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Department of Water Resources

BULLETIN No. 130-70

HYDROLOGIC DATA: 1970

Volume I: NORTH COASTAL AREA

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DECEMBER 1971

NORMAN B. LIVERMORE, JR.
Secretary for Resources
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RONALD REAGAN
Governor
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Department of Water Resources

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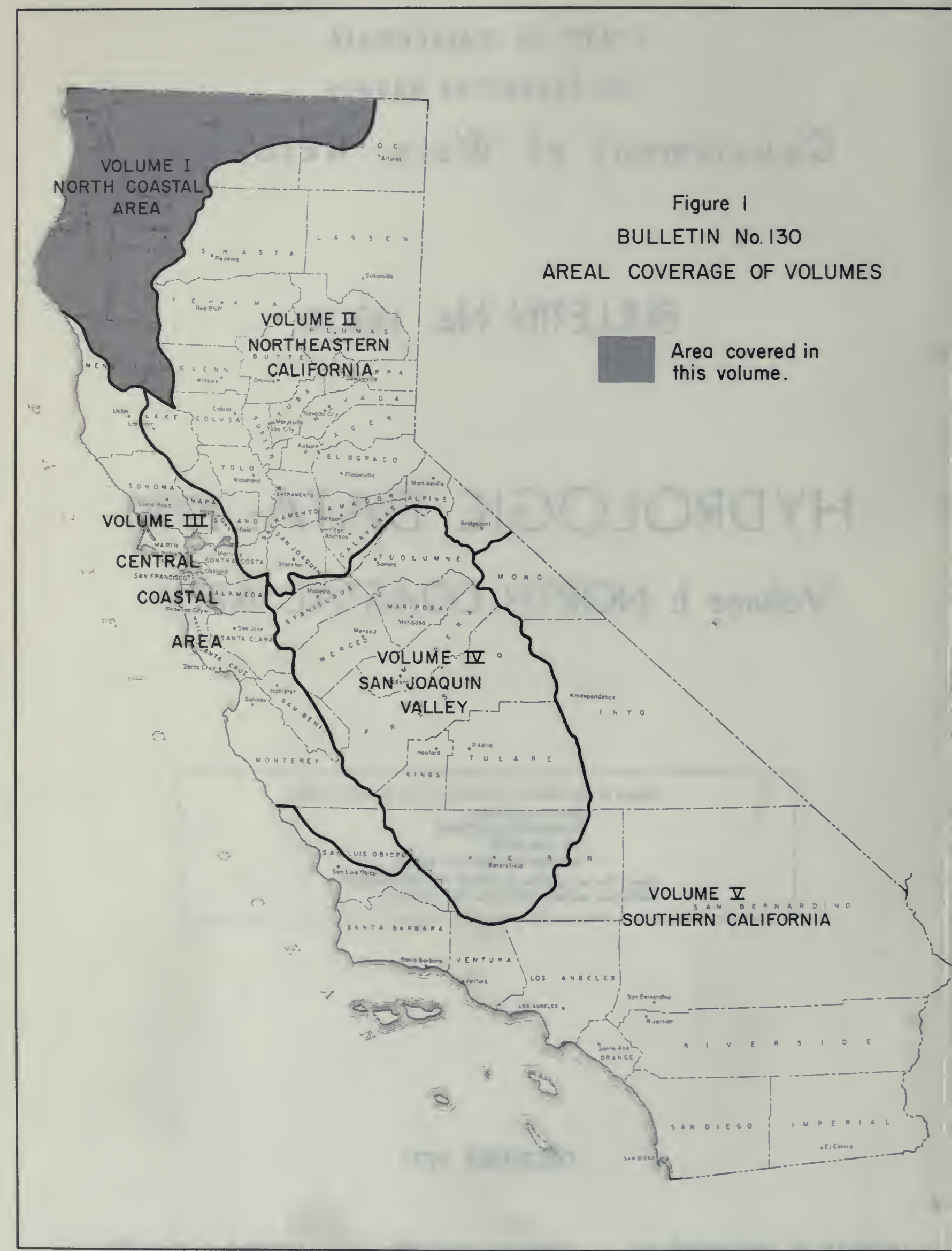

Figure I

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 needs of these agencies for data on the quality and quantity of water in the State. Bulletin No. 130-70 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, design, construction, 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.

William R. Gianelli

William R. Gianelli, Director
Department of Water Resources
The Resources Agency
State of California
November 8, 1971

METRIC CONVERSION TABLE

ENGLISH UNIT	EQUIVALENT METRIC UNIT	
Inch (in.)	2.54	Centimeters
Foot (ft.)	0.3048	Meter
Mile (mi.)	1.609	Kilometers
Acre	0.405	Hectare
Square mile (sq. mi.)	2.590	Square kilometer
U. S. gallon (gal.)	3.785	Liters
Acre-foot (acre-ft.)	1,233.5	Cubic meters
U. S. gallon per minute (gpm)	0.0631	Liter per second
Cubic feet per second (cfs)	1.7	Cubic meters per minute
Part per million (ppm)	Milligram per liter (mg/1)	
Part per billion (ppb)	Microgram per liter (ug/1)	
Part per trillion (ppt)	Nanogram per liter (ng/1)	
Equivalent per million (epm)	Milliequivalent per liter (me/1)	
Degrees Fahrenheit (°F)	Degrees Celsius or Degrees Centigrade (°C) = (°F - 32°) 5/9	

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ABSTRACT

The report contains tables showing data on climate, surface water flow, ground water levels, and surface and ground water quality in the North Coastal area during the 1969-70 water year. Figures show the location of climatological stations, surface water measurement stations, surface water sampling stations, and ground water basins.

ACKNOWLEDGMENTS

In the preparation of this report, valuable assistance and contributions were received from several public 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.

State of California
The Resources Agency
DEPARTMENT OF WATER RESOURCES

RONALD REAGAN, Governor
NORMAN B. LIVERMORE, JR., Secretary for Resources
WILLIAM R. GIANELLI, Director, Department of Water Resources
JOHN R. TEERINK, Deputy Director

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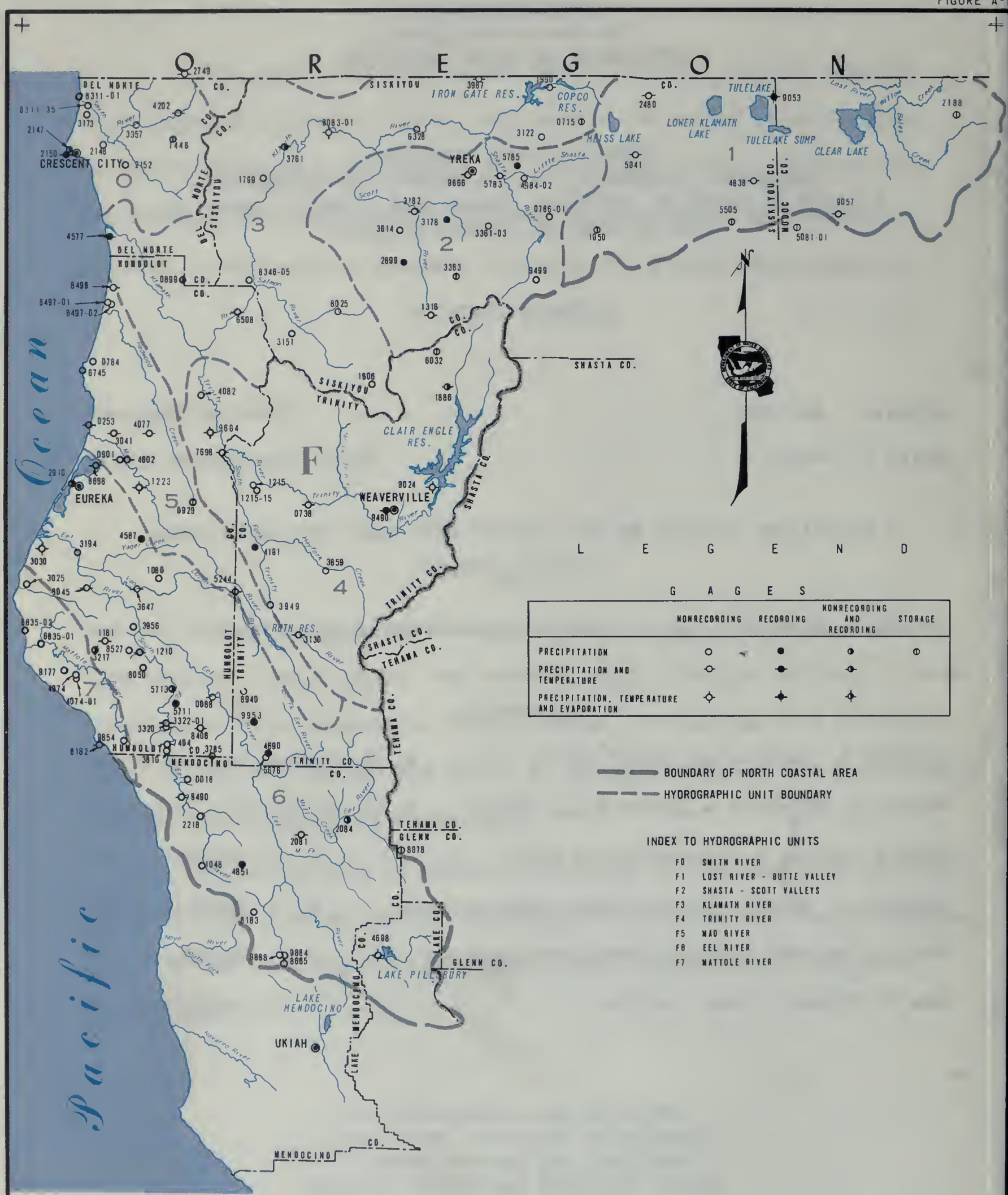
Reviewed and coordinated by
Division of Resources Development
Environmental Quality Branch
Water Resources Evaluation Section

FIGURE A-1



CLIMATOLOGICAL OBSERVATION STATIONS

APPENDIX A

CLIMATOLOGICAL DATA

This appendix summarizes monthly precipitation, wind movement, and evaporation data for the North Coastal area from July 1, 1969, to September 30, 1970. Storage gage data are reported as annual precipitation. The appendix contains all weather data collected by cooperating agencies and local observers at 121 stations, with the exception of the observed air temperature data.

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

To insure accuracy, stations are normally inspected either semi-annually or annually to see that the equipment is properly maintained and that observations are generally taken in accordance with National Weather Service standards.

Each station in this appendix has been assigned an identification number. The letter and first digit denote the drainage basin as shown below. The remaining digits denote the alphabetical sequence of the station.

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

TABLE A-1 INDEX OF CLIMATOLOGICAL STATIONS

An explanation of the column headings and code symbols follows:

40-Acre Tract - This denotes the location of the station within the section in which it is located. The letter code is derived from the diagram to the right.

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

Base and Meridian - The code for this column is as follows:

H - Humboldt Base and Meridian
M - Mount Diablo Base and Meridian

Cooperator Number - This number is assigned from the following list:

000 Private Cooperators
006 Northwestern Pacific Railroad
007 California-Oregon Power Company (COPCO)
804 California Department of Parks and Recreation
808 California Division of Forestry
809 California Division of Highways
900 National Weather Service (Climatological Data)
901 Corps of Engineers, San Francisco District
903 Corps of Engineers, Sacramento
905 U. S. Forest Service
907 State Climatologist

Cooperator's Index Number - This is the number assigned to the station by the agency responsible for, or handling the records of, the station. The National Weather Service number is only shown in this column when it differs from the alpha order number.

County - This is a standard code for California counties; those counties used in this appendix are shown below:

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

TABLE A-1

INDEX OF CLIMATOLOGICAL STATIONS FOR 1969-70

NORTH COASTAL AREA

Station Number	Station Name	Elevation (in Feet)	Section	Township	Range	40-Acre Tract	Base & Meridian	Latitude °	Latitude '	Latitude "	Longitude °	Longitude '	Longitude "	Cooperator Number	Cooperator's Index Number	Record Began	Record Ended	Years Missing	County Code
F6 0018	ADANAC LODGE	1100	SEC 14	T23N	R17W	H	M	39	50	48	123	42	00	000		1950			23
F6 0088	ALDERPOINT	435	SEC 27	T03S	R05E		H	40	11	00	123	36	00	900		1940			12
F5 0253	ARCATA A P	217	SEC 19	T07N	R01E	Q	H	40	58	18	124	05	24	000		1957			12
F3 0715	BESWICK 7 S	6140	SEC 33	T47N	R03W		M	41	52	00	122	14	00	900		1952			47
F4 0738	BIG BAR RANGER STA	1270	SEC 05	T33N	R12W		M	40	44	54	123	14	42	900		1943			53
F5 0764	BIG LAGOON	100	SEC 18	T09N	R01E	R	H	41	09	36	124	05	54	000	PN2125	1947			12
F2 0786-01	BIG SPRINGS 4 E	2955	SEC 05	T43N	R04W	R	M	41	35	30	122	19	42	000		1960			47
F3 0899	BLUE CREEK MTN LO	4870	SEC 30	T12N	R04E	R	H	41	23	42	123	45	54	900		1960			08
F5 0901	BLUE LAKE	105	SEC 30	T06N	R02E	A	H	40	52	54	123	59	12	000		1951			12
F4 0929	BOARDCAMP MTN	4500	SEC 26	T04N	R04E		H	40	42	12	123	42	00	000		1963			12
F6 1046	BRANSCOMB 2 NW	1480	SEC 09	T21N	R16W	M	M	39	41	12	123	39	36	900		1959			23
F1 1050	BRAY 10 WSW	5759	SEC 24	T43N	R03W		M	41	34	00	122	08	00	900		1951			47
F6 1080	BRIDGEVILLE 4 NNW	2050	SEC 27	T02N	R03E		H	40	31	00	123	49	00	900		1954			12
F6 1181	BULL CREEK	410	SEC 36	T01S	R01E	H	H	40	21	00	124	06	30	000		1960			12
F6 1210	BURLINGTON ST PARK	200	SEC 12	T02S	R02E	D	H	40	18	30	123	54	24	000		1950			12
F4 1215	BURNT RANCH 1S	2150	SEC 23	T05N	R06E	E	H	40	47	48	123	28	48	900		1945			53
F4 1215-15	BURNT RANCH HMS	1500	SEC 14	T05N	R06E	F	H	40	48	30	123	28	30	000		1963			53
F5 1223	BUTLER VALLEY RCH	420	SEC 36	T05N	R02E		H	40	46		123	54		900		1970			12
F2 1316	CALLAHAN RANGER STA	3136	SEC 21	T40N	R08W		M	41	18	00	122	48	00	900		1943			47
F0 1446	CAMP SIX LOOKOUT	3700	SEC 31	T17N	R03E	B	M	41	49	48	123	52	24	000		1963			08
F3 1606	CECILVILLE 5 SE	2980	SEC 12	T37N	R11W		M	41	06	00	123	03	00	900		1954			47
F3 1799	CLEAR CREEK	975	SEC 07	T15N	R07E	H	H	41	42	30	123	26	54	900		1959			47
F4 1886	COFFEE CREEK RS	2500	SEC 06	T37N	R07W		M	41	05		122	42		900		1960			53
F3 1990	COPCO DAM NO 1	2700	SEC 29	T48N	R04W	P	M	41	59	00	122	20	00	900		1928			47
F6 2081	COVELO	1385	SEC 12	T22N	R13W		M	39	47	00	123	15	00	900		1921			23
F6 2084	COVELO EEL RIVER RS	1514	SEC 28	T23N	R11W		M	39	50	00	123	05	00	900		1940			23
F0 2147	CRESCENT CITY 1N	40	SEC 20	T16N	R01W		H	41	46	00	124	12	00	900		1885			08
F0 2148	CRESCENT CITY 7 ENE	120	SEC 08	T16N	R01E		H	41	48	00	124	05	00	900		1913			08
F0 2150	CRESCENT CITY HMS	50	SEC 20	T16N	R01W		H	41	46	00	124	12	00	900		1941			08
F0 2152	CRESCENT CITY 11 E	360	SEC 30	T16N	R02E	B	H	41	45	18	123	59	30	000		1947			08
F1 2188	CROWDER FLAT	5175	SEC 20	T47N	R11E	K	M	41	53	00	120	44	00	000	PN2188	1958			25
F6 2218	CUMMINGS	1270	SEC 21	T23N	R16W		M	39	50	00	123	38	00	900		1927			23
F1 2480	DORRIS INSPECT STA	4240	SEC 36	T48N	R01W	R	M	41	57	18	121	54	30	000		1959			47
F0 2749	ELK VALLEY	1711	SEC 34	T19N	R04E		H	42	00	00	123	43	00	900		1938			08
F2 2899	ETNA	2912	SEC 28	T42N	R09W		M	41	28	00	122	54	00	900		1935			47
F6 2910	EUREKA WB CITY	43	SEC 22	T05N	R01W		H	40	48		124	10		900		1878			12
F7 3025	FERNDALE 8 SSW	1445	SEC 06	T01N	R02W	P	H	40	29	30	124	20	24	900		1959			12
F6 3030	FERNDALE 2NW	10	SEC 34	T03N	R02W	K	H	40	35	54	124	16	36	900		1963			12
F5 3041	FIELDBROOK 4 D RCH	285	SEC 36	T07N	R01E	P	H	40	56	36	124	01	06	000		1956			12
F3 3122	FOOTHILL SCHOOL	2960	SEC 25	T46N	R05W	F	M	41	48	42	122	22	18	000		1962			47
F4 3130	FOREST GLEN	2340	SEC 22	T01S	R08E		H	40	23	00	123	20	00	900		1930			53
F3 3151	FORKS OF SALMON	1270	SEC 24	T10N	R07E	A	H	41	15	12	123	19	00	900		1959			47
F0 3173	FORT DICK	46	SEC 14	T17N	R01W		H	41	52	00	124	09	00	900		1951			08
F2 3176	FORT JONES 6 ESE	3324	SEC 12	T43N	R08W		M	41	35	00	122	43	00	900		1941			47
F2 3182	FORT JONES RANGER STA	2720	SEC 02	T43N	R09W	C	M	41	36	00	122	51	00	900		1936			47
F6 3194	FORTUNA	60	SEC 35	T03N	R01W	Q	H	40	36	00	124	09	00	000		1955			12
F6 3217	FOX CAMP	2500	SEC 09	T02S	R01E	R	H	40	18	24	124	03	54	804		1960			12
F6 3320	GARBERVILLE	340	SEC 24	T04S	R03E		H	40	06	00	123	48	00	900		1938			12
F6 3322-01	GARVERVILLE HMS	540	SEC 24	T04S	R03E	G	H	40	06	00	123	47	40	809		1935			12
F0 3357	GASQUET RANGER STA	384	SEC 21	T17N	R02E	N	H	41	52	00	123	58	00	900		1940			08
F2 3361-03	GAZELLE - EPPERSON	2760	SEC 17	T43N	R06W	J	M	41	34	18	122	33	12	000		1950			47
F2 3363	GAZELLE LOOKOUT	5200	SEC 08	T41N	R07W	J	M	41	24	30	122	40	30	000		1956			47
F2 3614	GREENVIEW	2818	SEC 29	T43N	R09W		M	41	33	00	122	54	00	900		1943			47
F6 3647	GRIZZLY CRK REDWOOD	500	SEC 11	T01N	R02E		H	40	29	00	123	47	00	900		1963			12
F3 3761	HAPPY CAMP RANGER STA	1090	SEC 11	T16N	R07E		H	41	48	00	123	23	00	900		1914			47
F6 3785	HARRIS 7 SSE	1910	SEC 27	T05S	R05E	N	H	39	59	24	123	36	42	000		1953			23
F4 3859	HAYFORK RANGER STA	2340	SEC 12	T31N	R12W	R	M	40	33	00	123	10	00	900		1915			53
F4 3949	HIDDEN VALLEY RANCH	1978	SEC 32	T01N	R07E	M	H	40	24	54	123	24	30	000		1959	1967		53
F6 3956	HIGH ROCK	900	SEC 15	T01S	R02E	K	H	40	22	48	123	56	30	808		1960			12
F3 3987	HILTS	2900	SEC 23	T48N	R07W		M	42	00	00	122	38	00	900		1939			47
F7 4074	HONEYDEW 2 WSW	380	SEC 02	T03S	R01W	C	H	40	14	18	124	09	00	900		1953			12
F7 4074-01	HONEYDEW HUNTER	380	SEC 02	T03S	R01W	M	H	40	14	18	124	09	06	000		1955			12
F5 4077	HONOR CAMP 42	1875	SEC 31	T07N	R03E	K	H	40	56	48	123	52	42	000		1956			12
F4 4082	HOOPA	350	SEC 25	T08N	R04E		H	41	03	00	123	40	00	900		1941			12
F4 4191	HYAMPOM	1260	SEC 25	T03N	R06E		H	40	37	00	123	28	00	900		1940			53
F0 4202	IDLEWILD HMS	1250	SEC 06	T17N	R04E	D	H	41	54	00	123	46	12	900		1946			08
F3 4577	KLAMATH	25	SEC 15	T13N	R01E		H	41	31	00	124	02	00	900		1941			08
F6 4587	KNEELAND 10 SSE	2356	SEC 13	T03N	R02E		H	40	38	00	123	54	00	900		1954			12
F5 4602	KORBEL	150	SEC 28	T06N	R02E	P	H	40	52	00	123	57	30	900		1937			12
F6 4690	LAKE MOUNTAIN		SEC 21	T05S	R07E		H	40	01	00	123	24	00	900		1939	1969		53

TABLE A-1 (CONTINUED)

INDEX OF CLIMATOLOGICAL STATIONS FOR 1969-70

NORTH COASTAL AREA

Station Number	Station Name	Elevation (In Feet)	Section	Township	Range	40-Acre Tract	Base & Meridian	Latitude °	Latitude '	Latitude "	Longitude °	Longitude '	Longitude "	Cooperator Number	Cooperator's Index Number	Record Began	Record Ended	Years Missing	County Code
F6 4698	LAKE PILLSBURY NO 2	1740	SEC 10	T18N	R10W		M	39	25		122	59		900		1964	1970		17
F1 4838	LAVA BEDS NAT MON	4770	SEC 28	T45N	R04E	H	M	41	43	48	121	30	30	900		1940		06	47
F6 4851	LAYTONVILLE	1640	SEC 01	T21N	R15W		M	39	42	00	123	29	00	900		1940			23
F2 4984-02	LITTLE SHASTA	2725	SEC 26	T45N	R05W	C	M	41	43	00	122	23	00	000		1960			47
F1 5081-01	LONG BELL STATION	4375	SEC 20	T42N	R05E	B	M	41	28	00	121	25	00	000		1958			25
F5 5244	MAD RIVER RANGER STA	2775	SEC 17	T01N	R06E		H	40	27	00	123	32	00	900		1943			53
F1 5505	MEDICINE LAKE	6660	SEC 10	T43N	R03E		M	41	35	00	121	37	00	900		1946			47
F6 5676	MINA 3 NW	2875	SEC 28	T05S	R07E	A	H	40	00	06	123	23	30	000		1927			53
F6 5711	MIRANDA 4 SE	263	SEC 30	T03S	R04E		H	40	11	00	123	47	00	900		1964			12
F6 5713	MIRANDA SPENGLER RCH	400	SEC 19	T03S	R04E		H	40	12		123	46		900		1939			12
F2 5783	MONTAGUE	2500	SEC 27	T45N	R06W	Q	M	41	43	42	122	31	36	000	045783	1888		05	47
F2 5785	MONTAGUE 3 E	2640	SEC 18	T45N	R05W		M	41	45	00	122	28	00	900		1948			47
F1 5941	MOUNT HEBRON R S	4250	SEC 32	T46N	R01W		M	41	47	00	122	00	00	900		1942			47
F4 6032	MUMBO BASIN	5700	SEC 35	T39N	R06W	E	M	41	12	00	122	32	00	900		1946			53
F6 6050	MYERS FLAT	190	SEC 30	T02S	R03E		H	40	15	40	123	52	00	000		1950			12
F3 6328	OAK KNOLL RANGER STA	1963	SEC 12	T46N	R09W		M	41	50	00	122	51	00	900		1942			47
F6 6408	OLD HARRIS	2225	SEC 30	T04S	R05E	G	H	40	05	00	123	39	42	000		1956			12
F5 6497-01	ORICK 3 NNE	50	SEC 22	T11N	R01E	K	H	41	19	24	124	02	30	000		1950			12
F5 6497-02	ORICK ARCATA REDWOOD	75	SEC 22	T11N	R01E	K	H	41	19	24	124	02	36	000		1954			12
F5 6498	ORICK PRAIRIE CREEK	161	SEC 02	T11N	R01E		H	41	22	00	124	01	00	900		1937			12
F3 6508	ORLEANS	403	SEC 31	T11N	R06E		H	41	18	00	123	32	00	900		1885			12
F5 6745	PATRICKS PT ST PARK	250	SEC 26	T09N	R01W	L	H	41	08	12	124	09	00	804		1947			12
F7 6835-01	PETROLIA	175	SEC 03	T02S	R02W	L	H	40	19	30	124	16	48	000		1958			12
F7 6835-02	PETROLIA 4 NW	900	SEC 19	T01S	R02W	D	H	40	22	24	124	18	30	000		1953			12
F6 6976	PLASKETT	6580	SEC 27	T22N	R09W	A	M	39	44	12	122	51	24	000		1960			11
F6 7404	RICHARDSON GROVE	500	SEC 13	T05S	R03E		H	40	02		123	47		900		1961			12
F3 8025	SAWYERS BAR R S	2169	SEC 20	T40N	R11W		M	41	18	00	123	08	00	900		1931			47
F6 8045	SCOTIA	139	SEC 07	T01N	R01E		H	40	29	00	124	06	00	900		1926			12
F3 8083-01	SEIAD VALLEY R S	1371	SEC 11	T46N	R12W	R	M	41	50	36	123	11	42	905		1953			47
F7 8162	SHELTER COVE	55	SEC 16	T05S	R01E		H	40	02		124	04		900		1959			12
F6 8163	SHERWOOD VALLEY	2170	SEC 32	T20N	R14W	F	M	39	32	36	123	26	30	901		1958			23
F0 8311-01	SMITH RIVER 2 WNW	195	SEC 21	T18N	R01W	A	H	41	56	30	124	10	42	000		1951	1969		08
F0 8311-35	SMITH RIVER	55	SEC 26	T18N	R01W		H	41	55		124	08		000		1970			08
F3 8346-05	SOMESBAR UKONOM R S	727	SEC 33	T12N	R06E		H	41	23	00	123	28	00	905	PN8919	1965			12
F6 8490	STANDISH HICKEY PARK	850	SEC 03	T23N	R17W	F	M	39	52	30	123	43	30	900		1949			23
F6 8668	SUNNY BRAE	70	SEC 33	T06N	R01E		H	40	52	00	124	04	00	000		1965			12
F4 9024	TRINITY DAM VISTA PT	2500	SEC 16	T34N	R08W		M	40	48	00	122	46	00	900		1959			53
F1 9053	TULELAKE	4035	SEC 06	T47N	R05E		M	41	58	00	121	28	00	900		1932			47
F1 9057	TULELAKE INSP STA	4408	SEC 31	T44N	R07E	F	M	41	36		121	12		000	049057	1953	1969		25
F7 9177	UPPER MATTOLE	255	SEC 33	T02S	R01W		H	40	15	00	124	11	00	900		1886			12
F4 9490	WEAVERVILLE RANGER S	2050	SEC 12	T33N	R10W		M	40	44	00	122	56	00	900		1869			53
F2 9499	WEED FD	3593	SEC 01	T41N	R05W	M	M	41	26	00	122	23	00	900		1957			47
F6 9527	WEOTT 2 SE	600	SEC 12	T02S	R02E	H	H	40	18	29	123	53	40	000		1961			12
F7 9654	WHITEHORN	1050	SEC 15	T05S	R02E	E	M	40	01	18	123	56	12	000		1962			12
F6 9684	WILLITS 1 NE	1350	SEC 17	T18N	R13W		M	39	25	00	123	21		900		1950			23
F6 9685	WILLITS HOWARD RS	1925	SEC 05	T17N	R13W		M	39	21	00	123	19	00	900		1935			23
F6 9686	WILLITS NW PAC RR	1365	SEC 18	T18N	R13W	L	M	39	24	12	123	21	06	006		1911		05	23
F4 9694	WILLOW CREEK 1 NW	461	SEC 29	T07N	R05E		H	40	57		123	38		900		1968			53
F2 9866	YREKA	2631	SEC 27	T45N	R07W		M	41	43	00	122	38	00	900		1871			47
F6 9940	ZENIA 1 SSE	2880	SEC 22	T03S	R06E	G	H	40	11	18	123	28	54	000		1950			53
F6 9953	ZENIA-KETTEMPOM STORE	3600	SEC 35	T03S	R06E		H	40	10		123	27		900		1969			53

TABLE A-2
PRECIPITATION DATA
NORTH COASTAL AREA

Station Name	Precipitation in Inches																
	Total July 1 To June 30	1969						1970									Total Oct. 1 To Sept. 30
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
NORTH COASTAL AREA																	
SMITH RIVER																	
CRESCENT CITY 1 N	66.23	.07	.05	3.08	6.52	5.25	14.10	20.90	4.52	4.68	2.98	2.91	1.17	.02	.02	.46	63.53
CRESCENT CITY 7 ENE	87.90	.05	.04	3.99	6.74	5.74	20.92	29.52	5.23	6.27	4.69	3.36	1.35	.00	.00	.51	84.33
CRESCENT CITY H.M.S.	63.38	.00	.00	2.83	6.03	5.03	14.38	18.79	4.72	3.98	3.87	2.72	1.03	.00	.00	.36	60.91
CRESCENT CITY 11 E	109.89	.04	T	3.56	7.33	6.48	25.96	43.36	6.87	6.77	4.93	3.56	1.03	.00	.00	.36	106.65
ELK VALLEY	---	T	T	--	--	--	---	---	--	--	--	1.99	.53	.00	.00	.33	---
FORT DICK	77.26	T	.05	4.45	7.33	5.39	17.01	23.22	4.19	6.21	4.21	3.54	1.66	T	.02	.62	73.40
GASQUET RANGER STATION	93.46	.04	.03	3.25	6.60	5.25	21.61	35.35	5.93	5.79	4.58	3.56	1.47	.00	.00	.69	90.83
IDLEWILD H.M.S.	82.80	.00	.00	1.86	6.16	3.60	20.96	31.96	4.55	5.90	4.75	2.38	.68	.00	.00	.17	81.11
SMITH RIVER 2 WNW	---	.00	.04	4.75	7.86	5.67	RE										---
SMITH RIVER	---										RB	3.79	1.65	.00	T	.59	---
LOST RIVER - BUTTE VALLEY																	
DORRIS INSPECTION STA	14.65	.23	.00	.26	1.99	.65	4.11	4.02	.55	1.11	.41	.57	.75	.21	.00	.04	14.41
LAVA BEDS NAT'L MON	16.53	.07	.00	.01	1.42	.61	3.68	2.97	.74	2.55	.69	1.13	2.66	.00	.05	.02	16.52
MT HEBRON RANGER STA	14.09	.33	.00	.17	1.58	.59	3.48	3.87	.66	1.27	.45	.24	1.45	.01	.00	.00	13.60
TULELAKE	12.25	.28	.00	.04	1.99	.53	3.60	2.45	.40	1.57	.39	.42	.58	.00	.03	.18	12.14
TULELAKE INSPECTION STA	---	.11	.00	RE													---
SHASTA - SCOTT VALLEYS																	
BIG SPRINGS 4 E	11.66	.17	.00	.20	1.16	.87	3.20	2.93	.33	1.28	.42	.30	.80	.00	.00	.11	11.40
CALLAHAN RANGER STA	23.91	.04	.00	.16	1.04	.85	8.04	8.27	1.86	.73	1.14	.31	1.47	.13	.00	.08	23.92
ETNA	---	1.39	.00	.22	1.71	1.38	---	---	2.34	.91	--	--	--	.00	.00	.01	---
FORT JONES 6 ESE	25.6	.2	.0	.3	1.5	.7	8.1	9.4	2.2	1.0	.9	.7	.6	.0	.0	.1	25.2
FORT JONES RANGER STA	27.30	.53	.00	.24	1.45	.55	8.82	10.44	2.28	.99	.65	.37	.98	.41	.00	.09	27.03
GAZELLE EPPERSON	15.22	1.37	.00	.19	.99	.26	4.10	5.73	.39	1.55	.26	.17	.21	.30	.00	.04	14.00
GREENVIEW	21.46	.25	.00	.33	.32	.08	7.06	10.60	2.00	.25	.44	.04	.09	.00	.00	.06	20.94
LITTLE SHASTA	17.12	2.08	.00	.25	1.66	.75	4.03	4.95	.54	1.65	.49	.50	.22	.11	.00	.00	14.90
MONTAGUE	14.56	.27	.00	.10	1.24	.26	5.06	4.86	.56	1.39	.16	.32	.34	.20	.00	.17	14.56
MONTAGUE 3 E	---	.95	.00	--	--	.28	---	4.99	1.28	.59	--	--	--	.00	.00	.00	---
WEED FIRE DEPARTMENT	25.14	.16	.00	.25	1.14	2.12	9.29	8.04	1.98	.89	1.02	.03	.49	.00	.00	.08	25.08
YREKA	22.09	.05	.00	.15	1.25	.66	7.87	8.01	.90	1.75	.21	.14	1.10	1.99	.00	.02	23.90
KLAMATH RIVER																	
CECILVILLE 5 SE	44.21	.14	.00	.31	2.59	1.36	14.79	17.74	2.73	1.99	1.13	.71	.72	.00	.00	.08	43.84
CLEAR CREEK	67.77	1.10	.00	.61	5.12	2.00	18.37	28.61	4.67	3.91	2.32	.99	.07	.00	.00	.07	66.13
COPCO DAM NO. 1	22.80	.64	.00	.21	1.68	.88	7.13	6.46	1.52	1.69	.43	.41	1.75	.01	T	.02	21.98
FOOTHILL SCHOOL	19.50	.58	.00	.30	1.65	.63	6.20	5.81	1.48	1.07	.58	.43	.77	.00	.00	.04	18.66
FORKS OF SALMON	---	.22	.00	--	--	--	---	---	--	--	--	--	--	--	--	--	---
HAPPY CAMP RANGER STA	58.98	.82	.00	.46	4.67	1.77	17.38	23.95	4.51	3.15	1.06	.89	.32	.00	.00	.01	57.71
HILTS	24.18	.30	.00	.24	1.41	.74	7.08	9.07	1.08	2.24	.45	.09	1.48	.11	.00	.08	23.83
KLAMATH	83.04	T	T	2.50	7.70	5.40	15.90	30.20	4.60	6.34	5.00	4.60	.80	.00	.00	.60	81.14
OAK KNOLL RANGER STA	27.33	.22	.00	.01	1.98	.80	8.13	10.77	1.90	2.11	.68	.29	.44	.09	.00	.04	27.23
ORLEANS	55.90	.36	.00	.57	4.31	1.93	14.63	22.48	4.22	3.11	1.97	1.74	.58	.00	.00	.08	55.05
SAWYERS BAR RANGER STA	46.42	.27	.00	.43	3.17	1.76	13.70	19.49	2.45	2.61	1.29	.79	.46	.00	.00	.11	45.83
SEIAD VALLEY RANGER STA	47.55	.18	.00	.26	3.44	1.79	13.86	20.07	3.02	3.03	1.08	.67	.15	.00	.00	.08	47.19
SOMESBAR-UKONOM R S	---	.51	.00	.39	4.52	2.40	15.45	26.85	4.13	4.99	1.77	1.72	--	.00	.00	.10	---
TRINITY RIVER																	
BIG BAR RANGER STA	45.28	.04	.00	.31	3.00	1.13	14.22	20.09	2.38	2.16	.67	.87	.41	.00	.00	.02	44.95
BURNT RANCH 1 S	47.89	.07	.00	.53	3.24	1.75	14.70	17.95	3.54	2.92	1.42	1.11	.66	.00	.00	T	47.29
BURNT RANCH H.M.S.	43.70	.02	.00	.46	3.26	1.11	13.38	16.96	3.29	2.50	1.44	.85	.43	.00	.00	.00	43.22
COFFEE CREEK R S	---	.0	.0	.3	2.1	2.6	24.9	---	4.6	2.6	.5	.2	1.4	.0	.0	.0	---
FOREST GLEN	77.96	T	.00	.24	5.08	2.59	26.38	31.76	5.22	4.59	.71	1.00	.39	.00	.00	2.83	80.55
HAYFORK RANGER STA	40.88	.10	.00	.07	2.99	.80	14.70	15.46	2.68	2.24	.55	.56	.73	.00	.00	.00	40.71
HOOPA	57.77	.08	.00	.40	4.26	2.07	15.65	24.07	4.04	3.50	1.85	1.59	.26	.00	.00	.03	57.32
HYAMPOM	---	.00	.00	.12	3.80	1.11	16.26	21.17	3.95	2.05	.55	--	.26	.00	.00	.00	---
TRINITY DAM VISTA PT	42.89	T	.00	.17	2.68	1.79	13.83	17.12	1.98	3.50	.28	.49	1.05	.00	.00	T	42.72
WEAVERVILLE RANGER STA	45.25	.02	.00	.17	2.82	1.18	15.74	17.55	3.15	2.38	.46	.69	1.09	.02	.00	.00	45.08
WILLOW CREEK	51.57	.08	.00	.39	4.56	1.63	13.42	20.03	4.08	3.64	2.13	1.34	.27	.00	.00	.05	51.15
MAD RIVER																	
ARCATA AIRPORT	49.60	.48	.04	.58	4.49	3.72	10.95	16.05	3.00	4.57	2.63	2.66	.43	.01	.01	.12	48.64
BIG LAGOON	60.93	.40	.00	1.25	4.13	5.04	12.57	22.58	3.83	5.11	3.03	2.55	.44	.00	.00	.15	59.43
BLUE LAKE	40.02	.03	.03	.50	3.73	2.46	9.89	11.08	3.85	3.53	1.93	2.37	.62	.00	.00	.41	39.87
BUTLER VALLEY RANCH	---											RB	.40	.00	.00	.14	---
FIELDBROOK 4D RANCH	77.30	.00	T	1.30	6.60	4.50	18.30	26.10	6.15	3.50	6.15	3.60	1.10	.00	.00	.25	76.25
HONOR CAMP 42	71.57	.08	.09	1.26	6.54	3.99	15.01	25.68	5.48	4.22	4.71	3.41	1.10	.00	.00	.45	70.59
KORBEL	46.74	.02	.03	.36	4.01	2.82	11.56	15.89	3.48	3.23	2.60	2.06	.68	.00	.00	.37	46.70
MAD RIVER RANGER STA	70.61	.00	.00	.48	5.89	2.82	20.94	28.82	4.37	3.77	1.55	1.45	.52	.00	.00	.00	70.13
ORICK 3 NNE	69.90	.23	.02	1.13	4.96	4.53	15.40	26.71	3.03	5.79	3.73	3.70	.67	.00	.00	.35	68.87
ORICK ARCATA REDWOOD	57.67	.41	.00	1.13	4.81	4.57	13.32	18.68	2.77	4.71	3.59	3.09	.59	.00	.00	.31	56.44
ORICK PRAIRIE CREEK PK	66.10	.48	.05	1.24	4.54	4.56	14.82	23.54	4.34	5.00	3.50	3.51	.52	.00	.00	.23	64.56
PATRICK POINT STATE PK	60.82	.39	.07	1.39	4.60	4.65	13.46	21.69	4.52	4.09	3.19	2.20	.57	.00	.11	.49	59.57

- No record or record incomplete
T Trace
E Record ended
B Record began

TABLE A-2 (Continued)

PRECIPITATION DATA

NORTH COASTAL AREA

Station Name	Precipitation in Inches																
	Total July 1 To June 30	1969						1970									Total Oct. 1 To Sept. 30
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
NORTH COASTAL AREA																	
EEL RIVER																	
ADANAC LODGE	81.55	.00	.00	.40	4.99	3.85	23.43	34.39	7.30	3.98	1.76	1.15	.30	.00	.00	.00	81.15
ALDERPOINT	57.08	T	.00	.38	3.57	2.23	17.98	23.23	4.34	3.41	.99	.95	.00	.00	.00	.00	56.70
BRANSCOMB 2 NW	87.27	T	.00	.49	5.16	4.23	23.60	38.90	6.85	5.03	1.64	.96	.41	.00	.00	.00	86.78
BRIDGEVILLE 4 NNW	67.30	T	.00	1.27	5.20	3.43	17.59	23.32	4.58	4.66	4.00	2.59	.66	.00	.00	.00	66.03
BULL CREEK	71.89	.00	.00	.47	3.59	3.97	20.34	29.51	6.65	3.96	2.32	.94	.14	.00	.00	T	71.42
BURLINGTON STATE PARK	72.62	.00	.00	.11	4.08	3.36	22.65	29.67	6.24	3.27	2.00	1.10	.14	.00	.00	T	72.51
COVELO	---	.00	.00	.11	2.80	1.39	14.71	---	3.10	2.61	.44	.25	.22	.00	.00	.00	---
COVELO EEL RIVER R S	42.61	.00	.00	.16	2.40	1.55	12.52	18.48	3.76	1.92	.86	.66	.30	.00	.00	.00	42.45
CUMMINGS	81.97	.00	.00	.34	4.05	3.68	22.12	36.44	5.80	5.05	2.82	1.30	.37	.00	.00	.00	81.63
EUREKA W B CITY	38.22	.05	T	.36	3.20	3.49	9.60	12.46	3.15	2.70	1.54	1.38	.29	T	T	.32	38.13
FERNDALE 2 NW	37.76	.16	.01	.38	1.85	3.96	9.72	12.40	3.77	2.88	1.62	.80	.21	.04	.15	.12	37.52
FORTUNA	38.42	.00	T	.36	2.19	2.43	11.36	12.74	3.06	3.16	1.75	1.18	.19	.00	.00	.02	38.08
FOX CAMP	---	--	--	1.94	4.85	5.41	28.78	40.09	7.27	4.82	2.26	1.80	.29	.00	.00	.00	95.57
GARBERVILLE	64.30	.00	.00	.28	4.15	3.50	20.20	23.77	5.37	4.54	1.90	.32	.27	.00	.00	T	64.02
GARBERVILLE H.M.S.	62.94	.04	.00	.37	4.52	2.68	19.06	22.05	5.32	5.89	1.72	.83	.46	.00	.00	.00	62.53
GRIZZLY CRK REDWOOD S P	53.31	.03	T	.80	3.08	2.86	15.36	18.04	4.78	3.38	3.23	1.37	.38	.00	.00	.12	52.60
HARRIS 7 SSE	62.78	T	.00	.24	2.59	2.51	21.09	24.59	5.97	2.99	1.69	.91	.20	.00	.00	.00	62.54
HIGH ROCK	67.99	T	.00	.37	3.05	3.63	20.31	27.54	6.59	3.17	2.02	1.15	.16	.00	T	.00	67.62
KNEELAND 10 SSE	53.29	.00	.00	1.31	3.54	2.27	14.22	17.70	4.31	3.18	3.85	2.40	.51	.00	.00	.03	52.01
LAKE MOUNTAIN	---	.00	.00	.27	3.45	RE											---
LAKE PILLSBURY NO. 2	---	.00	.00	.00	3.81	1.99	15.15	27.10	3.76	2.09	.72	RE					---
LAYTONVILLE	67.75	.00	.00	.17	4.55	2.36	19.14	31.72	4.64	3.40	.96	.56	.25	.00	.00	.00	67.58
MINA 3 NW	62.92	.00	.00	.32	2.28	5.35	18.58	24.62	4.18	3.61	2.26	1.72	.00	.00	.00	.00	62.60
MIRANDA 4 SE	57.8	.0	.0	.6	3.9	2.8	19.5	22.4	2.9	2.7	1.8	1.0	.2	.0	.0	.0	57.2
MIRANDA SPENGLER RCH	---	.00	.00	.48	3.84	2.33	---	21.26	5.44	2.55	1.46	.94	.21	.00	.00	.00	---
MYERS FLAT	70.46	.01	.00	.45	4.35	3.46	21.84	27.69	6.27	3.08	2.04	1.12	.15	.00	.00	.00	70.00
OLD HARRIS	73.84	.10	.00	.48	4.79	3.38	20.17	30.93	6.13	4.05	2.15	1.25	.41	.00	.00	.00	73.26
RICHARDSON GROVE S P	77.42	.00	.00	.37	4.64	3.41	24.57	31.29	5.83	3.62	2.60	.84	.25	.00	.00	T	77.05
SCOTIA	47.62	.01	.00	.70	1.40	3.40	14.45	17.32	4.65	3.24	1.33	1.03	.09	.00	T	.10	47.01
SHERWOOD VALLEY	---	--	--	--	4.29	2.46	21.79	34.23	5.72	4.78	.97	.86	.68	--	--	--	---
STANDISH HICKEY ST PK	77.48	.00	.00	.45	4.96	3.75	20.53	33.47	6.29	5.26	1.93	.77	.07	.00	.00	.00	77.03
SUNNY BRAE	42.15	.26	.03	.56	3.86	2.93	10.17	12.83	2.86	3.82	2.22	2.23	.38	.00	T	.52	41.82
WEOTT 2 SE	68.02	.00	.00	.37	4.02	3.35	23.92	28.56	2.48	1.52	2.33	1.47	.00	.00	.00	.00	67.65
WILLITS 1 NE	56.55	.00	.00	.09	3.39	1.82	15.05	26.05	5.50	2.65	1.20	.43	.37	.00	.00	.00	56.46
WILLITS HOWARD FOR R S	55.85	.00	.00	.16	2.69	1.87	14.91	26.55	4.81	2.49	1.36	.39	.62	.00	.00	.00	55.69
WILLITS N W P R R	---	.00	.00	.06	3.20	1.78	16.28	26.76	6.07	2.60	--	.27	--	--	--	--	---
ZENIA 1 SSE	72.73	.00	.00	.75	4.62	3.20	20.12	27.56	5.88	5.47	2.41	2.11	.61	.00	.00	.06	72.04
ZENIA-KETTENPOM STORE	---					RB	19.27	29.84	5.30	4.20	2.17	1.96	.49	.00	.00	.00	---
MATTOLE RIVER																	
FERNDALE 8 SSW	39.89	.41	.33	.61	2.01	3.51	10.32	10.82	2.49	4.20	2.70	1.58	.91	--	--	--	---
HONEYDEW 2 WSW	114.18	.00	T	.62	4.31	8.35	36.74	45.26	10.40	5.63	1.84	.77	.26	.00	.00	.07	113.63
HONEYDEW HUNTER	118.45	.00	.00	.64	4.00	8.19	37.62	46.94	14.16	4.12	1.84	.81	.13	.00	.00	.07	117.88
PETROLIA	64.98	.00	.00	.58	2.53	5.40	20.81	22.38	5.97	3.99	1.78	1.19	.35	.00	.00	.08	64.48
PETROLIA 4 NW	47.68	.00	.00	.83	2.43	4.50	12.72	14.45	4.03	4.05	2.72	1.50	.45	--	--	--	---
SHELTER COVE	52.30	.02	T	1.80	4.63	4.97	15.12	14.74	5.03	2.76	1.36	1.24	.63	.00	.00	.02	50.50
UPPER MATTOLE	80.51	.00	.00	.67	4.23	6.91	24.21	29.44	8.16	3.99	2.01	.75	.14	.00	.00	.10	79.94
WHITETHORN	86.89	.05	.00	.92	6.03	5.96	25.99	31.86	7.85	4.73	1.92	1.01	.57	.00	.00	.00	85.92

- No record or record incomplete
T Trace
RE Record ended
RB Record began

TABLE A-3

STORAGE GAGE PRECIPITATION DATA
NORTH COASTAL AREA

Station	Measuring Agency	1969-70 Season		
		Measurement Period		Precipitation in Inches
NORTH COASTAL AREA				
SMITH RIVER				
Camp Six Lookout	DWR	7-08-69	6-23-70	107.92
LOST RIVER-BUTTE VALLEY				
Bray 10 WSW	DWR	7-08-69	6-23-70	24.15
Crowder Flat	DWR	8-15-69	6-24-70	19.62
Long Bell Station	DWR	7-11-69	6-25-70	34.36
Medicine Lake	DWR	7-10-69	6-25-70	51.49
SHASTA-SCOTT VALLEYS				
Gazelle Lookout	DWR	7-09-69	6-24-70	18.11
KLAMATH RIVER				
Beswick 7S	DWR	7-08-69	6-23-70	42.58
Blue Creek Mountain	DWR	7-07-69	6-22-70	119.44
TRINITY RIVER				
Board Camp Mountain	DWR	7-07-69	6-22-70	99.20
Mumbo Basin	DWR	7-10-69	6-24-70	65.37
EEL RIVER				
Plaskett	DWR	7-24-69	7-07-70	67.25

DWR - Department of Water Resources

TABLE A-4 EVAPORATION DATA

The definition of terms and the abbreviations used in Table A-4 are as follows:

Evap - The total amount of water evaporated from the pan in inches for the month.

Wind - The amount of movement of air over the pan in miles for the month.

Avg Max - The arithmetic average of daily maximum water temperatures in degrees Fahrenheit for the month.

Avg Min - The arithmetic average of daily minimum water temperatures in degrees Fahrenheit for the month.

TABLE A-4 EVAPORATION DATA

NORTH COASTAL AREA

Station Name		Evaporation in Inches							Wind in Total Miles									Water Temperature in Degrees Fahrenheit
		Total July 1 To June 30	1969						1970									Total Oct. 1 To Sept. 30
			July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
NORTH COASTAL AREA																		
LOST RIVER-BUTTE VALLEY																		
TULELAKE	Evap	---	9.57	9.61	8.41	---	---	---	---	---	---	---	8.28	7.58	9.88	9.12	6.53	---
	Wind																	
	Avg Max																	
	Avg Min																	
KLAMATH RIVER																		
SEIAD VALLEY RANGER S	Evap	---	8.48	8.13	5.08	---	---	---	---	---	---	---	---	---	9.64	8.50	4.86	---
	Wind																	
	Avg Max																	
	Avg Min																	
TRINITY RIVER																		
TRINITY DAM VISTA PT	Evap	---	10.21	9.79	5.81	2.58	.53	---	---	---	2.92	4.35	7.61	8.35	11.42	10.49	6.57	---
	Wind	---	1287	1258	1039	1161	776	849	---	---	1725	1443	1089	1186	1198	1185	1177	---
	Avg Max																	
	Avg Min																	
WILLOW CREEK 1 NW	Evap	---	8.47	7.04	4.87	2.80	.72	---	---	.84	1.95	2.40	4.73	6.90	9.61	7.38	4.55	---
	Wind	---	508	527	333	188	148	180	203	---	---	206	203	311	440	488	346	---
	Avg Max	---	93.2	89.2	85.7	71.6	57.3	---	---	56.8	65.5	66.1	---	88.9	95.3	90.0	81.0	---
	Avg Min	---	61.1	50.7	54.7	45.4	41.9	---	---	43.8	44.8	43.5	---	58.8	61.7	57.6	51.9	---
EEL RIVER																		
FERNDALE 2 NW	Evap	33.85	4.66	4.60	3.60	2.32	1.03	.59	.51	1.50	2.53	3.46	4.62	4.43	4.74	3.57	4.17	33.47
	Wind	10886	870	735	755	832	619	1007	1486	761	996	1042	953	830	681	660	652	10519
	Avg Max	68.8	78.8	79.9	76.2	67.8	59.2	55.1	55.2	61.1	66.4	70.0	76.9	78.5	79.2	76.2	76.8	68.5
	Avg Min	49.2	56.6	56.2	54.3	49.0	43.6	44.5	45.6	44.2	44.8	45.6	51.2	54.8	56.0	54.5	52.1	48.8
LAKE PILLSBURY NO. 2	Evap	---	10.83	10.18	6.91	3.16	1.20	.56	.70	1.69	2.92	5.33	RE					---
	Wind	---	532	503	453	342	156	171	272	259	1725	943	RE					---
	Avg Max	---	93.3	90.7	84.0	67.9	56.2	50.3	51.3	58.6	---	68.8	RE					---
	Avg Min	---	60.4	57.6	55.8	44.9	40.1	41.2	41.4	39.5	---	42.3	RE					---

RE - Record Ended

SURFACE WATER MEASUREMENT STATIONS

APPENDIX B

SURFACE WATER MEASUREMENTS

This appendix presents surface water data for the 1970 water year, the period from October 1, 1969, to September 30, 1970. The data consist of daily mean discharges and station locations at two gages, and summary tables of monthly and annual unimpaired runoff from major streams.

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. 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 1. 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

Each of the two stations in this appendix has been assigned an identification number. The letter and first digit denote the drainage basin as shown below. The remaining digits further identify each of the stations.

<u>North Coastal Area</u>

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

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 artifical 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*	4419	1226	1227	5383
1920-21			146	145
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	82	93	79	94
1935-36	90	93	83	107
1936-37	74	80	81	66
1937-38	179	182	172	200
1938-39	58	62	47	50
1939-40	102	104	131	135
1940-41	101	103	208	153
1941-42	105	108	147	138
1942-43	134	142	90	106
1943-44	62	52	53	42
1944-45	82	92	85	89
1945-46	116	124	115	112
1946-47	59	63	60	49
1947-48	97	101	98	88
1948-49	72	78	89	77
1949-50	92	96	70	77
1950-51	143	147	131	133
1951-52	150	159	148	149
1952-53	146	147	131	133
1953-54	139	131	129	129
1954-55	60	48	60	60
1955-56	187	179	165	190
1956-57	98	97	88	81
1957-58	185	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	131
1963-64	90	92	65	64
1964-65	162	152	140	175
1965-66	107	90	110	96
1966-67	117	103	135	123
1967-68	76	77	82	79
1968-69 **	129	137	142	162
1969-70 **	135	132	130	141

* Average 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 1969	Percent	33	85	79	44
	Average	85	21	21	55
November 1969	Percent	33	39	42	16
	Average	214	55	51	284
December 1969	Percent	154	171	230	168
	Average	485	129	99	943
January 1970	Percent	391	444	501	352
	Average	644	166	110	1225
February 1970	Percent	125	106	109	73
	Average	608	158	149	1177
March 1970	Percent	113	108	109	67
	Average	587	158	157	795
April 1970	Percent	47	44	51	26
	Average	627	179	217	550
May 1970	Percent	67	40	83	31
	Average	586	190	241	237
June 1970	Percent	90	72	80	31
	Average	336	108	123	79
July 1970	Percent	70	78	74	62
	Average	125	35	36.	22
August 1970	Percent	74	95	41	59
	Average	66	15	13	10
September 1970	Percent	92	89	30	50
	Average	55	10	9	7
1969-70 Water Year		135	132	130	141
		5968	1620	1594	7614

Note: The Percent Values are Preliminary Data Subject to Revision
Average Unimpared Runoff in Thousands of Acre Feet Adjusted To the 50-Year Period October 1920 Through September 1970.

TABLE B-3 DAILY MEAN DISCHARGE

The streamflow table is arranged in downstream order for each stream or stream system. Stations on a tributary entering between two main stem stations are listed between those stations, and in downstream order on that tributary. A stream gaging station is named after the stream and the nearest post office (e.g., Little Shasta River near Montague).

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
1970	F21300	LITTLE SHASTA RIVER NEAR MONTAGUE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	4.7	3.5	3.8 E	18	38	22	20	25	28	10	6.4	5.0	1
2	5.6	3.2	3.8 E	17	33	21	21	28	27	9.4	6.4	5.1	2
3	5.0	3.2	3.8 E	16	37	21	20	31	26	9.0	6.2	5.0	3
4	4.7	5.3	3.8 E	15	35	20	21	33	25	8.8	6.2	5.2	4
5	4.7	14	3.8 E	14	33	19	22	33	23	8.7	6.1	5.3	5
6	4.7	7.3	3.8 E	14	32	26	24	31	24	8.6	6.0	5.5	6
7	4.4	5.3	3.8 E	14	32	62	22	32	22	8.2	6.0	5.3	7
8	6.6	4.7	3.8 E	15	33	63	21	41	23	7.9	5.9	5.1 *	8
9	6.0	4.4	5.0 E	14	32 *	44	23	41	24	7.8	5.8	5.0	9
10	6.0	4.4	9.5 E	4.7	31	36	31	40	25	7.6	5.8	5.0	10
11	5.3	4.4	19 E	7.3	30	35	27	38	20	7.7	5.7	4.9	11
12	4.8	3.8	30 E	12	35	35	24	40	19	7.7	5.6	4.8	12
13	4.4	3.8	23 E	26	32	37	25	41	23	7.5	5.5	4.8	13
14	4.7	3.2	14 E	88	29	45	25	40 *	20	7.4	5.5	4.8	14
15	6.6	3.8	9.5 E	53	27	40	24	40	17	7.2	5.3	4.8	15
16	11	3.8	6.0 E	75	26	36	24	40	16	7.1	5.3	4.8	16
17	8.1	2.5	6.6 *	82	27	33 *	22	41	15 *	7.0	5.2	4.7	17
18	6.0	3.2	6.2	58	25	29	22	42	14	7.2	5.2	4.7	18
19	5.3	3.1	31	46	22	27	27	42	14	7.2	5.2	4.7	19
20	5.3	2.5	47	40 *	21	26	24	41	13	7.0	5.2	4.6	20
21	5.0	2.5	178	73	21	25	23	40	13	7.0 *	5.1	4.5	21
22	4.7	2.5	70	218	20	25	22	39	14	7.0	5.1	4.5	22
23	4.4 *	3.2	48	269	19	25	23	38	12	6.8	5.1	4.5	23
24	4.4	3.2	42	160	19	25	23	37	12	6.6	5.1	4.5	24
25	4.4	3.2	40	88	17	25	22	36	11	6.5	5.0	4.4	25
26	4.4	3.2	34	99	17	25	23	36	11	6.5	5.0	4.4	26
27	4.4	3.8	28	116	17	23	23	35	11	6.6	5.0	4.3	27
28	4.4	3.8	26	65	21	23	23	34	14	6.7	5.0	4.2	28
29	4.4	3.8	24	51		23	21	33	12	6.4	5.0	4.2	29
30	4.4	3.8	23	47		21	23	31	11	6.4	5.0	4.2	30
31	3.8		22	40		20 *		30		6.4	5.0		31
MEAN	5.3	4.1	24.9	59.8	27.2	30.2	23.2	36.4	18.0	7.5	5.5	4.8	MEAN
MAX.	11	14	178	269	38	63	31	42	28	10	6.4	5.5	MAX.
MIN.	3.8	2.5	3.8	4.7	17	19	20	25	11	6.4	5.0	4.2	MIN.
AC. FT.	323	243	1530	3680	1510	1860	1380	2240	1070	460	337	283	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
20.7	575	4.66	1	23	1600	2.5	1.33	11	17	0000	14970

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 8 APR 52-APR 55 SEP 56-DATE	28-NOV 51 8 APR 52-APR 55 SEP 56-DATE	1956 1965	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.

8 - Irrigation season only.

TABLE B-3 (CONT)

DAILY MEAN DISCHARGE

(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1970	F42100	NORTH FORK TRINITY RIVER NEAR HELENA

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	30	41	22	367	965	548	326	166	348	94	37	22	1
2	30	40	21	326	847	502	324	233	392	98	36	22	2
3	30	39	20	292	780	471	307	325	385	108	35	22 *	3
4	30	59	19	259	732	455	300	377	356	117	35	22	4
5	30	400	18	227	680	428	303	374	352	122	34	24	5
6	31	182	17	201	639	416	309	329	349	121	34	24	6
7	31	119	16	182	606	624	292	287	321	103 *	34	23	7
8	44	104	25	184	586	762	274	325	295	91	33	22	8
9	50	89	20	316	577	685	263	369	248	76	32	22	9
10	52	77	23	710 *	568	622	309	306	216	70	31	21	10
11	45	80	156	690	562 *	593	302	261	180	67	30	21	11
12	40	87	1320	748	600	569	271	231	148	65	29	21	12
13	38	82	1160	1550	602	566	260	216	142	62	29	20	13
14	37	73	1520	3070	566	654	245	225	153	58	29	20	14
15	66	67	834	2170	538	637	231 *	295	140	59	29	21	15
16	226	65	555 *	3220	608	604	221	444	150 *	63	28	21	16
17	174	58	501	4270	686	580	209	501	164	61	27	21	17
18	86	55	521	2990	650	540 *	207	452	179	55	27	21	18
19	67	52	1400 *	2910	611	504	220	393 *	232	50	27	21	19
20	64	49 *	2460	3150	579	478	198	337	273	50	27	22	20
21	99	45	7770	6780	555	455	192	320	266	50	26	22	21
22	82	42	2150	8580 *	529	448	184 *	353	275	49	26	21	22
23	67	39	1780 *	10200	506	451	174	380	260	46	26	21	23
24	59	36	1370	8230	488	449	168	336	240	44	25	21	24
25	52	34	1120	4210 *	471	446	161	381	204	43	25	20	25
26	48	31	1010	4290	465	427	172	426	204	43	25 *	20	26
27	46 *	29	793	6340	467	413	153	383	185	43	25	20	27
28	45	27	632	2800	518	400	146	317	164	43	24	20	28
29	43	25	533	1860		385	141	300	132	43	23	20 *	29
30	43	24	463	1410		367 *	146	294	102	41 *	23	19	30
31	42		409	1140		345		303		39	22		31
MEAN	58.9	71.7	924	2699	606	510	234	330	235	66.9	28.8	21.2	MEAN
MAX.	226	400	7770	10200	965	762	326	501	392	122	37	24	MAX.
MIN.	30	24	16	182	465	345	141	166	102	39	22	19	MIN.
AC. FT.	3620	4260	56840	166000	33680	31390	13900	20310	13990	4110	1770	1260	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
485	12800	19.40	12	21	0645	15	6.52	12	7	1715	351100

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

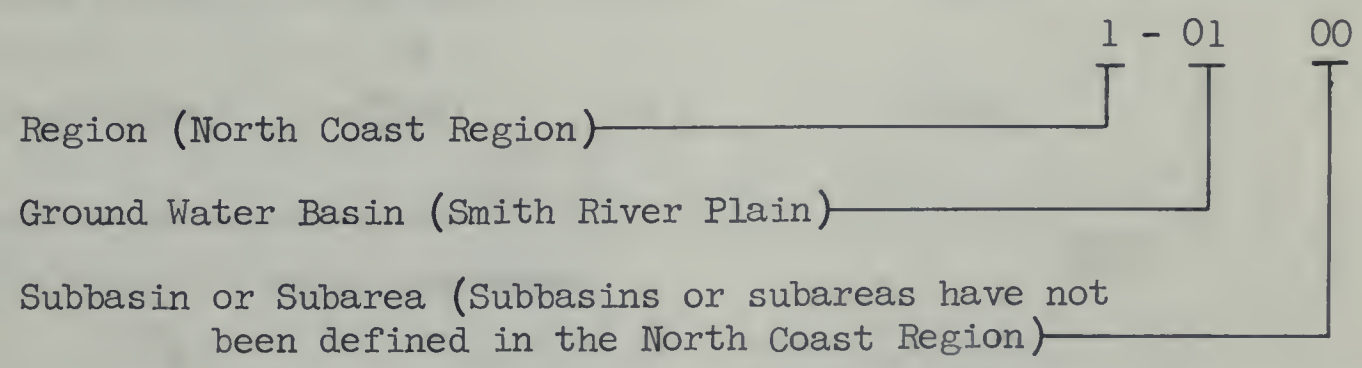
GROUND WATER MEASUREMENTS

This appendix contains ground water level measurements from 46 wells for the period October 1, 1969, through September 30, 1970. 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:



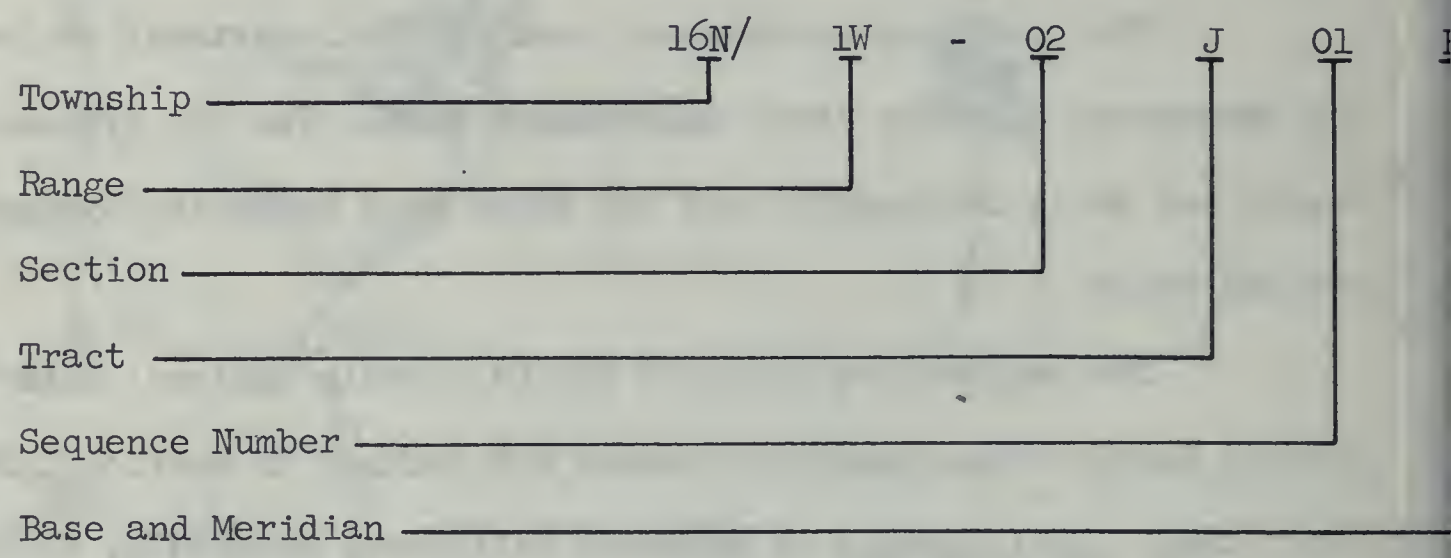
The State Well Numbering System is based on township, range, and section subdivisions of the Public Land Survey.

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 1969 to Spring 1970 in feet	Measuring Agency	Number of Wells Reported	
Name	Number			Fall 1969	Spring 1970
NORTH COASTAL REGION					
Smith River Plain	1-01.00	-1.2	DWR	6	6
Butte Valley	1-03.00	0.0	DWR	7	7
Shasta Valley	1-04.00	-0.1	DWR	6	6
Scott River Valley	1-05.00	+0.2	DWR	5	5
Mad River Valley	1-08.00	-3.8	DWR	2	2
Eel River Valley	1-10.00	-0.2	DWR	4	4
Round Valley	1-11.00	-0.7	DWR	6	5
Laytonville Valley	1-12.00	-3.9	DWR	4	4
Little Lake Valley	1-13.00	-2.1	DWR	6	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 21.

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 H	127.0	10-14-69	21.1	105.9	5050
		4-08-70	18.5	108.5	5050
16N/01W-17K01 H	48.0	10-14-69	22.3	25.7	5050
		4-08-70	13.8	34.2	5050
17N/01W-02P01 H	31.0	10-14-69	20.5	10.5	5050
		4-08-70	18.7	12.3	5050
17N/01W-03E01 H	14.0	10-14-69	13.0	1.0	5050
		4-08-70	(1) 12.7	1.3	5050
17N/01W-15M02 H	21.0	10-14-69	16.0	5.0	5050
		4-08-70	9.9	11.1	5050
18N/01W-26P01 H	38.0	10-14-69	25.7	12.3	5050
		4-08-70	14.0	24.0	5050
BUTTE VALLEY 1-03.00					
46N/01E-06N01 M	4242.0	10-08-69	28.0	4214.0	5050
		4-06-70	20.0	4222.0	5050
46N/02W-25R02 M	4256.0	10-08-69	32.9	4223.1	5050
		4-06-70	23.5	4232.5	5050
47N/01W-14B01 M	4234.0	10-08-69	10.4	4223.6	5050
		4-06-70	8.2	4225.8	5050
47N/01W-17R01 M	4240.0	10-08-69	9.5	4230.5	5050
		4-06-70	8.3	4231.7	5050
47N/01W-19L01 M	4238.0	10-08-69	5.3	4232.7	5050
		4-06-70	3.5	4234.5	5050
47N/01W-27B01 M	4233.0	10-08-69	9.7	4223.3	5050
		4-06-70	6.5	4226.5	5050
48N/01W-26N01 M	4244.0	10-08-69	20.2	4223.8	5050
		4-06-70	12.8	4231.2	5050
SHASTA VALLEY 1-04.00					
42N/05W-20J01 M	2882.0	10-07-69	3.6	2878.4	5050
		4-06-70	5.1	2876.9	5050
42N/06W-10J01 M	2835.0	10-07-69	13.5	2821.5	5050
		4-06-70	5.5	2829.5	5050
43N/06W-22A01 M	2665.0	10-07-69	9.0	2656.0	5050
		4-06-70	(1)		5050
44N/05W-34H01 M	2637.0	10-07-69	25.0	2612.0	5050
		4-06-70	28.8	2608.2	5050
44N/06W-10F01 M	2537.0	10-07-69	14.8	2522.2	5050
		4-06-70	25.0	2512.0	5050
45N/06W-19E01 M	2538.0	10-07-69	20.9	2517.1	5050
		4-06-70	18.2	2519.8	5050
SCOTT RIVER VALLEY 1-05.00					
42N/09W-02A02 M	2746.0	10-07-69	12.0	2734.0	5050
		4-06-70	8.0	2738.0	5050
42N/09W-27N01 M	2930.0	10-07-69	8.4	2921.6	5050
		4-06-70	2.1	2927.9	5050
43N/09W-23F01 M	2728.0	10-07-69	6.0	2722.0	5050
		4-06-70	3.2	2724.8	5050
43N/09W-24F01 M	2735.0	10-07-69	8.2	2726.8	5050
		4-06-70	3.0	2732.0	5050
44N/09W-28P01 M	2711.0	10-07-69	21.8	2689.2	5050
		4-06-70	9.3	2701.7	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
MAD RIVER VALLEY 1-08.00					
06N/01E-06H01 H	151.0	10-15-69	13.0	138.0	5050
		4-07-70	4.5	146.5	5050
06N/01E-29P01 H	25.0	10-15-69	9.3	15.7	5050
		4-07-70	12.0	13.0	5050
EEL RIVER VALLEY 1-10.00					
02N/01W-08B01 H	34.0	10-15-69	21.4	12.6	5050
		4-07-70	15.8	18.2	5050
03N/01W-18D01 H	15.0	10-15-69	2.4	12.6	5050
		4-07-70	1.8	13.2	5050
03N/01W-34J01 H	53.0	10-15-69	34.7	18.3	5050
		4-07-70	31.6	21.4	5050
03N/02W-26R01 H	12.0	10-15-69	10.2	1.8	5050
		4-07-70	7.0	5.0	5050
ROUND VALLEY 1-11.00					
22N/12W-04B01 M	1351.0	10-16-69	15.6	1335.4	5050
		4-09-70	6.4	1344.6	5050
22N/12W-06L03 M	1370.0	10-16-69	3.0	1367.0	5050
		4-09-70	-10.6	1380.6	5050
22N/13W-12R01 M	1400.0	10-16-69	28.7	1371.3	5050
		4-09-70	6.4	1393.6	5050
23N/12W-31N01 M	1388.0	10-16-69	(0)		5050
23N/13W-36C03 M	1410.0	10-16-69	28.5	1381.5	5050
		4-09-70	9.6	1400.4	5050
23N/13W-36Q01 M	1403.0	10-16-69	20.4	1382.6	5050
		4-09-70	2.4	1400.6	5050
LAYTONVILLE VALLEY 1-12.00					
21N/14W-30M01 M	1688.0	10-15-69	15.5	1672.5	5050
		4-09-70	6.8	1681.2	5050
21N/15W-01L02 M	1682.0	10-15-69	19.5	1662.5	5050
		4-09-70	10.0	1672.0	5050
21N/15W-12M02 M	1630.0	10-15-69	16.8	1613.2	5050
		4-09-70	10.6	1619.4	5050
21N/15W-24A01 M	1653.0	10-15-69	12.5	1640.5	5050
		4-09-70	3.3	1649.7	5050
LITTLE LAKE VALLEY 1-13.00					
18N/13W-08L01 M	1340.0	10-16-69	9.2	1330.8	5050
		4-09-70	2.9	1337.1	5050
18N/13W-17J01 M	1370.0	10-16-69	27.3	1342.7	5050
		4-09-70	21.2	1348.8	5050
18N/13W-18E01 M	1365.0	10-16-69	30.9	1334.1	5050
		4-09-70	25.2	1339.8	5050
18N/13W-20H03 M	1385.0	10-16-69	(0)		5050
19N/13W-32F01 M	1347.0	10-16-69	15.0	1332.0	5050
		4-09-70	8.3	1338.7	5050
19N/13W-32L02 M	1350.0	10-16-69	13.7	1336.3	5050
		4-09-70	11.5	1338.5	5050

SURFACE WATER SAMPLING STATIONS

APPENDIX D

SURFACE WATER QUALITY

This appendix presents surface water quality data collected during the period from October 1, 1969, through September 30, 1970. The data were collected from 26 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, 12th Edition, 1965. In some cases, the methods used were those presented in the U. S. Geological Survey Water-Supply Paper 1454, "Methods for Collection and Analysis of Water Samples", 1960. The analysis for trace elements is in accordance with the U. S. Geological Survey Water-Supply Paper 1540-B, "Concentration Method for the Spectro-Chemical Determination of Minor Elements in Water".

Each station in this appendix has been assigned a station number. The numbering system is described in Appendix B, "Surface Water Measurements". A sequential number (formerly employed) follows each station name for reference.

TABLE D-1

SAMPLING STATION DATA AND INDEX

North Coastal Area

Station	Station Number	Location *	Beginning of Record	Frequency of Sampling	Analyses on Page
Bear River near Capetown (7b)	F75100.00	01N/03W-13 H	MAY 1964	Semiannually	41
Black Butte River near Covelo (5h)	F63200.00	23N/11W-28 M	NOV. 1964	Monthly	39, 47
Eel River above Outlet Creek (5d)	F61329.50	21N/13W-31 M	APR. 1958	Monthly	37, 42, 46
Eel River at Scotia (6)	F61100.00	02N/01E-31 H	APR. 1951	Monthly	36, 42, 43, 47
Eel River at South Fork (5)	F61154.50	01S/02E-26 H	APR. 1951	Monthly	37
Eel River, Middle Fork, above Black Butte River (5g)	F63120.00	23N/11W-28 M	NOV. 1964	Monthly	39, 47
Eel River, Middle Fork, at Dos Rios (5c)	F63010.00	21N/13W-06 M	APR. 1958	Monthly	38, 42, 46
Eel River, South Fork, near Miranda (7)	F64100.00	03S/04E-30 H	APR. 1951	Monthly	40, 49
Klamath River above Hamburg Reservoir Site (1c)	F31470.00	46N/10W-14 M	DEC. 1958	Bimonthly	33, 45
Klamath River at Orleans (2c)	F31220.01	11N/06E-31 H	JAN. 1964	Monthly	32, 42
Klamath River below Iron Gate Dam (1f)	F31600.00	47N/05W-17 M	DEC. 1961	Monthly	34, 42, 45
Klamath River near Klamath (3)	F31100.00	13N/01E-24 H	APR. 1951	Monthly	32, 42, 43, 45
Klamath River near Seiad Valley (2b)	F31430.00	46N/12W-03 M	DEC. 1958	Monthly	33, 42, 45
Mad River near Arcata (6a)	F51100.00	06N/01E-15 H	NOV. 1958	Monthly	35, 42
Mattole River at Petrolia (7a)	F71100.00	02S/02W-11 H	JAN. 1959	Semiannually	41
Mill Creek near Covelo (5e)	F63050.00	22N/12W-22 M	FEB. 1965	Monthly	39, 47
Outlet Creek near Longvale (5b)	F61350.00	20N/14W-01 M	MAY 1958	Monthly	38
Redwood Creek at Orick (3b)	F55100.00	10N/01E-04 H	NOV. 1958	Monthly	36
Salmon River at Somesbar (2a)	F34100.00	11N/06E-02 H	NOV. 1958	Semiannually	34
Scott River near Fort Jones (1b)	F25250.00	44N/10W-29 M	DEC. 1958	Bimonthly	32
Shasta River near Yreka (1a)	F21050.00	46N/07W-24 M	DEC. 1958	Monthly	31
Smith River near Crescent City (3a)	F01300.00	16N/01E-10 H	APR. 1951	Monthly	31
Trinity River near Hoopa (4)	F41090.00	08N/05E-31 H	APR. 1951	Monthly	34, 42, 46
Trinity River at Lewiston (4a)	F41640.00	33N/08E-17 M	APR. 1951	Bimonthly	35, 46
Trinity River near Burnt Ranch (4b)	F41376.00	05N/07E-19 H	APR. 1958	Bimonthly	35, 46
Van Duzen River near Bridgeville (5a)	F65300.00	01N/02E-12 H	APR. 1958	Monthly	40
Williams Creek near Covelo (5f)	F63105.00	23N/12W-24 M	NOV. 1964	None	**

* - H = Humboldt Base and Meridian.
\- M = Mount Diablo Base and Meridian.
** - This station dropped from the monitoring program, October 1969.

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

An explanation of column headings follows:

The LAB and SAMPLER agency codes are as follows:

5000 - U. S. Geological Survey
5050 - California Department of Water Resources

TIME	- Pacific Standard Time on a 24-hour clock.
GH	- The instantaneous gage height in feet above an established datum.
Q	- The instantaneous discharge in cubic feet per second (cfs). "E" indicates the value has been estimated.
DO	- The dissolved oxygen content in milligrams per liter.
SAT	- The percent saturation.
TEMP	- Water temperature in degrees Fahrenheit at the time of field sampling. Water temperature in degrees Celsius is computed from degrees Fahrenheit.
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 temperature when sampled.
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.
TURB	- Turbidity in Jackson Candle Units.

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 D-2

MINERAL ANALYSIS OF SURFACE WATER

NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.H. Q	DO SAT	TEMP	FIELD LABORATORY PH	EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB
							MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				
FC 1300.00							SMITH RIVER NEAR CRESCENT CITY (3A)													
10/07/69	5050	6.45	10.9	54.0F	8.0		--	--	2.5	--	.0	89	--	3.7	--	.00	--		80	1
0710	5050	250	101	12.2C	8.1	156			.11		.00	1.46		.10			--			
									7			94		6						
11/04/69	5050	7.38	11.5	53.0F	7.6		--	--	2.0	--	.0	79	--	3.3	--	.00	--		67	2
0720	5050	480	105	11.7C	8.1	138			.09		.00	1.30		.09			--			
									7			94		7						
12/02/69	5050	7.30	13.3	40.0F	7.6		--	--	1.7	--	.0	74	--	3.6	--	.10	--		64	1
0815	5050	445	102	4.4C	7.8	131			.07		.00	1.21		.10			--			
									5			92		8						
01/06/70	5050	10.03	14.0	38.0F	7.0		--	--	1.6	--	.0	56	--	2.4	--	.00	--		48	2
0815	5050	1540	105	3.3C	7.1	101			.07		.00	.92		.07			--			
									7			91		7						
02/03/70	5050	13.54	13.7	47.0F	7.3		--	--	1.5	--	.0	49	--	1.9	--	.10	--		42	65
0850	5050	6020	116	8.3C	7.8	86			.07		.00	.80		.05			--			
									8			93		6						
03/10/70	5050		13.5	45.0F	7.3		--	--	1.6	--	.0	50	--	2.7	--	.00	--		42	25
0805	5050	7200E	112	7.2C	7.7	88			.07		.00	.82		.08			--			
									8			93		9						
04/07/70	5050	9.24	13.3	46.0F	7.3		--	--	1.8	--	.0	58	--	2.6	--	.00	--		50	1
0800	5050	960E	113	7.8C	8.0	107			.08		.00	.95		.07			--			
									7			89		7						
05/12/70	5050	12.20	13.7	46.0F	7.4		6.6	7.7	1.7	.6	.0	56	1.6	3.5	.1	.00	--	46	48	4
0645	5050	4120	115	7.8C	7.8	101	.33	.63	.07	.02	.00	.92	.03	.10	.00		--	50	2	
							31	60	7	2		88	3	10						
06/08/70	5050	8.00	10.9	61.0F	7.9		--	--	2.2	--	.0	71	--	2.8	--	.00	--		63	2
1415	5050	728	110	16.1C	8.2	122			.10		.00	1.16		.08			--			
									8			95		7						
07/06/70	5050	7.18	10.6	79.0F	8.2		--	--	2.6	--	.0	81	--	1.8	--	.00	--		69	1
1445	5050	480	129	26.1C	8.0	145			.11		.00	1.33		.05			--			
									8			92		3						
08/10/70	5050	6.54	10.5	72.0F	8.2		--	--	2.6	--	.0	95	--	3.3	--	.00	--		77	1
1415	5050	285	119	22.2C	7.8	155			.11		.00	1.56		.09			--			
									7			101		6						
09/15/70	5050	5.93	10.1	57.2F	7.5		10	14	2.5	.9	.0	93	4.4	3.2	.0	.00	--	86	82	4
0650	5050	202	98	14.0C	7.6	165	.50	1.15	.11	.02	.00	1.53	.09	.09	.00		--	82	6	
							28	65	6	1		89	5	5						
F2 1050.00							SHASTA RIVER NEAR YREKA (1A)													
10/15/69	5050	3.43	10.2	50.0F	8.2		--	--	40	--	.0	296	--	22	--	.40	--		201	8
0705	5050	192	97	10.0C	8.3	502			1.74		.00	4.85		.62			--			
									35			97		12						
11/17/69	5050	3.44	11.5	47.0F	8.3		--	--	36	--	.0	273	--	23	--	.50	--		171	4
1430	5050	196	105	8.3C	8.3	473			1.57		.00	4.48		.65			--			
									33			95		14						
12/08/69	5050	3.42	12.7	44.0F	8.3		--	--	35	--	5.0	265	--	22	--	.50	--		186	2
1310	5050	191	111	6.7C	8.4	476			1.52		.17	4.35		.62			--			
									32		4	91		13						
01/12/70	5050	3.61	11.9	45.0F	8.3		--	--	40	--	.0	299	--	22	--	.60	--		233	20
1545	5050	262	106	7.2C	8.1	515			1.74		.00	4.90		.62			--			
									34			95		12						
02/09/70	5050	4.15	11.4	49.0F	8.3		--	--	29	--	.0	278	--	17	--	.40	--		206	25
1715	5050	487	107	9.4C	8.2	478			1.26		.00	4.56		.48			--			
									26			95		10						
03/09/70	5050	4.36	11.6	49.0F	8.2		--	--	33	--	4.0	273	--	19	--	.50	--		209	30
1545	5050	575	109	9.4C	8.4	491			1.44		.13	4.48		.54			--			
									29		3	91		11						
04/14/70	5050	3.41	11.1	52.0F	8.4		--	--	41	--	7.0	321	--	21	--	.40	--		236	7
1640	5050	178	108	11.1C	8.5	554			1.78		.23	5.26		.59			--			
									32		4	95		11						
05/12/70	5050	3.51	11.3	53.0F	8.3		24	43	42	3.2	9.0	339	9.2	21	1.8	.70	--	315	239	9
1355	5050	235	111	11.7C	8.5	580	1.20	3.53	1.83	.08	.30	5.56	.19	.59	.03		--	323	57	
							18	53	28	1	4	83	3	9						
06/16/70	5050	3.16	9.7	66.0F	8.2		--	--	45	--	.0	367	--	26	--	.70	--		252	2
1135	5050	99	111	18.9C	8.3	600			1.96		.00	6.02		.73			--			
									33			100		12						
07/13/70	5050	2.73	9.4	70.0F	8.4		--	--	40	--	5.0	355	--	24	--	.60	--		254	5
1000	5050	31	113	21.1C	8.5	583			1.74		.17	5.82		.68			--			
									30		3	100		12						
08/31/70	5050	2.73	10.5	67.0F	8.5		39	41	46	3.6	.0	391	9.0	30	.1	.70	--	384	265	10
1110	5050	29	115	19.4C	8.3	660	1.95	3.37	2.00	.09	.00	6.41	.19	.85	.00		--	365	55	
							26	45	27	1		86	3	11						

TABLE D-2 (CONTINUED)

MINERAL ANALYSIS OF SURFACE WATER

NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.H. Q	DO SAT	TEMP	FIELD LABORATORY PH	EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB
							MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER			
F2	5250.00						SCOTT RIVER NEAR FORT JONES (1B)													
11/17/69	5050	5.54	12.4	45.0F	7.8		--	--	4.0	--	.0	155	--	4.9	--	.00	--		131	2
1135	5050	126	113	7.2C	7.8	252			.17		.00	2.54		.14			--			
									7			101		6						
01/12/70	5050	6.27	11.9	42.0F	7.3		--	--	2.9	--	.0	108	--	2.6	--	.00	--		99	7
1140	5050	520	104	5.6C	6.4	185			.13		.00	1.77		.07			--			
									7			96		4						
03/09/70	5050	7.80	11.8	44.0F	7.5		--	--	2.8	--	.0	106	--	1.0	--	.10	--		87	55
1200	5050	1430	106	6.7C	7.9	176			.12		.00	1.74		.03			--			
									7			99		2						
05/12/70	5050	6.54	11.5	48.0F	7.3		11	13	2.8	.9	.0	98	1.5	.4	2.2	.00	--	109	81	5
1800	5050	708	109	8.9C	8.0	167	.55	1.07	.12	.02	.00	1.61	.03	.01	.04		--	81	1	
							31	61	7	1		95	2	1	2					
07/13/70	5050	3.58	13.6	72.0F	8.4		--	--	5.3	--	.0	157	--	3.0	--	.00	--		134	3
1330	5050	71	170	22.2C	8.3	261			.23		.00	2.57		.08			--			
									9			98		3						
08/31/70	5050	3.53	12.4	72.0F	8.4		--	--	5.6	--	.0	161	--	6.0	--	.10	--		139	2
1505	5050	45	155	22.2C	8.3	276			.24		.00	2.64		.17			--			
									9			96		6						
F3	1100.00						KLAMATH RIVER NEAR KLAMATH (3)													
10/07/69	5050	6.05	10.5	57.0F	8.0		19	9.5	12	1.8	.0	113	14	5.2	.1	.00	.1		86	2
0900	5000	2910	101	13.9C	8.1	221	.95	.78	.52	.05	.00	1.85	.29	.15	.00		19.0	137	6	
							41	34	23	2		81	13	7						
11/04/69	5050	5.01	10.7	55.0F	7.7		18	9.4	15	2.2	.0	113	19	4.8	1.9	.05	.2		84	5
0910	5000	4330	100	12.8C	8.0	233	.90	.77	.65	.06	.00	1.85	.40	.14	.03		24.0	151	9	
							38	32	27	3		76	17	6	1					
12/01/69	5050	5.02	13.4	45.0F	7.8		18	9.5	12	1.9	.0	106	14	3.6	2.4	.05	.1		84	7
1530	5000	4850	111	7.2C	7.8	215	.90	.78	.52	.05	.00	1.74	.29	.10	.04		26.0	140	3	
							40	35	23	2		80	13	5	2					
01/05/70	5050	7.86	13.6	41.0F	7.3		16	7.4	6.2	1.0	.0	86	9.0	1.8	1.4	.03	.1		70	33
1700	5000	12800	106	5.0C	7.6	166	.80	.61	.27	.03	.00	1.41	.19	.05	.02		18.0	104	0	
							47	36	16	2		84	11	3	1					
02/03/70	5050	15.81	13.3	45.0F	7.4		14	6.4	5.1	1.1	.0	74	7.0	1.6	1.0	.02	.1		62	180
1050	5000	60500	110	7.2C	7.8	141	.70	.53	.22	.03	.00	1.21	.15	.05	.02		16.0	89	1	
							47	36	15	2		85	10	3	1					
03/10/70	5050	12.31	11.8	47.0F	7.4		17	7.4	5.5	1.2	.0	85	10	3.2	.3	.01	.0		73	85
0950	5000	34700	100	8.3C	7.8	161	.85	.61	.24	.03	.00	1.39	.21	.09	.00		15.0	102	4	
							49	35	14	2		82	12	5						
04/07/70	5050	12.24	12.3	51.0F	7.6		17	7.2	5.6	1.0	.0	85	8.0	2.8	.0	.04	.2		72	10
0935	5000	12000	110	10.5C	7.9	160	.85	.59	.24	.03	.00	1.39	.17	.08	.00		14.0	98	3	
							50	35	14	2		85	10	5						
05/11/70	5050	8.33	11.8	52.0F	7.6		14	6.6	5.0	.9	.0	74	13	2.1	.1	.04	.1		62	25
1815	5000	12800	107	11.1C	7.8	145	.70	.54	.22	.02	.00	1.21	.27	.06	.00		12.0	91	2	
							47	36	15	1		79	18	4						
06/08/70	5050	7.27	9.8	66.2F	7.6		17	7.5	7.2	1.3	.0	84	14	2.7	.0	.04	.1		74	4
1250	5000	8300	105	19.0C	7.6	169	.85	.62	.31	.03	.00	1.38	.29	.08	.00		15.0	107	5	
							47	34	17	2		79	17	5						
07/06/70	5050	5.78	8.3	75.0F	8.0		21	8.8	8.0	1.7	.0	108	14	2.4	.1	.01	.2		88	22
1330	5000	4000	97	23.9C	7.8	206	1.05	.72	.35	.04	.00	1.77	.29	.07	.00		16.0	126	0	
							49	33	16	2		83	14	3						
08/10/70	5050	5.16	9.5	73.4F	8.2		22	9.8	14	2.0	.0	119	21	5.2	.0	.02	.0		96	1
1245	5000	2520	109	23.0C	7.9	245	1.10	.81	.61	.05	.00	1.95	.44	.15	.00		7.8	141	2	
							43	32	24	2		77	17	6						
09/14/70	5050	5.33	10.3	63.0F	8.2		21	9.4	14	2.2	.0	114	19	4.3	--	.05	.2		91	9
1415	5000	2360	106	17.2C	8.1	247	1.05	.77	.61	.06	.00	1.87	.40	.12			14.0	141	3	
							42	31	24	2		76	16	5						
F3	1220.01						KLAMATH RIVER AT ORLEANS (2C)													
10/06/69	5050	2.80	12.2	57.0F	8.3		--	--	15	--	.0	111	--	6.7	--	.10	--		81	2
1210	5050	1450	120	13.9C	8.0	223			.65		.00	1.82		.19			--			
									29			82		9						
11/03/69	5050	3.73	12.1	54.0F	8.0		--	--	20	--	.0	116	--	6.4	--	.10	--		82	4
1405	5050	2620	115	12.2C	7.9	247			.87		.00	1.90		.18			--			
									35			77		7						
12/01/69	5050	4.38	14.0	43.0F	8.0		--	--	15	--	.0	102	--	6.5	--	.20	--		72	3
1315	5050	3940	115	6.1C	7.7	210			.65		.00	1.67		.18			--			
									31			80		9						
01/05/70	5050	6.80	14.8	38.0F	7.4		--	--	8.8	--	.0	84	--	3.5	--	.10	--		67	20
1445	5050	8000	113	3.3C	7.3	170			.38		.00	1.38		.10			--			
									22			81		6						
02/02/70	5050	12.65	14.5	43.0F	7.8		--	--	6.5	--	.0	79	--	1.9	--	.20	--		62	220
1235	5050	29600	119	6.1C	7.6	148			.28		.00	1.30		.05			--			
									19			88		3						
03/09/70	5050	16.19	13.4	46.0F	7.6		--	--	7.7	--	.0	82	--	3.1	--	.10	--		61	80
1350	5050	19100	115	7.8C	8.0	150			.33		.00	1.34		.09			--			
									22			89		6						

TABLE D-2 (CONTINUED)

MINERAL ANALYSIS OF SURFACE WATER

NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.H. Q	DO SAT	TEMP	FIELD LABORATORY PH	EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB
							MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
F3 1220.01							KLAMATH RIVER AT ORLEANS (2C) CONTINUED													
04/06/70	5050	5.63	12.7	50.0F	7.6		--	--	6.9	--	.0	85	--	2.5	--	.20	--		68	8
1250	5050	7040	114	10.0C	8.0	164			.30		.00	1.39		.07			--			
									18			85		4						
05/11/70	5050	5.43	12.8	48.0F	7.6		14	6.6	6.2	1.2	.0	76	9.7	3.2	.2	.10	--	95	62	8
1230	5050	6610	112	8.9C	8.1	152	.70	.54	.27	.03	.00	1.25	.20	.09	.00		--	79	1	
							45	35	18	2		81	13	6						
06/08/70	5050	4.74	10.1	63.0F	7.9		--	--	8.5	--	.0	77	--	2.8	--	.10	--		61	10
1035	5050	5270	106	17.2C	8.2	152			.37		.00	1.26		.08			--			
									24			83		5						
07/06/70	5050	2.48	9.3	73.0F	8.0		--	--	12	--	.0	106	--	3.5	--	.00	--		84	2
1100	5050	2550	109	22.8C	8.0	218			.52		.00	1.74		.10			--			
									24			80		5						
08/10/70	5050	1.68	9.3	73.0F	8.0		--	--	19	--	.0	127	--	7.1	--	.10	--		95	4
1015	5050	1700	109	22.8C	7.6	270			.83		.00	2.08		.20			--			
									31			77		7						
09/14/70	5050	1.39	11.0	60.8F	8.0		17	9.8	17	2.8	.0	112	19	5.5	.7	.00	--	144	83	10
1150	5050	1830	112	16.0C	8.3	238	.85	.81	.74	.07	.00	1.84	.40	.16	.01		--	128	9	
							34	33	30	3		76	17	7						
F3 1430.00							KLAMATH RIVER NEAR SEIAD VALLEY (2B)													
10/14/69	5050		12.0	57.0F	8.4		--	--	20	--	.0	122	--	6.4	3.9	.20	--		86	2
1420	5050	1750	121	13.9C	8.1	258			.87		.00	2.00		.18	.06		--			
									34			78		7	2					
11/17/69	5050		11.6	48.0F	8.2		--	--	19	--	.0	106	--	6.1	3.5	.10	--		76	5
1240	5050	3350	105	8.9C	7.8	227			.83		.00	1.74		.17	.06		--			
									37			77		7	3					
12/08/69	5050		12.7	43.0F	7.6		--	--	16	--	.0	105	--	7.4	5.6	.20	--		71	5
1540	5050	2990	107	6.1C	7.8	212			.70		.00	1.72		.21	.09		--			
									33			81		10	4					
01/12/70	5050		12.8	40.0F	7.6		--	--	17	--	.0	110	--	4.7	3.9	.20	--		81	15
1255	5050	4280	104	4.4C	6.4	224			.74		.00	1.80		.13	.06		--			
									33			80		6	3					
02/09/70	5050		12.9	46.0F	7.6		--	--	12	--	.0	109	--	3.0	3.1	.10	--		73	45
1350	5050	9190	114	7.8C	7.6	186			.52		.00	1.79		.08	.05		--			
									28			96		4	3					
03/09/70	5050		12.7	46.0F	7.8		--	--	13	--	.0	108	--	4.3	.4	.20	--		78	45
1250	5050	8840	112	7.8C	8.3	208			.57		.00	1.77		.12	.01		--			
									27			85		6						
04/14/70	5050		12.8	49.0F	8.2		--	--	15	--	9.0	108	--	6.5	.3	.10	--		90	9
1430	5050	3280	114	9.4C	8.5	231			.65		.30	1.77		.18	.00		--			
									28		13	77		8						
05/12/70	5050		12.8	49.0F	8.3		10	17	17	2.4	.0	125	21	4.3	1.4	.10	--	170	96	5
1630	5050	3130	117	9.4C	7.8	256	.50	1.40	.74	.06	.00	2.05	.44	.12	.02		--	136	8	
							19	52	27	2		78	17	5	1					
06/16/70	5050		11.0	65.0F	8.4		--	--	16	--	.0	122	--	6.6	1.8	.20	--		97	3
1400	5050	1910	122	18.3C	8.3	252			.70		.00	2.00		.19	.03		--			
									28			79		8	1					
07/13/70	5050		10.8	71.0F	8.2		--	--	21	--	.0	130	--	6.5	.1	.20	--		101	3
1230	5050	1100	128	21.6C	8.3	276			.91		.00	2.13		.18	.00		--			
									33			77		7						
08/03/70	5050		10.2	72.0F	8.4		--	--	24	--	.0	126	--	7.7	--	.20	--		98	2
1325	5050	1280	122	22.2C	7.7	300			1.04		.00	2.07		.22			--			
									35			69		7						
08/31/70	5050		11.2	74.0F	8.4		16	13	26	3.2	.0	128	36	8.1	.1	.20	--	186	95	8
1355	5050	1170	133	23.3C	8.3	307	.80	1.07	1.13	.08	.00	2.10	.75	.23	.00		--	167	12	
							26	35	37	3		68	24	7						
F3 1470.00							KLAMATH RIVER ABOVE HAMBURG RESERVOIR SITE (1C)													
11/17/69	5050		11.3	49.0F	8.4		--	--	20	--	.0	105	--	6.6	3.6	.10	--		70	4
1345	5050	3160E	104	9.4C	7.9	225			.87		.00	1.72		.19	.06		--			
									39			76		8	3					
01/12/70	5050		12.9	39.0F	7.6		--	--	21	--	.0	111	--	5.3	5.0	.20	--		76	28
1340	5050	3200E	103	3.9C	7.2	235			.91		.00	1.82		.15	.08		--			
									39			77		6	3					
03/09/70	5050		12.7	46.0F	8.0		--	--	18	--	.0	109	--	5.0	.2	.20	--		77	40
1345	5050	5680E	112	7.8C	8.3	224			.78		.00	1.79		.14	.00		--			
									35			80		6						
05/12/70	5050		12.8	50.0F	8.2		17	16	27	3.3	.0	144	35	6.2	1.6	.20	--	194	107	3
1555	5050	1560E	116	10.0C	8.0	317	.85	1.32	1.17	.08	.00	2.36	.73	.17	.03		--	178	10	
							25	39	34	2		72	22	5	1					
07/13/70	5050		9.7	70.0F	8.4		--	--	25	--	1.0	122	--	6.2	.8	.20	--		90	7
1150	5050	750E	114	21.1C	8.4	284			1.09		.03	2.00		.17	.01		--			
									38		1	70		6						
08/03/70	5050		10.0	73.0F	8.4		17	12	28	3.1	.0	121	39	7.2	.1	.00	--	179	91	3
1240	5050	1070E	121	22.8C	8.3	296	.85	.99	1.22	.08	.00	1.98	.81	.20	.00		--	167	7	
							27	32	39	3		66	27	7						

TABLE D-2 (CONTINUED)

MINERAL ANALYSIS OF SURFACE WATER

NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.H. Q	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	TOS SUM	TH NCH	TURB
F3	1470.00						KLAMATH RIVER ABOVE HAMBURG RESERVOIR SITE (1C) CONTINUED													
08/31/70	5050		11.6	73.0F	8.5		--	--	26	--	.0	128	--	8.7	.6	.20	--		93	2
1310	5050	1050E	140	22.8C	7.9	310			1.13		.00	2.10		.25	.01		--			
									36			68		8						
F3	1600.00						KLAMATH RIVER BELOW IRON GATE DAM (1F)													
10/15/69	5050		6.3	56.0F	7.1		--	--	19	--	.0	90	--	3.0	5.3	.10	--		63	0
0750	5050	1310	64	13.3C	7.7	217			.83		.00	1.48		.08	.09		--			
									38			68		4	4					
11/17/69	5050		8.9	49.0F	7.3		--	--	19	--	.0	89	--	4.6	3.2	.10	--		60	4
1530	5050	2970	83	9.4C	7.3	201			.83		.00	1.46		.13	.05		--			
									41			73		6	2					
12/08/69	5050		10.5	43.0F	7.3		--	--	15	--	.0	79	--	4.8	5.4	.10	--		65	6
1350	5050	1690	91	6.1C	7.4	172			.65		.00	1.30		.14	.09		--			
									38			76		8	5					
01/12/70	5050		12.7	37.0F	7.3		--	--	20	--	.0	92	--	5.6	5.7	.10	--		62	14
1450	5050	2940	99	2.8C	7.0	208			.87		.00	1.51		.16	.09		--			
									42			73		8	4					
02/09/70	5050		13.8	42.0F	7.5		--	--	15	--	.0	84	--	2.9	4.2	.10	--		45	25
1600	5050	5240	118	5.6C	7.6	154			.65		.00	1.38		.08	.07		--			
									42			90		5	5					
03/09/70	5050		13.8	46.0F	7.7		--	--	18	--	.0	88	--	4.8	.1	.10	--		55	25
1500	5050	5110	124	7.8C	8.3	183			.78		.00	1.44		.14	.00		--			
									43			79		8						
04/14/70	5050		12.3	51.0F	8.2		--	--	22	--	.0	105	--	5.8	.7	.20	--		78	7
1600	5050	1360	118	10.5C	8.3	237			.96		.00	1.72		.16	.01		--			
									41			73		7						
05/12/70	5050		12.8	52.0F	8.4		11	15	29	3.9	.0	115	46	4.9	1.9	.10	--	214	88	2
1445	5050	1330	125	11.1C	7.9	297	.55	1.23	1.26	.10	.00	1.89	.96	.14	.03		--	169	6	
							18	39	40	3		63	32	5	1					
06/16/70	5050		13.4	66.0F	8.4		--	--	29	--	5.0	105	--	6.9	3.1	.20	--		90	2
1215	5050	710	154	18.9C	8.4	304			1.26		.17	1.72		.19	.05		--			
									41		6	57		6	2					
07/13/70	5050		12.6	72.0F	8.4		--	--	26	--	3.0	104	--	5.8	1.6	.20	--		86	3
1040	5050	721	154	22.2C	8.4	274			1.13		.10	1.71		.16	.03		--			
									41		4	62		6	1					
08/03/70	5050		9.7	72.0F	8.4		15	12	29	4.0	.0	114	44	6.5	.9	.00	--	187	88	1
1030	5050	1040	118	22.2C	8.3	295	.75	.99	1.26	.10	.00	1.87	.92	.18	.01		--	168	7	
							24	32	41	3		63	31	6						
08/31/70	5050		9.7	71.0F	8.4		--	--	25	--	.0	111	--	5.8	.7	.20	--		79	2
1150	5050	1020	117	21.6C	8.0	281			1.09		.00	1.82		.16	.01		--			
									39			65		6						
F3	4100.00						SALMON RIVER AT SOMESBAR (2A)													
01/05/70	5050	3.77	14.8	37.0F	7.1		--	--	1.9	--	.0	61	--	1.0	--	.10	--		53	2
1410	5050	1090	111	2.8C	7.2	114			.08		.00	1.00		.03			--			
									7			88		3						
05/11/70	5050	6.69	13.1	45.0F	7.3		10	1.9	1.7	.9	.0	39	3.1	1.0	.1	.00	--	52	33	5
1330	5050	1750	111	7.2C	7.5	74	.50	.16	.07	.02	.00	.64	.06	.03	.00		--	38	1	
							67	21	9	3		88	8	4						
F4	1090.00						TRINITY RIVER NEAR HOOPA (4)													
10/06/69	5050	13.21	15.0	61.0F	8.3		--	--	3.4	--	.0	119	--	3.9	1.1	.10	--		106	1
1050	5050	307	153	16.1C	8.3	219			.15		.00	1.95		.11	.02		--			
									7			89		5	1					
11/03/69	5050	13.62	11.9	56.0F	8.0		--	--	4.3	--	.0	110	--	5.8	.6	.00	--		101	2
1230	5050	761	114	13.3C	8.1	212			.19		.00	1.80		.16	.01		--			
									9			85		8						
12/01/69	5050	13.52	12.3	45.0F	7.3		--	--	4.0	--	.0	111	--	6.0	.4	.10	--		100	2
1130	5050	679	103	7.2C	8.1	215			.17		.00	1.82		.17	.01		--			
									8			85		8						
01/05/70	5050	16.44	13.1	40.0F	7.1		--	--	3.2	--	.0	95	--	2.5	.9	.10	--		86	47
1215	5050	4500	102	4.4C	7.3	178			.14		.00	1.56		.07	.01		--			
									8			88		4	1					
02/02/70	5050	23.16	13.0	46.0F	7.3		--	--	2.6	--	.0	83	--	1.8	.5	.10	--		72	180
1120	5050	17500	110	7.8C	7.4	146			.11		.00	1.36		.05	.01		--			
									8			93		3	1					
03/09/70	5050	20.48	12.2	47.0F	7.3		--	--	2.6	--	.0	82	--	1.7	.4	.00	--		70	140
1240	5050	10100	105	8.3C	7.8	144			.11		.00	1.34		.05	.01		--			
									8			93		3	1					
04/06/70	5050	17.25	11.7	52.0F	7.5		--	--	3.1	--	.0	95	--	2.1	.1	.00	--		91	20
1145	5050	3600	107	11.1C	8.0	177			.13		.00	1.56		.06	.00		--			
									7			88		3						
05/11/70	5050	16.61	12.2	49.0F	7.5		15	8.4	2.2	.9	.0	82	7.1	3.1	.2	.10	--	73	72	6
1130	5050	3000	107	9.4C	8.1	148	.75	.69	.10	.02	.00	1.34	.15	.09	.00		--	78	5	
							48	44	6	1		85	9	6						
06/08/70	5050	15.58	9.5	63.0F	7.6		--	--	3.0	--	.0	86	--	1.8	.1	.00	--		77	10
0925	5050	1710	99	17.2C	8.2	154			.13		.00	1.41		.05	.00		--			
									8			92		3						

TABLE D-2 (CONTINUED)

MINERAL ANALYSIS OF SURFACE WATER

NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.H. Q	DO SAT	TEMP	FIELD LABORATORY PH	EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB
							MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER			
F4	1090.00						TRINITY RIVER NEAR HOOPA (4)							CONTINUED						
07/06/70	5050	14.70	8.9	71.0F	7.4		--	--	3.8	--	.0	101	--	2.2	.3	.00	--		90	1
1000	5050	1050	101	21.6C	8.1	190			.17		.00	1.66		.06	.00		--			
									9			87		3						
08/10/70	5050	13.82	9.0	68.0F	7.0		--	--	3.7	--	.0	127	--	4.1	.2	.10	--		104	2
0915	5050	482	99	20.0C	7.9	216			.16		.00	2.08		.12	.00		--			
									7			96		6						
09/14/70	5050	13.69	9.8	64.4F	7.9		27	7.7	4.5	1.4	.0	108	10	5.0	.1	.00	--	112	99	2
1045	5050	420	104	18.0C	8.0	211	1.35	.63	.20	.04	.00	1.77	.21	.14	.00		--	110	11	
							61	28	9	2		83	10	7						
F4	1376.00						TRINITY RIVER NEAR BURNT RANCH (4B)													
11/03/69	5050		11.9	51.0F	7.7		--	--	4.4	--	.0	83	--	6.8	.0	.00	--		71	2
1055	5050	430	110	10.5C	8.0	157			.19		.00	1.36		.19	.00		--			
									12			87		12						
01/05/70	5050		13.8	37.0F	7.3		--	--	3.2	--	.0	86	--	3.8	.4	.10	--		74	3
1115	5050	1150	105	2.8C	7.4	158			.14		.00	1.41		.11	.01		--			
									9			89		7	1					
03/09/70	5050		12.5	46.0F	7.5		--	--	2.6	--	.0	80	--	2.0	.1	.00	--		66	12
1130	5050	3010	108	7.8C	7.9	138			.11		.00	1.31		.06	.00		--			
									8			95		4						
05/11/70	5050		11.7	53.0F	7.6		15	5.2	2.6	.9	.0	68	5.1	4.1	.1	.00	--	66	59	1
1005	5050	1050	111	11.7C	8.1	126	.75	.43	.11	.02	.00	1.12	.11	.12	.00		--	67	3	
							57	33	8	2		83	8	9						
07/06/70	5050		9.0	72.0F	7.6		--	--	3.2	--	.0	65	--	2.4	.1	.00	--		55	1
0850	5050	510	105	22.2C	7.8	123			.14		.00	1.07		.07	.00		--			
									11			87		6						
09/14/70	5050		10.1	59.0F	7.7		16	6.8	4.5	1.0	.0	79	2.1	6.0	.4	.00	--	81	68	5
0945	5050	280	101	15.0C	8.0	154	.80	.56	.20	.03	.00	1.30	.04	.17	.01		--	76	3	
							50	35	13	2		86	3	11	1					
F4	1640.00						TRINITY RIVER AT LEWISTON (4A)													
11/03/69	5050	3.35	10.7	49.0F	7.3		--	--	2.2	--	.0	54	--	2.4	.1	.00	--		43	3
0930	5050	242	99	9.4C	7.8	94			.10		.00	.89		.07	.00		--			
									11			95		7						
01/05/70	5050	2.97	9.6	40.0F	7.1		--	--	2.6	--	.0	55	--	1.5	.5	.10	--		43	7
0930	5050	155	79	4.4C	7.1	97			.11		.00	.90		.04	.01		--			
									11			93		4	1					
03/09/70	5050	2.94	12.1	45.0F	7.1		--	--	2.1	--	.0	47	--	1.7	.2	.10	--		36	12
0955	5050	148	106	7.2C	7.3	80			.09		.00	.77		.05	.00		--			
									11			96		6						
05/11/70	5050	2.99	12.4	47.0F	7.5		4.3	6.7	2.1	.9	.0	46	1.8	1.8	.2	.10	--	44	38	5
0840	5050	160	112	8.3C	8.0	83	.21	.55	.09	.02	.00	.75	.04	.05	.00		--	41	1	
							24	63	10	2		89	5	6						
07/06/70	5050	2.99	11.0	45.0F	7.1		--	--	2.8	--	.0	48	--	.4	.1	.00	--		38	2
0730	5050	155	97	7.2C	7.6	86			.12		.00	.79		.01	.00		--			
									14			92		1						
09/14/70	5050	3.21	10.6	47.0F	7.1		--	--	2.2	--	.0	47	--	1.6	.1	.10	--		37	1
0830	5050	195	96	8.3C	7.9	79			.10		.00	.77		.05	.00		--			
									13			97		6						
F5	1100.00						MAD RIVER AT ARCATA (6A)													
10/07/69	5050	3.23	10.9	58.0F	7.9		--	--	4.7	--	.0	106	--	3.5	--	.10	--		94	1
1050	5050	32	106	14.4C	8.1	196			.20		.00	1.74		.10			--			
									10			89		5						
11/04/69	5050	3.57	11.1	57.0F	7.8		--	--	4.5	--	.0	103	--	3.0	--	.10	--		93	5
1055	5050	53	107	13.9C	8.1	200			.20		.00	1.69		.08			--			
									10			85		4						
12/02/69	5050	4.58	13.1	45.0F	7.6		--	--	3.2	--	.0	78	--	2.6	--	.10	--		71	3
1130	5050	183	108	7.2C	7.6	155			.14		.00	1.28		.07			--			
									9			83		5						
01/06/70	5050	6.16	13.6	40.0F	7.4		--	--	2.9	--	.0	63	--	1.9	--	.00	--		57	33
1100	5050	693	105	4.4C	7.3	128			.13		.00	1.03		.05			--			
									10			80		4						
02/03/70	5050	8.71	12.7	49.0F	7.3		--	--	2.7	--	.0	49	--	2.5	--	.10	--		43	200
1310	5050	2450	111	9.4C	7.2	98			.12		.00	.80		.07			--			
									12			82		7						
03/10/70	5050	8.22	12.8	49.0F	7.4		--	--	3.2	--	.0	49	--	2.2	--	.00	--		43	190
1205	5050	2340	111	9.4C	7.6	98			.14		.00	.80		.06			--			
									14			82		6						
04/07/70	5050	6.04	13.1	52.0F	7.8		--	--	3.5	--	.0	77	--	3.3	--	.00	--		69	12
1125	5050	533	119	11.1C	8.1	156			.15		.00	1.26		.09			--			
									10			81		6						
05/12/70	5050	7.02	12.3	50.0F	7.3		15	2.6	3.8	1.4	.0	52	7.2	4.8	.5	.10	--	80	48	60
0930	5050	1130	109	10.0C	7.6	114	.75	.21	.17	.04	.00	.85	.15	.14	.01		--	61	6	
							64	18	15	3		74	13	12	1					
06/09/70	5050	4.28	10.1	59.0F	7.4		--	--	5.3	--	.0	102	--	2.1	--	.10	--		91	3
0840	5050	78	100	15.0C	7.8	195			.23		.00	1.67		.06			--			
									12			86		3						

TABLE D-2 (CONTINUED)

MINERAL ANALYSIS OF SURFACE WATER

NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.H. Q	DO SAT	TEMP	FIELD PH	LABORATORY EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB
							MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
F5	1100.00						MAD RIVER AT ARCATA (6A)							CONTINUED						
07/07/70	5050	3.78	9.1	64.0F	7.7		--	--	8.7	--	.0	147	--	3.9	--	.10	--		137	1
0800	5050	25	95	17.8C	8.2	299			.38		.00	2.41		.11			--			
									13			81		4						
09/15/70	5050	3.76	10.8	55.0F	7.8		--	--	4.3	--	.0	109	--	2.9	--	.10	--		95	10
1010	5050	26	101	12.8C	8.1	202			.19		.00	1.79		.08			--			
									9			89		4						
F5	5100.00						REDWOOD CREEK AT ORICK (3B)													
10/07/69	5050	4.08	11.1	54.0F	7.3		--	--	5.5	--	.0	72	--	8.3	--	.10	--		69	2
0955	5050	23E	103	12.2C	7.8	162			.24		.00	1.18		.23			--			
									15			73		14						
11/04/69	5050	4.41	11.9	55.0F	7.3		--	--	5.2	--	.0	76	--	6.8	--	.00	--		81	2
1005	5050	58	112	12.8C	8.1	188			.23		.00	1.25		.19			--			
									12			66		10						
12/02/69	5050	4.46	14.0	44.0F	7.6		--	--	4.4	--	.0	72	--	6.3	--	.10	--		74	3
1030	5050	65	114	6.7C	7.6	174			.19		.00	1.18		.18			--			
									11			68		10						
01/06/70	5050	6.42	13.3	40.0F	7.1		--	--	2.9	--	.0	42	--	3.0	--	.00	--		42	35
1010	5050	700	102	4.4C	7.1	102			.13		.00	.69		.08			--			
									13			68		8						
02/03/70	5050	8.47	12.7	48.0F	7.1		--	--	2.6	--	.0	33	--	3.1	--	.10	--		31	210
1210	5050	1860	109	8.9C	7.1	78			.11		.00	.54		.09			--			
									14			69		12						
03/10/70	5050	8.31	12.2	48.0F	7.2		--	--	3.2	--	.0	39	--	3.7	--	.00	--		36	180
1100	5050	1840	105	8.9C	7.4	88			.14		.00	.64		.10			--			
									16			73		11						
04/07/70	5050	6.73	12.5	49.0F	7.3		--	--	3.2	--	.0	48	--	4.6	--	.00	--		48	7
1030	5050	450	109	9.4C	7.8	115			.14		.00	.79		.13			--			
									12			69		11						
05/12/70	5050	9.54	12.5	48.0F	7.3		14	2.2	3.2	1.4	.0	42	9.2	4.9	.6	.10	--	56	44	190
0840	5050	290E	108	8.9C	7.6	103	.70	.18	.14	.04	.00	.69	.19	.14	.01		--	57	10	
							66	17	13	4		67	18	14	1					
06/09/70	5050	5.88	10.3	56.0F	7.3		--	--	4.7	--	.0	65	--	4.0	--	.00	--		63	8
0745	5050	170E	98	13.3C	7.8	138			.20		.00	1.07		.11			--			
									14			78		8						
07/07/70	5050	5.19	9.9	59.0F	7.3		--	--	4.8	--	.0	73	--	4.7	--	.00	--		70	2
0700	5050	95E	98	15.0C	7.7	164			.21		.00	1.20		.13			--			
									13			73		8						
08/11/70	5050	5.19	8.9	59.0F	7.1		--	--	4.9	--	.0	78	--	7.0	--	.00	--		74	1
0705	5050	28	88	15.0C	7.6	171			.21		.00	1.28		.20			--			
									12			75		12						
09/14/70	5050	4.86	10.2	54.0F	7.1		--	--	5.7	--	.0	72	--	7.0	--	.10	--		69	2
0915	5050	19E	95	12.2C	7.8	164			.25		.00	1.18		.20			--			
									15			72		12						
F6	1100.00						EEL RIVER AT SCOTIA (6)													
10/07/69	5050	8.36	13.9	63.0F	8.4		39	13	10	1.5	.0	172	23	7.6	.0	.07	.1		151	1
1340	5000	115	143	17.2C	8.3	322	1.95	1.07	.44	.04	.00	2.82	.48	.21	.00		8.5	189	10	
							56	31	13	1		80	14	6						
11/04/69	5050	8.78	11.4	62.0F	8.2		40	11	8.3	1.3	.0	156	29	8.0	.0	.11	.1		146	1
1335	5000	247	116	16.7C	8.3	314	2.00	.90	.36	.03	.00	2.56	.60	.23	.00		7.3	183	17	
							61	27	11	1		76	18	7						
12/02/69	5050	8.91	12.7	51.0F	8.3		41	12	8.9	1.4	.0	157	29	5.5	.1	.15	.1		152	3
1425	5000	295	113	10.5C	8.1	321	2.05	.99	.39	.04	.00	2.57	.60	.16	.00		8.1	185	24	
							59	29	11	1		77	18	5						
01/06/70	5050		13.2	42.0F	7.4		23	7.2	5.8	1.0	.0	97	15	2.1	.3	.06	.2		87	24
1545	5000	9000E	105	5.6C	7.7	194	1.15	.59	.25	.03	.00	1.59	.31	.06	.00		11.0	114	8	
							57	29	12	1		81	16	3						
02/03/70	5050	14.88	12.4	49.0F	7.5		18	5.1	4.8	.9	.0	76	9.0	1.8	.4	.04	.1		66	100
1550	5000	10500E	108	9.4C	7.8	149	.90	.42	.21	.02	.00	1.25	.19	.05	.01		11.0	89	4	
							58	27	14	1		83	13	3	1					
03/10/70	5050	15.72	12.1	50.0F	7.6		17	5.5	4.7	1.6	.0	71	11	2.4	.5	.04	.0		65	180
1430	5000	15000E	107	10.0C	7.9	138	.85	.45	.20	.04	.00	1.16	.23	.07	.01		10.0	88	7	
							55	29	13	3		79	16	5	1					
04/07/70	5050	11.43	11.4	58.0F	7.9		27	7.8	6.4	1.1	.0	112	17	3.4	.0	.07	.3		100	5
1400	5000	2380E	111	14.4C	8.0	215	1.35	.64	.28	.03	.00	1.84	.35	.10	.00		10.0	129	8	
							59	28	12	1		80	15	4						
05/12/70	5050	10.26	12.0	58.0F	8.1		27	8.1	6.5	1.1	.0	118	19	3.6	.0	.07	.1		101	10
1415	5000	1150E	117	14.4C	8.2	228	1.35	.67	.28	.03	.00	1.94	.40	.10	.00		9.9	134	4	
							58	29	12	1		80	16	4						
06/09/70	5050		11.8	62.6F	8.2		34	10	7.8	1.4	.0	143	22	5.2	.0	.20	.2		126	1
1100	5000	570E	122	17.0C	8.1	272	1.70	.82	.34	.04	.00	2.35	.46	.15	.00		13.0	165	9	
							59	28	12	1		79	16	5						
07/07/70	5050		12.5	71.0F	8.4		36	11	8.8	1.7	.0	152	22	4.6	.0	.19	.2		135	7
1030	5000	275	141	21.6C	8.0	299	1.80	.90	.38	.04	.00	2.49	.46	.13	.00		7.2	167	11	
							58	29	12	1		81	15	4						

TABLE D-2 (CONTINUED)

MINERAL ANALYSIS OF SURFACE WATER

NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.M. Q	DO SAT	TEMP	FIELD PH	LABORATORY EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCM	TURB
							MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER			
F6 1100.00							EEL RIVER AT SCOTIA (6)								CONTINUED					
08/11/70	5050		10.7	73.4F	8.1		41	12	9.8	1.6	.0	170	22	7.0	.0	.00	.1		152	0
1015	5000	100E	121	23.0C	8.1	324	2.05	.99	.43	.04	.00	2.79	.46	.20	.00		7.2	186	13	
							58	28	12	1		81	13	6						
09/15/70	5050		12.1	64.0F	8.2		41	13	9.5	1.7	.0	165	22	7.2	--	.01	.3		156	8
1455	5000	77E	126	17.8C	8.3	325	2.05	1.07	.41	.04	.00	2.71	.46	.20			8.0	185	21	
							57	30	11	1		83	14	6						
F6 1154.50							EEL RIVER AT SOUTH FORK (5)													
10/07/69	5050		10.3	64.0F	7.9		--	--	7.5	--	.0	158	--	7.4	--	.20	--		156	1
1430	5050	31E	108	17.8C	8.2	325			.33		.00	2.59		.21			--			
									10			80		6						
11/04/69	5050		10.4	59.0F	7.7		--	--	8.0	--	.0	146	--	10	--	.30	--		153	2
1430	5050	83E	103	15.0C	8.3	330			.35		.00	2.39		.28			--			
									11			72		8						
12/02/69	5050		12.7	48.0F	7.6		--	--	7.0	--	.0	146	--	8.2	--	.30	--		148	1
1530	5050	80E	110	8.9C	7.9	316			.30		.00	2.39		.23			--			
									9			76		7						
01/07/70	5050		13.3	40.0F	7.3		--	--	4.6	--	.0	93	--	2.5	--	.10	--		85	24
0855	5050	1470E	103	4.4C	7.4	187			.20		.00	1.53		.07			--			
									11			82		4						
02/04/70	5050		12.4	48.0F	7.8		--	--	3.7	--	.0	78	--	1.6	--	.20	--		69	240
0840	5050	7300E	108	8.9C	7.9	149			.16		.00	1.28		.05			--			
									11			86		3						
03/10/70	5050		12.4	49.0F	7.9		--	--	4.0	--	.0	74	--	1.6	--	.00	--		64	250
1520	5050	10200E	109	9.4C	8.0	138			.17		.00	1.21		.05			--			
									12			88		4						
04/08/70	5050		11.5	54.0F	7.8		--	--	5.0	--	.0	110	--	3.5	--	.10	--		99	7
0845	5050	1160E	108	12.2C	8.2	216			.22		.00	1.80		.10			--			
									10			83		5						
05/12/70	5050		11.3	59.0F	8.0		29	8.1	8.1	1.0	.0	113	19	4.4	.1	.20	--	117	106	6
1500	5050	818E	112	15.0C	8.2	226	1.45	.67	.35	.03	.00	1.85	.40	.12	.00		--	126	14	
							58	27	14	1		78	17	5						
06/09/70	5050		9.6	65.0F	8.0		--	--	6.8	--	.0	135	--	3.0	--	.10	--		129	6
1210	5050	230E	102	18.3C	8.3	259			.30		.00	2.21		.08			--			
									12			85		3						
07/07/70	5050		9.5	69.0F	8.2		--	--	9.6	--	.0	119	--	3.2	--	.00	--		106	1
1120	5050	95E	106	20.5C	7.9	225			.42		.00	1.95		.09			--			
									19			87		4						
08/11/70	5050		8.0	74.0F	7.9		--	--	8.0	--	.0	161	--	5.9	--	.20	--		154	1
1200	5050	34E	94	23.3C	7.8	329			.35		.00	2.64		.17			--			
									11			80		5						
09/15/70	5050		10.1	64.0F	8.0		--	--	9.8	--	.0	171	--	7.2	--	.20	--		166	1
1540	5050	21E	106	17.8C	8.2	345			.43		.00	2.80		.20			--			
									12			81		6						
F6 1329.50							EEL RIVER ABOVE OUTLET CREEK (5D)													
10/08/69	5050	1.77	9.7	59.0F	8.0		--	--	8.9	--	.0	124	--	5.7	.1	.40	--		115	1
0850	5050	5.6	99	15.0C	8.2	267			.39		.00	2.03		.16	.00		--			
									15			76		6						
11/05/69	5050	2.94	10.2	56.0F	8.1		--	--	9.9	--	.0	122	--	9.4	.2	.50	--		122	10
0810	5050	83	100	13.3C	8.1	278			.43		.00	2.00		.27	.00		--			
									15			72		10						
12/03/69	5050	1.97	12.4	41.0F	8.1		--	--	8.9	--	.0	132	--	9.4	.1	.70	--		127	1
0950	5050	80E	100	5.0C	8.2	288			.39		.00	2.16		.27	.00		--			
									14			75		9						
01/07/70	5050	2.86	13.4	38.0F	7.4		--	--	4.6	--	.0	79	--	2.1	--	.20	--		72	91
1150	5050	273	103	3.3C	7.4	160			.20		.00	1.30		.06			--			
									13			81		4						
02/04/70	5050	5.70	12.3	48.0F	7.5		--	--	3.8	--	.0	65	--	1.8	.2	.10	--		54	150
1130	5050	1900	109	8.9C	7.5	120			.17		.00	1.07		.05	.00		--			
									14			89		4						
03/11/70	5050		12.1	49.0F	7.5		--	--	4.2	--	.0	66	--	1.8	.3	.10	--		55	90
0850	5050	1600	107	9.9C	7.8	124			.18		.00	1.08		.05	.00		--			
									15			87		4						
04/08/70	5050		10.8	60.0F	8.0		--	--	5.6	--	.0	101	--	2.3	.0	.20	--		102	3
1505	5050	122	111	15.5C	8.2	202			.24		.00	1.66		.06	.00		--			
									12			82		3						
05/13/70	5050		11.3	56.0F	8.1		27	8.4	9.2	1.1	.0	115	18	5.4	.1	.30	--	127	102	2
0800	5050	58	111	13.3C	8.3	228	1.35	.69	.40	.03	.00	1.89	.37	.15	.00		--	127	8	
							55	28	16	1		78	15	6						
06/10/70	5050		9.7	64.0F	8.4		--	--	8.5	--	.0	116	--	3.1	.1	.30	--		101	2
0800	5050	29	104	17.8C	8.3	231			.37		.00	1.90		.09	.00		--			
									16			82		4						
07/08/70	5050		7.6	74.0F	8.4		--	--	10	--	.0	107	--	3.9	.1	.40	--		98	1
0730	5050	10	91	23.3C	8.1	237			.44		.00	1.75		.11	.00		--			
									19			74		5						

TABLE D-2 (CONTINUED)

MINERAL ANALYSIS OF SURFACE WATER

NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.H. Q	DO SAT	TEMP	FIELD PH	LABORATORY EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB
							MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER			
F6	1329.50						EEL RIVER ABOVE OUTLET CREEK (5D)							CONTINUED						
08/12/70	5050		6.6	73.0F	7.9		--	--	11	--	.0	105	--	8.6	.1	.60	--		102	1
0730	5050	4.0	78	22.8C	7.9	248			.48		.00	1.72		.24	.00		--			
									19			69		10						
09/16/70	5050	1.74	9.6	61.0F	8.1		--	--	12	--	.0	118	--	8.6	.1	.60	--		115	1
0840	5050	2.8	100	16.1C	8.3	274			.52		.00	1.94		.24	.00		--			
									19			71		9						
F6	1350.00						OUTLET CREEK NEAR LONGVALE (5B)													
10/08/69	5050	1.18	10.0	59.0F	8.1		--	--	16	--	.0	145	--	32	--	2.60	--		135	1
0825	5050	1.9	102	15.0C	8.2	336			.70		.00	2.38		.90			--			
									21			71		27						
11/05/69	5050	2.64	10.3	55.0F	7.9		--	--	16	--	.0	138	--	25	--	2.50	--		126	5
0745	5050	192	100	12.8C	8.0	323			.70		.00	2.26		.71			--			
									22			70		22						
12/03/69	5050	1.37	12.7	40.0F	8.0		--	--	16	--	.0	151	--	20	--	1.90	--		134	1
0930	5050	6.1	101	4.4C	8.0	326			.70		.00	2.48		.56			--			
									21			76		17						
01/07/70	5050	2.30	13.1	39.0F	7.3		--	--	6.3	--	.0	72	--	5.9	--	.40	--		57	7
1130	5050	110	103	3.9C	7.4	151			.27		.00	1.18		.17			--			
									18			78		11						
02/04/70	5050	3.14	12.1	49.0F	7.3		--	--	4.6	--	.0	57	--	3.7	--	.30	--		46	20
1110	5050	371	109	9.4C	7.3	114			.20		.00	.93		.10			--			
									18			82		9						
03/11/70	5050	3.64	11.6	49.0F	7.3		--	--	4.4	--	.0	53	--	3.2	--	.10	--		43	25
0825	5050	590	104	9.4C	7.6	105			.19		.00	.87		.09			--			
									18			83		9						
04/08/70	5050	1.88	10.9	60.0F	7.8		--	--	7.2	--	.0	94	--	6.4	--	.40	--		81	2
1535	5050	53	112	15.5C	8.1	183			.31		.00	1.54		.18			--			
									17			84		10						
05/13/70	5050	0.76	10.9	55.0F	7.9		22	9.7	10	1.2	.0	112	7.7	9.9	.1	.80	--	119	95	2
0740	5050	38	107	12.8C	8.1	217	1.10	.80	.44	.03	.00	1.84	.16	.28	.00		--	117	3	
							46	34	19	1		81	7	12						
06/10/70	5050	0.43	9.2	64.0F	8.2		--	--	12	--	.0	129	--	11	--	1.10	--		106	3
0720	5050	10	99	17.8C	8.3	251			.52		.00	2.12		.31			--			
									21			84		12						
07/08/70	5050		7.5	74.0F	8.3		--	--	14	--	.0	138	--	15	--	1.60	--		111	1
0700	5050	3.5	90	23.3C	8.0	281			.61		.00	2.26		.42			--			
									22			80		15						
09/16/70	5050	1.14	8.7	58.0F	8.0		--	--	17	--	.0	142	--	31	--	2.70	--		129	1
0825	5050	1.9	87	14.4C	8.0	327			.74		.00	2.33		.87			--			
									23			71		27						
F6	3010.00						EEL RIVER,MIDDLE FORK,AT DOS RIOS (5C)													
10/08/69	5050	7.22	10.6	59.0F	8.1		--	--	8.7	--	.0	113	--	16	.1	.30	--		147	0
0930	5050	14	108	15.0C	8.2	340			.38		.00	1.85		.45	.00		--			
									11			54		13						
11/05/69	5050	8.63	10.5	55.0F	8.1		--	--	10	--	.0	130	--	13	.2	.10	--		151	105
0850	5050	257	102	12.8C	8.1	334			.44		.00	2.13		.37	.00		--			
									13			64		11						
12/03/69	5050	7.43	13.3	42.0F	8.3		--	--	7.4	--	.0	134	--	12	.1	.30	--		144	2
1045	5050	49	109	5.6C	8.3	313			.32		.00	2.20		.34	.00		--			
									10			70		11						
01/07/70	5050	9.37	13.8	38.0F	7.4		--	--	3.5	--	.0	87	--	2.5	--	.10	--		80	17
1225	5050	615	106	3.3C	7.6	176			.15		.00	1.43		.07			--			
									9			81		4						
02/04/70	5050	11.65	12.9	46.0F	7.8		--	--	3.8	--	.0	81	--	1.7	.2	.10	--		74	230
1210	5050	2330	111	7.8C	7.8	159			.17		.00	1.33		.05	.00		--			
									11			84		3						
03/11/70	5050	11.72	13.0	45.0F	7.7		--	--	3.8	--	.0	76	--	1.4	.4	.10	--		68	180
0940	5050	2700	111	7.2C	7.9	147			.17		.00	1.25		.04	.01		--			
									12			85		3	1					
04/08/70	5050	9.65	11.3	55.0F	7.9		--	--	4.1	--	.0	101	--	2.1	.0	.00	--		102	20
1435	5050	590	110	12.8C	8.2	205			.18		.00	1.66		.06	.00		--			
									9			81		3						
05/13/70	5050	8.76	11.3	54.0F	8.0		25	6.0	5.3	.8	.0	95	17	2.5	.1	.00	--	104	87	20
0900	5050	270E	108	12.2C	8.0	193	1.25	.49	.23	.02	.00	1.56	.35	.07	.00		--	104	9	
							63	25	12	1		79	18	4						
06/10/70	5050	6.31	10.1	63.0F	8.2		--	--	6.4	--	.0	119	--	4.0	.1	.10	--		120	4
0820	5050	130E	107	17.2C	8.3	251			.28		.00	1.95		.11	.00		--			
									11			78		4						
07/08/70	5050		8.7	74.0F	8.1		--	--	10	--	.0	135	--	7.0	.1	.10	--		145	1
0800	5050	45	104	23.3C	8.3	319			.44		.00	2.21		.20	.00		--			
									14			69		5						
08/12/70	5050	8.11	9.4	72.0F	8.0		--	--	11	--	.0	116	--	10	.0	.20	--		152	1
0800	5050	15	110	22.2C	8.2	341			.48		.00	1.90		.45	.00		--			
									14			56		13						

TABLE D-2 (CONTINUED)

MINERAL ANALYSIS OF SURFACE WATER

NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.H. Q	DO SAT	TEMP	FIELD LABORATORY PH	EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB
							MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER				
F6	3010.00						EEL RIVER,MIDDLE FORK,AT DOS RIOS (5C) CONTINUED													
09/16/70	5050	8.04	9.9	64.0F	8.0		--	--	12	--	.0	106	--	20	.1	.30	--		160	1
0925	5050	7.1	106	17.8C	8.1	370			.52		.00	1.74		.56	.00		--			
									14			47		15						
F6	3050.00						MILL CREEK NEAR COVELO (5E)													
01/07/70	5050	8.42	12.6	39.0F	7.7		--	--	5.8	--	.0	114	--	3.9	--	.00	--		102	4
1250	5050	28	100	3.9C	7.6	222			.25		.00	1.87		.11			--			
									11			84		5						
02/04/70	5050	9.14	11.7	49.0F	7.5		--	--	5.8	--	.0	108	--	3.6	.9	.10	--		89	25
1300	5050	218	106	9.4C	7.6	188			.25		.00	1.77		.10	.01		--			
									13			94		5	1					
03/11/70	5050	9.41	11.3	48.0F	7.4		--	--	6.0	--	.0	112	--	3.0	.4	.00	--		88	35
1030	5050	264	101	8.9C	7.8	187			.26		.00	1.84		.08	.01		--			
									14			98		4	1					
04/08/70	5050	8.29	10.8	61.0F	7.9		--	--	7.2	--	.0	170	--	2.0	.1	.00	--		142	2
1340	5050	29	114	16.1C	8.2	289			.31		.00	2.79		.06	.00		--			
									11			97		2						
05/13/70	5050	8.12	11.2	59.0F	8.0		33	19	10	1.1	.0	202	10	4.5	.2	.00	--	160	159	8
1000	5050	13	115	15.0C	8.2	333	1.65	1.56	.44	.03	.00	3.31	.21	.13	.00		--	179	5	
							45	42	12	1		91	6	4						
06/10/70	5050	7.85	8.2	67.0F	7.6		--	--	12	--	.0	221	--	3.1	.1	.00	--		175	4
0915	5050	4.0	92	19.4C	8.1	362			.52		.00	3.62		.09	.00		--			
									14			100		2						
F6	3120.00						EEL RIVER,MIDDLE FORK,ABOVE BLACK BUTTE RIVER (5G)													
10/08/69	5050		10.8	62.0F	8.3		--	--	17	--	.0	119	--	34	.1	.40	--		142	1
1035	5050	9.8	116	16.7C	8.3	376			.74		.00	1.95		.96	.00		--			
									20			52		26						
11/05/69	5050		11.4	50.0F	7.5		--	--	3.6	--	.0	54	--	5.6	.3	.00	--		55	50
1025	5050	770	106	10.0C	7.6	131			.16		.00	.89		.16	.00		--			
									12			68		12						
12/03/69	5050		12.7	47.0F	8.4		--	--	9.2	--	.0	100	--	18	.1	.30	--		105	2
1215	5050	24	113	8.3C	8.2	258			.40		.00	1.64		.51	.00		--			
									16			64		20						
01/07/70	5050		13.1	39.0F	7.6		--	--	3.0	--	.0	62	--	2.7	--	.00	--		57	4
1405	5050	200E	105	3.9C	7.6	129			.13		.00	1.02		.08			--			
									10			79		6						
02/04/70	5050		12.7	46.0F	7.5		--	--	2.6	--	.0	52	--	1.8	.1	.00	--		47	65
1405	5050	830	112	7.8C	7.6	104			.11		.00	.85		.05	.00		--			
									11			82		5						
03/11/70	5050		12.8	44.0F	7.3		--	--	2.3	--	.0	49	--	1.4	.1	.00	--		43	80
1135	5050	940	110	6.7C	7.8	94			.10		.00	.80		.04	.00		--			
									11			85		4						
04/08/70	5050		11.9	51.0F	7.5		--	--	3.1	--	.0	61	--	1.0	.0	.00	--		60	3
1235	5050		112	10.5C	8.0	128			.13		.00	1.00		.03	.00		--			
									10			78		2						
05/13/70	5050		11.8	53.0F	7.6		16	2.4	3.0	.3	.0	56	6.4	3.0	.1	.00	--	66	50	5
1100	5050	130E	114	11.7C	7.8	116	.80	.20	.13	.01	.00	.92	.13	.08	.00		--	59	4	
							70	18	11	1		81	12	7						
06/10/70	5050		9.6	64.0F	7.9		--	--	5.7	--	.0	79	--	5.5	.0	.10	--		74	2
1005	5050	60E	105	17.8C	8.3	173			.25		.00	1.30		.16	.00		--			
									14			75		9						
07/08/70	5050		8.6	72.0F	8.4		--	--	11	--	1.0	103	--	15	.1	.10	--		110	0
0925	5050	26E	105	22.2C	8.4	267			.48		.03	1.69		.42	.00		--			
									18		1	63		16						
08/12/70	5050		9.0	72.0F	8.4		--	--	15	--	.0	118	--	32	.0	.40	--		139	1
0900	5050	8E	105	22.2C	7.8	356			.65		.00	1.94		.90	.00		--			
									18			54		25						
09/16/70	5050		9.9	64.4F	8.2		49	9.2	20	1.4	.0	119	48	42	.0	.40	--	246	160	2
1010	5050	4.5	105	18.0C	8.3	409	2.45	.76	.87	.04	.00	1.95	1.00	1.18	.00		--	230	63	
							59	18	21	1		47	24	29						
F6	3200.00						BLACK BUTTE RIVER NEAR COVELO (5H)													
10/08/69	5050	11.78	10.1	62.0F	8.2		--	--	5.0	--	.0	127	--	2.3	.0	.10	--		155	1
1050	5050	5E	108	16.7C	8.3	329			.22		.00	2.08		.06	.00		--			
									7			63		2						
11/05/69	5050	13.87	10.7	53.0F	7.9		--	--	6.7	--	.0	118	--	4.1	.5	.00	--		150	140
1050	5050	159	103	11.7C	7.9	324			.29		.00	1.94		.12	.01		--			
									9			60		4						
12/03/69	5050	12.83	12.2	46.0F	8.2		--	--	5.0	--	.0	129	--	3.9	.1	.20	--		155	1
1240	5050	9.2	108	7.8C	8.2	318			.22		.00	2.12		.11	.00		--			
									7			67		3						
01/07/70	5050	13.83	13.1	38.0F	7.3		--	--	3.4	--	.0	91	--	.8	--	.10	--		84	6
1410	5050	350E	103	3.3C	7.5	182			.15		.00	1.49		.02			--			
									8			82		1						
02/04/70	5050	16.65	12.2	46.0F	7.8		--	--	3.2	--	.0	72	--	.8	.2	.10	--		71	360
1440	5050	675	108	7.8C	7.8	147			.14		.00	1.18		.02	.00		--			
									10			80		1						

TABLE D-2 (CONTINUED)

MINERAL ANALYSIS OF SURFACE WATER

NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.H. Q	DO SAT	TEMP	FIELD LABORATORY PH	EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB
							MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER				
F6	3200.00						BLACK BUTTE RIVER NEAR COVELO (5H) CONTINUED													
03/11/70	5050	16.55	12.4	45.0F	7.7		--	--	3.4	--	.0	71	--	.5	.1	.10	--		67	210
1155	5050	480	108	7.2C	7.9	145			.15		.00	1.16		.01	.00		--			
									10			80		1						
04/08/70	5050	15.92	11.2	53.0F	7.8		--	--	4.1	--	.0	92	--	.0	.1	.00	--		96	15
1210	5050	140E	108	11.7C	8.1	201			.18		.00	1.51		.00	.00		--			
									9			75								
05/13/70	5050	15.68	11.1	55.0F	7.9		30	4.1	4.5	.8	.0	91	23	1.0	.1	.00	--	120	92	25
1045	5050	120	110	12.8C	8.1	205	1.50	.34	.20	.02	.00	1.49	.48	.03	.00		--	109	18	
							73	17	10	1		75	24	2						
06/10/70	5050	15.20	9.4	66.0F	8.0		--	--	5.5	--	.0	119	--	1.0	.1	.10	--		117	1
1025	5050	38	106	18.9C	8.3	267			.24		.00	1.95		.03	.00		--			
									9			73		1						
07/08/70	5050	14.78	9.7	75.0F	8.2		--	--	7.5	--	3.0	126	--	1.0	.1	.00	--		153	0
0940	5050	12	119	23.9C	8.5	322			.33		.10	2.07		.03	.00		--			
									10		3	64		1						
08/12/70	5050	15.08	9.3	73.0F	8.2		--	--	7.0	--	.0	129	--	3.2	.0	.20	--		172	1
0915	5050	4.5	112	22.8C	7.9	362			.30		.00	2.12		.09	.00		--			
									8			59		2						
09/16/70	5050	14.58	10.1	66.0F	8.2		--	--	7.4	--	.0	126	--	10	.1	.10	--		192	0
1030	5050	2E	113	18.9C	8.1	388			.32		.00	2.07		.28	.00		--			
									8			53		7						
F6	4100.00						EEL RIVER,SOUTH FORK,NEAR MIRANDA (7)													
10/07/69	5050	1.62	12.4	61.0F	8.3		--	--	8.5	--	.0	152	--	7.4	.1	.10	--		128	1
1510	5050	39E	126	16.1C	8.2	288			.37		.00	2.49		.21	.00		--			
									13			86		7						
11/04/69	5050	3.58	10.9	58.0F	8.0		--	--	8.5	--	.0	140	--	8.1	.0	.10	--		124	2
1510	5050	111	107	14.4C	8.2	276			.37		.00	2.30		.23	.00		--			
									13			83		8						
12/02/69	5050	3.61	12.6	47.0F	7.8		--	--	7.5	--	.0	131	--	7.8	.1	.20	--		118	2
1615	5050	95E	108	8.3C	8.2	255			.33		.00	2.15		.22	.00		--			
									13			84		9						
01/07/70	5050	5.51	12.5	43.0F	7.3		--	--	5.5	--	.0	82	--	3.2	--	.10	--		72	32
0930	5050	908	101	6.1C	7.3	166			.24		.00	1.34		.09			--			
									14			81		5						
02/04/70	5050	7.30	12.0	49.0F	7.4		--	--	5.2	--	.0	65	--	3.3	.3	.00	--		54	150
0920	5050	2240	106	9.4C	7.5	126			.23		.00	1.07		.09	.00		--			
									18			85		7						
03/10/70	5050	7.51	11.8	51.0F	7.4		--	--	5.1	--	.0	61	--	3.4	.3	.00	--		50	180
1600	5050	3550	107	10.5C	7.8	118			.22		.00	1.00		.10	.00		--			
									19			85		8						
04/08/70	5050	4.94	11.7	51.0F	7.7		--	--	5.8	--	.0	90	--	3.0	.0	.00	--		80	3
0925	5050	492	106	10.5C	8.0	174			.25		.00	1.48		.08	.00		--			
									14			85		5						
05/12/70	5050	4.53	12.0	59.0F	8.2		22	7.5	10	1.0	.0	102	11	5.7	.1	.10	--	115	86	3
1600	5050	322	119	15.0C	8.3	198	1.10	.62	.44	.03	.00	1.67	.23	.16	.00		--	108	3	
							50	28	20	1		81	11	8						
06/09/70	5050	3.85	11.2	66.0F	8.2		--	--	8.5	--	.0	125	--	4.0	.1	.10	--		105	2
1245	5050	140	121	18.9C	8.3	230			.37		.00	2.05		.11	.00		--			
									16			89		5						
07/07/70	5050	3.54	11.4	75.0F	8.4		--	--	9.8	--	.0	132	--	5.4	.1	.10	--		109	1
1200	5050	87	135	23.9C	8.1	255			.43		.00	2.16		.15	.00		--			
									17			85		6						
08/11/70	5050	3.21	12.3	79.0F	8.4		--	--	8.9	--	.0	111	--	7.9	.4	.20	--		95	1
1230	5050	45	152	26.1C	8.1	226			.39		.00	1.82		.22	.01		--			
									17			81		10						
09/15/70	5050	3.09	11.0	65.0F	8.4		--	--	11	--	.0	144	--	9.8	.1	.20	--		126	1
1610	5050	29	124	18.3C	8.3	275			.48		.00	2.36		.28	.00		--			
									17			86		10						
F6	5300.00						VAN DUZEN RIVER NEAR BRIDGEVILLE (5A)													
10/07/69	5050	4.47	11.5	61.0F	8.3		--	--	8.0	--	.0	150	--	5.9	--	.10	--		144	1
1245	5050	12	117	16.1C	8.3	305			.35		.00	2.46		.17			--			
									11			81		6						
11/04/69	5050	4.62	11.2	58.0F	8.1		--	--	6.6	--	.0	130	--	4.4	--	.10	--		125	1
1240	5050	33	110	14.4C	8.3	269			.29		.00	2.13		.12			--			
									11			79		4						
12/02/69	5050	4.62	12.7	48.0F	7.8		--	--	5.2	--	.0	123	--	4.5	--	.20	--		118	1
1330	5050	31	110	8.9C	8.0	252			.23		.00	2.02		.13			--			
									9			80		5						
01/06/70	5050	5.43	13.3	43.0F	7.4		--	--	3.1	--	.0	76	--	1.4	--	.00	--		69	30
1500	5050	33	103	4.4C	7.4	152			.13		.00	1.25		.04			--			
									9			82		3						
02/03/70	5050	6.50	12.5	48.0F	7.3		--	--	3.0	--	.0	62	--	1.0	--	.20	--		54	200
1445	5050	1180	109	8.9C	7.5	120			.13		.00	1.02		.03			--			
									11			85		2						

TABLE D-2 (CONTINUED)

MINERAL ANALYSIS OF SURFACE WATER

NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.H. Q	DO SAT	TEMP	FIELD LABORATORY PH	EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F SIO2	TDS SUM	TH NCH	TURB
							MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENTS PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
F6	5300.00						VAN DUZEN RIVER NEAR BRIDGEVILLE (5A) CONTINUED													
03/10/70	5050	6.85	12.5	47.0F	7.4		--	--	3.4	--	.0	62	--	1.7	--	.00	--		53	160
1335	5050	1400	107	8.3C	7.8	117			.15		.00	1.02		.05			--			
									13			87		4						
04/07/70	5050	5.38	11.6	55.0F	7.8		--	--	3.8	--	.0	89	--	2.5	--	.10	--		80	2
1310	5050	162	111	12.8C	8.1	175			.17		.00	1.46		.07			--			
									10			83		4						
05/12/70	5050	5.83	11.8	54.0F	7.8		20	5.8	5.5	.9	.0	79	14	2.2	.2	.10	--	92	74	35
1320	5050	418	111	12.2C	8.1	160	1.00	.48	.24	.02	.00	1.30	.29	.06	.00		--	88	9	
							57	28	14	1		79	18	4						
06/09/70	5050	4.91	10.5	63.0F	8.1		--	--	6.0	--	.0	115	--	1.5	--	.00	--		108	4
1000	5050	63	109	17.2C	8.2	223			.26		.00	1.89		.04			--			
									12			85		2						
07/07/70	5050	4.66	9.8	69.0F	8.2		--	--	7.8	--	.0	140	--	2.5	--	.00	--		126	0
0930	5050	27	109	20.5C	8.2	272			.34		.00	2.30		.07			--			
									12			85		3						
08/11/70	5050	4.42	9.0	69.0F	7.9		--	--	8.0	--	.0	151	--	4.9	--	.10	--		144	1
0930	5050	9.8	100	20.5C	8.2	301			.35		.00	2.48		.14			--			
									12			82		5						
09/15/70	5050	4.38	10.3	64.4F	8.2		44	8.3	8.9	1.6	.0	151	34	5.2	.1	.00	--	169	144	2
1410	5050	8.3	110	18.0C	8.3	314	2.20	.68	.39	.04	.00	2.48	.71	.15	.00		--	178	20	
							66	21	12	1		74	21	4						
F7	1100.00						MATTOLE RIVER NEAR PETROLIA (7A)													
01/06/70	5050	4.44	12.9	42.0F	7.3		--	--	5.1	--	.0	64	--	3.4	--	.10	--		59	47
1320	5050		102	5.6C	7.3	146			.22		.00	1.05		.10			--			
									15			72		7						
05/12/70	5050	2.91	11.6	58.0F	8.1		26	4.6	7.9	1.0	.0	87	20	5.7	.1	.10	--	120	84	3
1135	5050	194	113	14.4C	8.1	198	1.30	.38	.34	.03	.00	1.43	.42	.16	.00		--	109	13	
							63	19	17	1		71	21	8						
09/15/70	5050	1.82	10.6	62.6F	8.0		40	5.6	8.9	1.3	.0	125	33	5.2	.4	.00	--	150	123	3
1210	5050	25E	110	17.0C	8.1	278	2.00	.46	.39	.03	.00	2.05	.69	.15	.01		--	157	21	
							69	16	14	1		71	24	5						
F7	5100.00						BEAR RIVER NEAR CAPETOWN (7B)													
01/06/70	5050		12.7	43.0F	7.3		--	--	9.0	--	.0	84	--	11	--	.10	--		91	33
1235	5050	150E	102	6.1C	7.3	231			.39		.00	1.38		.31			--			
									17			60		13						
05/12/70	5050		11.4	56.0F	7.8		32	4.9	7.8	1.1	.0	89	34	7.8	.2	.20	--	163	100	20
1100	5050	40E	108	13.3C	8.0	237	1.60	.40	.34	.03	.00	1.46	.71	.22	.00		--	133	27	
							68	17	14	1		61	30	9						
09/15/70	5050		10.5	66.2F	8.2		51	5.8	11	1.6	.0	148	45	7.5	.1	.10	--	196	151	2
1135	5050	7E	114	19.0C	8.3	343	2.54	.48	.48	.04	.00	2.43	.94	.21	.00		--	196	30	
							72	14	14	1		68	26	6						

TRACE ELEMENT ANALYSES OF SURFACE WATER

North Coastal Area

STATION	STATION NUMBER	DATE	CONSTITUENTS IN MICROGRAMS PER LITER																
			(Al)	(Be)	(Bi)	(Cd)	(Co)	(Cr)	(Cu)	(Fe)	(Ga)	(Ge)	(Mn)	(Mo)	(Ni)	(Pb)	(Ti)	(V)	(Zn)
Eel River above Outlet Creek (5d)	F61329.50	5-13-70	<1.4	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	17	<5.7	<0.3	<1.4	<0.3	<0.3	<1.4	<0.6	0.5	<5.7
Eel River, Middle Fork, at Dos Rios (5c)	F63010.00	5-13-70	<1.4	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	15	<5.7	<0.3	<1.4	<0.3	<1.3	<1.4	<0.6	0.6	<5.7
Eel River at Scotia (6)	F61100.00	5-12-70	<1.4	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	6.3	<5.3	<0.3	<1.4	<0.3	<0.3	<1.4	<0.6	0.6	<5.7
Klamath River below Iron Gate Dam (1f)	F31600.00	5-12-70	<1.4	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	29	<5.7	<0.3	<1.4	<0.3	<0.3	<1.4	<0.6	7.7	<5.7
		8- 3-70	6.9	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	5.1	<5.7	<0.3	<1.4	2.1	1.0	<1.4	<0.6	1.9	<5.7
Klamath River near Klamath (3)	F31100.00	5-11-70	<1.4	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	54	<5.7	<0.3	<1.4	<0.3	<0.3	<1.4	<0.6	1.0	<5.7
		9-14-70	<1.4	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	8.6	<5.7	<0.3	<1.4	<0.3	0.7	<1.4	<0.6	1.1	<5.7
Klamath River at Orleans (2c)	F31220.01	5-11-70	<1.4	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	7.4	<5.7	<0.3	<1.4	<0.3	5.1	<1.4	<0.6	1.4	<5.7
		9-14-70	<1.4	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	2.3	<5.7	<0.3	<1.4	<0.3	0.8	<1.4	<0.6	0.3	<5.7
Klamath River near Seiad Valley (2b)	F31430.00	5-12-70	<1.4	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	51	<5.7	<0.3	<1.4	<0.3	<0.3	<1.4	<0.6	2.9	<5.7
		8-31-70	14	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	46	<5.7	<0.3	<1.4	<0.3	2.1	<1.4	<0.6	1.1	12
Mad River near Arcata (6a)	F51100.00	5-12-70	60	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	83	<5.7	<0.3	<1.4	<0.3	6.0	<1.4	<0.6	0.7	<5.7
Trinity River near Hoopa (4)	F41090.00	5-11-70	<1.4	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	114	<5.7	<0.3	<1.4	<0.3	<0.3	<1.4	<0.6	0.7	<5.7
		9-14-70	2.3	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	4.0	<5.7	<0.3	<1.4	<0.3	1.4	<1.4	<0.6	0.6	<5.7

< Results are less than the amount indicated.

CONSTITUENTS

Al - Aluminum
Be - Beryllium
Bi - Bismuth
Cr - Chromium
Cu - Copper
Fe - Iron
Ge - Germanium
Mn - Manganese
Mo - Molybdenum
Pb - Lead
Ti - Titanium
V - Vanadium

TABLE D-4

MISCELLANEOUS CONSTITUENTS IN SURFACE WATER

NORTH COASTAL AREA

Station Number	Station	Date Time	Constituents * in mg/l			Samp	Lab
			Fe	Li	Sr		
F31100.00	KLAMATH RIVER NEAR KLAMATH (3)	10-07-69	0.03	< 0.01	0.15	5050	5000
		11-04-69	0.05	< 0.01	0.13	5050	5000
		12-01-69	0.01	< 0.02	0.12	5050	5000
		1-05-70	0.04	< 0.02	0.09	5050	5000
		2-03-70	0.02	< 0.01	0.09	5050	5000
		3-10-70	0.05	< 0.01	0.09	5050	5000
		4-07-70	0.08	< 0.01	0.08	5050	5000
		5-11-70	0.02	< 0.01	0.06	5050	5000
		6-08-70	0.01	< 0.01	0.09	5050	5000
		7-06-70	0.00	< 0.01	0.06	5050	5000
		8-10-70	0.00	< 0.01	0.16	5050	5000
		9-14-70	0.00	< 0.01	0.14	5050	5000
F61100.00	EEL RIVER AT SCOTIA (6)	10-07-69	0.01	< 0.01	0.63	5050	5000
		11-04-69	0.02	< 0.01	0.45	5050	5000
		12-02-69	0.00	< 0.02	0.45	5050	5000
		1-06-70	0.03	< 0.02	0.25	5050	5000
		2-03-70	0.01	< 0.01	0.23	5050	5000
		3-10-70	0.05	< 0.01	0.20	5050	5000
		4-07-70	0.04	< 0.01	0.32	5050	5000
		5-12-70	0.01	< 0.01	0.21	5050	5000
		6-09-70	0.01	< 0.01	0.43	5050	5000
		7-07-70	0.00	< 0.01	0.35	5050	5000
		8-11-70	0.00	< 0.01	0.53	5050	5000
		9-15-70	0.00	< 0.01	0.46	5050	5000

* Fe - Iron Li - Lithium Sr - Strontium

< The results are less than the amount indicated

TABLE D-5

NUTRIENTS IN SURFACE WATER

Abbreviations and Chemical Codes

NITROGEN SERIES

NO_3 - Nitrate

NO_2 - Nitrite

ORG - Organic Nitrogen

NH_4 - Ammonium

TOTAL - Total Nitrogen

N - Nitrogen

PHOSPHATE SERIES

ORTHO - Ortho Phosphate (Not filtered)

HYDRO - Hydrolizable Phosphates (Not filtered)

TOTAL - Total and Organic Phosphates (Not filtered)

MISCELLANEOUS NUTRIENTS

CODE - KN Kjeldahl Nitrogen

RP Reactive Phosphate (Not filtered)

UR - M Milligrams per liter

MY Less than value indicated in milligrams per liter

SAMP - Codes for agency collecting sample

5050 - Department of Water Resources

LAB - Codes for laboratory performing analysis

5050 - Department of Water Resources laboratory at Bryte

TABLE D-5

NUTRIENTS IN SURFACE WATER

NORTH COASTAL AREA

Date Time	Nutrients (Mg/L)								Miscellaneous Nutrients			Somp	Lob
	Nitrogen Series as N					Phosphate Series as P							
	NO_3	NO_2	Org	NH_4	Total	Ortho	Hydro	Total	Code	Value	UR		
	F31470.00 KLAMATH RIVER ABOVE HAMBURG RESERVOIR SITE (1c)												
11-17-69						0.13						5050	5050
1-12-70						0.10						5050	5050
3-09-70						0.02						5050	5050
5-12-70	0.35					0.04						5050	5050
7-13-70						0.10						5050	5050
8-03-70						0.10						5050	5050
8-31-70						0.15						5050	5050
	F31600.00 KLAMATH RIVER BELOW IRON GATE DAM (1f)												
10-15-69						0.21						5050	5050
11-17-69						0.12						5050	5050
12-08-69						0.12						5050	5050
1-12-70						0.09						5050	5050
2-09-70						0.08						5050	5050
3-09-70						0.02						5050	5050
4-14-70						0.07						5050	5050
5-12-70	0.44					0.04						5050	5050
6-16-70	0.07					0.12						5050	5050
7-13-70						0.12						5050	5050
8-03-70						0.12						5050	5050
8-31-70						0.15						5050	5050
	F31430.00 KLAMATH RIVER NEAR SEIAD VALLEY (2b)												
10-14-69						0.19						5050	5050
11-17-69						0.11						5050	5050
12-08-69						0.12						5050	5050
1-12-70						0.09						5050	5050
2-09-70						0.07						5050	5050
3-09-70						0.03						5050	5050
4-14-70						0.03						5050	5050
5-12-70	0.32					0.01						5050	5050
6-16-70	0.04					0.06						5050	5050
7-13-70						0.06						5050	5050
8-03-70	0.25					0.06						5050	5050
8-31-70						0.12						5050	5050
	F31100.00 KLAMATH RIVER NEAR KLAMATH (3)												
10-07-69						0.49 *						5050	5000
11-04-69						0.40 *						5050	5000
12-01-69						0.24 *						5050	5000
1-05-70						0.28 *						5050	5000
2-03-70						0.04 *						5050	5000
3-10-70						0.62 *						5050	5000
4-07-70						0.41 *						5050	5000
5-11-70						0.04 *						5050	5000
6-08-70						0.14 *						5050	5000
7-06-70						0.09 *						5050	5000
8-10-70						0.28 *						5050	5000
9-14-70						0.26 *						5050	5000

* Reported as (PO_4) Ortho Phosphate

TABLE D-5 (CONT)

NUTRIENTS IN SURFACE WATER

NORTH COASTAL AREA

Date Time	Nutrients (Mg/L)								Miscellaneous Nutrients			Samp	Lab
	Nitrogen Series as N					Phosphate Series as P							
	NO_3	NO_2	Org	NH_4	Total	Ortho	Hydro	Total	Code	Value	UR		
	F41090.00 TRINITY RIVER AT HOOPA (4)												
10-06-69						0.01						5050	5050
11-03-69						0.01						5050	5050
12-01-69						0.00						5050	5050
1-05-70						0.00						5050	5050
2-02-70						0.01						5050	5050
3-09-70						0.00						5050	5050
4-06-70						0.02						5050	5050
5-11-70						0.00						5050	5050
6-08-70						0.00						5050	5050
7-06-70						0.01						5050	5050
8-10-70						0.01						5050	5050
9-14-70						0.00						5050	5050
	F41640.00 TRINITY RIVER AT LEWISTON (4a)												
11-03-69						0.00						5050	5050
1-05-70						0.00						5050	5050
3-09-70						0.00						5050	5050
5-11-70						0.00						5050	5050
7-06-70						0.00						5050	5050
9-14-70						0.00						5050	5050
	F41376.00 TRINITY RIVER NEAR BURNT RANCH (4b)												
11-03-69						0.00						5050	5050
1-05-70						0.00						5050	5050
3-09-70						0.00						5050	5050
5-11-70						0.00						5050	5050
7-06-70						0.00						5050	5050
9-14-70						0.00						5050	5050
	F63010.00 EEL RIVER, MIDDLE FORK, AT DOS RIOS (5c)												
10-08-69						0.00						5050	5050
11-05-69						0.00						5050	5050
12-03-69						0.01						5050	5050
2-04-70						0.01						5050	5050
3-11-70						0.00						5050	5050
4-08-70						0.02						5050	5050
5-13-70						0.00						5050	5050
6-10-70						0.00						5050	5050
7-08-70						0.01						5050	5050
8-12-70						0.00						5050	5050
9-16-70						0.00						5050	5050
	F61329.50 EEL RIVER ABOVE OUTLET CREEK (5d)												
10-08-69						0.00						5050	5050
11-05-69						0.00						5050	5050
12-03-69						0.00						5050	5050
2-04-70						0.01						5050	5050
3-11-70						0.00						5050	5050
4-08-70						0.02						5050	5050
5-13-70						0.00						5050	5050
6-10-70						0.00						5050	5050
7-08-70						0.00						5050	5050
8-12-70						0.00						5050	5050
9-16-70						0.00						5050	5050

TABLE D-5 (CONT)

NUTRIENTS IN SURFACE WATER

NORTH COASTAL AREA

Date Time	Nutrients (Mg/L)								Miscellaneous Nutrients			Samp	Lab
	Nitrogen Series as N					Phosphate Series as P							
	NO_3	NO_2	Org	NH_4	Total	Ortho	Hydro	Total	Code	Value	UR		
	F63050.00 MILL CREEK NEAR COVELO (5e)												
2-04-70						0.02						5050	5050
3-11-70						0.02						5050	5050
4-08-70						0.03						5050	5050
5-13-70						0.00						5050	5050
6-10-70						0.03						5050	5050
	F63120.00 EEL RIVER, MIDDLE FORK, ABOVE BLACK BUTTE RIVER (5g)												
10-08-69						0.01						5050	5050
11-05-69						0.01						5050	5050
12-03-69						0.00						5050	5050
2-04-70						0.00						5050	5050
3-11-70						0.00						5050	5050
4-08-70						0.01						5050	5050
5-13-70						0.00						5050	5050
6-10-70						0.00						5050	5050
7-08-70						0.00						5050	5050
8-12-70						0.00						5050	5050
9-16-70						0.00						5050	5050
	F63200.00 BLACK BUTTE RIVER NEAR COVELO (5h)												
10-08-69						0.01						5050	5050
11-05-69						0.02						5050	5050
12-03-69						0.00						5050	5050
2-04-70						0.01						5050	5050
3-11-70						0.00						5050	5050
4-08-70						0.01						5050	5050
5-13-70						0.00						5050	5050
6-10-70						0.00						5050	5050
7-08-70						0.00						5050	5050
8-12-70						0.00						5050	5050
9-16-70						0.00						5050	5050
	F61100.00 EEL RIVER AT SCOTIA (6)												
10-07-69						0.10 *						5050	5000
11-04-69						0.04 *						5050	5000
12-02-69						0.03 *						5050	5000
1-06-70						0.26 *						5050	5000
2-03-70						0.23 *						5050	5000
3-10-70						0.80 *						5050	5000
4-07-70						0.30 *						5050	5000
5-12-70						0.00 *						5050	5000
6-09-70						0.03 *						5050	5000
7-07-70						0.00 *						5050	5000
8-11-70						0.12 *						5050	5000
9-15-70						0.09 *						5050	5000
	F64100.00 EEL RIVER, SOUTH FORK, NEAR MIRANDA (7)												
10-07-69						0.00						5050	5050
11-04-69						0.01						5050	5050
12-02-69						0.02						5050	5050
2-04-70						0.02						5050	5050
3-10-70						0.01						5050	5050
4-08-70						0.04						5050	5050
5-12-70						0.00						5050	5050
6-09-70						0.01						5050	5050
7-07-70						0.00						5050	5050
8-11-70						0.00						5050	5050
9-15-70						0.00						5050	5050

* Reported as (PO_4) Ortho Phosphate

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, 1969, through September 30, 1970. The data were collected from a number of major ground water sources in the North Coastal area in cooperation with local agencies. During the 1970 water year, 74 wells were sampled in 11 ground water basins.

At the time of field sampling, pH, specific conductance, and temperature measurements are normally made. Comments on local conditions are noted in field books which are available in the files of the Department of Water Resources.

Laboratory analyses of ground waters were performed in accordance with "Standard Methods for the Examination of Water and Waste Water", 12th Edition.

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 at the time of field sampling. Water temperature in degrees Celsius is computed from degrees Fahrenheit.

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

EC LAB - The electrical conductance in micromhos at temperature when sampled.

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.

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 ANALYSIS OF GROUND WATER

NORTH COASTAL AREA

DATE TIME	SAMPLER LAB		TEMP	FIELD PH	LABORATORY 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
						SMITH RIVER PLAIN													
	1-01.00																		
	16N/01W-02Q01	M																	
06/24/70	5050		62.0F	6.5	155	9.8	7.9	9.4	.6	.0	76	.0	6.9	1.4	.00	--	95	57	
1500	5050		16.7C	7.0	150	.49	.65	.41	.02	.00	1.25	.00	.19	.02		--	74	6	2
						31	41	26	1		86		13	1					
	16N/01W-20H01	M																	
06/24/70	5050		58.0F	6.1	158	--	--	--	--	.0	36	--	16	11	--	--		43	
1400	5050		14.4C	7.3	155					.00	.59		.45	.18		--			
											347		265	106					
	16N/02W-13E01	M																	
06/24/70	5050		58.0F	5.9	280	11	9.4	30	1.4	.0	69	10	42	1.8	.00	--	157	66	
1430	5050		14.4C	6.6	266	.55	.77	1.31	.04	.00	1.13	.21	1.18	.03		--	140	10	5
						21	29	49	1		44	8	46	1					
	17N/01W-03E01	M																	
06/25/70	5050		58.0F	6.8	340	--	--	--	--	--	--	--	--	--	--	--			
1015			14.4C													--			
	17N/01W-14C02	M																	
06/24/70	5050		60.0F	6.3	190	--	--	--	--	--	--	--	--	--	--	--			
0940			15.5C													--			
	18N/01W-05K01	M																	
06/24/70	5050		59.0F	5.9	170	--	--	--	--	--	--	--	--	--	--	--			
1745			15.0C													--			
	18N/01W-17R04	M																	
06/24/70	5050		62.0F	7.0	278	--	--	--	--	--	--	--	--	--	--	--			
1635			16.7C													--			
	18N/01W-26H01	M																	
06/25/70	5050		58.0F	6.1	83	--	--	--	--	.0	40	--	4.1	--	--	--		34	
0910	5050		14.4C	7.4	85					.00	.66		.12			--			
											708		129						
	18N/01W-34M02	M																	
06/25/70	5050		57.0F	6.6	340	--	--	--	--	--	--	--	--	--	--	--			
1000			13.9C													--			
						BUTTE VALLEY													
	1-03.00																		
	45N/01E-09C02	M																	
07/06/70	5050		58.0F	7.7	182	--	--	--	--	--	--	--	--	--	--	--			
1820			14.4C													--			
	45N/02W-01P01	M																	
07/06/70	5050		50.0F	6.3	225	--	--	--	--	.0	98	--	1.6	--	--	--		92	
0805	5050		10.0C	7.2	214					.00	1.61		.05			--			
											686		21						
	46N/01W-06P01	M																	
07/06/70	5050		53.0F	7.3	625	--	--	37	--	.0	323	--	8.4	--	--	--		243	
0950	5050		11.7C	7.8	600			1.61		.00	5.30		.24			--			
								245			806		36						
	46N/01W-17B01	M																	
07/06/70	5050		55.0F	8.2	360	21	16	33	4.8	.0	222	3.4	3.5	1.9	.00	--	198	119	
0935	5050		12.8C	8.3	348	1.05	1.32	1.44	.12	.00	3.64	.07	.10	.03		--	195	64	4
						27	34	37	3		95	2	3	1					
	46N/01W-17L01	M																	
07/06/70	5050		55.0F	7.5	460	32	26	22	5.2	.0	260	15	4.5	.9	.00	--	258	189	
0925	5050		12.8C	7.8	444	1.60	2.14	.96	.13	.00	4.26	.31	.13	.01		--	236	26	2
						33	44	20	3		90	7	3						
	46N/02W-16A02	M																	
07/06/70	5050		52.0F	8.0	185	--	--	--	--	--	--	--	--	--	--	--			
0900			11.1C													--			
	47N/01E-32A01	M																	
07/06/70	5050		71.0F	8.2	195	--	--	--	--	--	--	--	--	--	--	--			
1030			21.6C													--			
	47N/01W-23H02	M																	
07/06/70	5050		66.0F	7.7	250	6.2	6.4	32	7.6	.0	119	.0	8.4	11	.10	--	164	42	
1110	5050		18.9C	8.0	237	.31	.53	1.39	.19	.00	1.95	.00	.24	.18		--	131	56	6
						13	22	57	8		82		10	8					
	47N/02W-21H03	M																	
07/06/70	5050		56.0F	7.1	110	8.2	5.7	5.1	1.6	.0	61	.0	1.6	1.4	.00	--	100	44	
1145	5050		13.3C	7.5	105	.41	.47	.22	.04	.00	1.00	.00	.05	.02		--	54	6	1
						36	41	19	4		93		5	2					
	48N/01E-30F01	M																	
07/06/70	5050		57.0F	7.7	360	--	--	--	--	--	--	--	--	--	--	--			
1400			13.9C													--			
	48N/01E-31D03	M																	
07/06/70	5050		73.0F	8.4	460	3.4	2.6	99	11	.0	273	.0	9.1	9.6	.50	--	294	19	
1500	5050		22.8C	8.3	452	.17	.21	4.31	.28	.00	4.48	.00	.26	.15		--	272	205	29
						3	4	87	6		92		5	3					
	48N/01W-28J01	M																	
07/06/70	5050		63.0F	7.7	405	--	--	--	--	.0	237	--	5.5	--	--	--		155	
1300	5050		17.2C	8.3	397					.00	3.89		.16			--			
											894		37						
	48N/01W-36J01	M																	
07/06/70	5050		61.0F	7.4	1400	26	73	165	30	.0	790	52	30	11	.20	--	773	367	
1430	5050		16.1C	7.7	1220	1.30	6.00	7.18	.77	.00	12.96	1.08	.85	.18		--	782	283	12
						9	39	47	5		86	7	6	1					

TABLE E-1 (CONTINUED)

MINERAL ANALYSIS OF GROUND WATER

NORTH COASTAL AREA

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
		1-04.00 SHASTA VALLEY																	
		42N/05W-20J01	M																
07/07/70	5050		57.0F	6.8	360	18	25	22	4.1	.0	228	.3	6.0	.2	.10	--	226	149	
0755	5050		13.9C	7.0	363	.90	2.06	.96	.10	.00	3.74	.01	.17	.00		--	190	39	2
						22	51	24	2		95		4						
		42N/06W-10J01	M																
07/07/70	5050		57.0F	7.3	460	9.6	58	3.2	.3	.0	314	1.6	3.0	3.8	.00	--	251	265	
0830	5050		13.9C	7.6	457	.48	4.77	.14	.01	.00	5.15	.03	.08	.06		--	237	5	0
						9	88	3			97	1	2	1					
		43N/05W-02C01	M																
07/07/70	5050		53.0F	6.5	242	14	12	16	2.5	.0	124	2.8	8.6	1.1	.10	--	161	83	
1040	5050		11.7C	7.0	272	.70	.99	.70	.06	.00	2.03	.06	.24	.02		--	119	17	2
						29	40	29	2		86	3	10	1					
		43N/06W-21R01	M																
07/07/70	5050		63.0F	7.5	470	--	--	--	--	--	--	--	--	--	--	--			
0900			17.2C													--			
		44N/05W-32C02	M																
07/07/70	5050		62.0F	7.3	1010	45	66	88	4.8	.0	547	18	70	2.2	.90	--	594	382	
0950	5050		16.7C	7.5	1010	2.25	5.43	3.83	.12	.00	8.97	.37	1.97	.04		--	568	65	6
						19	47	33	1		79	3	17						
		44N/05W-32C03	M																
07/07/70	5050		62.0F	7.3	1000	--	--	80	--	.0	542	--	62	--	--	--		378	
0950	5050		16.7C	7.9	988			3.48		.00	8.89		1.75			--			
								321			821		162						
		44N/05W-34H01	M																
07/07/70	5050		58.0F	7.0	730	50	40	47	7.2	3.0	390	14	26	17	.40	--	445	288	
1015	5050		14.4C	8.4	705	2.50	3.29	2.04	.18	.10	6.40	.29	.73	.27		--	400	36	4
						31	41	25	2	1	82	4	9	3					
		44N/06W-22K01	M																
07/07/70	5050		69.0F	7.1	475	--	--	--	--	--	--	--	--	--	--	--			
0920			20.5C													--			
		45N/05W-06E01	M																
07/07/70	5050		64.0F	8.2	960	5.4	4.5	242	1.6	27	574	.0	29	1.5	8.20	2.2	608	32	
1120	5050		17.8C	8.9	974	.27	.37	10.53	.04	.90	9.41	.00	.82	.02		--	606	484	54
						2	3	94		8	84		7						
		45N/06W-19E01	M																
07/07/70	5050		65.0F	7.5	340	23	12	33	.9	.0	174	36	2.4	.5	.10	--	176	107	
1045	5050		18.3C	8.3	346	1.15	.99	1.44	.02	.00	2.85	.75	.07	.01		--	195	36	4
						32	28	40	1		77	20	2						
		1-05.00 SCOTT RIVER VALLEY																	
		42N/09W-27K01	M																
07/07/70	5050		59.0F	6.1	58	--	--	--	--	--	--	--	--	--	--	--			
1445			15.0C													--			
		43N/09W-02G01	M																
07/07/70	5050		58.0F	7.1	487	56	27	4.9	1.9	.0	287	12	2.7	7.1	.00	--	226	251	
1330	5050		14.4C	7.4	481	2.79	2.22	.21	.05	.00	4.71	.25	.08	.11		--	255	15	0
						53	42	4	1		91	5	2	2					
		43N/09W-08F01	M																
07/07/70	5050		67.0F	6.3	108	--	--	--	--	--	--	--	--	--	--	--			
1600			19.4C													--			
		43N/09W-24F02	M																
07/07/70	5050		57.0F	7.0	382	38	26	4.2	1.2	.0	240	1.8	1.8	6.4	.00	--	206	203	
1400	5050		13.9C	7.2	379	1.90	2.14	.18	.03	.00	3.94	.04	.05	.10		--	199	5	0
						45	50	4	1		95	1	1	2					
		43N/09W-29G02	M																
07/07/70	5050		66.0F	6.1	59	--	--	--	--	--	--	--	--	--	--	--			
1510			18.9C													--			
		43N/10W-11E01	M																
07/07/70	5050		62.0F	6.5	83	--	--	--	--	--	--	--	--	--	--	--			
1530			16.7C													--			
		44N/09W-34R01	M																
07/07/70	5050		71.0F	6.8	312	39	14	5.6	1.0	.0	170	7.4	2.1	16	.00	--	179	156	
1340	5050		21.6C	7.0	320	1.95	1.15	.24	.03	.00	2.79	.15	.06	.26		--	170	16	1
						58	34	7	1		86	5	2	8					
		1-08.00 MAD RIVER VALLEY																	
		05N/01E-04H04	M																
06/24/70	5050		57.0F	7.7	430	--	--	--	--	--	--	--	--	--	--	--			
0940			13.9C													--			
		06N/01E-07M01	M																
06/22/70	5050		60.0F	6.1	540	--	--	--	--	.0	246	--	16	--	--	--		233	
1645	5050		15.5C	7.6	517					.00	4.03		.45			--			
											711		79						
		06N/01E-08H01	M																
06/22/70	5050		57.0F	6.1	205	--	--	--	--	.0	51	--	16	3.0	--	--		60	
1615	5050		13.9C	7.5	204					.00	.84		.45	.05		--			
											376		201	22					

TABLE E-1 (CONTINUED)

MINERAL ANALYSIS OF GROUND WATER

NORTH COASTAL AREA

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	MILLIGRAMS PER LITER TDS SUM	TH NCH	SAR
		1-08.00						MAD RIVER VALLEY					CONTINUED						
		06N/01E-17D01	H																
06/22/70	5050		56.0F	6.3	435	--	--	--	--	--	--	--	--	--	--	--			
1705			13.3C													--			
		06N/01E-19Q01	H																
06/22/70	5050		58.0F	6.5	375	--	--	--	--	--	--	--	--	--	--	--			
1720			14.4C													--			
		06N/01E-30N01	H																
06/24/70	5050		56.0F	7.3	365	--	--	--	--	--	--	--	--	--	--	--			
1015			13.3C													--			
		06N/01E-32F01	H																
06/24/70	5050		65.0F	7.4	680	--	--	--	--	.0	283	--	85	--	--	--		83	
0955	5050		18.3C	7.8	708					.00	4.64		2.40			--			
											598		309						
		06N/01W-01H01	H																
06/22/70	5050		60.0F	6.1	190	--	--	--	--	--	--	--	--	--	--	--			
1350			15.5C													--			
		1-09.00						EUREKA PLAIN											
		04N/01W-08P01	H																
06/23/70	5050		55.0F	7.7	155	--	--	--	--	--	--	--	--	--	--	--			
0820			12.8C													--			
		04N/01W-16H01	H																
06/23/70	5050		57.0F	7.5	500	--	--	--	--	--	--	--	--	--	--	--			
1600			13.9C													--			
		04N/01W-17B01	H																
06/23/70	5050		55.0F	7.1	165	--	--	--	--	--	--	--	--	--	--	--			
0835			12.8C													--			
		05N/01E-18Q01	H																
06/24/70	5050		62.0F	7.3	780	19	14	143	5.7	.0	330	.0	99	3.5	1.20	--	468	104	
0800	5050		16.7C	7.4	801	.95	1.15	6.22	.15	.00	5.41	.00	2.79	.06		--	450	166	18
						11	14	73	2		65		34	1					
		05N/01E-20Q01	H																
06/24/70	5050		55.0F	6.3	270	--	--	--	--	--	--	--	--	--	--	--			
0835			12.8C													--			
		05N/01W-29Q01	H																
06/24/70	5050		58.0F	6.5	285	--	--	--	--	.0	76	--	24	31	--	--		84	
1045	5050		14.4C	7.5	291					.00	1.25		.68	.50		--			
											392		213	157					
		1-10.00						EEL RIVER VALLEY											
		02N/01W-04D01	H																
06/23/70	5050		58.0F	7.0	538	--	--	--	--	--	--	--	--	--	--	--			
1200			14.4C													--			
		02N/01W-07F01	H																
06/23/70	5050		54.0F	7.1	460	--	--	--	--	.0	194	--	23	--	--	--		190	
1250	5050		12.2C	7.9	472					.00	3.18		.65			--			
											614		126						
		02N/01W-12D04	H																
06/23/70	5050		60.0F	7.6	157	--	--	--	--	--	--	--	--	--	--	--			
1500			15.5C													--			
		03N/01W-05K01	H																
06/23/70	5050		56.0F	6.1	152	6.8	5.4	14	1.1	.0	53	2.3	14	.0	.00	--	99	39	
0920	5050		13.3C	6.3	147	.34	.44	.61	.03	.00	.87	.05	.39	.00		--	70	5	3
						24	31	43	2		66	4	30						
		03N/01W-18A01	H																
06/23/70	5050		59.0F	7.0	470	--	--	--	--	--	--	--	--	--	--	--			
1040			15.0C													--			
		03N/01W-30N01	H																
06/23/70	5050		57.0F	6.5	545	--	--	--	--	--	--	--	--	--	--	--			
1120			13.9C													--			
		03N/02W-32Q01	H																
06/23/70	5050		56.0F	8.1	960	--	--	--	--	--	--	--	--	--	--	--			
1335			13.3C													--			
		03N/02W-35H01	H																
06/23/70	5050		56.0F	7.1	780	30	32	85	12	.0	308	34	75	5.2	.00	--	425	209	
1410	5050		13.3C	7.1	766	1.50	2.63	3.70	.31	.00	5.05	.71	2.12	.08		--	427	46	8
						18	32	45	4		63	9	27	1					

TABLE E-1 (CONTINUED)

MINERAL ANALYSIS OF GROUND WATER

NORTH COASTAL AREA

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
						ROUND VALLEY													
	1-11.00																		
	22N/12W-06L02	M																	
05/21/70	5050		59.0F	7.5	450	--	--	--	--	--	--	--	--	--	--	--			
0940			15.0C													--			
	22N/13W-01J03	M																	
05/20/70	5050		63.0F	7.2	228	--	--	--	--	--	--	--	--	--	--	--			
1630			17.2C													--			
	22N/13W-13A01	M																	
05/20/70	5050		62.0F	7.0	220	19	12	12	.8	.0	116	12	8.0	2.5	.40	--	131	97	
1700	5050		16.7C	7.8	237	.95	.99	.52	.02	.00	1.90	.25	.23	.04		--	125	2	2
						38	40	21	1		79	10	10	2					
	23N/12W-33L03	M																	
05/21/70	5050		60.0F	7.1	595	--	--	--	--	18	373	--	2.9	--	--	--		291	
1020	5050		15.5C	8.6	597					.60	6.12		.08			--			
										92	935		12						
	23N/13W-25P01	M																	
05/21/70	5050		57.0F	7.1	235	--	--	--	--	--	--	--	--	--	--	--			
0845			13.9C													--			
	23N/13W-36P03	M																	
05/21/70	5050		60.0F	6.8	250	--	--	--	--	--	--	--	--	--	--	--			
0915			15.5C													--			
							LAYTONVILLE VALLEY												
	1-12.00																		
	21N/14W-30M01	M																	
05/20/70	5050		58.0F	6.3	205	--	--	--	--	.0	114	--	8.4	--	--	--		78	
1350	5050		14.4C	8.2	204					.00	1.87		.24			--			
											836		107						
	21N/15W-01L02	M																	
05/20/70	5050		62.0F	7.4	415	47	20	20	1.5	.0	268	1.3	11	1.1	.40	--	244	198	
1520	5050		16.7C	8.0	433	2.35	1.64	.87	.04	.00	4.40	.03	.31	.02		--	236	21	2
						48	33	18	1		92	1	7						
	21N/15W-12M02	M																	
05/20/70	5050		56.0F	5.5	55	--	--	--	--	--	--	--	--	--	--	--			
1500			13.3C													--			
							LITTLE LAKE VALLEY												
	1-13.00																		
	18N/13W-08L01	M																	
05/20/70	5050		58.0F	6.1	280	--	--	--	--	.0	148	--	6.9	--	--	--		110	
1210	5050		14.4C	7.9	282					.00	2.43		.19			--			
											786		61						
	18N/13W-20H03	M																	
05/20/70	5050		55.0F	6.1	222	--	--	--	--	.0	125	--	4.0	--	--	--		100	
1250	5050		12.8C	7.8	220					.00	2.05		.11			--			
											850		46						

TABLE E-2

TRACE ELEMENT ANALYSES OF GROUND WATER

NORTH COASTAL AREA

State Well Number	Date	Constituents in parts per million							
		As	Cd	Cu	Fe (Total)	Pb	Mn	Se	Zn
BUTTE VALLEY (1-3.00)									
46N-1W-6P1	7-6-70	0.00							
46N-2W-16A2	7-6-70	0.00							
48N-1W-28J1	7-6-70	0.00							
48N-1W-36J1	7-6-70	0.01							
SHASTA VALLEY (1-4.00)									
43N-5W-2C1	7-7-70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44N-5W-32C3	7-7-70	0.00							
44N-5W-34H1	7-7-70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CONSTITUENTS

As	Arsenic	Fe	Iron	Se	Selenium
Cd	Cadmium	Pb	Lead	Zn	Zinc
Cu	Copper	Mn	Manganese		

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