pollutant. 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 OEHHA fish consumption advisory has been established in this water body segment. Applicable water quality standards or guidelines are exceeded and this pollutant contributes to or causes the problem.

### **Lines of Evidence:**

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*Numeric Line of Evidence* Pollutant-Sediment

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

<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	A sediment quality guideline for this pollutant is not available that satisfies the conditions of section 6.1.3 of the Listing Policy.
<i>Data Used to Assess Water Quality:</i>	Seven hundred and fourteen samples are available. The pollutant is detected in the majority of these samples (Los Angeles RWCB & CC, 2004).
<i>Spatial Representation:</i>	The 714 samples are spread throughout the water body.
<i>Temporal Representation:</i>	The samples were collected between 1992 and 2001.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program QAPP. Quality assurance for other samples presented in the Contaminated Sediments Task Force Database.

<b><i>Line of Evidence</i></b>	Health Advisories
<i>Beneficial Use</i>	CM - Commercial and Sport Fishing (CA)
<i>Information Used to Assess Water Quality:</i>	A fish consumption advisory has been established for the DDT in the Los Angeles/Long Beach Harbor area. The advisory was established by the Office of Environmental Health Hazard Assessment.

## Region 4

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**Water Segment:** Los Angeles/Long Beach Inner Harbor

**Pollutant:** Polychlorinated biphenyls

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3.4 of the Listing Policy. Under section 3.4 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. OEHHA fish consumption advisory has been established in this water body segment. Under section 3.4 of the Listing Policy any water body segment where a health advisory against consumption of edible resident organisms has been issued 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 an OEHHA fish consumption advisory has been established for this pollutant. 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 OEHHA fish consumption advisory has been established in this water body segment. Applicable water quality standards or guidelines are exceeded and this pollutant contributes to or causes the problem.

### **Lines of Evidence:**

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*Numeric Line of Evidence* Pollutant-Sediment

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

*Matrix:* Sediment

*Water Quality Objective/* Basin Plan: Surface waters shall not contain concentrations of chemical

*Water Quality Criterion:* constituents in amounts that adversely affect any designated beneficial use.

*Evaluation Guideline:* A sediment quality guideline of 400 ng/g was used (MacDonald et al., 2000).

*Data Used to Assess Water Quality:* Of the 626 core and grab sediment samples, 31 exceeded the sediment quality guideline (LARWQCB and CCC, 2004).

*Spatial Representation:* The 626 samples are spread throughout the water body.

*Temporal Representation:* The samples were collected between 1992 and 2002.

*Data Quality Assessment:* Bay Protection and Toxic Cleanup Program QAPP. Quality assurance for other samples presented in the Contaminated Sediments Task Force Database.

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*Line of Evidence* Health Advisories

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

*Information Used to Assess Water Quality:* A fish consumption advisory has been established for the PCBs in the Los Angeles/Long Beach Harbor area. The advisory was established by the Office of Environmental Health Hazard Assessment.

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## Region 4

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**Water Segment:** Los Angeles/Long Beach Inner Harbor

**Pollutant:** Zinc

**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.

Two lines of evidence are available in the administrative record to assess this pollutant. A sufficient number of samples exceeded the sediment quality guideline and significant sediment toxicity has been documented within the water body segment.

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 nine of 654 sediment samples exceeded the sediment quality guideline and nine of 84 sediment samples were toxic and these data exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. Based on section 3.6 of the Listing Policy sediment toxicity has been documented and the pollutant in sediment may be linked to the observed toxicity.
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:

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*Numeric Line of Evidence* Toxicity

*Beneficial Use:* MA - Marine Habitat



<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	Measures of significant toxicity relative to control were used.
<i>Data Used to Assess Water Quality:</i>	Nine of 84 bedded sediment samples were toxic as compared to the toxicity test control (Anderson et al., 1998).
<i>Spatial Representation:</i>	The 84 samples were spread throughout the Inner Harbor.
<i>Temporal Representation:</i>	The samples were collected between 1992 and 1997.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program QAPP.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Sediment
<i>Beneficial Use:</i>	CM - Commercial and Sport Fishing (CA), MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	An Effects Range-Median of 410 ug/g was used (Long et al., 1995).
<i>Data Used to Assess Water Quality:</i>	Of the 654 core and grab samples, 69 exceeded the sediment quality guideline (LARWQCB and CCC, 2004).
<i>Spatial Representation:</i>	The 654 samples are spread throughout the Inner Harbor.
<i>Temporal Representation:</i>	The samples were collected between 1992 and 2002.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program QAPP. Quality assurance for other samples presented in the Contaminated Sediments Task Force Database.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Tissue
<i>Beneficial Use:</i>	CM - Commercial and Sport Fishing (CA), MA - Marine Habitat
<i>Matrix:</i>	Tissue

<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.
<i>Evaluation Guideline:</i>	There is no tissue guideline available for this pollutant that satisfies the requirements of section 6.1.3 of the Listing Policy.
<i>Data Used to Assess Water Quality:</i>	Ten measurements are available for mussel tissue (SMWP, 2004).
<i>Spatial Representation:</i>	The measurements were take from samples collected at three stations in the Inner Harbor. Most of the data were collected at one station (601.0).
<i>Temporal Representation:</i>	The samples were collected between 1992 and 2000.
<i>Data Quality Assessment:</i>	State Mussel Watch Program.

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## Region 4

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**Water Segment:** Los Angeles/Long Beach Outer Harbor (inside breakwater)

**Pollutant:** DDT

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under sections 2.1, 3.4, 3.5, and 3.6 of the Listing Policy. Under sections 3.5 and 3.6 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.

Four lines of evidence are available in the administrative record to assess this pollutant. Based on section 3.6 the site has significant sediment toxicity but it is unknown if the pollutant is not likely to cause or contribute to the toxic effect because no sediment guideline is available. An OEHHA advisory has been issued for the location and tissue samples show levels exceeding tissue guidelines.

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 tissue 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 13 samples exceeded the tissue guideline, and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. A health advisory has also been issued.
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:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Tissue
<i>Beneficial Use:</i>	CM - Commercial and Sport Fishing (CA), MA - Marine Habitat
<i>Matrix:</i>	Tissue
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.
<i>Evaluation Guideline:</i>	An OEHHA screening value of 100 ug/kg was used (Brodberg and Pollock, 1999).
<i>Data Used to Assess Water Quality:</i>	Of the 13 fish tissue samples collected, four exceeded the OEHHA screening value (TSMP, 2002).
<i>Spatial Representation:</i>	The 13 samples were spread throughout the Outer Harbor.
<i>Temporal Representation:</i>	The samples were collected in 1997 and 1998.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program QAPP.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Sediment
<i>Beneficial Use:</i>	CM - Commercial and Sport Fishing (CA), MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	A sediment quality guideline is not available for this pollutant that satisfies the requirements of section 6.1.3 of the Listing Policy.
<i>Data Used to Assess Water Quality:</i>	A total of 82 samples are available (LARWQCB and CCC, 2004).
<i>Spatial Representation:</i>	The 82 samples are spread throughout the Outer Harbor.
<i>Temporal Representation:</i>	The samples were collected between 1992 and 2001.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program QAPP. Quality assurance for other samples presented in the Contaminated Sediments

<b><i>Numeric Line of Evidence</i></b>	Toxicity
<i>Beneficial Use:</i>	MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	Toxicity measurements were evaluated by comparison to test control.
<i>Data Used to Assess Water Quality:</i>	Four of 32 bedded samples were toxic when compared to the test control (Anderson, et al., 1998).
<i>Spatial Representation:</i>	The 32 samples were spread throughout the water body.
<i>Temporal Representation:</i>	The samples were collected in 1992, 1994, and 1996.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program.

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<b><i>Line of Evidence</i></b>	Health Advisories
<i>Beneficial Use</i>	CM - Commercial and Sport Fishing (CA), MA - Marine Habitat
<i>Information Used to Assess Water Quality:</i>	A fish consumption advisory has been established for the DDT in the Los Angeles/Long Beach Harbor area. The advisory was established by the Office of Environmental Health Hazard Assessment.

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## Region 4

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**Water Segment:** Los Cerritos Channel

**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.

Two lines of evidence are available in the administrative record to assess this pollutant. A large number of samples exceed the Primary MCL guideline for aluminum.

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-one of 22 samples exceeded the Primary MCL guideline for aluminum 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/* Primary MCL guideline for Aluminum of 1mg/l shall not be exceeded to protect

*Water Quality Criterion:* MUN beneficial uses in accordance with Title 22 of the California Code of regulation table 64431-A of section 64431. This guideline has been incorporated by reference into the Basin Plan and is applicable.

*Data Used to Assess Water Quality:* Numeric data generated from 16 samples taken from 4 sample stations from which 15 samples exceeded the primary aluminum MCL guideline (City of Long Beach, 2003).

*Spatial Representation:* Four sampling sites within Los Cerritos Channel; Basin 14: Dominguez Gap, Basin 20 Bouton Creek, Basin 23: Belmont Pump Station, Basin 27: Los Cerritos Channel.

*Temporal Representation:* Samples taken during 11/11/02 though 2/25/03.

*Environmental Conditions:* Wet weather sampling storm events.

*Data Quality Assessment:* City of Long Beach Storm Water Monitoring Report 2002-2003 QA/QC Appendix A.

***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Primary MCL guideline for Aluminum of 1mg/l shall not be exceeded to protect MUN beneficial uses in accordance with Title 22 of the California Code of regulation table 64431-A of section 64431. This guideline has been incorporated by reference into the Basin Plan and is applicable.

*Data Used to Assess Water Quality:* Numeric data generated from 6 samples taken from 3 sample stations from which 6 samples exceeded the primary aluminum MCL guideline (City of Long Beach, 2003).

*Spatial Representation:* Three sampling sites within Los Cerritos Channel; Basin 20 Bouton Creek, Basin 23: Belmont Pump Station, Basin 27: Los Cerritos Channel.

*Temporal Representation:* Samples taken during 11/12/01 and 11/24/01.

*Environmental Conditions:* Wet weather sampling storm events.

*Data Quality Assessment:* City of Long Beach Storm Water Monitoring Report 2002-2003 QA/QC Appendix A.

## Region 4

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**Water Segment:** Los Cerritos Channel

**Pollutant:** Bis(2ethylhexyl)phthalate

**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 to protect human health from carcinogenic risk.

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 four 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:**

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*Numeric Line of Evidence* Pollutant-Water

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

*Matrix:* Water

*Water Quality Objective/* CTR criterion of 1.8 ug/l applicable to protect human health from carcinogenic



<i>Water Quality Criterion:</i>	risk due to consumption of water and organisms in all surface waters of the state, which are not bays, estuaries, or ocean that include a MUN use designation.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from four samples taken in two sampling sites ( Bouton Creek and Los Cerritos Channel monitoring stations in 11/01). Two samples exceeded the CTR value (City of Long Beach, 2003).
<i>Spatial Representation:</i>	Two sampling sites (Bouton Creek and Los Cerritos Channel Monitoring Stations).
<i>Temporal Representation:</i>	Samples were taken during 11/12/01 and 11/24/01.
<i>Environmental Conditions:</i>	Samples were taken during wet weather season.
<i>Data Quality Assessment:</i>	City of Long Beach Storm Water Monitoring Program QAPP 2002.

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## Region 4

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**Water Segment:** Malibu 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. A sufficient number of samples exceed the Maximum Contaminant Level (MCL) for aluminum of 1000 ug/l to protect MUN beneficial uses.

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 20 samples exceeded the aluminum MCL for the to protection of MUN beneficial uses 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	Maximum Contaminant Level (MCL) for aluminum is 1000 ug/l is applicable to protect MUN.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 20 samples taken from 10/28/00 to 4/30/03 at one to two-week sampling interval. Two (2) samples exceeded the MCL values (LACDPW, 2004c).
<i>Spatial Representation:</i>	One sample site sampled during the dry and wet season from 10/28/00 through 4/30/03 at approximately one to two week intervals.
<i>Temporal Representation:</i>	Twenty samples where taken during the wet and dry season from 10/28/00 to 4/30/03 at approximately one to two week intervals as part of the Los Angeles County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.
<i>Environmental Conditions:</i>	The Malibu Creek monitoring station is located at the existing stream gage station (Stream Gage No. F130-9-R) near Malibu Canyon Road, south of Pioma Road. At this location, the tributary watershed to Malibu Creek is 104.9 square miles. The entire Malibu Creek Watershed is 109.9 square miles.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** Malibu 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 total selenium criterion for continuous concentration.

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 20 samples exceeded the CTR criterion for total 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/* CTR total selenium criterion for continuous concentration in water for the

<i>Water Quality Criterion:</i>	protection of aquatic life is 5.0 ug/l. The criterion is linked and applicable for the protection of aquatic life Beneficial Uses.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 20 samples taken from 10/28/00 to 4/30/03 at one to two-week sampling interval. Five (5) samples exceeded the CTR continuous total selenium concentration criterion (LACDPW, 2004c).
<i>Spatial Representation:</i>	One sample site sampled during the dry and wet season beginning from 10/28/00 through 4/30/03 at approximately one to two week intervals.
<i>Temporal Representation:</i>	Twenty samples were taken during the wet and dry season from 10/12/00 to 4/30/03 at approximately one to two week intervals as part of the Los Angeles County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.
<i>Environmental Conditions:</i>	The Malibu Creek monitoring station is located at the existing stream gage station (Stream Gage No. F130-9-R) near Malibu Canyon Road, south of Piuma Road. At this location, the tributary watershed to Malibu Creek is 104.9 square miles. The entire Malibu Creek Watershed is 109.9 square miles.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** Malibu Creek

**Pollutant:** Sulfates

**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.

Two lines of evidence are available in the administrative record to assess this pollutant. A sufficient number of samples exceed the MCL guideline 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. Nine of a combined total of 22 samples taken from 10/00 to 3/04 exceeded the MCL 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/* Basin Plan Water Quality Objective of 500 mg/l is linked and applicable for the

<i>Water Quality Criterion:</i>	protection of MUN.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 20 samples taken from 10/28/00 to 4/30/03 at one to two-week sampling interval. Seven (7) samples exceeded the Basin Plan Objective for Sulfate (LACDPW, 2004c).
<i>Spatial Representation:</i>	One sample site sampled during the dry and wet season beginning from 10/28/00 through 4/30/03 at approximately one to two week intervals.
<i>Temporal Representation:</i>	Twenty samples were taken during the wet and dry season from 10/28/00 to 4/30/03 at approximately one to two week intervals as part of the Los Angeles County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.
<i>Environmental Conditions:</i>	The Malibu Creek monitoring station is located at the existing stream gage station (Stream Gage No. F130-9-R) near Malibu Canyon Road, south of Piuma Road. At this location, the tributary watershed to Malibu Creek is 104.9 square miles. The entire Malibu Creek Watershed is 109.9 square miles.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	MU - Municipal & Domestic
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	CCR- Title 22 Table 64449-B Secondary Maximum Contaminant Levels of 250 mg/l for Sulfate.
<i>Data Used to Assess Water Quality:</i>	Two samples with two exceeding (SWAMP, 2004).
<i>Spatial Representation:</i>	One station at Malibu Creek: 34.0429 -118.6842.
<i>Temporal Representation:</i>	Samples were collected March 2003 through March 2004.
<i>Environmental Conditions:</i>	Malibu Creek Watershed: 404.21.
<i>Data Quality Assessment:</i>	SWAMP Quality Assurance Plan.

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## Region 4

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**Water Segment:** Marina del Rey Harbor - Back Basins

**Pollutant:** Sediment Bioassays for Estuarine and Marine Water

**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 sufficient number of samples exceed the BPTCP reference envelope evaluation 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.Six of seven samples exceeded the BPTCP reference envelope evaluation 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:**

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*Numeric Line of Evidence* Toxicity

*Beneficial Use:* MA - Marine Habitat, WI - Wildlife Habitat

*Matrix:* Sediment

*Water Quality Objective/* Basin Plan: Existing habitats and associated populations of wetlands fauna and



<i>Water Quality Criterion:</i>	<p>flora shall be maintained by:</p> <ul style="list-style-type: none"> <li>-Maintaining substrate characteristics necessary to support flora and fauna which would be present naturally,</li> <li>-Protecting food supplies for fish and wildlife,</li> <li>-Protecting reproductive and nursery areas, and</li> <li>-Protecting wildlife corridors.</li> </ul> <p>Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.</p>
<i>Evaluation Guideline:</i>	BPTCP reference envelope approach used.
<i>Data Used to Assess Water Quality:</i>	Seven samples, 6 samples considered toxic (Anderson et al., 1998).
<i>Spatial Representation:</i>	Samples were collected synoptically with sediment samples.
<i>Temporal Representation:</i>	Summer-winter 1993, summer 1996, fall-winter 1997.
<i>Data Quality Assessment:</i>	BPTCP QAPP.

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## Region 4

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**Water Segment:** Peck Road Park Lake

**Pollutant:** Trash

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2 and 3.11 of the Listing Policy. Under these sections 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 only because a TMDL had been completed. No substantial evidence in the record shows that standards are met.

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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* TMDL completed (SWRCB, 2003).

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## Region 4

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<b>Water Segment:</b>	Piru Creek (from gaging station below Santa Felicia Dam to headwaters)
<b>Pollutant:</b>	Chloride
<b>Decision:</b>	List
<b>Weight of Evidence:</b>	<p>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.</p> <p>One line of evidence is available in the administrative record to assess this pollutant. A sufficient number of samples exceed the site specific chloride water quality objective.</p> <p>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.</p> <p>This conclusion is based on the staff findings that:</p> <ol style="list-style-type: none"><li>1.The data used satisfies the data quality requirements of section 6.1.4 of the Policy.</li><li>2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.</li><li>3.Eight of 12 samples exceeded the site specific chloride water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.</li><li>4.Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.</li></ol>
<b>SWRCB Staff Recommendation:</b>	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:

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	AG - Agricultural Supply
<i>Matrix:</i>	Water
<i>Water Quality Objective/</i>	The Basin Plan Site Specific Water Quality Objective for Piru Creek (Tributary

<i>Water Quality Criterion:</i>	to Santa Clara River, Reach 4, shall not exceed 60 mg/l for the protection of Agricultural supply (AGR) BUs.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from a total of twelve samples taken from below the Santa Felicia Dam, from July 2001 through April 2004 on a quarterly basis throughout the Year. Eight samples exceeded the site specific WQO for Piru Creek tributary to Santa Clara River, Reach 4 (LACSD, 2004b).
<i>Spatial Representation:</i>	One sampling station sampled from July 2001 through April 2004.
<i>Temporal Representation:</i>	Twelve samples taken on a quarterly basis from July 2001 through April 2004.
<i>Environmental Conditions:</i>	Results are from samples taken from July 2001 through April 2004 below Santa Felicia Dam.
<i>Data Quality Assessment:</i>	Fruit Growers Laboratory Quality Manual.

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## Region 4

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**Water Segment:** Port Hueneme 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. 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. 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. Two of 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/* Los Angeles RWQCB Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life

<i>Water Quality Criterion:</i>	or human health.
<i>Evaluation Guideline:</i>	20 ng/g (OEHHA Screening Value).
<i>Data Used to Assess Water Quality:</i>	Two out of 3 samples exceeded. All 3 samples were filet composites representing the following species: barred surfperch, speckled sanddab, and walleye surfperch (TSMP, 2002).
<i>Spatial Representation:</i>	One stations was sampled.
<i>Temporal Representation:</i>	Samples were collected in April and October 1999.
<i>Data Quality Assessment:</i>	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.

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## Region 4

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**Water Segment:** Rio Hondo Reach 1 (Confl. LA River to Snt Ana Fwy)

**Pollutant:** Ammonia

**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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* CO - Cold Freshwater Habitat, RA - Rare & Endangered Species, SP - Fish Spawning, WA - Warm Freshwater Habitat, WE - Wetland Habitat, WI - Wildlife Habitat

*Information Used to Assess Water Quality:* An alternative enforceable program is in place that will address ammonia water quality standards exceedances for this reach (SWRCB, 2003).

In June 1995, the seven water reclamation plants discharging in the San Gabriel River and Santa Clara River watersheds received NPDES permits containing requirements regarding compliance with the Basin Plan water quality objectives for ammonia. In accordance with these permits, the Los

Angeles County Sanitation Districts have been pursuing the addition of nitrification and denitrification facilities at each of these plants to comply with the ammonia objectives. By June 2003, it is expected that these new facilities will be operational and ammonia will be drastically reduced. Research facility operation shows that the monthly average ammonia concentration will fully comply with the chronic ammonia objective. Objective is expected to be applicable in June 2003. It is probable that the majority of ammonia discharged to this water body was contributed by POTWs. Information in the record indicates that the majority (over 95%) of the ammonia in the Los Angeles River was contributed by POTWs. Also, it is probable that the contribution in the San Gabriel River watershed is dominated by contributions from POTWs as well. Generally, concentrations of ammonia upstream of the treatment plants are much lower than downstream concentrations (up to an order of magnitude difference).

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## Region 4

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**Water Segment:** San Gabriel River Estuary

**Pollutant:** Ammonia as Nitrogen

**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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* ES - Estuarine Habitat, MA - Marine Habitat, MI - Fish Migration, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* The water quality objectives for ammonia are listed in Tables 3-1 to 3-4 of the Los Angeles RWQCB Basin Plan.

*Data Used to Assess Water Quality:* One-hundred and seventeen water samples, 34 samples exceeding (SWRCB, 2003).

*Spatial Representation:* Three sample sites.

*Temporal Representation:* Summer 1997, fall 1998, spring 2000.

*Data Quality Assessment:* Los Angeles County Sanitation District as part of the receiving water monitoring program for the San Jose Creek Water Reclamation plan.

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* ES - Estuarine Habitat, MA - Marine Habitat, MI - Fish Migration, RA - Rare & Endangered Species, SP - Fish Spawning, WI - Wildlife Habitat

*Information Used to Assess Water Quality:* An alternative enforceable program is in place that will address ammonia water quality standards exceedances for this reach. In June 1995, the seven water reclamation plants discharging in the San Gabriel River and Santa Clara River watersheds received NPDES permits containing requirements regarding compliance with the Basin Plan water quality objectives for ammonia. In accordance with these permits, the Los Angeles County Sanitation Districts have been pursuing the addition of nitrification and denitrification facilities at each of these plants to comply with the ammonia objectives. By June 2003, it is expected that these new facilities will be operational and ammonia will be drastically reduced. Research facility operation shows that the monthly average ammonia concentration will fully comply with the chronic ammonia objective that are expected to be applicable in June 2003.

It is probable that the majority of ammonia discharged to this water body was contributed by POTWs. Information in the record indicates that the majority (over 95%) of the ammonia in the Los Angeles River was contributed by POTWs. It is probable that the contribution in the San Gabriel River watershed is dominated by contributions from POTWs as well. Generally, concentrations of ammonia upstream of the treatment plants are much lower than downstream concentrations (up to an order of magnitude difference).

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## Region 4

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**Water Segment:** San Gabriel River Reach 1 (Estuary to Firestone)

**Pollutant:** Ammonia

**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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* In order to protect aquatic life, ammonia concentrations in inland surface waters characteristic of freshwater shall not exceed the values calculated for the appropriate instream conditions [both pH and temperature] shown in Tables 3-1 to 3-3 [in the Basin Plan] (per U.S. EPA's most recent criteria guidance document, '1999 Update of Ambient Water Quality Criteria for Ammonia').

<i>Data Used to Assess Water Quality:</i>	Based on 30-day average concentrations of ammonia, five samples out of 18 total samples exceed the ammonia objective. Ambient measurements of pH and temperature (30-day averages) were used to calculate the water quality objective (LACSD, 2004b).
<i>Spatial Representation:</i>	Five stations.
<i>Temporal Representation:</i>	Samples were collected from June 2003 through November 2004. New management practices were begun at the beginning of this period and may have resulted in a change in water quality. Water quality measurements collected before the implementation of management measures were not considered representative of current conditions.

<i>Line of Evidence</i>	Remedial Program in Place
<i>Beneficial Use</i>	WA - Warm Freshwater Habitat
<i>Information Used to Assess Water Quality:</i>	<p>An alternative enforceable program is in place that will address ammonia water quality standards exceedances for this reach.</p> <p>In June 1995, the seven water reclamation plants discharging in the San Gabriel River and Santa Clara River watersheds received NPDES permits requirements regarding compliance with the Basin Plan water quality objectives for ammonia. In accordance with these permits, the Los Angeles County Sanitation Districts have been pursuing the addition of nitrification and denitrification facilities at each of these plants to comply with the ammonia objectives. By June 2003, it is expected that these new facilities will be operational and ammonia will be drastically reduced. Research facility operation shows that the monthly average ammonia concentration will fully comply with the chronic ammonia objective that are expected to be applicable in June 2003.</p> <p>It is probable that the majority of ammonia discharged to this water body was contributed by POTWs. Information in the record indicates that the majority (over 95%) of the ammonia in the Los Angeles River was contributed by POTWs. It is probable that the contribution in the San Gabriel River watershed is dominated by contributions from POTWs as well. Generally, concentrations of ammonia upstream of the treatment plants is much lower than downstream concentrations (up to an order of magnitude difference).</p>

## Region 4

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**Water Segment:** San Gabriel River Reach 1 (Estuary to Firestone)

**Pollutant:** pH

**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 pH 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. Eighty-five of 284 samples exceeded the pH 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/* Basin Plan: The pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be

<i>Water Quality Criterion:</i>	changed more than 0.5 units from natural conditions as a result of waste discharge.
<i>Data Used to Assess Water Quality:</i>	Eighty-five samples of 284 total samples exceed the pH objective (LACSD, 2004b).
<i>Spatial Representation:</i>	Six stations.
<i>Temporal Representation:</i>	Measurements were taken weekly between June 2003 and November 2004.
<i>Data Quality Assessment:</i>	NPDES quality assurance.

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## Region 4

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**Water Segment:** San Gabriel River Reach 2 (Firestone to Whittier Narrows Dam)

**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. A sufficient number of samples exceed the MCL primary 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.Two of 12 samples exceeded the 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic, R1 - Water Contact Recreation

*Matrix:* Water

*Water Quality Objective/* 1 mg/L (MCLs; Title 22 Table 6444-A Primary).

*Water Quality Criterion:*

*Data Used to Assess Water Quality:*

Two out of 12 samples at this location exceeded the objective for total aluminum.

Summary of Results for the 2000-2001 Routine Monitoring at the San Gabriel River (Table B-5) (LACDPW, 2004c).

*Spatial Representation:*

The San Gabriel River Monitoring Station is located at an historic stream gage station (Stream Gage No. F263C-R), below San Gabriel River Parkway in Pico Rivera. At this location the upstream tributary area is 450 square miles. The San Gabriel River, at the gauging station, is a grouted rock-concrete stabilizer along the western levee and a natural section on the eastern side. Flow measurement and water sampling are conducted in the grouted rock area along the western levee of the river. The length of the concrete stabilizer is nearly 70 feet. The San Gabriel River sampling location has been an active stream gauging station since 1968.

*Temporal Representation:*

Samples taken between 10/28/2000 and 4/30/2003.

*Environmental Conditions:*

Samples taken on 10/10/2002 and 4/30/2003 were 'DRY' samples. All others were 'WET'.

*Data Quality Assessment:*

Detailed QA/QC contained in this report.

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## Region 4

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**Water Segment:** San Gabriel River Reach 2 (Firestone to Whittier Narrows Dam)

**Pollutant:** Ammonia

**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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* In order to protect aquatic life, ammonia concentrations in inland surface waters characteristic of freshwater shall not exceed the values calculated for the appropriate instream conditions [both pH and temperature] shown in Tables 3-1 to 3-3 [in the Basin Plan] (per U.S. EPA's most recent criteria guidance document, '1999 Update of Ambient Water Quality Criteria for Ammonia').

<i>Data Used to Assess Water Quality:</i>	Based on 30-day average concentrations of ammonia, no samples out of 3 total samples exceed the ammonia objective. Ambient measurements of pH and temperature (30-day averages) were used to calculate the water quality objective (LACSD, 2004b).
<i>Spatial Representation:</i>	One station.
<i>Temporal Representation:</i>	Samples were collected between September 2004 and November 2004.
<i>Data Quality Assessment:</i>	NPDES quality assurance.

<b><i>Line of Evidence</i></b>	Remedial Program in Place
<i>Beneficial Use</i>	RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
<i>Information Used to Assess Water Quality:</i>	<p>An alternative enforceable program is in place that will address ammonia water quality standards exceedances for this reach (SWRCB, 2003).</p> <p>In June 1995, the seven water reclamation plants discharging in the San Gabriel River and Santa Clara River watersheds received NPDES permits containing requirements regarding compliance with the Basin Plan water quality objectives for ammonia. In accordance with these permits, the Los Angeles County Sanitation Districts have been pursuing the addition of nitrification and denitrification facilities at each of these plants to comply with the ammonia objectives. By June 2003, it is expected that these new facilities will be operational and ammonia will be drastically reduced. Research facility operation shows that the monthly average ammonia concentration fully complies with the chronic ammonia objective that are expected to be applicable in June 2003.</p> <p>It is probable that the majority of ammonia discharged to this water body was contributed by POTWs. Information in the record indicates that the majority (over 95%) of the ammonia in the Los Angeles River was contributed by POTWs. It is probable that the contribution in the San Gabriel River watershed is dominated by contributions from POTWs as well. Generally, concentrations of ammonia upstream of the treatment plants is much lower than downstream concentrations (up to an order of magnitude difference).</p>

## Region 4

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**Water Segment:** San Gabriel River, East Fork

**Pollutant:** Trash

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for listing under sections 2.2 and 3.11 of the Listing Policy. Under these sections 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 only because a TMDL had been completed. No substantial evidence in the record shows that standards are met.

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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* MI - Fish Migration, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Information Used to Assess Water Quality:* TMDL completed (SWRCB, 2003).

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## Region 4

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**Water Segment:** San Jose Creek Reach 1 (SG Confluence to Temple St.)

**Pollutant:** Ammonia

**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. Two out of 17 samples exceed the ammonia objective, however, 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* In order to protect aquatic life, ammonia concentrations in inland surface waters characteristic of freshwater shall not exceed the values calculated for the appropriate instream conditions [both pH and temperature] shown in Tables 3-1 to 3-3 [in the Basin Plan] (per U.S. EPA's most recent criteria guidance document, '1999 Update of Ambient Water Quality Criteria for Ammonia').

<i>Data Used to Assess Water Quality:</i>	Based on 30-day average concentrations of ammonia, 2 samples out of 17 total samples exceed the ammonia objective. Ambient measurements of pH and temperature (30-day averages) were used to calculate the water quality objective (LACSD, 2004b).
<i>Spatial Representation:</i>	Five stations.
<i>Temporal Representation:</i>	Data were collected between July 2003 and November 2004.
<i>Data Quality Assessment:</i>	NPDES quality assurance.

<b><i>Line of Evidence</i></b>	Remedial Program in Place
<b><i>Beneficial Use</i></b>	WA - Warm Freshwater Habitat
<b><i>Information Used to Assess Water Quality:</i></b>	<p>An alternative enforceable program is in place that will address ammonia water quality standards exceedances for this Reach (SWRCB, 2003).</p> <p>In June 1995, the seven water reclamation plants discharging in the San Gabriel River and Santa Clara River watersheds received NPDES permits containing requirements regarding compliance with the Basin Plan water quality objectives for ammonia. In accordance with these permits, the Los Angeles County Sanitation Districts have been pursuing the addition of nitrification and denitrification facilities at each of these plants to comply with the ammonia objectives. By June 2003, it is expected that these new facilities will be operational and ammonia will be drastically reduced. Research facility operation shows that the monthly average ammonia concentration will fully comply with the chronic ammonia objective that are expected to be applicable in June 2003.</p> <p>It is probable that the majority of ammonia discharged to this water body was contributed by POTWs. Information in the record indicates that the majority (over 95%) of the ammonia in the Los Angeles River was contributed by POTWs. It is probable that the contribution in the San Gabriel River watershed is dominated by contributions from POTWs as well. Generally, concentrations of ammonia upstream of the treatment plants are much lower than downstream concentrations (up to an order of magnitude difference).</p>

## Region 4

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**Water Segment:** San Jose Creek Reach 2 (Temple to I-10 at White Ave.)

**Pollutant:** Ammonia

**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:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* WI - Wildlife Habitat

*Information Used to Assess Water Quality:* In June 1995, the seven water reclamation plants discharging in the San Gabriel River and Santa Clara River watersheds received NPDES permits containing requirements regarding compliance with the Basin Plan water quality objectives for ammonia. In accordance with these permits, the Los Angeles County Sanitation Districts have been pursuing the addition of nitrification and denitrification facilities at each of these plants to comply with the ammonia objectives. By June 2003, it is expected that these new facilities will be operational and ammonia will be drastically reduced. Research facility operation shows that the monthly average ammonia

concentration will fully comply with the chronic ammonia objective that are expected to be applicable in June 2003 (SWRCB, 2003).

It is probable that the majority of ammonia discharged to this water body was contributed by POTWs. Information in the record indicates that the majority (over 95%) of the ammonia in the Los Angeles River was contributed by POTWs. It is probable that the contribution in the San Gabriel River watershed is dominated by contributions from POTWs as well. Generally, concentrations of ammonia upstream of the treatment plants are much lower than downstream concentrations (up to an order of magnitude difference).

*Data Used to Assess Water Quality:*

New data was not submitted during the 2002 listing cycle that indicated that water quality standards are met.

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## Region 4

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**Water Segment:** Santa Clara River Reach 1 (Estuary to Hwy 101 Bridge)

**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 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 evaluation guideline for toxicity and thus the basin plan narrative 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 exhibited significant USEPA 7-day Ceriodaphnia dubia 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 toxicity guidelines are exceeded and a pollutant contributes to or causes the problem.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* ES - Estuarine Habitat

*Matrix:* Water



<i>Water Quality Objective/ Water Quality Criterion:</i>	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 aquatic life. Use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration shall determine compliance with this objective, or other appropriate methods as specified by the Regional Board.
<i>Evaluation Guideline:</i>	Toxicity samples were tested using the 7-day Ceriodaphnia dubia test, EPA 1994.
<i>Data Used to Assess Water Quality:</i>	Two of two toxicity samples with significant results compared to negative control based on statistical test, alpha of less than 5%, and less than the evaluation threshold (SWAMP, 2004).
<i>Spatial Representation:</i>	One station: 34.23556 -119.24083.
<i>Temporal Representation:</i>	Samples were taken in November 2001, February 2003
<i>Environmental Conditions:</i>	Santa Clara River Estuary-Between Highway 101 Bridge and Santa Clara River Estuary.
<i>Data Quality Assessment:</i>	SWAMP Quality Assurance Plan.

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## Region 4

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**Water Segment:** Santa Clara River Reach 11 (Piru Creek, from confluence with Santa Clara River Reach 4 to gaging station below Santa Felicia Dam)

**Pollutant:** Boron

**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 3.1a 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 Inland Surface Waters Site Specific Water Quality Objectives of 1.0 mg/l for Boron on table 3.8 of the Basin Plan. 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 Site Specific 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply

*Matrix:* Water

*Water Quality Objective/* Water Quality Objectives for Selected Constituents in Inland Surface Waters

<i>Water Quality Criterion:</i>	shown in the Basin Plan on Table 3-8 (1.0 mg/L).
<i>Data Used to Assess Water Quality:</i>	Three water samples; three samples exceeding the objective (SWAMP, 2004).
<i>Spatial Representation:</i>	Three sampling stations.
<i>Temporal Representation:</i>	Samples were collected in February through June 2003.
<i>Environmental Conditions:</i>	Santa Clara River Segment 11. Piru Creek above gauging station below Santa Felicia Dam.
<i>Data Quality Assessment:</i>	SWAMP Quality Assurance Plan.

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## Region 4

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**Water Segment:** Santa Clara River Reach 11 (Piru Creek, from confluence with Santa Clara River Reach 4 to gaging station below Santa Felicia Dam)

**Pollutant:** Sulfates

**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 sufficient number of samples exceed the exceed the Inland Surface Waters Site Specific Water Quality Objectives of 400 mg/l for Sulfate on table 3.8 of the Basin Plan.

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 Site Specific 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply

*Matrix:* Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	Water Quality Objectives for Selected Constituents in Inland Surface Waters shown in Table 3-8 of the Basin Plan (400 mg/l).
<i>Data Used to Assess Water Quality:</i>	Thirteen samples with 6 samples exceeding (SWAMP, 2004).
<i>Spatial Representation:</i>	Nine sampling stations.
<i>Temporal Representation:</i>	Samples were collected in February through June 2003.
<i>Environmental Conditions:</i>	Santa Clara River Segment 11. Piru Creek above gauging station below Santa Felicia Dam.
<i>Data Quality Assessment:</i>	SWAMP Quality Assurance Plan.

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## Region 4

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**Water Segment:** Santa Clara River Reach 5 (Blue Cut gaging station to West Pier Hwy 99 Bridge)  
(was named Santa Clara River Reach 7 on 2002 303(d) lists)

**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. A sufficient number of samples exceed the CCR Title 22 Secondary MCLs Drinking Water Standards of 0.2 mg/l for Aluminum.

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 MCLs Drinking Water Standards for Aluminum 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:**

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*Numeric Line of Evidence*                      Pollutant-Water

*Beneficial Use:*                                      MU - Municipal & Domestic

*Matrix:*    -N/A

<i>Water Quality Objective/ Water Quality Criterion:</i>	CCR Title 22 Secondary MCLs Drinking Water Standards of 0.2 mg/l for Aluminum : Table 64431-A and 64449-B.
<i>Data Used to Assess Water Quality:</i>	Three samples with two exceeding (SWAMP, 2004).
<i>Spatial Representation:</i>	Three sampling stations.
<i>Temporal Representation:</i>	Samples were collected in October and November of 2001.
<i>Environmental Conditions:</i>	The Santa Clara River Reach 5 monitoring stations are located within the Santa Clara River between West Pier Highway 99 and Blue Cut gaging station. Stations were located on Castaic Creek and Blue Cut.
<i>Data Quality Assessment:</i>	SWAMP Quality Assurance Plan.

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## Region 4

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<b>Water Segment:</b>	Santa Clara River Reach 5 (Blue Cut gaging station to West Pier Hwy 99 Bridge) (was named Santa Clara River Reach 7 on 2002 303(d) lists)
<b>Pollutant:</b>	Ammonia
<b>Decision:</b>	List
<b>Weight of Evidence:</b>	<p>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.</p> <p>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.</p> <p>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.</p>
<b>SWRCB Staff Recommendation:</b>	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.
<b>Lines of Evidence:</b>	

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<i>Line of Evidence</i>	Remedial Program in Place
<i>Beneficial Use</i>	MI - Fish Migration, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WE - Wetland Habitat, WI - Wildlife Habitat
<i>Information Used to Assess Water Quality:</i>	<p>An alternative enforceable program is in place that will address ammonia water quality standards exceedances for this Reach.</p> <p>In June 1995, the seven water reclamation plants discharging in the San Gabriel River and Santa Clara River watersheds received NPDES permits containing requirements regarding compliance with the Basin Plan water quality objectives for ammonia. In accordance with these permits, the Los</p>



Angeles County Sanitation Districts have been pursuing the addition of nitrification and denitrification facilities at each of these plants to comply with the ammonia objectives. By June 2003, it is expected that these new facilities will be operational and ammonia will be drastically reduced. Research facility operation shows that the monthly average ammonia concentration fully complies with the chronic ammonia objective that are expected to be applicable in June 2003 (SWRCB, 2003).

It is probable that the majority of ammonia discharged to this water body was contributed by POTWs. Information in the record indicates that the majority (over 95%) of the ammonia in the Los Angeles River was contributed by POTWs. It is probable that the contribution in the San Gabriel River watershed is dominated by contributions from POTWs as well. Generally, concentrations of ammonia upstream of the treatment plants is much lower than downstream concentrations (up to an order of magnitude difference).

*Data Used to Assess Water Quality:*

New data was not submitted during the listing cycle that indicated that water quality standards are met.

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## Region 4

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**Water Segment:** Santa Clara River Reach 5 (Blue Cut gaging station to West Pier Hwy 99 Bridge)  
(was named Santa Clara River Reach 7 on 2002 303(d) lists)

**Pollutant:** Chloride

**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. Two lines of evidence are numeric and one line of evidence documents that a TMDL was developed by RWQCB and it was approved by USEPA on May of 2005.

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 to address this water body pollutant combination has been developed and approved for implementation.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Los Angeles Region site specific WQ Objective for Santa Clara River, Reach 5 is 100 mg/l.

*Data Used to Assess Water Quality:* Forty one of 46 samples exceeded the site specific objective.

*Spatial Representation:* One sample site.

*Temporal Representation:* Samples were collected from 1/11/2000 to 1/27/2005.

*Environmental Conditions:* Data Collected by the United Water Conservation District during 2000 and 2005. Station sampled is located at Blue Cut Gaging Station near the county line.

*Data Quality Assessment:* United Water Conservation District QAPP.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* AG - Agricultural Supply

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Los Angeles Region site specific WQ Objective for Santa Clara River, Reach 5 is 100 mg/l.

*Data Used to Assess Water  
Quality:* Seven water samples, four samples exceeding (SWAMP, 2004).

*Spatial Representation:* Seven stations.

*Temporal Representation:* Samples were collected in October and November of 2001.

*Environmental Conditions:* The Santa Clara River Reach 5 monitoring stations are located within the Santa Clara River between West Pier Highway 99 and Blue Cut gauging station. Stations were located on Castaic Creek and Blue Cut.

*Data Quality Assessment:* SWAMP Quality Assurance Plan.

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***Line of Evidence*** Remedial Program in Place

*Beneficial Use* AG - Agricultural Supply

*Information Used to Assess  
Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Clara River Chloride TMDL was approved by SWRCB in July 2004 and subsequently approved by the Office of Administrative Law on November 15, 2004. USEPA approved the TMDL on May of 2005.

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## Region 4

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**Water Segment:** Santa Clara River Reach 5 (Blue Cut gaging station to West Pier Hwy 99 Bridge)  
(was named Santa Clara River Reach 7 on 2002 303(d) lists)

**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 sufficient number of samples exceed the CDFG Aquatic life toxicity one hour average 0.08 mg/l and 4 day average 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. Two of four samples exceeded the CDFG Diazinon 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	CDFG Hazard Assessment Criteria 0.16 ug/L 1-hour average (acute), 0.10 ug/L 4-day (chronic) average.
<i>Data Used to Assess Water Quality:</i>	Four water samples, two samples exceeding (SWAMP, 2004).
<i>Spatial Representation:</i>	Three stations.
<i>Temporal Representation:</i>	Samples were collected in October and November of 2001.
<i>Environmental Conditions:</i>	The Santa Clara River Reach 5 monitoring stations are located within the Santa Clara River between West Pier Highway 99 and Blue Cut gaging station. Stations were located on Castaic Creek and Blue Cut.
<i>Data Quality Assessment:</i>	SWAMP Quality Assurance Plan.

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## Region 4

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**Water Segment:** Santa Clara River Reach 5 (Blue Cut gaging station to West Pier Hwy 99 Bridge)  
(was named Santa Clara River Reach 7 on 2002 303(d) lists)

**Pollutant:** Polychlorinated biphenyls

**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 Toxics Rule (CTR) fresh water criterion continuous concentration of 0.014mg/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 three samples exceeded the CTR chronic criterion 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	California Toxics Rule (CTR) Criteria: Chronic FW .014 mg/l.
<i>Data Used to Assess Water Quality:</i>	Three summations with 2 exceeding (SWAMP, 2004).
<i>Spatial Representation:</i>	Three stations.
<i>Temporal Representation:</i>	Samples were collected in October and November of 2001.
<i>Environmental Conditions:</i>	The Santa Clara River Reach 5 monitoring stations are located within the Santa Clara River between West Pier Highway 99 and Blue Cut gaging station. Stations were located on Castaic Creek and Blue Cut.
<i>Data Quality Assessment:</i>	SWAMP Quality Assurance Plan.

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## Region 4

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<b>Water Segment:</b>	Santa Clara River Reach 6 (W Pier Hwy 99 to Bouquet Cyn Rd) (was named Santa Clara River Reach 8 on 2002 303(d) lists)
<b>Pollutant:</b>	Ammonia
<b>Decision:</b>	List
<b>Weight of Evidence:</b>	<p>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.</p> <p>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.</p> <p>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.</p>
<b>SWRCB Staff Recommendation:</b>	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.
<b>Lines of Evidence:</b>	

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<i>Line of Evidence</i>	Remedial Program in Place
<i>Beneficial Use</i>	MI - Fish Migration, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WE - Wetland Habitat, WI - Wildlife Habitat
<i>Information Used to Assess Water Quality:</i>	<p>An alternative enforceable program is in place that will address ammonia water quality standards exceedances for this Reach.</p> <p>In June 1995, the seven water reclamation plants discharging in the San Gabriel River and Santa Clara River watersheds received NPDES permits containing requirements regarding compliance with the Basin Plan water quality objectives for ammonia. In accordance with these permits, the Los</p>



Angeles County Sanitation Districts have been pursuing the addition of nitrification and denitrification facilities at each of these plants to comply with the ammonia objectives. By June 2003, it is expected that these new facilities will be operational and ammonia will be drastically reduced. Research facility operation shows that the monthly average ammonia concentration fully complies with the chronic ammonia objective that are expected to be applicable in June 2003 (SWRCB, 2003).

It is probable that the majority of ammonia discharged to this water body was contributed by POTWs. Information in the record indicates that the majority (over 95%) of the ammonia in the Los Angeles River was contributed by POTWs. It is probable that the contribution in the San Gabriel River watershed is dominated by contributions from POTWs as well. Generally, concentrations of ammonia upstream of the treatment plants is much lower than downstream concentrations (up to an order of magnitude difference).

*Data Used to Assess Water Quality:*

New data was not submitted during the listing cycle that indicated that water quality standards are met (SWAMP, 2004).

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## Region 4

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<b>Water Segment:</b>	Santa Clara River Reach 6 (W Pier Hwy 99 to Bouquet Cyn Rd) (was named Santa Clara River Reach 8 on 2002 303(d) lists)
<b>Pollutant:</b>	Chloride
<b>Decision:</b>	List
<b>Weight of Evidence:</b>	<p>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.</p> <p>One line of evidence is available in the administrative record to assess this pollutant. Based on the applicable factor, a TMDL has been developed by RWQCB and was approved by USEPA in May 2005.</p> <p>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.</p>
<b>SWRCB Staff Recommendation:</b>	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 developed and approved for implementation.

### Lines of Evidence:

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<i>Line of Evidence</i>	Remedial Program in Place
<i>Beneficial Use</i>	AG - Agricultural Supply
<i>Information Used to Assess Water Quality:</i>	A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Clara River Chloride TMDL was approved by SWRCB in July 2004 and subsequently approved by the Office of Administrative Law on November 15, 2004. USEPA approved the TMDL on May of 2005.

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## Region 4

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**Water Segment:** Santa Clara River Reach 6 (W Pier Hwy 99 to Bouquet Cyn Rd) (was named Santa Clara River Reach 8 on 2002 303(d) lists)

**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. An sufficient number of samples exceed the CDFG Chlorpyrifos 0.05 mg/l four day average aquatic life toxicity 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.Nine of 31 samples exceeded the CDFG 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	CDFG Aquatic life toxicity one hour average: 0.08 mg/l and 4 day average: 0.05 mg/l.
<i>Data Used to Assess Water Quality:</i>	31 water samples, 9 samples exceeding the 4 day average. All exceedances were from Station STCBQT (SWAMP, 2004).
<i>Spatial Representation:</i>	Eight stations.
<i>Temporal Representation:</i>	Samples were collected from August 2002 through April 2003.
<i>Environmental Conditions:</i>	The Santa Clara River Reach 6 monitoring stations are located between Bouquet Canyon Road Bridge and West Point Highway 99.
<i>Data Quality Assessment:</i>	SWAMP Quality Assurance Plan

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## Region 4

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**Water Segment:** Santa Clara River Reach 6 (W Pier Hwy 99 to Bouquet Cyn Rd) (was named Santa Clara River Reach 8 on 2002 303(d) lists)

**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 sufficient number of samples exceed the CDFG Diazinon Aquatic life toxicity guidelines of 0.08 mg/l one hour average and the 0.05 mg/l 4 day average.

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 29 samples exceeded the CDFG guidelines 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:**

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*Numeric Line of Evidence*                      Pollutant-Water

*Beneficial Use:*                                      WA - Warm Freshwater Habitat

*Matrix:*    Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses.
<i>Evaluation Guideline:</i>	CDFG Hazard Assessment Criteria 0.16 ug/L 1-hour average (acute), 0.10 ug/L 4-day (chronic) average.
<i>Data Used to Assess Water Quality:</i>	Twenty nine water samples, 28 samples exceeding (SWAMP, 2004).
<i>Spatial Representation:</i>	Six stations.
<i>Temporal Representation:</i>	Samples were collected from August 2002 through April 2003.
<i>Environmental Conditions:</i>	The Santa Clara River Reach 6 monitoring stations are located between Bouquet Canyon Road Bridge and West Point Highway 99.
<i>Data Quality Assessment:</i>	SWAMP Quality Assurance Plan.

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## Region 4

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<b>Water Segment:</b>	Santa Clara River Reach 6 (W Pier Hwy 99 to Bouquet Cyn Rd) (was named Santa Clara River Reach 8 on 2002 303(d) lists)
<b>Pollutant:</b>	Nitrogen, Nitrite
<b>Decision:</b>	List
<b>Weight of Evidence:</b>	<p>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.</p> <p>Two lines of evidence are available in the administrative record to assess this pollutant. A sufficient number of samples exceed the water quality objective but a remedial program has been out in place to address nitrite problems in this segment.</p> <p>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. However, there is sufficient information to indicate that the nitrification/ de-nitrification treatment process installed will address the nitrite problem.</p> <p>This conclusion is based on the staff findings that:</p> <ol style="list-style-type: none"><li>1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.</li><li>2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.</li><li>3. Fifteen of 36 samples exceeded the water quality objective and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.</li><li>4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.</li></ol>
<b>SWRCB Staff Recommendation:</b>	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. However there has been a remedial program put in place to address this problem.

### Lines of Evidence:

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	GW - Groundwater Recharge

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Nitrate-nitrogen plus Nitrite-nitrogen WQO is 10 mg/L.
<i>Data Used to Assess Water Quality:</i>	Thirty-six total measurements of nitrite-nitrogen. Fifteen samples exceed the water quality objective for nitrite-nitrogen (SWRCB, 2003).
<i>Spatial Representation:</i>	Two sample sites.
<i>Temporal Representation:</i>	Data were collected quarterly from 1997 through 2002.
<i>Environmental Conditions:</i>	Age of the data is up to five years.
<i>QA/QC Equivalent:</i>	NPDES monitoring and RWQCB staff monitoring related to TMDL development.

<b><i>Line of Evidence</i></b>	Remedial Program in Place
<i>Beneficial Use</i>	GW - Groundwater Recharge
<i>Information Used to Assess Water Quality:</i>	<p>The Saugus Water Reclamation Plant, which discharges at the upstream end of the reach, is in the process of installing nitrification and denitrification (NDN) treatment processes to meet effluent limits in the plant's NPDES permit for ammonia and nitrate plus nitrite (SWRCB, 2003). The permit establishes a compliance date of June 12, 2003 to meet receiving water limits for ammonia. The permittee has stated and shown that the NDN facilities will be operational at the Saugus plant by the June, 2003 deadline. The contract has been awarded (nearly \$10 million) to construct the NDN processes.</p> <p>When the NDN facilities are operational the nitrite concentrations will be reduced drastically. Operation of a research NDN facility at the Whittier narrows WRP has shown that NDN will reduce nitrite levels well below the 1 mg/L nitrite water quality objective.</p> <p>The Saugus WRP is the principal (if not sole) source of nitrite in Reach 8. A measurement upstream of the treatment plant had a very low concentration of nitrite (well below the standard). Other measurements down stream show varying levels of nitrite depending on possible plant uptake, conversion of nitrite to other more stable forms of nitrogen, and dilution.</p>



## Region 4

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**Water Segment:** Santa Clara River Reach 6 (W Pier Hwy 99 to Bouquet Cyn Rd) (was named Santa Clara River Reach 8 on 2002 303(d) lists)

**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 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 7-day Ceriodaphnia dubia test and thus the narrative 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.Four of 4 samples exhibited significant Ceriodaphnia 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* CO - Cold Freshwater Habitat, MU - Municipal & Domestic, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	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 aquatic life. Use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration shall determine compliance with this objective, or other appropriate methods as specified by the Regional Board.
<i>Evaluation Guideline:</i>	Toxicity samples tests using the 7-day Ceriodaphnia dubia test.
<i>Data Used to Assess Water Quality:</i>	Four of 4 toxicity samples with significant results compared to negative control based on statistical test, alpha of less than 5%, and less than the evaluation threshold (SWAMP, 2004).
<i>Spatial Representation:</i>	One station located at 34.42782 -118.54022.
<i>Temporal Representation:</i>	Samples were taken in November 2001, February 2003.
<i>Environmental Conditions:</i>	The Santa Clara River Reach 6 monitoring stations are located between Bouquet Canyon Road Bridge and West Point Highway 99.
<i>Data Quality Assessment:</i>	SWAMP Quality Assurance Plan.

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## Region 4

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**Water Segment:** Sawpit Creek

**Pollutant:** Bis(2ethylhexyl)phthalate

**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 1.8 ug/l human health criterion for the risk of carcinogens due to consumption of water and organisms.

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 7 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* GW - Groundwater Recharge, MI - Fish Migration, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	CTR criteria 1.8 ug/L (ppb) Human Health Freshwater (USEPA, 2000).
<i>Data Used to Assess Water Quality:</i>	Six of seven samples exceeded the CTR criteria for Bis(2-ethylhexyl)phthalate (LACDPW, 2004c).
<i>Spatial Representation:</i>	Samples were collected from seven sites.
<i>Temporal Representation:</i>	Samples were collected in November 2000, January, February, and March 2001.
<i>Environmental Conditions:</i>	Samples were collected during storm events.
<i>QA/QC Equivalent:</i>	Los Angeles Department of Public Works: Evaluation of analytes and QA/QC specification for Monitoring Programs. The report also included quality control data.

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## Region 4

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**Water Segment:** Sawpit Creek

**Pollutant:** Fecal Coliform

**Decision:** List

**Weight of Evidence:** This pollutant is being considered for placement on the section 303(d) list under section 3.3 of the Listing Policy. Under section 3.3 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 400 MPN/100 ml fresh water single sample limit water quality objective for the protection of RE1 Beneficial Uses.

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 6 samples exceeded the fecal coliform 400 MPN/100 ml 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* GW - Groundwater Recharge, MI - Fish Migration, MU - Municipal & Domestic, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan WQO: 400 MPN/100 ml fecal coliform.
<i>Data Used to Assess Water Quality:</i>	Five of six samples exceeded the fecal coliform objective (LACDPW, 2004c).
<i>Spatial Representation:</i>	Samples were collected from six sample sites
<i>Temporal Representation:</i>	Samples were collected in November 2000, January, February, and March 2001.
<i>Environmental Conditions:</i>	Samples were collected during storm events.
<i>QA/QC Equivalent:</i>	Los Angeles Department of Public Works: Evaluation of analytes and QA/QC specification for Monitoring Programs.

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## Region 4

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**Water Segment:** Ventura Marina Jetties

**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 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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* Los Angeles RWQCB Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.

<i>Evaluation Guideline:</i>	100 ng/g (OEHHA Screening Value).
<i>Data Used to Assess Water Quality:</i>	Two of 6 samples exceeded. All 6 samples were filet composites representing the following species: Rainbow surfperch, shiner surfperch, white surfperch, and white croaker (TSMP, 2002).
<i>Spatial Representation:</i>	One station were sampled.
<i>Temporal Representation:</i>	Samples were collected in September 1999.
<i>Data Quality Assessment:</i>	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.

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## Region 4

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**Water Segment:** Ventura Marina Jetties

**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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/  
Water Quality Criterion:* Los Angeles RWQCB Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.

<i>Evaluation Guideline:</i>	20 ng/g (OEHHA Screening Value).
<i>Data Used to Assess Water Quality:</i>	Two of 6 samples exceeded. All 6 samples were filet composites representing the following species: Rainbow surfperch, shiner surfperch, white surfperch, and white croaker. Shiner surfperch and white croaker from the Ventura Marina Jetty exceeded guideline (TSMP, 2002).
<i>Spatial Representation:</i>	One station were sampled.
<i>Temporal Representation:</i>	Samples were collected in July and September 1999.
<i>Data Quality Assessment:</i>	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.

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# Los Angeles Region (4)

# DELIST

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

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## Region 4

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**Water Segment:** Abalone Cove Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

**Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Arroyo Seco Reach 1 (LA River to West Holly Ave.)

**Pollutant:** Excess Algal Growth

**Decision:** Delist

**Weight of Evidence:** This condition is being considered for listing under section 2.2 of the Listing Policy. Under this section of the Policy, a minimum of two lines of evidence is needed to assess listing status.

One line of evidence is available in the administrative record to assess this water body condition. A TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. Qualitative information on excess algal growth alone is not sufficient to support placement on the section 303(d) list (Listing Policy section 3.7).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because algal growth is not a pollutant, and it is uncertain if the growth data are backed by pollutant data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004. This TMDL will address this water body condition.

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## Region 4

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<b>Water Segment:</b>	Arroyo Seco Reach 2 (Figueroa St. to Riverside Dr.)
<b>Pollutant:</b>	Excess Algal Growth
<b>Decision:</b>	Delist
<b>Weight of Evidence:</b>	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because excess algal growth is not a pollutant and it is uncertain if the growth data are backed by pollutant data showing exceedances of water quality standards.
<b>SWRCB Staff Recommendation:</b>	After review of the available data and information for this recommendation, SWRCB staff conclude that the water body should not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because excess algal growth is not a pollutant and it is uncertain if the growth data are backed by pollutant data showing exceedances of water quality standards.
<b>Lines of Evidence:</b>	

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<i>Line of Evidence</i>	Remedial Program in Place
<i>Beneficial Use</i>	R2 - Non-Contact Recreation
<i>Information Used to Assess Water Quality:</i>	A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Ballona Creek

**Pollutant:** Cadmium

**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 data cannot be found that was used to list this pollutant. It is likely that data from Ballona Creek Estuary were applied inappropriately to the concrete lined Ballona Creek.

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 data is 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 no data are available to support the listing.

### **Lines of Evidence:**

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*Line of Evidence* Pollutant-Sediment

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* The written summary information that formed the basis for the 1998 303(d) list, provide only summary information on the chemical concentrations in sediments. The original data are no longer available; consequently, sample locations cannot be confirmed. This is important because there is a discrepancy in the nomenclature used to define Ballona Creek and the Estuary. In the Basin Plan, the transition between Creek and Estuary is at Centinela Blvd. Ballona Creek

(above Centinela) is concrete-lined. Ballona Creek estuary (below Centinela) is soft-bottomed. Anyone unfamiliar with this regulatory distinction may have inadvertently attributed samples collected from Ballona Creek Estuary to Ballona Creek. Sediment data used in the 1998 list appear to have been collected from soft-bottomed estuary sediments as opposed to the concrete-lined channel. Therefore, the listing for this pollutant in Ballona Creek was made in error.

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## Region 4

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**Water Segment:** Ballona Creek

**Pollutant:** ChemA

**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 data that was used for the original listing was collected in the Ballona Creek Estuary and not the creek itself. It is likely that data from Ballona Creek Estuary were applied inappropriately to Ballona Creek.

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 data is 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 no data are available to support the listing.

### **Lines of Evidence:**

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*Line of Evidence* Pollutant-Tissue

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* To assess potential impairments associated with contaminant concentrations in fish and shellfish tissue, summary information that formed the basis for the 1998 303(d) list was reviewed. Tissue data used in the assessment were from the State Mussel Watch Program in the mid-1980s and data collected as part of the Toxic Substances Monitoring Program (TSMP) in 1993. A review of the original data sets revealed that both sets of data were from locations in Ballona Creek

Estuary. There are no data on fish tissue or mussel tissue for Ballona Creek. Consequently the Ballona Creek listing for this pollutant in tissue was made in error.

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## Region 4

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**Water Segment:** Ballona Creek

**Pollutant:** Chlordane

**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 data that was used for the original listing was collected in the Ballona Creek Estuary and not the creek itself. It is likely that data from Ballona Creek Estuary were applied inappropriately to Ballona Creek.

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 data is 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 no data are available to support the listing.

### **Lines of Evidence:**

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*Line of Evidence* Pollutant-Tissue

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* To assess potential impairments associated with contaminant concentrations in fish and shellfish tissue, summary information that formed the basis for the 1998 303(d) list was reviewed. Tissue data used in the assessment were from the State Mussel Watch Program in the mid-1980s and data collected as part of the Toxic Substances Monitoring Program (TSMP) in 1993. A review of the original data sets revealed that both sets of data were from locations in Ballona Creek

Estuary. There are no data on fish tissue or mussel tissue for Ballona Creek. Consequently the Ballona Creek listing for this pollutant in tissue was made in error.

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## Region 4

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**Water Segment:** Ballona Creek

**Pollutant:** DDT

**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 data that was used for the original listing was collected in the Ballona Creek Estuary and not the creek itself. It is likely that data from Ballona Creek Estuary were applied inappropriately to Ballona Creek.

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 data is 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 no data are available to support the listing.

### **Lines of Evidence:**

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*Line of Evidence* Pollutant-Tissue

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* To assess potential impairments associated with contaminant concentrations in fish and shellfish tissue, summary information that formed the basis for the 1998 303(d) list was reviewed. Tissue data used in the assessment were from the State Mussel Watch Program in the mid-1980s and data collected as part of the Toxic Substances Monitoring Program (TSMP) in 1993. A review of the original data sets revealed that both sets of data were from locations in Ballona Creek

Estuary. There are no data on fish tissue or mussel tissue for Ballona Creek. Consequently the Ballona Creek listing for this pollutant in tissue was made in error (SWAMP, 2004).

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## Region 4

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**Water Segment:** Ballona Creek

**Pollutant:** Dieldrin

**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 data that was used for the original listing was collected in the Ballona Creek Estuary and not the creek itself. It is likely that data from Ballona Creek Estuary were applied inappropriately to Ballona Creek.

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 data is 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 no data are available to support the listing.

### **Lines of Evidence:**

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*Line of Evidence* Pollutant-Tissue

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* To assess potential impairments associated with contaminant concentrations in fish and shellfish tissue, summary information that formed the basis for the 1998 303(d) list was reviewed. Tissue data used in the assessment were from the State Mussel Watch Program in the mid-1980s and data collected as part of the Toxic Substances Monitoring Program (TSMP) in 1993. A review of the original data sets revealed that both sets of data were from locations in Ballona Creek

Estuary. There are no data on fish tissue or mussel tissue for Ballona Creek. Consequently the Ballona Creek listing for this pollutant in tissue was made in error.

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## Region 4

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**Water Segment:** Ballona Creek

**Pollutant:** Lead

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under sections 4.1 of the Listing Policy. Four lines of evidence based, on different data sets, are available in the administrative record. The data sets address dissolved copper concentrations in water. An insufficient number of samples exceed the CTR criteria. Based on section 4.1 there is sufficient justification for 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.Six of 90 combined samples exceeded the dissolved lead CTR guidelines 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 not be removed from on the section 303(d) list because applicable water quality standards are exceeded.

### **Lines of Evidence:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* CTR Lead Criterion for continuous concentration in water for the protection of aquatic life is expressed as a function of the total hardness of the water body. At a total hardness of 100 mg/l the continuous concentration for lead is 2.5 ug/l. The aquatic life criteria will vary depending of total hardness reported. The criterion is linked and applicable for the protection of aquatic life Beneficial Uses.

*Data Used to Assess Water* Numeric data generated from 22 samples taken from 10/12/00 to 4/30/03 at one

<i>Quality:</i>	to two-week sampling interval. One (1) sample exceeded the Lead Continuous Criterion Concentration, which equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4days) without deleterious effects (LACDPW, 2004c).
<i>Spatial Representation:</i>	One sample site sampled during the dry and wet season beginning from 10/12/00 through 4/30/03 at approximately one to two week intervals.
<i>Temporal Representation:</i>	Twenty-two (22) samples were taken during the wet and dry season from 10/12/00 to 4/30/03 at approximately one to two week intervals as part of the Los Angeles County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.
<i>Environmental Conditions:</i>	The Ballona Creek monitoring station is located at the existing stream gage station (Stream Gage No. F38C-R) between Sawtelle Boulevard and Sepulveda Boulevard in the City of Los Angeles. At this location, which was chosen to avoid tidal influences, the upstream tributary watershed of Ballona Creek is 88.8 square miles. The entire Ballona Creek Watershed is 127.1 square miles. At the gauging station, Ballona Creek is a concrete lined trapezoidal channel.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	CTR Lead Criterion for continuous concentration in water for the protection of aquatic life is expressed as a function of the total hardness of the water body. At a total hardness of 100 mg/l the continuous concentration for lead is 2.5 ug/l. The aquatic life criteria will vary depending of total hardness reported. The criterion is linked and applicable for the protection of aquatic life Beneficial Uses.
<i>Data Used to Assess Water Quality:</i>	Thirty-eight water samples, 5 above chronic criterion (SWRCB, 2003).
<i>Spatial Representation:</i>	Samples collected spatially along creek.
<i>Temporal Representation:</i>	Fall, winter, spring, summer in different years.
<i>Environmental Conditions:</i>	Data 1-5 years old.
<i>Data Quality Assessment:</i>	Los Angeles County Stormwater Program.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	WA - Warm Freshwater Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	CTR Lead Criterion for continuous concentration in water for the protection of aquatic life is expressed as a function of the total hardness of the water body. At a total hardness of 100 mg/l the continuous concentration for lead is 2.5 ug/l. The aquatic life criteria will vary depending of total hardness reported. The criterion is linked and applicable for the protection of aquatic life Beneficial Uses.
<b><i>Data Used to Assess Water Quality:</i></b>	Seven of 48 measurements were analyzed. The dry weather detection limits in the City of Los Angeles data exceeded the water quality criterion and this precluded evaluation against the CTR standards. The detection limit was 10 ug/L (USEPA and LARWQCB, 2005).
<b><i>Spatial Representation:</i></b>	The metals data from the City of Los Angeles were from four locations along Ballona Creek at National Boulevard, Overland Avenue, Centinela Boulevard, and Pacific Avenue. The data from National and Overland Boulevards are representative of Ballona Creek Reaches 1 and 2, respectively.
<b><i>Temporal Representation:</i></b>	Sampled on a monthly basis between January 2002 through May 2003.
<b><i>Environmental Conditions:</i></b>	Samples are representative of dry-weather conditions. A hardness value of 300 mg/L was used to calculate the water quality criterion.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	WA - Warm Freshwater Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	CTR Lead Criterion for continuous concentration in water for the protection of aquatic life is expressed as a function of the total hardness of the water body. At a total hardness of 100 mg/l the continuous concentration for lead is 2.5 ug/l. The aquatic life criteria will vary depending of total hardness reported. The criterion is linked and applicable for the protection of aquatic life Beneficial Uses.
<b><i>Data Used to Assess Water Quality:</i></b>	None of 30 measurements exceeded the water criterion. The detection limit is 5 ug/L (USEPA and LARWQCB, 2003).
<b><i>Spatial Representation:</i></b>	The metals data from SCCWRP were from a characterization study of Ballona Creek and Estuary to identify relative metals contributions of runoff discharges during dry conditions. 12 in-stream sites and at the discharge of 35-40 storm drains (number depended on whether there was flow from the drain on the sampling day). Nine of the in-stream sites were from the Creek and three of the

in-stream sites were from the estuary. One of the storm drains was Sepulveda Canyon Channel and this data was used to assess conditions for that listed reach.

*Temporal Representation:* Sampling was conducted on May 17, July 16, and September 24, 2003.

*Environmental Conditions:* Samples are representative of dry-weather conditions. A hardness value of 300 mg/L was used to calculate the water quality criterion.

*Data Quality Assessment:* Southern California Coastal Water Research Project.

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## Region 4

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**Water Segment:** Ballona Creek

**Pollutant:** PCBs (dioxin-like)

**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 data that was used for the original listing was collected in the Ballona Creek Estuary and not the creek itself. It is likely that data from Ballona Creek Estuary were applied inappropriately to Ballona Creek.

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 data is 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 no data are available to support the listing.

### **Lines of Evidence:**

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*Line of Evidence* Pollutant-Tissue

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* To assess potential impairments associated with contaminant concentrations in fish and shellfish tissue, summary information that formed the basis for the 1998 303(d) list was reviewed. Tissue data used in the assessment were from the State Mussel Watch Program in the mid-1980s and data collected as part of the Toxic Substances Monitoring Program (TSMP) in 1993. A review of the original data

sets revealed that both sets of data were from locations in Ballona Creek Estuary. There are no data on fish tissue or mussel tissue for Ballona Creek. Consequently the Ballona Creek listing for this pollutant in tissue was made in error.

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## Region 4

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**Water Segment:** Ballona Creek

**Pollutant:** Sediment Bioassays for Estuarine and Marine Water

**Decision:** Delist

**Weight of Evidence:** This condition 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 data cannot be found that was used to list this condition. It is likely that data from Ballona Creek Estuary were applied inappropriately to the concrete lined Ballona Creek.

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-condition combination.

This conclusion is based on the staff findings that no data is 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 no data are available to support the listing.

### **Lines of Evidence:**

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*Line of Evidence* Pollutant-Sediment

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* The written summary information that formed the basis for the 1998 303(d) list, provide only summary information on the toxicity in sediments. The original data are no longer available; consequently, sample locations cannot be confirmed. This is important because there is a discrepancy in the nomenclature used to define Ballona Creek and the Estuary. In the Basin Plan, the transition between Creek and Estuary is at Centinela Blvd. Ballona Creek (above

Centinela) is concrete-lined. Ballona Creek estuary (below Centinela) is soft-bottomed. Anyone unfamiliar with this regulatory distinction may have inadvertently attributed samples collected from Ballona Creek Estuary to Ballona Creek. Sediment data used in the 1998 list appear to have been collected from soft-bottomed estuary sediments as opposed to the concrete-lined channel. Therefore, the listing for this condition in Ballona Creek was made in error.

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## Region 4

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**Water Segment:** Ballona Creek

**Pollutant:** Selenium

**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.

Five lines of evidence are available in the administrative record to assess this pollutant. Lines of evidence summarizes data from 1997 to 2003, some of which was used to place the water -pollutant combination on the 303(d) originally. Over the 7 year period, six samples exceed the water quality criterion for selenium.

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 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. Six of 176 samples exceeded the selenium water quality criterion 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 on the section 303(d) list because applicable water quality standards are not exceeded.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/* CTR Criteria Continuous Concentration of 5 ug/l is the highest concentration of Selenium to which aquatic life can be exposed for an extended period of time

<i>Water Quality Criterion:</i>	(four days) without deleterious effects applicable to protect aquatic life BUs.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 22 samples taken from 10/12/00 to 4/30/03 at one to two-week sampling interval. One (1) sample exceeded the CTR Selenium Continuous Criterion Concentration (LACDPW, 2004c).
<i>Spatial Representation:</i>	One sample site sampled during the dry and wet season beginning from 10/12/00 through 4/30/03 at approximately one to two week intervals.
<i>Temporal Representation:</i>	Twenty-two (22) samples were taken during the wet and dry season from 10/12/00 to 4/30/03 at approximately one to two week intervals as part of the Los Angeles County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.
<i>Environmental Conditions:</i>	The Ballona Creek monitoring station is located at the existing stream gage station (Stream Gage No. F38C-R) between Sawtelle Boulevard and Sepulveda Boulevard in the City of Los Angeles. At this location, which was chosen to avoid tidal influences, the upstream tributary watershed of Ballona Creek is 88.8 square miles. The entire Ballona Creek Watershed is 127.1 square miles. At the gauging station, Ballona Creek is a concrete lined trapezoidal channel.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	CTR Criteria Continuous Concentration of 5 ug/l is the highest concentration of Selenium to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects applicable to protect aquatic life BUs.
<i>Data Used to Assess Water Quality:</i>	Twenty-five water samples, 3 samples exceeding (SWRCB, 2003).
<i>Spatial Representation:</i>	One sample site sampled mostly during the wet season.
<i>Temporal Representation:</i>	Samples collected from 1997 through 1999 in the fall, spring, summer, and winter. Most samples collected during wet season.
<i>Data Quality Assessment:</i>	Los Angeles County Department of Public Works.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
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<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	-N/A
<i>Water Quality Objective/ Water Quality Criterion:</i>	CTR Criteria Continuous Concentration of 5 ug/l is the highest concentration of Selenium to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects applicable to protect aquatic life BUs.
<i>Data Used to Assess Water Quality:</i>	Two measurements of 55 exceed the water quality criterion. Three measurements greater than detection limit (USEPA and LAWQCB, 2005).
<i>Spatial Representation:</i>	One sampling location.
<i>Temporal Representation:</i>	Samples collected between 1996 and 2002.
<i>Environmental Conditions:</i>	These are wet-weather data taken from the Ballona Creek Metals TMDL. These measurements overlap with other measurements collected by LACDPW.
<i>Data Quality Assessment:</i>	Los Angeles Count Department of Public Works.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	CTR Saltwater Criteria Continuous Concentration of 71 ug/l is the highest concentration of Selenium to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects applicable to protect aquatic life BUs.
<i>Data Used to Assess Water Quality:</i>	No samples exceeding criterion out of 44 samples. Detection limit is 10 ug/L which is above the water quality criterion (USEPA and LAWQCB, 2005).
<i>Spatial Representation:</i>	The metals data from the City of Los Angeles were from four locations along Ballona Creek at National Boulevard, Overland Avenue, Centinela Boulevard, and Pacific Avenue. The data from National and Overland Boulevards are representative of Ballona Creek Reaches 1 and 2, respectively.
<i>Temporal Representation:</i>	Sampled on a monthly basis between January 2002 through May 2003.
<i>Environmental Conditions:</i>	These samples were collected during dry-weather conditions.
<i>Data Quality Assessment:</i>	City of Los Angeles.

<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	CTR Criteria Continuous Concentration of 5 ug/l is the highest concentration of Selenium to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects applicable to protect aquatic life BUs.
<i>Data Used to Assess Water Quality:</i>	No samples exceed the water quality criterion out of 30 samples. The detection limit was 100 ug/L (USEPA and LARWQCB, 2005).
<i>Spatial Representation:</i>	The metals data from SCCWRP were from a characterization study of Ballona Creek and Estuary to identify relative metals contributions of runoff discharges during dry conditions. Twelve in-stream sites and at the discharge of 35-40 storm drains (number depended on whether there was flow from the drain on the sampling day). Nine of the in-stream sites were from the Creek and three of the in-stream sites were from the estuary. One of the storm drains was Sepulveda Canyon Channel and this data was used to assess conditions for that listed reach.
<i>Temporal Representation:</i>	Sampling was conducted on May 17, July 16, and September 24, 2003.
<i>Environmental Conditions:</i>	Samples represent dry-weather conditions.
<i>Data Quality Assessment:</i>	Southern California Coastal Water Research Project.

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## Region 4

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**Water Segment:** Ballona Creek

**Pollutant:** Silver

**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 data cannot be found that was used to list this pollutant. It is likely that data from Ballona Creek Estuary were applied inappropriately to the concrete lined Ballona Creek.

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 data is 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 no data are available to support the listing.

### **Lines of Evidence:**

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*Line of Evidence* Pollutant-Sediment

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* The written summary information that formed the basis for the 1998 303(d) list, provide only summary information on the chemical concentrations in sediments. The original data are longer available; consequently, sample locations cannot be confirmed. This is important because there is a discrepancy in the nomenclature used to define Ballona Creek and the Estuary. In the Basin Plan, the transition between Creek and Estuary is at Centinela Blvd. Ballona Creek (above

Centinela) is concrete-lined. Ballona Creek estuary (below Centinela) is soft-bottomed. Anyone unfamiliar with this regulatory distinction may have inadvertently attributed samples collected from Ballona Creek Estuary to Ballona Creek. Sediment data used in the 1998 list appear to have been collected from soft-bottomed estuary sediments as opposed to the concrete-lined channel. Therefore, the listing for this pollutant in Ballona Creek was made in error.

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## Region 4

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**Water Segment:** Ballona Creek

**Pollutant:** Zinc

**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. Four lines of evidence are available in the administrative record to assess this pollutant. There are exceedances of the dissolved Zinc CTR criteria for continuous concentration in three lines of evidence. If all samples are combined only 9 measurements exceed the standard.

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 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. Nine of 154 samples exceeded the CTR criterion and this does not exceed the allowable frequency presented 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 are not exceeded.

### **Lines of Evidence:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* CTR Zinc Criterion for continuous concentration in water for the protection of aquatic life is expressed as a function of the total hardness of the water body. The aquatic life criteria will vary depending of total hardness reported. The criterion

is linked and applicable for the protection of aquatic life Beneficial Uses.

<i>Data Used to Assess Water Quality:</i>	Fifty-five water samples, 6 water samples exceeded (USEPA and LAWQCB, 2005).
<i>Spatial Representation:</i>	To assess wet-weather conditions, evaluated dissolved metals and hardness data collected from Ballona Creek by the LACDPW storm water program at Sawtelle Boulevard.
<i>Temporal Representation:</i>	Samples collected 1996 to 2000.
<i>Environmental Conditions:</i>	The storm water data were compared to the freshwater CTR values based on the actual hardness measured for each sample.
<i>Data Quality Assessment:</i>	Los Angeles County Department of Public Works.

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	CTR Zinc Criterion for continuous concentration in water for the protection of aquatic life is expressed as a function of the total hardness of the water body. At a total hardness of 100 mg/l the continuous concentration for Nickel is 120 ug/l. The aquatic life criteria will vary depending of total hardness reported. The criterion is linked and applicable for the protection of aquatic life Beneficial Uses.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 22 samples taken from 10/12/00 to 4/30/03 at one to two-week sampling interval. One (1) sample exceeded the Zinc Continuous Criterion Concentration, which equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4days) without deleterious effects (LACDPW, 2004c; 2004d).
<i>Spatial Representation:</i>	One sample site sampled during the dry and wet season beginning from 10/12/00 through 4/30/03 at approximately one to two week intervals.
<i>Temporal Representation:</i>	Twenty-two samples where taken during the wet and dry season from 10/12/00 to 4/30/03 at approximately one to two week intervals as part of the Los Angeles County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.
<i>Environmental Conditions:</i>	The Ballona Creek monitoring station is located at the existing stream gage station (Stream Gage No. F38C-R) between Sawtelle Boulevard and Sepulveda Boulevard in the City of Los Angeles. At this location, which was chosen to avoid tidal influences, the upstream tributary watershed of Ballona Creek is 88.8 square miles. The entire Ballona Creek Watershed is 127.1 square miles. At the

gauging station, Ballona Creek is a concrete lined trapezoidal channel.

*Data Quality Assessment:* Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* CTR Zinc Criterion for continuous concentration in water for the protection of aquatic life is expressed as a function of the total hardness of the water body. The aquatic life criteria will vary depending of total hardness reported. The criterion is linked and applicable for the protection of aquatic life Beneficial Uses.

*Data Used to Assess Water Quality:* Thirty samples, no measurements exceed the water quality criterion. Detection limit was 20 ug/L (USEPA and LARWQCB, 2005).

*Spatial Representation:* The metals data from SCCWRP were from a characterization study of Ballona Creek and Estuary to identify relative metals contributions of runoff discharges during dry conditions. A total of 70 samples, twelve in-stream sites and at the discharge of 35-40 storm drains (number depended on whether there was flow from the drain on the sampling day).

*Temporal Representation:* Sampling was conducted on May 17, July 16, and September 24, 2003.

*Environmental Conditions:* Samples represent dry-weather conditions. The water quality criterion was calculated with a hardness value of 300 mg/L.

*Data Quality Assessment:* Southern California Coastal Water Research Project.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* CTR Zinc Criterion for continuous concentration in water for the protection of aquatic life is expressed as a function of the total hardness of the water body. The aquatic life criteria will vary depending of total hardness reported. The criterion is linked and applicable for the protection of aquatic life Beneficial Uses.

*Data Used to Assess Water Quality:* Forty-seven samples, 2 exceed the water quality criterion. Detection limit was 10 ug/L (USEPA and LARWQCB, 2005).

<i>Spatial Representation:</i>	The metals data from the City of Los Angeles were from four locations along Ballona Creek at National Boulevard, Overland Avenue, Centinela Boulevard, and Pacific Avenue. The data from National and Overland Boulevards are representative of Ballona Creek Reaches 1 and 2, respectively.
<i>Temporal Representation:</i>	Sampled on a monthly basis between January 2002 through May 2003.
<i>Environmental Conditions:</i>	Samples are representative of dry-weather conditions. A hardness value of 300 mg/L was used to calculate the water quality criterion.
<i>Data Quality Assessment:</i>	City of Los Angeles.

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## Region 4

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**Water Segment:** Ballona Creek

**Pollutant:** pH

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 4.2 of the Listing Policy. Under section 4.2 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. There are exceedances of the pH basin plan water quality objective in both lines 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. Five of 40 samples exceeded the pH WQO in one line of evidence and 1 of 22 exceeded in the other. The first line of evidence does not exceed the allowable frequency listed in Table 4.2 of the Listing Policy and there were insufficient number of samples taken in the other data set to make an appropriate determination
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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/* Basin Plan WQO for inland surface waters shall not be depressed below 6.5 or

<i>Water Quality Criterion:</i>	raised above 8.5 as a result of waster discharges to protect aquatic life BUs.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 22 samples taken from 10/12/00 to 4/30/03 at one to two-week sampling interval. Four (4) samples exceeded the Basin Plan WQO (LACDPW, 2004c; 2004d).
<i>Spatial Representation:</i>	One sample site sampled during the dry and wet season beginning from 10/12/00 through 4/30/03 at approximately one to two week intervals.
<i>Temporal Representation:</i>	Twenty-two samples where taken during the wet and dry season from 10/12/00 to 4/30/03 at approximately one to two week intervals as part of the Los Angeles County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.
<i>Environmental Conditions:</i>	Data 1-5 years old, environmental data measured at site, samples collected during multiple seasons. The Ballona Creek monitoring station is located at the existing stream gage station (Stream Gage No. F38C-R) between Sawtelle Boulevard and Sepulveda Boulevard in the City of Los Angeles. At this location, which was chosen to avoid tidal influences, the upstream tributary watershed of Ballona Creek is 88.8 square miles. The entire Ballona Creek Watershed is 127.1 square miles. At the gauging station, Ballona Creek is a concrete lined trapezoidal channel.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan WQO for inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waster discharges to protect aquatic life BUs.
<i>Data Used to Assess Water Quality:</i>	Five of 40 samples exceeded the water quality objective (SWRCB, 2003).
<i>Spatial Representation:</i>	One site.
<i>Temporal Representation:</i>	Fall and spring.
<i>Data Quality Assessment:</i>	Los Angeles County Stormwater Program.

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## Region 4

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**Water Segment:** Bluff Cove Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Burbank Western Channel

**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. Two samples in one sampling station exceed the CTR Dissolved Cadmium Criterion for continuous concentration (CCC) in water 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 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. Two out of 95 samples exceeded the dissolved cadmium continuous criterion concentration and this does not exceed the maximum 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/* CTR Dissolved Cadmium Criterion for continuous concentration (CCC) in water



<i>Water Quality Criterion:</i>	for the protection of aquatic life is expressed as a function of the total hardness 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.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from a total of 95 samples taken at four different Burbank Western Channel sampling stations (sampling stations R1, R1.5, R2 and R5) covering a period from March 2002 to May 2004 at monthly sampling intervals. Two samples in station R5 taken 10/7/03 exceeded the dissolved cadmium continuous criterion concentration (City of Burbank, 2004).
<i>Spatial Representation:</i>	Four Sample sites at receiving water stations consistent with the Burbank Water Reclamation Plant NPDES permit which included receiving water stations both upstream (R1) and downstream (R1.5, R2, and R5) of the reclamation plant and the BWP power plan discharges.
<i>Temporal Representation:</i>	A total of 95 samples were taken at four sites during 2002 and 2004 at monthly sampling intervals
<i>Data Quality Assessment:</i>	Standard Operating Procedures for Receiving Water Monitoring, Burbank Western Channel (United Water Burbank Water Reclamation Plant)

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## Region 4

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**Water Segment:** Burbank Western Channel

**Pollutant:** Excess Algal Growth

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (algal growth, foam, and odors). A TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004 and this TMDL is expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this listing from the 303(d) Water Quality Limited Segment list because the segment pollutant combinations is not 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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*Numeric Line of Evidence* Adverse Biological Responses

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Dissolved Oxygen Water Quality Objective of all surface waters designated as Warm Fresh Water Aquatic Habitat shall not be depressed below 5mg/l.

*Data Used to Assess Water Quality:* Numeric data generated from six samples out of which one sample exceeded the WQO for protection of Warm Fresh Water Aquatic Habitat (SWRCB, 2003).

*Spatial Representation:* One (1) sample site.

*Temporal Representation:* Six monthly samples, Five (5) taken during the wet season (11/08/2002-03/15/2003) and one (1) sample taken during the dry season (04/30/2003).

*Environmental Conditions:* Data Age, 1-2 years.

*Data Quality Assessment:* Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* WQO is linked and applicable to MUN BUs

*Data Used to Assess Water  
Quality:* Numeric data generated from six samples out of which one sample exceeded the WQO for protection MUN (SWRCB, 2003).

*Spatial Representation:* One sampling site.

*Temporal Representation:* Six monthly samples, Five taken during the wet season (11/08/2002-03/15/2003) and one sample taken during the dry season (04/30/2003).

*Environmental Conditions:* Data age 1-2 years. Data taken during the wet and dry seasons. Documented exceedance recorded in 2/25/2003 (wet season).

*Data Quality Assessment:* Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* The Basin Plan Water Quality Objective for Nitrite-Nitrogen of 1 mg/l is linked and applicable for the protection of drinking water supplies.

*Data Used to Assess Water* Numeric data generated from 27 samples taken from 3/6/02 to 5/25/04 at two to three monthly intervals. Three samples exceeded the Basin Plan Nitrite-N WQO

<i>Quality:</i>	(City of Burbank, 2004).
<i>Spatial Representation:</i>	Three sample sites at receiving water stations consistent with the Burbank Water Reclamation Plant NPDES permit which included receiving water stations both upstream (R1) and downstream (R2, and R5) of the reclamation plant and the BWP power plan discharges.
<i>Temporal Representation:</i>	Twenty-seven samples were taken from 5/7/02 through 5/25/04 at quarterly intervals from three sampling stations (R1, R2, and R5).
<i>Environmental Conditions:</i>	Data was collected from 3/02 through 5/04 at three sampling stations. Sampling station R1 is located at the confluence of Burbank Western Channel and Lockheed Channel about 50 feet above the Burbank Reclamation Plant. Sampling station R2 is located at Burbank Western Wash at Verdugo Avenue. Sampling station R5 is located at Burbank Western Wash just upstream from the confluence with the Los Angeles River.
<i>Data Quality Assessment:</i>	Standard Operating Procedures for Receiving Water Monitoring, Burbank Western Channel (United Water Burbank Water Reclamation Plant).

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	MU - Municipal & Domestic
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	The Basin Plan Water Quality Objective for Nitrate-Nitrogen of 10 mg/l is linked and applicable for the protection of drinking water supplies.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 27 samples taken from 3/6/02 to 5/25/04 at quarterly intervals. No sample exceeded the Basin Plan Objective for Nitrate-Nitrogen (City of Burbank, 2004).
<i>Spatial Representation:</i>	Three sample sites at receiving water stations consistent with the Burbank Water Reclamation Plant NPDES permit which included receiving water stations both upstream (R1) and downstream (R2, and R5) of the reclamation plant and the BWP power plan discharges.
<i>Temporal Representation:</i>	Twenty-seven samples were taken from 3/6/02 through 5/25/04 at quarterly intervals from three sampling stations (R1, R2, and R5).
<i>Environmental Conditions:</i>	Data was collected from 3/02 through 5/25 at three sampling stations. Sampling station R1 is located at the confluence of Burbank Western Channel and Lockheed Channel about 50 feet above the Burbank Reclamation Plant. Sampling station R2 is located at Burbank Western Wash at Verdugo Avenue. Sampling station R5 is located at Burbank Western Wash just upstream from the confluence with the Los Angeles River.

*Data Quality Assessment:* Standard Operating Procedures for Receiving Water Monitoring, Burbank Western Channel (United Water Burbank Water Reclamation Plant).

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Burbank Western Channel

**Pollutant:** Foam/Flocs/Scum/Oil Slicks

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (algal growth, foam, and odors). A TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004 and this TMDL is expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing these listing from the 303(d) Water Quality Limited Segment list because the segment pollutant combinations is not 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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* The Basin Plan Water Quality Objective for Nitrate-Nitrogen of 10 mg/l is linked and applicable for the protection of drinking water supplies.

*Data Used to Assess Water Quality:* Numeric data generated from 27 samples taken from 3/6/02 to 5/25/04 at quarterly intervals. No sample exceeded the Basin Plan Objective for Nitrate-Nitrogen (City of Burbank, 2004).

*Spatial Representation:* Three sample sites at receiving water stations consistent with the Burbank Water Reclamation Plant NPDES permit which included receiving water stations both upstream (R1) and downstream (R2, and R5) of the reclamation plant and the BWP power plan discharges.

*Temporal Representation:* Twenty-seven samples were taken from 3/6/02 through 5/25/04 at quarterly intervals from three sampling stations (R1, R2, and R5).

*Environmental Conditions:* Data was collected from 3/02 through 5/25 at three sampling stations. Sampling station R1 is located at the confluence of Burbank Western Channel and Lockheed Channel about 50 feet above the Burbank Reclamation Plant. Sampling station R2 is located at Burbank Western Wash at Verdugo Avenue. Sampling station R5 is located at Burbank Western Wash just upstream from the confluence with the Los Angeles River.

*Data Quality Assessment:* Standard Operating Procedures for Receiving Water Monitoring, Burbank Western Channel (United Water Burbank Water Reclamation Plant).

***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* R2 - Non-Contact Recreation

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* One hour average Basin Plan Water Quality Objectives for ammonia-N was revised in 2002. For freshwaters not designated COLD and/or MIGR the ammonia WQO is dependent on pH and fish species, but not temperature. The 30-day average WQO for waters not designated for spawning are dependent on pH and temperature. These WQOs have been adopted into the basin plan and are linked and applicable to protection of aquatic life beneficial uses.

*Data Used to Assess Water Quality:* Numeric data generated from 27 samples taken from 5/7/02 to 5/25/04 at two to three monthly intervals. No sample exceeded the basin plan ammonia WQO. Data was compared against 2002 adopted ammonia WQO of which the 1-hour average objective is dependent on pH and fish species and the 30-day average is dependent on pH and temperature. It was not possible to determine any exceedances of the 1-hour average WQO or the 30-day average because pH and temperature data was not provided (City of Burbank, 2004).

*Spatial Representation:* Three sample sites sampled from May 2002 through May 2004 at two to three monthly intervals.

*Temporal Representation:* Twenty seven samples were taken at three sampling stations.

*Environmental Conditions:* Data was collected from May 2002 through May 2004 at 3 sampling stations. Sampling R1 is located at the confluence of Burbank Western Channel and Lockheed Channel about 50 feet above the Burbank Reclamation Plant. Station R2 is located at Burbank Western Wash at Verdugo Avenue. Station R5 is

located at Burbank Western Wash just upstream from the confluence with the L.A. River.

*Data Quality Assessment:* Standard Operating Procedures for Receiving Water Monitoring, Burbank Western Channel (United Water Burbank Water Reclamation Plant).

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* WQO is linked and applicable to MUN BUs

*Data Used to Assess Water  
Quality:* Numeric data generated from six samples out of which one sample exceeded the WQO for protection MUN (SWRCB, 2003).

*Spatial Representation:* One sampling site.

*Temporal Representation:* Six monthly samples, Five taken during the wet season (11/08/2002-03/15/2003) and one sample taken during the dry season (04/30/2003).

*Environmental Conditions:* Data age 1-2 years. Data taken during the wet and dry seasons. Documented exceedance recorded in 2/25/2003 (wet season).

*Data Quality Assessment:* Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* The Basin Plan Water Quality Objective for Nitrite-Nitrogen of 1 mg/l is linked and applicable for the protection of drinking water supplies.

*Data Used to Assess Water  
Quality:* Numeric data generated from 27 samples taken from 3/6/02 to 5/25/04 at two to three monthly intervals. Three samples exceeded the Basin Plan Nitrite-N WQO (City of Burbank, 2004).

*Spatial Representation:* Three sample sites at receiving water stations consistent with the Burbank Water Reclamation Plant NPDES permit which included receiving water stations both



upstream (R1) and downstream (R2, and R5) of the reclamation plant and the BWP power plan discharges.

*Temporal Representation:* Twenty-seven samples were taken from 5/7/02 through 5/25/04 at quarterly intervals from three sampling stations (R1, R2, and R5).

*Environmental Conditions:* Data was collected from 3/02 through 5/04 at three sampling stations. Sampling station R1 is located at the confluence of Burbank Western Channel and Lockheed Channel about 50 feet above the Burbank Reclamation Plant. Sampling station R2 is located at Burbank Western Wash at Verdugo Avenue. Sampling station R5 is located at Burbank Western Wash just upstream from the confluence with the Los Angeles River.

*Data Quality Assessment:* Standard Operating Procedures for Receiving Water Monitoring, Burbank Western Channel (United Water Burbank Water Reclamation Plant).

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Data Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004.

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## Region 4

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**Water Segment:** Burbank Western Channel

**Pollutant:** Taste and odor

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (algal growth, foam, and odors). A TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004 and this TMDL is expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing these listing from the 303 (d) Water Quality Limited Segment list because the segment pollutant combinations is not 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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* WQO is linked and applicable to MUN BUs

*Data Used to Assess Water Quality:* Numeric data generated from six samples out of which one sample exceeded the WQO for protection MUN (SWRCB, 2003).

*Spatial Representation:* One sampling site.

*Temporal Representation:* Six monthly samples, Five taken during the wet season (11/08/2002-03/15/2003) and one sample taken during the dry season (04/30/2003).

*Environmental Conditions:* Data age 1-2 years. Data taken during the wet and dry seasons. Documented exceedance recorded in 2/25/2003 (wet season).

*Data Quality Assessment:* Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* MU - Municipal & Domestic

*Matrix:* Water

*Water Quality Objective/ Water Quality Criterion:* The Basin Plan Water Quality Objective for Nitrite-Nitrogen of 1 mg/l is linked and applicable for the protection of drinking water supplies.

*Data Used to Assess Water Quality:* Numeric data generated from 27 samples taken from 3/6/02 to 5/25/04 at two to three monthly intervals. Three samples exceeded the Basin Plan Nitrite-N WQO (City of Burbank, 2004).

*Spatial Representation:* Three sample sites at receiving water stations consistent with the Burbank Water Reclamation Plant NPDES permit which included receiving water stations both upstream (R1) and downstream (R2, and R5) of the reclamation plant and the BWP power plan discharges.

*Temporal Representation:* Twenty-seven samples were taken from 5/7/02 through 5/25/04 at quarterly intervals from three sampling stations (R1, R2, and R5).

*Environmental Conditions:* Data was collected from 3/02 through 5/04 at three sampling stations. Sampling station R1 is located at the confluence of Burbank Western Channel and Lockheed Channel about 50 feet above the Burbank Reclamation Plant. Sampling station R2 is located at Burbank Western Wash at Verdugo Avenue. Sampling station R5 is located at Burbank Western Wash just upstream from the confluence with the Los Angeles River.

*Data Quality Assessment:* Standard Operating Procedures for Receiving Water Monitoring, Burbank Western Channel (United Water Burbank Water Reclamation Plant).

***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* R2 - Non-Contact Recreation

<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	One hour average Basin Plan Water Quality Objectives for ammonia-N was revised in 2002. For freshwaters not designated COLD and/or MIGR the ammonia WQO is dependent on pH and fish species, but not temperature. The 30-day average WQO for waters not designated for spawning are dependent on pH and temperature. These WQOs have been adopted into the basin plan and are linked and applicable to protection of aquatic live beneficial uses.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 27 samples taken from 5/7/02 to 5/25/04 at two to three monthly intervals. No sample exceeded the basin plan ammonia WQO. Data was compared against 2002 adopted ammonia WQO of which the 1-hour average objective is dependent on pH and fish species and the 30-day average is dependent on pH and temperature. It was not possible to determine any exceedances of the 1-hour average WQO or the 30-day average because pH and temperature data was not provided (City of Burbank, 2004).
<i>Spatial Representation:</i>	Three sample sites sampled from May 2002 through May 2004 at two to three monthly intervals.
<i>Temporal Representation:</i>	Twenty seven samples were taken at three sampling stations.
<i>Environmental Conditions:</i>	Data was collected from May 2002 through May 2004 at 3 sampling stations. Sampling R1 is located at the confluence of Burbank Western Channel and Lockheed Channel about 50 feet above the Burbank Reclamation Plant. Station R2 is located at Burbank Western Wash at Verdugo Avenue. Station R5 is located at Burbank Western Wash just upstream from the confluence with the L.A. River.
<i>Data Quality Assessment:</i>	Standard Operating Procedures for Receiving Water Monitoring, Burbank Western Channel (United Water Burbank Water Reclamation Plant).

<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	MU - Municipal & Domestic
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	The Basin Plan Water Quality Objective for Nitrate-Nitrogen of 10 mg/l is linked and applicable for the protection of drinking water supplies.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 27 samples taken from 3/6/02 to 5/25/04 at quarterly intervals. No sample exceeded the Basin Plan Objective for Nitrate-Nitrogen (City of Burbank, 2004).
<i>Spatial Representation:</i>	Three sample sites at receiving water stations consistent with the Burbank Water Reclamation Plant NPDES permit which included receiving water stations both upstream (R1) and downstream (R2, and R5) of the reclamation plant and the

BWP power plan discharges.

*Temporal Representation:* Twenty-seven samples were taken from 3/6/02 through 5/25/04 at quarterly intervals from three sampling stations (R1, R2, and R5).

*Environmental Conditions:* Data was collected from 3/02 through 5/25 at three sampling stations. Sampling station R1 is located at the confluence of Burbank Western Channel and Lockheed Channel about 50 feet above the Burbank Reclamation Plant. Sampling station R2 is located at Burbank Western Wash at Verdugo Avenue. Sampling station R5 is located at Burbank Western Wash just upstream from the confluence with the Los Angeles River.

*Data Quality Assessment:* Standard Operating Procedures for Receiving Water Monitoring, Burbank Western Channel (United Water Burbank Water Reclamation Plant).

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Data Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004.

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## Region 4

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**Water Segment:** Calleguas Creek Reach 4 (was Revolon Slough Main Branch: Mugu Lagoon to Central Avenue on 1998 303d list)

**Pollutant:** Excess Algal Growth

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (excess algal growth). A TMDL was approved by RWQCB on October, 2002 and subsequently approved by USEPA on June, 2003 and this TMDL is expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing these listing from the 303(d) Water Quality Limited Segment list because the segment pollutant combinations is not 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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### Lines of Evidence:

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL for this water segment-pollutant combination was approved by the RWQCB in October 2002. The TMDL has an approved implementation plan. USEPA approved the TMDL on June 20, 2003. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Calleguas Creek Reach 5 (was Beardsley Channel on 1998 303d list)

**Pollutant:** Excess Algal Growth

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (excess algal growth). A TMDL was approved by RWQCB on October, 2002 and subsequently approved by USEPA on June, 2003 and this TMDL is expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing these listing from the 303 (d) Water Quality Limited Segment list because the segment pollutant combinations is not 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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### Lines of Evidence:

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL for this water segment-pollutant combination was approved by the RWQCB in October 2002. The TMDL has an approved implementation plan. USEPA approved the TMDL on June 20, 2003. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Calleguas Creek Reach 9B (was part of Conejo Creek Reaches 1 and 2 on 1998 303d list)

**Pollutant:** Excess Algal Growth

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (algal growth). A TMDL was approved by RWQCB on October, 2002 and subsequently approved by USEPA on June, 2003 and this TMDL is expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing these listing from the 303 (d) Water Quality Limited Segment list because the segment pollutant combinations is not 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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL for this water segment-pollutant combination was approved by the RWQCB in October 2002. The TMDL has an approved implementation plan. USEPA approved the TMDL on June 20, 2003. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Calleguas Creek Reach 10 (Conejo Creek (Hill Canyon)-was part of Conejo Crk Reaches 2 & 3, and lower Conejo Crk/Arroyo Conejo N Fk on 1998 303d list)

**Pollutant:** Excess Algal Growth

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (algal growth). A TMDL was approved by RWQCB on October, 2002 and subsequently approved by USEPA on June, 2003 and this TMDL is expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing these listing from the 303(d) Water Quality Limited Segment list because the segment pollutant combinations is not 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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### Lines of Evidence:

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL for this water segment-pollutant combination was approved by the RWQCB in October 2002. The TMDL has an approved implementation plan. USEPA approved the TMDL on June 20, 2003. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Calleguas Creek Reach 11 (Arroyo Santa Rosa, was part of Conejo Creek Reach 3 on 1998 303d list)

**Pollutant:** Excess Algal Growth

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (algal growth). A TMDL was approved by RWQCB on October, 2002 and subsequently approved by USEPA on June, 2003 and this TMDL is expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing these listing from the 303(d) Water Quality Limited Segment list because the segment pollutant combinations is not 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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### Lines of Evidence:

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL for this water segment-pollutant combination was approved by the RWQCB in October 2002. The TMDL has an approved implementation plan. USEPA approved the TMDL on June 20, 2003. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Calleguas Creek Reach 13 (Conejo Creek South Fork, was Conejo Cr Reach 4 and part of Reach 3 on 1998 303d list)

**Pollutant:** Excess Algal Growth

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (algal growth). A TMDL was approved by RWQCB on October, 2002 and subsequently approved by USEPA on June, 2003 and this TMDL is expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing these listing from the 303(d) Water Quality Limited Segment list because the segment pollutant combinations is not 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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* CO - Cold Freshwater Habitat, R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL for this water segment-pollutant combination was approved by the RWQCB in October 2002. The TMDL has an approved implementation plan. USEPA approved the TMDL on June 20, 2003. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Carbon Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Coyote Creek

**Pollutant:** Abnormal Fish Histology (Lesions)

**Decision:** Delist

**Weight of Evidence:** This water quality condition is being considered for delisting under sections 4.8 of the Listing Policy. A single line of evidence (3.8) documenting adverse biological response measured in resident individuals in water can be listed when these impacts are associated with specific pollutant concentrations.

Two lines of evidence are available in the administrative record to assess this condition, none of which associate these impacts with a pollutant. Based on numeric and descriptive data, it appears that fish below the Coyote Creek Waste Reclamation Plant outfall below Willow Street show evidence of tissue alteration, which is higher in prevalence and more severe than at other sites. Although evidence is accumulating indicating that metals and some organics interfere with the immune system of the resident organisms, the association has not yet been established. Therefore, at this time it is not possible to directly attribute this infectious process to toxicity or pollutant concentrations.

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. Although, adverse biological responses have been documented these impacts have not been associated with toxicity or pollutant concentrations.

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 observations were judged to indicate that beneficial uses are not supported but there is nothing in the administrative record associating these impacts to toxicity or pollutant concentrations.
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 the biological impacts documented were not associated with toxicity or pollutant concentrations.

**Lines of Evidence:**

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<i>Numeric Line of Evidence</i>	Adverse Biological Responses
<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	-N/A
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological response 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 State or Regional Board.
<i>Evaluation Guideline:</i>	<p>With a thorough prior knowledge of normal fish anatomy, the investigators used histological analysis to detect alterations in tissues and organs caused by exposure to toxicants. When the concentration of a toxicant is sufficient to result only in cellular injury, but not in death of the cells, sublethal (adaptive) changes may be observed in affected cells.</p> <p>A combination of the necropsy-based approach and the histological condition index was used in this study. Alterations from the expected normal gross anatomy and microscopic anatomy of resident fishes, fathead minnow (<i>Pimephales promelas</i>), goldfish (<i>Cyprinus carpio</i>), white croaker (<i>Genyonemus lineatus</i>) mosquito fish (<i>Gambusia affinis</i>), and tilapia (<i>Tilapia sp.</i>) were included in the investigation. Lesions were compared to reference populations.</p>
<i>Data Used to Assess Water Quality:</i>	<p>Coyote Creek Above Outfall at Willow Street (LACSD, 2004b):</p> <p>Fish collected at this site included 19 Tilapia (<i>Tilapia sp.</i>) and 3 <i>Gambusia affinis</i>. Optical nerve damage was observed in these fish. A 5% frequency of gill parasitism was observed.</p> <p>Inflammation of the gill and adjacent bronchial cavity wall was seen at 27% incidence. Within livers, 3 of the 22 individuals showed inflammation and necrosis (a 14% frequency).</p> <p>Coyote Creek Below the Outfall (LACSP, 2004b):</p> <p>Fifteen Tilapia fish were collected from this site. When the head region of one of these fish was sectioned in a parasagittal plane, various organs could be identified and analyzed. Inflammation of the eye was observed in one fish. However, the same type of inflammation much more frequently observed in nerve tissue (73% frequency). In the gill, no parasites were observed. However, necrosis of certain types of cells was seen with a 33% frequency. The livers of these fish were free of alterations. In addition, there were no adhesions, granuloma, or other inflammation. Degeneration of kidney cells was seen at high frequency (60%).</p>
<i>Spatial Representation:</i>	Fish were collected from four sites in the lower San Gabriel River watershed. The sites included Coyote Creek above and below the Long Beach wastewater

treatment plant outfall, the San Gabriel River at the confluence of Coyote Creek, and from the tidal prism at College Park Drive.

*Temporal Representation:* Samples were collected between 1992 and 1993.

*Data Quality Assessment:* Quality Assurance and methods well described in the report: "Toxicity study of the Santa Clara, San Gabriel River, and Calleguas Creek" (Bailey et al., 1996, in LACSD, 2004b).

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*Line of Evidence* Narrative Description Data

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* In the fish from the downstream site of Coyote Creek below the outfall, a higher percentage showed inflammation of the trigeminal nerve. Also, necrosis of mitochondria-rich (chloride) cells and pavement epithelium of secondary lamellae were seen. Gills of fish from contaminated sites have been shown to contain various lesions and necrosis in the above cell types is a common finding. Also, kidney tubular epithelial cell degeneration was present at higher prevalence than at the upstream site. Taken together, it would appear that fish below the outfall show evidence of tissue alteration, which is higher in prevalence and more severe than at other sites. Clearly, these fish are not normal and would likely be susceptible to additional stress from deteriorating water quality.

Inflammatory foci of both eye and the fifth cranial or the trigeminal nerve were prominent findings in fish collected from Coyote Creek above the outfall at Willow Street. It would be impossible to directly attribute this infectious process to toxicity. However, evidence is accumulating which indicates that metals and some organics such as polychlorinated biphenyls interfere with the immune system of the host. With a compromise in the immune system, parasites and bacteria may establish infestation. It is possible that the infectious lesions of eye and trigeminal nerve reflect prior immunoincompetence. An additional finding was inflammation of the liver in penhepatic venous sites. This condition could have followed prior hepatocyte necrosis.

Even if the inflammation was not associated with contaminants, the fact that a sizeable fraction (25%) of the fish examined showed disease, indicates that the fish are compromised and would likely be endangered further by deterioration of water quality.

*Data Used to Assess Water Quality:* This evaluation of data came from the report: "Toxicity study of the Santa Clara, San Gabriel River, and Calleguas Creek" (Bailey et al., 1996 in LACSD, 2004b).

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## Region 4

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**Water Segment:** Coyote Creek

**Pollutant:** Excess Algal Growth

**Decision:** Delist

**Weight of Evidence:** This condition is being considered for removal from the section 303(d) list under section 4.7 of the Listing Policy. Ammonia is already listed in the 303(d) list and Nitrite- Nitrogen is also currently being recommended for placement on the 2004-303(d) list as well. These pollutants are usually associated with causing or contributing to excessive algae growth conditions. In addition, a subjective ranking system was used to document the presence of algae within the water body between 1992 and 1995. This information was probably used to place the water body on the 303(d) list originally.

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. Although, nuisance pollution has been documented in the past, these impacts can be associated with nutrient pollutants already proposed for listing on the Section 303(d) list.

This conclusion is based on the staff findings that:

1. It is unknown whether 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. Some observations of algae presence, using a subjective ranking system, were judged to be not supporting beneficial uses. Although, excessive algae condition was documented this condition can be most effectively addressed by focusing on reducing or eliminating the nutrient pollutants proposed for listing or already on the 303(d) list.
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 this condition can be most effectively addressed by focusing on reducing or eliminating the nutrient pollutants proposed for listing or already on the 303(d) list.

**Lines of Evidence:**



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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	WA - Warm Freshwater Habitat
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	In order to protect aquatic life, ammonia concentrations in inland surface waters characteristic of freshwater shall not exceed the values calculated for the appropriate instream conditions [both pH and temperature] shown in Tables 3-1 to 3-3 [in the Basin Plan] (per U.S. EPA's most recent criteria guidance document, '1999 Update of Ambient Water Quality Criteria for Ammonia').
<b><i>Data Used to Assess Water Quality:</i></b>	Based on 30-day average concentrations of ammonia, 10 samples out of 18 total samples exceed the ammonia objective. Ambient measurements of pH and temperature (30-day averages) were used to calculate the water quality objective (LACSD, 2004a).
<b><i>Spatial Representation:</i></b>	Three stations.
<b><i>Temporal Representation:</i></b>	Samples were collected from June 2003 through November 2004. New management practices were begun at the beginning of this period and may have resulted in a change in water quality. Water quality measurements collected before the implementation of management measures were not considered representative of current conditions.
<b><i>Data Quality Assessment:</i></b>	NPDES quality assurance.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<b><i>Beneficial Use:</i></b>	MU - Municipal & Domestic
<b><i>Matrix:</i></b>	Water
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	The Basin Plan Water Quality Objective for Nitrite-Nitrogen of 1 mg/L.
<b><i>Data Used to Assess Water Quality:</i></b>	Numeric data generated from 21 samples taken from 10/30/00 to 4/30/03 at one to two-week sampling interval. Two samples exceeded the Basin Plan WQO for Nitrite-Nitrogen (LACPWD, 2004c).
<b><i>Spatial Representation:</i></b>	One sample site sampled during the dry and wet season beginning from 10/12/00 through 4/30/03 at approximately one to two week intervals.
<b><i>Temporal Representation:</i></b>	Twenty-one samples were taken during the wet and dry season from 10/12/00 to 4/30/03 at approximately one to two week intervals as part of the Los Angeles

County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.

*Environmental Conditions:* The Coyote Creek Monitoring Station (S13) is located at the existing ACOE stream gage station (Stream Gage No. F354-R) below Spring Street in the lower San Gabriel River watershed. The site assists in determining mass loading for the San Gabriel River watershed. At this location, the upstream tributary area is 150 square miles (extending into Orange County). The sampling site was chosen to avoid backwater effects from the San Gabriel River. Coyote Creek, at the gauging station, is a concrete lined trapezoidal channel. The Coyote Creek sampling location has been an active stream gauging station since 1963.

*Data Quality Assessment:* Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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***Line of Evidence*** Pollutant-Nuisance

*Beneficial Use* R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat

*Non-Numeric Objective:* Basin Plan: 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.

*Evaluation Guideline:* The presence of algae in the water segment. The rankings were subjective and assigned to water bodies by one person for consistency (LACSD, 2004a).

*Data Used to Assess Water Quality:* Five observations with 4 of the observations judged to be not supporting beneficial uses.

*Spatial Representation:* One sampling location.

*Temporal Representation:* Observations made between 1992 and 1995. Samples taken in different seasons and no greater than two time within one year.

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***Line of Evidence*** Remedial Program in Place

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* An alternative enforceable program is in place that will address ammonia water quality standards exceedances for this Reach. In June 1995, the seven water reclamation plants discharging in the San Gabriel River and Santa Clara River watersheds received NPDES permits containing requirements regarding compliance with the Basin Plan water quality objectives for ammonia. In accordance with these permits, the Los Angeles County Sanitation Districts have been pursuing the addition of nitrification and denitrification facilities at each of these plants to comply with the ammonia objectives. By June 2003, it is

expected that these new facilities will be operational and ammonia will be drastically reduced.

Research facility operation shows that the monthly average ammonia concentration will fully comply with the chronic ammonia objective that are expected to be applicable in June 2003.

It is probable that the majority of ammonia discharged to this water body was contributed by POTWs. Information in the record indicates that the majority (over 95%) of the ammonia in the Los Angeles River was contributed by POTWs. It is probable that the contribution in the San Gabriel River watershed is dominated by contributions from POTWs as well. Generally, concentrations of ammonia upstream of the treatment plants is much lower than downstream concentrations (up to an order of magnitude difference).

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## Region 4

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**Water Segment:** Coyote Creek

**Pollutant:** Selenium

**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. Two applicable lines of evidence are available in the administrative record to assess this pollutant. Five samples exceed the total selenium CTR criterion for continuous concentration.

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. Five of 102 samples exceeded the total selenium CTR criterion for continuous concentration 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* CTR Selenium Criterion for Continuous Concentration in water for the protection of aquatic life is 5 ug/l, expressed in the total recoverable form. The criterion is linked and applicable for the protection of aquatic life Beneficial

Uses.

<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 64 samples taken from 11/10/97 to 1/13/04 at one to two-week sampling interval. Four samples exceeded the total selenium continuous criterion concentration, which equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time without deleterious effects (LACDPW, 2004c).
<i>Spatial Representation:</i>	Samples collected at one sampling site from during primarily the wet season beginning from 11/10/97 through 1/13/04 at approximately one to two week intervals.
<i>Temporal Representation:</i>	Sixty-four samples taken during primarily the wet season from 11/10/97 to 1/13/04 at approximately one to two week intervals.
<i>Environmental Conditions:</i>	Results are from samples taken from 1997 to 2004 by the LADPW. Sampling was carried out at Spring Street station (S13) on Coyote Creek during primarily wet season conditions.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	CTR Selenium Criterion for Continuous Concentration in water for the protection of aquatic life is 5 ug/l, expressed in the total recoverable form. The criterion is linked and applicable for the protection of aquatic life Beneficial Uses.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from a total of 38 samples taken at three different Los Angeles County Sanitation District sampling stations (sampling stations RA1, RA, R9E) between 8/3/95 and 5/11/04 at different sampling intervals. One sample in station RA1 taken 7/14/03 exceeded the total selenium continuous criterion concentration, which equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4days) without deleterious effects (LACSD, 2004b).
<i>Spatial Representation:</i>	Three (3) sample sites sampled between 8/3/95 and 5/11/04 at different sampling intervals.
<i>Temporal Representation:</i>	Thirty-eight samples were taken at three sampling stations primarily during the dry season between 8/3/95 to 5/11/04.

*Environmental Conditions:* Results are from samples taken from 1995 to 2004 by the LA County Sanitation Districts. Data primarily reflects dry weather conditions.

*Data Quality Assessment:* Quality Assurance Document Of The County Sanitation Districts Of Los Angeles County. July 2003.

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## Region 4

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**Water Segment:** Coyote Creek

**Pollutant:** Zinc

**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. Five samples exceed dissolved Zinc CTR criterion for continuous concentration.

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. Five of 64 samples exceeded the dissolved Zinc CTR criterion for continuous concentration 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* CTR Dissolved Zinc Criterion for continuous concentration (CCC) in water for the protection of aquatic life is expressed as a function of the total hardness of the water body. The aquatic life criteria will vary depending of total hardness reported at the sampling site. The CCC for dissolved zinc 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.

<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 64 samples taken from 10/14/97 to 1/13/04 at one to two-week sampling interval. Five samples exceeded the dissolved zinc continuous criterion concentration, which equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects (LACDPW, 2004b); (LACSD, 2004b).
<i>Spatial Representation:</i>	One sampling station sampled from 10/14/97 to 1/13/04. Los Angeles Department of Public Works mass emission station at Spring Street on Coyote Creek.
<i>Temporal Representation:</i>	Sixty-three samples taken primarily during the wet season from 10/14/97 to 1/13/04 at approximately one to two week intervals.
<i>Environmental Conditions:</i>	Results are from samples taken from 1997 to 2004. Sampling was carried out at Spring Street on Coyote Creek during the wet season.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	MU - Municipal & Domestic, WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	There is no fresh water WQO or criteria for Total Zinc applicable with protection of Warm Fresh Water Habitat or MUN BUs.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 21 samples taken from 10/12/00 to 4/30/03 at one to two-week sampling interval. Total Zinc was detected in 14 samples. Data reported could not be compared against any applicable criteria or WQO established for total Zinc for the protection of any beneficial use in fresh water (LACDPW, 2004b).
<i>Spatial Representation:</i>	One sample site sampled during the dry and wet season beginning from 10/12/00 through 4/30/03 at approximately one to two week intervals.
<i>Temporal Representation:</i>	Twenty-one (21) samples were taken during the wet and dry season from 10/12/00 to 4/30/03 at approximately one to two week intervals as part of the Los Angeles County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.
<i>Environmental Conditions:</i>	The Coyote Creek Monitoring Station (S13) is located at the existing ACOE stream gage station (Stream Gage No. F354-R) below Spring Street in the lower



San Gabriel River watershed. The site assists in determining mass loading for the San Gabriel River watershed. At this location, the upstream tributary area is 150 square miles (extending into Orange County). The sampling site was chosen to avoid backwater effects from the San Gabriel River. Coyote Creek, at the gauging station, is a concrete lined trapezoidal channel. The Coyote Creek sampling location has been an active stream gauging station since 1963.

*Data Quality Assessment:*

Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** Dockweiler Beach

**Pollutant:** Beach Closures

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (algal growth). A dry weather TMDL was approved by the RWQCB on 1/24/02, and a wet weather TMDL was approved on 12/12/04, and subsequently approved by USEPA on 6/19/03. These TMDLs are expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing these listing from the 303(d) Water Quality Limited Segment list because the segment pollutant combinations is not a pollutant. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

**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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Dominguez Channel (lined portion above Vermont Ave)

**Pollutant:** Aldrin

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

The original listing was based on Maximum Residue Level (MTRL) . The Listing Policy does not allow the use of MTRL in listing or delisting decisions. Only one sample was taken at one station.

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 an inappropriate guideline was originally used to assess the available data, and there were insufficient data upon which to base an assessment of 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 the listing was based on faulty data and it is unknown whether applicable water quality standards or guidelines for the pollutant are exceeded.

### **Lines of Evidence:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/* Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or

<i>Water Quality Criterion:</i>	human health.
<i>Evaluation Guideline:</i>	A NS guideline of 100 ug/kg is available for this pollutant (NAS, 1972). Previous assessment for this pollutant and water body relied upon the use of an Maximum Tissue Residue Level (MTRL). The Listing Policy does not allow the use of MTRLs.
<i>Data Used to Assess Water Quality:</i>	There was one measurement (TSMP, 2002).
<i>Spatial Representation:</i>	One station.
<i>Temporal Representation:</i>	One sample event in 1992.
<i>Data Quality Assessment:</i>	Toxic Substances Monitoring Program.

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## Region 4

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**Water Segment:** Dominguez Channel (lined portion above Vermont Ave)

**Pollutant:** ChemA

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

There is no tissue guideline for this pollutant that meets the requirements of section 6.1.3 of the Listing Policy. The original listing was based on an Elevated Data Level (EDL). The Listing Policy does not allow the use of EDLs in listing or delisting decisions. Only one sample was taken and the data was collected downstream from this segment and is not representative.

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 data is 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 the listing was based on faulty data and it is unknown whether applicable water quality standards or guidelines for the pollutant are exceeded.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/* Basin Plan: Toxic pollutants shall not be present at levels that will

<i>Water Quality Criterion:</i>	bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.
<i>Evaluation Guideline:</i>	There is no tissue guideline for this pollutant that meets the requirements of section 6.1.3 of the Listing Policy. The original listing was based on an Elevated Data Level (EDL). The Listing Policy does not allow the use of EDLs in listing or delisting decisions.
<i>Data Used to Assess Water Quality:</i>	The data that was used for the original listing was collected downstream of this water segment (TSMP, 2002).
<i>Spatial Representation:</i>	One station. The data were not collected in this water segment.
<i>Temporal Representation:</i>	One sample event in 1992.
<i>Data Quality Assessment:</i>	Toxic Substances Monitoring Program.

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## Region 4

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**Water Segment:** Dominguez Channel (lined portion above Vermont Ave)

**Pollutant:** Chlordane

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

The original listing was based on exceedances of a maximum tissue residue level (MTRL) and Elevated Data Level (EDL). Pursuant to section 6.1.3 of the Listing Policy, these two guidelines cannot be used to evaluate fish and shellfish tissue data. An OEHHA tissue guideline for chlordane of 30 ug/kg is available (Brodberg and Pollock, 1999) but application to this water segment is questionable. The listing data used to list this pollutant cannot be found. Only one sample was taken and the sample was not collected in the water segment.

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 data is 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 the listing was based on faulty data and it is unknown whether applicable water quality standards or guidelines for the pollutant are exceeded.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.
<i>Evaluation Guideline:</i>	The original listing was based on exceedance of a maximum tissue residue level (MTRL) and Elevated Data Level (EDL). Pursuant to section 6.1.3 of the Listing Policy, these two guidelines cannot be used to evaluate fish and shellfish tissue data. An OEHHA tissue guideline for chlordane of 30 ug/kg is available (Brodberg and Pollock, 1999) but application to this water segment is questionable.
<i>Data Used to Assess Water Quality:</i>	One sample is available (TSMP, 2002).
<i>Spatial Representation:</i>	Data were not collected in the water segment. Data from one downstream location were applied to this water segment.
<i>Temporal Representation:</i>	The sample was collected in 1992.
<i>Data Quality Assessment:</i>	Toxic substance Monitoring Program.

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## Region 4

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**Water Segment:** Dominguez Channel (lined portion above Vermont Ave)

**Pollutant:** DDT

**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. Two lines of evidence are available in the administrative record to assess this pollutant. One line of evidence pertains to pollutant in sediment and the other pertains to pollutant in tissue.

There is no sediment quality guideline for DDT that meets the requirements of section 6.1.3 of the Listing Policy. Furthermore, there was no sediment sample collected in this water segment. This particular segment is concrete lined. In addition, one downstream measurement was used to list this segment based on an Elevated Data Level (EDL) and Maximum Tissue Residue Level (MTRL). The Listing Policy does not allow the use of EDLs or MTRLs in listing or delisting decisions. Furthermore, only one sample was taken from a downstream segment and therefore the sample was not representative or sufficient in number to support the listing

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 data is 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 the listing was based on faulty data and it is unknown whether applicable water quality standards or guidelines for the pollutant are exceeded.

**Lines of Evidence:**

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*Numeric Line of Evidence* Pollutant-Sediment

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

<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	There is no sediment quality guideline for this pollutant that meets the requirements of section 6.1.3 of the Listing Policy.
<i>Data Used to Assess Water Quality:</i>	No sediment samples were ever collected in this water segment. The segment is concrete lined.
<i>Spatial Representation:</i>	No data collected in this water segment.
<i>Temporal Representation:</i>	No data collected in this water segment.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Tissue
<i>Beneficial Use:</i>	CM - Commercial and Sport Fishing (CA)
<i>Matrix:</i>	Tissue
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.
<i>Evaluation Guideline:</i>	An NAS guideline of 1,000 ug/kg is available (NAS, 1972). The original listing was based on an Elevated Data Level (EDL) and Maximum Tissue Residue Level (MTRL). The Listing Policy does not allow the use of EDLs or MTRLs in listing or delisting decisions.
<i>Data Used to Assess Water Quality:</i>	One measurement. Data used to place this segment on the section 303(d) list was collected in a downstream segment (TSMP, 2002).
<i>Spatial Representation:</i>	One station. Data were collected in a downstream section of this water body.
<i>Temporal Representation:</i>	The sample was collected in 1992.
<i>Data Quality Assessment:</i>	Toxic Substances Monitoring Program.

## Region 4

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**Water Segment:** Dominguez Channel (lined portion above Vermont Ave)

**Pollutant:** Dieldrin

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

The original listing was based on Maximum Tissue Residue Level (MTRL). The Listing Policy does not allow the use of MTRL in listing or delisting decisions. Only one sample was taken in 1992 and this is no longer representative.

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 an inappropriate guideline was used to assess the status of this water body for this pollutant and there were an insufficient number of samples taken to make a listing assessment. 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 the listing was based on faulty data and it is unknown whether applicable water quality standards or guidelines for the pollutant are exceeded.

### **Lines of Evidence:**

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*Numeric Line of Evidence* Pollutant-Tissue

*Beneficial Use:* CM - Commercial and Sport Fishing (CA), RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Matrix:* Tissue

*Water Quality Objective/* Basin Plan: Toxic pollutants shall not be present at levels that will

<i>Water Quality Criterion:</i>	bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.
<i>Evaluation Guideline:</i>	NAS Screening Value: 100 ug/kg (NAS, 1972). The original listing was based on the use of a Maximum Tissue Residue Level (MTRL). Section 6.1.3 of the Listing Policy does not allow the use of MTRLs to evaluate fish and shellfish tissue data.
<i>Data Used to Assess Water Quality:</i>	One tissue sample is available (TSMP, 2002).
<i>Spatial Representation:</i>	One station. The data used is from a station that is located in a downstream section of the water body.
<i>Temporal Representation:</i>	The sample was collected in 1992.
<i>Data Quality Assessment:</i>	Toxic Substances Monitoring Program.

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## Region 4

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**Water Segment:** Dominguez Channel Estuary (unlined portion below Vermont Ave)

**Pollutant:** Aldrin

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

Although the original listing was based on Maximum Tissue Residue Level (MTRL), which is not allowed in the Listing Policy to make listing or delisting decisions, it is unknown what data was used to support this specific listing. The nearest State Mussel Watch (SMW) station is downstream of the water body segment. Aldrin has never been detected at this SMW station. There is no data available to compare with applicable guideline.

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 there is no data to compare with available NAS guideline 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 the listing was based on unknown data and it is unknown whether applicable water quality guidelines for the pollutant are exceeded.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* -N/A

<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.
<i>Evaluation Guideline:</i>	An aldrin guideline of 100 ug/kg is available (NAS, 1972). The original listing was based on comparison to MTRL.
<i>Data Used to Assess Water Quality:</i>	It is unknown what data were used to support the original listing. The nearest State Mussel Watch Station is downstream of the water body and this pollutant has never been detected at that site.
<i>Spatial Representation:</i>	No data are available to compare to guideline.
<i>Temporal Representation:</i>	No data are available to compare to guideline.

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## Region 4

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**Water Segment:** Dominguez Channel Estuary (unlined portion below Vermont Ave)

**Pollutant:** ChemA

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

There is no tissue guideline for this pollutant that meets the requirements of section 6.1.3 of the Listing Policy. The original listing was based on an Elevated Data Level (EDL). The Listing Policy does not allow the use of EDLs in listing or delisting decisions. Only one sample was taken in 1992.

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 a non applicable guidelines was used 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 the listing was based on faulty data and it is unknown whether applicable water quality standards or guidelines for the pollutant are exceeded.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Tissue

*Beneficial Use:* ES - Estuarine Habitat

*Matrix:* Tissue

*Water Quality Objective/* Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or

<i>Water Quality Criterion:</i>	human health.
<i>Evaluation Guideline:</i>	There is no tissue guideline for this pollutant that meets the requirements of section 6.1.3 of the Listing Policy. The original listing was based on an Elevated Data Level (EDL). The Listing Policy does not allow the use of EDLs in listing or delisting decisions.
<i>Data Used to Assess Water Quality:</i>	One tissue sample (TSMP, 2002).
<i>Spatial Representation:</i>	One station.
<i>Temporal Representation:</i>	The sample was collected in 1992.
<i>Data Quality Assessment:</i>	Toxic Substances Monitoring Program.

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## Region 4

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**Water Segment:** Dominguez Channel Estuary (unlined portion below Vermont Ave)

**Pollutant:** Chlordane

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

The original listing was based on Maximum Tissue Residue Level (MTRL). The Listing Policy does not allow the use of MTRL and EDLs in listing or delisting decisions. Only one sample was taken in 1992 and this is no longer representative.

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 an inappropriate guideline was used to assess the status of this water body for this pollutant and there were an insufficient number of samples taken to make a listing assessment. 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 the listing was based on faulty data and it is unknown whether applicable water quality standards or guidelines for the pollutant are exceeded.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/* Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or

<i>Water Quality Criterion:</i>	human health.
<i>Evaluation Guideline:</i>	An OEHHA tissue guideline of 30 ug/kg is available (Brodberg and Pollock, 1999). The original listing was based on comparisons to a MTRL and an EDL. The Listing Policy does not allow the use of EDLs or MTRLs in listing or delisting decisions.
<i>Data Used to Assess Water Quality:</i>	One tissue sample (TSMP, 2002).
<i>Spatial Representation:</i>	One sample.
<i>Temporal Representation:</i>	The sample was collected in 1992.
<i>Data Quality Assessment:</i>	Toxic Substances Monitoring Program.

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## Region 4

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<b>Water Segment:</b>	Dominguez Channel Estuary (unlined portion below Vermont Ave)
<b>Pollutant:</b>	Chromium (total)
<b>Decision:</b>	Delist
<b>Weight of Evidence:</b>	<p>This pollutant is being considered for delisting under sections 4.6 of the Listing Policy. Under section 4.6 a single line of evidence is necessary to assess listing status.</p> <p>One line of evidence is available in the administrative record to assess this pollutant. Based on section 4.6, there is no known significant toxicity data associated with this pollutant and the number of pollutant exceedances does not exceed the frequency allowed by the Listing Policy.</p> <p>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.</p> <p>This conclusion is based on the staff findings that:</p> <ol style="list-style-type: none"><li>1.The sediment quality guideline used complies, with the requirements of section 6.1.3 of the Policy.</li><li>2.The data used satisfies the data quality requirements of section 6.1.4 of the Policy.</li><li>3.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.</li><li>4.Four of 93 samples exceeded the Effects Range Medium sediment guideline, There is no known toxicity data associated with the pollutant exceedances, and the exceedances recorded do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.</li><li>5.Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.</li></ol>
<b>SWRCB Staff Recommendation:</b>	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.
<b>Lines of Evidence:</b>	

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<i>Numeric Line of Evidence</i>	Pollutant-Sediment
<i>Beneficial Use:</i>	ES - Estuarine Habitat, MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	An Effects Range-Median of 370 ug/g was used (Long et al., 1995).
<i>Data Used to Assess Water Quality:</i>	Four of 93 samples exceed the ERM (LARWQCB and CCC, 2004).
<i>Spatial Representation:</i>	Ninety-three samples spread throughout the water body.
<i>Temporal Representation:</i>	Samples were collected between 1994 and 2002.
<i>Data Quality Assessment:</i>	Contaminated Sediments Task Force Database.

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## Region 4

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**Water Segment:** Dominguez Channel Estuary (unlined portion below Vermont Ave)

**Pollutant:** DDT

**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. Two lines of evidence are available in the administrative record to assess this pollutant. One line of evidence pertains to pollutant in sediment and the other pertains to pollutant in tissue.

There is no sediment quality guideline for DDT that meets the requirements of section 6.1.3 of the Listing Policy. In addition, one downstream measurement was used to list this segment based on an Elevated Data Level (EDL) and Maximum Tissue Residue Level (MTRL). The Listing Policy does not allow the use of EDLs or MTRLs in listing or delisting decisions. The tissue sample taken is not representative and the number of samples was insufficient to support the listing.

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 there is no guideline applicable to assess the sediment status of this water body and an inappropriate tissue guideline was used to assess the tissue concentration 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 the listing was based on faulty data and it is unknown whether applicable water quality standards or guidelines for the pollutant are exceeded.

### **Lines of Evidence:**

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*Numeric Line of Evidence*                      Pollutant-Tissue

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

<i>Matrix:</i>	Tissue
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.
<i>Evaluation Guideline:</i>	OEHHA Screening Value: 100 ug/kg (Brodberg and Pollock, 1999). The original listing was based on an EDL and MTRL. The Listing Policy does not allow the use of EDLs or MTRLs in listing or delisting decisions.
<i>Data Used to Assess Water Quality:</i>	One measurement (TSMP, 2002).
<i>Spatial Representation:</i>	One station.
<i>Temporal Representation:</i>	The sample was collected in 1992.
<i>Data Quality Assessment:</i>	Toxic Substances Monitoring Program.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Sediment
<i>Beneficial Use:</i>	CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat, MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	There is no tissue guideline for this pollutant that meets the requirements of section 6.1.3 of the Listing Policy.
<i>Data Used to Assess Water Quality:</i>	Forty-three samples are available (LARWQCB and CCC, 2004).
<i>Spatial Representation:</i>	Forty-three samples are spread throughout the water body.
<i>Temporal Representation:</i>	Samples were collected between 1994 and 2002.
<i>Data Quality Assessment:</i>	Bay Protection and Toxic Cleanup Program. Contaminated Sediments Task Force Database.

## Region 4

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**Water Segment:** Dominguez Channel Estuary (unlined portion below Vermont Ave)

**Pollutant:** Dieldrin

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

The original listing was based on Maximum Tissue Residue Level (MTRL). The Listing Policy does not allow the use of MTRL in listing or delisting decisions. Only one sample was taken downstream from the water segment in 1992 and this is not representative.

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 an inappropriate guideline was used to assess the status of this water body for this pollutant. The sample was not taken at the appropriate segment and there were an insufficient number of samples taken to make a listing assessment. 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 the listing was based on faulty data and it is unknown whether applicable water quality standards or guidelines for the pollutant are exceeded.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Tissue

*Beneficial Use:* CM - Commercial and Sport Fishing (CA), ES - Estuarine Habitat

*Matrix:* Tissue

*Water Quality Objective/* Basin Plan: Toxic pollutants shall not be present at levels that will

<i>Water Quality Criterion:</i>	bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.
<i>Evaluation Guideline:</i>	An OEHHA guideline of 2.0 ug/g is available (Brodberg and Pollock, 1999). The original listing was based on an MTRL. The Listing Policy does not allow the use of MTRLs in listing or delisting decisions.
<i>Data Used to Assess Water Quality:</i>	No data are available for this water segment. The data previously used was from a station downstream of the water segment (TSMP, 2002).
<i>Spatial Representation:</i>	No data collected in the water segment.
<i>Temporal Representation:</i>	The sample was collected in 1992.
<i>Data Quality Assessment:</i>	Toxic Substances Monitoring Program.

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## Region 4

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**Water Segment:** Dominguez Channel Estuary (unlined portion below Vermont Ave)

**Pollutant:** Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems)

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 3.9 of the Listing Policy. Under section 3.9 two lines of evidence are necessary to assess listing status.

Five lines of evidence are available in the administrative record to assess this pollutant. In four new individual lines of evidence, independently recommended for placement on the 303(d) list under section 3.9 of the Listing Policy, a sufficient number of samples exceeded the sediment quality guideline for the following PAHs: Pyrene, Phenanthrene, Chrysene, and Benzo (a) pyrene. Although sediment toxicity has been observed, significant benthic degradation has been recorded and this may be linked with these specific PAH pollutant concentrations in this water body segment.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing the PAH sediment-pollutant combination and replacing this general PAH listing with the individually listings of Pyrene, Phenanthrene, Chrysene, and Benzo (a) pyrene on the section 303(d) list in the Water Quality Limited Segments category.

This conclusion is based on the staff findings that:

1. In the new available data a sufficient number of samples exceeded the specific PAH sediment quality guideline for each PAH. The benthic community impacts may be better linked with the effects of these individual pollutants in the sediment of this water body segment.
2. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are not met due to other PAHs.

**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 for PAH in sediment and replace this general PAH listing with the individually listings of Pyrene, Phenanthrene, Chrysene, and Benzo (a) pyrene on the section 303(d) list in the Water Quality Limited Segments category. New individual lines of evidence, independently recommended for placement on the 303(d) list under section 3.9 of the Listing Policy, exhibit a sufficient number of samples exceeded the sediment quality guideline for the following PAHs: Pyrene, Phenanthrene, Chrysene, and Benzo (a) pyrene. The significant benthic degradation recorded may be better linked with these specific PAH pollutant concentrations in this water body segment.

**Lines of Evidence:**

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<i>Line of Evidence</i>	Adverse Biological Responses
<i>Beneficial Use</i>	ES - Estuarine Habitat
<i>Non-Numeric Objective:</i>	Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Data Used to Assess Water Quality:</i>	This water body pollutant combination is listed on the 2002 section 303(d) list for PAH in sediment. New data sets are now available recommending the listing of the following specific PAHs, Pyrene, Phenanthrene, Chrysene, and Benzo(a)pyrene. The present 303(d) listing for PAH in sediment should therefore be replaced with the specific listings of these PAHs.

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## Region 4

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**Water Segment:** Escondido Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Flat Rock Point Beach Area

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Hermosa Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Inspiration Point Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** La Costa Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Las Tunas Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Los Angeles Harbor - Consolidated Slip

**Pollutant:** Dieldrin

**Decision:** Delist

**Weight of Evidence:** This pollutant was placed on the 2002-303(d) list because originally a faulty guideline was used. Section 6.1.3 of the Listing Policy does not allow the use of MTRLS to evaluate fish and shellfish tissue data. Upon further reevaluation of the single line of evidence used to originally place the water body - pollutant combination on the 303(d) list by applying the correct OEHHA screening value, none of the samples were in exceedances.

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. Zero of three samples exceeded the 2.0 ug/kg OEHHA screening value 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:**

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*Numeric Line of Evidence* Pollutant-Sediment

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

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use (LARWQCB, 1995).

<i>Evaluation Guideline:</i>	An Effects Range-Median of 8 ng/g was used (Long et al., 1995).
<i>Data Used to Assess Water Quality:</i>	Of 38 sediment samples (cores or grabs), 10 exceeded the sediment guideline (LARWQCB and CCC, 2004).
<i>Spatial Representation:</i>	Thirty-eight samples spread throughout the estuary.
<i>Temporal Representation:</i>	Samples collected between 1992 and 1997.
<i>Data Quality Assessment:</i>	Contaminated Sediments Task Force Database (Stephenson et al. 1994) Bay Protection and Toxic Cleanup Program.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Tissue
<i>Beneficial Use:</i>	CM - Commercial and Sport Fishing (CA)
<i>Matrix:</i>	Tissue
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health (LARWQCB, 1995).
<i>Evaluation Guideline:</i>	OEHHA Screening Value: 2.0 ug/kg (Brodberg and Pollock, 1999).
<i>Data Used to Assess Water Quality:</i>	The guideline is not exceeded in any of the 12 measurements. The original listing was based on exceeding background levels rather than valid assessment guidelines (SMWP, 2004).
<i>Spatial Representation:</i>	One station.
<i>Temporal Representation:</i>	Samples collected annually from 1992 through 2003.
<i>Data Quality Assessment:</i>	State Mussel Watch Program.

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## Region 4

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**Water Segment:** Los Angeles Harbor - Consolidated Slip

**Pollutant:** Nickel

**Decision:** Delist

**Weight of Evidence:** This water body-pollutant combination was originally placed on the 2002-303(d) list in error. BPTCP data was used as the basis for determining whether the water body combination would be placed on the 303(d) list. However, nickel is not identified in the Consolidated Toxic Hot Spots Cleanup Plan as a chemical contributing to the creation or maintenance of the toxic hot spot within this water body because there is no available sediment quality guideline that meets the requirements of section 6.1.3 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 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. No guideline is available to evaluate this data.
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 it cannot be determined if applicable water quality standards for the pollutant are exceeded.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Sediment

*Beneficial Use:* MA - Marine Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use

(LARWQCB, 1995)

<i>Evaluation Guideline:</i>	There is no available sediment quality guideline that meets the requirements of section 6.1.3 of the Listing Policy.
<i>Data Used to Assess Water Quality:</i>	A total of 26 samples are available. BPTCP sediment samples ranging in concentration from 23 ppm to 53.6 ppm. Nickel is not identified in the Consolidated Toxic Hot Spots Cleanup Plan as a chemical contributing to the creation or maintenance of the toxic hot spot (LARWQCB and CCC, 2004).
<i>Spatial Representation:</i>	Samples were collected throughout water body.
<i>Temporal Representation:</i>	Samples collected from 1992 through 1997.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan (Stephenson et al., 1994) Contaminated Sediments Task Force Database.

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## Region 4

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**Water Segment:** Los Angeles Harbor - Consolidated Slip

**Pollutant:** Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems)

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 4.6 of the Listing Policy. Under section 4.6 two lines of evidence are necessary to assess listing status.

Three lines of evidence are available in the administrative record to assess this pollutant. Based on section 4.6, there is known significant toxicity and bioassessment data associated with this water body segment but the number of pollutant sediment exceedances does not exceed the frequency allowed by the Listing Policy.

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 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. One of 41 samples taken between 1992 and 1997 exceeded the 1,800 ug/g Effects Range Medium sediment guideline. Further sampling in 2002, recorded no exceedances out of 120 samples. Although significant toxicity data and benthic community impacts are associated with this water body segment, pollutant sediment concentrations does not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
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 not be removed from the section 303(d) list because it cannot be determined if applicable water quality guidelines are exceeded.

**Lines of Evidence:**

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Sediment
<b><i>Beneficial Use:</i></b>	MA - Marine Habitat
<b><i>Matrix:</i></b>	Sediment
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<b><i>Evaluation Guideline:</i></b>	A sediment quality guideline of 1,800 ug/g was used (Fairey et al., 2001).
<b><i>Data Used to Assess Water Quality:</i></b>	Of the 120 core and grab samples from 2002, none exceed the guideline. For the 41 samples collected between 1992 and 1997, one exceed the sediment guideline (LARWQCB and CCC, 2004).
<b><i>Spatial Representation:</i></b>	The samples were collected throughout the water body.
<b><i>Temporal Representation:</i></b>	The samples were collected between 1992 and 1997.
<b><i>Data Quality Assessment:</i></b>	Bay Protection and Toxic Clean up Program. Contaminated Sediments Task Force Database.

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<b><i>Numeric Line of Evidence</i></b>	Toxicity
<b><i>Beneficial Use:</i></b>	MA - Marine Habitat
<b><i>Matrix:</i></b>	Sediment
<b><i>Water Quality Objective/ Water Quality Criterion:</i></b>	Basin Plan: Existing habitats and associated populations of wetlands fauna and flora shall be maintained by:  -Maintaining substrate characteristics necessary to support flora and fauna which would be present naturally, -Protecting food supplies for fish and wildlife, -Protecting reproductive and nursery areas, and -Protecting wildlife corridors. (LARWQCB, 1995).
<b><i>Evaluation Guideline:</i></b>	Significant toxicity as compared to control conditions.
<b><i>Data Used to Assess Water Quality:</i></b>	Thirteen of 17 samples were significantly toxic (Anderson et al., 1998).
<b><i>Spatial Representation:</i></b>	Samples were collected throughout the estuary.

<i>Temporal Representation:</i>	Samples were collected in 1994 and 1996.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan (Stephenson et al., 1994).
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<b><i>Numeric Line of Evidence</i></b>	Population/Community Degradation
<i>Beneficial Use:</i>	MA - Marine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	<p>Basin Plan: Existing habitats and associated populations of wetlands fauna and flora shall be maintained by:</p> <ul style="list-style-type: none"> <li>-Maintaining substrate characteristics necessary to support flora and fauna which would be present naturally,</li> <li>-Protecting food supplies for fish and wildlife,</li> <li>-Protecting reproductive and nursery areas, and</li> <li>-Protecting wildlife corridors.</li> </ul> <p>Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use (LARWQCB, 1995)</p>
<i>Evaluation Guideline:</i>	Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community (Anderson et al., 1998).
<i>Data Used to Assess Water Quality:</i>	Eleven samples are available with 5 exhibiting degraded conditions and 6 with transitional community characteristics (Anderson et al., 1998).
<i>Spatial Representation:</i>	The samples were collected throughout the water body.
<i>Temporal Representation:</i>	Samples were collected in 1992 and 1996.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan (Stephenson et al., 1994)
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## Region 4

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**Water Segment:** Los Angeles River Estuary (Queensway Bay)

**Pollutant:** DDT

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 4.6 of the Listing Policy. Under section 4.6 two lines of evidence are necessary to assess listing status.

Three lines of evidence are available in the administrative record to assess this pollutant. Based on section 4.6, there is known significant toxicity and bioassessment data associated with this water body segment but there is no sediment quality guideline for DDT that meets the requirements of section 6.1.3 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 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. Although significant toxicity and bioassessment data are associated with this water body segment, there is no sediment quality guideline for DDT that meets the requirements of section 6.1.3 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 there is no sediment quality guideline that meets the requirements of section 6.1.3 of the Listing Policy and it cannot be determined if applicable water quality standards or guidelines are exceeded.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Sediment

*Beneficial Use:* ES - Estuarine Habitat

*Matrix:* Sediment



<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Existing habitats and associated populations of wetlands fauna and flora shall be maintained by:  -Maintaining substrate characteristics necessary to support flora and fauna which would be present naturally, -Protecting food supplies for fish and wildlife, -Protecting reproductive and nursery areas, and -Protecting wildlife corridors.  Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	A guideline that meets the requirements of section 6.1.3 of the Listing Policy is not available.
<i>Data Used to Assess Water Quality:</i>	Nine samples ranging in concentration from 16.1 ppb to 75.8 ppb (Anderson et al., 1998).
<i>Spatial Representation:</i>	Samples were collected synoptically with toxicity samples.
<i>Temporal Representation:</i>	Samples taken in 2 different years.
<i>Data Quality Assessment:</i>	BPTCP Quality Assurance Project Plan.

<i><b>Numeric Line of Evidence</b></i>	Toxicity
<i>Beneficial Use:</i>	ES - Estuarine Habitat
<i>Matrix:</i>	Sediment
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: Existing habitats and associated populations of wetlands fauna and flora shall be maintained by:  -Maintaining substrate characteristics necessary to support flora and fauna which would be present naturally, -Protecting food supplies for fish and wildlife, -Protecting reproductive and nursery areas, and -Protecting wildlife corridors.  Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
<i>Evaluation Guideline:</i>	BPTCP reference envelope approach used.
<i>Data Used to Assess Water Quality:</i>	Four out of six sediment samples were found to be significantly toxic to amphipods (Anderson et al., 1998).

*Spatial Representation:* Samples were collected synoptically with sediment samples.

*Temporal Representation:* Samples taken in 2 different years.

*Data Quality Assessment:* BPTCP Quality Assurance Project Plan.

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***Numeric Line of Evidence*** Population/Community Degradation

*Beneficial Use:* ES - Estuarine Habitat

*Matrix:* Sediment

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: Existing habitats and associated populations of wetlands fauna and flora shall be maintained by:

- Maintaining substrate characteristics necessary to support flora and fauna which would be present naturally,
- Protecting food supplies for fish and wildlife,
- Protecting reproductive and nursery areas, and
- Protecting wildlife corridors.

Basin Plan: Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.

*Evaluation Guideline:* Evaluation of the benthic data were completed using the approaches developed by scientists associated with the BPTCP. The relative benthic index used is a calculated value considering the total fauna, total mollusk species, crustacean species and indicator species at a site. The index ranges from 0 to 1.0. An index value of less than or equal to 0.3 is an indication that pollutants or other factors are negatively impacting the benthic community.

*Data Used to Assess Water Quality:* The benthic community was classified as transitional (Anderson et al., 1998).

*Spatial Representation:* Samples were collected synoptically with sediment and toxicity samples.

*Temporal Representation:* Samples taken in 2 different years.

*Data Quality Assessment:* BPTCP Quality Assurance Project Plan.

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## Region 4

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**Water Segment:** Los Angeles River Reach 1 (Estuary to Carson Street)

**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 delisting status.

Two lines of evidence are available in the administrative record to assess this pollutant. The CTR criterion for cadmium for the protection of aquatic life was exceeded from data collected between 1996 and 2002 and no samples exceeded CCR Title 22 MCL guidelines for the protection of MUN beneficial uses in data collected between 2000 and 2003.

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 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. Three of 42 samples exceeded the CTR - CMC acute criterion, and CCC chronic criterion and zero of 22 samples exceeded CCR Title 22 MCL guidelines 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:**

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*Numeric Line of Evidence* Pollutant-Water

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

*Matrix:* Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	Primary MCL guideline for Cadmium of .005 mg/l shall not be exceeded to protect MUN beneficial uses in accordance with Title 22 of the California Code of regulation table 64431-A of section 64449.
<i>Data Used to Assess Water Quality:</i>	No sample exceeded the Primary MCL guideline for Cadmium (LACDPW, 2003a).
<i>Spatial Representation:</i>	One sample site.
<i>Temporal Representation:</i>	Twenty-two samples were taken during the wet and dry season from 10/12/00 to 4/30/03 at approximately one to two week intervals as part of the Los Angeles County Storm water monitoring program prepared by the Los Angeles County Department of Public Works.
<i>Environmental Conditions:</i>	The Los Angeles River Monitoring Station is located at the existing stream gage station (Stream Gage No. F319-R) between Willow Street and Wardlow Road in the City of Long Beach. At this location, which was chosen to avoid tidal influences, the total upstream tributary drainage area for the Los Angeles River is 825 square miles. This river is the largest watershed outlet to the Pacific Ocean in Los Angeles County. At the site, the river is a concrete lined trapezoidal channel.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	MU - Municipal & Domestic, WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	California Toxic Rule: The criterion for cadmium at 100 mg/L hardness is 2.24 ug/L.
<i>Data Used to Assess Water Quality:</i>	Forty-two samples with three exceeding the water quality criterion (LACDPW, 2003a).
<i>Spatial Representation:</i>	One station (Wardlow gage) sampled during approximately 5 storm events.
<i>Temporal Representation:</i>	Samples collected between 1996 and 2002.
<i>Environmental Conditions:</i>	Data are representative of wet-weather conditions.
<i>Data Quality Assessment:</i>	NPDES MS4 monitoring conducted by Los Angeles County Department of Public Works.

## Region 4

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**Water Segment:** Los Angeles River Reach 2 (Carson to Figueroa Street)

**Pollutant:** Foam/Flocs/Scum/Oil Slicks

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (algal growth). The Los Angeles River Nitrogen TMDL was approved by RWQCB on August, 2003 and subsequently approved by USEPA on March 2004 and this TMDL is expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing these listing from the 303 (d) Water Quality Limited Segment list because the segment pollutant combinations is not 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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*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 Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Los Angeles River Reach 2 (Carson to Figueroa Street)

**Pollutant:** Nutrients (Algae)

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (algal growth). The Los Angeles River Nitrogen TMDL was approved by RWQCB on August, 2003 and subsequently approved by USEPA on March 2004 and this TMDL is expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing these listing from the 303 (d) Water Quality Limited Segment list because the segment pollutant combinations is not 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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*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 Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Los Angeles River Reach 2 (Carson to Figueroa Street)

**Pollutant:** Taste and odor

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (algal growth). The Los Angeles River Nitrogen TMDL was approved by RWQCB on August, 2003 and subsequently approved by USEPA on March 2004 and this TMDL is expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing these listing from the 303 (d) Water Quality Limited Segment list because the segment pollutant combinations is not 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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Los Angeles/Long Beach Outer Harbor (inside breakwater)

**Pollutant:** Polychlorinated biphenyls

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 4.4 of the Listing Policy. Under section 4.4 two lines of evidence are necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. Based on section 4.4, a health advisory has been issued for this water segment but mussel watch data do not exceed the tissue guideline or the narrative water quality objective.

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 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 9 samples exceeded the tissue guideline.
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:**

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*Numeric Line of Evidence* Pollutant-Tissue

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

*Matrix:* Tissue

*Water Quality Objective/* Basin Plan: Toxic pollutants shall not be present at levels that will



<i>Water Quality Criterion:</i>	bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.
<i>Evaluation Guideline:</i>	OEHHA PCB Screening Value: 20 ug/kg (Brodberg and Pollock, 1999).
<i>Data Used to Assess Water Quality:</i>	Nine measurements with none exceeding the tissue guideline.
<i>Spatial Representation:</i>	One station (Los Angeles Harbor, Angels Gate).
<i>Temporal Representation:</i>	One sample collected per year from 1990 through 2000.
<i>Data Quality Assessment:</i>	California State Mussel Watch Program.

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<b><i>Line of Evidence</i></b>	Health Advisories
<i>Beneficial Use</i>	CM - Commercial and Sport Fishing (CA)
<i>Information Used to Assess Water Quality:</i>	A fish consumption advisory has been established for the PCBs in the Los Angeles/Long Beach Harbor area. The advisory was established by the Office of Environmental Health Hazard Assessment.

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## Region 4

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**Water Segment:** Lunada Bay Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Malaga Cove Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Malibu Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Manhattan Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Nicholas Canyon Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Ormond Beach

**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 4.2 a single line of evidence is necessary to assess delisting status. 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.

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-three out of 279 samples exceeded the bacteriological Standard and this does not exceed the allowable frequency 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:**

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* R1 - Water Contact Recreation

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* 17 CCR 7958 (in part): The minimum protective bacteriological standards for waters adjacent to public beaches and public water-contact sports areas shall be as follows:  
(1) Based on a single sample, the density of bacteria in water from each sampling station at a public beach or public water contact sports area shall not exceed:  
(A) 1,000 total coliform bacteria per 100 milliliters, if the ratio of fecal/total

coliform bacteria exceeds 0.1; or  
(B) 10,000 total coliform bacteria per 100 milliliters; or  
(C) 400 fecal coliform bacteria per 100 milliliters; or  
(D) 104 enterococcus bacteria per 100 milliliters.

*Data Used to Assess Water Quality:* Eighty-four samples, 2 samples exceeding (SWRCB, 2003).

*Spatial Representation:* One station: VC(44000). This station represents the beach 50 yards on either side of the sampling point. Samples were collected at Arnold Road.

*Temporal Representation:* Data collected in 1999, 2000, and 2001.

*Data Quality Assessment:* County Health Department.

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***Numeric Line of Evidence*** Pollutant-Water

*Beneficial Use:* R1 - Water Contact Recreation

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* 17 CCR 7958 (in part): The minimum protective bacteriological standards for waters adjacent to public beaches and public water-contact sports areas shall be as follows:  
(1) Based on a single sample, the density of bacteria in water from each sampling station at a public beach or public water contact sports area shall not exceed:  
(A) 1,000 total coliform bacteria per 100 milliliters, if the ratio of fecal/total coliform bacteria exceeds 0.1; or  
(B) 10,000 total coliform bacteria per 100 milliliters; or  
(C) 400 fecal coliform bacteria per 100 milliliters; or  
(D) 104 enterococcus bacteria per 100 milliliters.

*Data Used to Assess Water Quality:* Ninety-nine samples, 13 samples exceeding (SWRCB, 2003).

*Spatial Representation:* One station: VC(42000). This station represents the beach 50 yards on either side of the sampling point. Samples were collected 50 yards south of the J Street drain.

*Temporal Representation:* Data collected in 1999, 2000, and 2001.

*Data Quality Assessment:* County Health Department.

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***Numeric Line of Evidence*** Pollutant-Water



<i>Beneficial Use:</i>	R1 - Water Contact Recreation
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	17 CCR 7958 (in part): The minimum protective bacteriological standards for waters adjacent to public beaches and public water-contact sports areas shall be as follows: (1) Based on a single sample, the density of bacteria in water from each sampling station at a public beach or public water contact sports area shall not exceed: (A) 1,000 total coliform bacteria per 100 milliliters, if the ratio of fecal/total coliform bacteria exceeds 0.1; or (B) 10,000 total coliform bacteria per 100 milliliters; or (C) 400 fecal coliform bacteria per 100 milliliters; or (D) 104 enterococcus bacteria per 100 milliliters.
<i>Data Used to Assess Water Quality:</i>	Ninety-six samples, 18 samples exceeding (SWRCB, 2003).
<i>Spatial Representation:</i>	One station: VC(43000). This station represents the beach 50 yards on either side of the sampling point. Samples were collected 50 yards north of the Oxnard Industrial drain.
<i>Temporal Representation:</i>	Data collected in 1999, 2000, and 2001.
<i>Data Quality Assessment:</i>	County Health Department.

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## Region 4

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**Water Segment:** Point Dume Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Point Fermin Park Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Point Vicente Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Portuguese Bend Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### Lines of Evidence:

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Puerco Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Resort Point Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Rocky Point Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Royal Palms Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** San Buenaventura Beach

**Pollutant:** Bacteria Indicators

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 4.2 of the Listing Policy. Under section 4.2 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. A total of 44 samples from three sampling stations from all four lines of evidence exceeded the bacteriological 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 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. 44 of 401 samples taken at three sampling stations exceeded the bacteriological standard and this does not exceed the allowable frequency 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* R1 - Water Contact Recreation

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* 17 CCR 7958 (in part): The minimum protective bacteriological standards for waters adjacent to public beaches and public water-contact sports areas shall be as follows:

- (1) Based on a single sample, the density of bacteria in water from each sampling station at a public beach or public water contact sports area shall not exceed:
- (A) 1,000 total coliform bacteria per 100 milliliters, if the ratio of fecal/total coliform bacteria exceeds 0.1; or
  - (B) 10,000 total coliform bacteria per 100 milliliters; or
  - (C) 400 fecal coliform bacteria per 100 milliliters; or
  - (D) 104 enterococcus bacteria per 100 milliliters.

<i>Data Used to Assess Water Quality:</i>	Ninety-seven samples, 2 samples exceeding (SWRCB, 2003).
<i>Spatial Representation:</i>	One station: VC(20000). This station represents the beach 50 yards on either side of the sampling point. Samples were collected south of drain at Weymouth.
<i>Temporal Representation:</i>	Data collected in 1999, 2000, and 2001.
<i>Data Quality Assessment:</i>	County Health Department.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	R1 - Water Contact Recreation
<i>Matrix:</i>	-N/A
<i>Water Quality Objective/ Water Quality Criterion:</i>	17 CCR 7958 (in part): The minimum protective bacteriological standards for waters adjacent to public beaches and public water-contact sports areas shall be as follows: (1) Based on a single sample, the density of bacteria in water from each sampling station at a public beach or public water contact sports area shall not exceed: (A) 1,000 total coliform bacteria per 100 milliliters, if the ratio of fecal/total coliform bacteria exceeds 0.1; or (B) 10,000 total coliform bacteria per 100 milliliters; or (C) 400 fecal coliform bacteria per 100 milliliters; or (D) 104 enterococcus bacteria per 100 milliliters.
<i>Data Used to Assess Water Quality:</i>	One-hundred and three samples, 20 samples exceeding (SWRCB, 2003).
<i>Spatial Representation:</i>	One station: VC(19000). This station represents the beach 50 yards on either side of the sampling point. Samples were collected south of the drain at San Jon Road.
<i>Temporal Representation:</i>	Data collected in 1999, 2000, and 2001.
<i>Data Quality Assessment:</i>	Samples were collected by the County Health Department.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	R1 - Water Contact Recreation
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	17 CCR 7958 (in part): The minimum protective bacteriological standards for waters adjacent to public beaches and public water-contact sports areas shall be as follows: (1) Based on a single sample, the density of bacteria in water from each sampling station at a public beach or public water contact sports area shall not exceed: (A) 1,000 total coliform bacteria per 100 milliliters, if the ratio of fecal/total coliform bacteria exceeds 0.1; or (B) 10,000 total coliform bacteria per 100 milliliters; or (C) 400 fecal coliform bacteria per 100 milliliters; or (D) 104 enterococcus bacteria per 100 milliliters.
<i>Data Used to Assess Water Quality:</i>	One-hundred samples, 8 samples exceeding (SWRCB, 2003).
<i>Spatial Representation:</i>	One station: VC(20000). This station represents the beach 50 yards on either side of the sampling point. Samples were collected south of drain at Dover Lane.
<i>Temporal Representation:</i>	Data collected in 1999, 2000, and 2001.
<i>Data Quality Assessment:</i>	County Health Department.

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<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	R1 - Water Contact Recreation
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	17 CCR 7958 (in part): The minimum protective bacteriological standards for waters adjacent to public beaches and public water-contact sports areas shall be as follows: (1) Based on a single sample, the density of bacteria in water from each sampling station at a public beach or public water contact sports area shall not exceed: (A) 1,000 total coliform bacteria per 100 milliliters, if the ratio of fecal/total coliform bacteria exceeds 0.1; or (B) 10,000 total coliform bacteria per 100 milliliters; or (C) 400 fecal coliform bacteria per 100 milliliters; or (D) 104 enterococcus bacteria per 100 milliliters.

<i>Data Used to Assess Water Quality:</i>	One-hundred and one samples, 14 samples exceeding (SWRCB, 2003).
<i>Spatial Representation:</i>	One station: VC(18000). This station represents the beach 50 yards on either side of the sampling point. Samples were collected between Kalorama Street and Sanjon testing sites.
<i>Temporal Representation:</i>	Data collected in 1999, 2000, and 2001.
<i>Data Quality Assessment:</i>	County Health Department.

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## Region 4

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**Water Segment:** San Gabriel River Estuary

**Pollutant:** Abnormal Fish Histology (Lesions)

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 4.8 of the Listing Policy. Under section 4.8 delisting is appropriate when documented adverse biological responses are not associated with water or sediment numeric pollutant specific evaluation guidelines.

Two lines of evidence are available in the administrative record to assess this pollutant. Based on section 4.8, adverse biological responses have been documented in fish taken from the site. Although a small portion of the fish collected exhibited impacts from toxicity, the majority of the fish samples collected from the San Gabriel River and its tributaries were victims of infectious disease. Therefore, there is insufficient information to conclude that the documented adverse biological responses are associated with specific pollutant(s).

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 majority of the fish collected showed adverse biological responses associated with infectious disease and not due to pollutant caused toxicity.
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:**

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*Numeric Line of Evidence*

Adverse Biological Responses

<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological response 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 State or Regional Board.
<i>Evaluation Guideline:</i>	<p>With a thorough prior knowledge of normal fish anatomy, the investigators used histological analysis to detect alterations in tissues and organs caused by exposure to toxicants. When the concentration of a toxicant is sufficient to result only in cellular injury, but not in death of the cells, sublethal (adaptive) changes may be observed in affected cells.</p> <p>A combination of the necropsy-based approach and the histological condition index was used in this study. Alterations from the expected normal gross anatomy and microscopic anatomy of resident fishes, fathead minnow (<i>Pimephales promelas</i>), goldfish (<i>Cyprinus carpio</i>), white croaker (<i>Genyonemus lineatus</i>) mosquito fish (<i>Gambusia affinis</i>), and tilapia (<i>Tilapia sp.</i>) were included in the investigation. Lesions were compared to reference populations.</p>
<i>Data Used to Assess Water Quality:</i>	<p>San Gabriel River Tidal Prism at Confluence of Coyote Creek (LACSD, 2004):</p> <p>A total of 21 tilapia (<i>Tilapia sp.</i>) were collected at this site. Extensive inflammation of the trigeminal ganglion was observed with cells that had characteristics of eosinophilic granular leukocytes. The cells in question were associated with a swollen feature of the nerve indicating damage to the glial cells. The frequency of this abnormality was 33%. Gill necrosis was observed in 3 of the animals studied and this involved mitochondria-rich (chloride) cells and pavement respiratory epithelium. The frequency for this lesion was 14%. Inflammation of gill arches and branchial cavity epithelium was observed in 2 of the individuals studied. The frequency of this alteration was 9%. Two of the individuals showed renal pathology. In one of these, extensive severe tubular epithelial hyalinization had occurred. This was associated with disruption of the nephron wall at that site. In another individual, interstitial inflammation was observed. Skin necrosis was found in 2 of the 21 animals observed. One gut parasite was found and appeared to be a tapeworm.</p> <p>San Gabriel River Tidal Prism at College Park Drive (LACSD, 2004b):</p> <p>A total of 30 tilapia (<i>Tilapia sp.</i>) and 1 white croaker (<i>Genyonemus lineatus</i>) were examined h m this site. Histopathologic examination revealed severe inflammation in submucosa and circular muscularis of the stomach. The inflammatory cells were eosinophilic granular leukocytes or macrophages which contained eosinophilic granules. In addition to this change, the white croaker showed mild inflammation around bile structures in the liver and inflammatory response in the wall of the heart. In addition, macrophage aggregates were present in the liver at a frequency of 3 per 10 X field. The white croaker also showed mild inflammation of the gill and two flukes (parasitic trematodes) were</p>

attached to gill structures. In the 30 tilapia, fairly consistent involvement of the eosinophilic granular leukocytes in inflammatory foci around the trigeminal ganglion and branches of the trigeminal nerve were seen. The frequency of this lesion was 30%. In addition to the changes within the 5th cranial nerve, alterations were seen in gills that indicated that 3 of the 30 individuals showed aneurysm formation in blood vessels of secondary lamellae. In addition, inflammation of gill arch and filaments and adjacent regions of the branchial cavity wall were seen. The frequency for this lesion was 17%. Inflammation of the liver in areas adjacent to arterial structures and large tributaries of the hepatic venous system were seen. The inflammatory cells were usually eosinophilic granular leukocytes. The frequency for this change was 13%. Two of the fish showed inclusion bodies within hepatocytes. These were quite frequently seen and were close in resemblance to the tubular epithelium hyaline granules of the kidney. In addition, 4 fish showed interstitial inflammation of the kidney and 5 showed extensive degeneration with tubular epithelium showing hyaline change. The frequency for the latter was 17%. Some of the tubular degenerative changes had advanced to the formation of tubular deposits of calcium and this characterized 2 of the 30 individuals. Heart ventricular mineralization was also seen in 4 of the 30 individuals examined. Skin necrosis involved 2 of the 30 individuals and was a consistent change in the affected fish. A large skin lesion was observed on one tilapia. One fish showed a parasite within the gut lumen.

<i>Spatial Representation:</i>	Fish were collected from four sites in the lower San Gabriel River watershed. The sites included Coyote Creek above and below the Long Beach wastewater treatment plant outfall, the San Gabriel River at the confluence of Coyote Creek, and from the tidal prism at College Park Drive.
<i>Temporal Representation:</i>	Samples were collected between 1992 and 1993.
<i>Data Quality Assessment:</i>	Quality Assurance and methods well described in the report: "Toxicity study of the Santa Clara, San Gabriel River, and Calleguas Creek" (Bailey et al., 1996 in LACSD, 2004b).

<i>Line of Evidence</i>	Narrative Description Data
<i>Beneficial Use</i>	WA - Warm Freshwater Habitat
<i>Information Used to Assess Water Quality:</i>	Toxicity Identification Evaluations were completed and it was suggested that diazinon, chlorpyrifos, and ammonia were the cause of the toxicity. Studies of upstream and downstream sites in the San Gabriel River Tidal Prism revealed toxicity. Inflammatory lesions were prevalent at about 30% in fish from both sites. Gill toxicity reactions were seen at equal frequency. In the upper site, only two fish showed extensive tubular epithelial hyalinization of kidney while 5 of their counterparts from the lower site were positive for the same lesion. In addition, the lesions had advanced in the downstream affected fish to the point at which tubular deposits of calcium were prominent in two fish. Heart ventricle also showed mineralization, a likely sequel to systemic infection. Skin necrosis, likely a direct result of toxicity in the water column characterized two of the 30 fish at the lower site.

The analysis of fish collected from the San Gabriel River and its tributaries



suggests that a sizeable portion of the individuals are victims of infectious disease and a smaller portion reveal signs of toxicity. These are not healthy fish and their tissue conditions do not resemble those of fishes from reference habitats previously investigated by this group.

*Data Used to Assess Water Quality:*

This evaluation of data came from the report: "Toxicity study of the Santa Clara, San Gabriel River, and Calleguas Creek" (Bailey et al., 1996 in LACSD, 2004b).

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## Region 4

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**Water Segment:** San Gabriel River Reach 1 (Estuary to Firestone)

**Pollutant:** Abnormal Fish Histology (Lesions)

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for delisting under sections 4.8 of the Listing Policy. Under section 4.8 delisting is appropriate when documented adverse biological responses are not associated with water or sediment numeric pollutant specific evaluation guidelines.

One line of evidence is available in the administrative record to assess this pollutant. Based on section 4.8, adverse biological responses have been documented in fish taken from the site. Although a small portion of the fish collected exhibited impacts from toxicity, the majority of the fish samples collected from the San Gabriel River and its tributaries were victims of infectious disease. Therefore there is insufficient information to conclude that the documented adverse biological responses are associated with specific pollutant(s).

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 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.The majority of the fish collected showed adverse biological responses are associated with infectious disease and not due to pollutant caused toxicity.
- 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 the documented adverse biological responses can not be associated with water or sediment numeric-specific evaluation guidelines.

**Lines of Evidence:**

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<i>Numeric Line of Evidence</i>	Adverse Biological Responses
<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological response 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 State or Regional Board.
<i>Evaluation Guideline:</i>	<p>With a prior knowledge of normal fish anatomy, the investigators used histological analysis to detect alterations in tissues and organs caused by exposure to toxicants. When the concentration of a toxicant is sufficient to result only in cellular injury, but not in death of the cells, sublethal (adaptive) changes may be observed in affected cells.</p> <p>A combination of the necropsy-based approach and the histological condition index was used in this study. Alterations from the expected normal gross anatomy and microscopic anatomy of resident fishes, fathead minnow (<i>Pimephales promelas</i>), goldfish (<i>Cyprinus carpio</i>), white croaker (<i>Genyonemus lineatus</i>) mosquito fish (<i>Gambusia affinis</i>), and tilapia (<i>Tilapia sp.</i>) were included in the investigation. Lesions were compared to reference populations.</p>
<i>Data Used to Assess Water Quality:</i>	<p>San Gabriel River Tidal Prism at Confluence of Coyote Creek (LACSD, 2004b).</p> <p>A total of 21 tilapia (<i>Tilapia sp.</i>) were collected at this site. Extensive inflammation of nerve tissue was observed. The cells in question were associated with a swollen feature of the nerve indicating damage. The frequency of this abnormality was 33%. Gill necrosis was observed in 3 of the animals studied. The frequency for this lesion was 14%. Skin necrosis was found in 2 of the 21 animals observed. One gut parasite was found and appeared to be a tapeworm.</p> <p>San Gabriel River Tidal Prism at College Park Drive (LACSD, 2004b).</p> <p>A total of 30 tilapia (<i>Tilapia sp.</i>) and 1 white croaker (<i>Genyonemus lineatus</i>) were examined from this site. Histopathologic examination revealed severe inflammation in the stomach. The white croaker showed mild inflammation in the liver and inflammatory response in the wall of the heart. In the 30 tilapia, fairly consistent nerve inflammation were observed. The frequency of this lesion was 30%. Inflammation of the liver were also observed. The frequency for this change was 13%. A large skin lesion was observed on one tilapia. One fish showed a parasite within the gut.</p>
<i>Spatial Representation:</i>	Fish were collected from four sites in the lower San Gabriel River watershed. The sites included Coyote Creek above and below the Long Beach wastewater

treatment plant outfall, the San Gabriel River at the confluence of Coyote Creek, and from the tidal prism at College Park Drive.

*Temporal Representation:* Samples were collected between 1992 and 1993.

*Data Quality Assessment:* Quality Assurance and methods well described in the report: "Toxicity study of the Santa Clara, San Gabriel River, and Calleguas Creek" (Bailey et al., 1996 in LACSD, 2004b).

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*Line of Evidence* Narrative Description Data

*Beneficial Use* WA - Warm Freshwater Habitat

*Information Used to Assess Water Quality:* Toxicity Identification Evaluations were completed and it was suggested that diazinon, chlorpyrifos, and ammonia were the cause of the toxicity. Studies of upstream and downstream sites in the San Gabriel River Tidal Prism revealed toxicity. Inflammatory lesions were prevalent at about 30% in fish from both sites. Gill toxicity reactions were seen at equal frequency. In the upper site, only two fish showed extensive tubular epithelial hyalinization of kidney while 5 of their counterparts from the lower site were positive for the same lesion. In addition, the lesions had advanced in the downstream affected fish to the point at which tubular deposits of calcium were prominent in two fish. Heart ventricle also showed mineralization, a likely sequel to systemic infection. Skin necrosis, likely a direct result of toxicity in the water column characterized two of the 30 fish at the lower site.

The analysis of fish collected from the San Gabriel River and its tributaries suggests that a sizeable portion of the individuals are victims of infectious disease and a smaller portion reveal signs of toxicity. These are not healthy fish and their tissue conditions do not resemble those of fishes from reference habitats previously investigated by this group.

*Data Used to Assess Water Quality:* This evaluation of data came from the report: "Toxicity study of the Santa Clara, San Gabriel River, and Calleguas Creek" (Bailey et al., 1996 in LACSD, 2004b).

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## Region 4

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**Water Segment:** San Gabriel River Reach 1 (Estuary to Firestone)

**Pollutant:** Excess Algal Growth

**Decision:** Delist

**Weight of Evidence:** This pollutant is being considered for removal from the section 303(d) list under section 4.7 of the Listing Policy. Under section 4.7 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Two of the samples were judged to exceed a subjective algae ranking guideline.

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. Two of 4 samples exceeded the Subjective algae guideline and this does not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.
2. Excess algae growth information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).
3. 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 the guideline used was applicable and water quality standards were exceeded. Furthermore, excess algae growth information should not be placed on the section 303(d) list because is not a pollutant or toxicity (section 2 of the Listing Policy).

**Lines of Evidence:**

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*Line of Evidence* Adverse Biological Responses

*Beneficial Use* R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat

*Non-Numeric Objective:* Basin Plan: 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.

<i>Evaluation Guideline:</i>	The presence of algae in the water segment was used as the guideline. The rankings were subjective and assigned to water bodies by one person for consistency.
<i>Data Used to Assess Water Quality:</i>	Four observations with 2 of the observations judged to be not supporting beneficial uses (SWRCB, 2003).
<i>Spatial Representation:</i>	One sampling location.
<i>Temporal Representation:</i>	Observations made between 1992 and 1995. Samples taken in different seasons and no greater than two time within one year.

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## Region 4

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<b>Water Segment:</b>	San Gabriel River Reach 1 (Estuary to Firestone)
<b>Pollutant:</b>	Toxicity
<b>Decision:</b>	Delist
<b>Weight of Evidence:</b>	<p>This pollutant is being considered for delisting under sections 4.6 of the Listing Policy. Under section 4.6 a single line of evidence is necessary to assess listing status.</p> <p>One line of evidence is available in the administrative record to assess this pollutant. Based on section 4.6, the site does not have significant water toxicity.</p> <p>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.</p> <p>This conclusion is based on the staff findings that:</p> <ol style="list-style-type: none"><li>1.The sediment quality guideline used complies, with the requirements of section 6.1.3 of the Policy.</li><li>2.The data used satisfies the data quality requirements of section 6.1.4 of the Policy.</li><li>3.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.</li><li>4.None of the 46 samples exceeded the NOEC indicating that the receiving water was not toxic and these do not exceed the allowable frequency listed in Table 4.1 of the Listing Policy.</li><li>5.Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are met.</li></ol>
<b>SWRCB Staff Recommendation:</b>	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:

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<i>Numeric Line of Evidence</i>	Adverse Biological Responses
<i>Beneficial Use:</i>	WA - Warm Freshwater Habitat
<i>Matrix:</i>	Water

*Water Quality Objective/  
Water Quality Criterion:*

Basin plan narrative toxicity WQO.

*Evaluation Guideline:*

No observed effect concentration (NOEC) is the highest tested concentration of toxicant to which organisms are exposed in a full life-cycle or partial life-cycle (short-term) test that causes no observable adverse effect on the test organisms. The guideline is used and recommended to determine the highest concentration of toxicant at which the values of the observed responses are not statistically significantly different from the control.

*Data Used to Assess Water  
Quality:*

Numeric toxicity results generated from a total of ten samples none of which were found to be toxic. This was a collaborative toxicity study conducted by the U.S. EPA and the Districts in August through October 2003. The study generated a total of 16 samples taken for Reach 1. Six (6) samples were taken in August 2003 (2 from R-3-1, 2 from R-4, and 2 from R-9W), 4 samples were taken in September 2003 (2 from R-3-1, 2 from R-4, and 1 from R-9W) and 6 samples were taken in October 2003 (2 from R-3-1, 2 from R-4, and 2 from R-9W). The August 2003, sampling results (6 samples) were excluded from analysis due a short-term operational upset that occurred while sampling was being carried out in the San Jose Creek WRP located within Reach 1 (LACSD, 2004b).

*Spatial Representation:*

Three (3) sample sites sampled from 8/2003 through 10/2003 at a monthly interval. Station R-3-1 is located towards the upstream end of Reach 1, upstream of the Los Coyotes Water Reclamation Plant (WRP). Receiving water station R-4 is located downstream of the discharge of the Los Coyotes WRP. Receiving water station R-9W is located at the lower end of Reach 1, just upstream of the San Gabriel River Estuary. All sampling stations are all located in Reach 1 of the San Gabriel River.

*Temporal Representation:*

A total of 16 samples were taken, six (6) samples were taken in August 2003 (2 from R-3-1, 2 from R-4, and 2 from R-9W), 4 samples were taken in September 2003 (2 from R-3-1, 2 from R-4, and 1 from R-9W) and 6 samples were taken in October 2003 (2 from R-3-1, 2 from R-4, and 2 from R-9W).

*Environmental Conditions:*

Data is one year old. The August 2003, sampling results (6 samples) were excluded from analysis due a short-term operational upset that occurred while sampling was being carried out in the San Jose Creek WRP located within Reach 1.

*Data Quality Assessment:*

Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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*Numeric Line of Evidence*

Adverse Biological Responses

*Beneficial Use:*

WA - Warm Freshwater Habitat

*Matrix:*

Water



<i>Water Quality Objective/ Water Quality Criterion:</i>	Narrative Toxicity Basin Plan WQO is applicable to the protection of aquatic life BUs.
<i>Evaluation Guideline:</i>	No observed effect concentration (NOEC) is the highest tested concentration of toxicant to which organisms are exposed in a full life-cycle or partial life-cycle (short-term) test that causes no observable adverse effect on the test organisms. The guideline is used and recommended to determine the highest concentration of toxicant at which the values of the observed responses are not statistically significantly different from the control.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from a total of 36 samples (12 samples per sampling stations) from Reach 1 stations R-1-3-1, R-9, and R-9 W respectively, taken from 6/2003 to 5/2004 on a monthly interval. No adverse effects (100 percent survival and growth) were observed in all toxicity results from all three sampling stations (LACSD, 2004b).
<i>Spatial Representation:</i>	Three (3) sample sites sampled from 6/2003 through 5/2004 at a monthly interval. Station R-3-1 is located towards the upstream end of Reach 1, upstream of the Los Coyotes Water Reclamation Plant (WRP). Receiving water station R-4 is located downstream of the discharge of the Los Coyotes WRP. Receiving water station R-9W is located at the lower end of Reach 1, just upstream of the San Gabriel River Estuary. All sampling stations are all located in Reach 1 of the San Gabriel River.
<i>Temporal Representation:</i>	Thirty-six (36) samples were taken from 6/2003 through 5/2004 at a monthly interval from three sampling stations within Reach 1 of the San Gabriel River.
<i>Environmental Conditions:</i>	The submitted toxicity results are from 2003-04. In June 2003, the LA County Sanitation Districts completed conversion of water reclamation plants in the San Gabriel River watershed to nitrification/denitrification (NDN) mode.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** San Gabriel River Reach 2 (Firestone to Whittier Narrows Dam)

**Pollutant:** Lead

**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. Four samples exceeded the CTR dissolved lead criteria continuous concentration 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 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. Four of 63 samples exceeded the CTR 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* WA - Warm Freshwater Habitat

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* CTR dissolved lead criterion for continuous concentration (CCC) in water for the protection of aquatic life is expressed as a function of the total hardness of the water body. The aquatic life criteria will vary depending of total hardness

reported at the sampling site. The CCC for dissolved lead 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:*

Numeric data generated from 63 samples taken from 10/14/97 to 1/13/04 at one to two-week sampling interval. Four samples exceeded the dissolved lead continuous criterion concentration, which equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects (LACDPW, 2004c).

*Spatial Representation:*

One sampling station sampled from 10/14/97 to 1/13/04.

*Temporal Representation:*

Sixty-three samples taken during the wet and dry season from 10/14/97 to 1/13/04 at approximately one to two week intervals.

*Environmental Conditions:*

Results are from samples taken from 1997 to 2004. The dissolved lead criterion was exceeded in 4 out of 63 measurements. The 3 exceedances occurred during the El Niño rain season in the winter of 1997 and one exceedance occurred during the wet season in November 2001.

*Data Quality Assessment:*

Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

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## Region 4

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**Water Segment:** San Gabriel River Reach 2 (Firestone to Whittier Narrows Dam)

**Pollutant:** Zinc

**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.

Two lines of evidence are available in the administrative record to assess this pollutant. Seven samples from combined exceedances of the two lines of evidence exceed the CTR zinc criteria continuous concentration.

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.Seven of 89 samples exceeded the CTR 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:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

*Matrix:* Water

*Water Quality Objective/* California Toxics Rule: The Criteria Continuous Concentration for dissolved zinc is dependent on the water hardness. After considering the event specific

<i>Water Quality Criterion:</i>	hardness values, the range of acceptable concentrations is 2.38 ug/L to 266 ug/L.
<i>Data Used to Assess Water Quality:</i>	Twenty-six water samples, 4 samples exceeding (LACDPW, 2004c).
<i>Spatial Representation:</i>	One sample site.
<i>Temporal Representation:</i>	Fall, winter, and spring (1997-2000).
<i>Data Quality Assessment:</i>	Stormwater Monitoring Program.

<b><i>Numeric Line of Evidence</i></b>	Pollutant-Water
<i>Beneficial Use:</i>	RA - Rare & Endangered Species, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	CTR Dissolved Zinc Criterion for continuous concentration (CCC) in water for the protection of aquatic life is expressed as a function of the total hardness of the water body. The aquatic life criteria will vary depending of total hardness reported at the sampling site. The CCC for dissolved zinc 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.
<i>Data Used to Assess Water Quality:</i>	Numeric data generated from 63 samples taken from 10/14/97 to 1/13/04 at one to two-week sampling interval. Three samples exceeded the dissolved Zinc Continuous Criterion Concentration, which equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects (LACDPW, 2004c).
<i>Spatial Representation:</i>	One sampling station sampled from 10/14/97 to 1/13/04.
<i>Temporal Representation:</i>	Sixty-two samples taken during the wet and dry season from 10/14/97 to 1/13/04 at approximately one to two week intervals.
<i>Environmental Conditions:</i>	Results are from samples taken from 1997 to 2004. The dissolved zinc criterion was exceeded in 3 out of 63 measurements. The exceedances occurred during the El Niño rain season in the winter of 1997.
<i>Data Quality Assessment:</i>	Evaluation of Analytes and QA/QC Specifications for Monitoring Program (Woodward-Clyde, 1996) Los Angeles County Department of Public Works.

## Region 4

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**Water Segment:** San Jose Creek Reach 1 (SG Confluence to Temple St.)

**Pollutant:** Excess Algal Growth

**Decision:** Delist

**Weight of Evidence:** This condition is being considered for delisting under section 4.7 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. It is not known if the algae information is backed by pollutant data. Algae should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 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 removing this water segment-pollutant combination from the Section 303(d) list.

**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 the guideline used was applicable and water quality standards were exceeded. Furthermore, excess algae growth information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

### Lines of Evidence:

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*Line of Evidence* Adverse Biological Responses

*Beneficial Use* R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat

*Non-Numeric Objective:* Basin Plan: 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.

*Evaluation Guideline:* The presence of algae in the water segment was used as the guideline. The rankings were subjective and assigned to water bodies by one person for consistency.

*Data Used to Assess Water Quality:* Seven observations with 2 of the observations judged to be not supporting beneficial uses (LACSD, 2004b).

*Spatial Representation:* One sampling location.

*Temporal Representation:* Observations made between 1990 and 1993. Samples taken in different seasons with 4 observations in 1992.

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## Region 4

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**Water Segment:** San Jose Creek Reach 2 (Temple to I-10 at White Ave.)

**Pollutant:** Excess Algal Growth

**Decision:** Delist

**Weight of Evidence:** This condition is being considered for delisting under section 4.7 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. It is not known if the algae information is backed by pollutant data. Algae should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 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 removing this water segment-pollutant combination from the Section 303(d) list.

**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 the guideline used was applicable and water quality standards were exceeded. Furthermore, excess algae growth information should not be placed on the section 303(d) list because is not a pollutant or toxicity (section 2 of the Listing Policy).

### Lines of Evidence:

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*Line of Evidence* Adverse Biological Responses

*Beneficial Use* R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat

*Non-Numeric Objective:* Basin Plan: 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.

*Evaluation Guideline:* The presence of algae in the water segment was used as the guideline. The rankings were subjective and assigned to water bodies by one person for consistency.



<i>Data Used to Assess Water Quality:</i>	Six observations with 2 of the observations judged to be partially not supporting beneficial uses (LACSD, 2004b).
<i>Spatial Representation:</i>	One sampling location. In 1996, San Jose Creek was defined as a single segment. When the segment was split the listing was applied to both segments. There is no assessment in Reach 2 as currently defined.
<i>Temporal Representation:</i>	Observations made between 1990 and 1993. Samples taken in different seasons and 4 samples taken in 1992.

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## Region 4

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**Water Segment:** Sea Level Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Topanga Beach

**Pollutant:** Beach Closures

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (beach closures). The dry weather TMDL was approved by the RWQCB on 1/24/02, and the wet weather TMDL was approved on 12/12/04, and subsequently approved by USEPA on 6/19/03. These TMDLs are expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this listing from the 303(d) Water Quality Limited Segment list because the segment pollutant combinations is not a pollutant. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

**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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Torrance Beach

**Pollutant:** Beach Closures

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (beach closures). The dry weather TMDL was approved by the RWQCB on 1/24/02, and the wet weather TMDL was approved on 12/12/04, and subsequently approved by USEPA on 6/19/03. These TMDLs are expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this listing from the 303(d) Water Quality Limited Segment list because the segment pollutant combinations is not a pollutant. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

**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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Trancas Beach (Broad Beach)

**Pollutant:** Beach Closures

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (beach closures). The dry weather TMDL was approved by the RWQCB on 1/24/02, and the wet weather TMDL was approved on 12/12/04, and subsequently approved by USEPA on 6/19/03. These TMDLs are expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this listing from the 303(d) Water Quality Limited Segment list because the segment pollutant combinations is not a pollutant. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

**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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Tujunga Wash (LA River to Hansen Dam)

**Pollutant:** Foam/Flocs/Scum/Oil Slicks

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (Scum/Foam). The TMDL was approved by the RWQCB on 8/19/03 and subsequently approved by USEPA on 31804 The TMDL is expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this listing from the 303(d) Water Quality Limited Segment list because the segment pollutant combinations is not a pollutant.

Foam and scum information should not be placed on the section 303(d) list because they are not pollutants or toxicity (section 2 of the Listing Policy).

**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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*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 Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Tujunga Wash (LA River to Hansen Dam)

**Pollutant:** Taste and odor

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (algal growth). A TMDL was approved by RWQCB in August, 2002 and subsequently approved by USEPA on March, 2003 and this TMDL is expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing these listing from the 303 (d) Water Quality Limited Segment list because the segment pollutant combinations is not a pollutant.

Taste and odor information should not be placed on the section 303(d) list because they are not pollutants or toxicity (section 2 of the Listing Policy).

**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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Venice Beach

**Pollutant:** Beach Closures

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (beach closures). The dry weather TMDL was approved by the RWQCB on 1/24/02, and the wet weather TMDL was approved on 12/12/04, and subsequently approved by USEPA on 6/19/03. These TMDLs are expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this listing from the 303(d) Water Quality Limited Segment list because the segment pollutant combinations is not a pollutant. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

**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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Ventura River Estuary

**Pollutant:** Fecal Coliform

**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 listing status.

One line of evidence is available in the administrative record to assess this pollutant. Six samples exceed the fecal coliform 400 MPN/100 ml single sample limit water quality objective.

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. Six of 37 samples exceeded the fecal coliform water quality objective and this does not exceed the allowable frequency listed in Table 4.2 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 removed from the section 303(d) list because applicable water quality standards for the pollutant are not exceeded.

### Lines of Evidence:

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*Numeric Line of Evidence* Pollutant-Water

*Beneficial Use:* R1 - Water Contact Recreation, SH - Shellfish Harvesting

*Matrix:* Water

*Water Quality Objective/  
Water Quality Criterion:* Basin Plan: In waters designated for water contact recreation (REC-1), the fecal coliform concentration shall not exceed a log mean of 200/100 ml (based on a minimum of not less than four samples for any 30-day period), nor shall more

than 10 percent of total samples during any 30-day period exceed 400/100 ml.

<i>Data Used to Assess Water Quality:</i>	Thirty seven bacteria samples. Six samples exceeding the 400 MPNM/100ml objective (Planetwater, various years); (SWRCB, 2003).
<i>Spatial Representation:</i>	1 site.
<i>Temporal Representation:</i>	Different seasons and years.
<i>Data Quality Assessment:</i>	Ojai Valley River Volunteer Monitoring Program Methods.

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## Region 4

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**Water Segment:** Verdugo Wash Reach 1 (LA River to Verdugo Rd.)

**Pollutant:** Excess Algal Growth

**Decision:** Delist

**Weight of Evidence:** This water quality condition 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 water body condition. A TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. Qualitative information on excess algal growth alone is not sufficient to support continued placement on the section 303(d) list (Listing Policy section 3.7).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because algal growth is not a pollutant and it is uncertain if the growth listing is backed by pollutant data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Verdugo Wash Reach 2 (Above Verdugo Road)

**Pollutant:** Excess Algal Growth

**Decision:** Delist

**Weight of Evidence:** This water quality condition 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 water body condition. A TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. Qualitative information on excess algal growth alone is not sufficient to support continued placement on the section 303(d) list (Listing Policy section 3.7).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because algal growth is not a pollutant and it is uncertain if the growth listing is backed by pollutant data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R2 - Non-Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004. This TMDL will address this water body condition.

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## Region 4

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**Water Segment:** Whites Point Beach

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Will Rogers Beach

**Pollutant:** Beach Closures

**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. Under this section of the Policy, a minimum of one line of evidence is needed to assess listing status.

The original line of evidence supporting the listing does not identify a pollutant but rather, a condition caused by a pollutant(s) (beach closures). The dry weather TMDL was approved by the RWQCB on 1/24/02, and the wet weather TMDL was approved on 12/12/04, and subsequently approved by USEPA on 6/19/03. These TMDLs are expected to address this water body condition.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of removing this listing from the 303(d) Water Quality Limited Segment list because the segment pollutant combinations is not a pollutant. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

**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 the pollutant is an ambient condition caused by pollutant(s). A TMDL is in place and is expected to address this water body condition.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Region 4

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**Water Segment:** Zuma Beach (Westward Beach)

**Pollutant:** Beach Closures

**Decision:** Delist

**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. It is not known if the beach closure information is backed by coliform data. Beach closure information should not be placed on the section 303(d) list because it is not a pollutant or toxicity (section 2 of the Listing Policy).

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination in the 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 not be placed in the Water Quality Limited Segments Being Addressed category of the section 303(d) list because beach closures are not pollutants and it is uncertain if the closures are backed by data showing exceedances of water quality standards.

### **Lines of Evidence:**

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*Line of Evidence* Remedial Program in Place

*Beneficial Use* R1 - Water Contact Recreation

*Information Used to Assess Water Quality:* A TMDL and implementation plan has been approved for this water segment-pollutant combination. The Santa Monica Bay Bacteria Dry Weather TMDL was approved by RWQCB on January 24, 2002 and subsequently approved by USEPA. The Santa Monica Bay Bacteria Wet Weather TMDL was approved by RWQCB on December 12, 2004 and approved by USEPA on June 19, 2003.

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## Los Angeles Region (4)

# Area Change

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



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## Region 4

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**Water Segment:** Dominguez Channel (lined portion above Vermont Ave)

**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:**

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*Line of Evidence* Narrative Description Data

*Beneficial Use* AG - Agricultural Supply

*Information Used to Assess Water Quality:* The water segments in the vicinity of the Los Angeles/Long Beach Harbor should be changed to better reflect the Basin Plan Water body naming scheme (Los Angeles RWQCB, 2004g). The water body names in the 2002 section 303(d) list are not reflective of the listings made in 1996 and leave some uncertainty about the boundaries of the areas covered by the listings. Also, from a hydrologic point of view, some water bodies were grouped together inappropriately. New maps have been included in the administrative record and all data reviews have used these new water segments.

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Region 4

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**Water Segment:** Dominguez Channel Estuary (unlined portion below Vermont Ave)

**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:**

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*Line of Evidence* Narrative Description Data

*Beneficial Use* AG - Agricultural Supply

*Information Used to Assess Water Quality:* The water segments in the vicinity of the Los Angeles/Long Beach Harbor should be changed to better reflect the Basin Plan Water body naming scheme (Los Angeles RWQCB, 2004g). The water body names in the 2002 section 303(d) list are not reflective of the listings made in 1996 and leave some uncertainty about the boundaries of the areas covered by the listings. Also, from a hydrologic point of view, some water bodies were grouped together inappropriately. New maps have been included in the administrative record and all data reviews have used these new water segments.

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Region 4

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**Water Segment:** Los Angeles Harbor - Cabrillo Marina

**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:**

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*Line of Evidence* Narrative Description Data

*Beneficial Use* AG - Agricultural Supply

*Information Used to Assess Water Quality:* The water segments in the vicinity of the Los Angeles/Long Beach Harbor should be changed to better reflect the Basin Plan Water body naming scheme (Los Angeles RWQCB, 2004g). The water body names in the 2002 section 303(d) list are not reflective of the listings made in 1996 and leave some uncertainty about the boundaries of the areas covered by the listings. Also, from a hydrologic point of view, some water bodies were grouped together inappropriately. New maps have been included in the administrative record and all data reviews have used these new water segments.

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Region 4

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**Water Segment:** Los Angeles Harbor - Consolidated Slip

**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:**

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*Line of Evidence* Narrative Description Data

*Beneficial Use* AG - Agricultural Supply

*Information Used to Assess Water Quality:* The water segments in the vicinity of the Los Angeles/Long Beach Harbor should be changed to better reflect the Basin Plan Water body naming scheme (Los Angeles RWQCB, 2004g). The water body names in the 2002 section 303(d) list are not reflective of the listings made in 1996 and leave some uncertainty about the boundaries of the areas covered by the listings. Also, from a hydrologic point of view, some water bodies were grouped together inappropriately. New maps have been included in the administrative record and all data reviews have used these new water segments.

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Region 4

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**Water Segment:** Los Angeles Harbor - Fish Harbor

**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:**

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*Line of Evidence* Narrative Description Data

*Beneficial Use* AQ - Aquaculture

*Information Used to Assess Water Quality:* The water segments in the vicinity of the Los Angeles/Long Beach Harbor should be changed to better reflect the Basin Plan Water body naming scheme (Los Angeles RWQCB, 2004g). The water body names in the 2002 section 303(d) list are not reflective of the listings made in 1996 and leave some uncertainty about the boundaries of the areas covered by the listings. Also, from a hydrologic point of view, some water bodies were grouped together inappropriately. New maps have been included in the administrative record and all data reviews have used these new water segments.

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Region 4

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**Water Segment:** Los Angeles Harbor - Inner Cabrillo Beach Area

**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:**

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*Line of Evidence* Narrative Description Data

*Beneficial Use* AG - Agricultural Supply

*Information Used to Assess Water Quality:* The water segments in the vicinity of the Los Angeles/Long Beach Harbor should be changed to better reflect the Basin Plan Water body naming scheme (Los Angeles RWQCB, 2004g). The water body names in the 2002 section 303(d) list are not reflective of the listings made in 1996 and leave some uncertainty about the boundaries of the areas covered by the listings. Also, from a hydrologic point of view, some water bodies were grouped together inappropriately. New maps have been included in the administrative record and all data reviews have used these new water segments.

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Region 4

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**Water Segment:** Los Angeles/Long Beach Inner Harbor

**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:**

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*Line of Evidence* Narrative Description Data

*Beneficial Use* AG - Agricultural Supply

*Information Used to Assess Water Quality:* The water segments in the vicinity of the Los Angeles/Long Beach Harbor should be changed to better reflect the Basin Plan Water body naming scheme (Los Angeles RWQCB, 2004g). The water body names in the 2002 section 303(d) list are not reflective of the listings made in 1996 and leave some uncertainty about the boundaries of the areas covered by the listings. Also, from a hydrologic point of view, some water bodies were grouped together inappropriately. New maps have been included in the administrative record and all data reviews have used these new water segments.

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## Region 4

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**Water Segment:** Los Angeles/Long Beach Outer Harbor (inside breakwater)

**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:**

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*Line of Evidence* Narrative Description Data

*Beneficial Use* AG - Agricultural Supply

*Information Used to Assess Water Quality:* The water segments in the vicinity of the Los Angeles/Long Beach Harbor should be changed to better reflect the Basin Plan Water body naming scheme (Los Angeles RWQCB, 2004g). The water body names in the 2002 section 303(d) list are not reflective of the listings made in 1996 and leave some uncertainty about the boundaries of the areas covered by the listings. Also, from a hydrologic point of view, some water bodies were grouped together inappropriately. New maps have been included in the administrative record and all data reviews have used these new water segments.

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## Region 4

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**Water Segment:** San Pedro Bay Near/Off Shore Zones

**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:**

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*Line of Evidence* Narrative Description Data

*Beneficial Use* IN - Industrial Service Supply

*Information Used to Assess Water Quality:* The water segments in the vicinity of the Los Angeles/Long Beach Harbor should be changed to better reflect the Basin Plan Water body naming scheme (Los Angeles RWQCB, 2004g). The water body names in the 2002 section 303(d) list are not reflective of the listings made in 1996 and leave some uncertainty about the boundaries of the areas covered by the listings. Also, from a hydrologic point of view, some water bodies were grouped together inappropriately. New maps have been included in the administrative record and all data reviews have used these new water segments.

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