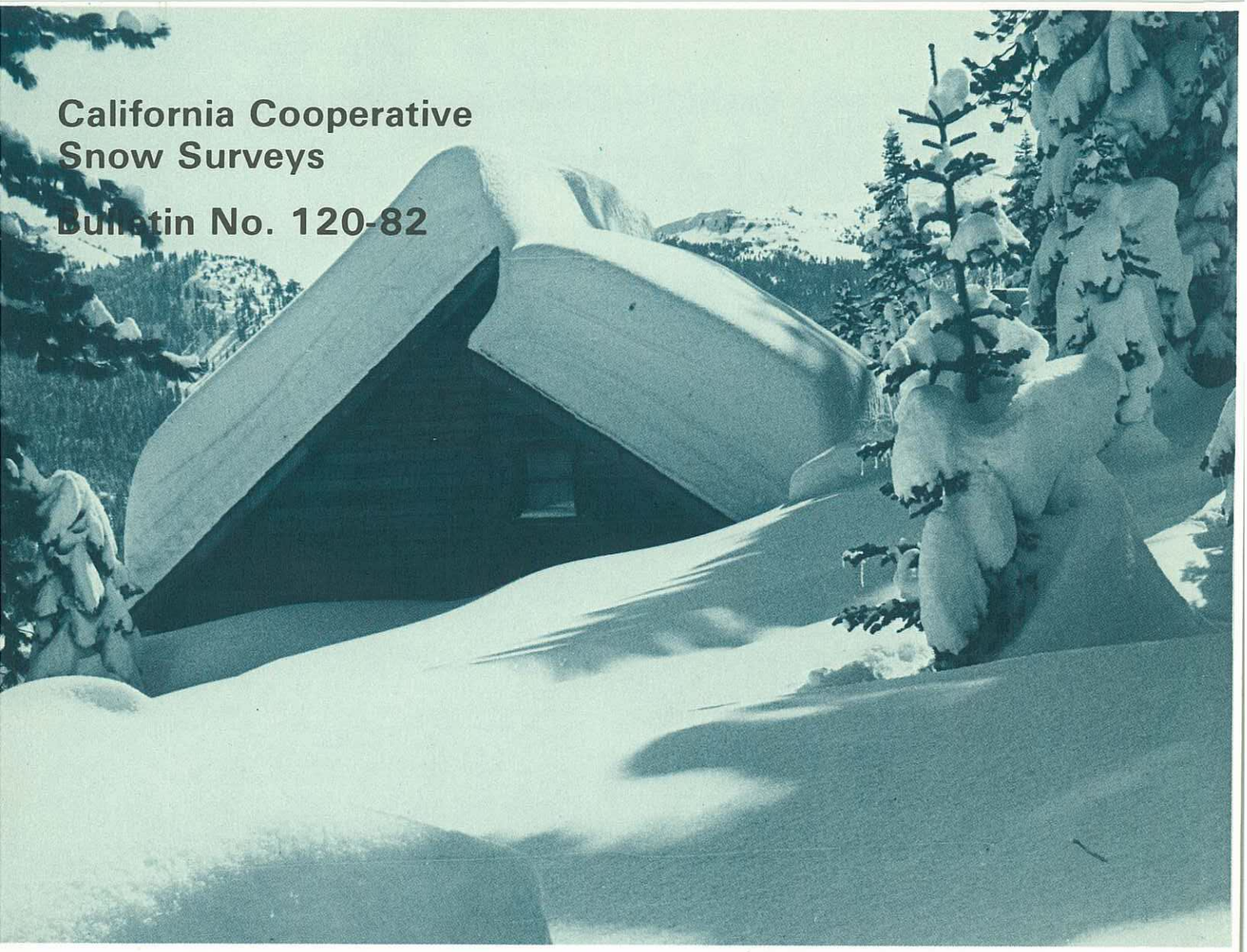

California Cooperative
Snow Surveys

Bulletin No. 120-82

State of California
The Resources Agency

Department of
Water Resources

save water
DWR

Water Conditions in California

Report 1 February 1, 1982

Huey D. Johnson
Secretary for Resources
The Resources Agency

Edmund G. Brown Jr.
Governor
State of California

Ronald B. Robie
Director
Department of Water Resources

State of California
EDMUND G. BROWN JR., Governor

The Resources Agency
HUEY D. JOHNSON, Secretary for Resources

Department of Water Resources
RONALD B. Robie, Director

M. CATHARINE BERGREN, Assistant Director

CHARLES R. SHOEMAKER	MARY ANNE MARK	GERALD H. MERAL	ROBERT W. JAMES
Deputy Director	Deputy Director	Deputy Director	Deputy Director

DIVISION OF FLOOD MANAGEMENT

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Murton A. Stewart . . . . . Lead Snow Gauger
Susan A. Burak . . . . . Snow Gauger
Jay K. Jensen . . . . . Snow Gauger

AGENCIES COOPERATING IN THE CALIFORNIA SNOW SURVEYS PROGRAM

Public Agencies
- Buena Vista Water Storage District
- Central California Irrigation District
- East Bay Municipal Utility District
- Friant Water Users Association
- Kaweah Delta Water Conservation District
- Kaweah River Association
- Kern Delta Water District
- Kings River Conservation District
- Kings River Water Association
- Los Angeles County Flood Control District
- Lower Tule River Irrigation District
- Merced Irrigation District
- Modesto Irrigation District
- Nevada Irrigation District
- North Kern Water Storage District
- Oakdale Irrigation District
- Omochumne-Hartnell Water District
- Oroville-Wyandotte Irrigation District
- Placer County Water Agency
- Sacramento Municipal Utility District
- St. Johns River Association
- Tulare Lake Basin Water Storage District
- Tri-Dam Project

Public Agencies (continued)
- Tule River Association
- Turlock Irrigation District
- Yuba County Water Agency

Private Organizations
- J. G. Boswell Company
- Union Carbide Corporation

Public Utilities
- Pacific Gas and Electric Company
- Sierra Pacific Power Company
- Southern California Edison Company

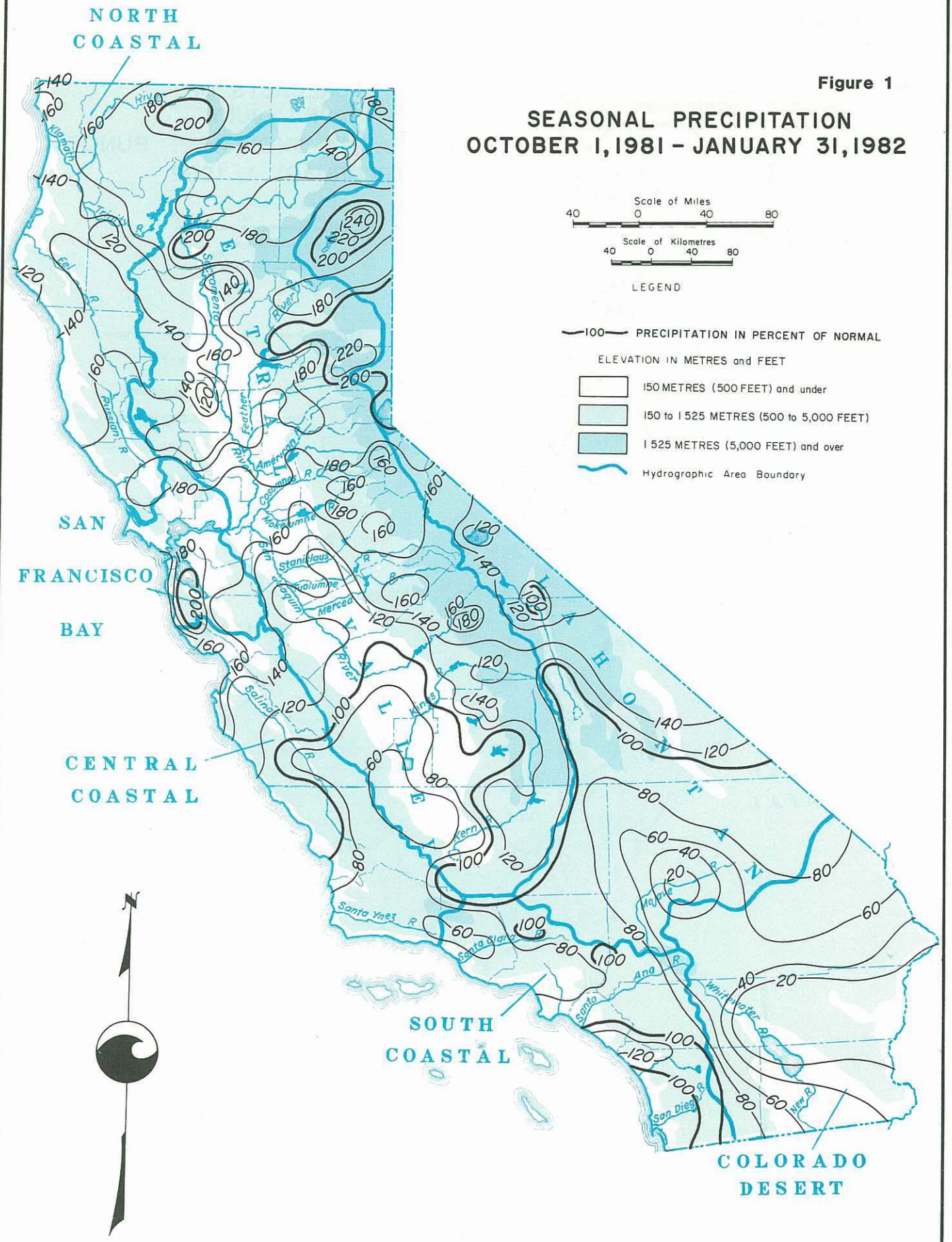
Municipalities
- City of Bakersfield
  Water Department
- City of Los Angeles
  Department of Water and Power
- City and County of San Francisco
  Public Utilities Commission

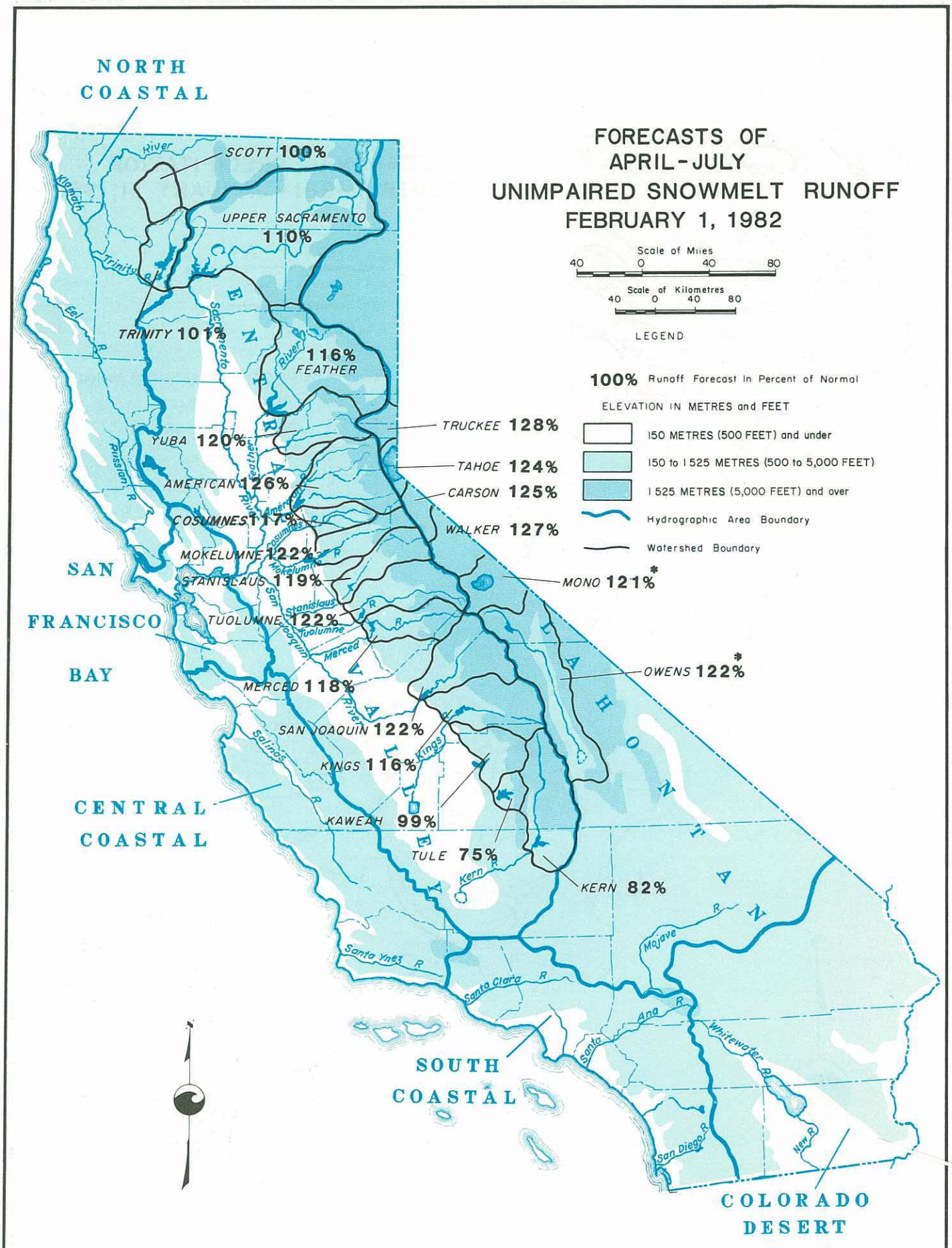
State and Federal Agencies
- California Department of Forestry
- California Department of Water Resources
- California Department of Parks and Recreation
- U. S. Department of Agriculture
  Forest Service (14 National Forests)
  Pacific Southwest Forest and Range Experiment Station
  Soil Conservation Service
- U. S. Department of Commerce
  National Weather Service
- U. S. Department of the Interior
  Water and Power Resources Service
  Geological Survey, Water Resources Division
  National Park Service (3 National Parks)
- U. S. Department of the Army
  Corps of Engineers

Other Cooperative Programs
- Nevada Cooperative Snow Surveys
- Oregon Cooperative Snow Surveys

Figure 1

SEASONAL PRECIPITATION
OCTOBER 1, 1981 - JANUARY 31, 1982





* Forecast by Department of Water & Power, City of Los Angeles

SUMMARY OF WATER CONDITIONS

FEBRUARY 1, 1982

YEAR-END STORM PATTERNS, CONTINUING THROUGH JANUARY, HAVE ESSENTIALLY ASSURED CALIFORNIA OF ADEQUATE WATER SUPPLIES FOR 1982. THE FIRST MAJOR STORMS PRODUCED HEAVY RAINFALL THAT BROUGHT MOST MAJOR RESERVOIRS CLOSE TO FLOOD CONTROL LEVELS. THE SUBSEQUENT SERIES OF COLD STORMS DURING JANUARY RESULTED IN THE ACCUMULATION OF AN ABOVE AVERAGE SNOWPACK IN MOST MOUNTAIN WATERSHEDS.

FORECASTS OF APRIL THROUGH JULY RUNOFF GENERALLY CALL FOR NORMAL TO ABOVE NORMAL FLOWS. ONLY THE TULE AND KERN RIVERS ARE FORECASTED TO HAVE BELOW NORMAL RUNOFF. MOST RIVER SYSTEMS ARE EXPECTED TO PRODUCE 10 TO 20 PERCENT ABOVE NORMAL RUNOFF FOR THE APRIL THROUGH JULY PERIOD. BASED ON THE FEBRUARY 1 RUNOFF FORECASTS, 1982 IS CLASSIFIED AS A "WET YEAR" UNDER THE STATE WATER RESOURCES CONTROL BOARD CLASSIFICATION SYSTEM FOR THE SACRAMENTO RIVER DRAINAGE AREA. THE FORECASTS UPON WHICH THIS CLASSIFICATION IS BASED ASSUME NORMAL PRECIPITATION AMOUNTS DURING THE NEXT FEW MONTHS.

SNOW SURVEYS FOR FEBRUARY 1 SHOW THAT THE SACRAMENTO VALLEY TRIBUTARY AREAS HAVE ACCUMULATED NEAR AVERAGE SNOW WATER CONTENT FOR THIS DATE, EXCEPT IN THE MCCLOUD RIVER BASIN (70 PERCENT) AND THE FEATHER RIVER BASIN (85 PERCENT). THE NORTH COASTAL SNOWPACK IS ALSO SLIGHTLY BELOW AVERAGE. IN THE LAHONTAN AREA, AND THROUGHOUT THE SAN JOAQUIN VALLEY HEADWATER AREAS, WELL ABOVE AVERAGE SNOW STORED WATER HAS BEEN RECORDED.

PRECIPITATION IN THE SACRAMENTO VALLEY DURING JANUARY WAS CONCENTRATED IN THE SOUTHERN PORTION, TAPERING FROM 60 PERCENT OF NORMAL IN THE PIT RIVER BASIN TO SLIGHTLY ABOVE NORMAL IN THE AMERICAN RIVER AREA. JANUARY PRECIPITATION ON THE SAN JOAQUIN VALLEY FLOOR WAS ABOUT THREE-FOURTHS OF AVERAGE BUT REACHED UP TO 200 PERCENT OF AVERAGE IN THE ADJACENT MOUNTAINS. FOR THE WATER YEAR TO DATE, PRECIPITATION IN THE CENTRAL VALLEY HAS BEEN ABOVE AVERAGE NORTH OF FRESNO, AS WELL AS IN ALL MOUNTAIN DRAINAGES. TO THE SOUTH, HOWEVER, THE TULARE LAKE BASIN, THE SOUTH COASTAL AREA, AND THE COLORADO DESERT, HAVE ALL EXPERIENCED WELL BELOW AVERAGE PRECIPITATION FOR THE FOUR-MONTH PERIOD.

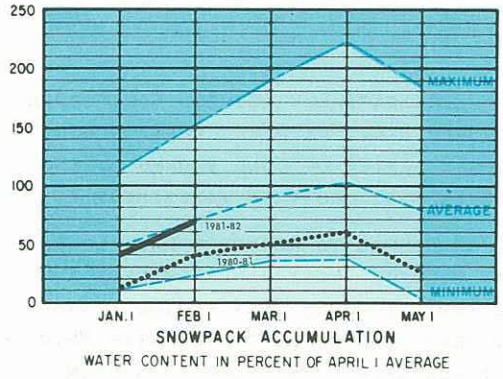
RUNOFF DURING JANUARY WAS NEAR OR ABOVE NORMAL THROUGHOUT THE CENTRAL VALLEY, RANGING FROM 96 PERCENT OF AVERAGE FOR THE INFLOW TO LAKE SHASTA TO 257 PERCENT FOR THE COSUMNES RIVER. THE WATER YEAR HAS ALSO PRODUCED WELL ABOVE AVERAGE FLOWS EXCEPT FOR THE TULE AND KERN RIVERS WHERE A 10 TO 15 PERCENT DEFICIENCY IN RUNOFF TO DATE HAS BEEN EXPERIENCED. ELSEWHERE, ONLY THE SOUTH COASTAL STREAMS HAVE BEEN DEFICIENT, THE ONLY AREA WHERE RUNOFF IS PROJECTED TO REMAIN BELOW NORMAL THIS YEAR.

RESERVOIR STORAGE IS WELL ABOVE AVERAGE THROUGHOUT THE SACRAMENTO VALLEY, AMOUNTING TO 2.7 MILLION dam^3 (2.2 MILLION AC-FT) ABOVE THE 10-YEAR AVERAGE FOR FEBRUARY 1. IN THE SAN JOAQUIN VALLEY, TOTAL RESERVOIR STORAGE IS BELOW AVERAGE BY 835 000 dam^3 (675,000 AC-FT) ONLY BECAUSE SAN LUIS RESERVOIR IS DRAWN DOWN FOR REPAIRS. AGGREGATE STORAGE IN ALL SAN JOAQUIN VALLEY RESERVOIRS, EXCLUDING SAN LUIS, NOW AMOUNTS TO 126 PERCENT OF AVERAGE FOR THIS DATE. (REPAIR PROGRESS AT SAN LUIS CAN BE MONITORED BY CALLING THE DEPARTMENT'S PUBLIC INFORMATION OFFICER (916) 445-4501.) COLORADO RIVER PROJECT RESERVOIRS ARE STORING 110 PERCENT OF AVERAGE SUPPLIES FOR THIS DATE, WITH INFLOWS ALSO PROJECTED TO BE SLIGHTLY ABOVE AVERAGE THIS YEAR.

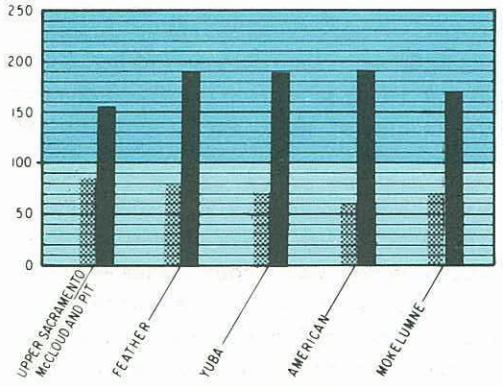
SUMMARY OF WATER CONDITIONS
IN PERCENT OF AVERAGE

HYDROGRAPHIC AREA	PRECIPITATION OCTOBER 1 TO DATE	SNOW WATER CONTENT	RESERVOIR STORAGE	RUNOFF*		
				OCTOBER 1 TO DATE	APR-JULY FORECAST	WATER YEAR FORECAST
NORTH COAST	155	85	115	210	100	135
SAN FRANCISCO BAY	170	--	135	210	--	150
CENTRAL COASTAL	110	--	115	120	--	105
SOUTH COASTAL	85	--	115	30	--	80
SACRAMENTO VALLEY	165	105	120	235	120	160
SAN JOAQUIN VALLEY	135	135	90	180	120	135
LAHONTAN	150	150	95	210	125	130
COLORADO DESERT	40	--	--	--	--	--
STATEWIDE	145	120	110	215	110	145

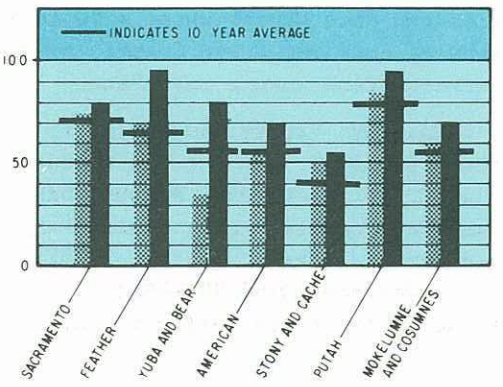
* BASED ON OBSERVED CONDITIONS TO DATE PLUS AVERAGE CONDITIONS THEREAFTER.



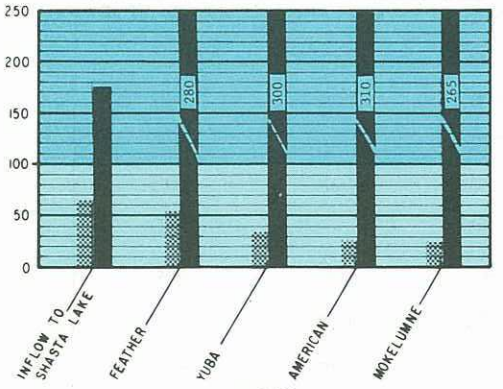
SNOWPACK ACCUMULATION
WATER CONTENT IN PERCENT OF APRIL 1 AVERAGE



PRECIPITATION
OCTOBER 1 TO DATE IN PERCENT OF AVERAGE



RESERVOIR STORAGE
CONTENTS OF MAJOR RESERVOIRS IN PERCENT OF CAPACITY



RUNOFF
OCTOBER 1 TO DATE IN PERCENT OF AVERAGE

FEBRUARY 1, 1981 FEBRUARY 1, 1982

SACRAMENTO RIVER BASIN

Snowpack - Measurements of the snowpack obtained at 84 snow courses and 7 snow sensors on or about February 1 show a basin wide average water equivalent of 544 mm (21.4 inches). The snow's water equivalent is 106 percent of the February 1 average but only 69 percent of the April 1 (seasonal) average. This compares to 41 percent of the April 1 average measured at this time last year and 52 percent measured at this time in 1980.

Despite heavy storms earlier this winter, and resulting high runoff, the current status of the snowpack water equivalent is very close to average for most of the basin. Thus, with the exception of the American River where the snowpack's water equivalent is considerably higher, an average water supply is forecast for this summer.

Precipitation - October through January precipitation over the Sacramento Valley averaged 165 percent of normal. All subdrainages, including the valley floor, were well above normal. Seasonal catches were generally more than double the amounts for this same period a year ago. A series of heavy storms have caused many places to exceed their water year normals already. Examples of impressive four-month totals are: Redding, on the valley floor, 1 149 mm (45.22 inches) or 210 percent; Brush Creek R. S., in the Feather, 2 040 mm (80.30 inches) or 206 percent; Bowman Dam, in the Yuba, 2 100 mm (82.66 inches) or 230 percent; Georgetown R. S., in the American, 1 462 mm (57.55 inches) or 199 percent.

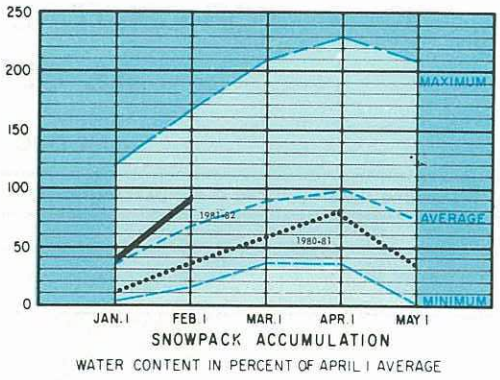
January precipitation averaged 105 percent. Three major storm periods during the month accumulated 472 mm (18.60 inches) or 129 percent at Brush Creek R. S. and 159 mm (6.25 inches) or 170 percent at Davis.

Reservoir Storage - February 1 storage in 47 major reservoirs in the Sacramento Valley was about 16.0 million dam^3 (13.0 million ac-ft), up about 1.7 million dam^3 (1.4 million ac-ft) from a year ago. Storage as of February 1 was 120 percent of the average and about 77 percent of available capacity. Storage in Oroville Reservoir was 3.44 million dam^3 (2.77 million ac-ft). This is about 131 000 dam^3 (106,000 ac-ft) less than one year ago and is now 112 percent of normal.

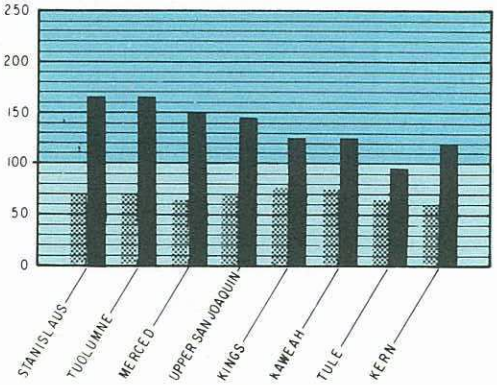
Runoff - January runoff from tributaries to the Sacramento Valley amounted to 3.8 million dam^3 (3.1 million ac-ft) or 125 percent of normal. For the period October through January, the four-month total was 16.0 million dam^3 (13.0 million ac-ft) or about 236 percent of normal. Last year, runoff for this same period was 3.90 million dam^3 (3.16 million ac-ft) or about 57 percent of normal.

The Sacramento Valley Four Basin Index for this water year is forecast at 33.2 million dam^3 (26.9 million ac-ft) assuming median conditions for the remainder of the year. This classifies the year as "wet" in the Sacramento - San Joaquin Delta according to State Water Resources Control Board Decision 1485.

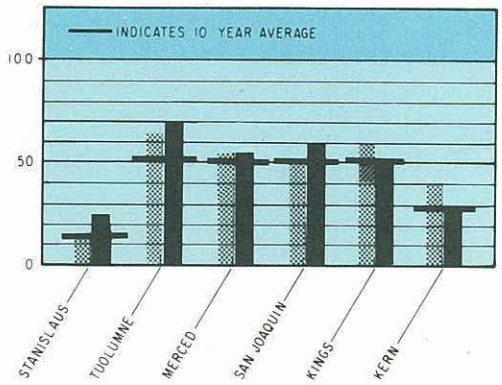
SAN JOAQUIN RIVER AND TULARE LAKE BASINS



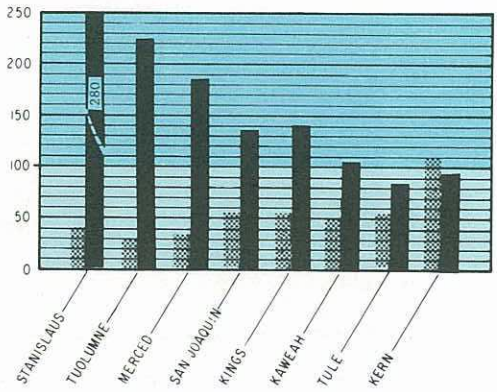
SNOWPACK ACCUMULATION
WATER CONTENT IN PERCENT OF APRIL 1 AVERAGE



PRECIPITATION
OCTOBER 1 TO DATE IN PERCENT OF AVERAGE



RESERVOIR STORAGE
CONTENTS OF MAJOR RESERVOIRS IN PERCENT OF CAPACITY



RUNOFF
OCTOBER 1 TO DATE IN PERCENT OF AVERAGE

FEBRUARY 1, 1981 ▒ FEBRUARY 1, 1982 ■

Snowpack - Measurements of the snowpack obtained at 74 snow courses, 44 aerial markers, and 9 snow sensors on or about February 1 show a basin wide average water equivalent of 564 mm (22.2 inches). The snow's water equivalent is 135 percent of the February 1 average or 88 percent of the April 1 (seasonal) average. This compares favorably to 37 percent of the April 1 average measured at this time last year and 75 percent measured at this time two years ago.

The above-average snowpack water equivalent in the central portion of the Sierras (San Joaquin) tapers off to little more than average in the southern Sierras (Tulare Lake Basin). Given a median future, watersheds tributary to the San Joaquin River should expect well above average water supplies for this summer, while Tulare Lake Basin tributaries should expect only average or below average water supplies for the summer.

Precipitation - Precipitation for the season from October through January averaged 135 percent of normal. Except for the Tule, subdrainage values were all well above normal. Catch amounts were one-and-one-half to double those experienced a year ago. Examples of above normal seasonal totals are: Calaveras Big Trees 1 280 mm (50.40 inches) or 177 percent; Grant Grove 678 mm (26.68 inches) or 119 percent; Glennville 309 mm (12.15 inches) or 137 percent. Heavy January precipitation averaged 155 percent of normal over the area. Substantial January totals reported were: Huntington Lake 361 mm (14.22 inches) or 236 percent; Grant Grove 317 mm (12.49 inches) or 167 percent; and Sonora with 236 mm (9.29 inches) or 155 percent.

Reservoir Storage - February 1 storage in 31 major reservoirs serving the San Joaquin Valley was 6.0 million dam^3 (4.9 million ac-ft) or about 88 percent of average and about 40 percent of available capacity. This is a decrease of 2.1 million dam^3 (1.7 million ac-ft) reported in storage last year on February 1. These reservoirs had about 8.1 million dam^3 (6.6 million ac-ft) or about 122 percent of average and about 54 percent of available capacity. Repair work being done on San Luis Reservoir is accountable for most of the diminished storage which on February 1 was reported to be about 100 000 dam^3 (81,200 ac-ft).

Runoff - During January, runoff of the tributaries to the San Joaquin Valley was about 801 000 dam^3 (649,000 ac-ft) or about 187 percent of normal. Season to date, October through January, was 2.0 million dam^3 (1.6 million ac-ft) or 208 percent of normal. One year ago the four-month total runoff for the San Joaquin Valley was 48 percent of normal. January runoff for the Tulare Lake Basin was 227 000 dam^3 (184,000 ac-ft) or 129 percent of normal. Water year to date runoff totaled about 509 700 dam^3 (413,000 ac-ft) or 116 percent of normal. Tulare Lake Basin runoff last year, for the same four-month period, was 69 percent of normal.

FORECASTS OF APRIL-JULY AND
FOR CENTRAL
AS OF

METRIC

DRAINAGE BASIN AND WATERSHED	April through July Unimpaired Runoff in 1,000 Cubic Dekametres (5)					
	HISTORICAL			FORECASTS		
	50-Year Average	Maximum of Record	Minimum of Record	April-July Forecast	Percent of Average	80% Prob. Range
SACRAMENTO RIVER BASIN						
Upper Sacramento River						
Sacramento River unimpaired flow at Shasta Lake (1)	360	785	47	355	99	--
McCloud River unimpaired flow at Shasta Lake (1)	516	1 048	227	530	103	--
Pit River unimpaired flow at Shasta Lake (1)	1 283	2 214	592	1 480	115	--
Total unimpaired flow at Shasta Lake (1)	2 234	3 778	896	2 465	110	1 675 to 3 575
Sacramento River above Bend Bridge, near Red Bluff (1)	3 046	5 688	1 163	3 455	113	2 195 to 5 055
Feather River						
Unimpaired flow at Lake Almanor near Pratville (1)	411	833	148	470	114	--
North Fork at Pulga (1)	1 288	2 980	300	1 420	110	--
Middle Fork near Clio (2)	102	638	5	105	102	--
South Fork at Ponderosa Dam (1)	139	329	16	170	124	--
Total unimpaired flow at Oroville Reservoir (1)	2 335	5 768	487	2 715	116	1 975 to 4 010
Yuba River						
North Yuba below Goodyears Bar (1)	358	797	62	430	121	--
Combined unimpaired flow at Jackson Mdws and Bowman Reservoirs (2)	136	291	31	155	114	--
South Yuba at Langs Crossings (2)	281	593	69	325	116	--
Yuba River at Smartville (1)	1 317	2 990	245	1 580	120	1 145 to 2 380
American River						
North Fork at North Fork Dam (1)	331	883	52	415	125	--
Middle Fork near Auburn (1)	661	1 734	123	840	127	--
Silver Creek below Camino Diversion Dam (1)	221	472	46	265	120	--
Total unimpaired flow at Folsom Reservoir (1)	1 618	3 791	281	2 035	126	1 420 to 3 145
Sacramento River at Sacramento						
Cosumnes River						
Cosumnes River at Michigan Bar (1)	164	444	14	190	117	130 to 325
Mokelumne River						
North Fork near West Point (4)	516	1 021	128	615	120	--
Total unimpaired flow at Pardee Reservoir (1)	578	1 314	125	705	122	530 to 1 000
SAN JOAQUIN RIVER BASIN						
Stanislaus River						
Middle Fork below Beardsley Dam (1)	424	866	78	505	119	--
Total unimpaired flow at Melones Reservoir (1)	894	2 109	147	1 060	119	775 to 1 530
Tuolumne River						
Cherry Creek and Eleanor Creek near Hetch Hetchy (1)	380	705	118	460	122	--
Tuolumne River near Hetch Hetchy (1)	746	1 717	189	900	121	--
Total unimpaired flow at Don Pedro Reservoir (1)	1 480	3 308	338	1 800	122	1 355 to 2 465
Merced River						
Merced River at Pohono Bridge (2)	437	1 095	97	525	120	--
Total unimpaired flow at Exchequer Reservoir (1)	765	1 839	152	900	118	665 to 1 280
San Joaquin River						
San Joaquin River at Mammoth Pool (2)	1 192	2 811	312	1 480	124	--
Big Creek below Huntington Lake (3)	116	324	17	140	122	--
South Fork near Florence Lake (3)	260	1 282	70	310	118	--
Total unimpaired flow at Millerton Lake (1)	1 502	4 137	200	1 825	122	1 330 to 2 565
San Joaquin River near Vernalis						
TULARE LAKE BASIN						
Kings River						
North Fork near Cliff Camp (3)	285	697	60	335	117	--
Total unimpaired flow at Pine Flat Reservoir (1)	1 483	3 840	338	1 725	116	1 185 to 2 380
Kaweah River						
Total unimpaired flow at Terminus Reservoir (1)	349	1 004	75	345	99	215 to 525
Tule River						
Total unimpaired flow at Success Reservoir (1)	78	275	2	58	75	30 to 110
Kern River						
Kern River near Kernville (3)	442	1 551	102	370	84	--
Total unimpaired flow at Isabella Reservoir (1)	550	2 043	104	450	82	230 to 845

(1) 50 year average based on data years 1931 - 1980
(2) 50 year average based on data years 1929 - 1978
(3) 50 year average based on data years 1926 - 1975
(4) 47 year average based on data years 1929 - 1975
(5) See inside back cover for definition of unimpaired runoff and 80 percent probability range.

WATER YEAR UNIMPAIRED RUNOFF
VALLEY STREAMS
FEBRUARY 1, 1982

UNITS

Water Year Unimpaired Runoff...October through September... in 1,000 Cubic Dekametres (5)												
HISTORICAL			*	DISTRIBUTION							FORECASTS	
50-Year Average	Maximum of Record	Minimum of Record	October through January	February	March	April	May	June	July	August and September	Water Year Forecast	Percent of Average
				Values in parentheses indicate the 80 percent probability range for water year forecasts →								
1 008	2 209	202	--	--	--	--	--	--	--	--	--	--
1 530	2 902	710	--	--	--	--	--	--	--	--	--	--
3 723	6 613	1 831	--	--	--	--	--	--	--	--	--	--
7 051	13 317	3 058	4 130	1 050	1 075	1 020	715	420	310	530	9 250 (7 770 to 11 600)	130
10 259	19 583	4 063	6 500	1 775	1 665	1 430	1 000	605	420	665	14 060 (11 350 to 17 515)	137
936	1 564	487	--	--	--	--	--	--	--	--	--	--
2 894	5 427	822	--	--	--	--	--	--	--	--	--	--
254	786	30	--	--	--	--	--	--	--	--	--	--
348	693	38	--	--	--	--	--	--	--	--	--	--
5 463	11 708	1 226	4 155	800	860	1 075	960	470	210	260	8 790 (7 520 to 11 000)	161
667	1 301	126	--	--	--	--	--	--	--	--	--	--
210	360	36	--	--	--	--	--	--	--	--	--	--
423	696	120	--	--	--	--	--	--	--	--	--	--
2 833	5 604	454	2 255	455	470	570	615	320	75	60	4 820 (4 070 to 5 300)	170
722	1 521	80	--	--	--	--	--	--	--	--	--	--
1 553	11 610	178	--	--	--	--	--	--	--	--	--	--
375	661	72	--	--	--	--	--	--	--	--	--	--
3 232	7 137	430	2 395	530	540	690	775	470	100	50	5 550 (4 560 to 6 410)	172
												160
447	1 081	49	339	125	110	105	60	20	5	1	765 (630 to 1 020)	171
665	1 245	153	--	--	--	--	--	--	--	--	--	--
889	2 087	159	375	100	115	185	290	205	25	15	1 310 (1 110 to 1 730)	147
479	1 145	109	--	--	--	--	--	--	--	--	--	--
1 378	3 496	190	575	160	180	270	430	285	75	25	2 000 (1 600 to 2 710)	145
540	942	150	--	--	--	--	--	--	--	--	--	--
933	2 048	317	--	--	--	--	--	--	--	--	--	--
2 249	4 751	418	775	245	270	395	640	565	200	40	3 130 (2 530 to 4 010)	139
537	1 257	112	--	--	--	--	--	--	--	--	--	--
1 174	2 699	185	315	135	150	210	345	270	75	30	1 530 (1 230 to 2 160)	130
1 559	3 656	444	--	--	--	--	--	--	--	--	--	--
134	366	27	--	--	--	--	--	--	--	--	--	--
345	2 627	88	--	--	--	--	--	--	--	--	--	--
2 145	5 387	463	340	160	200	345	630	615	235	105	2 630 (2 040 to 3 700)	122
												134
328	749	72	--	--	--	--	--	--	--	--	--	--
2 012	5 183	475	285	100	135	285	615	615	210	85	2 330 (1 850 to 3 330)	116
529	1 567	113	80	35	55	85	130	105	25	15	530 (370 to 800)	100
175	620	19	35	16	21	25	23	9	1	0	130 (85 to 245)	75
650	2 078	200	--	--	--	--	--	--	--	--	--	--
831	2 746	215	105	45	60	105	155	135	55	45	705 (405 to 1 230)	85

* Unimpaired runoff to date .

Monthly distributions of runoff forecasts are estimated based on comparisons with previous historic water years.

FORECASTS OF APRIL - JULY AND
FOR CENTRAL
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DRAINAGE BASIN AND WATERSHED	April through July Unimpaired Runoff in 1,000 Acre-feet (5)					
	HISTORICAL			FORECASTS		
	50-Year Average	Maximum of Record	Minimum of Record	April-July Forecast	Percent of Average	80% Prob. Range
SACRAMENTO RIVER BASIN						
Upper Sacramento River						
Sacramento River unimpaired flow at Shasta Lake (1)	292	636	38	290	99	--
McCloud River unimpaired flow at Shasta Lake (1)	418	850	184	430	103	--
Pit River unimpaired flow at Shasta Lake (1)	1,040	1,795	480	1,200	115	--
Total unimpaired flow at Shasta Lake (1)	1,811	3,063	726	2,000	110	1,360 to 2,900
Sacramento River above Bend Bridge, near Red Bluff (1)	2,469	4,611	943	2,800	113	1,780 to 4,100
Feather River						
Unimpaired flow at Lake Almanor near Pratville (1)	333	675	120	380	114	--
North Fork at Pulga (1)	1,044	2,416	243	1,150	110	--
Middle Fork near Clio (2)	83	517	4	85	102	--
South Fork at Ponderosa Dam (1)	113	267	13	140	124	--
Total unimpaired flow at Oroville Reservoir (1)	1,893	4,676	391	2,200	116	1,600 to 3,250
Yuba River						
North Yuba below Goodyears Bar (1)	290	646	50	350	121	--
Combined unimpaired flow at Jackson Mdws and Bowman Reservoirs (2)	110	236	25	125	114	--
South Yuba at Langs Crossings (2)	228	481	56	265	116	--
Yuba River at Smartville (1)	1,068	2,424	199	1,280	120	930 to 1,930
American River						
North Fork at North Fork Dam (1)	268	716	42	335	125	--
Middle Fork near Auburn (1)	536	1,406	100	680	127	--
Silver Creek below Camino Diversion Dam (1)	179	383	37	215	120	--
Total unimpaired flow at Folsom Reservoir (1)	1,312	3,073	228	1,650	126	1,150 to 2,550
Sacramento River at Sacramento						
Cosumnes River						
Cosumnes River at Michigan Bar (1)	133	360	11	155	117	105 to 265
Mokelumne River						
North Fork near West Point (4)	418	828	104	500	120	--
Total unimpaired flow at Pardee Reservoir (1)	469	1,065	101	570	122	430 to 810
SAN JOAQUIN RIVER BASIN						
Stanislaus River						
Middle Fork below Beardsley Dam (1)	344	702	63	410	119	--
Total unimpaired flow at Melones Reservoir (1)	725	1,710	115	860	119	630 to 1,240
Tuolumne River						
Cherry Creek and Eleanor Creek near Hetch Hetchy (1)	308	572	96	375	122	--
Tuolumne River near Hetch Hetchy (1)	605	1,392	153	730	121	--
Total unimpaired flow at Don Pedro Reservoir (1)	1,200	2,682	274	1,460	122	1,100 to 2,000
Merced River						
Merced River at Pohono Bridge (2)	354	888	79	425	120	--
Total unimpaired flow at Exchequer Reservoir (1)	620	1,491	123	730	118	540 to 1,040
San Joaquin River						
San Joaquin River at Mammoth Pool (2)	966	2,279	253	1,200	124	--
Big Creek below Huntington Lake (3)	94	263	19	115	122	--
South Fork near Florence Lake (3)	211	1,039	57	250	118	--
Total unimpaired flow at Millerton Lake (1)	1,218	3,354	162	1,480	122	1,080 to 2,080
San Joaquin River near Vernalis						
TULARE LAKE BASIN						
Kings River						
North Fork near Cliff Camp (3)	231	565	49	270	117	--
Total unimpaired flow at Pine Flat Reservoir (1	1,202	3,113	274	1,400	116	960 to 1,930
Kaweah River						
Total unimpaired flow at Terminus Reservoir (1)	283	814	61	280	99	175 to 425
Tule River						
Total unimpaired flow at Success Reservoir (1)	63	223	2	47	75	25 to 90
Kern River						
Kern River near Kernville (3)	358	1,257	83	300	84	--
Total unimpaired flow at Isabella Reservoir (1)	446	1,656	84	365	82	185 to 685

(1) 50 year average based on data years 1931 - 1980
(2) 50 year average based on data years 1929 - 1978
(3) 50 year average based on data years 1926 - 1975
(4) 47 year average based on data years 1929 - 1975
(5) See inside back cover for definition of unimpaired runoff and 80 percent probability range.

ATER YEAR UNIMPAIRED RUNOFF
LLEY STREAMS
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1, 1982

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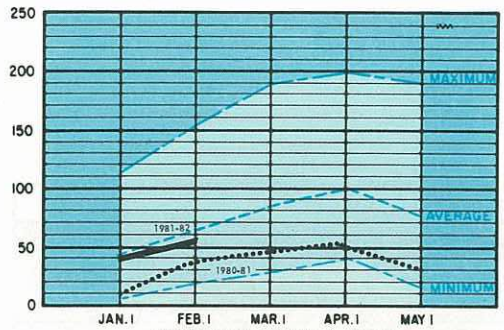
Water Year Unimpaired Runoff...October through September . . . in 1,000 Acre-Feet (5)

HISTORICAL			*	DISTRIBUTION							FORECASTS	
50-Year Average	Maximum of Record	Minimum of Record	October through January	February	March	April	May	June	July	August and September	Water Year Forecast	Percent of Average
				Values in parentheses indicate the 80 percent probability range for water year forecasts →								
817	1,791	164	--	--	--	--	--	--	--	--	--	--
1,240	2,353	576	--	--	--	--	--	--	--	--	--	--
3,018	5,361	1,484	--	--	--	--	--	--	--	--	--	--
5,756	10,796	2,479	3,350	850	870	830	580	340	250	430	7,500 (6,300 to 9,400)	130
8,317	15,876	3,294	5,270	1,440	1,350	1,160	810	490	340	540	11,400 (9,200 to 14,200)	137
759	1,268	395	--	--	--	--	--	--	--	--	--	--
2,346	4,400	666	--	--	--	--	--	--	--	--	--	--
206	637	24	--	--	--	--	--	--	--	--	--	--
282	562	31	--	--	--	--	--	--	--	--	--	--
4,429	9,492	994	3,370	650	700	870	780	380	170	210	7,130 (6,100 to 8,950)	161
541	1,055	102	--	--	--	--	--	--	--	--	--	--
170	292	29	--	--	--	--	--	--	--	--	--	--
343	564	97	--	--	--	--	--	--	--	--	--	--
2,297	4,543	368	1,830	370	380	460	500	260	60	50	3,910 (3,300 to 4,300)	170
585	1,233	65	--	--	--	--	--	--	--	--	--	--
1,259	9,412	144	--	--	--	--	--	--	--	--	--	--
304	536	58	--	--	--	--	--	--	--	--	--	--
2,620	5,786	349	1,940	430	440	560	630	380	80	40	4,500 (3,700 to 5,200)	172
												160
362	876	40	274	100	90	85	50	15	5	1	620 (510 to 870)	171
539	1,009	124	--	--	--	--	--	--	--	--	--	--
721	1,692	129	305	80	95	150	235	165	20	10	1,060 (900 to 1,400)	147
469	928	88	--	--	--	--	--	--	--	--	--	--
1,117	2,834	154	465	130	145	220	350	230	60	20	1,620 (1,300 to 2,200)	145
438	764	122	--	--	--	--	--	--	--	--	--	--
756	1,660	257	--	--	--	--	--	--	--	--	--	--
1,823	3,852	339	630	200	220	320	520	460	160	30	2,540 (2,050 to 3,250)	139
435	1,019	91	--	--	--	--	--	--	--	--	--	--
952	2,188	150	225	110	120	170	280	220	60	25	1,240 (1,000 to 1,750)	130
1,264	2,964	360	--	--	--	--	--	--	--	--	--	--
109	297	22	--	--	--	--	--	--	--	--	--	--
280	2,130	71	--	--	--	--	--	--	--	--	--	--
1,739	4,367	375	275	130	160	280	510	500	190	85	2,130 (1,650 to 3,000)	122
												134
266	607	58	--	--	--	--	--	--	--	--	--	--
1,631	4,202	385	230	80	110	230	500	500	170	70	1,890 (1,500 to 2,700)	116
429	1,270	92	65	30	45	70	105	85	20	10	430 (300 to 650)	100
142	503	15	27	14	18	20	19	7	1	0	106 (70 to 200)	75
527	1,685	162	--	--	--	--	--	--	--	--	--	--
674	2,226	174	85	35	50	85	125	110	45	35	570 (330 to 1 000)	85

* Unimpaired runoff to date .

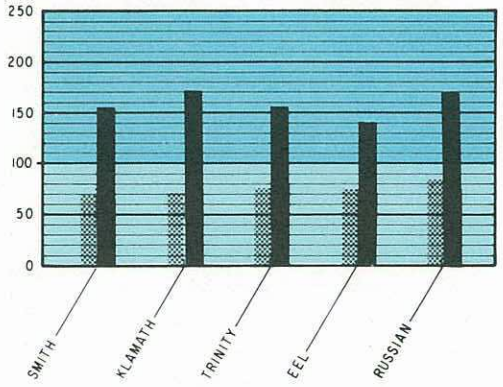
Monthly distributions of runoff forecasts are estimated based on comparisons with previous historic water years.

NORTH COASTAL AREA



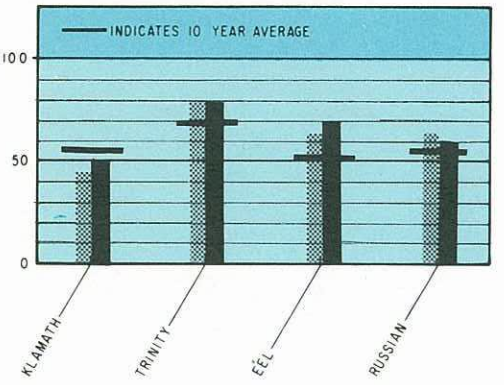
SNOWPACK ACCUMULATION

WATER CONTENT IN PERCENT OF APRIL 1 AVERAGE



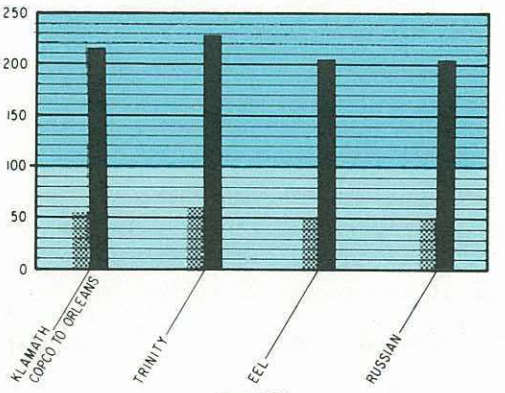
PRECIPITATION

OCTOBER 1 TO DATE IN PERCENT OF AVERAGE



RESERVOIR STORAGE

CONTENTS OF MAJOR RESERVOIRS IN PERCENT OF CAPACITY



RUNOFF

OCTOBER 1 TO DATE IN PERCENT OF AVERAGE

FEBRUARY 1, 1981 FEBRUARY 1, 1982

Snowpack - Measurements of the snowpack were obtained at 11 snow courses on or about February 1. These measurements indicate that the snowpack water equivalent was 422 mm (16.6 inches). This value represents 86 percent of the February 1 average or 56 percent of the April 1 (seasonal) average. This compares to 39 percent of the April 1 average measured at this time last year and 49 percent measured at this time two years ago. Although greater than the past two years, the snowpack water equivalent is still less than the long term average for this date.

The Oregon Cooperative Snow Surveys, through the U. S. Soil Conservation Service in Portland, Oregon, reports that the snowpack water equivalent in the Upper Klamath River Basin on February 1 was 130 percent of the February 1 average. This compares very favorably to 20 percent, 62 percent, and 30 percent of the February 1 average for measurements at this time of year in 1981, 1980, and 1979, respectively.

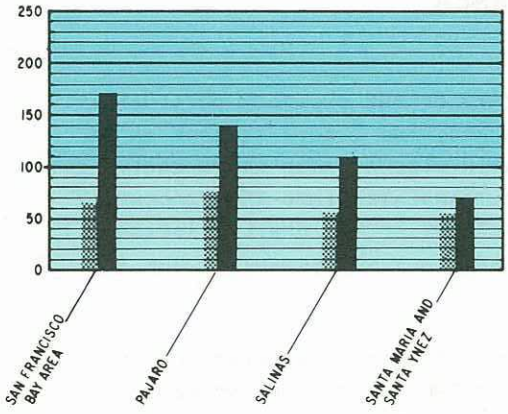
Precipitation - Precipitation in this area for the four months since October 1 averaged 155 percent of normal. It varied from 523 mm (20.59 inches) or 199 percent at Yreka to 655 mm (25.80 inches) or 117 percent at Big Bar R. S. Subdrainage values are doubled those experienced a year ago. Several stations, Yreka, in the Klamath, Santa Rosa and Fort Ross, in the Russian, have exceeded their water year normals at this early date.

January precipitation averaged 80 percent of normal over the area. Extremes varied from 221 mm (8.72 inches) or 138 percent at Santa Rosa to 76 mm (3.00 inches) or 20 percent at Upper Mattole.

Reservoir Storage - Storage on February 1 in six major reservoirs of the North Coastal area was 2.75 million dam^3 (2.23 million ac-ft). This is 114 percent of average storage for February 1 and about 80 percent of available capacity. One year ago storage was reported to be 109 percent of average and about 77 percent of available capacity. All reservoirs except Lewiston, on the Trinity River, were storing above average amounts. Lewiston, with a capacity of about 17 900 dam^3 (14,500 ac-ft), reported a February 1 storage of 16 700 dam^3 (13,500 ac-ft) or 98 percent of average and about 93 percent of available capacity. One year ago on February 1, storage in Lewiston was 17 100 dam^3 (13,900 ac-ft).

Runoff - January runoff from the North Coastal streams was 3.16 million dam^3 (2.56 million ac-ft) or 97 percent of normal. For the period October through January, the four-month total was 14.1 million dam^3 (11.4 million ac-ft) or 210 percent of normal. One year ago the four-month water year total was 3.58 million dam^3 (2.9 million ac-ft) or 53 percent of normal.

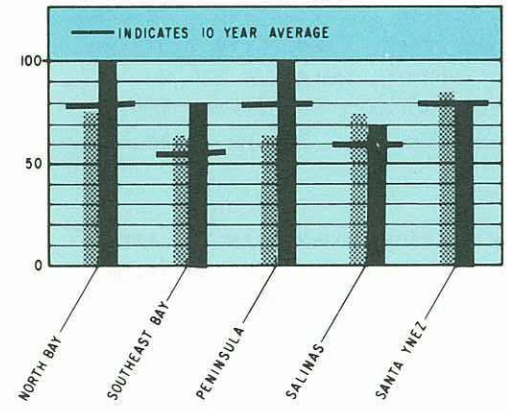
SAN FRANCISCO BAY AND CENTRAL COASTAL AREAS



PRECIPITATION
OCTOBER 1 TO DATE IN PERCENT OF AVERAGE

Precipitation - In the San Francisco Bay and Central Coastal areas, precipitation was 130 percent of normal for the period October 1 through January 31. It varied widely from 216 per percent at Redwood City with 622 mm (24.47 inches) to 66 percent at Santa Barbara with 157 mm (6.20 inches). Except for the Santa Maria and Santa Ynez Basins, all subdrainage values were well above normal and about doubled last year's amount. Several Bay Area stations have exceeded their water year normals.

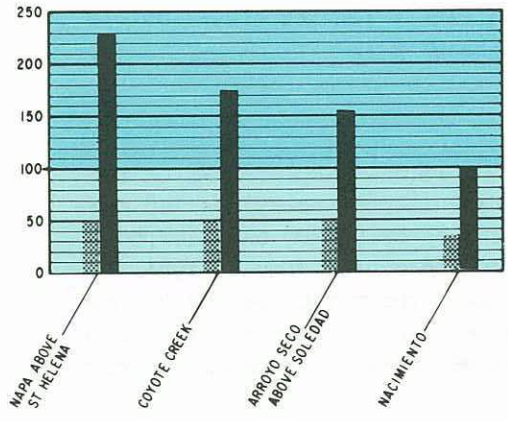
During January, precipitation averaged 145 percent. The greatest monthly total reported was 474 mm (18.68 inches) or 170 percent at Lagunitas Lake in Marin County. However, a bucket survey after the deluge which preceded the land slides in the Ben Lomond area indicated 36-hour storm totals were as high as 635 mm (25 inches).



RESERVOIR STORAGE
CONTENTS OF MAJOR RESERVOIRS IN PERCENT OF CAPACITY

Reservoir Storage - Storage on February 1 in 17 major reservoirs in the San Francisco Bay area was 714 000 dam^3 (579,000 ac-ft) or 135 percent of the February 1 average and 84 percent of available capacity. All seventeen reservoirs were above average, ranging from a high of 218 percent to a low of 106 percent. One year ago these reservoirs reported 554 000 dam^3 (449,000 ac-ft) or 102 percent of the February 1 average and 65 percent of capacity.

Storage in six major reservoirs in the Central Coastal area was about 889 000 dam^3 (721,000 ac-ft). This is 114 percent of average for February 1 or 74 percent of available capacity. One year ago, 940 000 dam^3 (762,000 ac-ft) was reported in storage on February 1, which was 122 percent of average for February 1 or 78 percent of available capacity.



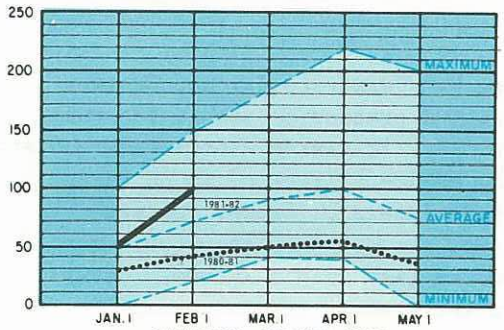
RUNOFF
OCTOBER 1 TO DATE IN PERCENT OF AVERAGE

Runoff - January runoff in selected San Francisco Bay area streams was 65 500 dam^3 (53,100 ac-ft) or 168 percent of normal. The total runoff, for the period October through January, was 133 000 dam^3 (108 000 ac-ft) or 212 percent of normal. Last year the January runoff for these streams was 27 100 dam^3 (22,000 ac-ft) or 70 percent of normal. For the period October through January last year, the total was 32 000 dam^3 (26,000 ac-ft) or 50 percent of normal.

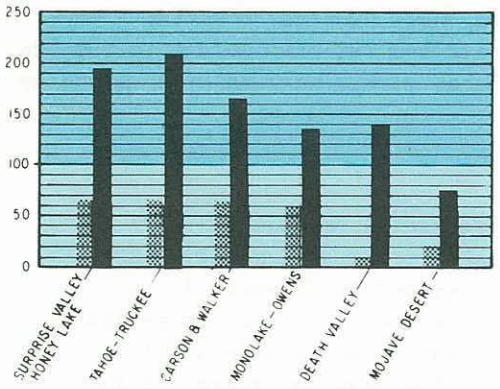
Selected Central Coastal area streams produced 130 800 dam^3 (106,000 ac-ft) or 157 percent of normal. The four-month total was 179 000 dam^3 (145,000 ac-ft) or 119 percent of normal. This compares with 40 percent of normal for the same four-month period one year ago.

FEBRUARY 1, 1981 ▒ FEBRUARY 1, 1982 ■

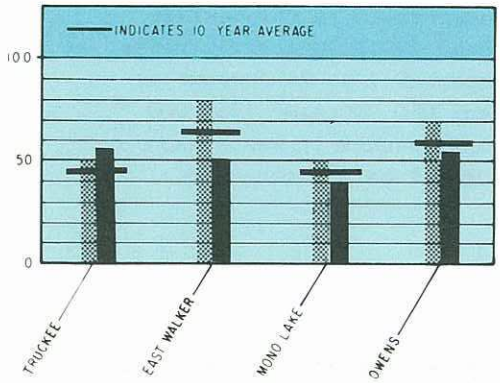
LAHONTAN AREA



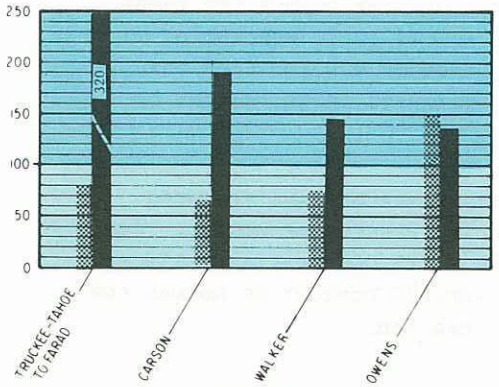
SNOWPACK ACCUMULATION
WATER CONTENT IN PERCENT OF APRIL 1 AVERAGE



PRECIPITATION
OCTOBER 1 TO DATE IN PERCENT OF AVERAGE



RESERVOIR STORAGE
CONTENTS OF MAJOR RESERVOIRS IN PERCENT OF CAPACITY



RUNOFF
OCTOBER 1 TO DATE IN PERCENT OF AVERAGE

FEBRUARY 1, 1981 FEBRUARY 1, 1982

Snowpack - Measurements of the snowpack obtained at 44 snow courses, 12 aerial markers, and 8 snow sensors on or about February 1 indicate a basin wide average water equivalent of 490 mm (19.3 inches). That translates into 150 percent of average for February 1 or 98 percent of the April 1 (seasonal) average. At this time last year, only 44 percent of the April 1 average was in place.

Surprise Valley shows the largest snowpack water equivalent in relative terms, at 190 percent of average for February 1. This is in stark contrast to last year at this time when the Surprise Valley area was the lowest with only 57 percent of the February 1 average.

Precipitation - In the Lahontan area, precipitation was 150 percent of normal for the four-month period October 1 through January 31. Except for the Mojave Desert, all sub-drainages were above normal. Seasonal values were over twice those experienced for this same period one year ago. Seasonal accumulations at various stations were: Tahoe City 1 013 mm (39.88 inches) or 231 percent of normal, which is 226 mm (8.90 inches) above its water year normal; Bridgeport 169 mm (6.64 inches) or 150 percent; and Mono Lake 233 mm (9.18 inches) or 11 percent.

January precipitation averaged normal in the area. Some life supporting amounts were: Tahoe City 242 mm (9.54 inches) or 154 percent; South Lake, in the Owens drainage, 90 mm (3.56 inches) or 116 percent; Death Valley 2 mm (0.08 inch) or 36 percent.

Reservoir Storage - February 1 storage in eight major reservoirs in this area was 312 000 dam^3 (253,000 ac-ft). This is 97 percent of average for February 1 and 59 percent of available capacity. On February 1, the usable storage in Lake Tahoe was about 533 000 dam^3 (432,000 ac-ft). This is 124 percent of average for February 1. One year ago, Lake Tahoe storage was 430 000 dam^3 (349,000 ac-ft), which was 95 percent of average for February 1. The lake's surface elevation was 1897.3 metres (6226.50 ft) on February 1.

Runoff - January runoff in selected streams of the Lahontan area totaled 102 000 dam^3 (82,800 ac-ft) or 148 percent of normal. This is an increase of 55 300 dam^3 (44,800 ac-ft) or 54 percent over the runoff during January 1981. For the period October through January, the total was 455 000 dam^3 (369,000 ac-ft) or 209 percent of normal. This compares with 210 000 dam^3 (170,000 ac-ft) or 96 percent of normal one year ago.

FORECASTS OF APRIL-JULY UNIMPAIRED RUNOFF AT SELECTED CALIFORNIA STREAMS AS OF FEBRUARY 1, 1982

DRAINAGE BASIN AND WATERSHED	Unimpaired Runoff in 1000 Cubic Dekametre 1000 Acre-Feet (3)								
	HISTORICAL						FORECASTS		
	50 Year Average		Maximum of Record		Minimum of Record		April - July Forecasts		Percent of Average
	1000 DAM3	1000 Ac-Ft.	1000 DAM3	1000 Ac-Ft.	1000 DAM3	1000 Ac-Ft.	1000 DAM3	1000 Ac-Ft.	
NORTH COASTAL AREA									
Trinity River at Lewiston	792	642	1727	1400	97	79	800	650	101
Scott River at Ft. Jones	247	200					245	200	100
Upper Klamath Lake (1)							994	806	150
LAHONTAN AREAS									
Truckee River, Lake Tahoe to Farad accretion	318	258	865	701	72	58	405	330	128
Lake Tahoe Rise (assuming gates closed)	.43 m	1.42 ft.					.54 m	1.76 ft	124
East Carson River near Gardnerville	227	184	501	406	52	42	290	235	128
West Carson River at Woodfords	65	53	133	108	15	12	80	65	123
East Walker River near Bridgeport	76	62	258	209	7	6	100	80	127
West Walker River near Coleville	176	143	407	330	42	34	220	180	126
Owens River at Long Valley (2)							122	99	118
SURPRISE VALLEY AREA									
Bidwell Creek near Ft. Bidwell	14.80	12.00	--	--	--	--	16.70	13.50	113
Mill Creek above diversions	5.06	4.10	--	--	--	--	5.80	4.70	115
Deep Creek above diversions	4.44	3.60	--	--	--	--	4.90	4.00	111
Eagle Creek at Eagleville	5.30	4.30	--	--	--	--	5.90	4.80	112
GOOSE LAKE TRIBUTARIES									
New Pine Creek below Schroeders	9.07	7.35	--	--	--	--	10.20	8.30	113
Cottonwood Creek below Larkin Garden Ditch	3.02	2.45	--	--	--	--	3.30	2.70	110
Lassen Creek near Willows Ranch	9.30	7.54	--	--	--	--	10.40	8.40	111
Davis Creek above Diversion No.4	7.71	6.25	--	--	--	--	8.50	6.90	110

(1) Forecast by U.S. Soil Conservation Service, Portland, Oregon, for monthly period, April through September.

(2) Forecast by Dept. of Water and Power, City of Los Angeles, for monthly period, April through September.

(3) Inside back cover for definition of unimpaired runoff.

DAM3 = Cubic Dekametre

SOUTH COASTAL AND COLORADO DESERT AREAS

Precipitation - In the South Coastal area, precipitation averaged 85 percent of normal over the period October 1 through January 31. Except for the San Diego River drainage, seasonal catches in all subdrainages were slightly below normal. Totals varied from 339 mm (13.34 inches) or 78 percent at Mt. Wilson to 457 mm (17.98 inches) or 110 percent at Cuyamaca in the San Diego River drainage. January precipitation averaged 115 percent of normal over the area. It varied from 132 percent at San Diego with 69 mm (2.71 inches) to 68 percent at Los Angeles with 55 mm (2.17 inches). Highest January was measured at Cuyamaca with 306 mm (12.05 inches) or 202 percent.

Precipitation in the Colorado Desert area was 40 percent of normal for the period October 1 through January 31. Extremes varied from 74 percent at Needles to 5 percent at Blythe. January precipitation averaged 50 percent over the area. Amounts were less than an inch.

Reservoir Storage - February 1 storage in 28 major reservoirs on the South Coastal area was 1.64 million dam^3 (1.33 million ac-ft). This is 113 percent of the February 1 average and about 63 percent of available capacity. Storage in these reservoirs one year ago was 1.85 million dam^3 (1.5 million ac-ft).

Runoff - Runoff during January was 7 650 dam^3 (6,200 ac-ft) or 31 percent of normal. This compares to 8 880 dam^3 (7,200 ac-ft) or 36 percent of normal a year ago. Runoff for the period October through January was 15 300 dam^3 (12,400 ac-ft) or 31 percent of normal.

MAJOR WATER DISTRIBUTION PROJECTS

State Water Project - Based on current forecasts of water supply, Lake Oroville is expected to fill by June 1982. No deficiencies are anticipated this year.

Central Valley Project - February 1 runoff forecasts indicate that the CVP shall have adequate water supplies, if normal precipitation is received through June. All the demands by CVP and agricultural water users served by Shasta, Trinity, and Folsom will be met. The inflow forecast for Millerton Lake indicates a full Class 1 supply. (For the status of San Luis Reservoir, refer to the Reservoir Storage table.)

Colorado River - February 1 snowpack in the Colorado River Basin, according to the U. S. Soil Conservation Service, is about 135 percent of normal for the basin, and ranges from a high of 145 percent on the main stream of the Colorado River, above Datsero, to a low of 105 percent on the Animas River. Snowpack conditions on the San Juan watershed in Colorado for February 1 is 106 percent.

The U. S. Bureau of Reclamation and the U. S. National Weather Service, Salt Lake City, Utah, forecasts that flow in the Colorado River, inflow to Lake Powell, during April-July 1982 will be about 10.9 million dam^3 (8.8 million ac-ft) or 116 percent of the U. S. Bureau of Reclamation's long-time average.

MAJOR WATER DISTRIBUTION PROJECTS

RESERVOIR STORAGE

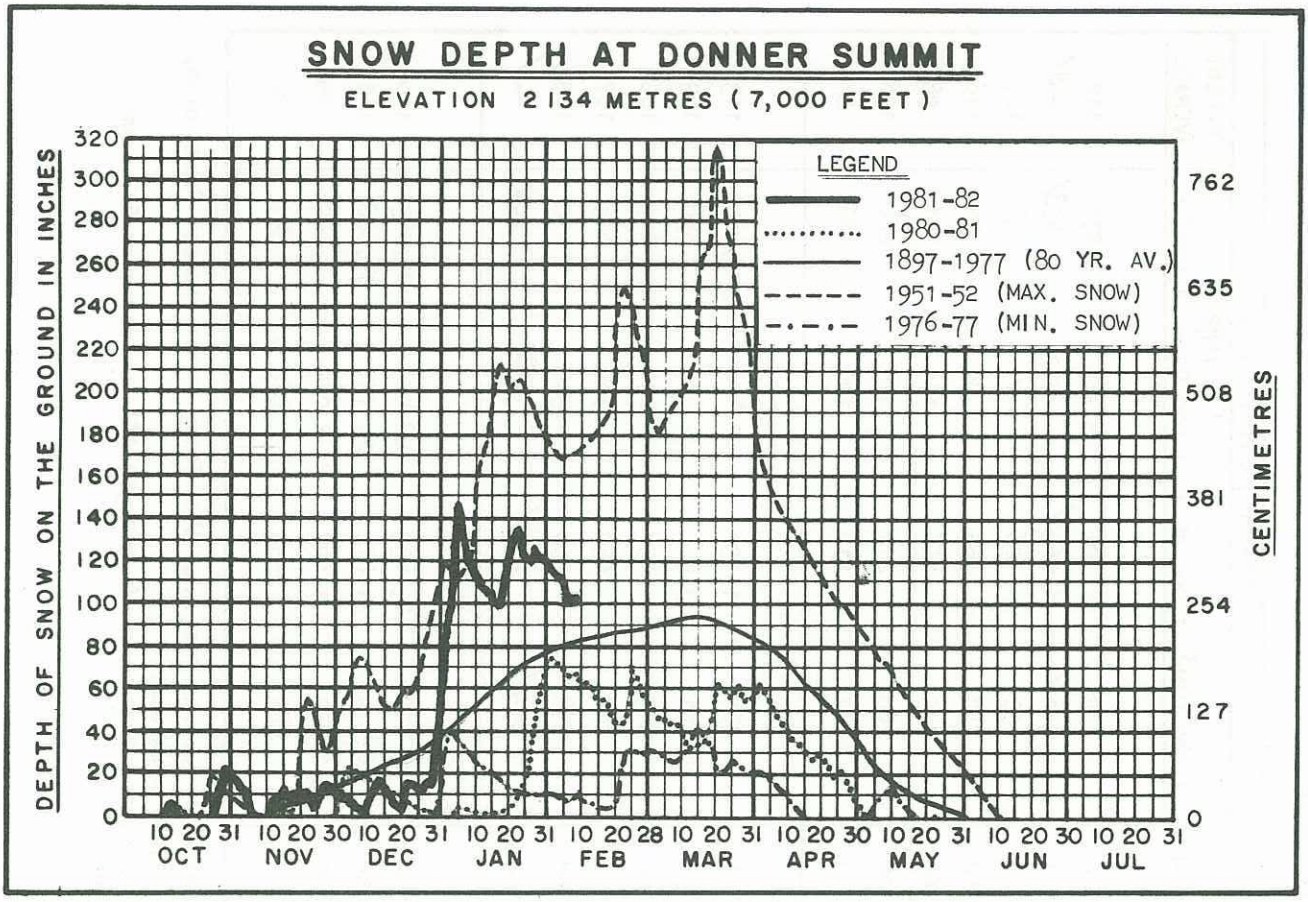
RESERVOIR	CAPACITY		AVERAGE STORAGE[1]		STORAGE AS OF FEBRUARY 1				
					1981		1982		PERCENT AVERAGE
	1 000 DAM^3	1,000 AF	1 000 DAM^3	1,000 AF	1 000 DAM^3	1,000 AF	1 000 DAM^3	1,000 AF	
STATE WATER PROJECT									
OROVILLE	4 364	3,538	3 049	2,472	3 554	2,881	3 423	2,775	112
SAN LUIS SWP[2]	1 317[2]	1,068[2]	1 111	901	1 311[3]	1,063[3]	52[3]	42[3]	--[4]
LAKE DEL VALLE	95	77	37	30	32	26	47	38	127
SILVERWOOD LAKE	96	78	77	62	80	65	89	72	116
PYRAMID LAKE	211	171	204	165	205	166	199	161	98
CASTAIC LAKE	398	323	254	206	260	211	345	280	136
PERRIS RESERVOIR	163	132	126	102	147	119	106	86	84
CENTRAL VALLEY PROJECT									
CLAIR ENGLE LAKE	3 020	2,448	2 172	1,761	2 381	1,930	2 446	1,983	113
SHASTA LAKE	5 615	4,552	3 876	3,142	4 261	3,454	4 386	3,556	113
WHISKEYTOWN	297	241	252	204	243	197	253	205	100
FOLSOM	1 246	1,010	620	583	812	658	768	623	107
MILLERTOWN LAKE	643	521	442	358	358	290	506	410	115
SAN LUIS CVP[2]	1 198[2]	971[2]	1 026	832	1 032[3]	837[3]	48[3]	39[3]	--[4]
COLORADO RIVER PROJECT									
LAKE MEAD	32 197	26,102	25 829	20,904	28 912	23,439	28 473	23,083	110
LAKE POWELL	30 840	25,002	21 055	17,069	26 979	21,872	24 181	19,608	115
LAKE MOHAVE	2 233	1,810	2 048	1,660	2 093	1,697	2 027	1,643	99
LAKE HAVASU	764	619	670	544	681	552	670	543	100

1/ AVERAGE STORAGE BASED ON 10-YEAR PERIOD 1972-1981, AND EXCLUDING PERIOD OF INITIAL FILLING. ALL STATE WATER PROJECT RESERVOIRS, SAN LUIS RESERVOIR, AND CVP WHISKEYTOWN RESERVOIR, HAVE LESS THAN 10-YEAR AVERAGES.

2/ JOINT FEDERAL-STATE RESERVOIR, WITH APPROXIMATELY 52 PERCENT OF CAPACITY 1 317 300 DAM^3 (1,067,900 AF) ALLOCATED TO SWP, AND APPROXIMATELY 48 PERCENT 1 197 600 DAM^3 (970,900 AF) ALLOCATED TO CVP.

3/ AMOUNT IN STORAGE FOR CVP OR FOR SWP.

4/ DRAWN DOWN FOR REPAIRS.



SNOW LINES

NEW FOR 82 - REFERRING TO OUR ORGANIZATIONAL OUTLINE (INSIDE FRONT COVER), NOTE THE ADDITION OF M. CATHARINE BERGREN, ASSISTANT DIRECTOR, AND ROBERT WILLIAMS, CHIEF, WATER SUPPLY AND FLOOD FORECASTING BRANCH, IN WHICH THE "SNOW SURVEYS PROGRAM" IS NOW INCLUDED. EQUALLY IMPORTANT, THE DEPARTMENT'S "SNOW GAUGERS", WHO MAKE THE LONGEST AND TOUGHEST SKI TREKS IN THE SIERRA TO CONDUCT SNOW SURVEYS, ARE NOW SHOWN ON THE ROSTER.

LIMITED FRESH WATER - OF ALL THE WATER IN THE WORLD, AN ESTIMATED 97 PERCENT IS IN THE OCEANS. OF THE REMAINING 3 PERCENT THAT IS FRESH, MUCH OF IT (ABOUT THREE-FOURTHS) IS FROZEN IN THE WORLD'S ICE CAPS, TUNDRA, AND GLACIERS. THAT LEAVES LESS THAN ONE PERCENT OF ALL THE FRESH WATER IN THE WORLD FOR NATURAL CONSUMPTIVE USES AND DEVELOPMENT TO SATISFY HUMAN NEEDS. --- IN CALIFORNIA, OUR ANNUAL SHARE OF FRESH WATER AVERAGES ABOUT 86 MILLION DAM^3 (70 MILLION ACRE-FEET). OF THIS, 18 MILLION DAM^3 (14.5 MILLION AC-FT) IS HELD IN TEMPORARY SNOW STORAGE. IT IS THE MEASUREMENT OF THIS SNOW STORED FRESH WATER AND FORECASTING OF SNOWMELT RUNOFF THAT GIVES CALIFORNIA "AN EDGE" IN PLANNING FOR FUTURE WATER USE.

CITY SNOW - FOR THOSE CALIFORNIANS WHO THINK SNOW FALLS ONLY IN THE MOUNTAINS OR FOOTHILLS - HERE ARE SOME SNOWSTORM AMOUNTS THAT HAVE BEEN RECORDED IN SEVERAL CALIFORNIA CITIES:

CITY	DATE	MM	INCHES
EUREKA	1-13-1907	86	3.4
FRESNO	1-12-1930	64	2.5
SAN FRANCISCO	2-05-1887	94	3.7
SACRAMENTO	1-05-1888	102	4.0
LOS ANGELES	1-15-1932	51	2.0
BEAUTIFUL DOWNTOWN BURBANK	1-11-1949	119	4.7
MT. SHASTA CITY	12-09-1952	1 791	70.5

SNOWPACK - Snow data is a major index of spring and summer runoff from Sierra Nevada watersheds. April 1 data historically reflects the magnitude of the snowpack at or near the maximum seasonal accumulation. Averages are based on April 1 data for the period 1931-1975 (45 years).

PRECIPITATION - Averages are based on the period 1931-1975 (45 years).

RUNOFF AND FORECASTS - Runoff data and runoff forecasts are shown as unimpaired values. Unimpaired runoff represents the natural water production of a river basin, unaltered by upstream diversions, storage, or by export or import of water to or from other watersheds. Forecasts of runoff assume median conditions subsequent to the date of forecast.

Runoff probability ranges are statistically derived from historical data. The 80 percent probability range is comprised of the 90 percent exceedence level value and the 10 percent exceedence level value. This means that actual runoff should fall within the stated limits eight times out of ten.

Runoff averages for most streams are based on the 50 year period 1931-1980 with data through 1975 being final values. For more details, contact California Cooperative Snow Surveys, P. O. Box 388, Sacramento, CA 95802, (916) 445-2196.

SELECTED METRIC CONVERSION FACTORS -

1 acre-foot	=	1.2335 cubic dekametres
1 inch	=	25.4 millimetres
1 inch	=	2.54 centimetres
1 foot	=	.3048 metres
1 mile	=	1.6093 kilometres

COVER - A NEW SNOWFALL COVERS THE LANDSCAPE AND THE WORKS OF MANKIND. THIS SUMMER CABIN, WITH THE STILL EQUALLY DISTRIBUTED ROOF LOAD, IS LOCATED NEAR ECHO SUMMIT, OVERLOOKING LAKE TAHOE. (PHOTO BY NED PETERSON.)

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