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3. WATER QUALITY OBJECTIVES

The California Water Code, Division 7, Chapter 4, Section 13241 specifies that each Regional Water Quality Control Board (Regional Water Board) shall establish water quality objectives which, in the Regional Water Board's judgment, are necessary for the reasonable protection of the beneficial uses and for the prevention of nuisance.

The federal Clean Water Act (33 U.S.C. § 303) requires the State to submit to the Administrator of the U.S. Environmental Protection Agency for approval all new or revised water quality standards which are established for surface and ocean waters. Under federal terminology, water quality standards consist of the beneficial uses enumerated in Table 2-1 and the water quality objectives contained in this section. The water quality objectives contained herein are designed to satisfy all state and federal requirements.

As new information becomes available, the Regional Water Board will review the appropriateness of the objectives contained herein. These objectives will be subject to public hearing at least once during each three-year period following adoption of this Basin Plan to determine the need for review and modification as appropriate.

The water quality objectives contained herein are a compilation of objectives adopted by the State Water Board, the Regional Water Board, and other state and federal agencies. Other water quality objectives and policies may apply that may be more stringent. Whenever several different objectives exist for the same water quality parameter, the strictest objective applies. In addition, the State Water Board "Policy With Respect to Maintaining High Quality Waters in California" also applies.

Controllable water quality factors shall conform to the water quality objectives contained herein. When other factors result in the degradation of water quality beyond the levels or limits established herein as water quality objectives, then controllable factors shall not cause further degradation of water quality. Controllable water quality factors are those actions, conditions, or circumstances resulting from man's activities that may influence the quality of the waters of the State and that may be reasonably controlled.

Water quality objectives form the basis for establishment of waste discharge requirements, waste discharge prohibitions, or maximum acceptable cleanup standards for all individuals and dischargers. These water quality objectives are considered to be necessary to protect those present and probable future beneficial uses enumerated in Table 2-1 and to protect existing high quality waters of the State. These objectives will be achieved primarily through the establishment of waste discharge requirements and through the implementation of this Basin Plan. The appropriate numeric water quality standards will be established in waste discharge orders.

The Regional Water Board, in setting waste discharge requirements, will consider, among other things, the potential impact on beneficial uses within the area of influence of the discharge, the existing quality of receiving waters, and the appropriate water quality objectives. The Regional Water Board will make a finding as to the beneficial uses to be protected within the area of influence of the discharge and establish waste discharge requirements to protect those uses and to meet water quality objectives. Resolution Nos. 87-113, 89-131, and 92-135 describe the policy of the Regional Water Board regarding the specific types of waste discharge for which it will waive issuance of waste discharge requirements. These resolutions are included in the Appendix Section of this Plan.

The water quality objectives for the Region refer to several classes of waters. Ocean waters are waters of the Pacific Ocean outside of enclosed bays, estuaries, and coastal lagoons, and within the territorial (3 mile) limit. Bays are indentations along the coast which include oceanic waters within distinct headlands or harbor works whose narrowest opening is less than 75 percent of the greatest dimension of the enclosed portion of the bay; this definition includes only Crescent City Harbor in the Klamath River Basin, and Humboldt Bay and Bodega Bay in the North Coastal Basin. Estuaries are waters at the mouths of streams which serve as mixing zones for freshwater and seawater; they generally extend from the upstream limit of tidal action to a bay or open ocean. The principal estuarine areas of the Region are at the mouths of the Smith and Klamath Rivers and Lakes

Earl and Talawa, and at the mouths of the Eel, Noyo, and Russian Rivers. Inland waters include all surface waters and groundwaters of the basin not included in the definitions of ocean waters, enclosed bays, or estuaries. Interstate waters include all rivers, streams, and lakes which flow across or form part of a state boundary. Groundwaters are any subsurface bodies of water which are beneficially used or usable. They include perched water if such water is used or usable or is hydraulically continuous with used or usable water.

The water quality objectives which follow supersede and replace those contained in the 1971 "Interim Water Quality Control Plan for the Klamath River Basin," the 1967 "Water Quality Control Policy for the Klamath River in California," the 1967 "Water Quality Control Policy for the Smith River in California," the 1967 "Water Quality Control Policy for the Humboldt-Del Norte Coastal Waters," the 1969 "Water Quality Control Policy for the Lost River," the 1971 "Interim Water Quality Control Plan for the North Coastal Basin," the 1967 "Water Quality Control Policy for the Sonoma-Mendocino Coast," the 1975 "Water Quality Control Plan for the Klamath River Basin (1A)," the 1975 "Water Quality Control Plan for the North Coastal Basin (1B)," and the 1988 "Water Quality Control Plan for the North Coast Region".

GENERAL OBJECTIVE

The following objective shall apply to all waters of the Region.

Whenever the existing quality of water is better than the water quality objectives established herein, such existing quality shall be maintained unless otherwise provided by the provisions of the State Water Resources Control Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California", including any revisions thereto. A copy of this policy is included verbatim in the Appendix Section of this Plan.

OBJECTIVES FOR OCEAN WATERS

The provisions of the State Water Board's "Water Quality Control Plan for Ocean Waters of California" (Ocean Plan), and "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California" (Thermal Plan), and any revisions thereto shall apply. Copies of these plans are included verbatim in the Appendix Section of this Plan.

OBJECTIVES FOR INLAND SURFACE WATERS, ENCLOSED BAYS, AND ESTUARIES

In addition to the General Objective, the specific objectives contained in Table 3-1 and the following objectives shall apply for inland surface waters, bays, and estuaries.

Color

Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses.

Tastes and Odors

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.

Numeric water quality objectives with regards to taste and odor threshholds have been developed by the State Department of Health Services and the U.S. EPA. These numeric objectives, as well as those available in the technical literature, are incorporated into waste discharge requirements and cleanup and abatement orders as appropriate.

Floating Material

Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

Suspended Material

Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.

Settleable Material

Waters shall not contain substances in concentrations

that result in deposition of material that causes nuisance or adversely affect beneficial uses.

Oil and Grease

Waters shall not contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.

Biostimulatory Substances

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

Sediment

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

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.

pH

The pH shall conform to those limits listed in Table 3-1. For waters not listed in Table 3-1 and where pH objectives are not prescribed, the pH shall not be depressed below 6.5 nor raised above 8.5.

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

Dissolved Oxygen

Dissolved oxygen concentrations shall conform to those limits listed in Table 3-1. For waters not listed in Table 3-1 and where dissolved oxygen objectives are not prescribed the dissolved oxygen concentrations shall not be reduced below the following minimum levels at any time.

Waters designated WARM, MAR, or SAL . 5.0 mg/l
Waters designated COLD . . . . . 6.0 mg/l
Waters designated SPWN . . . . . 7.0 mg/l
Waters designated SPWN during critical spawning and egg incubation periods . . . .9.0 mg/l

Bacteria

The bacteriological quality of waters of the North Coast Region shall not be degraded beyond natural background levels. In no case shall coliform concentrations in waters of the North Coast Region exceed the following:

In waters designated for contact recreation (REC-1), the median fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed 50/100 ml, nor shall more than ten percent of total samples during any 30-day period exceed 400/100 ml (State Department of Health Services).

At all areas where shellfish may be harvested for human consumption (SHELL), the fecal coliform concentration throughout the water column shall not exceed 43/100 ml for a 5-tube decimal dilution test or 49/100 ml when a three-tube decimal dilution test is used (National Shellfish Sanitation Program, Manual of Operation).

Temperature

Temperature objectives for COLD interstate waters, WARM interstate waters, and Enclosed Bays and Estuaries are as specified in the "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays of California" including any revisions thereto. A copy of this plan is included verbatim in the Appendix Section of this Plan.

In addition, the following temperature objectives apply to surface waters:

The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not

adversely affect beneficial uses.

At no time or place shall the temperature of any COLD water be increased by more than 5°F above natural receiving water temperature.

At no time or place shall the temperature of WARM intrastate waters be increased more than 5°F above natural receiving water temperature.

Toxicity

All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the Regional Water Board.

The survival of aquatic life in surface waters subjected to a waste discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary for other control water that is consistent with the requirements for "experimental water" as described in **Standard Methods for the Examination of Water and Wastewater**, 18th Edition (1992). As a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a 96-hour bioassay.

In addition, effluent limits based upon acute bioassays of effluents will be prescribed. Where appropriate, additional numerical receiving water objectives for specific toxicants will be established as sufficient data become available, and source control of toxic substances will be encouraged.

Pesticides

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 64444.5 (Table 5), and listed in Table 3-2 of this Plan.

Chemical Constituents

Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Chapter 15, Division 4, Article 4, Section 64435 (Tables 2 and 3), and Section 64444.5 (Table 5), and listed in Table 3-2 of this Plan.

Waters designated for use as agricultural supply (AGR) shall not contain concentrations of chemical constituents in amounts which adversely affect such beneficial use.

Numerical water quality objectives for individual waters are contained in Table 3-1.

Radioactivity

Radionuclides shall not be present in concentrations which are deleterious to human, plant, animal or aquatic life nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or indigenous aquatic life.

Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of radionuclides in excess of the limits specified in California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64443, Table 4, and listed below:

MCL Radioactivity

Maximum Contaminant Constituent	**Level, pCi/l**
Combined Radium-226 and Radium-228	5

Gross Alpha particle activity (including Radium-226 but excluding Radon and Uranium)	15
Tritium	20,000
Strontium-90	8
Gross Beta particle activity	50
Uranium	20

TABLE 3-1

SPECIFIC WATER QUALITY OBJECTIVES FOR NORTH COAST REGION

Waterbody[1]	Specific Conductance (micromhos) @ 77°F		Total Dissolved Solids (mg/l)		Dissolved Oxygen (mg/l)			Hydrogen Ion (pH)		Hardness (mg/l)	Boron (mg/l)	
	90% Upper Limit[3]	50% Upper Limit[2]	90% Upper Limit[3]	50% Upper Limit[2]	Min	90% Lower Limit[3]	50% Lower Limit[2]	Max	Min	50% Upper Limit[2]	90% Upper Limit[3]	50% Upper Limit[2]
Lost River HA												
Clear Lake Reservoir & Upper Lost River	300	200			5.0		8.0	9.0	7.0	60	0.5	0.1
Lower Lost River	1000	700			5.0		-	9.0	7.0	-	0.5	0.1
Other Streams	250	150			7.0		8.0	8.4	7.0	50	0.2	0.1
Tule Lake	1300	900			5.0		-	9.0	7.0	400	-	-
Lower Klamath Lake	1150	850			5.0		-	9.0	7.0	400	-	-
Groundwaters[4]	1100	500			-		-	8.5	7.0	250	0.3	0.2
Butte Valley HA												
Streams	150	100			7.0		9.0	8.5	7.0	30	0.1	0.0
Meiss Lake	2000	1300			7.0		8.0	9.0	7.5	100	0.3	0.1
Groundwaters[4]	800	400			-		-	8.5	6.5	120	0.2	0.1
Shasta Valley HA												
Shasta River	800	600			7.0		9.0	8.5	7.0	220	1.0	0.5
Other Streams	700	400			7.0		9.0	8.5	7.0	200	0.5	0.1
Lake Shastina	300	250			6.0		9.0	8.5	7.0	120	0.4	0.2
Groundwaters[4]	800	500			-		-	8.5	7.0	180	1.0	0.3
Scott River HA												
Scott River	350	250			7.0		9.0	8.5	7.0	100	0.4	0.1
Other Streams	400	275			7.0		9.0	8.5	7.0	120	0.2	0.1
Groundwaters[4]	500	250			-		-	8.0	7.0	120	0.1	0.1
Salmon River HA												
All Streams	150	125			9.0		10.0	8.5	7.0	60	0.1	0.0
Middle Klamath River HA												
Klamath River above Iron Gate Dam including Iron Gate & Copco Reservoirs	425	275			7.0		10.0	8.5	7.0	60	0.3	0.2
Klamath River below Iron Gate Dam	350	275			8.0		10.0	8.5	7.0	80	0.5	0.2
Other Streams	300	150			7.0		9.0	8.5	7.0	60	0.1	0.0
Groundwaters[4]	750	600			-		-	8.5	7.5	200	0.3	0.1
Applegate River HA												
All Streams	250	175			7.0		9.0	8.5	7.0	60	-	-
Upper Trinity River HA												
Trinity River[5]	200	175			7.0		10.0	8.5	7.0	80	0.1	0.0
Other Streams	200	150			7.0		10.0	8.5	7.0	60	0.0	0.0
Clair Engle Lake and Lewiston Reservoir	200	150			7.0		10.0	8.5	7.0	60	0.0	0.0

TABLE 3-1 (CONTINUED)

SPECIFIC WATER QUALITY OBJECTIVES FOR NORTH COAST REGION

Waterbody[1]	Specific Conductance (micromhos) @ 77°F		Total Dissolved Solids (mg/l)		Dissolved Oxygen (mg/l)			Hydrogen Ion (pH)		Hardness (mg/l)	Boron (mg/l)	
	90% Upper Limit[3]	50% Upper Limit[2]	90% Upper Limit[3]	50% Upper Limit[2]	Min	90% Lower Limit[3]	50% Lower Limit[2]	Max	Min	50% Upper Limit[2]	90% Upper Limit[3]	50% Upper Limit[2]
Hayfork Creek												
Hayfork Creek	400	275			7.0		9.0	8.5	7.0	150	0.2	0.1
Other Streams	300	250			7.0		9.0	8.5	7.0	125	0.0	0.0
Ewing Reservoir	250	200			7.0		9.0	8.0	6.5	150	0.1	0.0
Groundwaters 4	350	225			-		-	8.5	7.0	100	0.2	0.1
S.F. Trinity River HA												
S.F. Trinity River	275	200			7.0		10.0	8.5	7.0	100	0.2	0.0
Other Streams	250	175			7.0		9.0	8.5	7.0	100	0.0	0.0
Lower Trinity River HA												
Trinity River	275	200			8.0		10.0	8.5	7.0	100	0.2	0.0
Other Streams	250	200			9.0		10.0	8.5	7.0	100	0.1	0.0
Groundwaters 4	200	150			-		-	8.5	7.0	75	0.1	0.1
Lower Klamath River HA												
Klamath River	300[6]	200[6]			8.0		10.0	8.5	7.0	75[6]	0.5[6]	0.2[6]
Other Streams	200[6]	125[6]			8.0		10.0	8.5	6.5	25[6]	0.1[6]	0.0[6]
Groundwaters 4	300	225			-		-	8.5	6.5	100	0.1	0.0
Illinois River HA												
All Streams	200	125			8.0		10.0	8.5	7.0	75	0.1	0.0
Winchuck River HU												
All Streams	200[6]	125[6]			8.0		10.0	8.5	7.0	50[6]	0.0[6]	0.0[6]
Smith River HU												
Smith River-Main Forks	200	125			8.0		11.0	8.5	7.0	60	0.1	0.1
Other Streams	150[6]	125[6]			7.0		10.0	8.5	7.0	60[6]	0.1[6]	0.0[6]
Smith River Plain HSA												
Smith River	200[6]	150[6]			8.0		11.0	8.5	7.0	60[6]	0.1[6]	0.0[6]
Other Streams	1506	1256			7.0		10.0	8.5	6.5	606	0.16	0.06
Lakes Earl & Talawa	-	-			7.0		9.0	8.5	6.5	-	-	-
Groundwaters 4	350	100			-		-	8.5	6.5	75	1.0	0.0
Crescent City Harbor	-	-										
Redwood Creek HU												
Redwood Creek	220[6]	125[6]	115[6]	75[6]	7.0	7.5	10.0	8.5	6.5			
Mad River HU												
Mad River	300[6]	150[6]	160[6]	90[6]	7.0	7.5	10.0	8.5	6.5			
Eureka Plain HU												
Humboldt Bay	-	-	-	-	6.0	6.2	7.0	8.5	7			
Eel River HU												
Eel River	375[6]	225[6]	275[6]	140[6]	7.0	7.5	10.0	8.5	6.5			
Van Duzen River	375	175	200	100	7.0	7.5	10.0	8.5	6.5			

TABLE 3-1 (CONTINUED)

SPECIFIC WATER QUALITY OBJECTIVES FOR NORTH COAST REGION

Waterbody[1]	Specific Conductance (micromhos) @77°F 90% Upper Limit[3]	Specific Conductance (micromhos) @77°F 50% Upper Limit[2]	Total Dissolved Solids (mg/l) 90% Upper Limit[3]	Total Dissolved Solids (mg/l) 50% Upper Limit[2]	Dissolved Oxygen (mg/l) Min	Dissolved Oxygen (mg/l) 90% Lower Limit[3]	Dissolved Oxygen (mg/l) 50% Lower Limit[2]	Hydrogen Ion (pH) Max	Hydrogen Ion (pH) Min	Hardness (mg/l) 50% Upper Limit[2]	Boron (mg/l) 90% Upper Limit[3]	Boron (mg/l) 50% Upper Limit[2]
South Fork Eel River	350	200	200	120	7.0	7.5	10.0	8.5	6.5			
Middle Fork Eel River	450	200	230	130	7.0	7.5	10.0	8.5	6.5			
Outlet Creek	400	200	230	125	7.0	7.5	10.0	8.5	6.5			
Cape Mendocino HU												
Bear River	390[6]	255[6]	240[6]	150[6]	7.0	7.5	10.0	8.5	6.5			
Mattole River	300[6]	170[6]	170[6]	105[6]	7.0	7.5	10.0	8.5	6.5			
Mendocino Coast HU												
Ten Mile River	-	-	-	-	7.0	7.5	10.0	8.5	6.5			
Noyo River	185[6]	150[6]	120[6]	105[6]	7.0	7.5	10.0	8.5	6.5			
Jug Handle Creek	-	-	-	-	7.0	7.5	10.0	8.5	6.5			
Big River	300[6]	195[6]	190[6]	130[6]	7.0	7.5	10.0	8.5	6.5			
Albion River	-	-	-	-	7.0	7.5	10.0	8.5	6.5			
Navarro River	285[6]	250[6]	170[6]	150[6]	7.0	7.5	10.0	8.5	6.5			
Garcia River	-	-	-	-	7.0	7.5	10.0	8.5	6.5			
Gualala River	-	-	-	-	7.0	7.5	10.0	8.5	6.5			
Russian River HU	at 59°F											
(upstream) 8	370 320	250	170	150	7.0	7.5	10.0	8.5	6.5			
(downstream) 9	375[6]	285[6]	200[6]	170[6]	7.0	7.5	10.0	8.5	6.5			
Laguna de Santa Rosa	-	-	-	-	7.0	7.5	10.0	8.5	6.5			
Bodega Bay	-	-	-	-	6.0	6.2	7.0	8.5	7			
Coastal Waters 10	-	-	-	-	11	11	11	12	12			

[1] Water bodies are grouped by hydrologic unit (HU), hydrologic area (HA), or hydrologic subarea (HSA).

[2] 50% upper and lower limits represent the 50 percentile values of the monthly means for a calendar year. 50% or more of the monthly means must be less than or equal to an upper limit and greater than or equal to a lower limit.

[3] 90% upper and lower limits represent the 90 percentile values for a calendar year. 90% or more of the values must be less than or equal to an upper limit and greater than or equal to a lower limit.

[4] Value may vary depending on the aquifer being sampled. This value is the result of sampling over time, and as pumped, from more than one aquifer.

[5]

Daily Average Not to Exceed	Period	River Reach
60°F	July 1 - Sept. 14	Lewiston Dam to Douglas City Bridge
56°F	Sept. 15 - Oct. 1	Lewiston Dam to Douglas City Bridge
56°F	Oct. 1 - Dec. 31	Lewiston Dam to confluence of North Fork Trinity River

[6] Does not apply to estuarine areas.

[7] pH shall not be depressed below natural background levels.

[8] Russian River (upstream) refers to the mainstem river upstream of its confluence with Laguna de Santa Rosa.

[9] Russian River (downstream) refers to the mainstem river downstream of its confluence with Laguna de Santa Rosa.

[10] The State's Ocean Plan applies to all North Coast Region coastal waters.

[11] Dissolved oxygen concentrations shall not at any time be depressed more than 10 percent from that which occurs naturally.

[12] pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

- no water body specific objective available.

TABLE 3-2

INORGANIC, ORGANIC, AND FLUORIDE CONCENTRATIONS NOT TO BE EXCEEDED IN DOMESTIC OR MUNICIPAL SUPPLY [1, 2]

Constituent	LIMITING CONCENTRATION IN MILLIGRAMS PER LITER Lower	Optimum	Upper	Maximum Contaminant Level, mg/L
Fluoride [3]				
53.7 and below	0.9	1.2	1.7	2.4
53.8 to 58.3	0.8	1.1	1.5	2.2
58.4 to 63.8	0.8	1.0	1.3	2.0
63.9 to 70.6	0.7	0.9	1.2	1.8
70.7 to 79.2	0.7	0.8	1.0	1.6
79.3 to 90.5	0.6	0.7	0.8	1.4
Inorganic Chemicals				
* Aluminum				1.0
Arsenic				0.05
Barium				1.0
Cadmium				0.01
Chromium				0.05
Lead				0.05
Mercury				0.002
Nitrate-N (as NO_3)				45
Selenium				0.01
Silver				0.05
Organic Chemicals				
(a) Chlorinated Hydrocarbons				
Endrin				0.0002
Lindane				0.004
Methoxychlor				0.1
Toxaphene				0.005
(b) Chlorophenoxys				
2,4-D				0.1
2,4,5-TP (Silvex)				0.01
(c) Synthetics				
Atrazine				0.003
Bentazon				0.018
Benzene				0.001
Carbon Tetrachloride				0.0005
Carbofuran				0.018
Chlordane				0.0001

TABLE 3-2 (CONTINUED)

INORGANIC, ORGANIC, AND FLUORIDE CONCENTRATIONS NOT TO BE EXCEEDED IN DOMESTIC OR MUNICIPAL SUPPLY [1, 2]

Constituent	LIMITING CONCENTRATION IN MILLIGRAMS PER LITER Maximum Contaminant Level, mg/L
(c) Synthetics (cont'd.)	
1,2-Dibromo-3-chloropropane	0.0002
1,4-Dichlorobenzene	0.005
1,1-Dichloroethane	0.005
1,2-Dichloroethane	0.0005
cis-1,2-Dichloroethylene	0.006
trans-1,2-Dichloroethylene	0.01
1,1-Dichloroethylene	0.006
1,2-Dichloropropane	0.005
1,3-Dichloropropene	0.0005
Di(2-ethylhexyl)phthalate	0.004
* Ethylbenzene	0.680
Ethylene Dibromide	0.00002
Glyphosate	0.7
Heptachlor	0.00001
Heptachlor epoxide	0.00001
Molinate	0.02
Monochlorobenzene	0.030
Simazine	0.010
1,1,2,2-Tetrachloroethane	0.001
Tetrachloroethylene	0.005
* Thiobencarb	0.07
1,1,1-Trichloroethane	0.200
1,1,2-Trichloroethane	0.032
Trichloroethylene	0.005
Trichlorofluoromethane	0.15
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2
Vinyl Chloride	0.0005
* Xylenes [4]	1.750

1 Values included in this table have been summarized from California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Sections 64435 (Tables 2 and 3) and 64444.5 (Table 5).

2 The values included in this table are maximum contaminant levels for the purposes of groundwater and surface water discharges and cleanup. Other water quality objectives (e.g., taste and odor thresholds or other secondary MCLs) and policies (e.g., State Water Board "Policy With Respect to Maintaining High Quality Waters in California") that are more stringent may apply.

3 Annual Average of Maximum Daily Air Temperature, °F Based on temperature data obtained for a minimum of five years. The average concentration of fluoride during any month, if added, shall not exceed the upper concentration. Naturally occurring fluoride concentration shall not exceed the maximum contaminant level.

4 Maximum Contaminant Level is for either a single isomer or the sum of the isomers.

* Constituents marked with an * also have taste and odor thresholds that are more stringent than the MCL listed. Taste and odor thresholds have also been developed for other constituents not listed in this table.

PHOTO PAGE

WATER QUALITY OBJECTIVES FOR GROUNDWATERS

General Objectives

Tastes and Odors

Groundwaters shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

Numeric water quality objectives have been developed by the State Department of Health Services and U.S. EPA. These numeric objectives, as well as those available in the technical literature, are incorporated into waste discharge requirements and cleanup and abatement orders as appropriate.

Bacteria

In groundwaters used for domestic or municipal supply (MUN), the median of the most probable number of coliform organisms over any 7-day period shall be less than 1.1 MPN/100 ml, less than 1 colony/100 ml, or absent (State Department of Health Services).

Radioactivity

Groundwaters used for domestic or municipal supply (MUN) shall not contain concentrations of radionuclides in excess of the limits specified in California Code of Regulations, Title 22, Division r, Chapter 15, Article 5, Section 64443, Table 4 and listed in Table 3-2 of this Plan.

Chemical Constituents

Groundwaters used for domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64435 Tables 2 and 3, and Section 64444.5 (Table 5) and listed in Table 3-2 of this Plan

Groundwaters used for agricultural supply (AGR) shall not contain concentrations of chemical constituents in amounts that adversely affect such beneficial use.

Numerical objectives for certain constituents for individual groundwaters are contained in Table 3-1.

As part of the state's continuing planning process, data will be collected and numerical water quality objectives will be developed for those mineral and nutrient constituents where sufficient information is presently not available for the establishment of such objectives.

Salmon Creek Submittal from EPA data Solicitation Files: (4 files=total Doc.)

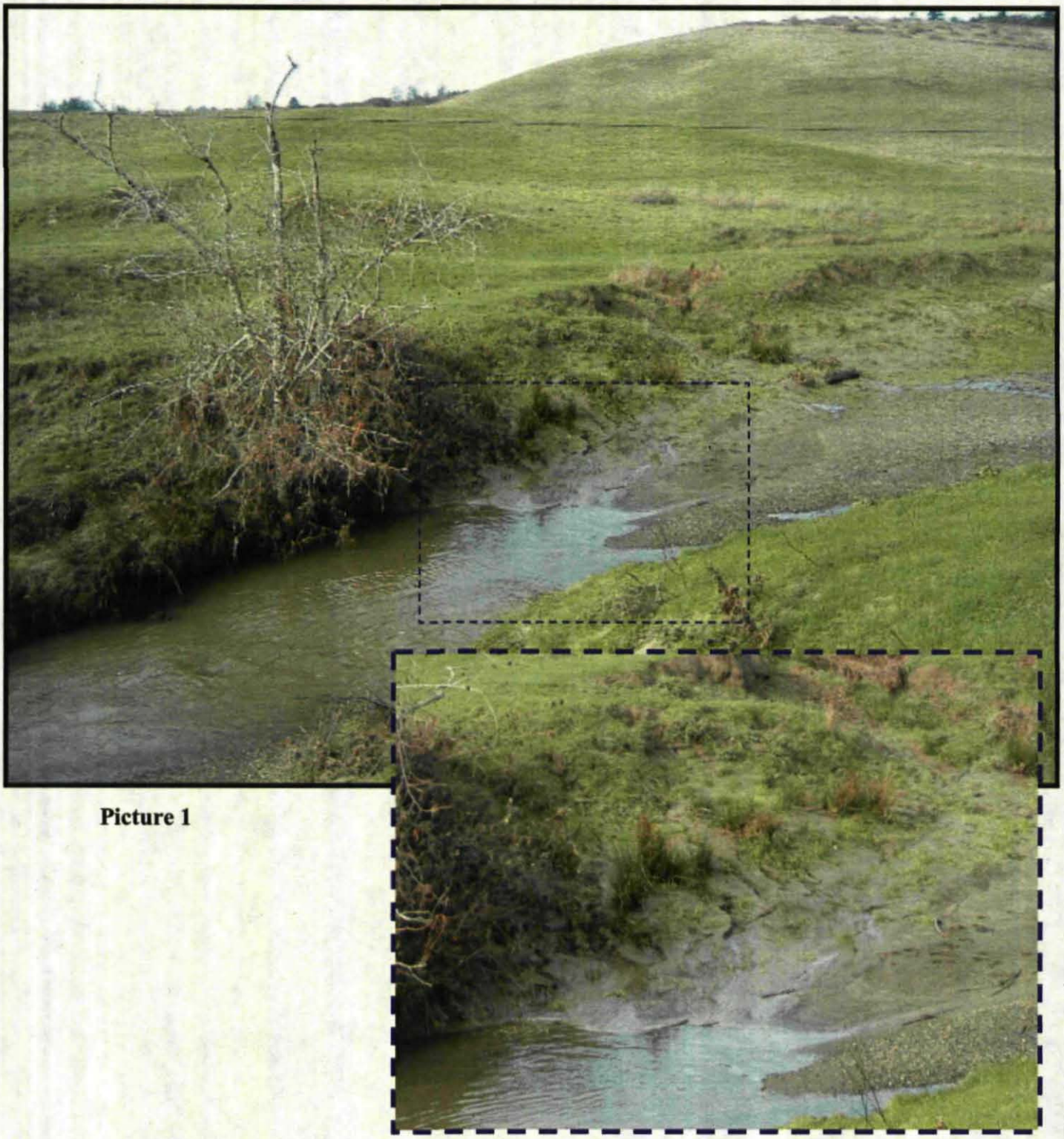
FS-ID: 2671 LOE ID - 896

File: 1-15cc _ Smn Crk Mem02b-Page-01

Date: January 19, 2004

Subject: Riparian Conditions Observed in Salmon Creek Watershed, Sonoma County California

The photographs presented below show streambank conditions in the Salmon Creek watershed observed on January 11, 2004. Pictures #1 through #6 show the Salmon Creek as viewed from the Bodega Hwy at the bridge over Salmon Creek, just west of the Valley Ford Cut-off Road. Pictures #1 through #4 show stream banks and upland pastureland on the north side of the road where the stream flows westward (from right to left in this picture) from the town of Freestone.



Picture 1

Picture 2

File: 1-15dd_Smn Creek
Memo 02-b page-02

Stream banks in this area show the erosive effects of denuded banks, and channeled runoff. Pictures #3 and #4 show examples of the cattle paths up and down the banks along this stretch of creek, which can deliver significant amounts of fine-grained sediment directly to the streambed.

Picture 3

Similar erosive conditions are also evident in upland areas, as seen in Pictures #5 and #6

Picture 5

Picture 6

The land-use impacts visible on the north side of the road contrast sharply with the conditions immediately downstream, on the south side of the road where cows have been excluded. Pictures #7 and #8 show the view of Salmon Creek as it flows from the Bodega Hwy Bridge westward toward the town of Bodega

Picture 7

Picture 8

Salmon Creek Submittal from EPA data Solicitation

File: 1-15q Nolan 01. mem

FSID: 2765 LOEID-895

Date: January 26, 2004

Subject: Riparian conditions on Nolan Creek, tributary to Salmon Creek, Sonoma County, CA

This memo documents riparian conditions observed on Nolan Creek on January 11, 2004. Nolan Creek flows southward from Joy Ridge where it joins Thurston Creek before passing under the Bodega Hwy about 1000 feet west of Joy Road near the town of Bodega. Nolan Creek passes southward under the Bodega Hwy bridge where it joins Salmon Creek about 2000 feet south of the highway. The photographs below were taken from the Bodega Hwy at or near the Nolan Creek Bridge.

Picture 1 below shows Nolan Creek flowing away to the south toward Salmon Creek.

Picture 1

Picture 2

Picture 2 above looks upstream at the pastoral landscape north of Bodega Hwy at Joy Road.

Picture 3 and Picture 4 below show examples of the cattle trails and trampled, denuded stream banks that appear to provide significant sources of fine sediment d to the tributary streams and main stem of Salmon Creek.

Picture 3

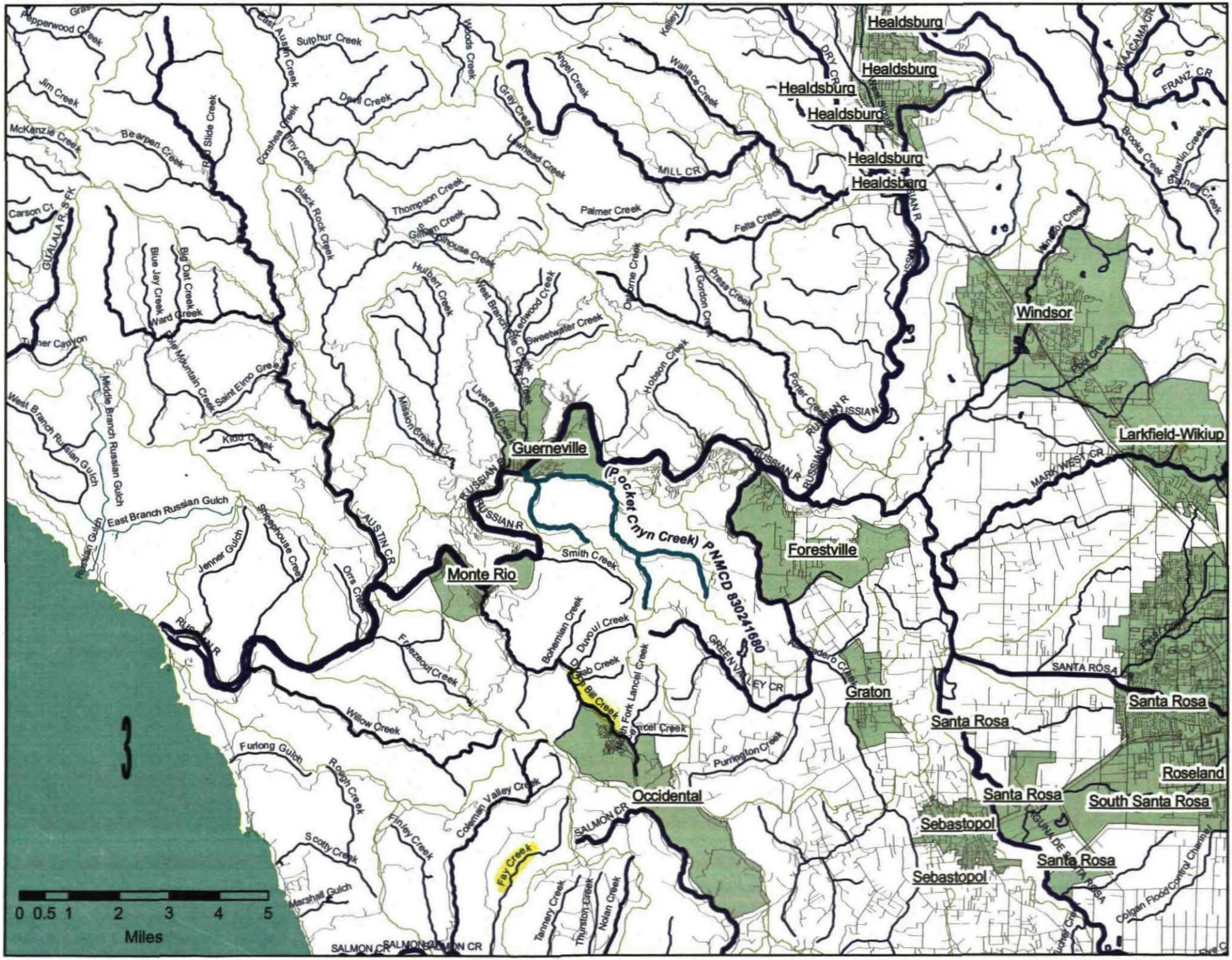
Picture 4

(same file)

Pictures 5 and Picture 6 below illustrate fine sediment delivery to the creeks from trampled stream banks.

Picture 5

Picture 6


Healdsburg
Windsor
Larkfield-Wikiup
Guerneville
Forestville
Monte Rio
Occidental
Graton
Santa Rosa
Roseland
South Santa Rosa
Sebastopol
(Pocket Cnyn Creek) PNMCD 830241680
RUSSIAN R
MILL CR
MARK WEST CR
SANTA ROSA
GREENVALLEY CR
AUSTIN CR
SALMON CR
Mill Creek
Windsor Creek
Felta Creek
Palmer Creek
Porter Creek
Hobson Creek
Smith Creek
Bohemian Creek
Willow Creek
Furlong Gulch
Rough Creek
Finley Creek
Scotty Creek
Marshall Gulch
Coleman Valley Creek
Fay Creek
Tannery Creek
Thurston Creek
Nolan Creek
Purrington Creek
Pruitt Creek
Colgan Flood Control Channel
Laguna de Santa Rosa
0 0.5 1 2 3 4 5
Miles

R1 CREEKS	WATERSHED
Fay Creek	Eureka Plain HU, Salmon Creek
Tannery Creek	"
Thurston Creek	"
Salmon Creek	"
Westwood Creek	Can't find
Austin Creek	Russian River HU, Lower Russian River HA, Guerneville HSA *(upper reaches of Austin Creek are in Russian River HU, Lower Russian River HA, Austin Creek HSA)*
Big Sulphur Creek	Russian River HU, Middle Russian River HA, Big Sulphur HSA
Dutch Bill Creek	Russian River HU, Lower Russian River HA, Guerneville HSA
Lancel Creek	Russian River HU, Lower Russian River HA, Guerneville HSA
Jenner Gulch *(no "creek" found)*	Russian River HU, Lower Russian River HA, Guerneville HSA
Mark West Creek	Russian River HU, Middle Russian River HA, Mark West Creek HSA
Pocket Canyon	Russian River HU, Lower Russian River HA, Guerneville HSA

TABLE 2-1: BENEFICIAL USES OF SURFACE WATERS OF THE NORTH COAST REGION

HU/HA/HSA	HYDROLOGIC UNIT/AREA/SUBUNIT/ DRAINAGE FEATURE	BENEFICIAL USES																									
		MUN	AGR	IND	PRO	GWR	FRSH	NAV	POW	REC1	REC2	COMM	WARM	COLD	BSA	SAL	WILD	RARE	MAR	MIGR	SPWN	SHELL	EST	AQUA	CUL	FLD	WET	WQE
101.00	**Winchuck River Hydrologic Unit**																											
	Winchuck River	E	E	E	P		E	E	P	E	E	E		E			E	E		E	E			P				
102.00	**Rogue River Hydrologic Unit**																											
102.20	Illinois River Hydrologic Area	E	E	E	P		E	E	E	E	E	E		E			E	E		E	E			E				
102.30	Applegate River Hydrologic Area	E	E	E	E		E	E	P	E	E	E		E			E	E		E	E			P				
103.00	**Smith River Hydrologic Unit**																											
103.10	Lower Smith River Hydrologic Area																											
103.11	Smith River Plain Hydrologic Subarea	E	E	E	P		E	E		E	E	E		E	E		E	E	E	E	E		E	P	E			
	Lake Talawa	P					E	E		E	E	E	E	E			E	E		E				P	E			
	Lake Earl	E	E	E			E	E		E	E	E	E	E			E	E		E				P	E			
	Crescent City Harbor						E	E		E	E	E	P	E			E	E	E	E		E		E				
103.12	Rowdy Creek Hydrologic Subarea	E	E	E	P		E	E	P	E	E	E		E			E	E		E	E			P				
103.13	Mill Creek Hydrologic Subarea	E	E	E	P		E	E	P	E	E	E		E			E	E		E	E			P				
103.20	South Fork Smith River Hydrologic Area	E	E	E	P		E	E	E	E	E	E		E			E	E		E	E			P	E			
103.30	Middle Fork Smith River Hydrologic Area	E	E	E	P		E	E	E	E	E	E		E			E	E		E	E			E	P			
103.40	North Fork Smith River Hydrologic Area	E	E	E	P		E	E	E	E	E	E		E			E	E		E	E			P				
103.50	Wilson Creek Hydrologic Area	E	E	E	P		E	E	E	E	E	E		E			E	E		E	E			P	E			
105.00	**Klamath River Hydrologic Unit**																											
105.10	Lower Klamath River Hydrologic Area																											
105.11	Klamath Glen Hydrologic Subarea	E	E	P	P	E	E	E	P	E	E	E	E	E	E		E	E	E	E	E	E	E	P	E			
105.12	Orleans Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E	E	E	E		E	E		E	E	P	E	P	E			
105.20	Salmon River Hydrologic Area																											
105.21	Lower Salmon Hydrologic Subarea	E	E	E	P		E	E	P	E	E	E		E			E	E		E	E	P		P	E			
105.22	Wooley Creek Hydrologic Subarea	E	P	E	P	E	E	E	P	E	E	E		E	E		E	E		E	E	P		P	E			
105.23	Sawyers Bar Hydrologic Subarea	E	E	E	P		E	E	P	E	E	E		E			E	E		E	E	P		P				
105.24	Cecilville Hydrologic Subarea	E	E	E	P		E	E	P	E	E	E		E			E	E		E	E	P		P				
105.30	Middle Klamath River Hydrologic Area																											
105.31	Ukonom Hydrologic Subarea	E	E	E	E	E	E	E	P	E	E	E	E	E	E		E	E		E	E			P	E			
105.32	Happy Camp Hydrologic Subarea	E	E	E	E	E	E	E	P	E	E	E	E	E	E		E	E		E	E			P	E			
105.33	Seiad Valley Hydrologic Subarea	E	E	E	E	E	E	E	P	E	E	E	E	E	E		E	E		E	E			P	E			
105.35	Beaver Creek Hydrologic Subarea	E	E	E	E	E	E	E	P	E	E	E	E	E			E	E		E	E			P				
105.36	Hornbrook Hydrologic Subarea	E	E	E	E	E	E	E	P	E	E	E	E	E			E	E		E	E			P				
105.37	Iron Gate Hydrologic Subarea	P	P	P	P		E	E	E	E	E	E	E	E			E	E		E	E	E		E				
105.38	Copco Lake Hydrologic Subarea	E	E	E	P		E	E	E	E	E	E	E	E	E		E	E		E	E			E				
105.40	Scott River Hydrologic Area																											
105.41	Scott Bar Hydrologic Subarea	E	E	E	P	E	E	E	E	E	E	E		E			E	E		E	E			P				
105.42	Scott Valley Hydrologic Subarea	E	E	E	P	E	E	E	E	E	E	E		E			E	E		E	E			E				

TABLE 2-1: BENEFICIAL USES OF SURFACE WATERS OF THE NORTH COAST REGION

HU/HA/HSA	HYDROLOGIC UNIT/AREA/SUBUNIT/ DRAINAGE FEATURE	BENEFICIAL USES																										
		MUN	AGR	IND	PRO	GWR	FRSH	NAV	POW	REC1	REC2	COMM	WARM	COLD	BSA	SAL	WILD	RARE	MAR	MIGR	SPWN	SHELL	EST	AQUA	CUL	FLD	WET	WQE
105.50	Shasta Valley Hydrologic Area																											
	Shasta River & Tributaries	E	E	E	P	E	E	E	P	E	E	E	E	E			E	E		E	E			E				
	Lake Shastina	P	E	P	P	E	E	E		E	E		E	E			E			P				P				
	Lake Shastina Tributaries	E	E	E	P	E	E	P	P	E	E	E	E	E			E			E	E			P				
105.80	Butte Valley Hydrologic Area																											
105.81	Macdoel-Dorris Hydrologic Subarea	E	E	P	P				E	E	E	E	E	E			E	E		E	E			P				
	Meiss Lake	E	E	P	P	E				P	E		E	E			E							P				
105.82	Bray Hydrologic Subarea	E	E						P	E	E	E	E		E		E	E		E	E			P				
105.83	Tennant Hydrologic Subarea	E	E	P	P	E	E		P	E	E	P	P	E			E	P		E	E			P				
105.90	Lost River Hydrologic Area																											
105.91	Mt Dome Hydrologic Subarea	P	E	P	P	E	E		P	P	E	P	E	E	E		E	E		E	E			P				
105.92	Tule Lake Hydrologic Subarea	P	E	P	P	E	E			P	E	E	E	P	E		E	E		E	E			P				
105.93	Clear Lake Hydrologic Subarea	P	E	P	P	E	E	P	P	E	E	E	E	E	E		E	E		E	E	P		P				
105.94	Boles Hydrologic Subarea	P	E	P	P	E	E		P	P	E	E	E	E	E		E	E		E	E	P		P				
	Trinity River Hydrologic Unit																											
106.10	Lower Trinity River Hydrologic Area																											
106.11	Hoopa Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E		E	E		E	E		E	E	P		P	E			
106.12	Willow Creek Hydrologic Subarea	E	E	E	P	E	E	E	E	E	E	E		E			E	E		E	E	P		P				
106.13	Burnt Ranch Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E	P		E				
106.14	New River Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E		E	E		E	E		E	E	P		P				
106.15	Helena Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E	P		P				
106.20	South Fork Trinity River Hydrologic Area																											
106.21	Grouse Creek Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E			P				
106.22	Hyampom Hydrologic Subarea	E	E	E	P	E	E	P	E	E	E	E		E			E	E		E	E			P				
106.23	Forest Glen Hydrologic Subarea	E	E	E	P	E	E	P	P	E	E	E		E			E	E		E	E			P				
106.24	Corral Creek Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E			P				
106.25	Hayfork Valley Hydrologic Subarea	E	E	E	E	E	E		P	E	E	E		E			E	E		E	E			P				
	Ewing Reservoir	E		P	P			E		P	E	E	E	E			E	E						P				
106.31	Douglas City Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E		E	E		E	E		E	E			P				
106.32	Weaver Creek Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E		E	E		E	E		E	E			E				
106.40	Upper Trinity River Hydrologic Area																											
	Trinity Lake (formerly Clair Engle Lake)	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	E		P	E			P				
	Lewiston Reservoir	E	E	P	P	E	E	E	E	E	E	E	P	E	E		E	E		P	E			E				
	Trinity River	E	E	P	P	E	E	E	P	E	E	E		E	E		E	E		E	E			E				
107.00	**Redwood Creek Hydrologic Unit**																											
107.10	Orick Hydrologic Area	E	E	E	P	E		E	P	E	E	E		E	E		E	E	E	E	E		E	P	E			
107.20	Beaver Hydrologic Area	E	E	E	P	E		E	P	E	E	E		E	E		E	E		E	E			P				
107.30	Lake Prairie Hydrologic Area	E	E	E	P	E		E	P	E	E	E		E	E		E	E		E	E			P				
108.00	**Trinidad Hydrologic Unit**																											
108.10	Big Lagoon Hydrologic Area	E	E	E	P	E	E	E		E	E	E		E	E		E	E	E	E	E		E	P	E			
108.20	Little River Hydrologic Area	P	E	E	P	E	E	E		P	E	E		E			E	E	E	E	E		E	P	E			

TABLE 2-1: BENEFICIAL USES OF SURFACE WATERS OF THE NORTH COAST REGION

HU/HA/HSA	HYDROLOGIC UNIT/AREA/SUBUNIT/ DRAINAGE FEATURE	BENEFICIAL USES																										
		MUN	AGR	IND	PRO	GWR	FRSH	NAV	POW	REC1	REC2	COMM	WARM	COLD	BSA	SAL	WILD	RARE	MAR	MIGR	SPWN	SHELL	EST	AQUA	CUL	FLD	WET	WQE
109.00	**Mad River Hydrologic Unit**																											
109.10	Blue Lake Hydrologic Area	E	E	E	E	E	E	E	P	E	E	E		E	E		E	E	P	E	E		E	E	E			
109.20	North Fork Mad River Hydrologic Area	E	E	E	E	E	E	E	P	E	E	E		E			E	E		E	E			P				
109.30	Butler Valley Hydrologic Area	E	E	E	E	E	E	E	P	E	E	E		E	E		E	E		E	E			P	E			
109.40	Ruth Hydrologic Area	E	E	E	E	E	E	E	E	E	E	E	E	E			E	E		E	E			P				
110.00	**Eureka Plain Hydrologic Unit**																											
	Jacoby Creek	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E		E*	P	E			
	Freshwater Creek	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E		E*	E	E			
	Elk River	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E		E*	P				
	Salmon Creek	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E		E*	P	E			
	Humboldt Bay	E	E	E	P		E	E	P	E	E	E		E	E		E	E	E	E	E	E	E*	E	E			
111.20	Van Duzen River Hydrologic Area																											
111.21	Hydesville Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E	E	E	E		E	E		E	E			P	E			
111.22	Bridgeville Hydrologic Subarea	E	E	E	P	E	E	E	E	E	E	E	E	E			E	E		E	E			P				
111.23	Yager Creek Hydrologic Subarea	E	E	E	P	E	E		P	E	E	E	E	E			E	E		E	E			E	E			
111.30	South Fork Eel River Hydrologic Area																											
111.31	Weott Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E	E	E			E	E		E	E			P				
111.32	Benbow Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E	E	E	E		E	E		E	E			P				
111.33	Laytonville Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E	E	E			E	E		E	E			P				
111.40	Middle Fork Eel River Hydrologic Area																											
111.41	Sequoia Hydrologic Subarea	E	E	E	P	E	E	E	E	E	E	E	E	E			E	E		E	E			P				
111.42	Spy Rock Hydrologic Subarea	E	E	E	P	E	E	E	E	E	E	E	E	E			E	E		E	E			P				
111.50	North Fork Eel River Hydrologic Area	E	E	E	P	E	E	E	E	E	E	E	E	E	E		E	E		E	E			P				
111.60	Upper Main Eel River Hydrologic Area																											
111.61	Outlet Creek Hydrologic Subarea	E	E	E	P	E		E	P	E	E	E	E	E			E	E		E	E			E				
111.62	Tomki Creek Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E	E	E			E	E		E	E			E				
111.63	Lake Pillsbury Hydrologic Subarea	E	E	E	P	E	E	E	E	E	E	E	E	E			E	E		E	E			E				
111.70	Middle Fork Eel River Hydrologic Area																											
111.71	Eden Valley Hydrologic Subarea	E	E	E	P		E	E	P	E	E	E	E	E			E	E		E	E			E				
111.72	Round Valley Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E	P	E			E	E		E	E			E				
111.73	Black Butte River Hydrologic Subarea	E	E	E	P		E	E	E	E	E	E	E	E			E	E		E	E			P				
111.74	Wilderness Hydrologic Subarea	E	E	E	P		E	E	E	E	E	E	E	E	P		E	E		E	E			P				
112.00	**Cape Mendocino Hydrologic Unit**																											
112.10	Oil Creek Hydrologic Area	P	E	E	P		E		P	E	E	E		E			E	E		E	E		E	E	E			
112.20	Capetown Hydrologic Area	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E			P	E			
112.30	Mattole River Hydrologic Area	E	E	E	P	E	E	E	P	E	E	E	P	E	E		E	E		E	E		E	E				
113.00	**Mendocino Coast Hydrologic Unit**																											
113.10	Rockport Hydrologic Area	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E		E	P				
113.11	Usal Creek Hydrologic Subarea	E	P	P	P	E	E	E	P	E	E	E		E	E		E	E		E	E							
113.12	Wages Creek Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E							
113.13	Ten Mile River Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E		E	P				
113.20	Noyo River Hydrologic Area	E	E	E	P	E	E	E	E	E	E	E		E	E		E	E		E	E		E	E				
113.30	Big River Hydrologic Area	E	E	E	P	E	E	E	P	E	E	E		E	E		E	E		E	E		E	P				
113.40	Albion River Hydrologic Area	E	E	E	P	E	E	E	P	E	E	E		E	E		E	E		E	E		E	P				
113.50	Navarro River Hydrologic Area	E	E	E	P	E	E	E	P	E	E	E		E	E		E	E		E	E		E	P				

TABLE 2-1: BENEFICIAL USES OF SURFACE WATERS OF THE NORTH COAST REGION

HU/HA/HSA	HYDROLOGIC UNIT/AREA/SUBUNIT/ DRAINAGE FEATURE	BENEFICIAL USES																										
		MUN	AGR	IND	PRO	GWR	FRSH	NAV	POW	REC1	REC2	COMM	WARM	COLD	BSA	SAL	WILD	RARE	MAR	MIGR	SPWN	SHELL	EST	AQUA	GUL	FLD	WET	WQE
113.60	Pt Arena Hydrologic Area																											
113.61	Greenwood Creek Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E		E	P				
113.62	Elk Creek Hydrologic Subarea	P	P	E	P	E	E	E	P	E	E	E		E			E	E		E	E		E	P				
113.63	Alder Creek Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E		E	P				
113.64	Brush Creek Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E		E	P				
113.70	Garcia River Hydrologic Area	E	E	E	P		E	E	P	E	E	E		E			E	E		E	E		E	P				
113.80	Gualala River Hydrologic Area																											
113.81	North Fork Gualala Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E		E			E	E		E	E			E				
113.82	Rockpile Creek Hydrologic Subarea	E	E	E	P	E		E	P	E	E	E	E	E			E	E		E	E		E	P				
113.83	Buckeye Creek Hydrologic Subarea	E	E	E	P	E		E	P	E	E	E	E	E			E	E		E	E			P				
113.84	Wheatfield Fork Hydrologic Subarea	E	E	E	P	E		E	P	E	E	E	E	E			E	E		E	E			P				
113.85	Gualala Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E	E	E	E		E	E		E	E			P				
113.90	Russian Gulch Hydrologic Area	E	E	E	P	E				E	E	P		E		E	E			E	E			E				
114.00	**Russian River Hydrologic Unit**																											
114.10	Lower Russian River Hydrologic Area																											
114.11	Guerneville Hydrologic Subarea	E	E	E	P	E	E	E	E	E	E	E	E	E	E		E	E		E	E		E	P				
114.12	Austin Creek Hydrologic Subarea	E	E	E	P	E		E	E	E	E	E	E	E			E	E		E	E			P				
114.20	Middle Russian River Hydrologic Area																											
114.21	Laguna Hydrologic Subarea	P	E	E	P	E	E	E	P	E	E	E	E	E			E	E		E	E	P		P				
114.22	Santa Rosa Hydrologic Subarea	E	E	E	P	E		E	P	E	E	E	E	E	E		E	E		E	E	P		P				
114.23	Mark West Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E	E	E			E	E		E	E	P		P				
114.24	Warm Springs Hydrologic Subarea	E	E	E	P	E	E	E	E	E	E	E	E	E	E		E	E		E	E			E				
114.25	Geyserville Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E	E	E			E	E		E	E	P		P				
114.26	Sulphur Creek Hydrologic Subarea	E	E	E	P	E		E	P	E	E	E	E	E			E	E		E	E			P				
114.30	Upper Russian River Hydrologic Area																											
114.31	Ukiah Hydrologic Subarea	E	E	E	P	E	E	E	P	E	E	E	E	E			E	E		E	E	P		P				
114.32	Coyote Valley Hydrologic Subarea	E	E	E	P	E	E	E	E	E	E	E	E	E			E	E		E	E			P				
114.33	Forsythe Creek Hydrologic Subarea	E	E	E	P	E		E	P	E	E	E	E	E			E	E		E	E			P				
115.00	**Bodega Hydrologic Unit**																											
115.10	Salmon Creek Hydrologic Area	E	E	E	P	E		E		E	E	E		E	E		E	E		E	E	P	E	P				
115.20	Bodega Harbor (or Bay) Hydrologic Area	E	E	E	P	E		E		E	E	E		E	E		E	E	E	E	E	E		E				
115.30	Estero Americano Hydrologic Area	E	E	E	P	E		E		E	E	E		E			E	E	E	E	E	P	E	P				
115.40	Estero de San Antonio Hydrologic Area	E	E	E	P	E		E		E	E	E		E			E	E	E	E	E	P	E	P				
	Minor Coastal Streams (not listed above**)	E	P	P	P	P	P	P		P	P	E	P	P	P		E	E	P	P	P		E	P	P			
	Ocean Waters			P	P			E		E	E	E			P		E	E	E	E	E	E		E				
	Bays			P	P			E		P	E	E	P	E	P		E	P	E	E	E	E	P	P	P			
	Saline Wetlands			P		P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	E	P
	Freshwater Wetlands	P	P	P		P	P	P		P	P	P	P	P	P		P	P		P	P	P	P	P	P	P	E	P
	Estuaries	P	P	P	P		P	E	P	E	E	P	P	E	P		E	P	E	E	E	E	E	P	P			
	Groundwater	E	E	E	P																			P	E			

Waterbodies are gouped by hydrologic unit (HU) or hydrologic area (HA)

**Permanent or intermittent P= Potential E=Existing

*EST use applies only to the estuarine portion of the waterbody as defined in Chapter 2

Pet - Cold
MAR
MIGR.
RARE
REC
SPECIAL
WILD.