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BULLETIN No. 130-74

HYDROLOGIC DATA: 1974

Volume I: NORTH COASTAL AREA

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STATE OF CALIFORNIA

The Resources Agency

Department of Water Resources

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DECEMBER 1975

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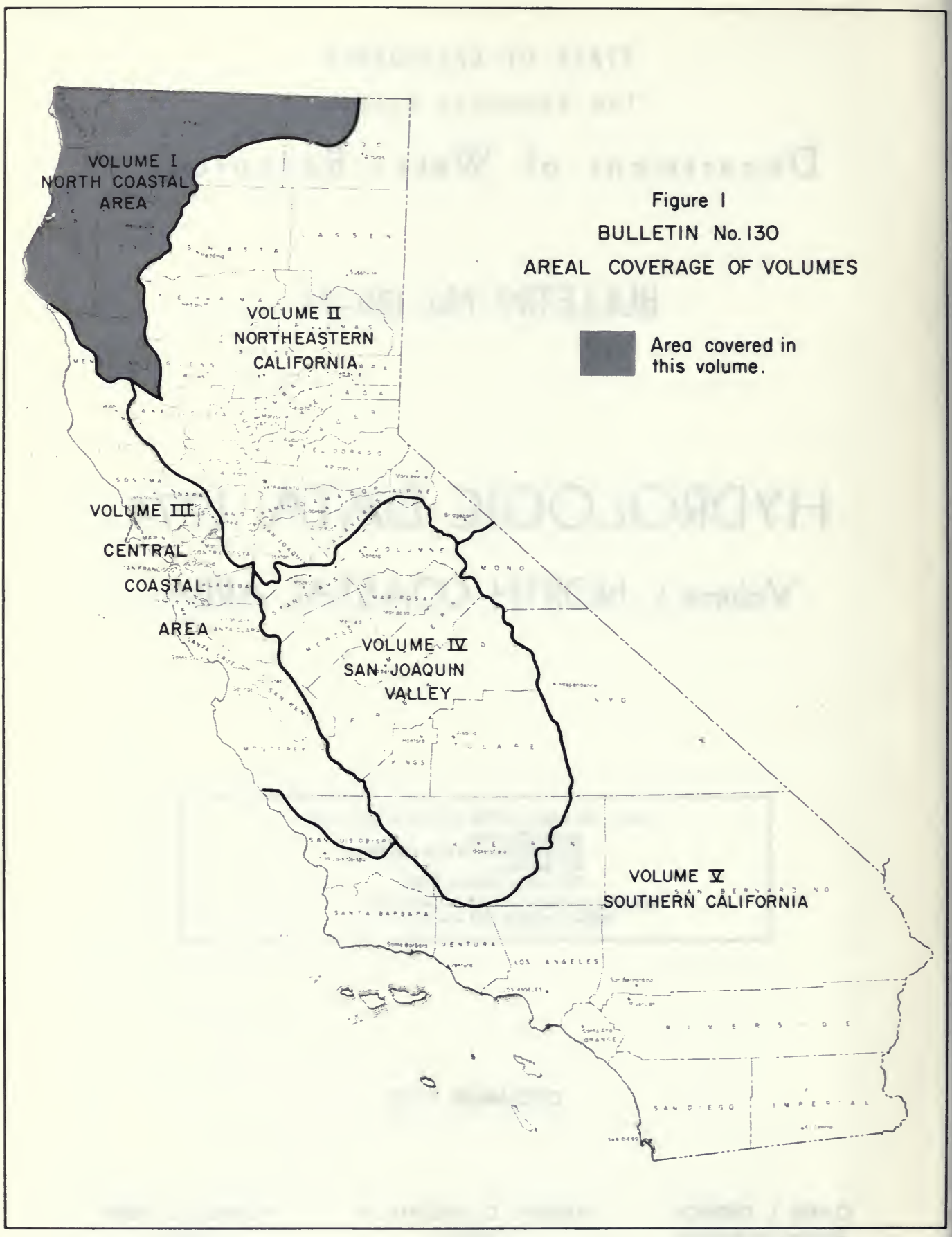

Figure 1
BULLETIN No. 130
AREAL COVERAGE OF VOLUMES

FOREWORD

The hydrologic data programs of the Department of Water Resources supplement the data collection activities of other agencies and help satisfy the needs for data on the quality and quantity of water in the State. Bulletin No. 130-74 presents accurate, comprehensive, and timely hydrologic data which provide a more complete knowledge of the factors affecting our environment and are prerequisites for effective planning and operation of water facilities.

The Bulletin No. 130 series is published annually in five volumes. Each volume presents hydrologic data for one of five reporting areas of the State. These areas are delineated on the map on the opposite page.

Volume I contains data on climate, surface water flow, ground water levels, and surface and ground water quality in the North Coastal Area for the 1973-74 water year. Figures show hydrographic unit boundaries; ground water basins; and the location of climatological observation, surface water measurement, and surface water quality sampling stations.

Ronald B. Robie, Director
Department of Water Resources
The Resources Agency
State of California

CONVERSION FACTORS

English to Metric System of Measurement

Quantity	English unit	Multiply by*	To get metric equivalent
Length	inches (in)	25.4	millimetres (mm)
		.0254	metres (m)
	feet (ft)	.3048	metres (m)
	miles (mi)	1.6093	kilometres (km)
Area	square inches (in^2)	6.4516×10^{-4}	square metres (m^2)
	square feet (ft^2)	.092903	square metres (m^2)
	acres	4046.9	square metres (m^2)
		.40469	hectares (ha)
		.40469	square hectometres (hm^2)
		.0040469	square kilometres (km^2)
	square miles (mi^2)	2.590	square kilometres (km^2)
Volume	gallons (gal)	3.7854	litres (l)
		.0037854	cubic metres (m^3)
	million gallons (10^6 gal)	3785.4	cubic metres (m^3)
	cubic feet (ft^3)	.028317	cubic metres (m^3)
	cubic yards (yd^3)	.76455	cubic metres (m^3)
	acre-feet (ac-ft)	1233.5	cubic metres (m^3)
		.0012335	cubic hectometres (hm^3)
		1.233×10^{-6}	cubic kilometres (km^3)
Volume/Time (Flow)	cubic feet per sec (ft^3/s)	28.317	litres per second (l/s)
		.028317	cubic metres per sec (m^3/s)
	gallons per minute (gal/min)	.06309	litres per second (l/s)
		6.309×10^{-5}	cubic metres per sec (m^3/s)
	million gallons per day (mgd)	.043813	cubic metres per sec (m^3/s)
Water Usage	acre-feet per acre	.3048	cubic metres per square metre (m^3/m^2)
Mass	pounds (lb)	.45359	kilograms (kg)
	tons (short, 2,000 lb)	.90718	tonne (t)
		907.18	kilograms (kg)
Power	horsepower (hp)	0.7460	kilowatts (kW)
Pressure	pounds per square inch (psi)	6894.8	pascal (Pa)

* For greater accuracy, use conversion factors in "Metric Practice Guide" (American Society for Testing and Materials, E 380-72).

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APPENDIX F: WASTE WATER DATA, which appeared in certain volumes of the Bulletin No. 130 series, has been discontinued. For information regarding waste water, the reader is referred to the recently reactivated Bulletin No. 68 series: "Inventory of Waste Water Production and Waste Water Reclamation Practices in California".

ABSTRACT

The report contains tables showing data on surface water flow, ground water levels, and surface and ground water quality in the North Coastal area during the 1973-74 water year. Figures show the location of climatological stations, surface water measurement stations, surface water sampling stations, and ground water basins.

ACKNOWLEDGMENTS

Valuable assistance and contributions were received from several agencies and many private cooperators. The cooperation of the National Weather Service (formerly the U. S. Weather Bureau) and the U. S. Geological Survey was particularly helpful and is gratefully appreciated.

A special note of thanks is extended to the many loyal and dedicated weather observers whose unselfish efforts have contributed immeasurably to our knowledge of historical weather conditions in the North Coastal area.

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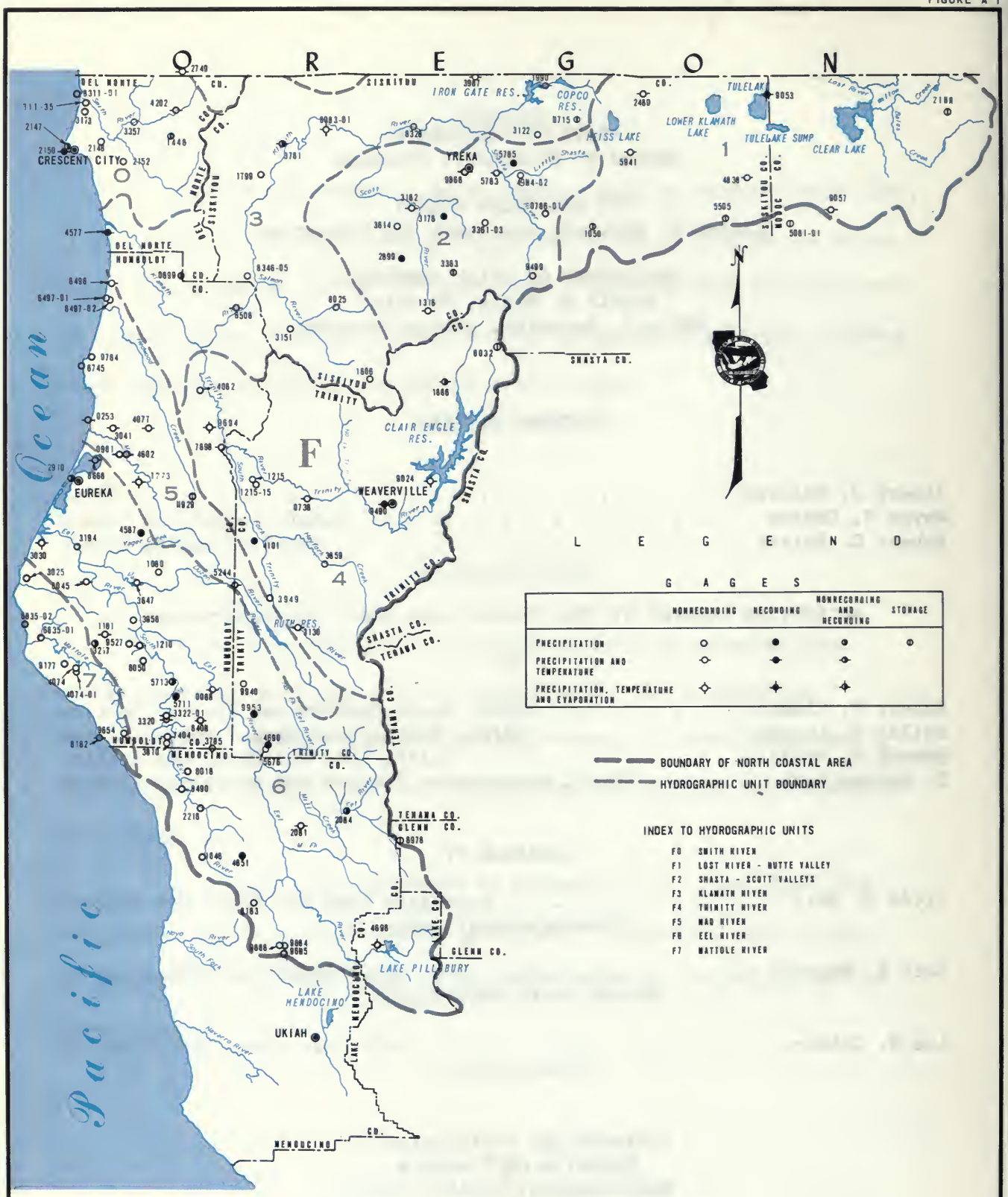
FIGURE A-1



CLIMATOLOGICAL OBSERVATION STATIONS

APPENDIX A

CLIMATOLOGICAL DATA

TABLE A-1

PRECIPITATION IN NORTH COASTAL AREA
DURING WATER YEAR 1973

Table A-1 summarizes monthly precipitation totals for selected stations for the 1974 water year, October 1, 1973, through September 30, 1974. The table shows stations by assigned number, name, and county. Location is defined by latitude and longitude in degrees to the third decimal, and stations are located on the map on the preceding page.

Precipitation values are shown to the nearest hundredth (.01) of an inch. Where digital recording rain gages are used, a zero is shown in the second decimal place, even though these instruments record to only the nearest tenth (.1) of an inch. The following notations are used to qualify the values:

- \- No record or incomplete record
- B Record began
- E Wholly or partially estimated
- N Record ends
- T Trace, an amount too small to measure

Precipitation data collected by the National Weather Service and local observers and cooperators in the North Coastal area are available in greater detail in other reports. The National Weather Service publishes a report entitled "Climatological Data for California" and a companion volume, "Hourly Precipitation Data". Department of Water Resources Bulletin No. 165, "Climatological Stations in California, 1971, Indexed by County", contains station information on both active and historical precipitation measurement stations.

In addition, evaporation data and daily climatologic data, including temperatures, together with local conditions and qualifying remarks, are available in the files of the Department of Water Resources.

The county codes (CO) used in Table A-1 are shown below:

County	Code
Del Norte	08
Glenn	11
Humboldt	12
Lake	17
Mendocino	23
Modoc	25
Siskiyou	47
Trinity	53

PRECIPITATION IN NORTH COASTAL AREA DURING WATER YEAR 1974

CO	STA NO	LAT	LONGIT	ELEV	STATION NAME	TOTAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
12	F6 008800	40.183	123.600	435	ALDERPOINT	.00-	8.18	20.13	.00-	.00-	.00-	.00-	.00-	.25	.92	0.47	0.50	0.00
12	F5 025300	40.971	124.089	217	ARCATA A P	69.98	5.39	22.36	11.23	8.55	6.75	9.30	4.65	.71	.83	0.15	0.05	0.01
47	F2 078601	41.591	122.320	2955	BIG SPRINGS 4 E	13.10	3.07	2.02	1.35	1.76	.50	1.22	1.62	.00	.33	0.33	0.10	0.00
23	F6 104600	39.686	123.660	1480	BRANSCOMB 2 NW	127.93	8.14	33.06	16.89	21.94	11.99	23.66	8.68	.15	.45	1.83	0.34	0.00
12	F6 108000	40.516	123.816	2050	BRIDGEVILLE 4 NNW	104.29	8.99	29.97	18.52	15.11	10.27	14.07	5.58	.60	.15	0.55	0.48	0.00
	F6 108400					.00-	6.40	22.70	.00-	.00-	.00-	10.50	3.40	.50	.40	0.30	0.40	0.00
12	F6 118100	40.350	124.108	410	BULL CREEK	122.75	5.84	34.71	20.66	24.61	11.04	18.31	5.58	.56	.54	0.45	0.45	0.00
12	F6 121000	40.308	123.906	200	BURLINGTON ST PARK	107.60	6.49	32.40	15.94	21.32	9.82	14.39	4.21	.39	1.14	0.82	0.68	0.00
53	F4 121500	40.796	123.479	2150	BURNT RANCH 1S	68.00	6.61	17.54	12.36	8.82	7.38	10.26	3.74	.29	.53	0.42	0.05	0.00
12	F5 123300	40.766	123.900	420	BUTLER VALLEY RANCH	73.49	7.14	19.16	11.64	8.25	9.79	10.12	5.95	.93	.29	0.10	0.12	0.00
47	F2 131600	41.300	122.800	3136	CALLAHAN RANGER STA	29.36	3.40	5.48	4.00	6.66	2.23	4.16	1.81	.14	.70	0.51	0.27	0.00
47	F3 160600	41.100	123.050	2980	CECILVILLE 5 SE	.00-	5.26	.00-	.00-	.00-	.00-	.00-	2.97	.56	.63	0.82	0.00	-0.00-
47	F3 179900	41.708	123.448	975	CLEAR CREEK	100.51	8.21	26.83	18.12	17.85	10.41	13.89	4.85	.04	.11	0.20	0.00	0.00
53	F4 188600	41.883	122.700	2500	COFFEE CREEK RS	.00-	7.10	.00-	11.60	18.80	7.60	15.10	4.10	.10	1.20	2.30	0.30	0.00
47	F3 199000	41.983	122.333	2700	COPCO DAM NO 1	24.54	2.94	6.04	3.10	4.07	2.40	2.82	2.56	.08	.00	T0.33	0.20	0.00
23	F6 208100	39.783	123.250	1385	COVELO	62.35	5.54	15.00	8.73	11.03	4.77	11.75	3.85	.27	.50	0.85	0.06	0.00
23	F6 208400	39.833	123.083	1514	COVELO EEL RIVER RS	.00-	.00-	15.10	8.50	.00-	6.10	10.10	2.30	.50	.00	0.90	0.00	0.00
08	F0 214700	41.766	124.200	40	CRESCENT CITY 1 N	93.81	6.07	31.25	14.68	12.37	11.06	12.82	3.20	.75	.85	0.68	0.08	0.00
08	F0 214800	41.800	124.083	120	CRESCENT CITY 7 ENE	123.28	7.98	41.72	21.81	14.61	14.19	14.42	6.10	.94	.85	0.63	0.03	0.00
08	F0 215000	41.766	124.200	50	CRESCENT CITY HMS	.00-	6.90	.00-	.00-	13.30	9.20	13.40	3.50	.70	1.00	0.80	0.00	0.00
08	F0 215200	41.755	123.991	360	CRESCENT CITY 11 E	159.38	10.48	50.39	26.59	23.39	18.10	19.95	7.24	2.10	.51	0.63	0.00	0.00
23	F6 221800	39.833	123.633	1270	CUMMINGS	114.87	8.19	30.56	15.08	21.55	10.86	20.51	6.30	.21	.35	1.10	0.16	0.00
47	F1 248000	41.955	121.908	4240	DORRIS INSPECT STA	19.66	2.27	4.31	1.47	1.75	1.20	3.14	1.23	.16	.34	3.12	0.67	0.00
08	F0 274900	42.000	123.716	1711	ELK VALLEY	.00-	6.98	39.59	23.33	17.05	13.98	15.99	.00-	2.07	.20	0.15	0.00	0.00
47	F2 289900	41.466	122.900	2912	ETNA	42.76	3.77	9.27	6.74	10.47	3.95	5.69	2.39	.06	.13	0.24	0.05	0.00
12	F6 291000	40.800	124.166	43	EUREKA WB CITY	51.05	4.14	16.58	7.02	6.02	5.98	6.98	3.15	.42	.33	0.11	0.32	0.00T
12	F5 304100	40.943	124.018	285	FIELDBROOK 4 D RCH	95.80	10.10	28.45	14.50	10.75	12.15	15.15	2.20	1.10	.80	0.60	0.00	0.00
00	F3 312200	41.811	122.371	2960	FOOTHILL SCHOOL	19.83	2.90	4.40	2.09	2.84	1.70	2.98	2.14	.14	.02	0.62	0.00	0.00
53	F4 313000	40.383	123.333	2340	FOREST GLEN	109.91	7.59	30.14	16.80	20.25	8.60	20.31	3.93	.35	.67	1.01	0.26	0.00
08	F0 317300	41.866	124.150	46	FORT DICK	105.74	6.89	34.45	18.13	14.01	12.22	13.11	4.56	.59	1.15	0.58	0.05	0.00
47	F2 317600	41.583	122.716	3324	FORT JONES 6 ESE	31.80	3.50	6.50	3.50	7.80	2.50	4.10	2.40	.30	.20	0.70	0.30	0.00
47	F2 318200	41.600	122.850	2720	FORT JONES RANGER ST	34.20	3.86	7.17	5.15	7.13	2.62	3.33	3.92	.05	.14	0.79	0.04	0.00
12	F6 319400	40.600	124.150	60	FORTUNA	63.92	3.95	19.30	8.30	9.36	7.60	5.40	8.72	.33	.36	0.08	0.52	0.00
12	F6 321700	40.306	124.065	2500	FOX CAMP	136.26	13.60	37.66	20.64	25.33	11.98	20.41	6.17	.47	.00	0.00	0.00	0.00
12	F6 332000	40.100	123.800	340	GARBERVILLE	90.84	6.83	24.31	13.04	19.30	7.96	13.06	4.29	.09	.86	0.45	0.65	0.00
12	F6 332201	40.100	123.794	540	GARBERVILLE HMS	91.90	6.81	26.50	12.11	19.44	7.67	12.54	4.43	.11	1.05	0.55	0.69	0.00
08	F0 335700	41.866	123.966	384	GASQUET RANGER STA	138.51	7.40	45.96	22.89	17.95	16.68	18.63	6.50	1.24	.47	0.79	0.00	0.00
47	F2 361400	41.550	122.900	2818	GREENVIEW	37.40	3.70	7.07	5.05	11.47	3.37	4.36	1.50	.00	.20	0.68	0.00	0.00
47	F3 376100	41.800	123.383	1090	HAPPY CAMP RANGR STA	86.80	7.34	22.17	15.64	15.71	9.88	11.49	4.19	.05	.13	0.20	0.00	0.00
23	F6 378500	39.989	123.611	1910	HARRIS 7 SSE	102.76	7.24	26.97	13.86	18.74	10.95	18.25	4.74	.48	.54	0.64	0.35	0.00
53	F4 385900	40.550	123.166	2340	HAYFORK RANGER STA	55.03	3.95	11.30	11.01	10.69	4.32	8.60	2.52	.30	.56	0.96	0.82	0.00
47	F3 398700	42.000	122.633	2900	HILTS	33.53	3.07	6.83	4.38	8.55	2.33	6.78	.87	.49	.05	0.18	0.00	T0.00
12	F4 408200	41.050	123.666	350	HOOPA	82.51	8.22	21.86	15.46	9.51	10.01	11.73	4.90	.37	.15	0.22	0.08	0.00
	F4 408900					.00-	8.10	23.50	13.44	.00-	.00-	.00-	3.53	.00-	.00	0.20	0.00	0.00
53	F4 419100	40.616	123.466	1260	HYANPOM	.00-	4.20	15.44	10.04	.00-	.00-	8.55	1.72	.00	.30	0.24	0.08	0.00
08	F0 420200	41.900	123.769	1250	IDLEWILD HMS	121.49	6.55	36.87	19.39	19.05	13.98	17.55	6.50	1.01	.39	0.20	0.00	0.00
08	F3 457700	41.516	124.033	25	KLAMATH	113.99	8.74	35.30	20.61	12.75	12.26	15.02	7.34	.85	.57	0.53	0.02	0.00
12	F6 458700	40.633	123.900	2356	KNEELAND 10 SSE	.00-	8.14	25.05	12.68	8.90	.00-	21.43	4.51	.73	.28	0.17	0.30	0.00
12	F5 460200	40.866	123.958	150	KORBEL	68.12	8.19	19.19	9.92	6.37	7.39	8.31	5.47	.94	1.62	0.36	0.36	0.00
47	F1 483800	41.729	121.508	4770	LAVA BEDS NAT MON	18.55	2.68	3.41	1.75	3.01	1.15	4.42	.48	.13	.02	1.03	0.47	0.00
23	F6 485100	39.700	123.483	1640	LAYTONVILLE	.00-	6.50	24.70	.00-	.00-	7.30	18.40	3.30	.20	.60	1.90	0.10	0.00
47	F2 498402	41.716	122.383	2725	LITTLE SHASTA	14.42	2.51	3.03	1.36	1.71	.99	2.05	1.12	.15	.32	0.82	0.36	0.00
53	F5 524400	40.450	123.533	2775	MAD RIVER RANGER STA	96.06	8.13	23.04	16.17	18.08	8.80	14.14	5.71	.37	.75	0.55	0.32	0.00
12	F6 571100	40.183	123.783	263	MIRANDA 4 SE	.00-	7.80	27.40	11.20	19.50	8.00	.00-	.00-	.00-	.00-	0.00	-0.00	-0.00
12	F6 571300	40.200	123.766	400	MIRANDA SPENGLER RCH	.00-	7.18	24.34	10.41	17.68	7.46	.00-	.00-	.21	1.05	0.35	0.50	0.00
47	F2 578300	41.728	122.526	2500	MONTAGUE	16.10	2.39	3.21	1.59	2.72	.78	2.07	2.27	.02	.09	0.77	0.19	0.00
47	F2 578500	41.750	122.466	2640	MONTAGUE 3 NE	.00-	2.40	3.90	1.70	3.40	1.20	2.60	2.00	.10	.10	0.70	0.00	-0.00
47	F1 594100	41.783	122.000	4250	MOUNT HEBRON R S	13.31	2.82	3.55	1.49	1.17	.64	2.17	.65	.08	.05	0.07	0.62	0.00
12	F6 605000	40.261	123.866	190	MYERS FLAT	97.47	7.00	29.76	14.42	17.80	8.05	13.77	3.79	.15	1.24	1.10	0.39	0.00
47	F3 632900	41.833	123.850	1963	OAK KNOLL RS 2	42.68	3.92	9.95	5.07	9.31	4.58	6.27	2.84	.21	.11	0.42	0.00	0.00
12	F6 640000	40.083	123.661	2225	OLD HARRIS	107.10	8.59	29.47	15.45	14.00	9.68	16.93	10.38	.31	.79	1.02	0.48	0.00
12	F5 649701	41.323	124.041	50	ORICK 3 NNE	95.01	8.29	30.68	14.58	16.24	9.65	13.08	6.25	.79	.81	0.60	0.04	0.00
12	F5 649702	41.323	124.043	75	ORICK ARCATA REDWOOD	94.51	8.64	30.37	12.85	12.13	10.15	14.63	3.85	.69	.77	0.43	0.00	0.00
12	F5 649800	41.366	124.016	161	ORICK PRAIRIE CREEK	94.62	7.91	29.82	15.22	9.87	9.68	12.91	6.28	.80	1.39	0.42	0.32	0.00
12	F3 650800	41.300	123.533	403	ORLEANS	79.57	7.90	22.20	15.34	9.64	9.37	9.42	4.55	.32	.56	0.27	0.00	0.00
12	F3 651300	41.300	123.533	390	ORLEANS RS	.00-	7.70	21.20	14.20	10.60	7.80	10.20	3.70	.00-	.00-	0.00	-0.00	0.00
12	F7 683501	40.324	124.279	175	PETROLIA	96.39	4.88	31.63	11.77	18.36	9.82	13.72	5.01	.40	.13	0.55	0.12	0.00
12	F6 740400	40.833	123.783	500	RICHARDSON GROVE	111.51	5.35	31.13	16.18	22.86	9.53	18.99	5.57	.05	.62	1.02	0.21	0.00
	F5 761400					.00-	.00-	.00-	10.90	.00-	.00-	11.80	2.50	.40	.80	0.50	0.10	0.00
47	F3 802500	41.300	123.133	2169	SAWYERS BAR R S	67.27	6.88	15.94	12.21	8.71	7.32	10.00	4.64	.10	.42	0.30	0.75	0.00
12	F6 804500	40.483	124.100	139	SCOTIA	73.57	4.49	21.53	11.21	11.73	8.36	10.44	4.20	.40	.26	0.15	0.80	0.00T
12	F7 816200	40.833	124.066	55	SHELTER COVE	.00-	8.20	25.90	12.01	11.00	6.73	12.09	5.88	.00-	.00-	0.00	-0.00	-0.00
23	F6 849000	39.874	123.724	850	STANDISH HICKEY PARK	113.67	8.03	28.28	15.13	22.24	8.52	19.48	8.52	.12	.64	2.36	0.35	-0.00
	F6 866800					57.21	5.65	17.21	9.13	5.76	6.27	7.11	4.85	.50	.45	0.21	0.07	0.00
53	F4 902400	40.800	122.766	2500	TRINITY DAM VISTA PT	58.03	4.45	14.12	8.60	12.76	4.45	7.88	4.00	.12	1.17	0.41	0.07	0.00
47	F1 905300	41.966	121.466	4035	TULELAKE	.00-	1.19	3.30	.00-	.35	.64	1.45	.47	.13	.01	0.89	0.28	0.00
12	F7 917700	40.250	124.183	255	UPPER MATTOLE	115.92	7.04	39.03	14.13	20.29	12.39	17.14	4.64	.20	.41	0.27	0.38	0.00
53	F4 949000	40.733	122.933	2050	WEAVERVILLE RANGER S	63.63	5.92	14.95	9.55	12.10	5.63	8.98	4.17	.17	.79	1.24	0.13	0.00
12	F7 965400	40.021	123.936	1050	WHITETHORN	122.96	7.58	35.30	16.88	23.83	11.50	18.53	6.78	.07	.99	1.48	0.02	0.00
23	F6 968400	39.416	123.350	1350	WILLITS 1 NE	76.39	5.69	18.99	9.87	13.17	8.22	14.28	4.63	.20	.06	1.26	0.02	0.00
23	F6 968500	39.350	123.316	1925	WILLITS HOWARD RS	.00-	5.47	20.11	9.30	.00-	7.33	15.43	.00-	.15	.05	0.00	-0.03	0.00
53	F4 969400	40.950	123.633	461	WILLOW CREEK 1 NW	69.37	6.72	18.55	12.63	7.38	9.01	9.98	4.35	.25	.17	0.13	0.20	0.00
47	F2 986600	41.716	122.633	2631	YREKA	27.99	3.08	4.78	3.43	7.40	2.08	4.27	2.19	.15	.20	0.35	0.06	0.00
53	F6 994000	40.188	123.481	2800	ZENIA 1 SSE	100.04	6.86	24.77	15.38	18.66	9.09	17.75	5.88	.41	1.00	1.04	0.00	0.00
53	F4 995300	40.166	123.450	3600	ZENIA-KETTENPOM STORE	.00-	7.73	14.87	14.87	18.22	1.80	.00-	5.24	.21	.75	1.26	0.23	0.00

TABLE A-2

STORAGE GAGE PRECIPITATION DATA

Table A-2 lists storage gages for which the seasonal accumulation of precipitation is reported. These gages are located in the remote mountain regions where no observers are available to operate conventional rain gages. Storage precipitation gages are tanks with capacity for storing an entire year's rainfall, along with antifreeze to melt frozen precipitation and oil to prevent evaporation losses. Once each year, in the summer or early fall, the precipitation that has accumulated since the last measurement is measured and then emptied out. With the addition of the proper amount of oil and antifreeze, the gage is ready to receive the next season's amount. Although logistics preclude conducting the measurement operation exactly at the end of the water year and exactly one year following the previous measurement, data from the gages fairly accurately depict the total precipitation for the water year.

TABLE A-2

STORAGE GAGE PRECIPITATION DATA
NORTH COASTAL AREA
(Measurements by the Department of Water Resources)

Station	Station Number	1973-74 Season	
		Measurement Period	Precipitation in Inches
NORTH COASTAL AREA			
SMITH RIVER			
Camp Six Lookout	1446	6-18-73 to 6-25-74	169.66
LOST RIVER-BUTTE VALLEY			
Bray 10 WSW	1050	6-19-73 to 6-26-74	No data 1/
Crowder Flat	2188	6-27-73 to 6-19-74	21.91
Long Bell Station	5081-01	6-21-73 to 6-20-74	43.31
Medicine Lake	5505	6-21-73 to 8-29-74	83.27
SHASTA-SCOTT VALLEYS			
Gazelle Lookout	3363	6-19-73 to 6-27-74	26.95
KLAMATH RIVER			
Beswick 7S	0715	6-19-73 to 8-29-74	61.43
Blue Creek Mountain	0899	6-17-73 to 6-24-74	176.88
TRINITY RIVER			
Board Camp Mountain	0929	6-17-73 to 6-25-74	No data 1/
Mumbo Basin	6032	6-20-73 to 6-27-74	102.16
EEL RIVER			
Plaskett	6976	6-14-73 to 6-3-74	84.20

1/ Vandalism.

FIGURE B-1

SURFACE WATER MEASUREMENT STATIONS

APPENDIX B

SURFACE WATER MEASUREMENTS

This appendix presents surface water data for the 1974 water year, the period from October 1, 1973 to September 30, 1974. The data consist of summary tables of monthly and annual unimpaired runoff from four major North Coastal streams and daily mean discharges at the Department's two North Coastal area gaging stations (see Figure B-1).

In addition to data collected and published by the Department of Water Resources in this appendix, the U. S. Geological Survey collects and publishes data from many additional gaging stations for the same report area. This work is done under a federal-state cooperative contract, or through cooperative arrangements with other local or government agencies. Major exportations from the North Coastal Area, made through the U. S. Bureau of Reclamation's Judge Francis Carr Powerplant and the Pacific Gas and Electric Company's Potter Valley Powerhouse, are shown in the USGS report listed below. The data published in the following reports together with this report present a comprehensive analysis of the water resources for the area:

1. "Water Resources Data for California
   Part I. Surface Water Records
   Volume 1: Colorado River Basin, Southern Great Basin, and Pacific Slope Basins excluding Central Valley"
   United States Department of the Interior, Geological Survey
   Prepared in cooperation with the California Department of Water Resources and with other agencies.
2. Bulletin 120, "Water Conditions in California", Fall Issue, Department of Water Resources.
3. Bulletin 157, "Index of Stream Gaging Stations in and Adjacent to California, 1970". June 1971. Department of Water Resources.

TABLE B-1 ANNUAL UNIMPAIRED RUNOFF

Unimpaired runoff is defined as the flow that would occur naturally at a point in a stream if there were: (1) no upstream controls such as dams or reservoirs; (2) no artificial diversions or accretions; and (3) no change in ground water storage resulting from development.

TABLE B-1

ANNUAL UNIMPAIRED RUNOFF

In Percent of Average

WATER YEAR	KLAMATH RIVER COPCO TO ORLEANS	SALMON RIVER AT SOMESBAR	TRINITY RIVER AT LEWISTON	EEL RIVER AT SCOTIA
Average Annual Runoff*	4,434	1,225	1,227	5,379
1921-22			64	69
1922-23			56	51
1923-24			22	16
1924-25			122	133
1925-26			66	61
1926-27			149	146
1927-28	86	89	86	86
1928-29	57	48	43	35
1929-30	-	63	66	65
1930-31	40	39	33	30
1931-32	76	85	59	67
1932-33	81	83	65	68
1933-34	49	47	56	46
1934-35	81	93	79	84
1935-36	90	93	83	107
1936-37	73	80	81	66
1937-38	179	182	171	200
1938-39	58	62	47	50
1939-40	102	104	131	136
1940-41	100	103	208	153
1941-42	104	108	147	138
1942-43	133	142	90	106
1943-44	62	52	53	42
1944-45	82	92	85	89
1945-46	117	124	115	112
1946-47	58	63	60	49
1947-48	96	101	98	88
1948-49	72	78	89	77
1949-50	92	96	70	77
1950-51	142	147	131	133
1951-52	149	159	148	149
1952-53	146	147	131	133
1953-54	138	131	129	129
1954-55	60	48	60	60
1955-56	186	179	165	190
1956-57	97	97	88	81
1957-58	184	184	219	217
1958-59	77	82	85	77
1959-60	78	77	84	87
1960-61	102	98	99	100
1961-62	74	78	85	73
1962-63	133	140	130	132
1963-64	90	92	65	64
1964-65	161	152	140	175
1965-66	101	91	110	96
1966-67	117	103	135	123
1967-68	76	77	82	79
1968-69	135	133	143	161
1969-70	143	130	130	139
1970-71	192	200	136	148
1971-72	142	148	94	87
1972-73	81	73	113	112
1973-74**	219	226	222	219

* Average annual unimpaired runoff in thousands of acre-feet adjusted to the 50-year period October 1920 through September 1970.

** Preliminary data subject to revision.

TABLE B-2

MONTHLY UNIMPAIRED RUNOFF

In Percent of Average

MONTH		KLAMATH RIVER COPCO TO ORLEANS	SALMON RIVER AT SOMESBAR	TRINITY RIVER AT LEWISTON	EEL RIVER AT SCOTIA
October	Percent	162	220	202	212
1973	Average	86	21	21	55
November	Percent	525	652	807	810
1973	Average	215	55	51	284
December	Percent	194	327	247	227
1973	Average	487	128	99	939
January	Percent	362	365	506	229
1974	Average	655	165	110	1225
February	Percent	111	115	85	64
1974	Average	607	158	149	1176
March	Percent	223	210	198	276
1974	Average	588	158	157	795
April	Percent	206	160	140	215
1974	Average	627	179	217	550
May	Percent	149	129	160	79
1974	Average	587	192	241	239
June	Percent	183	181	212	84
1974	Average	335	108	123	79
July	Percent	159	180	198	136
1974	Average	125	35	36	22
August	Percent	136	150	98	181
1974	Average	67	15	13	10
September	Percent	111	118	52	99
1974	Average	56	10	9	7
1973-74	Percent	219	226	222	219
Water Year	Average	4,434	1,225	1,227	5,379

Note: The percent values are preliminary data subject to revision. Average annual unimpaired runoff in thousands of acre-feet adjusted to the 50-year period October 1920 through September 1970.

TABLE B-3 DAILY MEAN DISCHARGE

A stream gaging station is named after the stream and the nearest post office. Each of the two gaging stations has been assigned an identification number, the letter and first digit of which denote the hydrographic unit; the remaining digits further identify the stations.

North Coastal Area

F0 - Smith River	F4 - Trinity River
F1 - Lost River-Butte Valley	F5 - Mad River
F2 - Shasta-Scott Valleys	F6 - Eel River
F3 - Klamath River	F7 - Mattole River

The discharges estimated for periods of no record or invalid record are shown with the letter "E". Also qualified by the letter "E" are discharges obtained from extended ratings which exceed 140 percent of the highest measured flow-rate on which the rating curve was based.

The discharge figures in this table have been rounded off as follows:

1. Daily flows - cubic feet per second

0.0	- 9.9	nearest	Tenth
10	- 999	"	Unit
1,000	- 9,999	"	Ten
10,000	- 99,999	"	Hundred
100,000	- 999,999	"	Thousand

2. Monthly means - cubic feet per second

0.0	- 99.9	nearest	Tenth
100	- 9,999	"	Unit
10,000	- 99,999	"	Ten
100,000	- 999,999	"	Hundred

3. Yearly totals - acre-feet

0.0	- 9,999	nearest	Unit
10,000	- 99,999	"	Ten
100,000	- 999,999	"	Hundred
1,000,000	- 9,999,999	"	Thousand

TABLE B-3
DAILY MEAN DISCHARGE
(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1974	F21300	LITTLE SHASTA RIVER NEAR MONTAGUE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	3.4	7.4	42	19	24	16	95	58	46	17	9.4	6.7	1
2	3.2	6.1	29	12	23	17	87	60	44	17	9.3	6.5	2
3	3.2	6.1	24	8.0 *	23	16	82	61	43	16	9.2	6.5	3
4	3.2	6.2	21	7.0	21	15	79	62	42	16	9.1	6.5 *	4
5	3.1	7.6	20	5.9	20	16	84	64	43	16	13	6.4	5
6	3.6	19	22	5.1	19	18	77	69	42	15	12	6.3	6
7	5.5	22	48	5.1	18	19	68	79	41	15	9.7	6.3	7
8	3.6	41	39	5.2	18	16	63	85	39	15	9.0	6.2	8
9	3.3	17	27	5.4	17	17	58	85	37	16	8.7	6.2	9
10	3.1	21	22	5.6	17	18	58	84 *	34	16	8.6	6.2 *	10
11	3.1 *	80	23	6.0	16	19	57	85	32	16	8.5	6.1	11
12	3.0	76	20	7.0	16	21	56	85	30	16	8.1	5.9	12
13	3.0	30 *	18	8.0	15	22	52	80	29 *	15	8.1	6.0	13
14	3.0	23	18	38	15	23	49	76	28	14	8.1	6.0	14
15	3.1	20	21	112	14	30	49	73	27	14	8.0 *	6.0	15
16	3.0	24	27	192	13	37	51	70	26	14	7.7	5.9	16
17	3.0	25	69	117	12	51	53	68	26	13	7.5	5.9	17
18	3.0	22	39	104	12	70	55	65	25	13	7.5	5.8	18
19	3.0	17	26	86	12	64	54	64	24	12 *	7.6	5.6	19
20	3.2	16	42	65	11	59 *	50	61	24	12	7.6	5.6	20
21	3.9	16	36	48	12	55	50	59	23	12	7.4	5.6	21
22	12	15	26	45 *	12	52	54	57	22	12	7.2	5.6	22
23	15	14	23	43	12	51	60	56	21	11	7.2	5.6	23
24	10	14	24	39	13	50	61	54	21	11	7.2	5.5	24
25	8.1	14	40	38	15	50	60	53	20	11	7.2	5.6	25
26	6.2	14	29	33	16	50	56	53	19	11	7.2	5.6	26
27	5.8	17	27	34	16	50	52	53	19	11	7.0	5.5	27
28	7.9	30	33	34	16	49	49	53	18	11	7.1	5.3	28
29	8.3	67	49	28		103	50	52	18	10	7.0	5.3	29
30	6.8	75	30	26		124	54	50	17	9.8	6.9	5.3	30
31	6.4		25	25		89		48		9.5	6.9		31
MEAN	5.0	25.4	30.3	38.9	16.0	41.5	60.8	65.2	29.3	13.5	8.2	5.9	MEAN
MAX.	15	80	69	192	24	124	95	85	46	17	13	6.7	MAX.
MIN.	3.0	6.1	18	5.1	11	15	49	48	17	9.5	6.9	5.3	MIN.
AC. FT.	309	1512	1862	2393	889	2553	3616	4011	1745	828	506	352	AC. FT.

E — ESTIMATED
NR — NO RECORD
* — DISCHARGE MEASUREMENT OR OBSERVATION OF NO FLOW
# — E AND *

WATER YEAR SUMMARY

MEAN DISCHARGE	MAXIMUM DISCHARGE	MAXIMUM GAGE HT.	MAXIMUM MO.	MAXIMUM DAY	MAXIMUM TIME	MINIMUM DISCHARGE	MINIMUM GAGE HT.	MINIMUM MO.	MINIMUM DAY	MINIMUM TIME	TOTAL ACRE FEET
341	251	3.23	1	15	2315	2.9	0.59	10	12	2215	20,580

LOCATION			MAXIMUM DISCHARGE OF RECORD			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.&M.	CFS	GAGE HT.	DATE	DISCHARGE	GAGE HEIGHT ONLY	PERIOD FROM	PERIOD TO	ZERO ON GAGE	REF. DATUM
41 45 11	122 17 58	NW15 45N 4W	5910 E	10.66	12/22/64	28-NOV 51 δ APR 52-APR 55 SEP 56-DATE	28-NOV 51 δ APR 52-APR 55 SEP 56-DATE	1956	1964	0.00	LOCAL

Station located S of Ball Mountain Road, 12 mi. NE of Montague, 16 mi. SW of Macdoel. Stage-discharge relationship affected by ice at times. Drainage area is 48.2 sq. mi.

δ - Irrigation seaaon only.

TABLE B-3 (CONT.)
DAILY MEAN DISCHARGE
(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1974	F42100	NORTH FORK TRINITY RIVER NEAR HELENA

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	33	216	3350	1270	672	2170	3600	942 *	607	246	100	40	1
2	31	175	1870	1060 *	642	1590	3120	931	637	240	99	39	2
3	29	146	1390	923	606	979	2810	891	643	234	93	38	3
4	29	137	1160	808	580	730 *	2730	931	618	232	92	37	4
5	27	321	1020	727	546	638	2660	999	712	226	99	36	5
6	37	1170	960	652	515	635	2590	1070	675	220	107	36	6
7	90	1630	1230	594	492	677	2510	1150	571 *	216	87	35	7
8	60	2620	1300	551	479	617	2430	1190	449	208	74	35	8
9	54	3070 *	1140	514	470	564	2360	1060	438	205	68	35 *	9
10	47	4030	1010	483	467	527	2280	871	488	198 *	64	35	10
11	42	6500	982	464	463	717	2210	824	549	191	63	35	11
12	38 *	3330	945	474	461	1050	2140	774	544	190	62	34	12
13	36	2030	1200	699	454	995	2070	673	481	177	58	34	13
14	34	1620	1120	2650	449	1010	2000	619	460	177	56 *	33	14
15	32	1720 *	993	10100	449	1210	1930	592	417	178	53	33	15
16	31	2560	952	16200	450	1240	1860	525	350	170	50	33	16
17	30	1930	1760	5920	445	1250	1780	470	328	174	50	32	17
18	29	1480	1520	3970 *	463	1230	1720	429	325	177	49	31	18
19	29	1170	1240	3500	722	1120	1650	395	366	189	49	31	19
20	35	1010	1790	2700	627	1060	1580	386	312	196	47	31	20
21	230	897	2700	2090	587	1000	1520	384	302	182	45	30	21
22	954	828	1910	1660	575	964	1450	413	297	166	43	29	22
23	1090	764	1470	1270	547	923	1380	453	292	141	43	28	23
24	641	759	1290	1090	523	899	1320	498	284	134	43	28	24
25	542	726	1440	972	540	994	1260	627	278	142	44	28 *	25
26	385	677	1350	865	598	998	1200	819	273	148	43	27	26
27	344	658	1490	784	631	1090	1140	853	266	143	41	27	27
28	363	833	1830	717	1490	1210	1090	753	262	137	40	27	28
29	302	2130	3200	659		4280	1030	681	256	122	40	27	29
30	246	4650	2200	613		6310	977	574	250	113	41	27	30
31	241		1600	639		3290		560		104	40		31
MEAN	197	1660	1529	2117	569	1354	1947	721	424	180	60.7	32.4	MEAN
MAX.	1090	6500	3350	16200	1490	6310	3600	1190	712	246	107.	40	MAX.
MIN.	27	137	945	464	445	527	977	384	250	104	40	27	MIN.
AC. FT.	12120	98750	94040	130200	31620	83240	115800	44310	25250	11060	3735	1926	AC. FT.

E — ESTIMATED
NR — NO RECORD
* — DISCHARGE MEASUREMENT OR OBSERVATION OF NO FLOW
# — E AND *

WATER YEAR SUMMARY

MEAN DISCHARGE	MAXIMUM DISCHARGE	MAXIMUM GAGE HT.	MAXIMUM MO.	MAXIMUM DAY	MAXIMUM TIME	MINIMUM DISCHARGE	MINIMUM GAGE HT.	MINIMUM MO.	MINIMUM DAY	MINIMUM TIME	TOTAL ACRE FEET
901	20,000	22.59	1	16	1015	27	5.69	10	5	2115	652,000

LOCATION			MAXIMUM DISCHARGE OF RECORD			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.&M.	CFS	GAGE HT.	DATE	DISCHARGE	GAGE HEIGHT ONLY	PERIOD FROM	PERIOD TO	ZERO ON GAGE	REF.* DATUM
40 46 55	123 07 40	SW21 34N 11W	35800	27.93	12/22/64	JAN 57-DATE	JAN 57-DATE	1957		0.00	LOCAL

Station located 1.0 mi. above mouth, 0.6 mi. N of Helena. Stage-discharge relationship affected by ice at times. Drainage area is 151 sq. mi.

GROUND WATER BASINS, WATER LEVEL MEASUREMENTS

APPENDIX C

GROUND WATER MEASUREMENTS

This appendix contains ground water level measurements from 61 wells for the period October 1, 1973 through September 30, 1974. It also contains a table which summarizes the measurements. Wells in the network are continuously reviewed and, when conditions dictate, replacement wells are located and measured.

There are nine ground water basins in the North Coastal Region for which data are reported.

Two numbering systems are used by the Department to facilitate the processing of water level measurement data. The two systems are the Region and Basin Designation and the State Well Numbering System as described below.

The regions are those of the California Regional Water Quality Control Boards whose geographic areas are defined in Section 13200 of the Water Code. That portion of Northern California covered by this report is included in the North Coast Region. A decimal system of the form 0-00.00 has been selected according to geographic regions, ground water basins, and subbasins or subareas as follows:

1 - 01 00

Region (North Coast Region)
Ground Water Basin (Smith River Basin)
Subbasin or Subarea (Subbasins or subareas have not been defined in the North Coast Region)

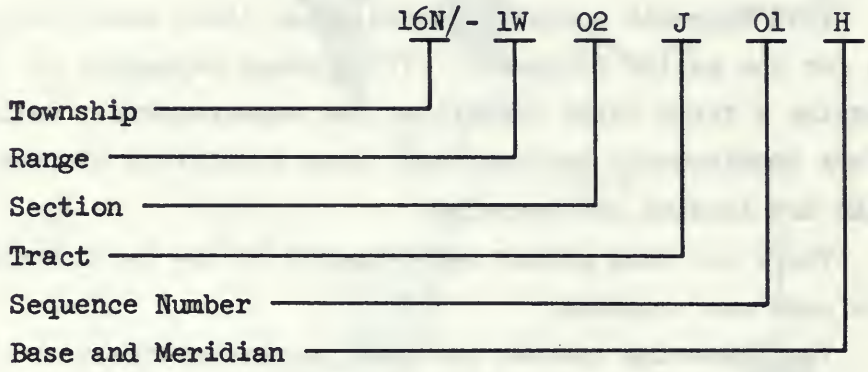
The State Well Numbering System is based on township, range, and section subdivisions of the Public Land Survey.

A section is divided into 40-acre tracts as follows:

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Sequence numbers in a tract are generally assigned in chronological order.

The number of a well, assigned in accordance with this system, is referred to as the State Well Number, as illustrated below:



This number identifies and locates the well. In the example, the well is in Township 16 North, Range 1 West, Tract J of Section 2, located in the Humboldt Base and Meridian.

TABLE C-1

AVERAGE CHANGE OF GROUND WATER LEVELS
AND SUMMARY OF WELL MEASUREMENTS REPORTED
NORTH COASTAL AREA

Ground Water Basin		Average Change Spring 1973 to Spring 1974 in feet	Measuring Agency	Number of Wells Reported	
Name	Number			Fall 1973	Spring 1974
NORTH COASTAL REGION					
Smith River Plain	1-01.00	+1.1	DWR	8	8
Butte Valley	1-03.00	+1.1	DWR	15	15
Shasta Valley	1-04.00	+2.3	DWR	9	9
Scott River Valley	1-05.00	+3.6	DWR	5	5
Mad River Valley	1-08.00	+1.0	DWR	3	3
Eel River Valley	1-10.00	+1.4	DWR	7	7
Round Valley	1-11.00	+0.7	DWR	5	5
Laytonville Valley	1-12.00	+1.3	DWR	4	4
Little Lake Valley	1-13.00	+2.0	DWR	5	5

DWR - Department of Water Resources

TABLE C-2 GROUND WATER LEVELS AT WELLS

An explanation of the column headings and the code symbols follows:

State Well Number - Refer to the explanation presented on page 17.

Ground Surface Elevation - The numbers in this column are the elevation in feet above mean sea level (USGS datum) of the ground surface at the well. Elevations are usually taken from topographic maps and the accuracy is controlled by topographic standards.

Date - The date shown in the column is the date when the depth measurement given in the next column was made.

Ground Surface to Water Surface - This is the measured depth in feet from the ground surface to the water surface in the well; some of the depth measurements in the column may be preceded by a number in parentheses to indicate a questionable measurement. The code applicable to these "questionable measurements" is as follows:

(1) Pumping
(2) Nearby pump operating
(3) Casing leaking or wet
(4) Pumped recently
(5) Air or pressure gage measurement
(6) Other
(7) Recharge operation at or near well
(8) Oil in casing
(9) Caved or deepened

When a measurement was attempted, but could not be obtained, then only a number in parentheses is shown in the column. The code applicable to these "no measurements" is as follows:

(1) Pumping
(2) Pump house locked
(3) Tape hung up
(4) Cannot get tape in casing
(5) Unable to locate well
(6) Well has been destroyed
(7) Special
(8) Casing leaking or wet
(9) Temporarily inaccessible
(0) Measurements discontinued

The words FLOW and DRY are shown in this column to indicate a flowing or dry well, respectively. A minus sign preceding the number in this column indicates that the static water level in the well is this distance in feet above the ground surface.

Water Surface Elevation - This is the elevation in feet above mean sea level (USGS datum) of the water surface in the well. It was derived by subtraction of the depth measurement from the ground surface elevation.

Agency Supplying Data - Each of these numbers is the code number for the agency supplying data for that measurement. The Department of Water Resources is the sole agency supplying ground water level measurement data for this report. It has been assigned an agency code number of 5050.

TABLE C-2

GROUND WATER LEVELS AT WELLS

NORTH COASTAL AREA

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SMITH RIVER PLAIN 1-01.00					
16N/01W-02J01 M	127.0	9-24-73	Dry		5050
		4-17-74	16.8	110.2	5050
16N/01W-17K01 M	48.0	9-24-73	22.1	25.9	5050
		4-17-74	9.6	38.4	5050
17N/01W-02P01 M	31.0	9-24-73	19.0	12.0	5050
		4-17-74	16.6	14.4	5050
17N/01W-03E01 M	14.0	9-24-73	13.4	0.6	5050
		4-17-74	9.7	4.3	5050
17N/01W-15M02 M	21.0	9-24-73	16.6	4.4	5050
		4-17-74	6.6	14.4	5050
17N/01W-20Q01 M	15.0	9-24-73	6.0	9.0	5050
		4-17-74	1.5	13.5	5050
17N/01W-27Q05 M	40.0	9-24-73	20.5	19.5	5050
		4-17-74	10.6	29.4	5050
18N/01W-27P03 M	15.0	9-24-73	6.5	8.5	5050
		4-17-74	5.2	9.8	5050
BUTTE VALLEY 1-03.00					
45N/01W-06A01 M	4258.0	10-10-73	40.8	4217.2	5050
		4-11-74	26.8	4231.2	5050
45N/02W-11P01 M	4275.0	10-10-73	54.8	4220.2	5050
		4-11-74	38.7	4236.3	5050
46N/01E-06N01 M	4242.0	10-10-73	27.2	4214.8	5050
		4-11-74	20.0	4222.0	5050
46N/01W-17B01 M	4246.0	10-10-73	45.2	4200.8	5050
		4-11-74	33.5	4212.5	5050
46N/01W-18Q01 M	4247.0	10-10-73	34.5	4212.5	5050
		4-11-74	16.9	4230.1	5050
46N/02W-25R02 M	4256.0	10-10-73	39.3	4216.7	5050
		4-11-74	25.5	4230.5	5050
46N/02W-26Q01 M	4254.0	10-10-73	22.0	4232.0	5050
		4-11-74	12.0	4242.0	5050
47N/01E-06A02 M	4244.5	10-10-73	34.4	4210.1	5050
		4-11-74	30.5	4214.0	5050
47N/01E-20D01 M	4240.0	10-10-73	25.6	4214.2	5050
		4-11-74	23.8	4216.2	5050
47N/01W-04D01 M	4241.5	10-10-73	7.9	4233.6	5050
		4-11-74	(9)		
47N/01W-04D02 M	4241.5	10-10-73	8.3	4233.2	5050
		4-11-74	(9)		
47N/01W-19L01 M	4238.0	10-10-73	6.0	4232.0	5050
		4-11-74	1.7	4236.3	5050
47N/01W-27B01 M	4233.0	10-10-73	9.0	4224.0	5050
		4-11-74	6.0	4227.0	5050
47N/01W-34Q01 M	4237.0	10-10-73	20.2	4216.8	5050
		4-11-74	16.0	4221.0	5050
48N/01W-26N01 M	4244.0	10-10-73	(2)		5050
		4-11-74	(2)		5050
SHASTA VALLEY 1-04.00					
42N/05W-20J01 M	2882.0	10-09-73	3.4	2878.6	5050
		4-10-74	4.6	2877.4	5050
42N/06W-10J01 M	2835.0	10-09-73	15.7	2819.3	5050
		4-10-74	2.5	2832.5	5050
43N/05W-11A01 M	2740.0	10-10-73	127.5	2612.5	5050
		4-10-74	120.5	2619.5	5050
43N/06W-15F03 M	2663.0	10-09-73	11.0	2652.0	5050
		4-10-74	7.4	2655.6	5050
43N/06W-22A01 M	2665.0	10-09-73	28.0	2637.0	5050
		4-10-74	6.7	2658.3	5050
43N/06W-33C01 M	2810.0	10-09-73	51.2	2758.8	5050
		4-10-74	49.6	2760.4	5050
44N/05W-34B01 M	2637.0	10-10-73	28.4	2608.6	5050
		4-10-74	28.0	2609.0	5050
44N/06W-10F01 M	2537.0	10-09-73	20.2	2514.8	5050
		4-10-74	24.0	2513.0	5050
45N/06W-19E01 M	2538.0	10-09-73	22.0	2516.0	5050
		4-10-74	13.0	2523.0	5050

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SCOTT RIVER VALLEY 1-05.00					
42N/09W-02A02 M	2746.0	10-09-73	12.2	2733.8	5050
		4-10-74	4.0	2742.0	5050
42N/09W-27B01 M	2930.0	10-09-73	7.7	2922.3	5050
		4-10-74	3.2	2926.8	5050
43N/09W-23F01 M	2728.0	10-09-73	6.7	2721.3	5050
		4-10-74	1.9	2726.1	5050
43N/09W-24F01 M	2735.0	10-09-73	(1)		5050
		4-10-74	1.8	2733.2	5050
44N/09W-28P01 M	2711.0	10-09-73	26.5	2684.5	5050
		4-10-74	3.0	2708.0	5050
MAD RIVER VALLEY 1-08.00					
06N/01E-07N01 M	11.0	9-25-73	9.4	1.6	5050
		4-16-74	2.0	9.0	5050
06N/01E-17D01 M	16.0	9-25-73	14.1	1.9	5050
		4-16-74	4.5	11.5	5050
06N/01E-29P01 M	25.0	9-25-73	9.4	15.4	5050
		4-16-74	6.4	18.6	5050
EEL RIVER VALLEY 1-10.00					
02N/01W-08B01 M	34.0	9-25-73	23.2	10.8	5050
		4-16-74	11.2	22.8	5050
03N/01W-18D01 M	15.0	9-25-73	6.0	9.0	5050
		4-16-74	2.0	13.0	5050
03N/01W-30H01 M	19.0	9-25-73	17.2	1.8	5050
		4-16-74	10.2	8.8	5050
03N/01W-34J01 M	53.0	9-25-73	36.0	17.0	5050
		4-16-74	29.8	23.2	5050
03N/02W-13J01 M	10.0	9-25-73	7.2	2.8	5050
		4-16-74	3.7	6.3	5050
03N/02W-26R01 M	12.0	9-25-73	11.0	1.0	5050
		4-16-74	4.8	7.2	5050
03N/02W-35M02 M	13.0	9-25-73	10.8	2.2	5050
		4-16-74	6.2	6.8	5050
ROUND VALLEY 1-11.00					
22N/12W-04B01 M	1351.0	10-03-73	15.4	1335.6	5050
		4-18-74	5.7	1345.3	5050
22N/12W-06L03 M	1370.0	10-03-73	7.0	1363.0	5050
		4-18-74	-11.1	1381.1	5050
22N/13W-12R01 M	1400.0	10-03-73	29.7	1370.3	5050
		4-18-74	5.1	1394.9	5050
23N/13W-36C03 M	1410.0	10-03-73	30.5	1379.5	5050
		4-18-74	8.2	1401.8	5050
23N/13W-36Q01 M	1403.0	10-03-73	21.2	1381.8	5050
		4-18-74	-0.5	1403.5	5050
LAYTONVILLE VALLEY 1-12.00					
21N/14W-30M01 M	1688.0	10-03-73	16.7	1671.3	5050
		4-17-74	3.7	1684.3	5050
21N/15W-01L02 M	1682.0	10-03-73	39.0	1643.0	5050
		4-17-74	4.0	1678.0	5050
21N/15W-12M02 M	1630.0	10-03-73	16.7	1613.3	5050
		4-17-74	3.5	1626.5	5050
21N/15W-24A01 M	1653.0	10-03-73	11.9	1641.1	5050
		4-17-74	2.2	1650.8	5050
LITTLE LAKE VALLEY 1-13.00					
18N/13W-08L01 M	1340.0	10-03-73	8.6	1331.4	5050
		4-18-74	1.5	1338.5	5050
18N/13W-17J01 M	1370.0	10-03-73	31.2	1338.8	5050
		4-18-74	13.6	1356.4	5050
18N/13W-18B01 M	1365.0	10-03-73	26.0	1339.0	5050
		4-18-74	17.8	1347.2	5050
19N/13W-32F01 M	1347.0	10-03-73	14.3	1332.7	5050
		4-18-74	3.5	1343.5	5050
19N/13W-32L02 M	1350.0	10-03-73	14.3	1335.7	5050
		4-18-74	5.3	1345.2	5050

SURFACE WATER SAMPLING STATIONS

APPENDIX D

SURFACE WATER QUALITY

This appendix presents surface water quality data collected during the period from October 1, 1973, through September 30, 1974. The data were collected from 25 stream stations in the North Coastal area.

At the time of field sampling, dissolved oxygen, pH, and temperature measurements are made and gage height and time are noted. Comments on local conditions are noted in field books which are available in the files of the Department of Water Resources. The mineral constituents were determined in accordance with methods described in "Standard Methods for the Examination of Water and Waste Water", prepared and published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation, 13th Edition, 1971.

Each station in this appendix has been assigned a station number. The numbering system is described in Appendix B, "Surface Water Measurements".

TABLE D-I
SAMPLING STATION DATA AND INDEX
North Coastal Area

Station	Station Number	Location*	Beginning of Record	Frequency of Sampling	Analyses on Page
BEAR RIVER AT CAPETOWN	F75100.00	01N/03W-13 H	MAY 1964	Annually	36
BLACK BUTTE RIVER NEAR COVELO	F63200.00	23N/11W-28 M	NOV. 1964	Monthly	34, 39, 45
EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS	F61329.50	21N/13W-32 M	APR. 1958	Monthly	32, 33, 39, 45
EEL RIVER AT SCOTIA	F61100.00	01N/01E-05 H	APR. 1951	Monthly	31, 32, 37, 39, 41, 45, 47
EEL RIVER AT SOUTH FORK	F61154.50	01S/02E-26 H	APR. 1951	Monthly	32, 39, 45, 47
EEL RIVER, MIDDLE FORK, AT DOS RIOS	F63009.01	21N/13W-06 M	APR. 1958	Monthly	33, 34, 39, 45
EEL RIVER, SOUTH FORK, NEAR MIRANDA	F64100.00	03S/04E-30 H	APR. 1951	Monthly	35, 39, 45
KLAMATH RIVER ABOVE HAMBURG RESERVOIR SITE	F31470.00	46N/10W-14 M	DEC. 1958	Bimonthly	29
KLAMATH RIVER AT ORLEANS	F31220.01	11N/06E-31 H	JAN. 1964	Monthly	28, 37, 43
KLAMATH RIVER BELOW IRON GATE DAM	F31599.01	47N/05W-20 M	DEC. 1961	Monthly	29, 30, 37, 43
KLAMATH RIVER NEAR KLAMATH	F31100.00	13N/02E-19 H	APR. 1951	Monthly	28, 37, 41, 43, 47
KLAMATH RIVER NEAR SEIAD VALLEY	F31430.00	46N/12W-03 M	DEC. 1958	Monthly	28, 29, 37, 43
MAD RIVER NEAR ARCATA	F51100.00	06N/01E-15 H	NOV. 1958	Bimonthly	31, 37, 43
MATTOLE RIVER NEAR PETROLIA	F71100.00	02S/02W-11 H	JAN. 1959	Annually	35
MILL CREEK NEAR COVELO	F63050.00	22N/12W-22 M	FEB. 1965	Monthly	34, 45
OUTLET CREEK NEAR LONGVALE	F61350.00	20N/14W-01 M	MAY 1958	Monthly	33, 39, 45
REDWOOD CREEK AT ORICK	F55100.00	10N/01E-04 H	NOV. 1958	Monthly	31, 37, 45, 47
SALMON RIVER AT SOMESBAR	F34100.00	11N/06E-03 H	NOV. 1958	Semiannually	30
SCOTT RIVER NEAR FORT JONES	F25250.00	44N/10W-28 M	DEC. 1958	Bimonthly	27, 37, 43, 47
SHASTA RIVER NEAR YREKA	F21050.00	46N/07W-24 M	DEC. 1958	Bimonthly	27, 37, 43, 47
SMITH RIVER NEAR CRESCENT CITY	F01300.00	16N/01E-10 H	APR. 1951	Monthly	27, 37, 43, 47
TRINITY RIVER AT HOOPA	F41080.00	08N/04E-25 H	APR. 1951	Monthly	30, 37, 43, 47
TRINITY RIVER AT LEWISTON	F41640.00	33N/08W-17 M	APR. 1951	Bimonthly	30, 31, 37, 43
TRINITY RIVER NEAR BURNT RANCH	F41376.00	05N/07E-19 H	APR. 1958	Bimonthly	30, 37, 43
VAN DUZEN RIVER NEAR BRIDGEVILLE	F65279.00	01N/02E-12 H	APR. 1958	Monthly	35, 39, 45, 47

* H = Humboldt Base and Meridian
M = Mount Diablo Base and Meridian

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

Lab and Sampler Agency Codes

5000 - U. S. Geological Survey

5050 - Department of Water Resources

Abbreviations

TIME - Pacific Standard Time on a 24-hour clock.

G.H. - Instantaneous gage height in feet above an established datum.

Q - Instantaneous discharge measured in cubic feet per second (cfs). "E" indicates the value has been estimated.

DEPTH - Depth at which sample was collected.

DO - Dissolved oxygen content in milligrams per liter.

SAT - Percent of normal dissolved oxygen saturation.

TEMP - Water temperature in degrees Fahrenheit (F) and Celsius (C).

PH - Measure of acidity or alkalinity of water.

EC - Electrical conductance in micromhos at 25° C.

TDS - Gravimetric determination of total dissolved solids at 180° C.

SUM - Total dissolved solids by summation of analyzed constituents.

TH - Total hardness.

NCH - Noncarbonate hardness - any excess of total hardness over total alkalinity.

TURB - Jackson Turbidity Units measured with a Hellege Turbidmeter (E) or a Hach Nephelometer (A). Field determination (F).

SAR - Sodium adsorption ratio.

PERCENT REACTANCE VALUE - Determined by dividing the sum of the cations or anions in milliequivalents per liter into each constituent in milliequivalents per liter arriving at a percentage. For a partial analysis, an approximate value is determined by multiplying the electrical conductance by 0.01 and using that as the cation or anion sum.

Mineral Constituents

B	- Boron	K	- Potassium
CA	- Calcium	MG	- Magnesium
CL	- Chloride	NA	- Sodium
CO_3	- Carbonate	NO_3	- Nitrate
F	- Fluoride	SiO_2	- Silica
HCO_3	- Bicarbonate	SO_4	- Sulfate

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH	EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB SAR	REM
							MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER										MILLIGRAMS PER LITER				
							MILLIEQUIVALENTS PER LITER														
							PERCENT REACTANCE VALUE														
F0 1300.00					SMITH RIVER NEAR CRESCENT CITY																
10/02/73	5050	8.06	12.2	55.4F	7.4	141	--	--	2.5	--	0	80	--	2.8	--	.00	--		74	0A	
0655	5050	389	116	13.0C	7.6	142			.11		.00	1.31		.08			--			0.1	
									7												
11/14/73	5050	20.95	13.6	56.0F	7.4	78	3.5	7.7	1.9	.4	0	46	1.8	2.4	.0	.00	--	40	40	53A	
0810	5050	27500	120	10.0C	7.2	81	.17	.63	.08	.01	.00	.75	.04	.07	.00		--	40	3	0.1	
							19	71	9	1		87	5	8							
12/11/73	5050	14.26	13.5	48.2F	7.3	78	--	--	--	--	--	--	--	--	--	--	--			12AF	
0810	5050	8040	117	9.0C													--				
01/15/74	5050	27.98	13.8	49.1F	7.6	63	--	--	1.5	--	0	38	--	1.0	--	.00	--		31	200A	
1300	5050	63900	121	9.5C	7.5	67			.07		.00	.62		.03			--			0.1	
									10												
02/05/74	5050	13.25	14.2	42.8F	7.2	80	--	--	--	--	--	--	--	--	--	--	--			5AF	
0705	5050	5060	114	6.0C													--				
03/05/74	5050	14.02	14.0	47.3F	7.3	73	--	--	--	--	--	--	--	--	--	--	--			5AF	
0645	5050	6740	120	8.5C													--				
04/02/74	5050	20.94	13.7	46.4F	7.4		--	--	1.6	--	0	36	--	2.0	--	.00	--		32	48A	
0700	5050	26300	116	8.0C	8.0	66			.07		.00	.59		.06			--			0.1	
									10												
05/14/74	5050	9.71	12.3	50.0F	7.4	91	--	--	--	--	--	--	--	--	--	--	--			1AF	
0705	5050	1580	109	10.0C													--				
06/11/74	5050	8.99	9.6	61.7F	7.6	101	--	--	--	--	--	--	--	--	--	--	--			1AF	
0735		1040	98	16.5C													--				
07/09/74	5050	8.35	9.9	64.4F	7.8	126	--	--	--	--	--	--	--	--	--	--	--			1AF	
0635		610	104	18.0C													--				
08/06/74	5050	7.73		68.0F	7.5	147	--	--	--	--	--	--	--	--	--	--	--			1AF	
0720		293.		20.0C													--				
09/04/74	5050	7.56	9.0	66.2F	7.5	154	--	--	--	--	--	--	--	--	--	--	--			1AF	
0655		238	97	19.0C													--				
F2 1050.00					SHASTA RIVER NEAR YREKA																
11/15/73	5050	3.76	12.9	48.2F	8.1	507	--	--	--	--	--	--	--	--	--	--	--			5AF	
0930	5050	304	119	9.0C													--				
01/14/74	5050	4.80	11.4	44.6F	8.2	354	23	22	21	2.5	0	197	12	11	4.8	.30	--	207	148	300A	
1305	5050	740	100	7.0C	7.4	394	1.15	1.81	.91	.06	.00	3.23	.25	.31	.08		--	193	0	0.9	
							29	46	23	2		83	6	8	2						
03/15/74	5050	4.41	11.5	48.2F	8.1	445	--	--	--	--	--	--	--	--	--	--	--			8AF	
0905	5050	564	106	9.0C													--				
05/07/74	5050	3.68	9.8	65.3F	8.2		--	--	21	--	0	238	--	12	--	.30	--		176	3A	
1120	5050	272	111	18.5C	8.3	410			.91		.00	3.90		.34			--			0.7	
									21												
07/16/74	5050	3.03	10.8	71.6F	8.2	556	--	--	--	--	--	--	--	--	--	--	--			1AF	
1230		77	131	22.0C													--				
09/13/74	5050	3.05	9.4	58.1F	8.1	581	--	--	--	--	--	--	--	--	--	--	--			2AF	
0820		81	98	14.5C													--				
F2 5250.00					SCOTT RIVER NEAR FORT JONES																
11/15/73	5050	8.39	12.8	44.6F	7.2	109	9.0	7.2	2.0	.4	0	61	2.1	1.8	1.2	.00	--	80	52	16A	E
1230	5050	1810	115	7.0C	7.4	107	.45	.59	.09	.01	.00	1.00	.04	.05	.02		--	54	2	0.1	T
							39	52	8	1		90	4	5	2						
01/14/74	5050	9.57	12.3	41.0F	7.1	123	--	--	--	--	--	--	--	--	--	--	--			80AF	
1525	5050	2780	105	5.0C													--				
03/15/74	5050	8.02	11.6	48.2F	7.6	199	--	--	--	--	--	--	--	--	--	--	--			30AF	
1145	5050	1660	109	9.0C													--				
05/07/74	5050	9.51	10.5	54.5F	7.5		--	--	1.7	--	0	61	--	.0	--	.00	--		51	36A	
1430	5050	2850	107	12.5C	7.5	106			.07		.00	1.00		.00			--			0.1	
									6												
07/16/74	5050		12.0	68.9F	8.0	231	--	--	--	--	--	--	--	--	--	--	--			1AF	
1505		314	145	20.5C													--				
09/13/74	5050	5.22	10.9	63.5F	8.1	308	33	18	5.0	.9	0	181	8.6	3.4	3.8	.10	--	168	156	0A	
1100	5050	74	124	17.5C	8.2	308	1.65	1.48	.22	.02	.00	2.97	.18	.10	.06		--	162	8	0.2	
							49	44	7	1		90	5	3	2						

TABLE D-2 cont

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD PH	LABORATORY EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB SAR	REM
							MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					
F3 1100.00					KLAMATH RIVER NEAR KLAMATH																
10/02/73	5050	4.69	10.8	59.9F	7.8	219	21	9.1	9.7	1.6	0	112	15	4.6	--	.09	.2	134	90	14	
0810	5000	2580	109	15.5C	8.1	216	1.05	.75	.42	.04	.00	1.84	.31	.13			17.0	133	0	0.4	
							46	33	19	2		81	14	6							
11/13/73	5050		12.4	48.2F	7.3	102	11	4.7	2.7	.8	0	57	5.1	1.0	--	.02	.0	67	47	100A	
1635	5000	976000	107	9.0C		103	.55	.39	.12	.02	.00	.93	.11	.03			13.0	66	1	0.2	
							51	36	11	2		87	10	3							
12/11/73	5050		12.9	43.7F	7.4		13	5.4	4.0	.7	0	70	5.5	1.8	--	.03	.1	82	55	50A	
0935	5000	36700	105	6.5C		127	.65	.44	.17	.02	.00	1.15	.11	.05			16.0	81	0	0.2	
							51	34	13	2		88	8	4							
01/15/74	5050		12.9	46.4F	8.0		11	4.1	2.7	.7	0	49	3.7	1.6	--	.03	.0	61	44	200A	
0935	5000	136000	109	8.0C		95	.55	.34	.12	.02	.00	.80	.08	.05			12.0	60	5	0.2	
							53	33	12	2		86	9	5							
02/05/74	5050		13.1	42.8F	7.5		14	6.4	4.9	.9	--	78	5.6	2.6	--	.03	.1	92	61	70A	
0855	5000	35600	105	6.0C		144	.70	.53	.21	.02		1.28	.12	.07			18.0			0.3	
							48	36	14	1											
03/05/74	5050		13.2	46.4F	7.7		16	6.7	4.2	1.0	--	76	6.9	2.1	--	.03	.1	93	68	80A	
0835	5000	46000	111	8.0C		148	.80	.55	.18	.03		1.25	.14	.06			17.0			0.2	
							51	35	12	2											
04/02/74	5050		13.1	46.4F	7.9	152	13	5.1	3.3	1.0	--	60	4.6	2.0	--	.03	.1	73	54	100A	X
0845	5000	180000	110	8.0C		114	.65	.42	.14	.03		.98	.10	.06			13.0			0.2	
							52	34	11	2											
05/14/74	5050		11.5	52.7F	6.3	122	13	5.4	3.8	.9	--	67	6.9	2.2	--	.03	.0	80	55	30A	
0915	5000	24500	105	11.5C		119	.65	.44	.17	.02		1.10	.14	.06			14.0			0.2	
							51	34	13	2											
06/11/74	5050		9.3	62.6F	7.4	107	12	5.3	2.9	.8	--	61	4.6	1.6	--	.03	.0	70	52	20A	
0910	5000		96	17.0C		110	.60	.44	.13	.02		1.00	.10	.05			12.0			0.2	
							50	37	11	2											
07/09/74	5050		8.9	62.6F	7.5	149	17	6.5	6.9	1.0	--	84	7.8	2.3	--	.03	.0	97	69	1A	
0750	5000	6600	92	17.0C		154	.85	.53	.30	.03		1.38	.16	.06			14.0			0.4	
							50	31	18	2											
08/06/74	5050			215.3F	76.0	1750	20	7.6	6.3	1.8	--	100	8.5	4.0	--	70.0	.1	114	81	2A	X
0830	5000	3700		101.7C	7.6	184	1.00	.63	.27	.05		1.64	.18	.11			16.0			0.3	
							51	32	14	3											
09/04/74	5050		8.5	68.0F	7.9	206	22	7.2	9.2	1.6	--	110	10	4.4	--	.08	.1	127	85	2A	
0810	5000	2950	93	20.0C	7.9	203	1.10	.59	.40	.04		1.80	.21	.12			18.0			0.4	
							52	28	19	2											
F3 1220.01					KLAMATH RIVER AT ORLEANS																
10/01/73	5050	0.58	12.0	61.7F	7.9	230	--	--	--	--	--	--	--	--	--	--	--			1AF	
1105	5050	1650	124	16.5C													--				
11/13/73	5050	13.80	13.1	46.4F	7.3	100	11	4.5	3.4	1.2	0	54	6.6	.5	.6	.00	--	82	46	100A	E
1205	5050	33600	112	8.0C	8.0	105	.55	.37	.15	.03	.00	.89	.14	.01	.01		--	54	2	0.2	T
							50	34	14	3		85	13	1	1						
12/10/73	5050	10.28	14.5	44.6F	7.4	128	--	--	--	--	--	--	--	--	--	--	--			25AF	
1225	5050	19000	121	7.0C													--				
01/14/74	5050	10.86	14.2	44.6F	8.2	112	--	--	--	--	--	--	--	--	--	--	--			90AF	
1245	5050	50000E	118	7.0C													--				
02/04/74	5050	11.61	14.2	41.9F	7.7	147	--	--	--	--	--	--	--	--	--	--	--			40AF	
1145	5050	21300	114	5.5C													--				
03/04/74	5050	11.56	14.5	45.5F	7.5	160	--	--	--	--	--	--	--	--	--	--	--			41AF	
1255	5050	19500	122	7.5C													--				
04/01/74	5050	19.72	13.3	46.4F	7.7		--	--	4.2	--	0	63	--	1.2	--	.00	--		50	220A	
1145	5050	75000	113	8.0C	8.1	111			.18		.00	1.03		.03			--			0.3	
									15												
05/13/74	5050	9.93	12.1	52.7F	7.5	110	--	--	--	--	--	--	--	--	--	--	--			22AF	
1120	5050	16100	112	11.5C													--				
06/10/74	5050	8.32	10.0	59.0F	7.8	98	--	--	--	--	--	--	--	--	--	--	--			4AF	
1055		11700	100	15.0C													--				
07/08/74	5050	4.43	9.5	62.6F	7.7	144	--	--	--	--	--	--	--	--	--	--	--			2AF	
1210		4120	99	17.0C													--				
08/05/74	5050	2.81		74.3F	7.9	178	--	--	--	--	--	--	--	--	--	--	--			1AF	
1140		2500		23.5C													--				
09/03/74	5050	2.40	9.3	73.4F	7.9	205	--	--	--	--	--	--	--	--	--	--	--			1AF	
1050		2250	109	23.0C													--				
F3 1430.00					KLAMATH RIVER NEAR SEIAD VALLEY																
10/15/73	5050		13.4	58.1F	8.0	274	--	--	21	--	0	135	--	6.9	--	.10	--		90	1A	
1120	5050	1530	137	14.5C	7.8	278			.91		.00	2.21		.19			--			1.0	
									34												
11/15/73	5050		13.0	47.3F	8.1	181	14	9.2	9.4	1.4	0	93	8.2	4.3	--	.10	--	120	73	13A	
1105	5050	6130	116	8.5C	8.1	180	.70	.76	.41	.04	.00	1.52	.17	.12			--	92	0	0.5	T
							37	40	21	2		84	9	7							

TABLE D-2 cont

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH	EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCM	TURB SAR	REM
							MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE						MILLIGRAMS PER LITER				
	F3	1430.00			KLAMATH RIVER NEAR SEIAD VALLEY									CONTINUED							
12/04/73	5050		12.9	42.8F	7.5	197	--	--	--	--	--	--	--	--	--	--	--			9AF	
1325	5050	6780	108	6.0C													--				
01/14/74	5050		12.5	41.0F	7.4	160	--	--	8.4	--	0	82	--	2.5	--	.10	--		61	110A	
1425	5050	12300	102	5.0C	7.4	159			.37		.00	1.34		.07			--			0.5	
									23												
02/05/74	5050		14.1	41.0F	7.5	189	--	--	--	--	--	--	--	--	--	--	--			20AF	
1210	5050	8930	115	5.0C													--				
03/15/74	5050		12.6	44.6F	7.8	213	--	--	--	--	--	--	--	--	--	--	--			26AF	
1030	5050	9760	108	7.0C													--				
04/16/74	5050		11.7	49.1F	7.9	178	--	--	--	--	--	--	--	--	--	--	--			36AF	
1100	5050	12700	107	9.5C													--				
05/07/74	5050		10.9	57.2F	8.4		--	--	5.8	--	0	77	--	.5	--	.00	--		59	23A	
1320	5050	9430	110	14.0C	7.7	143			.25		.00	1.26		.01			--			0.3	
									17												
06/05/74	5050		9.6	55.4F	7.9	127	--	--	--	--	--	--	--	--	--	--	--			14AF	
1110		5570	95	13.0C													--				
07/16/74	5050		11.3	68.0F	8.2	209	--	--	--	--	--	--	--	--	--	--	--			2AF	
1400		1670	129	20.0C													--				
08/14/74	5050		10.2	68.9F	8.2	203	--	--	--	--	--	--	--	--	--	--	--			2AF	
1130		1420	118	20.5C													--				
09/13/74	5050		9.9	62.6F	8.2	234	--	--	--	--	--	--	--	--	--	--	--			2AF	
1000		1680	106	17.0C													--				
	F3	1470.00			KLAMATH RIVER ABOVE HAMBURG RESERVOIR SITE																
11/15/73	5050		12.5	47.3F	7.8	252	--	--	--	--	--	--	--	--	--	--	--			7AF	
1020	5050	2120E	112	8.5C													--				
01/14/74	5050		13.8	38.3F	7.4	202	--	--	--	--	--	--	--	--	--	--	--			95AF	
1350	5050	4660E	109	3.5C													--				
03/15/74	5050		12.6	42.8F	7.9	228	--	--	--	--	--	--	--	--	--	--	--			20AF	
0950	5050	5680E	106	6.0C													--				
05/07/74	5050		10.9	57.2F	8.0		--	--	11	--	0	87	--	2.6	--	.10	--		66	9A	
1220	5050	3510E	111	14.0C	7.5	168			.48		.00	1.43		.07			--			0.6	
									27												
07/16/74	5050		11.0	71.6F	8.2	220	--	--	--	--	--	--	--	--	--	--	--			2AF	
1315		812E	132	22.0C													--				
09/13/74	5050		8.8	64.4F	8.0	233	--	--	--	--	--	--	--	--	--	--	--			2AF	
0910		1420E	98	18.0C													--				
	F3	1599.01			KLAMATH RIVER BELOW IRON GATE DAM																
10/15/73	5050		10.1	57.2F	7.5	250	--	--	--	--	--	--	--	--	--	--	--			2AF	
0945	5050	1340	105	14.0C													--				
11/15/73	5050		8.0	48.2F	6.9	194	--	--	--	--	--	--	--	--	--	--	--			5AF	
0845	5050	1820	74	9.0C													--				
12/04/73	5050		12.3	41.0F	7.9	184	--	--	--	--	--	--	--	--	--	--	--			8AF	
1140	5050	3390	103	5.0C													--				
01/14/74	5050		13.5	37.4F	7.2	183	--	--	--	--	--	--	--	--	--	--	--			28AF	
1230	5050	3920	107	3.0C													--				
02/05/74	5050		14.4	39.2F	7.2	153	--	--	--	--	--	--	--	--	--	--	--			11AF	
0950	5050	5050	118	4.0C													--				
03/15/74	5050		13.7	48.2F	7.6	201	--	--	--	--	--	--	--	--	--	--	--			15AF	
0815	5050	5120	127	9.0C													--				
04/16/74	5050		12.6	48.2F	7.7	143	--	--	--	--	--	--	--	--	--	--	--			10AF	
0920	5050	6460	117	9.0C													--				
05/07/74	5050		10.6	57.2F	7.6		--	--	11	--	0	67	--	1.4	--	.10	--		47	6A	
1030	5050	3240	110	14.0C	7.5	146			.48		.00	1.10		.04			--			0.7	
									34												
06/05/74	5050		8.6	61.7F	8.2	145	--	--	--	--	--	--	--	--	--	--	--			4AF	
0930		845	94	16.5C													--				
07/16/74	5050		13.7	68.0F	8.3	166	--	--	--	--	--	--	--	--	--	--	--			2AF	
1200		735	161	20.0C													--				

TABLE D-2 cont'

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH	EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB SAR	REM
							MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER					
F3	1599.01			KLAMATH RIVER BELOW IRON GATE DAM										CONTINUED							
08/14/74	5050		8.8	69.8F	8.3	156	--	--	--	--	--	--	--	--	--	--	--			2AF	
0955		1030	105	21.0C													--				
09/13/74	5050		7.0	64.4F	7.6	203	--	--	--	--	--	--	--	--	--	--	--			2AF	
0745		1340	79	18.0C													--				
F3	4100.00			SALMON RIVER AT SOMESBAR																	
10/01/73	5050		12.5	59.9F	8.1	141	--	--	--	--	--	--	--	--	--	--	--			14F	
1145	5050	200	127	15.5C													--				
06/10/74	5050	7.18	10.7	54.5F	7.2	49	6.6	1.3	1.2	.4	0	26	.8	.0	.0	.00	--	37	22	5A	E
1135	5050	3720	102	12.5C	7.7	48	.33	.11	.05	.01	.00	.43	.02	.00	.00		--	23	1	0.1	T
							66	22	10	2		96	4								S
F4	1080.00			TRINITY RIVER AT HOOPA																	
10/01/73	5050	14.28	10.9	61.7F	7.8	199	--	--	--	--	--	--	--	--	--	--	--			1AF	
1005	5050	603	112	16.5C													--				
11/13/73	5050	25.09	12.1	49.1F	7.4	117	16	4.1	2.5	.8	0	64	4.9	1.4	--	.00	--	75	57	130A	
1305	5050	22300	107	9.5C	8.1	122	.80	.34	.11	.02	.00	1.05	.10	.04			--	61	5	0.1	
							63	27	9	2		88	8	3							
12/10/73	5050	19.97	13.2	46.4F	7.4	135	--	--	--	--	--	--	--	--	--	--	--			39AF	
1115	5050	7300	112	8.0C													--				
01/14/74	5050	16.72	13.2	46.4F	7.5	135	--	--	--	--	--	--	--	--	--	--	--			105AF	
1130	5050	10000E	112	8.0C													--				
02/04/74	5050	19.74	13.8	43.7F	8.3	144	--	--	--	--	--	--	--	--	--	--	--			52AF	
1035	5050	9000	113	6.5C													--				
03/04/74	5050	22.39	13.5	47.3F	7.7	148	--	--	--	--	--	--	--	--	--	--	--			81AF	
1145	5050	14500	116	8.5C													--				
04/01/74	5050	31.84	12.9	45.5F	8.3		--	--	2.2	--	0	63	--	1.6	--	.00	--		48	360A	
1040	5050	48700	108	7.5C	8.1	111			.10		.00	1.03		.05			--			0.1	
									9												
05/13/74	5050	18.37	11.4	51.8F	7.6	124	--	--	--	--	--	--	--	--	--	--	--			18AF	
1005	5050	8000	104	11.0C													--				
06/10/74	5050	16.94	9.4	61.2F	7.6	126	--	--	--	--	--	--	--	--	--	--	--			8AF	
0935		3800	96	16.2C													--				
07/08/74	5050		9.5	64.4F	7.9	163	--	--	--	--	--	--	--	--	--	--	--			1AF	
1110		1500	101	18.0C													--				
08/05/74	5050	14.03		71.6F	7.4	175	--	--	3.7	--	0	94	--	3.8	--	.00	--		83	1A	
1040	5050	900		22.0C	7.8	176			.16		.00	1.54		.11			--			0.2	
									9												
09/03/74	5050	13.79	9.7	68.0F	8.0	204	--	--	--	--	--	--	--	--	--	--	--			1AF	
0950		580	107	20.0C													--				
F4	1376.00			TRINITY RIVER NEAR BURNT RANCH																	
11/13/73	5050		11.4	48.2F	7.1	99	--	--	--	--	--	--	--	--	--	--	--			30AF	
1030	5050	5200	101	9.0C													--				
01/14/74	5050		12.8	44.6F	7.4	139	--	--	--	--	--	--	--	--	--	--	--			15AF	
1025	5050	3270	108	7.0C													--				
03/04/74	5050		13.5	44.6F	7.5	154	--	--	--	--	--	--	--	--	--	--	--			20AF	
1030	5050	4480	114	7.0C													--				
05/13/74	5050		11.8	51.8F	7.4		--	--	2.7	--	0	56	--	1.4	--	.00	--		46	11A	
0905	5050	3170	110	11.0C	7.5	100			.12		.00	.92		.04			--			0.2	
									12												
07/08/74	5050		9.7	61.7F	7.9	120	--	--	--	--	--	--	--	--	--	--	--			1AF	
1010		4950	102	16.5C													--				
09/03/74	5050		9.1	68.0F	8.2	158	--	--	--	--	--	--	--	--	--	--	--			1AF	
0855		356	103	20.0C													--				
F4	1640.00			TRINITY RIVER AT LEWISTON																	
11/13/73	5050	3.43	10.3	46.4F	8.0	87	--	--	--	--	--	--	--	--	--	--	--			13AF	
0845	5050	320E	92	8.0C													--				
01/14/74	5050	3.07	11.8	45.5F	7.4	82	--	--	--	--	--	--	--	--	--	--	--			8AF	
0825	5050	171	104	7.5C													--				
03/04/74	5050	3.36	12.6	44.6F	7.1	76	--	--	1.7	--	0	42	--	1.7	--	.00	--		35	37A	
0800	5050	276	110	7.0C	8.0	77			.07		.00	.69		.05			--			0.1	
									9												

TABLE D-2 cont

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH	EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB SAH	REM
							MINERAL CONSTITUENTS IN					MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					
	F4	1640.00		TRINITY RIVER AT LEWISTON										CONTINUED							
05/13/74	5050	5.09	13.0	46.4F	7.6	74	--	--	--	--	--	--	--	--	--	--	--			13AF	
0715	5050	1300	116	8.0C													--				
05/16/74	5050	5.40	13.2	47.3F	7.3	71	3.6	6.3	1.6	.9	0	44	.6	.5	--	.10	--	43	35	12A	
1235	5050		120	8.5C	7.4	74	.18	.52	.07	.02	.00	.72	.01	.01			--	35	0	0.1	
							23	66	9	3		97	1	1							
07/08/74	5050	3.06	9.4	49.1F	7.4	77	--	--	--	--	--	--	--	--	--	--	--			7AF	
0730		162	87	9.5C													--				
09/03/74	5050	3.28	11.6	47.3F	8.1	76	--	--	--	--	--	--	--	--	--	--	--			4AF	
0725		215	105	8.5C													--				
	F5	1100.00		MAD RIVER NEAR ARCATA																	
11/13/73	5050	12.78	11.6	50.0F	7.4	85	14	1.2	3.5	2.9	0	45	7.6	1.4	1.2	.00	--	84	40	450A	E
1455	5050	13900	103	10.0C	7.6	98	.70	.10	.15	.07	.00	.74	.16	.04	.02		--	54	3	0.2	T
							69	10	15	7		77	17	4	2						S
01/15/74	5050		12.4	50.0F		77	--	--	2.7	--	0	50	--	.4	--	.20	--		45	1300A	
0730	5050	18700	110	10.0C	7.3	94			.12		.00	.82		.01			--			0.2	
									12												
03/04/74	5050	8.52	13.1	46.4F	7.4	93	--	--	--	--	--	--	--	--	--	--	--			165AF	
1500	5050	4400	110	8.0C													--				
05/13/74	5050	4.49	11.5	60.8F	8.2		--	--	4.4	--	0	80	--	1.9	--	.00	--		72	3A	
1350	5050	276	116	16.0C	7.9	158			.19		.00	1.31		.05			--			0.2	
									12												
07/08/74	5050		9.6	62.6F	7.9	217	--	--	--	--	--	--	--	--	--	--	--			1AF	
1415		34	99	17.0C													--				
09/03/74	5050		10.6	69.8F	8.2	197	--	--	--	--	--	--	--	--	--	--	--			1AF	
1320		47	118	21.0C													--				
	F5	5100.00		REDWOOD CREEK AT ORICK																	
10/01/73	5050	5.06	10.8	65.3F	7.4	220	--	--	6.4	--	0	89	--	5.0	--	.10	--		96	1A	
1430	5050	64	115	18.5C	7.7	218			.28		.00	1.46		.14			--			0.3	
									13												
11/13/73	5050	12.65	12.1	50.0F	7.3	63	8.9	1.0	2.8	2.0	0	26	8.4	2.6	.4	.00	--	63	26	380A	E
1545	5050	10500	107	10.0C	7.5	68	.44	.08	.12	.05	.00	.43	.17	.07	.01		--	39	5	0.2	T
							64	12	17	7		63	25	10	1						
12/11/73	5050	8.75	12.7	48.2F	7.2	70	--	--	--	--	--	--	--	--	--	--	--			162AF	
1030	5050	2800	110	9.0C													--				
01/15/74	5050	11.10	12.0	50.9F	8.4	63	--	--	2.7	--	0	27	--	1.6	--	.10	--		26	320A	
0830	5050	6730	107	10.5C	6.7	67			.12		.00	.44		.05			--			0.2	
									19												
02/04/74	5050	2.76	12.5	48.2F	7.3	81	--	--	--	--	--	--	--	--	--	--	--			60AF	
1420	5050	1500E	108	9.0C													--				
03/04/74	5050	8.89	13.0	48.2F	7.1	71	--	--	--	--	--	--	--	--	--	--	--			90AF	
1600	5050	2930	112	9.0C													--				
04/01/74	5050	16.93	12.3	49.1F	7.4		--	--	3.0	--	0	27	--	2.5	--	.10	--		29	1600A	
1435	5050	24200	107	9.5C	8.0	57			.13		.00	.44		.07			--			0.2	
									18												
05/13/74	5050	6.14	11.0	59.0F	7.4	118	--	--	--	--	--	--	--	--	--	--	--			4AF	
1450	5050	317	109	15.0C													--				
06/10/74	5050	5.76	10.0	69.8F	8.4	143	--	--	--	--	--	--	--	--	--	--	--			1AF	
1435		105	111	21.0C													--				
07/09/74	5050	5.52	9.2	59.0F	7.2	162	--	--	--	--	--	--	--	--	--	--	--			1AF	
0840		105	91	15.0C													--				
08/05/74	5050	5.14		62.6F	7.4	161	--	--	--	--	--	--	--	--	--	--	--			1AF	
1445		40		17.0C													--				
09/03/74	5050	5.00	10.7	68.0F	7.9	160	--	--	--	--	--	--	--	--	--	--	--			1AF	
1415		23	117	20.0C													--				
	F6	1100.00		EEL RIVER AT SCOTIA																	
10/02/73	5050	9.35	12.2	60.8F	7.9	304	37	11	9.2	1.4	0	151	24	6.8	--	.01	.2	172	140	1A	
1150	5000		123	16.0C	8.3	301	1.85	.90	.40	.04	.00	2.47	.50	.19			7.5	171	14	0.3	
							58	28	13	1		78	16	6							
11/14/73	5050		12.1	53.6F	7.9	109	14	3.6	3.9	1.1	0	59	5.6	2.3	--	.06	.1		50	200A	
1400	5000	71400	112	12.0C		117	.70	.30	.17	.03	.00	.97	.12	.06			11.0	71	2	0.2	
							58	25	14	3		84	10	5							
12/11/73	5050		12.5	48.2F	7.4		19	4.7	4.9	.8	0	69	8.6	4.0	--	.04	.2	88	67	50A	
1415	5000	14000	108	9.0C		138	.95	.39	.21	.02	.00	1.13	.18	.11			11.0	87	11	0.3	
							61	25	13	1		80	13	8							
01/16/74	5050		12.5	50.9F	7.6		11	3.0	4.0	1.2	0	53	4.1	1.5	--	.03	.1	61	40	200A	
0905	5000	321000	112	10.5C		96	.55	.25	.17	.03	.00	.87	.09	.04			7.6	58	0	0.3	
							55	25	17	3		87	9	4							

TABLE D-2 cont
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB SAR	REM
F6 1100.00				EEL RIVER AT SCOTIA										CONTINUED							
02/05/74	5050		12.1	47.3F	7.6		19	5.7	5.3	.9	--	82	9.1	2.6	--	.05	.1	96	71	80A	
1600	5000	8700	103	8.5C		164	.95	.47	.23	.02		1.34	.19	.07			12.0			0.3	
							57	28	14	1											
03/05/74	5050		12.3	47.3F	7.6		18	5.3	4.6	1.0	--	76	7.0	2.5	--	.04	.1	89	67	100A	
1335	5000	24800	105	8.5C		149	.90	.44	.20	.03		1.25	.15	.07			12.0			0.2	
							57	28	13	2											
04/02/74	5050		12.3	50.0F	8.0	143	13	3.2	3.6	1.0	--	57	4.9	1.7	--	.04	.1	67	46	600A	x
1245	5000	98200	109	10.0C		108	.65	.26	.16	.03		.93	.10	.05			9.7			0.2	
							59	24	15	3											
05/14/74	5050		11.0	62.6F	8.3	188	23	6.3	5.1	1.0	--	98	12	3.0	--	.07	.1	110	84	10A	
1245	5000	11300	113	17.0C		183	1.15	.52	.22	.03		1.61	.25	.08			11.0			0.2	
							60	27	11	2											
06/11/74	5050		8.8	73.4F	7.9	227	29	7.7	5.9	1.3	--	121	13	3.4	--	.09	.1	130	100	1A	
1255	5000	1050	102	23.0C		229	1.45	.63	.26	.03		1.98	.27	.10			9.5			0.3	
							61	27	11	1											
07/09/74	5050		10.0	68.0F	8.1	279	41	9.8	7.0	1.4	--	155	19	4.3	--	.11	.1	170	140	1A	
1230	5000	540	109	20.0C		286	2.05	.81	.30	.04		2.54	.40	.12			10.0			0.3	
							64	25	9	1											
08/06/74	5050			70.7F	7.9	296	--	--	--	--	--	--	--	--	--	--	--			0AF	
1225		240		21.5C													--				
09/04/74	5050		10.3	64.4F	8.0	317	39	10	9.8	1.5	--	169	20	6.3	--	140	.1	179	140	1A	
1210	5000	150	108	18.0C	8.0	314	1.95	.82	.43	.04		2.77	.42	.18			8.4			0.4	
							60	25	13	1											
F6 1154.50				EEL RIVER AT SOUTH FORK																	
10/02/73	5050		12.0	63.5F	7.9	297	--	--	8.7	--	0	135	--	6.3	--	.20	--		130	0A	
1245	5050	74E	125	17.5C	7.9	296			.38		.00	2.21		.18			--			0.3	
									13												
11/14/73	5050		12.6	51.8F	8.3	105	17	3.0	3.5	2.1	0	63	7.4	.5	.6	.10	--	96	55	320A	E
1500	5050	30400E	114	11.0C	8.0	121	.85	.25	.15	.05	.00	1.03	.15	.01	.01		--	65	4	0.2	T
							65	19	12	4		86	13	1	1						S
12/11/73	5050		12.6	48.2F	7.5	132	--	--	--	--	--	--	--	--	--	--	--			54AF	
1510	5050	7670E	109	9.0C													--				
02/06/74	5050		13.0	42.8F	7.6	162	--	--	--	--	--	--	--	--	--	--	--			59AF	
0840	5050	1200E	105	6.0C													--				
03/05/74	5050		13.3	49.1F	7.9	133	--	--	--	--	--	--	--	--	--	--	--			162AF	
1430	5050	12300E	117	9.5C													--				
04/02/74	5050		12.6	50.0F	8.2		--	--	3.4	--	0	59	--	.9	--	.10	--		49	650A	
1340	5050	42500E	112	10.0C	8.3	108			.15		.00	.97		.03			--			0.2	
									13												
05/14/74	5050		10.3	62.6F	7.7	170	--	--	--	--	--	--	--	--	--	--	--			15AF	
1350	5050	1880	106	17.0C													--				
06/11/74	5050		8.3	75.2F	8.0	202	--	--	--	--	--	--	--	--	--	--	--			2AF	
1315		636	98	24.0C													--				
07/09/74	5050		9.0	69.8F	8.0	271	--	--	--	--	--	--	--	--	--	--	--			1AF	
1335		220	101	21.0C													--				
08/06/74	5050			73.4F	8.0	285	--	--	--	--	--	--	--	--	--	--	--			1AF	
1315		96		23.0C													--				
09/04/74	5050		9.4	69.8F	7.8	304	--	--	--	--	--	--	--	--	--	--	--			1AF	
1255		48	105	21.0C													--				
F6 1329.50				EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS																	
10/03/73	5050		11.4	60.8F	8.0	252	--	--	--	--	--	--	--	--	--	--	--			0AF	
0845	5050	4.8	119	16.0C													--				
11/15/73	5050		11.2	53.6F	7.9	113	14	4.1	3.9	.9	0	61	8.9	.9	--	.10	--	75	52	110A	
1200	5050	4850	107	12.0C	7.8	120	.70	.34	.17	.02	.00	1.00	.19	.03			--	63	2	0.2	
							57	28	14	2		82	16	2							
12/12/73	5050		12.8	46.4F	7.5	120	--	--	--	--	--	--	--	--	--	--	--			31AF	
0945	5050	2090	111	8.0C													--				
01/23/74	5050		12.7	44.6F	7.4	111	--	--	--	--	--	--	--	--	--	--	--			144AF	
1040	5050	3820	108	7.0C													--				
02/06/74	5050		13.3	41.9F	8.2	132	--	--	--	--	--	--	--	--	--	--	--			69AF	
1205	5050	1120	109	5.5C													--				
03/06/74	5050		11.9	50.0F	7.1	158	--	--	--	--	--	--	--	--	--	--	--			63AF	
1045	5050	3240	109	10.0C													--				
04/03/74	5050		12.5	46.4F	7.6		--	--	3.7	--	0	55	--	1.2	--	.00	--		46	270A	
0810	5050	8290	109	8.0C	8.0	103			.16		.00	.90		.03			--			0.2	
									15												

TABLE D-2 cont
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD PH	LABORATORY EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB SAR	REM
							MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER				
F6	1329.50			EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS										CONTINUED							
05/15/74	5050		10.2	59.0F	7.9	183	--	--	--	--	--	--	--	--	--	--	--			6AF	
0805	5050	311	104	15.0C													--				
06/12/74	5050		8.0	74.3F	7.9	229	--	--	--	--	--	--	--	--	--	--	--			1AF	
0815		115	97	23.5C													--				
07/10/74	5050		8.4	68.0F	8.0	233	--	--	--	--	--	--	--	--	--	--	--			1AF	
0745		143	95	20.0C													--				
08/07/74	5050			71.6F	7.9	236	--	--	--	--	--	--	--	--	--	--	--			1AF	
0755		12		22.0C													--				
09/05/74	5050		7.1	68.0F	8.2	229	--	--	--	--	--	--	--	--	--	--	--			0AF	
0720		7.5	80	20.0C													--				
F6	1350.00			OUTLET CREEK NEAR LONGVALE																	
10/03/73	5050	1.05	10.1	57.2F	7.9	357	--	--	--	--	--	--	--	--	--	--	--			1AF	
0825	5050	1.2	101	14.0C													--				
11/15/73	5050	5.12	11.2	53.6F	8.4	81	6.9	4.1	4.2	1.0	0	42	3.4	3.0	.5	.10	--	61	34	18A	E
1225	5050	1590	107	12.0C	7.1	84	.34	.34	.18	.03	.00	.69	.07	.08	.01		--	44	0	0.3	T
							38	38	20	3		81	8	9	1						
12/12/73	5050	4.05	12.4	48.2F	7.3	92	--	--	--	--	--	--	--	--	--	--	--			33AF	
0920	5050	888	111	9.0C													--				
01/23/74	5050	3.75	12.8	44.6F	7.2	98	--	--	--	--	--	--	--	--	--	--	--			18AF	
1015	5050	718	109	7.0C													--				
02/06/74	5050	2.94	13.4	41.0F	7.6	120	--	--	--	--	--	--	--	--	--	--	--			7AF	
1145	5050	344	108	5.0C													--				
03/06/74	5050	3.97	12.5	50.0F	7.3	101	--	--	--	--	--	--	--	--	--	--	--			14AF	
1105	5050	842	114	10.0C													--				
04/03/74	5050		11.9	48.2F	7.3		--	--	3.5	--	0	39	--	2.8	--	.10	--		32	95A	
0740	5050	2760	106	9.0C	8.0	75			.15		.00	.64		.08			--			0.3	
									19												
05/15/74	5050	3.34	10.1	59.0F	7.6	187	--	--	--	--	--	--	--	--	--	--	--			1AF	
0740	5050	513	103	15.0C													--				
06/12/74	5050	2.61	7.3	71.6F	7.9	234	--	--	--	--	--	--	--	--	--	--	--			1AF	
0755		230	86	22.0C													--				
07/10/74	5050	2.75	7.7	66.2F	8.1	268	--	--	--	--	--	--	--	--	--	--	--			1AF	
0725		275	85	19.0C													--				
08/07/74	5050	2.48		73.4F	8.0	275	--	--	--	--	--	--	--	--	--	--	--			1AF	
0735		192		23.0C													--				
09/05/74	5050	2.39	8.1	66.2F	8.0	293	--	--	--	--	--	--	--	--	--	--	--			1AF	
0700		169	90	19.0C													--				
F6	3009.01			EEL RIVER MIDDLE FORK AT DOS RIOS																	
10/03/73	5050	6.27	12.2	59.0F	7.9	337	--	--	--	--	--	--	--	--	--	--	--			1AF	
0930	5050	25	124	15.0C													--				
11/15/73	5050	13.08	12.9	49.1F	8.0	106	15	3.5	3.0	1.2	0	58	7.7	.0	--	.00	--	96	52	130A	E
0800	5050	7450	116	9.5C	7.6	114	.75	.29	.13	.03	.00	.95	.16	.00			--	59	5	0.2	T
							63	24	11	3		86	14								
12/12/73	5050	11.10	13.7	43.7F	7.8	130	--	--	--	--	--	--	--	--	--	--	--			51AF	
1015	5050	3440	114	6.5C													--				
01/23/74	5050	11.63	13.5	42.8F	7.6	143	--	--	3.4	--	0	76	--	.9	--	.00	--		68	240A	
1115	5050	4370	111	6.0C	8.1	151			.15		.00	1.25		.03			--			0.2	
									10												
02/06/74	5050	9.16	14.1	40.1F	7.8	176	--	--	--	--	--	--	--	--	--	--	--			48AF	
1240	5050	1220	112	4.5C													--				
03/06/74	5050	10.97		46.4F	7.9	156	--	--	--	--	--	--	--	--	--	--	--			108AF	
0720	5050	5040		8.0C													--				
04/03/74	5050	13.67	13.3	44.6F	7.8		--	--	3.4	--	0	67	--	1.1	--	.00	--		60	170A	
0840	5050	9030	113	7.0C	8.1	124			.15		.00	1.10		.03			--			0.2	
									11												
05/15/74	5050	9.72	11.2	53.6F	7.9	146	--	--	--	--	--	--	--	--	--	--	--			25AF	
0835	5050	1730	107	12.0C													--				
06/12/74	5050	8.57	8.7	68.0F	7.8	175	--	--	--	--	--	--	--	--	--	--	--			3AF	
0845		793	98	20.0C													--				

TABLE D-2 cont
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD PH	LABORATORY EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB SAR	REM
							MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					
F6 3009.01					EEL RIVER MIDDLE FORK AT DOS RIOS									CONTINUED							
07/10/74	5050	7.29	9.0	65.3F	7.9	247	--	--	--	--	--	--	--	--	--	--	--			2AF	
0820		549	98	18.5C													--				
08/07/74	5050	7.53		71.6F	8.0	304	--	--	--	--	--	--	--	--	--	--	--			1AF	
0820		300		22.0C													--				
09/05/74	5050	11.56	8.8	68.0F	7.9	318	--	--	--	--	--	--	--	--	--	--	--			1AF	
0745		232	99	20.0C													--				
F6 3050.00					MILL CREEK NEAR COVELO																
11/15/73	5050		11.1	50.9F	8.1	108	12	4.6	3.9	1.1	0	57	6.1	.9	--	.00	--	71	49	70A	
0915	5050		103	10.5C	7.9	114	.60	.38	.17	.03	.00	.93	.13	.03			--	57	3	0.2	
							51	32	14	3		85	12	3							
12/12/73	5050		12.3	46.4F	7.4	169	--	--	--	--	--	--	--	--	--	--	--			13AF	
1110	5050	150E	108	8.0C													--				
01/23/74	5050		12.4	43.7F	7.3	173	--	--	--	--	--	--	--	--	--	--	--			31AF	
1215	5050	200E	105	6.5C													--				
02/06/74	5050		12.7	43.7F	7.5	210	--	--	--	--	--	--	--	--	--	--	--			8AF	
1330	5050	100E	107	6.5C													--				
03/06/74	5050		12.8	47.3F	7.4	174	--	--	--	--	--	--	--	--	--	--	--			17AF	
0825	5050	150E	114	8.5C													--				
04/03/74	5050		12.0	46.4F	7.4	145	--	--	4.4	--	0	80	--	.9	--	.00	--		65	110A	
0930	5050		105	8.0C	7.8	144			.19		.00	1.31		.03			--			0.2	
									13												
05/15/74	5050		10.2	59.0F	8.0	306	--	--	--	--	--	--	--	--	--	--	--			1AF	
0925	5050	40E	105	15.0C													--				
06/12/74	5050		7.6	73.4F	7.6	344	--	--	--	--	--	--	--	--	--	--	--			1AF	
0940		20E	92	23.0C													--				
07/10/74	5050		7.1	67.1F	7.4	327	--	--	9.8	--	0	187	--	5.0	--	.10	--		150	0A	
0905	5050	6E	80	19.5C	8.2	331			.43		.00	3.06		.14			--			0.3	
									13												
F6 3200.00					BLACK BUTTE RIVER NEAR COVELO																
10/03/73	5050	11.50	11.9	60.8F	8.1	300	--	--	6.6	--	0	124	--	1.8	.3	.00	--		144	0A	
1045	5050	21	126	16.0C	7.9	302			.29		.00	2.03		.05	.00		--			0.2	
									9			98		2							
11/15/73	5050	13.50	12.6	50.0F	8.4	110	17	1.8	2.8	.8	0	54	7.6	.9	--	.10	--	84	50	24A	E
1010	5050	596	117	10.0C	7.6	116	.85	.15	.12	.02	.00	.89	.16	.03			--	58	6	0.2	T
							75	13	11	2		82	15	3							
12/12/73	5050	12.97	13.7	41.9F	7.5	127	--	--	--	--	--	--	--	--	--	--	--			21AF	
1215	5050	717	114	5.5C													--				
01/23/74	5050	15.53	13.0	43.7F	8.0	140	--	--	3.2	--	0	71	--	.9	--	.20	--		68	420A	
1305	5050	3960	111	6.5C	8.2	151			.14		.00	1.16		.03			--			0.2	
									9												
02/06/74	5050	15.52	13.2	41.0F	7.6	176	--	--	--	--	--	--	--	--	--	--	--			90AF	
1420	5050	3060	108	5.0C													--				
03/06/74	5050	15.52	13.2	45.5F	7.8	165	--	--	--	--	--	--	--	--	--	--	--			148AF	
0925	5050	687	115	7.5C													--				
04/03/74	5050	15.52	13.1	42.8F	7.8		--	--	3.4	--	0	65	--	1.2	--	.10	--		58	580A	
1100	5050	786	110	6.0C	8.1	126			.15		.00	1.07		.03			--			0.2	
									11												
05/15/74	5050	12.35	11.3	51.8F	7.6	145	--	--	--	--	--	--	--	--	--	--	--			15AF	
1010	5050	211	107	11.0C													--				
06/12/74	5050	11.62	8.3	67.1F	7.9	201	--	--	--	--	--	--	--	--	--	--	--			2AF	
1020		77	94	19.5C													--				
07/10/74	5050	11.35	8.8	64.4F	8.0	250	--	--	--	--	--	--	--	--	--	--	--			1AF	
0950		45	97	18.0C													--				
08/07/74	5050	10.44		74.3F	8.0	289	--	--	--	--	--	--	--	--	--	--	--			1AF	
0945		8.1		23.5C													--				
09/05/74	5050	10.41	9.5	69.8F	8.0	316	--	--	--	--	--	--	--	--	--	--	--			0AF	
0910		7.2	111	21.0C													--				

TABLE D-2 cont

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	Q.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB SAR	REM
F6	4100.00			EEL RIVER SOUTH FORK NEAR MIRANDA																	
10/02/73	5050	3.86	13.9	63.5F	8.1	257	--	--	--	--	--	--	--	--	--	--	--			1AF	
1320	5050	74	146	17.5C													--				
11/14/73	5050	12.53	12.2	53.6F	8.2	92	10	3.2	4.4	1.5	0	46	4.0	4.3	--	.00	--	64	38	240A	
1550	5050	14400	114	12.0C	8.1	96	.50	.26	.19	.04	.00	.75	.08	.12			--	50	1	0.3	T
							51	26	19	4		79	8	13							
12/11/73	5050	8.03	12.2	50.0F	8.1	117	--	--	--	--	--	--	--	--	--	--	--			102AF	
1555	5050	4100	109	10.0C													--				
01/16/74	5050	34.52	12.5	50.9F	7.2	64	--	--	3.9	--	0	39	--	1.8	--	.50	--		38	3200A	
1100	5050	122000	113	10.5C	6.8	78			.17		.00	.64		.05			--			0.3	
									18												
02/06/74	5050	6.89	13.4	43.7F	7.3	129	--	--	--	--	--	--	--	--	--	--	--			61AF	
0915	5050	1600	109	6.5C													--				
03/05/74	5050	8.72	12.3	50.0F	7.3	113	--	--	--	--	--	--	--	--	--	--	--			129AF	
1520	5050	4500	109	10.0C													--				
04/02/74	5050	12.14	11.7	52.7F	7.6		--	--	4.6	--	0	48	--	3.5	--	.10	--		38	1500A	
1420	5050	13000	108	11.5C	8.2	88			.20		.00	.79		.10			--			0.3	
									21												
05/14/74	5050	5.60	11.4	62.6F	8.2	186	--	--	--	--	--	--	--	--	--	--	--			1AF	
1420	5050	850	118	17.0C													--				
06/11/74	5050	3.44	10.3	77.0F	8.3	208	--	--	--	--	--	--	--	--	--	--	--			1AF	
1420		325	124	25.0C													--				
07/09/74	5050	5.20	10.0	71.6F	8.3	234	--	--	--	--	--	--	--	--	--	--	--			1AF	
1410		270	114	22.0C													--				
08/06/74	5050	4.58		80.6F	8.1	252	--	--	--	--	--	--	--	--	--	--	--			2AF	
1345		67		27.0C													--				
09/04/74	5050	4.53	12.5	75.2F	8.2	251	--	--	--	--	--	--	--	--	--	--	--			1AF	
1330		55	148	24.0C													--				
F6	5279.00			VAN DUZEN RIVER NEAR BRIDGEVILLE																	
10/02/73	5050	3.53	12.1	59.0F	7.8	265	--	--	--	--	--	--	--	--	--	--	--			1AF	
1050	5050	28	121	15.0C													--				
11/14/73	5050	9.70	12.1	50.0F	8.1	92	13	3.0	3.2	2.3	0	50	7.6	.9	.5	.00	--	86	45	260A	E
1230	5050	6200	108	10.0C	7.9	99	.65	.25	.14	.06	.00	.82	.16	.03	.01		--	55	4	0.2	T
							59	23	13	5		80	16	3	1						S
12/11/73	5050	7.12	13.0	48.2F	7.4	109	--	--	--	--	--	--	--	--	--	--	--			170AF	
1320	5050	1980	113	9.0C													--				
02/05/74	5050	5.46	13.5	43.7F	7.2	120	--	--	--	--	--	--	--	--	--	--	--			49AF	
1505	5050	900	111	6.5C													--				
03/05/74	5050	6.66	13.4	47.3F	7.3	108	--	--	--	--	--	--	--	--	--	--	--			105AF	
1150	5050	2710	116	8.5C													--				
04/02/74	5050	9.11	12.8	45.5F	7.6		--	--	3.0	--	0	52	--	1.1	--	.00	--		43	550A	
1130	5050	5700	108	7.5C	8.3	95			.13		.00	.85		.03			--			0.2	
									13												
05/14/74	5050	4.75	10.6	59.0F	7.8	162	--	--	--	--	--	--	--	--	--	--	--			1AF	
1150	5050	195	106	15.0C													--				
06/11/74	5050	4.31	8.9	72.5F	8.1	200	--	--	--	--	--	--	--	--	--	--	--			1AF	
1150		74	103	22.5C													--				
07/09/74	5050	4.20	9.6	67.1F	8.0	233	--	--	--	--	--	--	--	--	--	--	--			1AF	
1120		57	105	19.5C													--				
08/06/74	5050	3.83		71.6F	8.2	258	--	--	--	--	--	--	--	--	--	--	--			1AF	
1135		19		22.0C													--				
09/04/74	5050	3.67	9.8	68.0F	8.0	282	--	--	--	--	--	--	--	--	--	--	--			1AF	
1100		10	108	20.0C													--				
F7	1100.00			MATTOLE RIVER NEAR PETROLIA																	
02/05/74	5050	4.49	12.7	48.2F	7.6	130	15	3.0	5.8	.8	0	58	9.7	2.9	.2	.20	--	82	51	120A	
1310	5050	1350	110	9.0C	7.3	128	.75	.25	.25	.02	.00	.95	.20	.08	.00		--	66	3	0.4	
							59	20	20	2		77	16	7							

TABLE D-2 cont

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER					MILLIEQUIVALENTS PER LITER				PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					REM
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3					B	F SIO2	TDS SUM	TH NCH	TURB SAR	
		FT	5100.00		HEAR RIVER AT CAPETOWN																				
02/05/74	5050		12.8	46.4F	7.4	160	20	3.2	6.7	1.5	0	60	18	5.5	.8					.10	--	98	62	180A	
1200	5050	300E	108	8.0C	7.4	159	1.00	.26	.29	.04	.00	.98	.37	.16	.01						--	85	14	0.4	
							63	16	18	3		64	24	11	1										

TABLE D-3

MINOR ELEMENT ANALYSIS OF SURFACE WATER

Lab and Sampler Agency Codes

5000 - U. S. Geological Survey

5050 - Department of Water Resources

Abbreviations

TIME - Pacific Standard Time on a 24-hour clock

DISCH - Instantaneous discharge in cubic feet per second

EC - Electrical conductance in micromhos at 25° Celsius

TEMP - Water temperature at time of sampling in degrees Fahrenheit (F) and Celsius (C)

PH - Measure of acidity (<7) or alkalinity (>7) of water

CHROM (ALL) - All chromium

CHROM (HEX) - Hexavalent chromium

D - Dissolved

T - Total

TABLE D-3

MINOR ELEMENT ANALYSIS OF SURFACE WATER

CONSTITUENTS IN MILLIGRAMS PER LITER

DATE TIME	SAMP LAB	DEPTH	DISCH EC	TEMP PH	ARSENIC	BARIUM CADMIUM	CHROM (ALL) CHROM (HEX)	COPPER IRON	LEAD MANGANESE	MERCURY SELENIUM	SILVER ZINC	REM
		F0	1300.00	SMITH RIVER NEAR CRESCENT CITY								
04/02/74	5050			8.0C		--	--	0.01 T	0.01 T	--	--	
0700	5050			7.4	--	0.00 T	--	5.1 T	0.04 T	--	0.01 T	
		F2	1050.00	SHASTA RIVER NEAR YREKA								
05/07/74	5050			18.5C		--	--	0.01 T	0.00 T	--	--	
1120	5050			8.2	--	0.00 T	--	0.26 T	0.01 T	--	0.02 T	
		F2	5250.00	SCOTT RIVER NEAR FORT JONES								
05/07/74	5050			12.5C		--	--	0.01 T	0.00 T	--	--	
1430	5050			7.5	--	0.00 T	--	3.5 T	0.08 T	--	0.01 T	
		F3	1100.00	KLAMATH RIVER NEAR KLAMATH								
10/02/73	5050			15.5C		--	--	--	--	--	--	
0810	5000		219	7.8	--	--	--	0.00 D	--	--	--	
11/13/73	5050			9.0C		--	--	--	--	--	--	
1635	5000		102	7.3	--	--	--	0.060 D	--	--	--	
12/11/73	5050			6.5C		--	--	--	--	--	--	
0935	5000			7.4	--	--	--	0.050 D	--	--	--	
01/15/74	5050			8.0C		--	--	--	--	--	--	
0935	5000			8.0	--	--	--	0.050 D	--	--	--	
02/05/74	5050			6.0C		--	--	--	--	--	--	
0855	5000			7.5	--	--	--	0.020 D	--	--	--	
03/05/74	5050			8.0C		--	--	--	--	--	--	
0835	5000			7.7	--	--	--	0.040 D	--	--	--	
04/02/74	5050			8.0C		--	--	0.06 T	0.00 T	--	--	
0845	5050			7.9	--	0.00 T	--	41. T	0.92 T	--	0.08 T	
05/14/74	5050			11.5C		--	--	--	--	--	--	
0915	5000		122	8.3	--	--	--	0.05 D	--	--	--	
06/11/74	5050			17.0C		--	--	--	--	--	--	
0910	5000		107	7.4	--	--	--	0.040 D	--	--	--	
07/09/74	5050			17.0C		--	--	--	--	--	--	
0750	5000		149	7.5	--	--	--	0.020 D	--	--	--	
08/06/74	5050			215.3		--	--	--	--	--	--	
0830	5000		175	76.0	--	--	--	.0030 D	--	--	--	
09/04/74	5050			20.0C		--	--	--	--	--	--	
0810	5000		206	7.9	--	--	--	0.0020 D	--	--	--	
		F3	1220.01	KLAMATH RIVER AT ORLEANS								
04/01/74	5050			8.0C		--	--	0.08 T	0.00 T	--	--	
1145	5050			7.7	--	0.01 T	--	30. T	0.64 T	--	0.05 T	
		F3	1430.00	KLAMATH RIVER NEAR SEIAD VALLEY								
05/07/74	5050			14.0C		--	--	0.01 T	0.01 T	--	--	
1320	5050			8.4	--	0.00 T	--	2.2 T	0.06 T	--	0.01 T	
		F3	1599.01	KLAMATH RIVER BELOW IRON GATE DAM								
05/07/74	5050			14.0C		--	--	0.00 T	0.00 T	--	--	
1030	5050			7.6	--	0.00 T	--	0.41 T	0.02 T	--	0.01 T	
		F4	1080.00	TRINITY RIVER AT HOOPA								
04/01/74	5050			7.5C		--	--	0.10 T	0.01 T	--	--	
1040	5050			8.3	--	0.01 T	--	48. T	1.1 T	--	0.28 T	
		F4	1376.00	TRINITY RIVER NEAR HURNT RANCH								
05/13/74	5050			11.0C		--	--	0.01 T	0.00 T	--	--	
0905	5050			7.4	--	0.00 T	--	0.59 T	0.02 T	--	0.02 T	
		F4	1640.00	TRINITY RIVER AT LEWISTON								
05/16/74	5050			8.5C		--	--	0.00 T	0.00 T	--	--	
1235	5050		71	7.3	--	0.00 T	--	0.46 T	0.01 T	--	0.00 T	
		F5	1100.00	MAD RIVER NEAR ARCATA								
05/13/74	5050			16.0C		--	--	0.00 T	0.00 T	--	--	
1350	5050			8.2	--	0.00 T	--	0.10 T	0.01 T	--	0.00 T	
		F5	5100.00	REDWOOD CREEK AT ORICK								
04/01/74	5050			9.5C		--	--	0.37 T	0.12 T	--	--	
1435	5050			7.4	--	0.01 T	--	228. T	5.0 T	--	0.67 T	
		F6	1100.00	EEL RIVER AT SCOTIA								
10/02/73	5050			16.0C		--	--	--	--	--	--	
1150	5000		304	7.9	--	--	--	0.010 D	--	--	--	
11/14/73	5050			12.0C		--	--	--	--	--	--	
1400	5000		109	7.9	--	--	--	0.060 D	--	--	--	
12/11/73	5050			9.0C		--	--	--	--	--	--	
1415	5000			7.4	--	--	--	0.040 D	--	--	--	
01/16/74	5050			10.5C		--	--	--	--	--	--	
0905	5000			7.6	--	--	--	0.080 D	--	--	--	
02/05/74	5050			8.5C		--	--	--	--	--	--	
1600	5000			7.6	--	--	--	0.020 D	--	--	--	
03/05/74	5050			8.5C		--	--	--	--	--	--	
1335	5000			7.6	--	--	--	0.020 D	--	--	--	

TABLE D-3 cont

MINOR ELEMENT ANALYSIS OF SURFACE WATER

CONSTITUENTS IN MILLIGRAMS PER LITER

DATE TIME	SAMP LAB	DEPTH	DISCH EC	TEMP PH	ARSENIC	BARIUM CADMIUM	CHROM (ALL) CHROM (HEX)	COPPER IRON	LEAD MANGANESE	MERCURY SELENIUM	SILVER ZINC	REM
		F6 1100.00		EEL RIVER AT SCOTIA					CONTINUED			
04/02/74	5050			10.0C		--	--	0.12 T	0.02 T	--	--	
1245	5050			8.0	--	0.01 T	--	93. T	1.9 T	--	0.22 T	
05/14/74	5050			17.0C		--	--	--	--	--	--	
1245	5000		188	8.3	--	--	--	0.02 D	--	--	--	
06/11/74	5050			23.0C		--	--	--	--	--	--	
1255	5000		227	7.9	--	--	--	0.020 D	--	--	--	
07/09/74	5050			20.0C		--	--	--	--	--	--	
1230	5000		279	8.1	--	--	--	0.010 D	--	--	--	
09/04/74	5050			18.0C		--	--	--	--	--	--	
1210	5000		317	8.0	--	--	--	.0020 D	--	--	--	
		F6 1154.50		EEL RIVER AT SOUTH FORK								
04/02/74	5050			10.0C		--	--	0.07 T	0.01 T	--	--	
1340	5050			8.2	--	0.01 T	--	77. T	1.6 T	--	0.49 T	
		F6 1329.50		EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS								
04/02/74	5050			10.0C		--	--	0.03 T	0.00 T	--	--	
1340	5050			8.2	--	0.00 T	--	26. T	0.51 T	--	0.08 T	
		F6 1350.00		OUTLET CREEK NEAR LONGVALE								
04/03/74	5050			9.0C		--	--	0.01 T	0.00 T	--	--	
0740	5050			7.3	--	0.00 T	--	5.9 T	0.03 T	--	0.01 T	
		F6 3009.01		EEL RIVER MIDDLE FORK AT DOS RIOS								
04/03/74	5050			7.0C		--	--	0.05 T	0.01 T	--	--	
0840	5050			7.8	--	0.01 T	--	49. T	0.96 T	--	0.54 T	
		F6 3200.00		BLACK BUTTE RIVER NEAR COVELO								
04/03/74	5050			6.0C		--	--	0.07 T	0.06 T	--	--	
1100	5050			7.8	--	0.01 T	--	62. T	1.1 T	--	0.35 T	
		F6 4100.00		EEL RIVER SOUTH FORK NEAR MIRANDA								
04/02/74	5050			11.5C		--	--	0.06 T	0.02 T	--	--	
1420	5050			7.6	--	0.01 T	--	66. T	1.3 T	--	1.3 T	
		F6 5279.00		VAN DUZEN RIVER NEAR BRIDGEVILLE								
04/02/74	5050			7.5C		--	--	0.06 T	0.39 T	--	--	
1130	5050			7.6	--	0.01 T	--	64. T	1.2 T	--	0.21 T	

TABLE D-4

SUPPLEMENTAL MINOR ELEMENT ANALYSIS OF SURFACE WATER

Lab and Sampler Agency Codes

5000 - U. S. Geological Survey

5050 - Department of Water Resources

Abbreviations

TIME - Pacific Standard Time on a 24-hour clock

DISCH - Instantaneous discharge in cubic feet per second

EC - Electrical conductance in micromhos at 25° Celsius

TEMP - Water temperature at time of sampling in degrees Fahrenheit (F) and Celsius (C)

PH - Measure of acidity (<7) or alkalinity (>7) of water

D - Dissolved

T - Total

TABLE D-4

SUPPLEMENTAL MINOR ELEMENT ANALYSIS OF SURFACE WATER

DATE TIME	SAMP LAB	DEPTH	DISCH EC	TEMP PH	ALUMINUM	CONSTITUENTS IN MILLIGRAMS PER LITER ANTIMONY BERYLLIUM	BISMUTH COBALT	GALLIUM GERMANIUM	LITHIUM MOLYBDENUM	NICKEL STRONTIUM	TITANIUM VANADIUM	REM
		F3	1100.00	KLAMATH RIVER NEAR KLAMATH								
10/02/73	5050			15.5C		--	--	--	0.00 D	--	--	
0810	5000		219	7.8	--	--	--	--	--	0.0160 D	--	
11/13/73	5050			9.0C		--	--	--	0.00 D	--	--	
1635	5000		102	7.3	--	--	--	--	--	0.080 D	--	
12/11/73	5050			6.5C		--	--	--	0.000 D	--	--	
0935	5000			7.4	--	--	--	--	--	0.090 D	--	
01/15/74	5050			8.0C		--	--	--	0.000 D	--	--	
0935	5000			8.0	--	--	--	--	--	0.060 D	--	
02/05/74	5050			6.0C		--	--	--	0.000 D	--	--	
0855	5000			7.5	--	--	--	--	--	0.060 D	--	
03/05/74	5050			8.0C		--	--	--	0.00 D	--	--	
0835	5000			7.7	--	--	--	--	--	0.090 D	--	
04/02/74	5050			8.0C		--	--	--	0.20 D	--	--	
0845	5000		152	7.9	--	--	--	--	--	0.60 D	--	
05/14/74	5050			11.5C		--	--	--	0.00 D	--	--	
0915	5000		122	8.3	--	--	--	--	--	0.080 D	--	
06/11/74	5050			17.0C		--	--	--	0.00 D	--	--	
0910	5000		107	7.4	--	--	--	--	--	0.08 D	--	
07/09/74	5050			17.0C		--	--	--	0.000 D	--	--	
0750	5000		149	7.5	--	--	--	--	--	0.110 D	--	
08/06/74	5050			215.3		--	--	--	0.0000 D	--	--	
0830	5000		175	76.0	--	--	--	--	--	.0010 D	--	
09/04/74	5050			20.0C		--	--	--	.0000 D	--	--	
0810	5000		206	7.9	--	--	--	--	--	0.0013 D	--	
		F6	1100.00	EEL RIVER AT SCOTIA								
10/02/73	5050			16.0C		--	--	--	0.00 D	--	--	
1150	5000		304	7.9	--	--	--	--	--	0.0460 D	--	
11/14/73	5050			12.0C		--	--	--	0.00 D	--	--	
1400	5000		109	7.9	--	--	--	--	--	0.0180 D	--	
12/11/73	5050			9.0C		--	--	--	0.000 D	--	--	
1415	5000			7.4	--	--	--	--	--	0.190 D	--	
01/16/74	5050			10.5C		--	--	--	0.000 D	--	--	
0905	5000			7.6	--	--	--	--	--	0.110 D	--	
02/05/74	5050			8.5C		--	--	--	0.000 D	--	--	
1600	5000			7.6	--	--	--	--	--	0.240 D	--	
03/05/74	5050			8.5C		--	--	--	0.00 D	--	--	
1335	5000			7.6	--	--	--	--	--	0.0210 D	--	
04/02/74	5050			10.0C		--	--	--	0.02 D	--	--	
1245	5000		143	8.0	--	--	--	--	--	0.14 D	--	
05/14/74	5050			17.0C		--	--	--	0.00 D	--	--	
1245	5000		188	8.3	--	--	--	--	--	0.30 D	--	
06/11/74	5050			23.0C		--	--	--	0.00 D	--	--	
1255	5000		227	7.9	--	--	--	--	--	0.32 D	--	
07/09/74	5050			20.0C		--	--	--	0.000 D	--	--	
1230	5000		279	8.1	--	--	--	--	--	0.420 D	--	
09/04/74	5050			18.0C		--	--	--	0.0000 D	--	--	
1210	5000		317	8.0	--	--	--	--	--	.0044 D	--	

TABLE D-5 NUTRIENT ANALYSIS OF SURFACE WATER

Lab and Sampler Agency Codes

5000 - U. S. Geological Survey

5050 - Department of Water Resources

Abbreviations

TIME	- Pacific Standard Time on a 24-hour clock.
G.H.	- Instantaneous gage height in feet above an established datum.
Q	- Instantaneous discharge measured in cubic feet per second (cfs). "E" indicates the value has been estimated.
TEMP	- Water temperature in degrees Fahrenheit (F) or Celsius (C).
TURB	- Jackson Turbidity Units measured with a Hellege Turbidmeter (E) or a Hach Nephelometer (A).
PH	- Measure of acidity or alkalinity of water.
EC	- Electrical conductance in micromhos at 25° C.
HCO_3	- Bicarbonate
CO_3	- Carbonate

Nitrogen Series as N

NO_2	- Unfiltered nitrite
NH_3	- Unfiltered ammonia
NO_3	- Unfiltered nitrate
ORG N	- Organic nitrogen
DIS ORG N	- Dissolved organic nitrogen
NH_3 + ORG N	- Ammonia plus organic nitrogen

Phosphorus Series as P

DIS A.H.PO_4	- Dissolved acid hydrolyzable phosphate
D O-PO_4	- Dissolved orthophosphate
T O-PO_4	- Total orthophosphate
D TOT P	- Dissolved total phosphorus
TOT P	- Total phosphorus

TABLE D-5

NUTRIENT ANALYSIS OF SURFACE WATER

DATE TIME	SAMP LAB	G.H. DISCH.	TEMP DEPTH	FIELD PH	LABORATORY EC	TURB F-CO2	FIELD CACO3 P CACO3 T	LAB HCO3 CO3	NH3	NO2 NO3	F ORG N U ORG N	F (NH3 + U ORG N)	DIS A.M.PO4	F H3PO4 U H3PO4	F TOT P U TOT P	REM
F0 1300.00 SMITH RIVER NEAR CRESCENT CITY																
04/02/74	5050	20.94	8.0C	7.4		48A				--	--	--		0.01	--	
0700	5050				66				--	0.02	--	0.0	--	--	0.17	
F2 1050.00 SHASTA RIVER NEAR YREKA																
05/07/74	5050	3.68	18.5C	8.2						--	--	--		0.11	--	
1120	5050								--	0.02	--	0.3	--	--	0.12	
F2 5250.00 SCOTT RIVER NEAR FORT JONES																
05/07/74	5050	9.51	12.5C	7.5						--	--	--		0.01	--	
1430	5050								--	0.11	--	0.1	--	--	0.10	
F3 1100.00 KLAMATH RIVER NEAR KLAMATH																
10/02/73	5050		15.5C	7.8	219			112		--	--	--		--	--	
0810	5000			8.1				0	--	0.05	--	--	--	--	0.13	
11/13/73	5050		9.0C	7.3	102					--	--	--		--	--	
1635	5000								--	0.06	--	--	--	--	0.42	
12/11/73	5050		6.5C	7.4		50A		70		--	--	--		--	--	
0935	5000				127			0	--	0.21	--	--	--	--	0.15	
01/15/74	5050		8.0C	8.0		200A		49		--	--	--		--	--	
0935	5000				95			0	--	0.13	--	--	--	--	0.70	
02/05/74	5050		6.0C	7.5		70A		78		--	--	--		--	--	
0855	5000				144				--	0.31	--	--	--	--	0.17	
03/05/74	5050		8.0C	7.7		80A		76		--	--	--		--	--	
0835	5000				148				--	0.20	--	--	--	--	0.16	
04/02/74	5050	12.53	8.0C	7.9						--	--	--		0.03	--	
0845	5050								--	0.05	--	0.7	--	--	1.9	
04/02/74	5050		8.0C	7.9	152	100A		60		--	--	--		--	--	
0846	5000				114				--	0.30	--	--	--	--	0.83	
05/14/74	5050		11.5C	8.3	122	30A		67		--	--	--		--	--	
0915	5000				119				--	0.06	--	--	--	--	0.12	
06/11/74	5050		17.0C	7.4	107	20A		61		--	--	--		--	--	
0910	5000				110				--	0.03	--	--	--	--	0.05	
07/09/74	5050		17.0C	7.5	149	1A		84		--	--	--		--	--	
0750	5000				154				--	0.01	--	--	--	--	0.03	
08/06/74	5050		215.3	76.0	175	2A				--	--	--		--	--	
0830	5000			7.6	184				--	0.06	--	--	--	--	0.03	
09/04/74	5050		20.0C	7.9	206	2A				--	--	--		--	--	
0810	5000			7.9	203				--	0.07	--	--	--	--	0.06	
F3 1220.01 KLAMATH RIVER AT ORLEANS																
01/01/74	5050	19.72	8.0C	7.5		220A		63		--	--	--		0.03	--	
1145	5050			8.1	111			0	--	0.05	--	0.5	--	--	0.67	
F3 1430.00 KLAMATH RIVER NEAR SEIAD VALLEY																
10/15/73	5050		14.5C	8.0	274					--	--	--		0.18	--	
1120	5050								--	0.42	--	--	--	--	--	
11/15/73	5050		8.5C	8.1	181	13A				--	--	--		0.09	--	
1105	5050								--	0.40	--	--	--	--	--	
01/14/74	5050		5.0C	7.4	160	110A				--	--	--		0.04	--	
1425	5050								--	0.45	--	--	--	--	--	
05/07/74	5050		14.0C	8.4						--	--	--		0.03	--	
1320	5050								--	0.12	--	0.2	--	--	0.12	
F3 1599.01 KLAMATH RIVER BELOW IRON GATE DAM																
05/07/74	5050		14.0C	7.6						--	--	--		0.05	--	
1030	5050								--	0.17	--	0.4	--	--	0.08	
F4 1080.00 TRINITY RIVER AT HOOPA																
11/13/73	5050	25.09	9.5C	7.4	117	130A				--	--	--		0.00	--	
1305	5050								--	0.08	--	--	--	--	--	
04/01/74	5050	31.84	7.5C	8.3		360A		63		--	--	--		0.02	--	
1040	5050			8.1	111			0	--	0.02	--	0.7	--	--	1.7	
08/05/74	5050	14.03	22.0C	7.4	175	1AF				--	--	--		0.01	--	
1040	5050								--	0.05	--	--	--	--	--	
F4 1376.00 TRINITY RIVER NEAR BURNT RANCH																
05/13/74	5050		11.0C	7.4		11A				--	--	--		0.01	--	
0905	5050				100				--	0.00	--	0.1	--	--	0.02	
F4 1640.00 TRINITY RIVER AT LEWISTON																
03/04/74	5050	3.36	7.0C	7.1	76	35AF				--	--	--		0.01	--	
0800	5050								--	0.07	--	--	--	--	--	
05/16/74	5050	5.40	8.5C	7.3	71	12A				--	--	--		0.00	--	
1235	5050				74				--	0.04	--	0.1	--	--	0.01	
F5 1100.00 MAD RIVER NEAR ARCATA																
05/13/74	5050	4.49	16.0C	8.2		3A				--	--	--		0.00	--	
1350	5050				158				--	0.00	--	0.0	--	--	0.02	

TABLE D-5 cont

NUTRIENT ANALYSIS OF SURFACE WATER

DATE TIME	SAMP LAB	G.H. DISCH.	TEMP DEPTH	FIELD LABORATORY PH	EC	TURB F-CO2	FIELD CACO3 P CACO3 T	LAB HCO3 CO3	NH3	NUTRIENT CONSTITUENTS IN MILLIGRAMS PER LITER NO2 NO3	F ORG N U ORG N	F (NH3 + U ORG N)	DIS A.H.PO4	F H3PO4 U H3PO4	F TOT P U TOT P	REM
F5 5100.00 REDWOOD CREEK AT ORICK																
04/01/74	5050	16.93	9.5C	7.4		1600A		27		--	--	--		0.02	--	
1435	5050			8.0	57			0	--	0.07	--	--	--	--	3.1	
F6 1100.00 EEL RIVER AT SCOTIA																
10/02/73	5050		16.0C	7.9	304			151		--	--	--		--	--	
1150	5000			8.3				0	--	0.03	--	--	--	--	0.04	
11/14/73	5050		12.0C	7.9	109					--	--	--		--	--	
1400	5000								--	0.26	--	--	--	--	0.90	
12/11/73	5050		9.0C	7.4		50A		69		--	--	--		--	--	
1415	5000				138			0	--	0.13	--	--	--	--	0.12	
01/16/74	5050		10.5C	7.6		200A		53		--	--	--		--	--	
0905	5000				96			0	--	0.48	--	--	--	--	2.3	
02/05/74	5050		8.5C	7.6		80A		82		--	--	--		--	--	
1600	5000				160				--	0.14	--	--	--	--	0.12	
03/05/74	5050		8.5C	7.6		100A		76		--	--	--		--	--	
1335	5000				149				--	0.27	--	--	--	--	0.04	
04/02/74	5050	27.82	10.0C	8.0						--	--	--		0.03	--	
1245	5050								--	0.03	--	1.2	--	--	0.68	
04/02/74	5050		10.0C	8.0	143	600A		57		--	--	--		--	--	
1246	5000				108				--	0.36	--	--	--	--	1.2	
05/14/74	5050		17.0C	8.3	188	10A		98		--	--	--		--	--	
1245	5000				183				--	0.06	--	--	--	--	0.19	
06/11/74	5050		23.0C	7.9	227	1A		121		--	--	--		--	--	
1255	5000				229				--	0.03	--	--	--	--	0.00	
07/09/74	5050		20.0C	8.1	279					--	--	--		--	--	
1230	5000								--	0.03	--	--	--	--	0.02	
09/04/74	5050		18.0C	8.0	317	1A				--	--	--		--	--	
1210	5000			7.9	314				--	0.04	--	--	--	--	0.00	
F6 1154.50 EEL RIVER AT SOUTH FORK																
04/02/74	5050		10.0C	8.2		650A		59		--	--	--		0.02	--	
1340	5050			8.3	108			0	--	0.02	--	1.1	--	--	0.94	
F6 1329.50 EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS																
11/15/73	5050		12.0C	7.9	113	110A				--	--	--		0.01	--	
1200	5050								--	0.08	--	--	--	--	--	
04/02/74	5050		10.0C	8.2		270A		55		--	--	--		0.02	--	
1340	5050			8.0	103			0	--	0.01	--	0.4	--	--	0.75	
F6 1350.00 OUTLET CREEK NEAR LONGVALE																
04/03/74	5050		9.0C	7.3		95A		39		--	--	--		0.02	--	
0740	5050			8.0	75			0	--	0.05	--	0.2	--	--	0.80	
F6 3009.01 EEL RIVER MIDDLE FORK AT DOS RIOS																
11/15/73	5050	13.08	9.5C	8.0	106					--	--	--		0.01	--	
0800	5050								--	0.12	--	--	--	--	--	
01/23/74	5050	11.63	6.0C	7.6	143	240AF				--	--	--		0.01	--	
1115	5050								--	0.07	--	--	--	--	--	
04/03/74	5050	13.67	7.0C	7.8		170A		67		--	--	--		0.02	--	
0840	5050			8.1	124			0	--	0.02	--	0.7	--	--	0.65	
F6 3050.00 MILL CREEK NEAR COVELO																
11/15/73	5050		10.5C	8.1	108	70A				--	--	--		0.01	--	
0915	5050								--	0.17	--	--	--	--	--	
04/03/74	5050		8.0C	7.4	145	86AF				--	--	--		0.01	--	
0930	5050								--	0.23	--	--	--	--	--	
07/10/74	5050		19.5C	7.4	327	14F				--	--	--		0.00	--	
0905	5050	6 E							--	0.02	--	--	--	--	--	
F6 3200.00 BLACK BUTTE RIVER NEAR COVELO																
11/15/73	5050	13.50	10.0C	8.4	110	24A				--	--	--		0.01	--	
1010	5050								--	0.07	--	--	--	--	--	
01/23/74	5050	15.53	6.5C	8.0	140	1100AF				--	--	--		0.01	--	
1305	5050								--	0.05	--	--	--	--	--	
04/03/74	5050	15.52	6.0C	7.8		580A		65		--	--	--		0.02	--	
1100	5050			8.1	126			0	--	0.02	--	0.9	--	--	1.4	
F6 4100.00 EEL RIVER SOUTH FORK NEAR MIRANDA																
11/14/73	5050	12.53	12.0C	8.2	92	240A				--	--	--		0.01	--	
1550	5050								--	0.17	--	--	--	--	--	
04/02/74	5050	12.41	11.5C	7.6		1500A		48		--	--	--		0.03	--	
1420	5050			8.2	88			0	--	0.03	--	0.8	--	--	0.65	
F6 5279.00 VAN DUZEN RIVER NEAR BRIDGEVILLE																
04/02/74	5050	9.11	7.5C	7.6		550A		52		--	--	--		0.02	--	
1130	5050			8.3	95			0	--	0.04	--	0.9	--	--	0.66	

TABLE D-6

PESTICIDES IN SURFACE WATER

All samples were collected and analyzed for pesticides by the Department of Water Resources (5050).

All samples were analyzed for two groups of pesticides, chlorinated organic compounds and organic phosphorus compounds. All pesticides detected are included in Table D-6. Other pesticides in these groups were absent or below detectable levels.

Pesticides

BHC - Benzene hexachloride

DDT - Dichloro diphenyl trichloroethane

ppDDD - Para para isomer of dichloro diphenyl dichloroethane

ppDDT - Para para isomer of dichloro diphenyl trichloroethane

When two pesticides are reported together with a slash mark separating them (ppDDE/Dieldrin, Simazine/Atrazine, etc.), the reported concentration is an undifferentiated total of the two. Either of the two pesticides could make up the entire total.

TABLE D-6

PESTICIDES IN SURFACE WATER

COMPOUNDS REPORTED IN NANOGRAMS/LITER

DATE TIME	SAMP LAB	TEMP EC	DO PH	G.H. DEP DISCHARGE	CHLORINATED HYDROCARBON	ORGANIC PHOSPHORUS	OTHER
	F0	1300.00			SMITH RIVER NEAR CRESCENT CITY		
04/02/74 0700	5050 5050	8.0C	13.7 7.4	20.94	NONE DETECTED	NONE DETECTED	
	F2	1050.00			SHASTA RIVER NEAR YREKA		
05/07/74 1120	5050 5050	18.5C	9.8 8.2	3.68	NONE DETECTED	NONE DETECTED	
	F2	5250.00			SCOTT RIVER NEAR FORT JONES		
05/07/74 1430	5050 5050	12.5C	10.5 7.5	9.51	NONE DETECTED	NONE DETECTED	
	F3	1100.00			KLAMATH RIVER NEAR KLAMATH		
04/02/74 0845	5050 5050	8.0C	13.1 7.9	25.30	NONE DETECTED	NONE DETECTED	
	F4	1080.00			TRINITY RIVER AT HOOPA		
04/01/74 1040	5050 5050	7.5C	12.9 8.3	31.84	NONE DETECTED	NONE DETECTED	
	F5	5100.00			REDWOOD CREEK AT ORICK		
04/01/74 1435	5050 5050	9.5C	12.3 7.4	16.93	NONE DETECTED	NONE DETECTED	
	F6	1100.00			EEL RIVER AT SCOTIA		
04/02/74 1245	5050 5050	10.0C	12.3 8.0	27.82	NONE DETECTED	NONE DETECTED	
	F6	1154.50			EEL RIVER AT SOUTH FORK		
04/02/74 1340	5050 5050	10.0C	12.6 8.2		NONE DETECTED	NONE DETECTED	
	F6	5279.00			VAN DUZEN RIVER NEAR BRIDGEVILLE		
04/02/74 1130	5050 5050	7.5C	12.8 7.6	9.11	NONE DETECTED	NONE DETECTED	

FIGURE E-1

GROUND WATER BASINS, WATER QUALITY SAMPLES

APPENDIX E

GROUND WATER QUALITY

This appendix presents ground water quality data collected during the period from October 1, 1973, through September 30, 1974. The data were collected from a number of major ground water sources in the North Coastal area in cooperation with local agencies. During the 1973 water year, 96 wells were sampled in 10 ground water basins.

At the time of field sampling, pH, specific conductance, and temperature measurements are made. The results are compared with measurements made in previous years. If a substantial change is noted, the samples are submitted to the laboratory for further analyses.

Laboratory analyses of ground waters are performed in accordance with "Standard Methods for the Examination of Water and Waste Water", 13th Edition, 1971.

The Region and Basin and State Well Numbering Systems are described in Appendix C, "Ground Water Measurements".

TABLE E-1 MINERAL ANALYSES OF GROUND WATER

An explanation of column headings follows:

The LAB and SAMPLER agency code is as follows:

5050 - California Department of Water Resources

TIME - Pacific Standard Time on a 24-hour clock.

TEMP - Water temperature in degrees Fahrenheit or degrees Celsius. The computer prints out both.

PH LAB & FIELD - Measure of acidity or alkalinity of water.

EC LAB - The electrical conductance in micromhos at 25° Celsius.

EC FIELD - The electrical conductance in micromhos at time of field sampling.

TDS - Gravimetric determination of total dissolved solids at 180° Celsius.

SUM - Total dissolved solids determined by addition of analyzed constituents.

TH - Total hardness.

NCH - Noncarbonate hardness.

SAR - Sodium adsorption ratio.

PERCENT REACTANCE VALUE - Determined by dividing the sum of the cations or anions in milliequivalents per liter into each constituent in milliequivalents per liter arriving at a percentage. For a partial analysis, an approximate value is determined by multiplying the electrical conductance by 0.01 and using that as the cation or anion sum.

The MINERAL CONSTITUENTS are as follows:

B	- Boron	K	- Potassium
CA	- Calcium	MG	- Magnesium
CL	- Chloride	NA	- Sodium
CO_3	- Carbonate	NO_3	- Nitrate
F	- Fluoride	SIO_2	- Silica
HCO_3	- Bicarbonate	SO_4	- Sulfate

TABLE E-1

MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLER LAB		TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	SAR	REM
	1	NORTH COASTAL REGION																		
	1-01	SMITH RIVER PLAIN																		
	16N/01W-02Q01	H																		
09/04/74	5050		59.0F	6.7	170	--	--	--	--	--	--	--	--	--	--	--				
1310			15.0C													--				
	16N/02W-13E01	H																		
09/04/74	5050		71.0F	6.6	540	--	--	--	--	--	--	--	--	--	--	--				
1630			21.6C													--				
	17N/01W-03E01	H																		
09/04/74	5050		60.0F	6.9	305	--	--	--	--	--	--	--	5.0	5.2	--	--		137		
1440	5050		15.5C		291								.14	.08		--				
	17N/01W-04J01	H																		
09/04/74	5050		64.0F	6.9	320	7.5	34	4.4	.6	0	184	4.3	5.3	6.5	.00	--	172	158		
1420	5050		17.8C	8.0	305	.37	2.80	.19	.02	.00	3.02	.09	.15	.10		--	153	8	0.2	
						11	83	6	1		90	3	4	3						
	17N/01W-14C02	H																		
09/04/74	5050		60.0F	6.5	175	--	--	--	--	--	--	--	--	--	--	--				
1400			15.5C													--				
	18N/01W-05K01	H																		
09/04/74	5050		63.0F	5.9	185	--	--	--	--	--	--	--	21	21.0	--	--		45		
1530	5050		17.2C		178								.59	.34		--				
	18N/01W-26H01	H																		
09/04/74	5050		62.0F	6.3	105	--	--	--	--	--	--	--	--	--	--	--				
1510			16.7C													--				
	18N/01W-34M02	H																		
09/04/74	5050		58.0F	6.8	318	--	--	--	--	--	--	--	--	--	--	--				
1450			14.4C													--				
	1-02	KLAMATH RIVER BASIN																		
	46N/02E-15F01	H																		
06/18/74	5050		57.0F	7.1	850	83	26	56	5.5	0	129	284	22	13.0	.40	--	630	314		E
1235	5050		13.9C	7.9	855	4.14	2.14	2.44	.14	.00	2.11	5.91	.62	.21		--	553	209	1.4	
						47	24	28	2		24	67	7	2						
	1-03	BUTTE VALLEY																		
	45N/01E-09C02	H																		
06/18/74	5050		57.0F	7.7	200	--	--	--	--	--	--	--	3.4	4.2	--	--		70		
1205	5050		13.9C		187								.10	.07		--				
	47N/01E-07C02	H																		
06/19/74	5050		62.0F	8.1	675	--	--	--	--	--	--	--	--	--	--	--				
1015			16.7C													--				
	47N/01E-07C03	H																		
06/19/74	5050		77.0F	8.3	445	6.4	4.9	80	17	0	212	11	26	5.7	.20	--	300	36		
1005	5050		25.0C	8.3	459	.32	.40	3.48	.43	.00	3.47	.23	.73	.09		--	255	0	5.8	
						7	9	75	9		77	5	16	2						
	47N/01E-08D01	H																		
06/19/74	5050		57.0F	7.7	850	--	--	--	--	--	--	--	--	--	--	--				
0945			13.9C													--				
	47N/01E-32A01	H																		
06/19/74	5050		70.0F	8.2	218	--	--	--	--	--	--	--	6.4	--	.10	--		42		
1110	5050		21.1C		222								.18			--				
	48N/01E-30F01	H																		
06/18/74	5050		56.0F	7.8	395	--	--	--	--	--	--	--	6.6	--	--	--		148		
1500	5050		13.3C		382								.19			--				
	45N/01W-33D01	H																		
06/18/74	5050		56.0F	6.9	118	9.2	5.8	4.1	1.6	0	72	1.0	.0	1.3	.00	--	96	47		E
1010	5050		13.3C	8.0	109	.46	.48	.18	.04	.00	1.18	.02	.00	.02		--	58	0	0.3	T
						40	41	16	3		97	2		2						
	45N/02W-01P01	H																		
06/18/74	5050		51.0F	6.5	158	13	7.7	5.6	1.7	0	73	8.7	.0	6.4	.00	--	120	64		E
0950	5050		10.5C	7.7	148	.65	.63	.24	.04	.00	1.20	.18	.00	.10		--	79	4	0.3	T
						42	40	15	3		81	12		7						S
	45N/02W-01Q02	H																		
06/18/74	5050		48.0F	6.3	100	--	--	--	--	--	--	--	--	--	--	--				
0930			8.9C													--				
	46N/01W-02F01	H																		
06/19/74	5050		54.0F	8.2	400	--	--	--	--	--	--	--	--	--	--	--				
1145			12.2C													--				

TABLE E-1 cont

MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLER LAB		TEMP	FIELD PH	LABORATORY EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	SAR	REM
						MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER					MILLIGRAMS PER LITER					
										MILLIEQUIVALENTS PER LITER										
										PERCENT REACTANCE VALUE										
	1		NORTH COASTAL REGION																	
	1-03		BUTTE VALLEY																	
	46N/01W-17B01	M																		
06/19/74	5050		54.0F	8.3	350	--	--	--	--	--	--	--	--	--	--	--				
0835			12.2C													--				
	46N/01W-17G02	M																		
06/19/74	5050		59.0F	8.2	400	35	25	16	5.0	8.0	221	17	8.1	10.0	.00	--	234	192		
0815	5050		15.0C	8.5	433	1.75	2.06	.70	.13	.27	3.62	.35	.23	.16		--	233	0	0.5	
						38	44	15	3	6	78	8	5	3						
	46N/01W-17L01	M																		
06/19/74	5050		54.0F	7.6	440	--	--	--	--	--	--	--	--	--	--	--				
0735			12.2C													--				
	46N/01W-29F01	M																		
06/19/74	5050		53.0F	7.0	325	23	22	14	4.0	0	163	40	2.9	14.0	.00	--	223	146		
1310	5050		11.7C	8.1	352	1.15	1.81	.61	.10	.00	2.67	.83	.08	.23		--	200	15	0.5	
						31	49	17	3		70	22	2	6						
	46N/01W-30Q01	M																		
06/19/74	5050		54.0F	7.0	312	21	22	11	4.4	4.0	145	39	2.0	14.0	.00	--	231	142		
1320	5050		12.2C	8.4	336	1.05	1.81	.48	.11	.13	2.38	.81	.06	.23		--	189	18	0.4	
						30	52	14	3	4	66	22	2	6						
	46N/02W-13P01	M																		
06/19/74	5050		54.0F	7.1	450	--	--	--	--	--	--	--	9.7	12.0	--	--		143		
1240	5050		12.2C		448								.27	.19		--				
	46N/02W-25R01	M																		
06/19/74	5050		53.0F	7.1	355	--	--	--	--	--	--	--	--	--	--	--				
1345			11.7C													--				
	46N/02W-25R02	M																		
06/19/74	5050		53.0F	7.1	300	--	--	--	--	--	--	--	1.4	--	--	--		132		
1340	5050		11.7C		306								.04			--				
	46N/02W-26P01	M																		
06/19/74	5050		53.0F	7.7	185	--	--	--	--	--	--	--	--	--	--	--				
1405			11.7C													--				
	46N/02W-26Q02	M																		
06/19/74	5050		54.0F	7.0	300	--	--	--	--	--	--	--	--	--	--	--				
1400			12.2C													--				
	46N/02W-34B01	M																		
06/19/74	5050		52.0F	8.1	145	13	7.4	6.9	2.0	0	94	1.5	1.0	.6	.00	--	105	63		
1430	5050		11.1C	8.3	150	.65	.61	.30	.05	.00	1.54	.03	.03	.01		--	79	0	0.4	T
						40	38	19	3		96	2	2	1						
	46N/02W-36K01	M																		
06/19/74	5050		53.0F	6.9	350	23	24	10	3.8	0	134	40	2.7	26.0	.00	--	252	156		
1455	5050		11.7C	8.1	368	1.15	1.97	.44	.10	.00	2.20	.83	.08	.42		--	195	46	0.3	T
						31	54	12	3		62	24	2	12						
	47N/02W-21H03	M																		
06/18/74	5050		55.0F	7.2	118	--	--	--	--	--	--	--	--	--	--	--				
1715			12.8C													--				
	48N/01W-28F01	M																		
06/18/74	5050		83.0F	8.4	205	--	--	--	--	--	--	--	5.4	--	.20	--		9		
1600	5050		28.3C		200								.15			--				
	48N/01W-28J01	M																		
06/18/74	5050		63.0F	7.7	420	--	--	--	--	--	--	--	5.6	--	.10	--		153		
1540	5050		17.2C		411								.16			--				
	48N/01W-28J03	M																		
06/18/74	5050		59.0F	7.6	580	--	--	--	--	0	282	--	5.6	16.0	--	--		217		
1520	5050		15.0C	7.6	559					.00	4.62		.16	.26		--				
											92.		3	5						
	48N/01W-31M01	M																		
06/18/74	5050		57.0F	6.9	495	34	26	14	3.0	0	103	14	29	94.0	.00	--	337	190		
1620	5050		13.9C	8.0	482	1.70	2.14	.61	.08	.00	1.69	.29	.82	1.52		--	265	108	0.4	T
						38	47	13	2		39	7	19	35						
	48N/01W-36A01	M																		
06/18/74	5050		81.0F	8.4	340	6.2	2.6	60	13	0	190	1.2	8.2	5.6	.20	--	222	26		
1420	5050		27.2C	8.0	337	.31	.21	2.61	.33	.00	3.11	.02	.23	.09		--	190	0	5.1	
						9	6	75	10		90	1	7	3						
	1-04		SHASTA VALLEY																	
	42N/05W-20F01	M																		
07/01/74	5050		67.0F	6.8	700	23	57	49	1.5	0	413	12	31	2.2	2.00	--	400	293		
0835	5050		19.4C	7.5	706	1.15	4.69	2.13	.04	.00	6.77	.25	.87	.04		--	381	0	1.2	
						14	59	27			85	3	11	1						
	42N/05W-20J01	M																		
07/01/74	5050		60.0F	6.8	335	--	--	--	--	--	--	--	--	--	--	--				
0815			15.5C													--				

TABLE E-1 cont'

MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLER LAB		TEMP	FIELD PH	LABORATORY EC	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE									B	F SIO2	TDS SUM	TH NCM	SAR	REM
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3						
	1		NORTH COASTAL REGION																	
	1-04		SHASTA VALLEY																	
	42N/06W-10J01	M																		
07/01/74	5050		65.0F	7.4	500	--	--	--	--	--	--	--	--	--	--	--				
0930			18.3C													--				
	43N/04W-07M01	M																		
07/01/74	5050		70.0F	6.8	2500	64	195	216	6.0	0	1260	3.6	275	1.5	5.80	--	1350	963		
1445	5050		21.1C	7.3	2420	3.19	16.04	9.40	.15	.00	20.65	.07	7.76	.02		--	1386	0	3.0	
						11	56	33	1		72		27							
	43N/05W-02C01	M																		
07/01/74	5050		53.0F	6.3	224	13	12	17	1.9	0	122	4.4	9.4	.9	.10	--	154	81		
1225	5050		11.7C	6.9	227	.65	.99	.74	.05	.00	2.00	.09	.27	.01		--	119	0	0.8	T
						27	41	30	2		84	4	11							
	43N/06W-15L01	M																		
07/01/74	5050		56.0F	7.3	615	--	--	--	--	--	--	--	10	--	--	--		302		
1015	5050		13.3C		599								.28			--				
	43N/06W-21R01	M																		
07/01/74	5050		60.0F	7.3	480	--	--	--	--	--	--	--	--	--	--	--				
0955			15.5C													--				
	44N/05W-32C03	M																		
07/01/74	5050		65.0F	7.3	1020	--	--	--	--	--	--	--	--	--	--	--				
1100			18.3C													--				
	44N/06W-15C01	M																		
07/01/74	5050		74.0F	7.6	590	--	--	--	--	--	--	--	27	17.0	--	--		280		
1530	5050		23.3C		624								.76	.27		--				
	44N/06W-22K01	M																		
07/01/74	5050		65.0F	7.0	440	--	--	--	--	--	--	--	--	--	--	--				
1040			18.3C													--				
	45N/05W-06E01	M																		
07/01/74	5050		62.0F	8.4	1000	--	--	--	--	--	--	--	--	--	--	--				
1635			16.7C													--				
	45N/06W-19E01	M																		
07/01/74	5050		67.0F	7.7	360	--	--	--	--	--	--	--	--	--	--	--				
1555			19.4C													--				
	45N/06W-22R01	M																		
07/01/74	5050		64.0F	8.3	500	--	--	--	--	--	--	--	--	--	--	--				
1610			17.8C													--				
	45N/06W-27D02	M																		
07/01/74	5050		60.0F	8.3	580	--	--	--	--	--	--	--	20	54.0	--	--		225		
1550	5050		15.5C		573								.56	.87		--				
	45N/06W-30E01	M																		
07/01/74	5050		86.0F	7.4	445	--	--	--	--	--	--	--	--	--	--	--				
1710			30.0C													--				
	1-05		SCOTT RIVER VALLEY																	
	42N/09W-02B01	M																		
07/02/74	5050		56.0F	7.2	560	--	--	--	--	--	--	--	9.8	--	--	--		293		
1225	5050		13.3C		571								.28			--				
	42N/09W-27K01	M																		
07/02/74	5050		63.0F	6.5	63	--	--	--	--	--	--	--	--	--	--	--				
0715			17.2C													--				
	42N/09W-29A02	M																		
07/02/74	5050		57.0F	6.9	155	--	--	--	--	--	--	--	--	--	--	--				
0755			13.9C													--				
	43N/09W-02G01	M																		
07/02/74	5050		62.0F	7.3	410	46	26	4.4	1.2	0	250	17	2.0	3.7	.00	--	196	220		
1045	5050		16.7C	7.7	418	2.30	2.14	.19	.03	.00	4.10	.35	.06	.06		--	223	17	0.1	
						49	46	4	1		90	8	1	1						
	43N/09W-08F01	M																		
07/02/74	5050		58.0F	6.3	115	--	--	--	--	--	--	--	--	--	--	--				
0945			14.4C													--				
	43N/09W-08H01	M																		
07/01/74	5050		59.0F	6.8	125	--	--	--	--	--	--	--	1.0	--	--	--		53		
1005	5050		15.0C		125								.03			--				
	43N/09W-24F02	M																		
07/02/74	5050		56.0F	7.1	440	--	--	--	--	--	--	--	--	--	--	--				
1205			13.3C													--				

TABLE E-1 cont

MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLER LAB		TEMP	FIELD PH	LABORATORY EC	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER					REM
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TOS SUM	TH NCH	SAR	
	1		NORTH COASTAL REGION																	
	1-05		SCOTT RIVER VALLEY																	
	43N/09W-29G02	H																		
07/02/74	5050		77.0F	7.7	85	--	--	--	--	--	--	--	--	--	--	--				
0800			25.0C													--				
	43N/10W-11E01	H																		
07/02/74	5050		58.0F	6.8	63	--	--	--	--	--	--	--	--	--	--	--				
0840			14.4C													--				
	44N/08W-33E01	H																		
07/02/74	5050		57.0F	6.8	600	52	47	6.8	.7	0	321	29	6.8	35.0	.20	--	391	325		
1145	5050		13.9C	7.5	613	2.59	3.87	.30	.02	.00	5.26	.60	.19	.56		--	335	60	0.2	
						38	57	4			80	9	3	8						
	44N/09W-34R01	H																		
07/02/74	5050		73.0F	6.8	295	--	--	--	--	--	--	--	2.7	12.0	--	--		146		
1055	5050		22.8C		298								.08	.19		--				
	1-06		MAYFORK VALLEY																	
	31N/12W-12L01	H																		
06/13/74	5050		66.0F	6.1	175	--	--	--	--	--	--	--	--	--	--	--				
1245			18.9C													--				
06/13/74	5105		66.0F	6.1	175	--	--	--	--	--	--	--	--	--	--	--				
1246			18.9C													--				
	31N/12W-15K01	H																		
06/13/74	5050		57.0F	6.8	325	--	--	--	--	--	--	--	--	--	--	--				
1225			13.9C													--				
06/13/74	5050		57.0F	6.8	325	30	16	12	.3	4.0	168	15	11	.8	.00	--	174	143		
1225	5050		13.9C	8.4	301	1.50	1.32	.52	.01	.13	2.75	.31	.31	.01		--	172	0	0.4	
						45	39	16		4	78	9	9							
	1-08		MAD RIVER VALLEY																	
	05N/01E-04H04	H																		
09/05/74	5050		61.0F	7.9	470	--	--	--	--	--	--	--	--	--	--	--				
1110			16.1C													--				
	06N/01E-07M01	H																		
09/05/74	5050		60.0F	6.3	520	--	--	18	--	6.0	274	--	28	--	--	--		242		
0940	5050		15.5C	8.5	541			.78		.20	4.49		.79			--			0.5	
								14												
	06N/01E-08H01	H																		
09/05/74	5050		58.0F	5.9	180	--	--	--	--	--	--	--	--	--	--	--				
0855			14.4C													--				
	06N/01E-19Q01	H																		
09/05/74	5050		58.0F	7.7	365	--	--	--	--	--	--	--	11	--	--	--		176		
1045	5050		14.4C		386								.31			--				
	06N/01E-30N01	H																		
09/05/74	5050		58.0F	7.2	365	--	--	--	--	--	--	--	--	--	--	--				
1025			14.4C													--				
	06N/01E-32F01	H																		
09/05/74	5050		64.0F	7.6	700	--	--	--	--	--	--	--	--	--	--	--				
1010			17.8C													--				
	06N/01W-01H01	H																		
09/05/74	5050		56.0F	6.1	205	--	--	--	--	--	--	--	--	--	--	--				
0835			13.3C													--				
	1-09		EUREKA PLAIN																	
	05N/01E-18Q01	H																		
09/05/74	5050		62.0F	7.3	815	--	--	--	--	--	--	--	98	--	1.40	--		108		
1510	5050		16.7C		838								2.76			--				
	05N/01E-20Q01	H																		
09/05/74	5050		56.0F	6.3	295	--	--	--	--	--	--	--	--	--	--	--				
1455			13.3C													--				
	04N/01W-08P01	H																		
09/05/74	5050		56.0F	7.7	170	--	--	--	--	--	--	--	--	--	--	--				
1315			13.3C													--				
	04N/01W-17B01	H																		
09/05/74	5050		56.0F	6.9	190	--	--	--	--	--	--	--	--	--	--	--				
1330			13.3C													--				

TABLE E-1 cont

MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLER LAB		TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	SAR	REM
	1		NORTH COASTAL REGION																	
	1-09		EUREKA PLAIN																	
		05N/01W-29Q01 M																		
09/06/74	5050		60.0F	6.5	290	--	--	--	--	--	--	--	--	--	--	--				
1210			15.5C													--				
	1-10		EEL RIVER VALLEY																	
		02N/01W-04Q01 M																		
09/06/74	5050		58.0F	6.7	570	--	--	--	--	--	--	--	--	--	--	--				
1000			14.4C													--				
		03N/01W-05K01 M																		
09/06/74	5050		64.0F	6.3	160	--	--	--	--	--	--	--	--	--	--	--				
1100			17.8C													--				
		03N/01W-18A01 M																		
09/06/74	5050		60.0F	7.3	475	--	--	--	--	--	--	--	16	3.8	--	--		92		
1045	5050		15.5C		484								.45	.06		--				
		03N/01W-30N01 M																		
09/06/74	5050		56.0F	6.5	580	--	--	--	--	--	--	--	--	--	--	--				
0750			13.3C													--				
		03N/02W-13J01 M																		
09/06/74	5050		56.0F	6.5	4800	--	--	--	--	--	--	--	1470	--	.10	--		1600		
1030	5050		13.3C		4840								41.45			--				
		03N/02W-35M02 M																		
09/06/74	5050		56.0F	6.7	650	24	28	76	13	0	312	30	46	5.8	.10	--	387	176		
0825	5050		13.3C	8.0	698	1.20	2.30	3.31	.33	.00	5.11	.62	1.30	.09		--	376	0	2.5	
						17	32	46	5		72	9	18	1						
	1-11		ROUND VALLEY																	
		22N/12W-06L02 M																		
08/20/74	5050		60.0F	7.2	400	41	21	16	.7	0	254	.5	2.4	2.8	.10	--	234	187		
1025	5050		15.5C	8.1	401	2.05	1.73	.70	.02	.00	4.16	.01	.07	.05		--	209	0	0.5	
						46	38	16			97		2	1						
		22N/12W-19F01 M																		
08/20/74	5050		60.0F	6.9	380	29	41	14	.6	0	280	28	4.3	2.2	.00	--	272	240		X
1110	5050		15.5C	8.3	486	1.45	3.37	.61	.02	.00	4.59	.58	.12	.04		--	257	12	0.4	
						27	62	11			86	11	2	1						
		22N/13W-01J03 M																		
08/20/74	5050		60.0F	7.3	225	--	--	--	--	--	--	--	--	--	--	--				
1020			15.5C													--				
		22N/13W-13A01 M																		
08/20/74	5050		76.0F	6.3	165	12	12	5.0	.2	0	105	1.6	1.9	1.5	.00	--	116	81		
1045	5050		24.4C	8.3	173	.60	.99	.22	.01	.00	1.72	.03	.05	.02		--	86	0	0.2	T
						33	54	12	1		95	2	3	1						
		23N/12W-33L03 M																		
08/20/74	5050		67.0F	7.2	585	66	29	29	.7	0	408	.5	1.4	3.6	.10	--	355	286		
0910	5050		19.4C	8.0	615	3.29	2.38	1.26	.02	.00	6.69	.01	.04	.06		--	331	0	0.7	
						47	34	18			98		1	1						
		23N/13W-25P01 M																		
08/20/74	5050		60.0F	7.4	255	--	--	--	--	--	--	--	--	--	--	--				
0935			15.5C													--				
		23N/13W-36P03 M																		
08/20/74	5050		62.0F	6.8	260	--	--	--	--	--	--	--	--	--	--	--				
0950			16.7C													--				
	1-12		LAYTONVILLE VALLEY																	
		21N/15W-01L02 M																		
08/20/74	5050		68.0F	7.2	440	--	--	--	--	--	--	--	--	--	--	--				
1340			20.0C													--				
		21N/15W-12M02 M																		
08/20/74	5050		66.0F	5.7	60	--	--	--	--	--	--	--	--	--	--	--				
1350			18.9C													--				
	1-13		LITTLE LAKE VALLEY																	
		18N/13W-08L01 M																		
08/20/74	5050		63.0F	6.3	230	--	--	--	--	--	--	--	--	--	--	--				
1445			17.2C													--				
		18N/13W-20H03 M																		
08/20/74	5050		59.0F	6.5	220	--	--	--	--	--	--	--	--	--	--	--				
1520			15.0C													--				

Appendix F, "Waste Water Data", which appeared in certain volumes of the Bulletin No. 130 series, has been discontinued. For information regarding waste water, the reader is referred to the recently reactivated Bulletin No. 68 series: "Inventory of Waste Water Production and Waste Water Reclamation Practices in California".