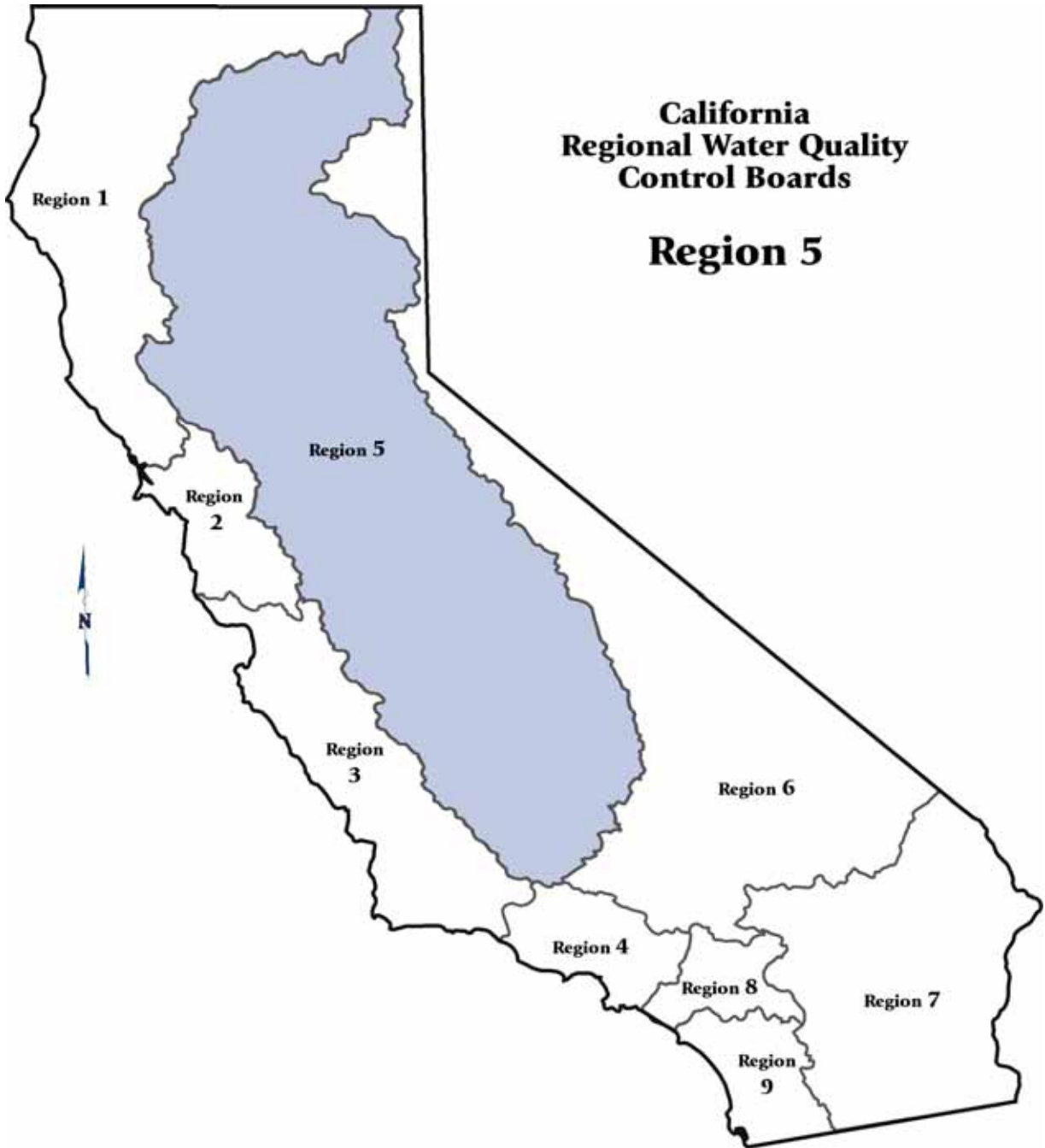


Fact Sheets Supporting
“Do Not Delist” Recommendations



November 2006

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New or Revised Fact Sheets

New or Revised Fact Sheets

Region 5

Water Segment:	Harding Drain (Turlock Irrigation District Lateral #5)
Pollutant:	Chlorpyrifos
Decision:	Do Not Delist
Weight of Evidence:	<p>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.</p> <p>Two lines of evidence are available in the administrative record to assess this pollutant. Based on the readily available data, the weight of evidence indicates that there is insufficient justification in favor of removing this water segment-pollutant combination from the section 303(d) list.</p> <p>A UAA has not been submitted to USEPA.</p> <p>This conclusion is based on the staff findings that: .</p> <ol style="list-style-type: none"> 1.The data used satisfies the data quality requirements of section 6.1.4 of the Policy. 2.The data used satisfies the data quantity requirements of section 6.1.5 of the Policy. 4. Thirty-six out of 319 samples exceeded the Water Quality Criteria for chlorpyrifos, and this exceeds 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 not 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 applicable water quality standards are exceeded and a pollutant contributes to or causes the problem.
Lines of Evidence:	

Numeric Line of Evidence	Pollutant-Water
Beneficial Use:	AG - Agricultural Supply, CO - Cold Freshwater Habitat, MI - Fish Migration, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
Matrix:	Water
Water Quality Objective/ Water Quality Criterion:	<p>The narrative pesticide objectives state, in part:</p> <ul style="list-style-type: none"> -No individual pesticides or combination of pesticides shall be present in concentrations that adversely affect beneficial uses, -Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses, Pesticide concentrations shall not exceed those allowable by applicable

	antidegradation policies, and waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
<i>Evaluation Guideline:</i>	Department of Fish and Game guideline of 0.014 µg/L (Siepmann and Finlayson, 2000).
<i>Data Used to Assess Water Quality:</i>	Thirty-six out of 319 samples exceeded the water quality guideline (Turlock Irrigation District, 2006). Data was collected by Turlock Irrigation District (TID), USGS/NAWQA, DPR, and City of Turlock.
<i>Spatial Representation:</i>	Samples were collected at three sites: CMD32Hodges, HD1, and HD2.
<i>Temporal Representation:</i>	Samples were collected by TID, from 9/12/01-8/25/04, by USGS/NAWQA from 4/22/92-8/2/01, by DPR from 3/4/91-2/9/93, and by the City of Turlock from 2/17/01-5/23/05.
<i>Data Quality Assessment:</i>	TID Sampling and Analysis Plan.

<i>Line of Evidence</i>	Testimonial Evidence
<i>Beneficial Use</i>	AG - Agricultural Supply, CO - Cold Freshwater Habitat, MI - Fish Migration, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
<i>Data Used to Assess Water Quality:</i>	Letter submitted on behalf of Turlock Irrigation District requesting Harding Drain to be delisted for chlorpyrifos due to a UAA that was completed.

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Original Fact Sheets

Fact Sheets Not Changed
from September 2005 Version

Region 5

Water Segment: American River, Lower (Nimbus Dam to confluence with Sacramento River)
Pollutant: Mercury
Decision: Do Not Delist
Weight of Evidence: This pollutant is being considered for removal from the section 303(d) list under section 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 by OEHHA for this water. Tissue samples from multiple species were collected, were considered representative and determined to exceed OEHHA criteria.

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. A health advisory is available and fish in the water exceed OEHHA guidelines. The samples had sufficient sample size (more than 9 fish per species) of legal/edible size fish to be considered representative of mercury levels in those species, thereby allowing adequate estimation of the health risks associated with their consumption.
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 and a pollutant contributes to or causes the problem.

Lines of Evidence:

<i>Numeric Line of Evidence</i>	Health Advisories
<i>Beneficial Use:</i>	CM - Commercial and Sport Fishing (CA)
<i>Matrix:</i>	Tissue
<i>Water Quality Objective/ Water Quality Criterion:</i>	Fish consumption health advisory issued by OEHHA in September 2004.
<i>Evaluation Guideline:</i>	OEHHA guidance tissue levels for mercury (Brodberg & Pollock, 1999).
<i>Data Used to Assess Water Quality:</i>	USGS and UCD collected a total of 11 fish species by electrofishing equipment or gill nets in August 2000, from September to October 2002,

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

Spatial Representation:

Sample locations included Lake Natoma at Willow Creek, Mississippi Bar, Nimbus Dam, Alder Creek, Natomas Slough and Negro Bar; on the American River samples were taken at Discovery Park, d/s Watt Ave. bridge, and at Sunrise.

Temporal Representation:

Collection dates for USGS and UCD sampling data from Lake Natoma ranged from Aug. 2000, Sept. and Oct. 2002, and July 2003. SRWP data was collected in 1997, 1998, 1999, 2000, and 2001. Additionally, composite fish samples were collected as part of TSMP and SRWP, periodically from 1978 until 2002, from sections of the lower American River. Only mercury data were considered for this advisory.

Environmental Conditions:

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

Line of Evidence

Pollutant-Tissue

Beneficial Use

CM - Commercial and Sport Fishing (CA)

***Information Used to Assess
Water Quality:***

Supporting documentation - Fish consumption study documenting overlaps of fishing intensities with mercury concentrations in fish. Concentrations >0.3 ppm have been measured in largemouth bass, Smallmouth and white bass, Sacramento pike minnow, Suckers sampled from the following American River.

Region 5

Water Segment:	Bear River, Lower (below Camp Far West Reservoir)
Pollutant:	Diazinon
Decision:	Do Not Delist
Weight of Evidence:	<p>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.</p> <p>One line of evidence is available in the administrative record to assess this pollutant. Some of the data was questionable due to a possible bias (higher diazinon conc) from the ELISA method and as such could not be used in this assessment. Therefore, the data can not be used to make a delisting decision.</p> <p>Based on the readily available data and information, the weight of evidence indicates that there is insufficient 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">1. The data used does not satisfy the data quality requirements of section 6.1.4 of the Policy.2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.3. 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:	

Line of Evidence	Pollutant-Water
<i>Beneficial Use</i>	CO - Cold Freshwater Habitat
<i>Non-Numeric Objective:</i>	No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the executive Officer. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.
<i>Evaluation Guideline:</i>	CDFG Hazard Assessment Criteria - 0.10 µg/L 4-day average and 0.16

µg/L 1-hour average (Siepman & Finlayson, 2000; Finlayson, 2004).

Data Used to Assess Water Quality: None of the concentrations from the 30 samples from this site exceeded the CDFG criteria but some of the data was questionable due to a possible bias (higher diazinon conc) from the ELISA method. Data was obtained from the U.S. Geological Survey Water-Resources Investigations Report 02-4101. Samples were analyzed using GC/ECD/TSD and ELISA.

Spatial Representation: Samples were taken on the Bear River at Berry Road.

Temporal Representation: Samples were collected in January/February 2000, 2001.

Region 5

Water Segment: Bear River, Upper

Pollutant: Mercury

Decision: Do Not 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 sections 4.1 and 4.5 single lines of evidence are necessary to assess listing status.

Three lines of evidence are available in the administrative record to assess this pollutant. For water, none of the samples exceed the water quality criterion or MCL. All samples exceed the guideline for tissue.

Based on the readily available data and information, the weight of evidence indicates that there is insufficient 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. For tissue, all the samples exceed the guideline. For water, none of 25 samples exceeded the USEPA CTR criterion. None of the 25 samples exceeded the Drinking Water MCL.
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 applicable water quality standards are not attained.

Lines of Evidence:

Numeric Line of Evidence	Pollutant-Tissue
Beneficial Use:	CO - Cold Freshwater Habitat, MU - Municipal & Domestic
Matrix:	Tissue
Water Quality Objective/ Water Quality Criterion:	All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
Evaluation Guideline:	OEHHA guideline used (0.3 mg/kg) (Brodberg and Pollock, 1999).
Data Used to Assess Water Quality:	Three fish were collected. Tissue concentrations ranged from 0.38 to 0.40 ppm. All exceeded the objective (SWRCB, 2003).
Spatial Representation:	All the fish were collected at Dog Bar Road.

Temporal Representation: All fish were collected on September 23, 1999.
Data Quality Assessment: All samples were collected using USGS methods and quality control.

Numeric Line of Evidence -N/A
Beneficial Use: CO - Cold Freshwater Habitat, MU - Municipal & Domestic
Matrix: Water
*Water Quality Objective/
Water Quality Criterion:* Drinking Water MCL Title 22 Primary (0.002 mg/L).
*Data Used to Assess Water
Quality:* None of the 25 samples from Bear Creek exceeded the Drinking Water MCL value (USGS, 2005).

Spatial Representation: Twenty-five samples were taken at each of the following locations on the Bear River: below Rollins Reservoir; below Wolf Creek; below Steep Hollow Creek.

Temporal Representation: Samples were taken monthly beginning in August 2000 at Wolf Creek; in July 2001 below Rollins Reservoir and below Steep Hollow Creek and ending June 2003.

Data Quality Assessment: Data from USGS reports are considered of adequate quality per section 6.1.4 of the Policy.

Numeric Line of Evidence Pollutant-Water
Beneficial Use: CO - Cold Freshwater Habitat, MU - Municipal & Domestic
Matrix: Water
*Water Quality Objective/
Water Quality Criterion:* CTR value: 50 ng/L.
*Data Used to Assess Water
Quality:* None of the 25 samples exceeded the CTR acute and chronic values (USGS 2005).

Spatial Representation: Twenty-five samples were taken at each of the following locations on the Bear River: below Rollins Reservoir; below Wolf Creek; below Steep Hollow Creek.

Temporal Representation: Samples were taken monthly beginning in August 2000 at Wolf Creek; beginning in July 2001 below Rollins Reservoir and below Steep Hollow Creek and ending June 2003.

Data Quality Assessment: Data from USGS reports are considered of adequate quality per section 6.1.4 of the Policy.

Region 5

Water Segment: Butte Slough

Pollutant: Diazinon

Decision: Do Not 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. Several of the samples exceed the water quality objective but some of the data was questionable due to a possible bias (higher diazinon conc) from the ELISA method and as such could not be used in this assessment. Out of 91 samples, 15 were considered to be "questionable". Of the 15 "questionable" samples, none were in exceedance and these were not used when assessing this water body for this pollutant.

Based on the readily available data and information, the weight of evidence indicates that there is insufficient 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. Twenty of the 76 samples exceeded the CDFG Hazard Assessment Criteria, and this exceeds the allowable frequency presented in Table 4.1 of the Listing Policy. Additionally, when the chronic criteria could be applied, 4 out of 12 data set averages (4-day) exceeded the chronic criteria.
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 and a pollutant contributes to or causes the problem.

Lines of Evidence:

Line of Evidence Pollutant-Water

Beneficial Use CO - Cold Freshwater Habitat, MI - Fish Migration, R1 - Water Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

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

concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the executive Officer. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.

Evaluation Guideline: CDFG Hazard Assessment Criteria - 0.16 µg/L 1-hour average (acute), 0.10 µg/L 4-day average (chronic) (Siepman & Finlayson, 2000; Finlayson, 2004).

Data Used to Assess Water Quality: There were 91 samples taken, 20 were in exceedance. All 20 exceedances were from the 1994 data. Some of the more recent data was "questionable" due to a possible bias (higher diazinon conc) from the ELISA method and as such could not be used in this assessment. When the chronic criteria could be applied, 4 out of 12 data set averages (4-day) exceeded the chronic criteria (Dileanis, 2002, Dileanis, 2002a, Dileanis, 2003b, Holmes et al., 2000).

Spatial Representation: Samples were taken in Butte Slough at Lower Pass Road, Pass Road and Mawson Bridge near Colusa.

Temporal Representation: Samples were collected in 1994 and from 2000 to 2002. There were no samples taken between 1994 and 2000.

Region 5

Water Segment: Colusa Basin Drain

Pollutant: Diazinon

Decision: Do Not 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. Under section 4.1 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. Samples taken as late as February 2004 exceeded the CDFG criteria.

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 in the Water Quality Limited Segments category.

This conclusion is based on the staff findings that:

1. The CDFG criterion used complies with the requirements of section 6.1.3 of the Policy.
2. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
3. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
4. Thirteen of 129 samples exceeded the CDFG criterion, and these exceed the allowable frequency listed in Table 4.1 of the Listing Policy. Additionally, when the chronic criteria could be applied, 2 out of 9 data set averages (4-day) exceeded the chronic criteria.
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 on 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
<i>Beneficial Use:</i>	CO - Cold Freshwater Habitat, WA - Warm Freshwater Habitat
<i>Matrix:</i>	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. Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the executive Officer. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.
<i>Evaluation Guideline:</i>	CDFG Hazard Assessment Criterion - 0.16 µg/L 1-hour average (acute), 0.10 µg/L 4-day average (chronic) (Siepman & Finlayson, 2000; Finlayson, 2004).
<i>Data Used to Assess Water Quality:</i>	Two of 14 samples exceeded the CDFG acute criteria. None of 8 samples exceeded the chronic criteria (Calanchini et al., 2004).
<i>Spatial Representation:</i>	Samples taken at Colusa Basin Drain near Knight's Landing.
<i>Temporal Representation:</i>	Two storm events were sampled for the 2004 TMDL project in the Sacramento River Basin. The first storm event (Storm 1) was the period 28 January to 6 February 2004. The second storm event (Storm 2) was the period 15-23 February, 2004. For storm 1 sampling was conducted from 28 January to 3 February at most sites, and as late as 6 February at the Tower Bridge at Sacramento site. For storm 2 the sampling period began on 16 February and extended until 22 February.
<i>Data Quality Assessment:</i>	Data from CDFA laboratories are considered of adequate quality.

Line of Evidence	Pollutant-Water
<i>Beneficial Use</i>	CO - Cold Freshwater Habitat, WA - Warm Freshwater Habitat
<i>Non-Numeric Objective:</i>	No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the executive Officer. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.
<i>Evaluation Guideline:</i>	CDFG Hazard Assessment Criterion: 0.16 µg/L 1-hour average (acute), 0.10 µg/L 4-day average (Siepman & Finlayson, 2002).

Data Used to Assess Water Quality:

Data analysis consisted of ELISA and GC/ECD/TSD. Nine samples were considered of "questionable" quality due to a possible bias (higher diazinon conc) from the ELISA method. Data from 1996-98 was from the NWIS Web data for the nation. Therefore, these samples were not included as part of this assessment. Of the remaining 115 samples, 11 exceeded the acute criteria. When the chronic criteria could be applied, 2 out of 9 data set averages (4-day) exceeded the chronic criteria (Dileanis et al., 2002).

Spatial Representation:

Samples taken at Colusa Basin Drain at Road 99E near Knights Landing and Clarks Ditch.

Temporal Representation:

Samples taken in 2000. Additional samples taken from 1996-1998. Samples from 1999-2003 resulted in non-detects based on EPA 8141A analysis methodology. Samples in 1994 taken in Feb. from Clarks Ditch, trib. to Colusa Basin Drain.

Region 5

Water Segment: Harding Drain (Turlock Irrigation District Lateral #5)

Pollutant: Unknown Toxicity

Decision: Do Not Delist

Weight of Evidence: The data and information in the administrative record does not support this change. A UAA has not been approved by USEPA.

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 and a pollutant contributes to or causes the problem.

Lines of Evidence:

<i>Line of Evidence</i>	Testimonial Evidence
<i>Beneficial Use</i>	AG - Agricultural Supply, CO - Cold Freshwater Habitat, MI - Fish Migration, PR - Industrial Process Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
<i>Data Used to Assess Water Quality:</i>	Letter submitted on behalf of Turlock Irrigation District requesting Harding Drain to be delisted for unknown toxicity due to a UAA that was completed.

Region 5

Water Segment: Jack Slough

Pollutant: Diazinon

Decision: Do Not Delist

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

One line of evidence is available in the administrative record to assess this pollutant. 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 against removing this water segment-pollutant combination from the section 303(d) list.

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. There were 24 out of 54 samples that exceeded the CDFG Hazard Assessment Criteria and this exceeds the allowable frequency listed in Table 4.1 of the Listing Policy. Additionally, when the chronic criteria could be applied, 6 out of 10 data set averages (4-day) exceeded the chronic criteria.
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 and a pollutant contributes to or causes the problem.

Lines of Evidence:

Line of Evidence Pollutant-Water

Beneficial Use

AG - Agricultural Supply, WA - Warm Freshwater Habitat

Non-Numeric Objective:

No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the executive Officer. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of

	Regulations, Title 22, Division 4, Chapter 15.
<i>Evaluation Guideline:</i>	CDFG Hazard Assessment Criteria 0.16 µg/L 1-hour average (acute), 0.10 µg/L 4-day average (chronic) (Siepman & Finlayson, 2000; Finlayson, 2004).
<i>Data Used to Assess Water Quality:</i>	There were 59 samples total taken. Of these, 16 were considered to be of "questionable" quality and were not used in this assessment. Of the remaining 43 samples, 20 exceeded the acute diazinon criteria (Dileanis et al., Deileanis, 2003b, Holmes et al., 2000).
<i>Spatial Representation:</i>	Samples were collected in Marysville and at Doc Adams Road.
<i>Temporal Representation:</i>	Samples were taken late January/February during the years 1994, 2000, 2001 and 2002.

Region 5

Water Segment: Orestimba Creek (above Kilburn Road)

Pollutant: Chlorpyrifos

Decision: Do Not 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 exceeded the pesticide water quality objective but the number of samples is insufficient to determine with the confidence and power required by the Listing Policy.

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. One of 14 samples exceeded the CDFG Hazard Assessment Criteria. At least 28 samples are needed before a pollutant can be considered for removal from the list using the frequencies 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 not be removed from the section 303(d) list because it cannot be determined if applicable water quality standards are attained.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, MI - Fish Migration, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

**Water Quality Objective/
Water Quality Criterion:** Pesticide concentrations shall not exceed those allowable by applicable antidegradation policies (see State Water Resources Control Board Resolution No. 68-16 and 40 CFR section 131.12).

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

result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the executive Officer. Pesticide concentrations shall not exceed the lowest levels technically and economically achievable. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.

<i>Evaluation Guideline:</i>	CDFG Hazard Assessment Criteria - 14 ng/L 4-day average and 25 ng/L 1-hour average.
<i>Data Used to Assess Water Quality:</i>	Chlorpyrifos was detected at concentrations exceeding toxicity benchmarks. Chlorpyrifos was detected in one sample at 0.0705 µg/L, and found at trace concentrations in one additional sample. The detection exceeds both the acute and chronic CDFG WQC (Starnier et al., 2003).
<i>Spatial Representation:</i>	Samples were taken on Orestimba Creek at River Road.
<i>Temporal Representation:</i>	Sampling began on July 2, 2002, and continued throughout the summer until September 30, 2002. Each site was sampled once per week.
<i>Environmental Conditions:</i>	At each sampling event, temperature, dissolved oxygen (DO), pH, and electrical conductivity (EC) were measured in situ at each sampling site. DO, EC and temperature were measured. The pH at Orestimba Creek ranged from 7.1 to 7.8. Measured water temperature ranged from 16 to 25.4 °C. DO and EC had ranges of 6.21 to 8.28 mg/L and 641 to 887 µS/cm, respectively.
<i>Data Quality Assessment:</i>	Quality Control (QC) for the chemical analysis portion of this study was conducted in accordance with Standard Operating Procedure QAQC001.00 (Segawa, 1995).

Region 5

Water Segment: Orestimba Creek (above Kilburn Road)

Pollutant: Diazinon

Decision: Do Not 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 exceeded the water quality objective but the number of samples is insufficient to determine with the confidence and power required by the Listing Policy.

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

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. One of 14 samples exceeded the pesticide water quality objective. At least 28 samples are needed before a pollutant can be considered for removal from the list using the frequencies 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 not be removed from the section 303(d) list because it cannot be determined if applicable water quality standards are attained.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, CO - Cold Freshwater Habitat, MI - Fish Migration, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

**Water Quality Objective/
Water Quality Criterion:** Pesticide concentrations shall not exceed those allowable by applicable antidegradation policies (see State Water Resources Control Board Resolution No. 68-16 and 40 CFC section 131.12).

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

result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the executive Officer. Pesticide concentrations shall not exceed the lowest levels technically and economically achievable. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.

<i>Evaluation Guideline:</i>	CDFG Hazard Assessment Criteria - 0.10 µg/L 4-day average and 0.16 µg/L 1-hour average (Siepman & Finlayson, 2000; Finlayson, 2004).
<i>Data Used to Assess Water Quality:</i>	Diazinon was detected at concentrations exceeding toxicity benchmarks. Of the 14 samples collected at Orestimba Creek, diazinon was detected three times (21% detection frequency), with concentrations of 0.043, 0.046, and 0.276 µg/L. The two lowest detected concentrations were below the CDFG chronic WQC of 0.10 µg/L. The 0.276 µg/L detection exceeded both the chronic and the acute WQC. The three samples with quantifiable diazinon detections were taken from consecutive sampling events at Orestimba Creek on 8/5, 8/12-10 - and 8/19/2002 (Starnier et al., 2003).
<i>Spatial Representation:</i>	Samples were taken on Orestimba Creek at River Road.
<i>Temporal Representation:</i>	Sampling began on July 2, 2002, and continued throughout the summer until September 30, 2002. Each site was sampled once per week.
<i>Environmental Conditions:</i>	At each sampling event, temperature, dissolved oxygen (DO), pH, and electrical conductivity (EC) were measured in situ at each sampling site. DO, EC and temperature were measured. The pH at Orestimba Creek ranged from 7.1 to 7.8. Measured water temperature ranged from 16 to 25.4 °C. DO and EC had ranges of 6.21 to 8.28 mg/L and 641 to 887 µS/cm, respectively.
<i>Data Quality Assessment:</i>	Quality Control (QC) for the chemical analysis portion of this study was conducted in accordance with Standard Operating Procedure QAQC001.00 (Segawa, 1995).

Region 5

Water Segment:	Salt Slough (upstream from confluence with San Joaquin River)
Pollutant:	Chlorpyrifos
Decision:	Do Not Delist
Weight of Evidence:	<p>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.</p> <p>One line of evidence is available in the administrative record to assess this pollutant. One sample exceeds the water quality objective but the number of samples is insufficient to determine with the confidence and power required by the Listing Policy.</p> <p>Based on the readily available data and information, the weight of evidence indicates that there is insufficient 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">1. The data used satisfies the data quality requirements of section 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 14 samples exceeded both the CDFG chronic and CDFG acute WQC. At least 28 samples are needed before a pollutant can be considered for removal from the list using the frequencies 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 not be removed from the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem.

Lines of Evidence:

<i>Numeric Line of Evidence</i>	Pollutant-Water
<i>Beneficial Use:</i>	AG - Agricultural Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat
<i>Matrix:</i>	Water
<i>Water Quality Objective/ Water Quality Criterion:</i>	<p>Pesticide concentrations shall not exceed those allowable by applicable antidegradation policies (see State Water Resources Control Board Resolution No. 68-16 and 40 C.F.R. Section 131.12).</p> <p>No individual pesticide or combination of pesticides shall be present in</p>

concentrations that adversely affect beneficial uses. Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the executive Officer. Pesticide concentrations shall not exceed the lowest levels technically and economically achievable. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.

<i>Evaluation Guideline:</i>	CDFG Hazard Assessment Criteria - 14 ng/L 4-day average and 25 ng/L 1-hour average.
<i>Data Used to Assess Water Quality:</i>	The single chlorpyrifos detection of 0.046 µg/L at Salt Slough exceeded both the CDFG chronic and CDFG acute WQC of 0.014 and 0.02 µg/L. Chlorpyrifos was also found at trace concentrations in two additional samples (Starner et al., 2003).
<i>Spatial Representation:</i>	Samples for Salt Slough were taken at Highway 165; there were 14 separate sampling events.
<i>Temporal Representation:</i>	Sampling began on July 2, 2002, and continued throughout the summer until September 30, 2002. Each site was sampled once per week.
<i>Environmental Conditions:</i>	At each sampling event, temperature, dissolved oxygen (DO), pH, and electrical conductivity (EC) were measured in situ at each sampling site. DO, EC and temperature were measured. The pH at Salt Slough ranged from 6.49 to 7.66. Measured water temperature ranged from 18.9 to 26.9 °C. DO and EC had ranges of 5.14 to 7.37 mg/L and 877 to 1188 µS/cm, respectively.
<i>Data Quality Assessment:</i>	Quality Control (QC) for the chemical analysis portion of this study was conducted in accordance with Standard Operating Procedure QAQC001.00 (Segawa, 1995).

Region 5

Water Segment: Salt Slough (upstream from confluence with San Joaquin River)

Pollutant: Diazinon

Decision: Do Not 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. A second line of evidence represented mapping changes requested by the Regional Board and accepted by the SWRCB. None of the samples exceeded the water quality objective but trace concentrations were present in two samples. The number of samples is insufficient to determine with the confidence and power required by the Listing Policy.

Based on the readily available data and information, the weight of evidence indicates that there is insufficient 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 14 samples exceeded the pesticide water quality objective. At least 28 samples are needed before a pollutant can be considered for removal from the list using the frequencies 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 not be removed from on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Water

Beneficial Use: AG - Agricultural Supply, R1 - Water Contact Recreation, R2 - Non-Contact Recreation, SP - Fish Spawning, WA - Warm Freshwater Habitat, WI - Wildlife Habitat

Matrix: Water

<i>Water Quality Objective/ Water Quality Criterion:</i>	Pesticide concentrations shall not exceed those allowable by applicable antidegradation policies (see State Water Resources Control Board Resolution No. 68-16 and 40 CFR section 131.12). No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the executive Officer. Pesticide concentrations shall not exceed the lowest levels technically and economically achievable. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.
<i>Evaluation Guideline:</i>	CDFG Hazard Assessment Criteria - 0.10 µg/L 4-day average and 0.16 µg/L 1-hour average (Siepman & Finlayson, 2000; Finlayson, 2004).
<i>Data Used to Assess Water Quality:</i>	Diazinon was not detected above the WQO at Salt Slough, but was present at trace concentrations in two samples (Starner et al., 2003).
<i>Spatial Representation:</i>	Samples for Salt Slough were taken at Highway 165; there were 14 separate sampling events.
<i>Temporal Representation:</i>	Sampling began on July 2, 2002, and continued throughout the summer until September 30, 2002. Each site was sampled once per week.
<i>Environmental Conditions:</i>	At each sampling event, temperature, dissolved oxygen (DO), pH, and electrical conductivity (EC) were measured in situ at each sampling site. DO, EC and temperature were measured. The pH at Salt Slough ranged from 6.49 to 7.66. Measured water temperature ranged from 18.9 to 26.9 °C. DO and EC had ranges of 5.14 to 7.37 mg/L and 877 to 1188 µS/cm, respectively.
<i>Data Quality Assessment:</i>	Quality Control (QC) for the chemical analysis portion of this study was conducted in accordance with Standard Operating Procedure QAQC001.00 (Segawa, 1995).

<i>Line of Evidence</i>	-N/A
<i>Beneficial Use</i>	WA - Warm Freshwater Habitat
<i>Information Used to Assess Water Quality:</i>	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This water body has been remapped and the revised extent impacted is 17 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.

Region 5

Water Segment: San Joaquin River (Stanislaus River to Delta Boundary)
Pollutant: DDT
Decision: Do Not Delist
Weight of Evidence: This pollutant is being considered for removal from the section 303(d) list under section 4.5 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 insufficient 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. Two of the 3 samples exceeded the OEHHA Screening Value and this does not exceed the allowable frequency listed in Table 4.1 of the Listing Policy and there are not enough samples to support delisting.
4. Pursuant to section 4.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

SWRCB Staff Recommendation: After review of the available data and information, SWRCB staff concludes that the water body-pollutant combination should no be removed from the section 303(d) list because applicable water quality standards are exceeded.

Lines of Evidence:

Numeric Line of Evidence Pollutant-Tissue
Beneficial Use: CM - Commercial and Sport Fishing (CA)
Matrix: Tissue
**Water Quality Objective/
Water Quality Criterion:** Central Valley RWQCB Basin Plan: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life.
Evaluation Guideline: 100 ng/g - OEHHA Screening Value (Brodberg & Pollock, 1999).
Data Used to Assess Water Quality: Two out of 3 samples exceeded. A total of 3 filet composite samples of 2 largemouth bass and one of white catfish were collected. Largemouth bass were collected in 1998 and 2000. White catfish were collected in 1998. The guideline was exceeded in the 2000 sample of largemouth bass and the 1998 white catfish sample (TSMP, 2002).
Spatial Representation: One station along the San Joaquin River about 4 miles upstream from South County Park near San Joaquin City (Vernalis) was sampled.

Temporal Representation:

Samples were collected annually 1998 and 2000.

Data Quality Assessment:

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