

## Final California 2010 Integrated Report( 303(d) List/305(b) Report)

### Supporting Information

#### Regional Board 1 - North Coast Region

**Water Body Name:** Klamath River HU, Lower HA, Klamath Glen HSA  
**Water Body ID:** CAR1051108619990608084033  
**Water Body Type:** River & Stream

**DECISION ID** 17487

**Region 1**

Klamath River HU, Lower HA, Klamath Glen HSA

**Pollutant:** Hexachlorocyclohexane (HCH), alpha | Hexachlorocyclohexane (HCH), beta | Aldrin | Atrazine | Azinphos, Ethyl (Ethyl Guthion) | Bolstar | Carbofuran | Chlordane | Chlorothalonil | Chlorpyrifos | Chlorpyrifos, methyl | Ciodrin | Dacthal | Demeton s | Dichlofenthion | Dichlorvos | Dieldrin | Dimethoate | Dioxathion | Dyfonate (Fonofos or Fonophos) | Endrin | Endrin Ketone | Ethion | Ethoprop | Famphur | Fenchlorphos | Fenitrothion | Fensulfothion | Fenthion | Glyphosate | Heptachlor | Heptachlor epoxide | Hexachlorobenzene/ HCB | Leptophos | Lindane/gamma Hexachlorocyclohexane (gamma-HCH) | Merphos | Methidathion | Methoxychlor | Methyl Parathion | Mevinphos | Molinate | Naled | Oxadiazon | Oxychlordane | Phorate | Phosmet | Phosphamidon | Prometon (Prometone) | Prometryn | Propazine | Secbumeton | Simazine | Simetryn | Sulfotep | Tedion | Terbufos | Terbutylazine | Terbutryn | Tetrachlorvinphos | Thiobencarb/Bolero | Thionazin | Tokuthion | Toxaphene | Trichlorfon | Trichloronate | beta-BHC (Benzenehexachloride or beta-HCH) | cis-Nonachlor | delta-BHC (Benzenehexachloride or delta-HCH) | o,p?-DDD (Dichlorodiphenyldichloroethane) | o,p?-DDE (Dichlorodiphenyldichloroethylene) | p,p'-DDD (Dichlorodiphenyldichloroethane) | p,p'-DDE | p,p?-DDMU | trans-Nonachlor  
**Final Listing Decision:** Do Not List on 303(d) list (TMDL required list)

**Last Listing Cycle's Final Listing Decision:** New Decision

**Revision Status**

Revised

**Impairment from Pollutant or Pollution:** Pollutant

#### **Conclusion:**

These pollutants are 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. None of the samples in LOE #30116 exceed the water quality objective. The pollutants in LOE #29812 do not have water quality objectives and, therefore, a decision could not be made. The samples were analyzed for 92 pesticides, pesticide constituents, isomers, or metabolites. For 92 of the pesticide analytes, 3 to 4 samples were collected. The samples were collected as part of the Surface Water Ambient Water Monitoring Program (SWAMP). The data are found in the 5-Year Monitoring Report (NCRWQCB 2008). 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 on the section 303(d) list in the Water Quality Limited Segments category. This conclusion is based on the staff findings that: 1. The data used satisfies the data quality requirements of section 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 360 samples for both LOEs, #29812, without criteria, or LOE #30116 with criteria, exceeded the water quality guidelines and this does not 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.

**RWQCB Board Staff**

**Decision:**

After review of the available data and information, RWQCB staff concludes that the water body-pollutant combination should not be placed on the section 303(d) list because applicable water quality standards are not being exceeded.

**SWRCB Board Staff Decision:**

After review of this Regional Board decision, SWRCB staff recommend the decision be approved by the State Board.

**USEPA Action (if applicable):**

**Line of Evidence (LOE) for Decision ID 17487, Multiple Pollutants  
Klamath River HU, Lower HA, Klamath Glen HSA**

**Region 1**

LOE ID:	29812
Pollutant:	Azinphos, Ethyl (Ethyl Guthion)   Bolstar   Carbofuran   Chlorothalonil   Chlorpyrifos, methyl   Ciodrin   Demeton s   Dichlofenthion   Dichlorvos   Dimethoate   Dioxathion   Dyfonate (Fonofos or Fonophos)   Endrin Ketone   Ethion   Ethoprop   Famphur   Fenchlorphos   Fenitrothion   Fensulfothion   Fenthion   Leptophos   Lindane/gamma Hexachlorocyclohexane (gamma-HCH)   Merphos   Methidathion   Methyl Parathion   Mevinphos   Naled   Oxadiazon   Oxychlordane   Phorate   Phosmet   Phosphamidon   Prometon (Prometone)   Prometryn   Propazine   Secbumeton   Simetryn   Sulfotep   Tedion   Terbufos   Terbutylazine   Terbutryn   Tetrachlorvinphos   Thiobencarb/Bolero   Thionazin   Tokuthion   Trichlorfon   Trichloronate   beta-BHC (Benzenehexachloride or beta-HCH)   cis-Nonachlor   delta-BHC (Benzenehexachloride or delta-HCH)   o,p?-DDD (Dichlorodiphenyldichloroethane)   o,p?-DDE (Dichlorodiphenyldichloroethylene)   p,p'-DDD (Dichlorodiphenyldichloroethane)   p,p'-DDE   p,p?-DDMU   trans-Nonachlor
LOE Subgroup:	Pollutant-Water
Matrix:	Water
Fraction:	Dissolved
Beneficial Use:	Municipal & Domestic Supply
Number of Samples:	360
Number of Exceedances:	0
Data and Information Type:	PHYSICAL/CHEMICAL MONITORING
Data Used to Assess Water Quality:	None of the 360 pesticides samples collected in the mainstem Klamath River exceed the objective as all of the samples were either measured as non-detect or were measured as detected but not quantified with reporting limits below objectives or evaluation guidelines. The samples were analyzed for 92 pesticides, pesticide constituents, isomers, or metabolites. For 92 of the pesticide analytes, 3 to 4 samples were collected. The samples were collected as part of the Surface Water Ambient Water Monitoring Program (SWAMP). The data are found in the 5-Year Monitoring Report (NCRWQCB 2008). The data are found in the 5-Year Monitoring Report (NCRWQCB 2008).
Data Reference:	<a href="#">Surface Water Ambient Monitoring Program (SWAMP). Summary Report for the North Coast Region (RWQCB-1) for years 2000-2006. North Coast Regional Water Quality Control Board. March 2008</a>
Water Quality Objective/Criterion:	Per the Basin Plan (NCRWQCB 2007): No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no bioaccumulation of pesticide concentrations found in bottom sediments or aquatic life. Waters designated for use as domestic or municipal supply shall not contain concentrations of pesticides in excess of the limiting concentrations set forth in California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64444, and listed in Table 3.2 of the Basin Plan. No evaluation guidelines for the dissolved fractions of the pesticides assessed

Objective/Criterion Reference:	for this waterbody for the Municipal & Domestic Supply beneficial use could be found that meet the requirements of Section 6.1.3 of the Listing Policy. <a href="#">Water Quality Control Plan (Basin Plan) - North Coast Region (Region 1)</a>
Evaluation Guideline: Guideline Reference:	
Spatial Representation:	Samples were collected as grab samples from the mainstem Klamath River in Klamath Glen at the boat launch, approximately 6 river miles upstream of the Klamath River estuary (SWAMP Station ID 105KLAMGL) in well-mixed flows in glides or riffles.
Temporal Representation:	The samples were collected as grab samples during 5 site visits during the 2002 - 2003 fiscal year (10/2002 - 6/2003). The site visits corresponded to fall, winter, spring and early summer seasonal conditions.
Environmental Conditions:	There are no known environmental conditions (e.g., seasonality, land use practices, fire events, storms, etc.) that are related to these data.
QAPP Information:	Quality control was conducted in accordance with the SWAMP Quality Assurance Management Plan (SWAMP 2002).
QAPP Information Reference(s):	

**Line of Evidence (LOE) for Decision ID 17487, Multiple Pollutants  
Klamath River HU, Lower HA, Klamath Glen HSA**

**Region 1**

LOE ID:	30116
Pollutant:	Hexachlorocyclohexane (HCH), alpha   Hexachlorocyclohexane (HCH), beta   Aldrin   Atrazine   Carbofuran   Chlordane   Chlorpyrifos   Dacthal   Dieldrin   Endrin   Glyphosate   Heptachlor   Heptachlor epoxide   Hexachlorobenzene/HCB   Lindane/gamma Hexachlorocyclohexane (gamma-HCH)   Methoxychlor   Molinate   Simazine   Thiobencarb/Bolero   Toxaphene
LOE Subgroup:	Pollutant-Water
Matrix:	Water
Fraction:	Dissolved
Beneficial Use:	Municipal & Domestic Supply
Number of Samples:	360
Number of Exceedances:	0
Data and Information Type:	PHYSICAL/CHEMICAL MONITORING
Data Used to Assess Water Quality:	None of the 360 pesticides samples collected in the mainstem Klamath River exceed the objective as all of the samples were either measured as non-detect or were measured as detected but not quantified with reporting limits below objectives or evaluation guidelines. The samples were analyzed for 92 pesticides, pesticide constituents, isomers, or metabolites. For 92 of the pesticide analytes, 3 to 4 samples were collected. The samples were collected as part of the Surface Water Ambient Water Monitoring Program (SWAMP). The data are found in the 5-Year Monitoring Report (NCRWQCB 2008). The data are found in the 5-Year Monitoring Report (NCRWQCB 2008).
Data Reference:	<a href="#">Surface Water Ambient Monitoring Program (SWAMP). Summary Report for the North Coast Region (RWQCB-1) for years 2000-2006. North Coast Regional Water Quality Control Board. March 2008</a>
Water Quality Objective/Criterion:	Per the Basin Plan (NCRWQCB 2007): No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no bioaccumulation of pesticide concentrations found in bottom sediments or aquatic life. Waters designated for use as domestic or municipal supply shall not contain concentrations of pesticides in excess of the limiting concentrations set forth in California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64444, and listed in Table 3.2 of the Basin Plan. No evaluation guidelines for the dissolved fractions of the pesticides assessed

Objective/Criterion Reference:	for this waterbody for the Municipal & Domestic Supply beneficial use could be found that meet the requirements of Section 6.1.3 of the Listing Policy. <a href="#">Water Quality Control Plan (Basin Plan) - North Coast Region (Region 1)</a>
Evaluation Guideline:	Hexachlorocyclohexane, alpha (0.0026 ug/l) Hexachlorocyclohexane, beta (0.0091ug/l) Aldrin (0.000049 ug/l) Atrazine (0.001 ug/l) Carbofuran (0.04 mg/l) Chlordane (0.0001 ug/l) Chlorpyrifos (0.083 ug/l) Dacthal (70 ug/l) Dieldrin (0.00014 ug/l) Endrin (0.002 ug/l) Glyphosate (700 ug/l) Heptachlor (0.01 ug/l) Heptachlor epoxide (0.01 ug/l) Hexachlorobenzene/ HCB (0.001 ug/l) Lindane/gamma Hexachlorocyclohexane (gamma-HCH) (.98 ug/l) Methoxychlor (0.03 mg/l) Molinate (0.02 mg/l) Simazine (0.04 mg/l) Thiobencarb/Bolero (0.07 mg/l) Toxaphene (0.003 mg/l)
Guideline Reference:	<a href="#">National recommended water quality criteria: 2002. EPA-822-R-02-047 Washington, D.C. USEPA</a> <a href="#">Water Quality Standards 2000. Establishment of numeric criteria for priority toxic pollutants for the State of California: Rules and regulations. Federal Register Vol. 65, No. 97. Washington, D.C.: Environmental Protection Agency</a> <a href="#">California Code of Regulations, Title 22, Division 4, Chapter 15. Domestic Water Quality and Monitoring.</a> <a href="http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Lawbook.aspx">http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Lawbook.aspx</a>
Spatial Representation:	Samples were collected as grab samples from the mainstem Klamath River in Klamath Glen at the boat launch, approximately 6 river miles upstream of the Klamath River estuary (SWAMP Station ID 105KLAMGL) in well-mixed flows in glides or riffles.
Temporal Representation:	The samples were collected as grab samples during 5 site visits during the 2002 - 2003 fiscal year (10/2002 - 6/2003). The site visits corresponded to fall, winter, spring and early summer seasonal conditions. .
Environmental Conditions:	There are no known environmental conditions (e.g., seasonality, land use practices, fire events, storms, etc.) that are related to these data.
QAPP Information:	Quality control was conducted in accordance with the SWAMP Quality Assurance Management Plan (SWAMP 2002).
QAPP Information Reference(s):	

**DECISION ID** 12314 **Region 1**  
Klamath River HU, Lower HA, Klamath Glen HSA

**Pollutant:** Aluminum  
**Final Listing Decision:** Do Not List on 303(d) list (TMDL required list)  
**Last Listing Cycle's Final Listing Decision:** New Decision  
**Revision Status** Revised  
**Impairment from Pollutant or Pollution:** Pollutant

**Conclusion:** 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. None of the 4 aluminum 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 placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category (i.e., sufficient justification to not 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 4 samples exceeded the aluminum objective, and this does not 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.

**RWQCB Board Staff Decision:**

After review of the available data and information, North Coast RWQCB staff concludes that the water body-pollutant combination should not be placed on the Section 303(d) List because applicable water quality standards are not being exceeded.

**SWRCB Board Staff Decision:**

After review of this Regional Board decision, SWRCB staff recommend the decision be approved by the State Board.

**USEPA Action (if applicable):**

**Line of Evidence (LOE) for Decision ID 12314, Aluminum  
Klamath River HU, Lower HA, Klamath Glen HSA**

**Region 1**

LOE ID:	25359
Pollutant:	Aluminum
LOE Subgroup:	Pollutant-Water
Matrix:	Water
Fraction:	Total
Beneficial Use:	Municipal & Domestic Supply
Number of Samples:	4
Number of Exceedances:	0
Data and Information Type:	PHYSICAL/CHEMICAL MONITORING
Data Used to Assess Water Quality:	None of the 4 aluminum samples collected from the mainstem Klamath River exceed the objective. The samples were collected as part of the Surface Water Ambient Water Monitoring Program (SWAMP). The data are found in the SWAMP Summary Report for the North Coast Region for Years 2000-2006 (NCRWQCB 2008).
Data Reference:	<a href="#">Surface Water Ambient Monitoring Program (SWAMP). Summary Report for the North Coast Region (RWQCB-1) for years 2000-2006. North Coast Regional Water Quality Control Board. March 2008</a>
Water Quality Objective/Criterion:	Per the Basin Plan (NCRWQCB 2007): The Maximum Contaminant Level for aluminum is 1.0 mg/l (1,000 ug/L).
Objective/Criterion Reference:	<a href="#">Water Quality Control Plan (Basin Plan) - North Coast Region (Region 1)</a>
Evaluation Guideline:	
Guideline Reference:	
Spatial Representation:	Samples were collected from the mainstem Klamath River in Klamath Glen at the boat launch, approximately 6 river miles upstream of the Klamath River estuary (SWAMP Station ID KLAMGL) in well-mixed flows in glides or riffles.
Temporal Representation:	The samples were collected as grab samples during 5 site visits during the 2002 - 2003 fiscal year (10/2002 - 6/2003). The site visits corresponded to fall, winter, spring and early summer seasonal conditions.
Environmental Conditions:	There are no known environmental conditions (e.g., seasonality, land use practices, fire events, storms, etc.) that are related to these data.

QAPP Information: Quality control was conducted in accordance with the SWAMP Quality Assurance Management Plan (Puckett 2002).

QAPP Information Reference(s): [Quality Assurance Management Plan for the State of California's Surface Water Ambient Monitoring Program. Sacramento, CA. State Water Resources Control Board. SWAMP. December 2002 \(1st version\)](#)

**DECISION ID** 15726 **Region 1**  
**Klamath River HU, Lower HA, Klamath Glen HSA**

**Pollutant:** Ammonia as Nitrogen  
**Final Listing Decision:** Do Not List on 303(d) list (TMDL required list)  
**Last Listing Cycle's Final Listing Decision:** New Decision  
**Revision Status:** Revised  
**Impairment from Pollutant or Pollution:** Pollutant

**Conclusion:** 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. None of the 5 ammonia as nitrogen samples exceed the objective. 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 on the Section 303(d) List in the Water Quality Limited Segments category (i.e., sufficient justification to not 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 5 samples exceed the water quality objective, and this does not 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.

**RWQCB Board Staff Decision:** After review of the available data and information, North Coast Regional Water Board staff concludes that the water body-pollutant combination should not be placed on the Section 303(d) List because applicable water quality standards are being attained.

**SWRCB Board Staff Decision:** After review of this Regional Board decision, SWRCB staff recommend the decision be approved by the State Board.

**USEPA Action (if applicable):**

**Line of Evidence (LOE) for Decision ID 15726, Ammonia as Nitrogen** **Region 1**  
**Klamath River HU, Lower HA, Klamath Glen HSA**

**LOE ID:** 26297

**Pollutant:** Ammonia as Nitrogen  
**LOE Subgroup:** Pollutant-Water  
**Matrix:** Water  
**Fraction:** Total

**Beneficial Use:** Cold Freshwater Habitat  
**Aquatic Life Use:** Fish Migration | Fish Spawning | Freshwater Replenishment | Preservation of Rare & Endangered Species | Warm Freshwater Habitat | Wildlife Habitat

**Number of Samples:** 5  
**Number of Exceedances:** 0



the 47 samples exceeded the metal objectives, and this does not 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.

**RWQCB Board Staff Decision:**

After review of the available data and information, North Coast RWQCB staff concludes that the water body-pollutant combination should not be placed on the Section 303(d) List because applicable water quality standards are not being exceeded.

**SWRCB Board Staff Decision:**

After review of this Regional Board decision, SWRCB staff recommend the decision be approved by the State Board.

**USEPA Action (if applicable):**

**Line of Evidence (LOE) for Decision ID 10636, Multiple Pollutants  
Klamath River HU, Lower HA, Klamath Glen HSA**

**Region 1**

LOE ID:	21508
Pollutant:	Arsenic   Cadmium   Chromium (total)   Copper   Lead   Mercury   Nickel   Selenium   Silver   Zinc
LOE Subgroup:	Pollutant-Water
Matrix:	Water
Fraction:	Total
Beneficial Use:	Municipal & Domestic Supply
Number of Samples:	47
Number of Exceedances:	0
Data and Information Type:	PHYSICAL/CHEMICAL MONITORING
Data Used to Assess Water Quality:	None of the 47 metals samples collected in the mainstem Klamath River exceed the objectives. There were 3 to 5 samples collected for each of the 10 metal parameters. The samples were collected as part of the Surface Water Ambient Water Monitoring Program (SWAMP). The data are found in the SWAMP Summary Report for the North Coast Region for Years 2000-2006 (NCRWQCB 2008).
Data Reference:	<a href="#">Surface Water Ambient Monitoring Program (SWAMP). Summary Report for the North Coast Region (RWQCB-1) for years 2000-2006. North Coast Regional Water Quality Control Board. March 2008</a>
Water Quality Objective/Criterion:	Per the Basin Plan (NCRWQCB 2007): Arsenic objective is 0.05 mg/L. Cadmium objective is 0.01 mg/L. Chromium objective is 0.05 mg/L. Lead objective is 0.05 mg/L. Mercury objective is 0.002 mg/L. Selenium objective is 0.01 mg/L. Silver objective is 0.05 mg/L. Per 22 CCR 64431: Nickel maximum contaminant level is 0.1 mg/L. Per 22 CCR 64449: Copper secondary maximum contaminant level is 1.0 mg/L. Zinc secondary maximum contaminant level is 5.0 mg/L.
Objective/Criterion Reference:	<a href="#">Water Quality Control Plan (Basin Plan) - North Coast Region (Region 1) Title 22, Division 4, Chapter 15, Sections 64400 et seq. California Code of Regulations</a>
Evaluation Guideline:	
Guideline Reference:	
Spatial Representation:	Samples were collected as grab samples from the mainstem Klamath River in Klamath Glen at the boat launch, approximately 6 river miles upstream of the Klamath River estuary (SWAMP Station ID 105KLAMGL) in well-mixed flows in glides or riffles.
Temporal Representation:	



The samples were collected as grab samples during 5 site visits during the 2002 - 2003 fiscal year (10/2002 - 6/2003). The site visits corresponded to fall, winter, spring and early summer seasonal conditions.

**Environmental Conditions:** There are no known environmental conditions (e.g., seasonality, land use practices, fire events, storms, etc.) that are related to these data.

**QAPP Information:** Quality control was conducted in accordance with the SWAMP Quality Assurance Management Plan (SWAMP 2002).

**QAPP Information Reference(s):** [Quality Assurance Management Plan for the State of California's Surface Water Ambient Monitoring Program. Sacramento, CA. State Water Resources Control Board. SWAMP. December 2002 \(1st version\)](#)

**DECISION ID** 12435 **Region 1**  
**Klamath River HU, Lower HA, Klamath Glen HSA**

**Pollutant:** Chloride  
**Final Listing Decision:** Do Not List on 303(d) list (TMDL required list)  
**Last Listing Cycle's Final Listing Decision:** New Decision  
**Revision Status:** Revised  
**Impairment from Pollutant or Pollution:** Pollutant

**Conclusion:** 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. None of the 5 chloride samples exceed the evaluation guideline. 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 on the section 303(d) list in the Water Quality Limited Segments category (i.e., sufficient justification to not 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 5 samples exceeded the chloride evaluation guideline used to interpret the water quality objective, and this does not exceed the allowable frequency listed in Table 3.2 of the Listing Policy. (4) Pursuant to Section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

**RWQCB Board Staff Decision:** After review of the available data and information, North Coast RWQCB staff concludes that the water body-pollutant combination should not be placed on the Section 303(d) List because applicable water quality standards are not being exceeded.

**SWRCB Board Staff Decision:** After review of this Regional Board decision, SWRCB staff recommend the decision be approved by the State Board.

**USEPA Action (if applicable):**

**Line of Evidence (LOE) for Decision ID 12435, Chloride** **Region 1**  
**Klamath River HU, Lower HA, Klamath Glen HSA**

**LOE ID:** 25414  
**Pollutant:** Chloride  
**LOE Subgroup:** Pollutant-Water  
**Matrix:** Water  
**Fraction:** Not Recorded  
**Beneficial Use:** Municipal & Domestic Supply

Number of Samples:	5
Number of Exceedances:	0
Data and Information Type:	PHYSICAL/CHEMICAL MONITORING
Data Used to Assess Water Quality:	None of the 5 chloride samples collected in the mainstem Klamath River exceed the evaluation guideline. The samples were collected as part of the Surface Water Ambient Water Monitoring Program (SWAMP). The data are found in the SWAMP Summary Report for the North Coast Region for Years 2000-2006 (NCRWQCB 2008).
Data Reference:	<a href="#">Surface Water Ambient Monitoring Program (SWAMP). Summary Report for the North Coast Region (RWQCB-1) for years 2000-2006. North Coast Regional Water Quality Control Board. March 2008</a>
Water Quality Objective/Criterion:	Per the Basin Plan (NCRWQCB 2007): Waters shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance or adversely affect beneficial uses.
Objective/Criterion Reference:	<a href="#">Water Quality Control Plan (Basin Plan) - North Coast Region (Region 1)</a>
Evaluation Guideline:	Per 22 CCR 64449: The recommended Secondary Maximum Contaminant Level for chloride is 250 mg/L.
Guideline Reference:	<a href="#">Title 22, Division 4, Chapter 15, Sections 64400 et seq. California Code of Regulations</a>
Spatial Representation:	Samples were collected as grab samples from the mainstem Klamath River in Klamath Glen at the boat launch, approximately 6 river miles upstream of the Klamath River estuary (SWAMP Station ID 105KLAMGL) in well-mixed flows in glides or riffles.
Temporal Representation:	The samples were collected as grab samples during 5 site visits during the 2002 - 2003 fiscal year (10/2002 - 6/2003). The site visits corresponded to fall, winter, spring and early summer seasonal conditions.
Environmental Conditions:	There are no known environmental conditions (e.g., seasonality, land use practices, fire events, storms, etc.) that are related to these data.
QAPP Information:	Quality control was conducted in accordance with the SWAMP Quality Assurance Management Plan (SWAMP 2002).
QAPP Information Reference(s):	<a href="#">Quality Assurance Management Plan for the State of California's Surface Water Ambient Monitoring Program. Sacramento, CA. State Water Resources Control Board. SWAMP. December 2002 (1st version)</a>

**DECISION ID** 13976 **Region 1**  
**Klamath River HU, Lower HA, Klamath Glen HSA**

**Pollutant:** **Cyanobacteria hepatotoxic microcystins**  
**Final Listing Decision:** **Do Not List on 303(d) list (TMDL required list)**  
**Last Listing Cycle's Final Listing Decision:** New Decision  
**Revision Status** Revised  
**Impairment from Pollutant or Pollution:** Pollutant

**Conclusion:** This decision applies to the mainstem Klamath River in the Klamath River Hydrologic Unit, Lower Klamath River Hydrologic Area, Klamath Glen Hydrologic Sub-Area.

This pollutant is being considered for placement on the Section 303(d) List under Section 3.11 of the Listing Policy. Two lines of evidence are available in the administrative record to assess this pollutant.

Based on the readily available data and information, the situation-specific weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination on the Section 303(d) List in the Water Quality Limited Segments category (i.e., sufficient justification to not list). This conclusion is based on the staff

findings that:

(1) None of 17 water column microcystin toxin samples exceed the evaluation guidelines used to interpret the water quality objective. None of 36 water column Microcystis cell samples exceed the evaluation guideline used to interpret the water quality objective.

(2) In compliance with Section 3.11 of the Listing Policy, a water segment shall not be placed on the Section 303(d) List if the weight of evidence indicates attainment of water quality objectives.

(3) The data used satisfies the data quality requirements of Section 6.1.4 of the Policy.

(4) The data used satisfies the data quantity requirements of Section 6.1.5 of the Policy.

(5) Pursuant to Section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

**RWQCB Board Staff Decision:**

After review of the available data and information, North Coast RWQCB staff concludes that the water body-pollutant combination should not be placed on the Section 303(d) List because applicable water quality standards are not being exceeded.

**SWRCB Board Staff Decision:**

After review of this Regional Board decision, SWRCB staff recommend the decision be approved by the State Board.

**USEPA Action (if applicable):**

**Line of Evidence (LOE) for Decision ID 13976, Cyanobacteria hepatotoxic microcystins**

**Region 1**

**Klamath River HU, Lower HA, Klamath Glen HSA**

LOE ID:	26043
Pollutant:	Cyanobacteria hepatotoxic microcystins
LOE Subgroup:	Pollutant-Water
Matrix:	Water
Fraction:	None
Beneficial Use:	Water Contact Recreation
Number of Samples:	17
Number of Exceedances:	0
Data and Information Type:	PHYSICAL/CHEMICAL MONITORING
Data Used to Assess Water Quality:	None of the 17 microcystin samples collected in 2007 exceeded the evaluation guideline. Additionally, none of the 17 microcystin samples exceeded the Blue Green Algae Work Group (2008) guideline for microcystin toxin of 8 ug/L to protect the recreational exposure of a child. Sample concentrations range from less than the quantitation limit of 1.8 ug/l to 2.0 ug/l. Samples were collected by the Yurok Tribal Environmental Program. Data are summarized in the "Final 2007 Klamath River Blue-Green Algae Summary Report" (Fetcho 2008).
Data Reference:	<a href="#">Cyanobacteria in California Recreational Water Bodies. Providing Voluntary Guidance about Harmful Algal Blooms, Their Monitoring, and Public Notification. Draft. September 2008. Blue Green Algae Work Group of the State Water Resources Control Board, Department of Public Health, and Office of Environmental Health and Hazard Assessment</a> <a href="#">Final 2007 Klamath River Blue-Green Algae Summary Report. Yurok Tribe Environmental Program</a>
Water Quality Objective/Criterion:	Per the Basin Plan (NCRWQCB 2007): All water shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental

Objective/Criterion Reference:	physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the Regional Water Board. <a href="#">Water Quality Control Plan (Basin Plan) - North Coast Region (Region 1)</a>
Evaluation Guideline:	Per the World Health Organization (WHO 2003): The recommended guideline for microcystin toxin in recreational waters associated with a moderate probability of adverse health effects is 20 ug/L.
Guideline Reference:	<a href="#">World Health Organization. 2003. Guidelines for Safe Recreational Water Environments: Volume 1 Coastal and Freshwaters.</a>
Spatial Representation:	Samples were collected in the mainstem Klamath River at 4 locations as follows: (1) below Weitchpec at river mile 42.5 (Site KBW), (2) above Tully Creek at river mile 38.5 (Site TC), (3) near the lower extent of the Yurok Indian Reservation at the USGS gage at Terwer Creek at river mile 5.8 (Site TG), and (4) in the lower Klamath River Estuary just upstream of where the Klamath empties into the Pacific Ocean at river mile 0.5 (Site LES).
Temporal Representation:	Grab samples were collected in the Klamath River on 6 occasions between July 24, 2007 and October 15, 2007.
Environmental Conditions:	There are no known environmental conditions (e.g., seasonality, land use practices, fire events, storms, etc.) that are related to these data.
QAPP Information:	Samples were collected and analyzed according to the procedures described in the "Lower Klamath River Nutrient, Periphyton, Phytoplankton and Algal Toxin Sampling Analysis Plan (SAP)" (Yurok 2008) and the "Final 2007 Klamath River Blue-Green Algae Summary Report" (Fetcho 2008).
QAPP Information Reference(s):	<a href="#">Lower Klamath River Nutrient, Periphyton, Phytoplankton, and Algal Toxin Sampling Analysis Plan (SAP). June 2008. Prepared with assistance from Kier Associates</a> <a href="#">Final 2007 Klamath River Blue-Green Algae Summary Report. Yurok Tribe Environmental Program</a>

**Line of Evidence (LOE) for Decision ID 13976, Cyanobacteria hepatotoxic microcystins**

**Region 1**

**Klamath River HU, Lower HA, Klamath Glen HSA**

LOE ID:	26026
Pollutant:	Cyanobacteria hepatotoxic microcystins
LOE Subgroup:	Pollutant-Water
Matrix:	Water
Fraction:	None
Beneficial Use:	Water Contact Recreation
Number of Samples:	36
Number of Exceedances:	0
Data and Information Type:	PHYSICAL/CHEMICAL MONITORING
Data Used to Assess Water Quality:	None of the 36 samples analyzed for Microcystis cells collected in the mainstem Klamath River exceed the evaluation guideline. Additionally, one of the 36 samples analyzed for Microcystis cells exceeded the Blue Green Algae Work Group (2008) guideline of 40,000 Microcystis cells/ml if cell populations are dominated by Microcystis and Planktothrix to protect the recreational exposure of a child. Microcystis cell concentrations ranged from 0 to 90,764 cells/ml. Samples were collected by the Yurok Tribal Environmental Program. Data are summarized in the "Final 2007 Klamath River Blue-Green Algae Summary Report" (Fetcho 2008) and in a September 16, 2008 Memorandum (Fetcho 2008).
Data Reference:	<a href="#">Cyanobacteria in California Recreational Water Bodies. Providing Voluntary Guidance about Harmful Algal Blooms, Their Monitoring, and Public</a>

[Notification. Draft. September 2008. Blue Green Algae Work Group of the State Water Resources Control Board, Department of Public Health, and Office of Environmental Health and Hazard Assessment](#)  
[Final 2007 Klamath River Blue-Green Algae Summary Report. Yurok Tribe Environmental Program](#)  
[Memorandum to Klamath River Blue Green Algae Workgroup Regarding September 3, 2008 Phytoplankton Results. Yurok Tribe Environmental Program](#)

Water Quality Objective/Criterion:	Per the Basin Plan (NCRWQCB 2007): All water shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the Regional Water Board.
Objective/Criterion Reference:	<a href="#">Water Quality Control Plan (Basin Plan) - North Coast Region (Region 1)</a>
Evaluation Guideline:	Per the World Health Organization (WHO 2003): The recommended guideline for Microcystis cells in recreational waters associated with a moderate probability of adverse health effects is 100,000 cells/ml. This cell count evaluation guideline is a strong indicator of potential toxicity associated with the toxin microcystin.
Guideline Reference:	<a href="#">World Health Organization. 2003. Guidelines for Safe Recreational Water Environments: Volume 1 Coastal and Freshwaters.</a>
Spatial Representation:	Samples were collected in the mainstem Klamath River at 4 locations as follows: (1) below Weitchpect at river mile 42.5 (Site KBW), (2) above Tully Creek at river mile 38.5 (Site TC), (3) near the lower extent of the Yurok Indian Reservation at the USGS gage at Terwer Creek at river mile 5.8 (Site TG), and (4) in the lower Klamath River Estuary just upstream of where the Klamath empties into the Pacific Ocean at river mile 0.5 (Site LES).
Temporal Representation:	Grab samples were collected in the Klamath River on 11 occasions between May 30, 2007 and October 15, 2007 and on 3 occasions between August 7, 2008 and September 3, 2008.
Environmental Conditions:	There are no known environmental conditions (e.g., seasonality, land use practices, fire events, storms, etc.) that are related to these data.
QAPP Information:	Samples were collected and analyzed according to the procedures described in the "Lower Klamath River Nutrient, Periphyton, Phytoplankton and Algal Toxin Sampling Analysis Plan (SAP)" (Yurok 2008) and the "Final 2007 Klamath River Blue-Green Algae Summary Report" (Fetcho 2008).
QAPP Information Reference(s):	<a href="#">Lower Klamath River Nutrient, Periphyton, Phytoplankton, and Algal Toxin Sampling Analysis Plan (SAP). June 2008. Prepared with assistance from Kier Associates</a> <a href="#">Final 2007 Klamath River Blue-Green Algae Summary Report. Yurok Tribe Environmental Program</a>

**DECISION ID** 12845 **Region 1**

**Klamath River HU, Lower HA, Klamath Glen HSA**

<b>Pollutant:</b>	<b>Disulfoton</b>
<b>Final Listing Decision:</b>	<b>Do Not List on 303(d) list (TMDL required list)</b>
<b>Last Listing Cycle's Final Listing Decision:</b>	New Decision
<b>Revision Status</b>	Revised
<b>Impairment from Pollutant or Pollution:</b>	Pollutant

**Conclusion:** 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. One of the 3 disulfoton sample exceeds the evaluation guideline

used to interpret the water quality objective. 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 on the section 303(d) list in the Water Quality Limited Segments category. Per Table 3.1 of the Listing Policy, a minimum of 2 samples are needed, and 3 samples are available. This conclusion is also based on the staff findings that: (1) The data used satisfies the data quality requirements of Section 6.1.4 of the Policy. (2) Pursuant to Section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

**RWQCB Board Staff Decision:**

After review of the available data and information, RWQCB staff concludes that the water body-pollutant combination should not be placed on the section 303(d) list because applicable water quality standards are not being exceeded.

**SWRCB Board Staff Decision:**

After review of this Regional Board decision, SWRCB staff recommend the decision be approved by the State Board.

**USEPA Action (if applicable):**

**Line of Evidence (LOE) for Decision ID 12845, Disulfoton  
Klamath River HU, Lower HA, Klamath Glen HSA**

**Region 1**

LOE ID:	25609
Pollutant:	Disulfoton
LOE Subgroup:	Pollutant-Water
Matrix:	Water
Fraction:	Not Recorded
Beneficial Use:	Cold Freshwater Habitat
Aquatic Life Use:	Fish Migration   Fish Spawning   Preservation of Rare & Endangered Species   Warm Freshwater Habitat   Wildlife Habitat
Number of Samples:	3
Number of Exceedances:	1
Data and Information Type:	PHYSICAL/CHEMICAL MONITORING
Data Used to Assess Water Quality:	One of the 3 disulfoton samples collected in the mainstem Klamath River exceeds the evaluation guideline. Sample concentrations range from non-detect (with a reporting limit of 0.050 ug/l) to detected but not quantified with a concentration of at least 0.050 ug/l. The samples were collected as part of the Surface Water Ambient Water Monitoring Program (SWAMP). The data are found in the 5-Year Monitoring Report (NCRWQCB 2008).
Data Reference:	<a href="#">Surface Water Ambient Monitoring Program (SWAMP). Summary Report for the North Coast Region (RWQCB-1) for years 2000-2006. North Coast Regional Water Quality Control Board. March 2008</a>
Water Quality Objective/Criterion:	Per the Basin Plan (NCRWQCB 2007): No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no bioaccumulation of pesticide concentrations found in bottom sediments or aquatic life. Waters designated for use as domestic or municipal supply shall not contain concentrations of pesticides in excess of the limiting concentrations set forth in California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64444, and listed in Table 3.2 of the Basin Plan.
Objective/Criterion Reference:	<a href="#">Water Quality Control Plan (Basin Plan) - North Coast Region (Region 1)</a>
Evaluation Guideline:	Per "Water Quality Criteria 1972" (USEPA 1973): The instantaneous maximum water quality criterion for disulfoton for the protection of freshwater aquatic life is 0.05 ug/l.
Guideline Reference:	

[National Academy of Sciences. Water Quality Criteria 1972. EPA-R3-73-033. Washington, D.C.: U.S. Environmental Protection Agency](#)

Spatial Representation: Samples were collected as grab samples from the mainstem Klamath River in Klamath Glen at the boat launch, approximately 6 river miles upstream of the Klamath River estuary (SWAMP Station ID 105KLAMGL) in well-mixed flows in glides or riffles.

Temporal Representation: The samples were collected as grab samples during 5 site visits during the 2002 - 2003 fiscal year (10/2002 - 6/2003). The site visits corresponded to fall, winter, spring and early summer seasonal conditions.

Environmental Conditions: There are no known environmental conditions (e.g., seasonality, land use practices, fire events, storms, etc.) that are related to these data.

QAPP Information: Quality control was conducted in accordance with the SWAMP Quality Assurance Management Plan (SWAMP 2002).

QAPP Information Reference(s): [Quality Assurance Management Plan for the State of California's Surface Water Ambient Monitoring Program. Sacramento, CA. State Water Resources Control Board. SWAMP. December 2002 \(1st version\)](#)

**DECISION ID** 12479 **Region 1**

**Klamath River HU, Lower HA, Klamath Glen HSA**

**Pollutant:** PCBs (Polychlorinated biphenyls)  
**Final Listing Decision:** Do Not List on 303(d) list (TMDL required list)  
**Last Listing Cycle's Final Listing Decision:** New Decision  
**Revision Status:** Revised  
**Impairment from Pollutant or Pollution:** Pollutant

**Conclusion:** 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. None of the 250 polychlorinated biphenyl (PCB) samples exceed the evaluation guideline. 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 on the section 303(d) list in the Water Quality Limited Segments category (i.e., sufficient justification to not 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 250 samples exceeded the PCB evaluation guideline used to interpret the water quality objective, and this does not exceed the allowable frequency of 22 per the binomial distribution described in Section 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.

**RWQCB Board Staff Decision:** After review of the available data and information, North Coast RWQCB staff concludes that the water body-pollutant combination should not be placed on the Section 303(d) List because applicable water quality standards are not being exceeded.

**SWRCB Board Staff Decision:** After review of this Regional Board decision, SWRCB staff recommend the decision be approved by the State Board.

**USEPA Action (if applicable):**

**Line of Evidence (LOE) for Decision ID 12479, PCBs (Polychlorinated biphenyls)** **Region 1**  
**Klamath River HU, Lower HA, Klamath Glen HSA**

LOE ID: 25458

Pollutant:	PCBs (Polychlorinated biphenyls)
LOE Subgroup:	Pollutant-Water
Matrix:	Water
Fraction:	Total
Beneficial Use:	Municipal & Domestic Supply
Number of Samples:	250
Number of Exceedances:	0
Data and Information Type:	PHYSICAL/CHEMICAL MONITORING
Data Used to Assess Water Quality:	None of the 250 polychlorinated biphenyl (PCB) analytes collected in the mainstem Klamath River exceed the evaluation guideline. Each of the 5 samples were analyzed for 50 PCB congeners. The samples were collected as part of the Surface Water Ambient Water Monitoring Program (SWAMP). The data are found in the 5-Year Monitoring Report (NCRWQCB 2008).
Data Reference:	<a href="#">Surface Water Ambient Monitoring Program (SWAMP). Summary Report for the North Coast Region (RWQCB-1) for years 2000-2006. North Coast Regional Water Quality Control Board. March 2008</a>
Water Quality Objective/Criterion:	Per the Basin Plan (NCRWQCB 2007, p. 3-4.00): 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.
Objective/Criterion Reference:	<a href="#">Water Quality Control Plan (Basin Plan) - North Coast Region (Region 1)</a>
Evaluation Guideline:	Per the "Public Health Goal for Water Soluble Polychlorinated Biphenyls Expected to Found in Drinking Water" (OEHHA 2007): The health-protective concentration of water-soluble PCBs in drinking water associated with a one in one million extra lifetime cancer risk is 0.09 ug/L.
Guideline Reference:	<a href="#">Public Health Goal for Water Soluble Polychlorinated Biphenyls Expected to Be Found in Drinking Water. Pesticide and Environmental Toxicology Branch, Office of Environmental Health Hazard Assessment, California Environmental Protection Agency</a>
Spatial Representation:	Samples were collected as grab samples from the mainstem Klamath River in Klamath Glen at the boat launch, approximately 6 river miles upstream of the Klamath River estuary (SWAMP Station ID 105KLAMGL) in well-mixed flows in glides or riffles.
Temporal Representation:	The samples were collected as grab samples during 5 site visits during the 2002 - 2003 fiscal year (10/2002 - 6/2003). The site visits corresponded to fall, winter, spring and early summer seasonal conditions.
Environmental Conditions:	There are no known environmental conditions (e.g., seasonality, land use practices, fire events, storms, etc.) that are related to these data.
QAPP Information:	Quality control was conducted in accordance with the SWAMP Quality Assurance Management Plan (SWAMP 2002).
QAPP Information Reference(s):	<a href="#">Quality Assurance Management Plan for the State of California's Surface Water Ambient Monitoring Program. Sacramento, CA. State Water Resources Control Board. SWAMP. December 2002 (1st version)</a>

DECISION ID 10016

Region 1

Klamath River HU, Lower HA, Klamath Glen HSA

<b>Pollutant:</b>	<b>Specific Conductivity</b>
<b>Final Listing Decision:</b>	<b>Do Not List on 303(d) list (TMDL required list)</b>
<b>Last Listing Cycle's Final Listing Decision:</b>	New Decision
<b>Revision Status</b>	Revised
<b>Impairment from Pollutant or Pollution:</b>	Pollutant



**Conclusion:** 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. None of the 5 specific conductivity 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 placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category (i.e., sufficient justification to not 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 5 samples exceed the specific conductivity objective, and this does not exceed the allowable frequency listed in Table 3.2 of the Listing Policy. (4) Pursuant to Section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

**RWQCB Board Staff Decision:** After review of the available data and information, North Coast RWQCB staff concludes that the water body-pollutant combination should not be placed on the Section 303(d) List because applicable water quality standards are not being exceeded.

**SWRCB Board Staff Decision:** After review of this Regional Board decision, SWRCB staff recommend the decision be approved by the State Board.

**USEPA Action (if applicable):**

**Line of Evidence (LOE) for Decision ID 10016, Specific Conductivity  
Klamath River HU, Lower HA, Klamath Glen HSA**

**Region 1**

LOE ID:	21218
Pollutant:	Specific Conductivity
LOE Subgroup:	Pollutant-Water
Matrix:	Water
Fraction:	None
Beneficial Use:	Municipal & Domestic Supply
Number of Samples:	5
Number of Exceedances:	0
Data and Information Type:	PHYSICAL/CHEMICAL MONITORING
Data Used to Assess Water Quality:	None of the 5 specific conductivity samples collected from the mainstem Klamath River exceed the objective. The samples were collected as part of the Surface Water Ambient Water Monitoring Program (SWAMP). The data are found in the SWAMP Summary Report for the North Coast Region for Years 2000-2006 (NCRWQCB 2008).
Data Reference:	<a href="#">Surface Water Ambient Monitoring Program (SWAMP). Summary Report for the North Coast Region (RWQCB-1) for years 2000-2006. North Coast Regional Water Quality Control Board. March 2008</a>
Water Quality Objective/Criterion:	Per the Basin Plan (NCRWQCB 2007): The 90% upper limit specific conductance objective at 77 F is 300 micromhos (or mS/cm <sup>2</sup> ). The 50% upper limit specific conductance objective at 77 F is 200 micromhos (or mS/cm <sup>2</sup> ). The 90% and 50% upper limits represent the 90/50 percentile values for a calendar year. 90% or 50% or more of the values must be less than or equal to the upper limit.
Objective/Criterion Reference:	<a href="#">Water Quality Control Plan (Basin Plan) - North Coast Region (Region 1)</a>
Evaluation Guideline:	
Guideline Reference:	

Spatial Representation: Samples were collected from the mainstem Klamath River in Klamath Glen at the boat launch, approximately 6 river miles upstream of the Klamath River estuary (SWAMP Station ID KLAMGL) in well-mixed flows in glides or riffles.

Temporal Representation: The samples were collected as grab samples during 5 site visits during the 2002 - 2003 fiscal year (10/2002 - 6/2003). The site visits corresponded to fall, winter, spring and early summer seasonal conditions.

Environmental Conditions: There are no known environmental conditions (e.g., seasonality, land use practices, fire events, storms, etc.) that are related to these data.

QAPP Information: Quality control was conducted in accordance with the SWAMP Quality Assurance Management Plan (Puckett 2002).

QAPP Information Reference(s): [Quality Assurance Management Plan for the State of California's Surface Water Ambient Monitoring Program. Sacramento, CA. State Water Resources Control Board. SWAMP. December 2002 \(1st version\)](#)

**DECISION ID** 12505 **Region 1**  
**Klamath River HU, Lower HA, Klamath Glen HSA**

**Pollutant:** Sulfates  
**Final Listing Decision:** Do Not List on 303(d) list (TMDL required list)  
**Last Listing Cycle's Final Listing Decision:** New Decision  
**Revision Status:** Revised  
**Impairment from Pollutant or Pollution:** Pollutant

**Conclusion:** 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. None of the 5 sulfate samples exceed the evaluation guideline. 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 on the Section 303(d) List in the Water Quality Limited Segments category (i.e., sufficient justification to not 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 5 samples exceed the sulfate evaluation guideline used to interpret the water quality objective, and this does not exceed the allowable frequency listed in Table 3.2 of the Listing Policy. (4) Pursuant to Section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

**RWQCB Board Staff Decision:** After review of the available data and information, North Coast RWQCB staff concludes that the water body-pollutant combination should not be placed on the Section 303(d) List because applicable water quality standards are not being exceeded.

**SWRCB Board Staff Decision:** After review of this Regional Board decision, SWRCB staff recommend the decision be approved by the State Board.

**USEPA Action (if applicable):**

**Line of Evidence (LOE) for Decision ID 12505, Sulfates** **Region 1**  
**Klamath River HU, Lower HA, Klamath Glen HSA**

LOE ID: 25522  
 Pollutant: Sulfates  
 LOE Subgroup: Pollutant-Water  
 Matrix: Water

Fraction:	Not Recorded
Beneficial Use:	Municipal & Domestic Supply
Number of Samples:	5
Number of Exceedances:	0
Data and Information Type:	PHYSICAL/CHEMICAL MONITORING
Data Used to Assess Water Quality:	None of the 5 sulfate samples collected in the mainstem Klamath River exceed the evaluation guideline. The samples were collected as part of the Surface Water Ambient Water Monitoring Program (SWAMP). The data are found in the 5-Year Monitoring Report (NCRWQCB 2008).
Data Reference:	<a href="#">Surface Water Ambient Monitoring Program (SWAMP). Summary Report for the North Coast Region (RWQCB-1) for years 2000-2006. North Coast Regional Water Quality Control Board. March 2008</a>
Water Quality Objective/Criterion:	Per the Basin Plan (NCRWQCB 2007, p. 3-3.00): Waters shall not contain taste - or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance or adversely affect beneficial uses.
Objective/Criterion Reference:	<a href="#">Water Quality Control Plan (Basin Plan) - North Coast Region (Region 1)</a>
Evaluation Guideline:	Per 22 CCR 64449 (Table 64449-B): The recommended secondary maximum contaminant level for sulfate is 250 mg/L.
Guideline Reference:	<a href="#">Title 22. Division 4. Chapter 15. Sections 64400 et seq. California Code of Regulations</a>
Spatial Representation:	Samples were collected as grab samples from the mainstem Klamath River in Klamath Glen at the boat launch, approximately 6 river miles upstream of the Klamath River estuary (SWAMP Station ID 105KLAMGL) in well-mixed flows in glides or riffles.
Temporal Representation:	The samples were collected as grab samples during 5 site visits during the 2002 - 2003 fiscal year (10/2002 - 6/2003). The site visits corresponded to fall, winter, spring and early summer seasonal conditions.
Environmental Conditions:	There are no known environmental conditions (e.g., seasonality, land use practices, fire events, storms, etc.) that are related to these data.
QAPP Information:	Quality control was conducted in accordance with the SWAMP Quality Assurance Management Plan (SWAMP 2002).
QAPP Information Reference(s):	<a href="#">Quality Assurance Management Plan for the State of California's Surface Water Ambient Monitoring Program. Sacramento, CA. State Water Resources Control Board. SWAMP. December 2002 (1st version)</a>

<b>DECISION ID</b>	<b>6118</b>	<b>Region 1</b>
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Klamath River HU, Lower HA, Klamath Glen HSA

<b>Pollutant:</b>	<b>Nutrients</b>
<b>Final Listing Decision:</b>	<b>List on 303(d) list (TMDL required list)</b>
<b>Last Listing Cycle's Final Listing Decision:</b>	List on 303(d) list (TMDL required list)(2006)
<b>Revision Status</b>	Original
<b>Sources:</b>	Agriculture   Agriculture-irrigation tailwater   Agriculture-storm runoff   Agriculture-subsurface drainage   Industrial Point Sources   Intensive Animal Feeding Operations   Irrigated Crop Production   Major Industrial Point Source   Major Municipal Point Source-dry and/or wet weather discharge   Minor Industrial Point Source   Minor Municipal Point Source-dry and/or wet weather discharge   Municipal Point Sources   Pasture Grazing-Riparian and/or Upland   Range Grazing-Riparian   Specialty Crop Production
<b>Expected TMDL</b>	2010
<b>Completion Date:</b>	
<b>Impairment from Pollutant or Pollution:</b>	Pollutant

<b>Conclusion:</b>	303(d) listing decisions made prior to 2006 were not held in an assessment database. The Regional Boards will update this decision when new data and information become available and are assessed.
<b>RWQCB Board Staff Decision:</b>	No new data were assessed for 2008. The decision has not changed.
<b>SWRCB Board Staff Decision:</b>	After review of this Regional Board decision, SWRCB staff recommend the decision be approved by the State Board.
<b>USEPA Action (if applicable):</b>	USEPA approved the listing of this water body as a water quality limited segment requiring a TMDL for this pollutant.

**Line of Evidence (LOE) for Decision ID 6118, Nutrients  
Klamath River HU, Lower HA, Klamath Glen HSA**

**Region 1**

LOE ID:	3674
Pollutant:	Nutrients
LOE Subgroup:	Pollutant-Water
Matrix:	Water
Fraction:	None
Beneficial Use:	Cold Freshwater Habitat
Number of Samples:	0
Number of Exceedances:	0
Data and Information Type:	Not Specified
Data Used to Assess Water Quality:	Unspecified--This LOE is a placeholder to support a 303(d) listing decision made prior to 2006.
Data Reference:	<a href="#">Placeholder reference pre-2006 303(d)</a>
Water Quality Objective/Criterion:	
Objective/Criterion Reference:	
Evaluation Guideline:	
Guideline Reference:	
Spatial Representation:	Unknown
Temporal Representation:	Unknown
Environmental Conditions:	Unknown
QAPP Information:	Unknown
QAPP Information Reference(s):	

**DECISION ID 6119  
Klamath River HU, Lower HA, Klamath Glen HSA**

**Region 1**

<b>Pollutant:</b>	<b>Organic Enrichment/Low Dissolved Oxygen</b>
<b>Final Listing Decision:</b>	<b>List on 303(d) list (TMDL required list)</b>
<b>Last Listing Cycle's Final Listing Decision:</b>	List on 303(d) list (TMDL required list)(2006)
<b>Revision Status</b>	Original
<b>Sources:</b>	Agriculture   Agriculture-animal   Agriculture-irrigation tailwater   Agriculture-storm runoff   Agriculture-subsurface drainage   Flow Regulation/Modification   Industrial Point Sources   Irrigated Crop Production   Municipal Point Sources   Out-of-state source   Range Grazing-Riparian   Specialty Crop Production   Upstream Impoundment
<b>Expected TMDL Completion Date:</b>	2010

**Impairment from Pollutant or Pollution:** Pollutant

**Conclusion:** 303(d) listing decisions made prior to 2006 were not held in an assessment database. The Regional Boards will update this decision when new data and information become available and are assessed.

**RWQCB Board Staff Decision:** No new data were assessed for 2008. The decision has not changed.

**SWRCB Board Staff Decision:** After review of this Regional Board decision, SWRCB staff recommend the decision be approved by the State Board.

**USEPA Action (if applicable):** USEPA approved the listing of this water body as a water quality limited segment requiring a TMDL for this pollutant.

**Line of Evidence (LOE) for Decision ID 6119, Organic Enrichment/Low Dissolved Oxygen****Region 1****Klamath River HU, Lower HA, Klamath Glen HSA**

LOE ID: 3675

Pollutant: Organic Enrichment/Low Dissolved Oxygen  
 LOE Subgroup: Pollutant-Water  
 Matrix: Water  
 Fraction: None

Beneficial Use: Cold Freshwater Habitat

Number of Samples: 0  
 Number of Exceedances: 0

Data and Information Type: Not Specified  
 Data Used to Assess Water Quality: Unspecified--This LOE is a placeholder to support a 303(d) listing decision made prior to 2006.  
 Data Reference: [Placeholder reference pre-2006 303\(d\)](#)

Water Quality Objective/Criterion:  
 Objective/Criterion Reference:

Evaluation Guideline:  
 Guideline Reference:

Spatial Representation: Unknown  
 Temporal Representation: Unknown  
 Environmental Conditions: Unknown  
 QAPP Information: Unknown  
 QAPP Information Reference(s):

**DECISION ID 4484****Region 1****Klamath River HU, Lower HA, Klamath Glen HSA**

**Pollutant:** **Sedimentation/Siltation**  
**Final Listing Decision:** **List on 303(d) list (TMDL required list)**  
**Last Listing Cycle's Final Listing Decision:** List on 303(d) list (TMDL required list)(2006)  
**Revision Status:** Original  
**Sources:** Source Unknown  
 2019

**Expected TMDL****Completion Date:****Impairment from Pollutant or Pollution:****Conclusion:**

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.

Three lines of evidence are available in the administrative record to assess this pollutant. Narrative information, photos, study findings, and numerical data were submitted which demonstrated that a sedimentation problem exists in this water body.

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

This conclusion is based on the staff findings that: (1) The data used satisfies the data quality requirements of Section 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 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. (5) It is uncertain if these sampling locations are on tribal land. The State Water Board found at its October 25, 2006 meeting that this water body and pollutant be placed on the Section 303(d) List and that USEPA should make a determination if this listing should remain on the California Section 303(d) List. It is not the State Water Board's intent that this listing affect actions related to decommissioning and removal of dams on the Klamath River.

**RWQCB Board Staff Decision:**

No new data were assessed for 2008. The decision has not changed.

**SWRCB Board Staff Decision:**

After review of this Regional Board decision, SWRCB staff recommend the decision be approved by the State Board.

**USEPA Action (if applicable):**

USEPA approved the listing of this water body as a water quality limited segment requiring a TMDL for this pollutant.

**Line of Evidence (LOE) for Decision ID 4484, Sedimentation/Siltation  
Klamath River HU, Lower HA, Klamath Glen HSA**

**Region 1**

LOE ID:	1638
Pollutant:	Sedimentation/Siltation
LOE Subgroup:	Visual
Matrix:	Not Specified
Fraction:	None
Beneficial Use:	Cold Freshwater Habitat
Number of Samples:	0
Number of Exceedances:	0
Data and Information Type:	Not Specified
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). 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

Data Reference:

[Placeholder reference 2006 303\(d\)](#)

Water Quality Objective/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

Objective/Criterion Reference: [Placeholder reference 2006 303\(d\)](#)  
 Evaluation Guideline:  
 Guideline Reference:  
 Spatial Representation:  
 Temporal Representation:  
 Environmental Conditions:  
 QAPP Information: Narrative information submitted only.  
 QAPP Information Reference(s):

**Line of Evidence (LOE) for Decision ID 4484, Sedimentation/Siltation** **Region 1**  
**Klamath River HU, Lower HA, Klamath Glen HSA**

LOE ID: 1640  
 Pollutant: Sedimentation/Siltation  
 LOE Subgroup: Pollutant-Water  
 Matrix: Water  
 Fraction: Total  
 Beneficial Use: Cold Freshwater Habitat  
 Number of Samples: 21  
 Number of Exceedances: 1  
 Data and Information Type: Not Specified  
 Data Used to Assess Water Quality: 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).  
 Data Reference: [Placeholder reference 2006 303\(d\)](#)  
 Water Quality Objective/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.  
 Objective/Criterion Reference: [Placeholder reference 2006 303\(d\)](#)  
 Evaluation Guideline: 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.  
 Guideline Reference: [Placeholder reference 2006 303\(d\)](#)  
 Spatial Representation: Three sampling locations; Blue Creek, McGarvey Creek and Turwar Creek gauging stations are located in the Lower Klamath River Basin.  
 Temporal Representation: 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.

**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.

**QAPP Information:** "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.

**QAPP Information Reference(s):**

**Line of Evidence (LOE) for Decision ID 4484, Sedimentation/Siltation  
Klamath River HU, Lower HA, Klamath Glen HSA**

**Region 1**

<b>LOE ID:</b>	1639
<b>Pollutant:</b>	Sedimentation/Siltation
<b>LOE Subgroup:</b>	Pollutant-Water
<b>Matrix:</b>	Water
<b>Fraction:</b>	Total
<b>Beneficial Use:</b>	Cold Freshwater Habitat
<b>Number of Samples:</b>	31
<b>Number of Exceedances:</b>	8
<b>Data and Information Type:</b>	Not Specified
<b>Data Used to Assess Water Quality:</b>	<p>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.</p> <p>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.</p> <p>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.</p> <p>These measurements considered collectively, there are 31 weeks of 7 consecutive days averages- over three locations with 8 of those weekly</p>

	averages in exceedance of the 25 NTU evaluation guideline for turbidity (Yurok Tribe, 2003).
Data Reference:	<a href="#">Placeholder reference 2006 303(d)</a>
Water Quality Objective/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.
Objective/Criterion Reference:	<a href="#">Placeholder reference 2006 303(d)</a>
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."
Guideline Reference:	<a href="#">Placeholder reference 2006 303(d)</a>
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.
QAPP Information:	"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.
QAPP Information Reference(s):	

<b>DECISION ID</b>	<b>6120</b>	<b>Region 1</b>
<b>Klamath River HU, Lower HA, Klamath Glen HSA</b>		
<b>Pollutant:</b>	<b>Temperature, water</b>	
<b>Final Listing Decision:</b>	<b>List on 303(d) list (TMDL required list)</b>	
<b>Last Listing Cycle's Final Listing Decision:</b>	List on 303(d) list (TMDL required list)(2006)	
<b>Revision Status</b>	Original	

<b>Sources:</b>	Channel Erosion   Dam Construction   Flow Regulation/Modification   Habitat Modification   Hydromodification   Removal of Riparian Vegetation   Upstream Impoundment   Water Diversions
<b>Expected TMDL Completion Date:</b>	2010
<b>Impairment from Pollutant or Pollution:</b>	Pollutant
<b>Conclusion:</b>	303(d) listing decisions made prior to 2006 were not held in an assessment database. The Regional Boards will update this decision when new data and information become available and are assessed.
<b>RWQCB Board Staff Decision:</b>	No new data were assessed for 2008. The decision has not changed.
<b>SWRCB Board Staff Decision:</b>	After review of this Regional Board decision, SWRCB staff recommend the decision be approved by the State Board.
<b>USEPA Action (if applicable):</b>	USEPA approved the listing of this water body as a water quality limited segment requiring a TMDL for this pollutant.

**Line of Evidence (LOE) for Decision ID 6120, Temperature, water  
Klamath River HU, Lower HA, Klamath Glen HSA**

**Region 1**

LOE ID:	3676
Pollutant:	Temperature, water
LOE Subgroup:	Pollutant-Water
Matrix:	Water
Fraction:	None
Beneficial Use:	Cold Freshwater Habitat
Number of Samples:	0
Number of Exceedances:	0
Data and Information Type:	Not Specified
Data Used to Assess Water Quality:	Unspecified--This LOE is a placeholder to support a 303(d) listing decision made prior to 2006.
Data Reference:	<a href="#">Placeholder reference pre-2006 303(d)</a>
Water Quality Objective/Criterion:	
Objective/Criterion Reference:	
Evaluation Guideline:	
Guideline Reference:	
Spatial Representation:	
Temporal Representation:	Unknown
Environmental Conditions:	Unknown
QAPP Information:	Unknown
QAPP Information Reference(s):	