

PROPOSED 2006 CWA SECTION 303(d) LIST OF WATER QUALITY LIMITED SEGMENTS

NORTH COAST REGIONAL BOARD

SWRCB DRAFT 303(d) LIST RELEASE DATE: SEPTEMBER 15, 2006

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	B	Bodega HU, Bodega Harbor HA	11522000	Exotic Species		810 Acres	2019
Source Unknown							
1	R	Bodega HU, Estero Americano HA, Americano Creek	11530000	Nutrients		38 Miles	2019
<p><i>The Bodega HU, Estero Americano HA, Americano Creek includes the following Calwater Super Planning Watersheds (SPWs): 115.30010 and 115.30011. Water Quality Attainment strategy is attempting to increase voluntary measures for attainment of standards & objectives, as was done in the Estero de San Antonio/Stemple Creek TMDL Water Quality Attainment Strategy, adopted by NCRWQCB in Dec, 97.</i></p> <p style="margin-left: 40px;"> Pasture Grazing-Riparian and/or Upland Range Grazing-Riparian Range Grazing-Upland Intensive Animal Feeding Operations Manure Lagoons Dairies </p>							
1	E	Bodega HU, Estero Americano HA, estuary	11530012	Nutrients		199 Acres	2019
<p><i>Water Quality Attainment strategy is attempting to increase voluntary measures for attainment of standards & objectives, as was done in the Estero de San Antonio/Stemple Creek TMDL Water Quality Attainment Strategy, adopted by North Coast Regional Water Quality Control Board (NCRWQCB) in Dec, 97.</i></p> <p style="margin-left: 40px;"> Pasture Grazing-Riparian and/or Upland Manure Lagoons </p>							
<p style="margin-left: 40px;"> Sedimentation/Siltation </p> <p><i>Water Quality Attainment strategy is attempting to increase voluntary measures for attainment of standards & objectives, as was done in the Estero de San Antonio/Stemple Creek TMDL Water Quality Attainment Strategy, adopted by NCRWQCB in Dec, 97.</i></p> <p style="margin-left: 40px;"> Range Grazing-Riparian Hydromodification Removal of Riparian Vegetation Streambank Modification/Destabilization Erosion/Siltation Nonpoint Source </p>							

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1	R	Cape Mendocino HU, Mattole River HA, Mattole River	11230000	Temperature, water	Range Grazing-Riparian and/or Upland Silviculture Road Construction Habitat Modification Removal of Riparian Vegetation Natural Sources Nonpoint Source	503 Miles	2019
1	R	Eel River HU, Lower Eel River HA, Eel River Delta	11110000	Sedimentation/Siltation	Range Grazing-Riparian and/or Upland Silviculture Nonpoint Source	426 Miles	2019
				Temperature, water	Removal of Riparian Vegetation Nonpoint Source	426 Miles	2019
1	R	Eel River HU, Middle Fork HA	11170000	Temperature, water	Removal of Riparian Vegetation Nonpoint Source	1071 Miles	2019
				<i>USEPA will develop a TMDL for Eel River, Middle Fork.</i>			

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1	R	Eel River HU, Middle Main HA	11140000	Sedimentation/Siltation	Range Grazing-Riparian Range Grazing-Upland Silviculture Harvesting, Restoration, Residue Management Logging Road Construction/Maintenance Construction/Land Development Land Development Hydromodification Habitat Modification Removal of Riparian Vegetation Streambank Modification/Destabilization Erosion/Siltation	674 Miles	2004
				Temperature, water	USEPA has committed to developing TMDLs for sediment and temperature for the Middle Main Eel River. Upstream Impoundment Habitat Modification Removal of Riparian Vegetation Streambank Modification/Destabilization Drainage/Filling Of Wetlands Channel Erosion Erosion/Siltation	674 Miles	2019
1	R	Eel River HU, North Fork HA	11150000	Temperature, water	USEPA Will develop a Temperature TMDL for Eel River, North Fork. Habitat Modification Removal of Riparian Vegetation Streambank Modification/Destabilization Nonpoint Source	382 Miles	2019

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1	R	Eel River HU, South Fork HA	11130000	Temperature, water <i>USEPA will develop a temperature TMDL for the Eel River, South Fork.</i>	Hydromodification Flow Regulation/Modification Removal of Riparian Vegetation Erosion/Siltation Nonpoint Source	943 Miles	2019
1	R	Eel River HU, Upper Main HA (Includes Tomki Creek)	11160000	Sedimentation/Siltation <i>USEPA will develop a TMDL for Eel River, Upper Main Fork.</i>	Agriculture-grazing Silviculture Harvesting, Restoration, Residue Management Logging Road Construction/Maintenance Silvicultural Point Sources Construction/Land Development Highway/Road/Bridge Construction Removal of Riparian Vegetation Streambank Modification/Destabilization Erosion/Siltation	1141 Miles	2019
				Temperature, water <i>USEPA will develop a TMDL for Eel River, Upper Main Fork.</i>	Channelization Habitat Modification Removal of Riparian Vegetation Streambank Modification/Destabilization Drainage/Filling Of Wetlands Nonpoint Source	1141 Miles	2019
1	L	Eel River HU, Upper Main HA, Lake Pillsbury HSA, Lake Pillsbury	11163000	Mercury	Natural Sources	1973 Acres	2019

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REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Eureka Plain HU, Elk River	11000000	Sedimentation/Siltation		88 Miles	2019
				<p><i>The Eureka Plain HU, Elk River, includes the following Calwater Planning Watersheds (PWS): 110.00021, 110.00030, 110.00032, and 110.00042. Sedimentation, threat of sedimentation, impaired irrigation water quality, impaired domestic supply water quality, impaired spawning habitat, increased rate and depth of flooding due to sediment, property damage. NCRWQCB and California Department of forestry staff are involved in ongoing efforts to attain adherence to Forest Practice Rules.</i></p>			
				<p>Silviculture</p> <p>Harvesting, Restoration, Residue Management</p> <p>Logging Road Construction/Maintenance</p> <p>Removal of Riparian Vegetation</p> <p>Streambank Modification/Destabilization</p> <p>Erosion/Siltation</p> <p>Natural Sources</p> <p>Nonpoint Source</p>			
1	R	Eureka Plain HU, Freshwater Creek	11000000	Sedimentation/Siltation		84 Miles	2019
				<p><i>The Eureka Plain HU, Freshwater Creek, includes the following Calwater Planning Watersheds (PWS): 110.00011, 110.00012, 110.00014, 110.00040, and 110.00050. Sedimentation, threat of sedimentation, impaired irrigation water quality, impaired domestic supply water quality, impaired spawning habitat, increased rate and depth of flooding due to sediment, property damage. NCRWQCB and California Department of forestry staff are involved in ongoing efforts to attain adherence to Forest Practice Rules.</i></p>			
				<p>Silviculture</p> <p>Harvesting, Restoration, Residue Management</p> <p>Logging Road Construction/Maintenance</p> <p>Removal of Riparian Vegetation</p> <p>Streambank Modification/Destabilization</p> <p>Erosion/Siltation</p> <p>Natural Sources</p> <p>Nonpoint Source</p>			
1	B	Eureka Plain HU, Humboldt Bay	11000000	PCBs (Polychlorinated biphenyls)		16075 Acres	2019
				<p><i>This listing was made by USEPA.</i></p> <p>Source Unknown</p>			

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1	R	Eureka Plain HU, Jacoby Creek watershed	11000000	Sediment		19 Miles	2019
<p><i>The Eureka Plain HU, Jacoby Creek watershed includes the following Calwater Planning Watersheds (PWS): 110.00010 and 110.00013. The beneficial uses of Jacoby Creek appear to be threatened. Specifically, records show a decline in the salmonid fishery in Jacoby Creek, and this decline appears to be correlated with sedimentation.</i></p>							
<p>Silviculture</p>							
<p>Road Construction</p>							
<p>Land Development</p>							
<p>Disturbed Sites (Land Develop.)</p>							
<p>Urban Runoff/Storm Sewers</p>							
<p>Hydromodification</p>							
<p>Channelization</p>							
<p>Removal of Riparian Vegetation</p>							
<p>Streambank Modification/Destabilization</p>							
<p>Drainage/Filling Of Wetlands</p>							
<p>Channel Erosion</p>							
<p>Erosion/Siltation</p>							
<p>Sediment Resuspension</p>							
<p>Natural Sources</p>							
<p>Nonpoint Source</p>							
1	R	Klamath River HU, Butte Valley HA	10580000	Nutrients		253 Miles	2019
<p><i>The Klamath River, from source to mouth, is listed as water quality impaired (by both Oregon and California) under Section 303(d) of the Federal Clean Water Act. In 1992 the California State Water Quality Control Board (SWQCB) proposed that the Klamath River be listed for both temperature and nutrients, requiring the development of Total Maximum Daily Load (TMDL) limits and implementation plans. The United States Environmental Protection Agency (USEPA) and the NCRWQCB accepted this action in 1993. The basis for listing the Klamath River as impaired was aquatic habitat degradation due to excessively warm water temperatures and algae blooms associated with high nutrient loads, water impoundments, and agricultural water diversions.</i></p>							
<p>Nonpoint Source</p>							

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				Temperature, water		253 Miles	2019
				<p><i>The Klamath River, from source to mouth, is listed as water quality impaired (by both Oregon and California) under Section 303(d) of the Federal Clean Water Act. In 1992 the SWQCB proposed that the Klamath River be listed for both temperature and nutrients, requiring the development of Total Maximum Daily Load (TMDL) limits and implementation plans. The United States Environmental Protection Agency (USEPA) and the NCRWQCB accepted this action in 1993. The basis for listing the Klamath River as impaired was aquatic habitat degradation due to excessively warm water temperatures and algae blooms associated with high nutrient loads, water impoundments, and agricultural water diversions.</i></p>			
				Nonpoint Source			
1	R	Klamath River HU, Lost River HA, Tule Lake and Mt Dome HSAs	10590000				
				Nutrients		612 Miles	2006
				<p><i>The Klamath River HU, Lost River HA, Tule Lake and Mt Dome includes the following Hydrologic Sub Areas (HSAs): Mt. Dome HSA 105.91 and Tule Lake HSA 105.92. The Klamath River, from source to mouth, is listed as water quality impaired (by both Oregon and California) under Section 303(d) of the Federal Clean Water Act. In 1992 the California State Water Quality Control Board (SWQCB) proposed that the Klamath River be listed for both temperature and nutrients, requiring the development of Total Maximum Daily Load (TMDL) limits and implementation plans. The United States Environmental Protection Agency (USEPA) and the NCRWQCB accepted this action in 1993. The basis for listing the Klamath River as impaired was aquatic habitat degradation due to excessively warm water temperatures and algae blooms associated with high nutrient loads, water impoundments, and agricultural water diversions.</i></p>			
				<ul style="list-style-type: none"> Agriculture Specialty Crop Production Agriculture-subsurface drainage Agriculture-irrigation tailwater Agricultural Return Flows Water Diversions Agricultural Water Diversion Habitat Modification Removal of Riparian Vegetation Drainage/Filling Of Wetlands Natural Sources Nonpoint Source 			

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1	R	Klamath River HU, Lower HA, Klamath Glen HSA	10511000	<p>Nutrients</p> <p><i>Klamath Falls (Oregon) municipal wastewater discharge, industrial facilities, and US Bureau of Reclamation pumped discharge of agricultural waste are significant sources of nutrient loads to the Klamath River as it enters California.</i></p> <p>Industrial Point Sources</p> <p>Major Industrial Point Source</p> <p>Minor Industrial Point Source</p> <p>Municipal Point Sources</p> <p>Major Municipal Point Source-dry and/or wet weather discharge</p> <p>Minor Municipal Point Source-dry and/or wet weather discharge</p> <p>Agriculture</p> <p>Irrigated Crop Production</p> <p>Specialty Crop Production</p> <p>Pasture Grazing-Riparian and/or Upland</p> <p>Range Grazing-Riparian</p> <p>Intensive Animal Feeding Operations</p> <p>Agriculture-storm runoff</p> <p>Agriculture-subsurface drainage</p> <p>Agriculture-irrigation tailwater</p>	<p>609 Miles</p>	<p>2006</p>	

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				Organic Enrichment/Low Dissolved Oxygen		609 Miles	2006
				<i>Klamath Falls (Oregon) municipal wastewater discharge, industrial facilities, and US Bureau of Reclamation pumped discharge of agricultural waste are significant sources of organic enrichment of Klamath River waters flowing to California.</i>			
					Industrial Point Sources		
					Municipal Point Sources		
					Agriculture		
					Irrigated Crop Production		
					Specialty Crop Production		
					Range Grazing-Riparian		
					Agriculture-storm runoff		
					Agriculture-subsurface drainage		
					Agriculture-irrigation tailwater		
					Agriculture-animal		
					Upstream Impoundment		
					Flow Regulation/Modification		
					Out-of-state source		
				Temperature, water		609 Miles	2006
				<i>Flow regulation and diversion, coupled with reduced riparian vegetative cover and darker material on the channel bottom, all contribute to elevated water temperatures.</i>			
					Hydromodification		
					Dam Construction		
					Upstream Impoundment		
					Flow Regulation/Modification		
					Water Diversions		
					Habitat Modification		
					Removal of Riparian Vegetation		
					Channel Erosion		
1	R	Klamath River HU, Middle HA, Iron Gate Dam to Scott River	10530000				
				Nutrients		548 Miles	2006
				<i>The Klamath River HU, Middle HA, Iron Gate Dam to Scott River includes the following Hydrologic Sub Areas (HSAs) : Beaver Creek HSA 105.35 and Hornbrook HSA 105.36. The Klamath River, from source to mouth, is listed as water quality impaired by both Oregon and California.</i>			
					Out-of-state source		
					Nonpoint/Point Source		

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				Organic Enrichment/Low Dissolved Oxygen		548 Miles	2006
				<i>The Klamath River HU, Middle HA, Iron Gate Dam to Scott River includes the following Hydrologic Sub Areas (HSAs) : Beaver Creek HSA 105.35 and Hornbrook HSA 105.36. The impairment listing regarding dissolved oxygen was prompted by a 1997 United States Fish and Wildlife Service Report.</i>			
				Out-of-state source			
				Nonpoint/Point Source			
				Temperature, water		548 Miles	2006
				<i>The Klamath River HU, Middle HA, Iron Gate Dam to Scott River includes the following Hydrologic Sub Areas (HSAs) : Beaver Creek HSA 105.35 and Hornbrook HSA 105.36.</i>			
				Hydromodification			
				Upstream Impoundment			
				Flow Regulation/Modification			
				Habitat Modification			
				Removal of Riparian Vegetation			
				Nonpoint Source			
1	R	Klamath River HU, Middle HA, Oregon to Iron Gate	10530000				
				Nutrients		129 Miles	2006
				<i>The Klamath River HU, Middle HA, Oregon to Iron Gate Dam includes the following Hydrologic Sub Areas (HSAs): Iron Gate HSA 115.37 and Copco HSA 105.38.</i>			
				Industrial Point Sources			
				Municipal Point Sources			
				Agriculture			
				Specialty Crop Production			
				Agricultural Return Flows			
				Internal Nutrient Cycling (primarily lakes)			
				Natural Sources			
				Nonpoint Source			

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			Organic Enrichment/Low Dissolved Oxygen		129 Miles	2006
			<i>The Klamath River HU, Middle HA, Oregon to Iron Gate Dam includes the following Hydrologic Sub Areas (HSAs): Iron Gate HSA 115.37 and Copco HSA 105.38.</i>			
				Industrial Point Sources		
				Municipal Point Sources		
				Agriculture		
				Irrigated Crop Production		
				Specialty Crop Production		
				Range Grazing-Riparian and/or Upland		
				Agriculture-storm runoff		
				Agriculture-subsurface drainage		
				Agriculture-irrigation tailwater		
				Agriculture-animal		
				Upstream Impoundment		
				Flow Regulation/Modification		
				Out-of-state source		
			Temperature, water		129 Miles	2006
			<i>The Klamath River HU, Middle HA, Oregon to Iron Gate Dam includes the following Hydrologic Sub Areas (HSAs): Iron Gate HSA 115.37 and Copco HSA 105.38.</i>			
				Hydromodification		
				Upstream Impoundment		
				Flow Regulation/Modification		
				Nonpoint Source		

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1	R	Klamath River HU, Middle HA, Scott River to Trinity River	1050000				
				Nutrients		1389 Miles	2006
				<i>The Klamath River HU, Middle HA, Scott River to Trinity River includes the following Hydrologic Sub Areas (HSAs) : Orleans HSA 105.12, Ukonom HSA 105.31, Happy Camp HSA 105.32, and Seiad Valley HSA 105.33</i>			
				Industrial Point Sources			
				Municipal Point Sources			
				Agriculture			
				Agriculture-storm runoff			
				Agriculture-irrigation tailwater			
				Wastewater - land disposal			
				Upstream Impoundment			
				Natural Sources			
				Nonpoint Source			
				Out-of-state source			
				Organic Enrichment/Low Dissolved Oxygen		1389 Miles	2006
				<i>The Klamath River HU, Middle HA, Scott River to Trinity River includes the following Hydrologic Sub Areas (HSAs) : Orleans HSA 105.12, Ukonom HSA 105.31, Happy Camp HSA 105.32, and Seiad Valley HSA 105.33</i>			
				Industrial Point Sources			
				Municipal Point Sources			
				Combined Sewer Overflow			
				Agriculture			
				Agriculture-storm runoff			
				Agriculture-irrigation tailwater			
				Upstream Impoundment			
				Flow Regulation/Modification			
				Out-of-state source			

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				Temperature, water		1389 Miles	2006
				<i>The Klamath River HU, Middle HA, Scott River to Trinity River includes the following Hydrologic Sub Areas (HSAs) : Orleans HSA 105.12, Ukonom HSA 105.31, Happy Camp HSA 105.32, and Seiad Valley HSA 105.33</i>			
				Hydromodification Channelization Dam Construction Upstream Impoundment Flow Regulation/Modification Water Diversions Habitat Modification Removal of Riparian Vegetation Streambank Modification/Destabilization Drainage/Filling Of Wetlands Natural Sources Nonpoint Source			
1	R	Klamath River HU, Shasta River HA	10550000	Organic Enrichment/Low Dissolved Oxygen		630 Miles	0000
					Minor Municipal Point Source-dry and/or wet weather discharge Agriculture-storm runoff Agriculture-irrigation tailwater Dairies Hydromodification Dam Construction Flow Regulation/Modification Habitat Modification		
				Temperature, water		630 Miles	0000
					Agriculture-irrigation tailwater Flow Regulation/Modification Habitat Modification Removal of Riparian Vegetation Drainage/Filling Of Wetlands		

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1	L	Klamath River HU, Tule Lake and Lower Klamath Lake National Wildlife Refuge	10590000	<p>pH (high)</p> <p><i>The Klamath River HU, Tule Lake and Lower Klamath Lake National Wildlife Refuge includes the following Calwater Planning Watersheds (PWS): Lower Klamath Lake National Wildlife Refuge PWS 105.91020 and Tule Lake PWS 105.92020. The pH of surface water can influence the toxicity of dissolved materials resulting in synergistic and direct effects on biological systems. High pH levels influence ammonia concentrations which can be toxic to fish. In addition, high pH levels can increase the solubility of minerals and metals, which can affect fish and other aquatic organisms. Photosynthetic activity of algae effects carbonate cycling, which influences pH. Elevated pH levels in Tule Lake and Lower Klamath Lake National Wildlife Refuge are likely due to photosynthetic activity of algae.</i></p> <p>Internal Nutrient Cycling (primarily lakes)</p> <p>Nonpoint Source</p>	26998 Acres	2006	
1	R	Mad River HU, Mad River	10900000	<p>Sedimentation/Siltation</p> <p><i>USEPA will develop TMDL for the Mad River. Sediment TMDLS will be developed for the area tributary to and including: (1) the Mad River (North Fork), (2) the mad River (Upper), and (3) the Mad River (Middle).</i></p> <p>Silviculture</p> <p>Resource Extraction</p> <p>Nonpoint Source</p> <p>Temperature, water</p> <p><i>Recent (1997-2000) temperature data collected on the mainstem of the Mad River indicate that high temperature levels may be a source of impairment of cold water fisheries in the river. Data were available from 11 locations, with at least two years of record at most locations. MWAT values at all of the 11 locations exceeded 20°C, and are higher than any available temperature criteria for sub-lethal effects (reduced growth) on juvenile salmonids. Records also indicate that maximum temperatures at most of the 11 locations in most years are higher than 24°C.</i></p> <p>Upstream Impoundment</p> <p>Flow Regulation/Modification</p> <p>Habitat Modification</p> <p>Removal of Riparian Vegetation</p> <p>Nonpoint Source</p> <p>Unknown Nonpoint Source</p> <p>Turbidity</p> <p><i>Turbidity TMDLs will be developed for the area tributary to and including: (1) the Mad River (North Fork), (2) the Mad River (Upper), and (3) the Mad River (Middle).</i></p> <p>Silviculture</p> <p>Resource Extraction</p> <p>Nonpoint Source</p>	654 Miles	2019	
1	R	Mad River HU, Mad River	10900000	<p>Temperature, water</p> <p><i>Recent (1997-2000) temperature data collected on the mainstem of the Mad River indicate that high temperature levels may be a source of impairment of cold water fisheries in the river. Data were available from 11 locations, with at least two years of record at most locations. MWAT values at all of the 11 locations exceeded 20°C, and are higher than any available temperature criteria for sub-lethal effects (reduced growth) on juvenile salmonids. Records also indicate that maximum temperatures at most of the 11 locations in most years are higher than 24°C.</i></p> <p>Upstream Impoundment</p> <p>Flow Regulation/Modification</p> <p>Habitat Modification</p> <p>Removal of Riparian Vegetation</p> <p>Nonpoint Source</p> <p>Unknown Nonpoint Source</p> <p>Turbidity</p> <p><i>Turbidity TMDLs will be developed for the area tributary to and including: (1) the Mad River (North Fork), (2) the Mad River (Upper), and (3) the Mad River (Middle).</i></p> <p>Silviculture</p> <p>Resource Extraction</p> <p>Nonpoint Source</p>	654 Miles	2019	

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1	R	Mendocino Coast HU, Albion River HA, Albion River	11340000	Temperature, water	Source Unknown	91 Miles	2019
1	R	Mendocino Coast HU, Big River HA, Big River	11330000	Temperature, water <i>The most sensitive beneficial uses supported by the Big River include uses associated with the cold water fishery and municipal and domestic supply. The Big River provides habitat for coho salmon and steelhead trout, which are listed as a threatened species under the federal Endangered Species Act. Populations of coho salmon and steelhead trout in the Big River are extremely low compared to historical levels. Recent (1996-2000) temperature data gathered in the Big River watershed indicate that high temperature levels may be a source of impairment of cold water fisheries in the river. This listing is specific to the area of the watershed from the confluence with the North Fork Big River, including the watersheds of the mainstem Big and the North Fork Big.</i>	Habitat Modification Removal of Riparian Vegetation Streambank Modification/Destabilization Drainage/Filling Of Wetlands Erosion/Siltation Nonpoint Source	225 Miles	2019
1	R	Mendocino Coast HU, Garcia River HA, Garcia River	11370000	Temperature, water <i>Elevated temperatures impacting coldwater fisheries in these reaches and sub_areas: Planning Units 113.70010 (Pardaloe Creek), 113.70011, 12, 13, 14, 20, 21 and the entire mainstem Garcia River from Pardaloe Creek to the estuary, which includes that portion of 113.70022, 23, 24, 25, and 26. February 2002- The Garcia River TMDL for sediment has been adopted by NCRWQCB and approved by SWRCB and Office of Administrative Law. It is possible that voluntary compliance with measures in this TMDL will improve conditions related to temperature prior to development of a TMDL for temperature.</i>	Habitat Modification Removal of Riparian Vegetation Streambank Modification/Destabilization Nonpoint Source	154 Miles	2019

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1	R	Mendocino Coast HU, Gualala River HA, Gualala River	11380000	Temperature, water <i>Recent (1994-2000) temperature data collected in the Gualala River watershed indicate that high temperature levels may be a source of impairment of cold water fisheries in the watershed. Temperatures in the Little North Fork are generally below threshold levels and appear to exhibit properly functioning conditions with respect to stream temperature. The Gualala River is listed for temperature, with the exception of the Little North Fork.</i>	Removal of Riparian Vegetation Streambank Modification/Destabilization Channel Erosion Erosion/Siltation Nonpoint Source	455 Miles	2019
1	R	Mendocino Coast HU, Navarro River HA	11350000	Temperature, water <i>Temperature TMDLs have been developed for: (1) the area tributary to and including the Navarro River above Philo and (2) the area tributary to and including the Navarro River below Philo.</i>	Agriculture Agricultural Return Flows Resource Extraction Flow Regulation/Modification Water Diversions Habitat Modification Removal of Riparian Vegetation Streambank Modification/Destabilization Drainage/Filling Of Wetlands Nonpoint Source	415 Miles	2019
1	R	Mendocino Coast HU, Noyo River HA, Noyo River	11320000	Temperature, water <i>This listing only applies to the following areas of the Noyo River watershed:---The Noyo River mainstem from the confluence of Duffy Gulch downstream to the confluence with Hayshed Gulch;---The South Fork Noyo River mainstem from the confluence of Kass Creek downstream to the confluence with Noyo River mainstem; and ---The Little North Fork Noyo River, Duffy Gulch, and Kass Creek tributaries.</i>	Source Unknown	144 Miles	2019

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1	R	Mendocino Coast HU, Noyo River HA, Pudding Creek	11320050	Temperature, water	Source Unknown	24 Miles	2019
1	R	Mendocino Coast HU, Rockport HA, Ten Mile River HSA	11310000	Temperature, water	Habitat Modification Removal of Riparian Vegetation Streambank Modification/Destabilization Nonpoint Source	162 Miles	2019
1	R	Redwood Creek HU, Redwood Creek	10700000	Temperature, water	Recent (1994-2001) temperature data collected in the Redwood Creek watershed indicate that high temperature levels may be a source of impairment of cold water fisheries in the river. Logging Road Construction/Maintenance Removal of Riparian Vegetation Streambank Modification/Destabilization Erosion/Siltation Natural Sources Nonpoint Source	332 Miles	2019
1	R	Russian River HU, Lower Russian River HA, Austin Creek HSA	11412000	Sedimentation/Siltation	Silviculture Construction/Land Development Disturbed Sites (Land Develop.) Dam Construction Flow Regulation/Modification Erosion/Siltation	81 Miles	2019

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REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Temperature, water		81 Miles	2019
				<i>The most sensitive beneficial uses supported by the Russian River include uses associated with the cold water fishery and municipal and domestic supply. The Russian River provides habitat for coho salmon and steelhead trout, which are listed as a threatened species under the federal Endangered Species Act. Recent (1997-2000) temperature data collected in the Russian River watershed indicate that high temperature levels may be a source of impairment of cold water fisheries in the watershed.</i>			
				Hydromodification Flow Regulation/Modification Habitat Modification Removal of Riparian Vegetation Nonpoint Source			
1	R	Russian River HU, Lower Russian River HA, Guerneville HSA	11411000				
				Pathogens		195 Miles	2008
				<i>Listing covers only the Monte Rio area of this watershed from the confluence of Dutch Bill Creek to the confluence of Fife Creek and Healdsburg Memorial Beach from the Hwy 101 crossing to the railroad crossing upstream of the Beach.</i>			
				Nonpoint/Point Source			
				pH		195 Miles	2019
				<i>Listing only applies to Pocket Canyon Creek , a tributary to the lower Russian River within the greater Guerneville HSA.</i>			
				Source Unknown			

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REGION TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
			Sedimentation/Siltation		195 Miles	2019
			<i>Sediment impacts in Russian River tributaries prompted listing entire Russian River watershed for sediment .</i>			
				Agriculture		
				Irrigated Crop Production		
				Specialty Crop Production		
				Agriculture-storm runoff		
				Agriculture-grazing		
				Silviculture		
				Construction/Land Development		
				Highway/Road/Bridge Construction		
				Land Development		
				Hydromodification		
				Channelization		
				Dam Construction		
				Upstream Impoundment		
				Flow Regulation/Modification		
				Habitat Modification		
				Removal of Riparian Vegetation		
				Streambank Modification/Destabilization		
				Drainage/Filling Of Wetlands		
				Channel Erosion		
				Erosion/Siltation		
			Temperature, water		195 Miles	2019
			<i>The most sensitive beneficial uses supported by the Russian River include uses associated with the cold water fishery and municipal and domestic supply. The Russian River provides habitat for coho salmon and steelhead trout, which are listed as a threatened species under the federal Endangered Species Act. Recent (1997-2000) temperature data collected in the Russian River watershed indicate that high temperature levels may be a source of impairment of cold water fisheries in the watershed.</i>			
				Hydromodification		
				Upstream Impoundment		
				Flow Regulation/Modification		
				Habitat Modification		
				Removal of Riparian Vegetation		
				Streambank Modification/Destabilization		
				Nonpoint Source		

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1	R	Russian River HU, Middle Russian River HA, Big Sulphur Creek HSA	11426000	Sedimentation/Siltation <i>Sediment impacts in Russian River tributaries prompted listing entire Russian River watershed for sediment .</i>	Geothermal Development Erosion/Siltation Nonpoint Source	85 Miles	2019
				Specific Conductivity	Source Unknown	85 Miles	2019
				Temperature, water <i>The most sensitive beneficial uses supported by the Russian River include uses associated with the cold water fishery and municipal and domestic supply. The Russian River provides habitat for coho salmon and steelhead trout, which are listed as a threatened species under the federal Endangered Species Act. Recent (1997-2000) temperature data collected in the Russian River watershed indicate that high temperature levels may be a source of impairment of cold water fisheries in the watershed.</i>	Flow Regulation/Modification Habitat Modification Removal of Riparian Vegetation Nonpoint Source	85 Miles	2019

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1	R	Russian River HU, Middle Russian River HA, Geyserville HSA	11425000	<p>Sedimentation/Siltation</p> <p><i>Sediment impacts in Russian River tributaries prompted listing entire Russian River watershed for sediment TMDL.</i></p> <p>Agriculture</p> <p>Nonirrigated Crop Production</p> <p>Irrigated Crop Production</p> <p>Specialty Crop Production</p> <p>Range Grazing-Riparian</p> <p>Range Grazing-Upland</p> <p>Agriculture-storm runoff</p> <p>Agriculture-grazing</p> <p>Silviculture</p> <p>Construction/Land Development</p> <p>Geothermal Development</p> <p>Disturbed Sites (Land Develop.)</p> <p>Surface Runoff</p> <p>Resource Extraction</p> <p>Channelization</p> <p>Bridge Construction</p> <p>Removal of Riparian Vegetation</p> <p>Streambank Modification/Destabilization</p> <p>Drainage/Filling Of Wetlands</p> <p>Channel Erosion</p> <p>Erosion/Siltation</p> <p>Natural Sources</p> <p>Nonpoint Source</p>	<p>242 Miles</p>	<p>2019</p>	

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REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Temperature, water		242 Miles	2019
				<p><i>The most sensitive beneficial uses supported by the Russian River include uses associated with the cold water fishery and municipal and domestic supply. The Russian River provides habitat for coho salmon and steelhead trout, which are listed as a threatened species under the federal Endangered Species Act. Recent (1997-2000) temperature data collected in the Russian River watershed indicate that high temperature levels may be a source of impairment of cold water fisheries in the watershed.</i></p>			
				<p>Flow Regulation/Modification</p> <p>Habitat Modification</p> <p>Removal of Riparian Vegetation</p> <p>Nonpoint Source</p>			
1	R	Russian River HU, Middle Russian River HA, Laguna de Santa Rosa	11421000	Low Dissolved Oxygen		96 Miles	2008
				<p><i>The Laguna de Santa Rosa was added to the 303(d) List in 1990 for high levels of ammonia and low dissolved oxygen (DO) concentrations. A TMDL was completed for the Laguna for ammonia and dissolved oxygen in 1995. The TMDL concluded that high ammonia levels in the Laguna were the result of point and non-point source nitrogen inputs of various forms. Low dissolved oxygen concentrations were a result of inputs of organic matter and nutrients which stimulate algal growth and subsequently cause depressed dissolved oxygen levels when the algae dies and decays. The TMDL took the form of a Waste Reduction Strategy (WRS) which addressed the reduction of nitrogen loading from point and non-point sources. With the implementation of the WRS and operational improvements at the City of Santa Rosa Waste Water Treatment Plant as well as improvements in waste storage and disposal activities at local dairies, nitrogen inputs to the Laguna were significantly reduced. Following implementation of the WRS and the subsequent attainment of nitrogen-ammonia interim concentration goals, as stated in the WRS, the Laguna was removed from the 303(d) List for ammonia and dissolved oxygen in 1998, pursuant to a recommendation by US EPA. However, dissolved oxygen levels in the Laguna continue to fall below the Regional Water Board Basin Plan minimum DO objective of 7.0 mg/L and in many cases fluctuate significantly on a daily and seasonal basis. Based on available information, it appears that phosphorus may contribute to the dissolved oxygen fluctuations. However, the cause of the low dissolved oxygen levels is not certain. While elevated phosphorus levels may contribute to low DO, nitrogen to phosphorus ratios, based on recent Laguna measurements, indicate that nitrogen may be the macronutrient controlling plant growth in the Laguna. A TMDL addressing nutrients (both nitrogen and phosphorus) and dissolved oxygen is necessary for water quality objective attainment.</i></p>			
				<p>Internal Nutrient Cycling (primarily lakes)</p> <p>Nonpoint Source</p> <p>Point Source</p>			
				Mercury		96 Miles	2019
				<p>Source Unknown</p>			

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			Nitrogen		96 Miles	2019
			<i>This listing was made by USEPA.</i>			
				Internal Nutrient Cycling (primarily lakes)		
				Nonpoint Source		
				Point Source		
			Phosphorus		96 Miles	2019
			<i>This listing was made by USEPA.</i>			
				Internal Nutrient Cycling (primarily lakes)		
				Nonpoint Source		
				Point Source		
			Sedimentation/Siltation		96 Miles	2019
			<i>Entire Russian River watershed (including Laguna de Santa Rosa) is listed for sedimentation.</i>			
				Road Construction		
				Land Development		
				Disturbed Sites (Land Develop.)		
				Urban Runoff/Storm Sewers		
				Other Urban Runoff		
				Highway/Road/Bridge Runoff		
				Hydromodification		
				Channelization		
				Removal of Riparian Vegetation		
				Streambank Modification/Destabilization		
				Drainage/Filling Of Wetlands		
				Channel Erosion		
				Erosion/Siltation		
				Erosion From Derelict Land		
				Highway Maintenance and Runoff		
				Nonpoint Source		

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			<p>Temperature, water</p> <p><i>Entire Russian River watershed (including Laguna de Santa Rosa) is listed for temperature. The most sensitive beneficial uses supported by the Russian River include uses associated with the cold water fishery and municipal and domestic supply. The Russian River provides habitat for coho salmon and steelhead trout, which are listed as a threatened species under the federal Endangered Species Act. Recent (1997-2000) temperature data collected in the Russian River watershed indicate that high temperature levels may be a source of impairment of cold water fisheries in the watershed.</i></p>	<p>Hydromodification</p> <p>Upstream Impoundment</p> <p>Removal of Riparian Vegetation</p> <p>Streambank Modification/Destabilization</p> <p>Nonpoint Source</p>	96 Miles	2008

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REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Russian River HU, Middle Russian River HA, Mark West Creek HSA	11423000	Sedimentation/Siltation		99 Miles	2019
				<i>Russian River Watershed tributary sediment impairments led to listing of entire watershed for sediment .</i>			
				Agriculture			
				Irrigated Crop Production			
				Specialty Crop Production			
				Range Grazing-Riparian and/or Upland			
				Range Grazing-Riparian			
				Intensive Animal Feeding Operations			
				Agriculture-storm runoff			
				Agriculture-grazing			
				Silviculture			
				Harvesting, Restoration, Residue Management			
				Construction/Land Development			
				Highway/Road/Bridge Construction			
				Land Development			
				Disturbed Sites (Land Develop.)			
				Other Urban Runoff			
				Surface Runoff			
				Removal of Riparian Vegetation			
				Streambank Modification/Destabilization			
				Drainage/Filling Of Wetlands			
				Channel Erosion			
				Erosion/Siltation			

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REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Temperature, water		99 Miles	2019
				<p><i>The most sensitive beneficial uses supported by the Russian River include uses associated with the cold water fishery and municipal and domestic supply. The Russian River provides habitat for coho salmon and steelhead trout, which are listed as a threatened species under the federal Endangered Species Act. Recent (1997-2000) temperature data collected in the Russian River watershed indicate that high temperature levels may be a source of impairment of cold water fisheries in the watershed.</i></p>			
					<p>Hydromodification Upstream Impoundment Flow Regulation/Modification Habitat Modification Removal of Riparian Vegetation Streambank Modification/Destabilization Nonpoint Source</p>		
1	R	Russian River HU, Middle Russian River HA, Santa Rosa Creek	11422000	Pathogens		87 Miles	2008
					<p>Nonpoint Source Point Source</p>		

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			Sedimentation/Siltation		87 Miles	2019
			<i>Entire Russian River watershed (including Santa Rosa Creek) is listed for sedimentation.</i>			
				Agriculture		
				Nonirrigated Crop Production		
				Irrigated Crop Production		
				Specialty Crop Production		
				Pasture Grazing-Riparian and/or Upland		
				Range Grazing-Riparian		
				Range Grazing-Upland		
				Dairies		
				Construction/Land Development		
				Highway/Road/Bridge Construction		
				Land Development		
				Urban Runoff/Storm Sewers		
				Urban Runoff--Non-industrial Permitted		
				Other Urban Runoff		
				Surface Runoff		
				Hydromodification		
				Channelization		
				Bridge Construction		
				Habitat Modification		
				Removal of Riparian Vegetation		
				Streambank Modification/Destabilization		
				Drainage/Filling Of Wetlands		
				Channel Erosion		
				Erosion/Siltation		
				Natural Sources		
				Nonpoint Source		

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				Temperature, water		87 Miles	2019
				<i>Entire Russian River watershed (including Santa Rosa Creek) is listed for temperature.</i>			
					Hydromodification		
					Upstream Impoundment		
					Removal of Riparian Vegetation		
					Streambank Modification/Destabilization		
					Nonpoint Source		
1	R	Russian River HU, Middle Russian River HA, Warm Springs HSA	11424000	Sedimentation/Siltation		255 Miles	2019
				<i>Sediment impacts in Russian River tributaries prompted listing entire Russian River watershed for sediment .</i>			
					Agriculture		
					Agriculture-storm runoff		
					Silviculture		
					Logging Road Construction/Maintenance		
					Construction/Land Development		
					Highway/Road/Bridge Construction		
					Disturbed Sites (Land Develop.)		
					Hydromodification		
					Channelization		
					Dam Construction		
					Upstream Impoundment		
					Flow Regulation/Modification		
					Habitat Modification		
					Removal of Riparian Vegetation		
					Streambank Modification/Destabilization		
					Drainage/Filling Of Wetlands		
					Channel Erosion		
					Erosion/Siltation		
					Nonpoint Source		

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				Temperature, water		255 Miles	2019
				<p><i>The most sensitive beneficial uses supported by the Russian River include uses associated with the cold water fishery and municipal and domestic supply. The Russian River provides habitat for coho salmon and steelhead trout, which are listed as a threatened species under the federal Endangered Species Act. Recent (1997-2000) temperature data collected in the Russian River watershed indicate that high temperature levels may be a source of impairment of cold water fisheries in the watershed.</i></p>			
				<p>Hydromodification</p> <p>Upstream Impoundment</p> <p>Flow Regulation/Modification</p> <p>Habitat Modification</p> <p>Removal of Riparian Vegetation</p> <p>Streambank Modification/Destabilization</p> <p>Nonpoint Source</p>			
1	L	Russian River HU, Middle Russian River HA, Warm Springs HSA, Lake Sonoma [Reservoir]	11424000	Mercury		2377 Acres	2019
				<p><i>The Russian River HU, Middle Russian River HA, Warm Springs HSA, Lake Sonoma [Reservoir] includes the following Calwater Planning Watersheds (PWS): 114.24022, 114.24030 and 114.24032.</i></p>			
				<p>Resource Extraction</p> <p>Nonpoint Source</p>			

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1	R	Russian River HU, Upper Russian River HA, Coyote Valley HSA	11432000	<p>Sedimentation/Siltation</p> <p><i>Russian River Watershed tributary sediment impairments led to listing of entire watershed for sediment .</i></p> <p>Agriculture</p> <p>Silviculture</p> <p>Construction/Land Development</p> <p>Hydromodification</p> <p>Channelization</p> <p>Dam Construction</p> <p>Flow Regulation/Modification</p> <p>Bridge Construction</p> <p>Habitat Modification</p> <p>Removal of Riparian Vegetation</p> <p>Streambank Modification/Destabilization</p> <p>Drainage/Filling Of Wetlands</p> <p>Channel Erosion</p> <p>Erosion/Siltation</p>	171 Miles	2019	
				<p>Temperature, water</p> <p><i>The most sensitive beneficial uses supported by the Russian River include uses associated with the cold water fishery and municipal and domestic supply. The Russian River provides habitat for coho salmon and steelhead trout, which are listed as a threatened species under the federal Endangered Species Act. Recent (1997-2000) temperature data collected in the Russian River watershed indicate that high temperature levels may be a source of impairment of cold water fisheries in the watershed.</i></p> <p>Hydromodification</p> <p>Upstream Impoundment</p> <p>Flow Regulation/Modification</p> <p>Habitat Modification</p> <p>Removal of Riparian Vegetation</p> <p>Streambank Modification/Destabilization</p> <p>Nonpoint Source</p>	171 Miles	2019	

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1	L	Russian River HU, Upper Russian River HA, Coyote Valley HSA, Lake Mendocino [Reservoir]	11432060	Mercury	Resource Extraction Nonpoint Source	1704 Acres	2019
1	R	Russian River HU, Upper Russian River HA, Forsythe Creek HSA	11433000	Sedimentation/Siltation <i>Russian River Watershed tributary sediment impairments led to listing of entire watershed for sediment .</i> Erosion/Siltation Nonpoint Source	Temperature, water <i>The most sensitive beneficial uses supported by the Russian River include uses associated with the cold water fishery and municipal and domestic supply. The Russian River provides habitat for coho salmon and steelhead trout, which are listed as a threatened species under the federal Endangered Species Act. Recent (1997-2000) temperature data collected in the Russian River watershed indicate that high temperature levels may be a source of impairment of cold water fisheries in the watershed.</i> Hydromodification Upstream Impoundment Flow Regulation/Modification Habitat Modification Removal of Riparian Vegetation Streambank Modification/Destabilization Nonpoint Source	122 Miles 122 Miles	2019 2019

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REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Russian River HU, Upper Russian River HA, Ukiah HSA	11431000	<p>Sedimentation/Siltation</p> <p><i>Russian River Watershed tributary sediment impairments led to listing of entire watershed for sediment .</i></p> <p>Agriculture</p> <p>Silviculture</p> <p>Construction/Land Development</p> <p>Resource Extraction</p> <p>Habitat Modification</p> <p>Removal of Riparian Vegetation</p> <p>Streambank Modification/Destabilization</p> <p>Drainage/Filling Of Wetlands</p> <p>Channel Erosion</p> <p>Erosion/Siltation</p> <p>Highway Maintenance and Runoff</p> <p>Natural Sources</p>	460 Miles	2019	
				<p>Temperature, water</p> <p><i>The most sensitive beneficial uses supported by the Russian River include uses associated with the cold water fishery and municipal and domestic supply. The Russian River provides habitat for coho salmon and steelhead trout, which are listed as a threatened species under the federal Endangered Species Act. Recent (1997-2000) temperature data collected in the Russian River watershed indicate that high temperature levels may be a source of impairment of cold water fisheries in the watershed.</i></p> <p>Hydromodification</p> <p>Upstream Impoundment</p> <p>Flow Regulation/Modification</p> <p>Habitat Modification</p> <p>Removal of Riparian Vegetation</p> <p>Streambank Modification/Destabilization</p> <p>Nonpoint Source</p>	460 Miles	2019	
1	L	Trinity Lake (was Claire Engle Lake)	10640000	<p style="text-align: center;">Mercury</p>	Source Unknown	15985 Acres	2019

PROPOSED 2006 CWA SECTION 303(d) LIST OF WATER QUALITY LIMITED SEGMENTS

NORTH COAST REGIONAL BOARD

SWRCB DRAFT 303(d) LIST RELEASE DATE: SEPTEMBER 15, 2006

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Trinity River HU, South Fork HA	10620000	<p>Temperature, water</p> <p><i>Elevated temperatures impact coldwater fisheries. USEPA will be developing temperature TMDL for South Fork Trinity River.</i></p>	<p>Range Grazing-Riparian</p> <p>Water Diversions</p> <p>Habitat Modification</p> <p>Removal of Riparian Vegetation</p> <p>Streambank Modification/Destabilization</p>	1161 Miles	2019
1	R	Trinity River HU, Upper HA, Trinity River, East Fork	10640000	<p>Mercury</p> <p><i>The Trinity River HU, Upper HA, Trinity River, East Fork includes the following Calwater Super Planning Watersheds (SPWs): Mumbo Creek SPW 106.40030 and Blue Ridge SPW 106.40040.</i></p>	<p>Source Unknown</p>	92 Miles	2019

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REGION TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
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ABBREVIATIONS

REGIONAL WATER QUALITY CONTROL BOARDS

- 1 North Coast
- 2 San Francisco Bay
- 3 Central Coast
- 4 Los Angeles
- 5 Central Valley
- 6 Lahontan
- 7 Colorado River Basin
- 8 Santa Ana
- 9 San Diego

WATER BODY TYPE

- B = Bays and Harbors
- C = Coastal Shorelines/Beaches
- E = Estuaries
- L = Lakes/Reservoirs
- R = Rivers and Streams
- S = Saline Lakes
- T = Wetlands, Tidal
- W = Wetlands, Freshwater

CALWATER WATERSHED

"Calwater Watershed" is the State Water Resources Control Board hydrological subunit area or an even smaller area delineation.

GROUP A PESTICIDES OR CHEM A

aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, hexachlorocyclohexane (including lindane), endosulfan, and toxaphene