CALIFORNIA COOPERATIVE SNOW SURVEYS

State of California

Department of Water Resources

BULLETIN No. 120-67

WATER CONDITIONS IN CALIFORNIA

REPORT No. 3

APRIL 1, 1967

RONALD REAGAN
Governor
State of California

WILLIAM R. GIANELLI
Director
Department of Water Resources

FOREWORD

REPORTS ENTITLED "WATER CONDITIONS IN CALIFORNIA" ARE PREPARED AS OF THE FIRST OF EACH MONTH, FEBRUARY THROUGH MAY, AND IN THE FALL OF EACH YEAR BY THE DEPARTMENT OF WATER RESOURCES, STATEWIDE OPERATIONS OFFICE, PURSUANT TO SECTION 228, ARTICLE 2, CHAPTER 2, DIVISION 1, OF THE WATER CODE WHICH PROVIDES THAT:

> "THE DEPARTMENT SHALL GATHER AND CORRELATE INFORMATION AND DATA PERTINENT TO AN ANNUAL FORECAST OF SEASONAL WATER CROP, INCLUDING THE MAKING OF SURVEYS, EITHER INDEPENDENTLY OR IN COOPERATION WITH ANY PERSON OR ANY COUNTY, STATE, FEDERAL, OR OTHER AGENCY."

THESE REPORTS ARE PRODUCTS OF THE CALIFORNIA COOPERATIVE SNOW SURVEY PROGRAM, WHICH IS THE OPERATING VEHICLE DESIGNED TO CARRY OUT THE ABOVE PROVISIONS. DATA AND ASSISTANCE ARE FURNISHED NOT ONLY BY THE PUBLIC AND PRIVATE AGENCIES COOPERATING IN THE PROGRAM, BUT BY MANY OTHER AGENCIES AND INDIVIDUALS WHO SUPPLY NECESSARY HYDROLOGIC DATA. AGENCIES ACTIVELY PARTICIPATING IN THE CALIFORNIA COOPERATIVE SNOW SURVEY PROGRAM BY MAKING SURVEYS, OR BY FURNISHING FUNDS, ARE LISTED ON PAGE VII. AGENCIES CONTRIBUTING OTHER DATA ARE INDICATED IN THE BASIC DATA SUPPLEMENT TO THIS REPORT, WHICH IS A SEPARATE VOLUME.

THIS IS THE THIRD OF THE 1967 SERIES OF REPORTS AND DESCRIBES WATER CONDITIONS AS OF APRIL 1, 1967. THE REPORT FIRST SUMMARIZES WATER CONDITIONS ON A STATEWIDE BASIS. FOLLOWING THE SUMMARY, RUNOFF FORECASTS AND THE VARIOUS FACTORS OF WATER SUPPLY ARE DISCUSSED WITH RESPECT TO EACH OF THE HYDROGRAPHIC AREAS DELINEATED ON PLATE 1. THE AREA DISCUSSIONS INCLUDE BAR GRAPHS AND EXPECTANCY CURVES TO FACILITATE COMPARISONS OF CURRENT AND HISTORICAL CONDITIONS. PRINCIPAL WATER SUPPLY FACTORS ARE LISTED BELOW WITH PERTINENT COMMENTS REGARDING THEIR PRESENTATION IN THE REPORT.

PRECIPITATION - SEASONAL AND MONTHLY NORMALS (AVERAGES) ARE BASED ON THE 30-YEAR PERIOD 1931-60.

SNOWPACK - THE PRINCIPAL MONTHS OF SNOW DEPOSITION AND ACCUMULATION ARE DECEMBER THROUGH MARCH. MAXIMUM SNOWPACK IS CONSIDERED TO BE ATTAINED ON APRIL 1. AVERAGE SNOWPACK FIGURES ARE BASED ON THE 30-YEAR PERIOD 1931-60.

RESERVOIR STORAGE - THE TOTAL CONTENTS OF SELECTED MAJOR RESERVOIRS ARE RELATED TO THEIR AGGREGATE CAPACITIES AND TO THEIR COMBINED 10-YEAR AVERAGE SUPPLY. AVERAGE STORAGE IS BASED ON THE 10-YEAR PERIOD 1957-66.

STREAMFLOW - UNLESS OTHERWISE NOTED, STREAMFLOW IS THE COMPUTED UNIMPAIRED RUNOFF AS IT WOULD BE IF UNALTERED BY UPSTREAM DEVELOPMENT. STREAMFLOW AVERAGES ARE BASED ON THE 50-YEAR PERIOD 1911-60.

SUPPORTING DATA FOR THIS REPORT WILL BE SENT TO COOPERATORS AND IS AVAILABLE TO OTHER AGENCIES AND INDIVIDUALS UPON REQUEST.

ALLIED AND SUPPLEMENTARY HYDROLOGIC INFORMATION IS AVAILABLE IN THE BULLETIN 130 SERIES. INFORMATION ON THIS AND OTHER PUBLICATIONS BY THE DEPARTMENT OF WATER RESOURCES MAY BE OBTAINED BY WRITING TO:

STATE OF CALIFORNIA
OFFICE OF PROCUREMENT, DOCUMENTS SECTION
P. O. BOX 1612
SACRAMENTO, CALIFORNIA 95807

TABLE OF CONTENTS

	Page
FOREWORD	iii
ORGANIZATION - DEPARTMENT OF WATER RESOURCES, STATEWIDE OPERATIONS OFFICE	vi
AGENCIES COOPERATING IN THE CALIFORNIA SNOW SURVEY PROGRAM	vii
SUMMARY OF WATER CONDITIONS	1
NORTH COASTAL AREA	6
SAN FRANCISCO BAY AND CENTRAL COASTAL AREAS	10
SACRAMENTO VALLEY, CENTRAL VALLEY AREA	14
SAN JOAQUIN VALLEY, CENTRAL VALLEY AREA	22
LAHONTAN AREA	26
SOUTH COASTAL AREA	30
COLORADO DESERT AREA	34
"SNOW LINES"	36

Table Number		
1.	Selected Snowpack and Precipitation Data	5
2.	Forecasts of Unimpaired April-July Runoff - Sacramento Valley Streams	18
3.	Forecasts of Unimpaired April-July Runoff - San Joaquin Valley Streams	19
4.	Unimpaired April-July Runoff of Central Valley Streams in Recent Years	20
5.	Unimpaired Water Year Runoff of Central Valley Streams	21

Plate Number		
1.	Water Conditions in Hydrographic Areas	Following Summary
2.	Forecasts of April-July Runoff in Percent of Normal	Following Summary
3.	Seasonal Precipitation in Percent of Normal	Following Summary

COVER

Bishop Creek, a typical mountain stream, is shown here as it begins to release early spring snowmelt runoff from the vast frozen reservoir formed during the winter. This stream feeds into the Owens River near Bishop, California. Its pure waters will eventually reach the taps of municipal users in far away Los Angeles.

SUMMARY OF WATER CONDITIONS

IT WAS A WET MARCH. COOL STORMS WHICH BEGAN ABOUT MIDMONTH CONTINUED ON INTO EARLY APRIL AND HAVE ASSURED CALIFORNIA AN EXCELLENT WATER SUPPLY.

APRIL 1 SNOW SURVEY DATA, COUPLED WITH CURRENT LEVELS OF RESERVOIR STORAGE, CONFIRM THIS FACT. RUNOFF FORECASTS, WHICH WERE REDUCED ON MARCH 1 BECAUSE OF AN EXTREMELY DRY FEBRUARY, HAVE NOW BEEN INCREASED TO INDICATE A YEAR COMPARABLE TO 1962 WHICH, LIKE THIS YEAR, HAD EXCELLENT SNOWPACK CONDITIONS.

THE MOUNTAIN SNOWPACK NORMALLY REACHES MAXIMUM ACCUMULATION ABOUT APRIL 1 AND, THEREFORE, THE RUNOFF FORECASTS PRESENTED IN THIS REPORT SHOULD BE REASONABLY ACCURATE. PRECIPITATION DURING THE REMAINDER OF THE SEASON, EVEN THOUGH VERY LIGHT, WILL HAVE LITTLE MATERIAL EFFECT ON THE CURRENTLY INDICATED WATER SUPPLY POTENTIALS. AGENCIES RESPONSIBLE FOR RESERVOIR OPERATION AND/OR DISTRIBUTION SYSTEMS SHOULD BE PLANNING FOR THE POSSIBILITY OF HIGH SNOWMELT FLOWS, AS WELL AS FOR SATISFYING AGRICULTURAL NEEDS.

RUNOFF FORECASTS FOR THE APRIL THROUGH JULY PERIOD ARE ABOVE NORMAL FOR ALL MAJOR STREAMS, VARYING FROM 103 PERCENT OF NORMAL FOR THE TRINITY RIVER AT LEWISTON TO 176 PERCENT OF NORMAL FOR THE EAST WALKER RIVER NEAR BRIDGEPORT. IN THE SACRAMENTO VALLEY AREA, RUNOFF FORECASTS VARY FROM 112 PERCENT FOR THE INFLOW TO SHASTA TO ABOUT 134 PERCENT FOR THE FEATHER RIVER. IN THE SAN JOAQUIN VALLEY THE POTENTIAL WATER SUPPLY, WITH RESPECT TO NORMAL, IS EVEN BETTER. HERE, FORECASTS VARY FROM 113 PERCENT OF NORMAL FOR THE MERCED RIVER TO 162 PERCENT FOR THE KERN RIVER WHICH CONTINUES TO LEAD ALL OTHER MAJOR CENTRAL VALLEY STREAMS IN WATER SUPPLY POTENTIAL THIS YEAR.

A DEEP TROUGH OFF THE PACIFIC COAST USHERED IN A SERIES OF FOUR STORMS DURING MARCH, BOOSTING WATER YEAR PRECIPITATION UP TO 120 PERCENT OF NORMAL. MODERATE TO HEAVY PRECIPITATION OCCURRED OVER THE NORTHERN TWO-THIRDS OF THE STATE. PRECIPITATION OVER SOUTHERN CALIFORNIA WAS GENERALLY MODERATE EXCEPT FOR THE SAN GABRIEL AND SAN BERNARDINO MOUNTAINS, WHERE OVER ONE AND ONE-HALF TIMES MARCH NORMALS WERE REPORTED. THE FIRST STORM, A COLD ONE, LASTING THROUGH FIVE DAYS, PILED SNOW ON THE GROUND. BY MARCH 15 IT HAD REACHED THE GREATEST DEPTH OF THE SEASON AT NORDEN--210 INCHES. UNFORTUNATELY, A BRIEF ONE-DAY CLEARING WAS IMMEDIATELY FOLLOWED BY A WARMER STORM WHICH DUMPED UP TO FIVE INCHES OF RAIN ON THE 16TH, RESULTING IN AN OVERNIGHT CONSOLIDATION AND A DROP IN DEPTH AS DRAMATIC AS THE RISE. LOW BAROMETRIC PRESSURE DOMINATED THE WEATHER PICTURE THROUGHOUT THE REST OF THE MONTH. THE FINAL FOUR DAYS OF THE MONTH PRODUCED ANOTHER COLD STORM WHICH BROUGHT THREE TO FOUR INCHES OF WATER TO NORTHERN AND CENTRAL CALIFORNIA. THIS STORM CONTINUED INTO APRIL, CONTRIBUTING ADDITIONAL MOISTURE TO THE SIERRA WATERSHEDS.

WATER SUPPLY CONDITIONS FOR SOUTHERN CALIFORNIA ARE IMPROVED BECAUSE OF MARCH STORMS. THE RAINFALL PROVIDED SOME ASSISTANCE TO AGRICULTURAL AREAS AND REDUCED THE NEED FOR IMPORTED WATER. THE MONO-OWENS BASIN WHICH SUPPLIES THE LOS ANGELES AQUEDUCT SYSTEM IS PREDICTED TO PRODUCE ABOUT 160 PERCENT OF NORMAL AMOUNTS FOR THE APRIL THROUGH SEPTEMBER PERIOD. STORAGE IN THE COLORADO RIVER PROJECT RESERVOIRS IS ABOUT AVERAGE FOR THIS DATE AND, ALTHOUGH INFLOW DURING THE APRIL THROUGH JULY PERIOD FROM THE UPPER BASIN IS FORECASTED AT ABOUT 75 PERCENT OF NORMAL, THESE SOURCES OF IMPORTED SUPPLIES WILL PROVIDE NORMAL DELIVERIES THIS YEAR.

SUMMARY OF WATER CONDITIONS

In the following table, precipitation, water content of snow, and reservoir storage for each of the major hydrographic areas of the State are presented in terms of percent of average. Also presented in the same terms are runoff to date and a forecast of water year runoff for each of the hydrographic areas, assuming that normal precipitation will follow.

Hydrographic Area	Oct. 1-Apr. 31 Precipitation in Percent of Average	Apr. 1 Snow Water Content in Percent of Average	Apr. 1 Reservoir Storage in Percent of Average	Runoff in Percent of Avg.	
				Actual	Forecast
				Oct. 1, 1966 Mar. 31, 1967	1966-67 Water Year
North Coastal	110	100	95	125	115
San Francisco Bay	140	--	115	160	150
Central Coastal	120	--	145	190	175
South Coastal	125	--	160	170	150
Central Valley					
Sacramento Valley	125	130	110	135	130
San Joaquin Valley	120	130	160	190	145
Lahontan	140	140	100	145	140
Colorado Desert	60	--	--	--	--
Entire State	120	130	120 1/	140	130

1/ California Reservoirs only.

Runoff during March was 135 percent of normal on a statewide basis, reflecting contributions from the series of general storms during the month. South Coastal streams were running about average for the month, and most of the major river basins to the north produced well above average runoff. Sacramento Valley streams discharged 140 percent of normal March runoff and streams tributary to the San Joaquin Valley averaged 165 percent of normal runoff for the month.

Streamflow amounts experienced during March have enhanced the season's total runoff volumes for the October 1, 1966, to date period of the water year. This volume now stands at 140 percent of normal for the period with all areas having experienced well above average runoff. Here again, the San Joaquin Valley leads the State with 190 percent of average runoff for the water year to date. Forecasts of runoff on a water year basis reflect this early season abundance in that all major streams in the State are predicted to discharge above average runoff volumes for the 1966-67 water year. This condition will assist operators to hold their reservoir storage levels relatively high next fall and will result in carryover storage for possible use next season, thus, providing some insurance against deficiencies if a dry year develops.

SUMMARY OF WATER CONDITIONS

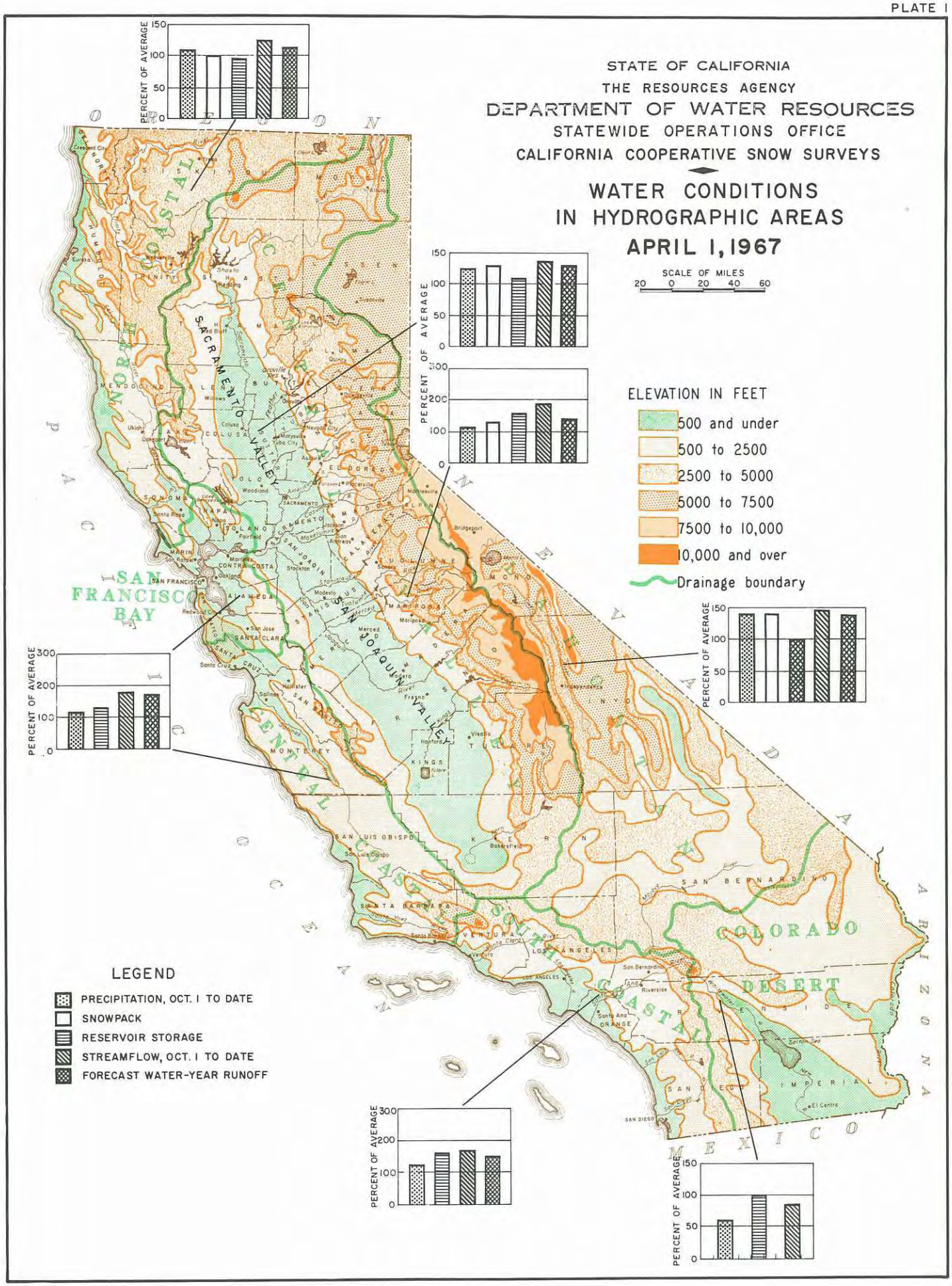
Snowpack measurements were obtained at 312 snow courses and 131 aerial snow depth markers throughout the State on or about April 1. The series of March storms began with heavy contributions to the snowpack followed by warm rains which melted most lower elevation snow. Month-end storms turned colder and again deposited snow at elevations below 2,000 feet in some areas. The net result was to boost the snowpack to 130 percent of average on a statewide basis by April 1. Data from automatic snow sensors during March again provided up-to-date information on the rate of snow accumulation in the American, Lake Tahoe, and Kings River watersheds. The warm rain which occurred on March 15-16 fell upon deep snow deposited during the preceding day. Snow sensors, monitored during this period, showed no water loss from the existing snowpack at the higher elevations.

Storage data were received for 122 major reservoirs in California which have a combined capacity of 23,586,000 acre-feet. Reservoir storage on April 1 is above average in all areas of the State except the North Coastal area. On April 1 these reservoirs were storing 17,167,000 acre-feet or 120 percent of the 10-year average for this date. This is an increase of 1,958,000 acre-feet during March and is 1,865,000 acre-feet more than the storage of one year ago. Stored water in the San Joaquin Valley has reached 160 percent of average, promising excellent surface supplies this season in this important agricultural area.

Data from 10 major reservoirs, serving both California and adjacent states, contained 26,306,000 acre-feet on April 1 which is normal for this date. Lake Mead, on the Colorado River, is storing 15,438,000 acre-feet or 90 percent of normal and Lake Powell, upstream, is storing 7,368,000 acre-feet.

Storage data for individual reservoirs will be presented in the Basic Data Supplement to this report along with individual snow courses, precipitation, and stream gaging station data.

Runoff forecasts and the various factors of water supply are treated in greater detail under the hydrographic area discussions which follow. Bar graphs and expectancy curves are included with the area discussions to facilitate comparisons of current and historical conditions.


STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
STATEWIDE OPERATIONS OFFICE
CALIFORNIA COOPERATIVE SNOW SURVEYS
WATER CONDITIONS
IN HYDROGRAPHIC AREAS
APRIL 1, 1967
SCALE OF MILES
20 0 20 40 60
ELEVATION IN FEET
500 and under
500 to 2500
2500 to 5000
5000 to 7500
7500 to 10,000
10,000 and over
Drainage boundary
PERCENT OF AVERAGE
LEGEND
PRECIPITATION, OCT. 1 TO DATE
SNOWPACK
RESERVOIR STORAGE
STREAMFLOW, OCT. 1 TO DATE
FORECAST WATER-YEAR RUNOFF
NORTH COASTAL
SACRAMENTO VALLEY
SAN FRANCISCO BAY
SAN JOAQUIN VALLEY
CENTRAL COASTAL
SOUTH COASTAL
COLORADO DESERT
PACIFIC OCEAN
NEVADA
ARIZONA
MEXICO

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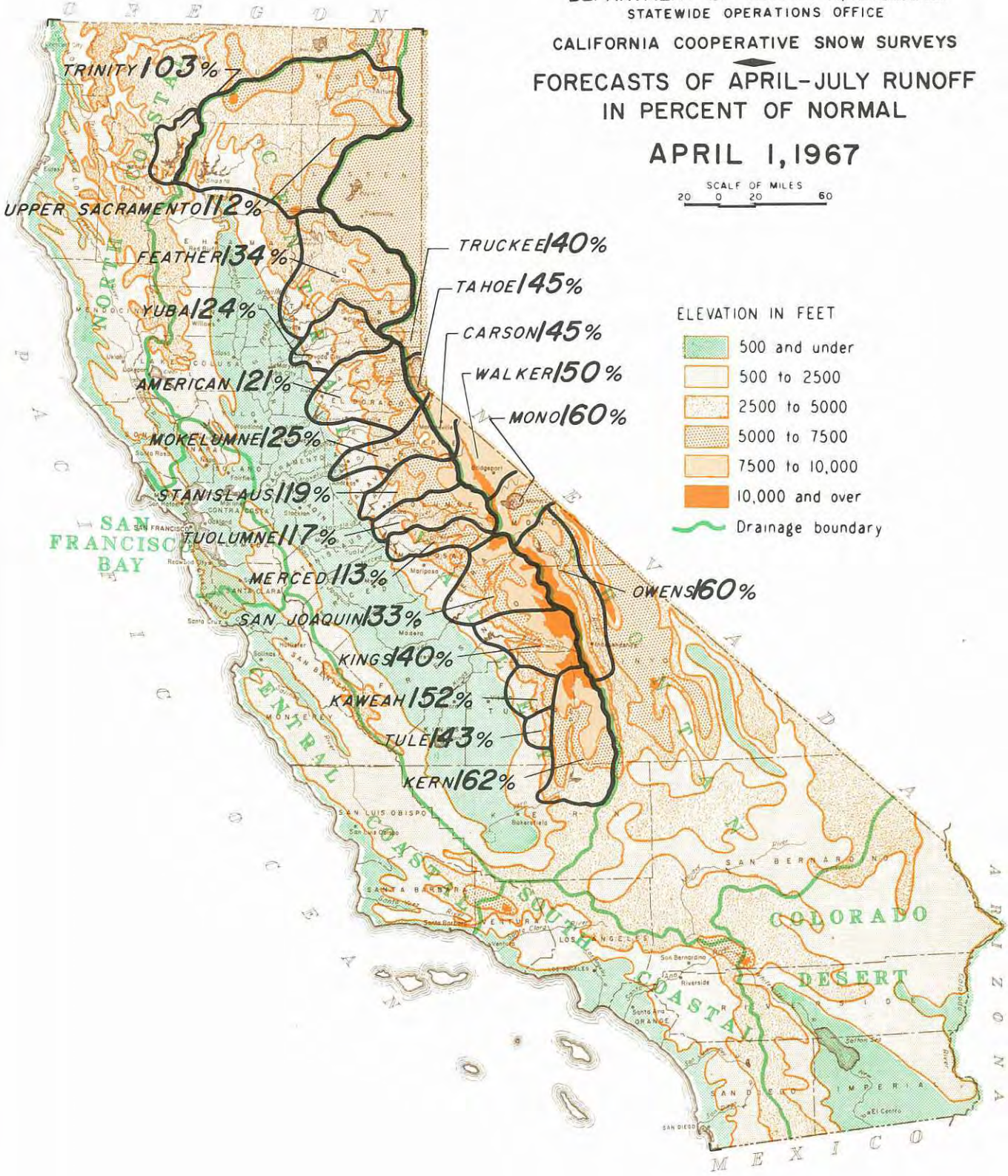
CALIFORNIA COOPERATIVE SNOW SURVEYS

FORECASTS OF APRIL-JULY RUNOFF IN PERCENT OF NORMAL

APRIL 1, 1967



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CALIFORNIA COOPERATIVE SNOW SURVEYS

SEASONAL PRECIPITATION IN PERCENT OF NORMAL

OCTOBER 1, 1966 – APRIL 1, 1967

TABLE 1

SELECTED SNOWPACK AND PRECIPITATION DATA

1A - Snow Data For Selected Key Courses

Snow Course	Watershed	Elevation (Feet)	Date of Survey	Snow Depth (Inches)	Snowpack Water Content 1967 (Inches)	1966 (Inches)	April 1 Average (Inches)
Middle Boulder #1	Scott River	6600	3-29	78.6	31.2	32.4	32.9
Mount Shasta	Sacramento River	7900	4-5	168.0	71.6	63.0	49.4
Upper Lassen Peak	Feather River	8480	Survey Delayed			69.5	79.0
Donner Summit	Yuba River	6900	3-29	115.8	48.7	31.3	39.9
Echo Summit	American River	7450	3-27	105.5	46.2	28.7	38.9
Lake Alpine	Stanislaus River	7550	4-1	143.6	49.6	34.2	41.7
Snow Flat	Merced River	8700	3-30	131.1	50.6	41.9	42.8
Kaiser Pass	San Joaquin River	9200	4-1	147.0	53.8	31.0	38.2
Round Meadow	Kern River	9000	3-24	48.8	19.7	18.6	26.3
Virginia Lakes	Walker River	9500	3-22	81.0	29.6	16.2	18.0
East Piute Pass	Owens River	10800	4-3	70.0	26.4	6.8	11.6

1B - Precipitation Data For Selected Key Stations

Station	Hydrographic Area	Elevation (Feet)	Precipitation in Inches: March 1967	March Average	Oct. 1 - Mar. 31 1966-67	Oct. 1 - Mar. 31 Average	Average Annual
Fort Bragg	North Coastal	80	9.33	5.04	36.90	32.78	38.34
Redwood City	San Francisco Bay	31	5.44	2.55	24.11	17.09	19.26
Santa Maria WB AP	Central Coastal	238	2.31	2.06	11.27	11.60	13.37
Mount Shasta City	Central Valley	3544	8.49	4.46	35.00	29.36	36.72
Bucks Lake		5100	17.32	9.73	74.09	58.42	69.50
Salt Springs		3700	12.76	6.39	45.69	36.11	43.78
Huntington Lake		7020	10.94	4.37	37.07	26.33	32.45
Giant Forest		6360	11.98	6.88	58.14	36.97	44.40
Red Bluff		341	2.69	2.70	21.26	18.17	22.05
Sacramento		25	4.15	2.46	21.66	15.40	18.02
Fresno		331	3.15	1.96	10.19	9.53	11.14
Susanville Airport	Lahontan	4148	3.69	1.51	16.09	11.54	14.48
Tahoe City		6228	10.95	3.95	36.38	26.09	30.90
Bishop		4108	.45	.55	7.81	4.66	5.84
Los Angeles City	South Coastal	312	2.02	2.26	17.42	13.02	14.68
San Diego		19	.70	1.57	7.74	9.17	10.40
Cuyamaca		4650	4.78	6.32	31.40	29.97	36.82
Imperial	Colorado Desert	-64	.12	.18	1.00	1.85	2.84

NORTH COASTAL AREA

PRECIPITATION - PRECIPITATION IN THE NORTH COASTAL AREA WAS ABOUT 110 PERCENT OF NORMAL FOR THE PERIOD OCTOBER 1 THROUGH MARCH 31. IT VARIED FROM 147 PERCENT OF NORMAL AT LAGUNITAS LAKE, IN THE RUSSIAN RIVER DRAINAGE, TO 69 PERCENT OF NORMAL AT STANDISH-HICKEY STATE PARK, IN THE EEL RIVER DRAINAGE. ALL OF THE INDIVIDUAL SUBDRAINAGES WERE NORMAL OR ABOVE. THE GREATEST STATEWIDE SIX-MONTH TOTAL OF 98.97 INCHES WAS REPORTED FROM HONEYDEW 2WSW IN THE MATTOLE RIVER DRAINAGE.

FOR THE MONTH OF MARCH, PRECIPITATION AVERAGED 145 PERCENT OF NORMAL. SUBDRAINAGES VARIED FROM 170 PERCENT OF NORMAL IN THE RUSSIAN RIVER DRAINAGE TO 120 PERCENT IN THE KLAMATH RIVER DRAINAGE. THE WETTEST SPOT IN CALIFORNIA DURING MARCH WAS ALSO HONEYDEW 2WSW, WHICH REPORTED A CATCH OF 21.34 INCHES, OR 138 PERCENT OF NORMAL.

SNOWPACK - MEASUREMENTS OF SNOWPACK WERE OBTAINED AT 19 SNOW COURSES ON OR ABOUT APRIL 1. THESE MEASUREMENTS INDICATE THAT SNOWPACK WATER CONTENT WAS 100 PERCENT OF THE APRIL 1 AVERAGE AS COMPARED TO 125 PERCENT ONE YEAR AGO. THE NORTH COASTAL AREA WAS THE ONLY AREA IN THE STATE THAT DID NOT RECEIVE SUBSTANTIAL INCREASES DURING THE MONTH OF MARCH.

THE OREGON COOPERATIVE SNOW SURVEYS REPORTS THAT THE SNOWPACK WATER CONTENT IN THE UPPER KLAMATH RIVER BASIN ON APRIL 1 WAS 94 PERCENT OF NORMAL AS COMPARED TO 98 PERCENT OF NORMAL ONE YEAR AGO.

RESERVOIR STORAGE - APRIL 1 STORAGE IN FOUR MAJOR INTRASTATE RESERVOIRS IN THIS AREA WAS ABOUT 2,312,000 ACRE-FEET OR 85 PERCENT OF CAPACITY AND NEAR AVERAGE FOR THIS DATE. THIS IS 140,000 ACRE-FEET MORE THAN WAS STORED IN THESE RESERVOIRS ONE MONTH AGO. THREE INTERSTATE RESERVOIRS IN THE AREA, LOCATED ON THE KLAMATH RIVER, CONTAINED 700,000 ACRE-FEET, WHICH IS AVERAGE FOR APRIL 1 AND ABOUT 60 PERCENT OF CAPACITY.

STREAMFLOW - RUNOFF DURING THE PAST MONTH WAS SLIGHTLY BELOW NORMAL IN THE KLAMATH RIVER BASIN AND NEAR NORMAL IN THE TRINITY RIVER BASIN. GREATER FLOWS, WITH RESPECT TO NORMAL, OCCURRED IN STREAMS TO THE SOUTH AND APPROACHED 150 PERCENT OF NORMAL FOR THE RUSSIAN RIVER WATERSHED. SEASON-TO-DATE RUNOFF IN THE AREA IS ABOUT 125 PERCENT OF NORMAL.

FORECASTS APRIL 1, 1967 - CONDITIONS AT THIS TIME INDICATE THAT RUNOFF OF THE NORTH COASTAL AREA DURING THE 1966-67 WATER YEAR WILL BE ABOUT 115 PERCENT OF AVERAGE. THIS FORECAST IS PREDICATED ON THE ASSUMPTION THAT NORMAL PRECIPITATION WILL FOLLOW.

THE APRIL-JULY RUNOFF OF THE TRINITY RIVER AT LEWISTON IS FORECASTED TO BE ABOUT 650,000 ACRE-FEET, WHICH IS 103 PERCENT OF THE AVERAGE RUNOFF AT THIS STATION. LAST YEAR, THE APRIL-JULY FLOW WAS 117 PERCENT OF AVERAGE.

THE U. S. SOIL CONSERVATION SERVICE, THE OREGON EXPERIMENT STATION, AND THEIR COOPERATORS FORECAST THAT APRIL-JULY RUNOFF INTO UPPER KLAMATH LAKE WILL BE ABOUT 559,000 ACRE-FEET, OR 106 PERCENT OF THE 1948-62 AVERAGE.

NORTH COASTAL AREA

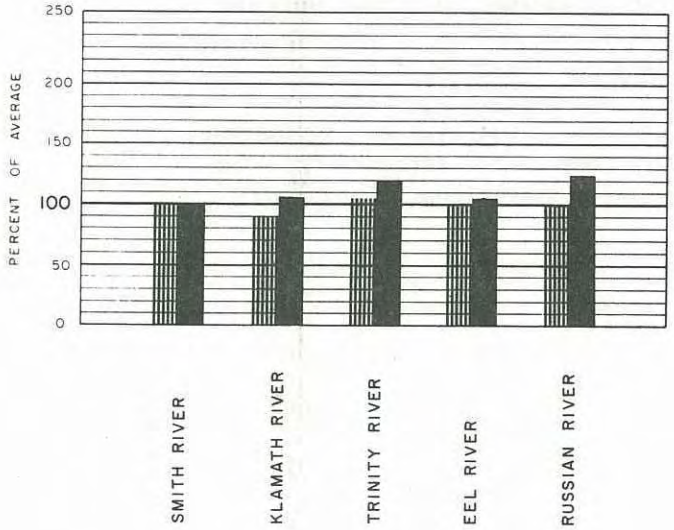
IMPACT

CONTINUED HEAVY PRECIPITATION INTO APRIL IS ADDING ADDITIONAL MOISTURE TO THIS AREA WHICH HAS ALREADY EXPERIENCED A NEARLY CONTINUOUS SERIES OF STORMS THROUGH THE MONTH OF MARCH. FORTUNATELY, IN THIS FLOOD CONSCIOUS AREA, THE STORMS HAVE PRODUCED RATHER EVENLY DISTRIBUTED CONTRIBUTIONS AND THUS, PROVIDED A HIGH MOISTURE BASE IN VALLEY SOILS UNACCOMPANIED BY DAMAGING RUNOFF VOLUMES. THIS WILL BE PARTICULARLY BENEFICIAL TO THIS AREA WHERE DRY FARMING AND GRAZING OPERATIONS PREDOMINATE. THE OUTLOOK FOR NORMAL WATER SUPPLIES FROM BOTH GROUND WATER AND NATURAL STREAMFLOW IS EXCELLENT FOR THE REMAINDER OF THE GROWING SEASON.

NORTH COASTAL AREA

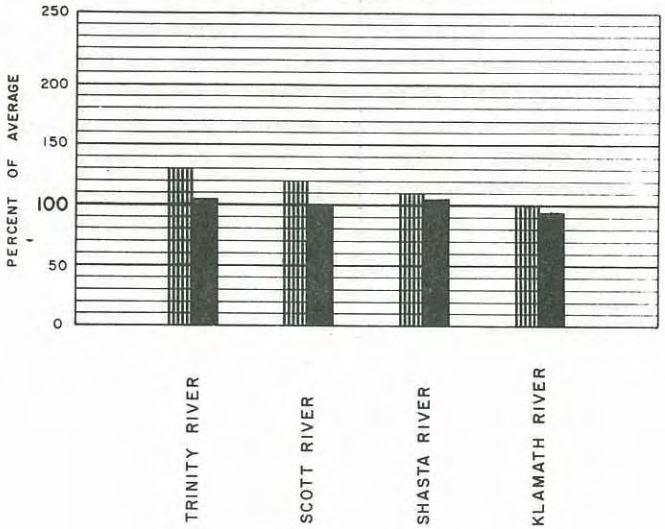
PRECIPITATION

SEASONAL PRECIPITATION
IN PERCENT OF AVERAGE TO DATE



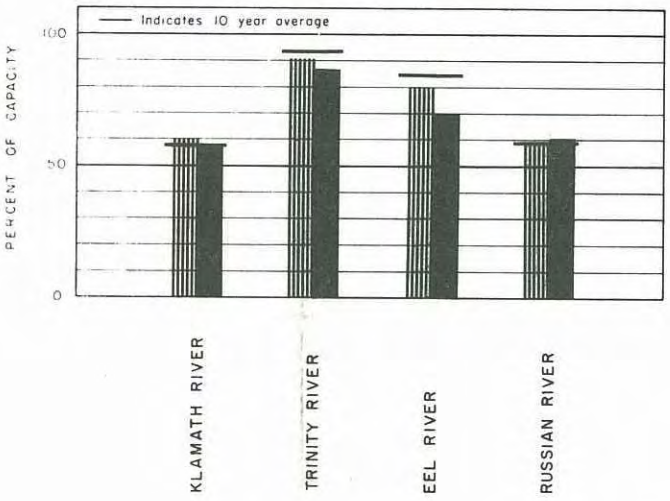
SNOWPACK

SNOWPACK WATER CONTENT
IN PERCENT OF AVERAGE TO DATE



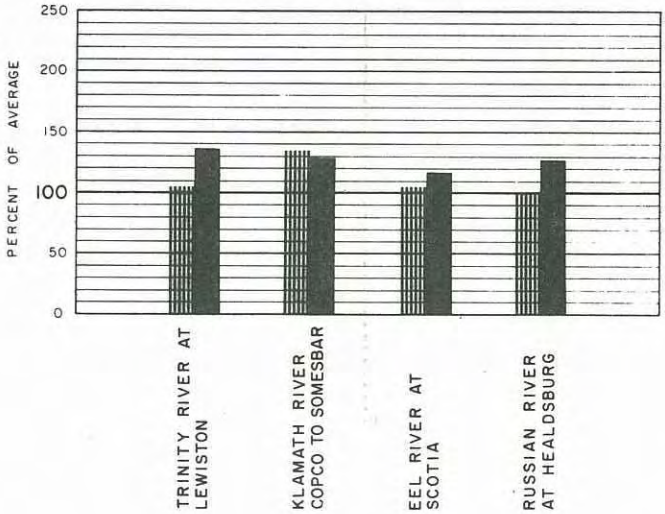
RESERVOIR STORAGE

CONTENTS OF MAJOR RESERVOIRS
IN PERCENT OF CAPACITY



STREAMFLOW

ACCUMULATED UNIMPAIRED RUNOFF SINCE OCTOBER 1
IN PERCENT OF AVERAGE TO DATE

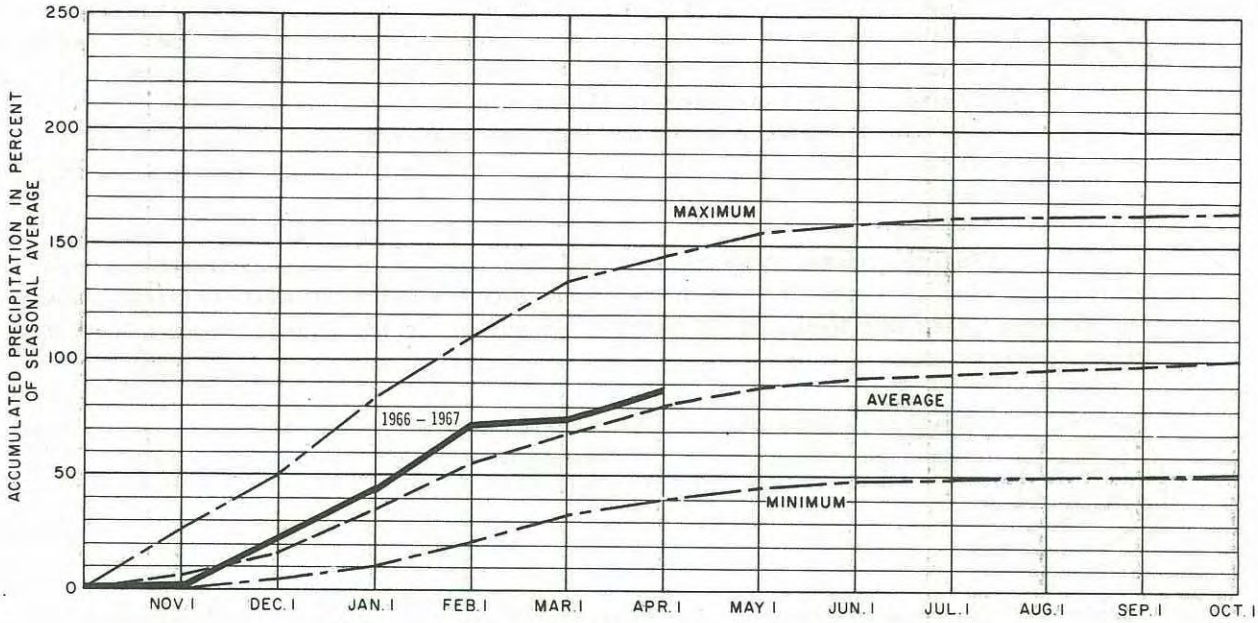


APRIL 1, 1966
APRIL 1, 1967

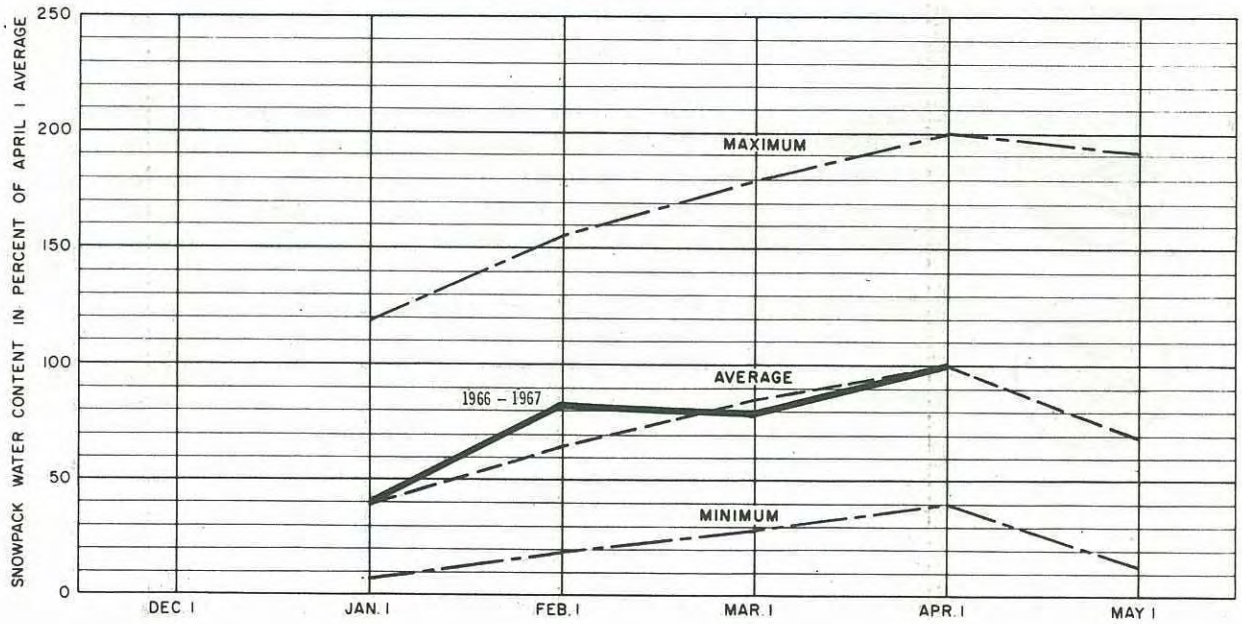
STATUS OF WATER SUPPLY

NORTH COASTAL AREA

PRECIPITATION



SNOWPACK ACCUMULATION



PRECIPITATION AND SNOWPACK ACCUMULATION

SAN FRANCISCO BAY AND CENTRAL COASTAL AREAS

PRECIPITATION - IN THE SAN FRANCISCO BAY AND CENTRAL COASTAL AREAS, PRECIPITATION WAS ABOUT 120 PERCENT OF NORMAL FOR THE PERIOD OCTOBER 1 THROUGH MARCH 31. IT VARIED FROM 165 PERCENT OF NORMAL AT PASO ROBLES IN THE UPPER SALINAS RIVER DRAINAGE, TO 97 PERCENT OF NORMAL AT SANTA MARIA. ALL SUB-DRAINAGES ARE WELL ABOVE NORMAL, ESPECIALLY THE SAN FRANCISCO BAY AREA, WHICH HAS RECEIVED ALMOST TWICE THE AMOUNT OF WATER THIS YEAR THAN IN THE CORRESPONDING PERIOD LAST YEAR.

FOR THE MONTH OF MARCH PRECIPITATION WAS HEAVY, AVERAGING 160 PERCENT OF NORMAL OVER THE ENTIRE AREA. IT VARIED FROM 270 PERCENT OF NORMAL AT GERBER RANCH IN THE ALAMEDA CREEK DRAINAGE, TO 90 PERCENT OF NORMAL AT LOS ALAMOS IN THE SANTA YNEZ RIVER DRAINAGE.

SNOWPACK - SNOW OCCURS INFREQUENTLY IN THIS AREA, AND HAS LITTLE OR NO EFFECT ON RUNOFF OR GENERAL WATER CONDITIONS.

RESERVOIR STORAGE - THE COMBINED STORAGE ON APRIL 1 IN 17 MAJOR RESERVOIRS IN THE SAN FRANCISCO BAY AREA WAS 462,000 ACRE-FEET OR 115 PERCENT OF AVERAGE. THIS REPRESENTS A NET INCREASE OF 55,000 ACRE-FEET DURING THE PAST MONTH AND 137,000 ACRE-FEET DURING THE PAST YEAR. SEVEN OF THESE RESERVOIRS CONTAIN SUPPLIES IMPORTED FROM SIERRA WATERSHEDS.

SIX MAJOR RESERVOIRS SERVING THE CENTRAL COASTAL AREA WERE STORING 658,000 ACRE-FEET ON APRIL 1. THIS IS MORE THAN 65 PERCENT OF THEIR COMBINED CAPACITY AND 145 PERCENT OF APRIL 1 AVERAGE. THERE WAS AN INCREASE OF 101,000 ACRE-FEET IN STORAGE DURING MARCH AND OF 180,000 ACRE-FEET DURING THE PAST YEAR.

STREAMFLOW - MARCH RUNOFF IN THE SAN FRANCISCO BAY AREA WAS 170 PERCENT OF NORMAL, RANGING FROM 145 PERCENT OF NORMAL IN THE NAPA RIVER DRAINAGE TO 195 PERCENT OF NORMAL IN THE COYOTE CREEK BASIN. IN THE CENTRAL COASTAL AREA, RUNOFF DURING THE MONTH WAS 180 PERCENT OF NORMAL. TOTAL RUNOFF IN THESE AREAS SINCE OCTOBER 1, 1966, NOW STANDS AT 180 PERCENT OF NORMAL.

FORECASTS APRIL 1, 1967 - CONDITIONS AT THIS TIME INDICATE THAT RUNOFF OF THE SAN FRANCISCO BAY AND CENTRAL COASTAL AREAS DURING THE 1966-67 WATER YEAR WILL BE 170 PERCENT OF AVERAGE. THIS FORECAST IS PREDICATED ON THE ASSUMPTION THAT NORMAL PRECIPITATION WILL FOLLOW. LAST YEAR THE RUNOFF DURING THE WATER YEAR WAS ONLY 66 PERCENT OF AVERAGE.

SAN FRANCISCO BAY AND CENTRAL COASTAL AREAS

IMPACT

PRECIPITATION DURING MARCH HAS RESULTED IN IMMEDIATE IMPROVEMENT OF THE DETERIORATING WATER SUPPLY CONDITIONS WHICH PREVAILED FOLLOWING THE DRY SPELL IN FEBRUARY. SUBSTANTIAL RAINFALL DURING MARCH, CONTINUING INTO APRIL, HAS BOOSTED BOTH THE RUNOFF POTENTIALS OF LOCAL STREAMS AND STORAGE LEVELS IN RESERVOIRS DEPENDENT ON LOCAL SUPPLIES. DOMESTIC USERS, RELYING ON IMPORTED SUPPLIES FROM SIERRA WATERSHEDS, ARE ASSURED OF NORMAL SUPPLIES FROM THESE MOUNTAIN SOURCES WHICH ARE NOW PREDICTED TO YIELD ABOVE AVERAGE RUNOFF THIS YEAR.

SACRAMENTO VALLEY
CENTRAL VALLEY AREA

PRECIPITATION - FROM OCTOBER 1, 1966, THROUGH MARCH 31, 1967, PRECIPITATION OVER THE SACRAMENTO VALLEY WAS ABOUT 125 PERCENT OF NORMAL. THE HIGHEST SEASONAL TOTALS WITH RESPECT TO NORMAL (140 PERCENT) WERE ACCUMULATED IN THE FEATHER RIVER DRAINAGE. THE BALANCE OF THE MOUNTAIN DRAINAGES AVERAGED SLIGHTLY LESS, AT 120 PERCENT. THE VALLEY FLOOR AVERAGED 130 PERCENT. PRECIPITATION TO DATE IN ALL INDIVIDUAL DRAINAGES IS ALMOST TWICE THAT RECEIVED BY THIS TIME ONE YEAR AGO.

DURING MARCH PRECIPITATION WAS WELL ABOVE NORMAL EXPECTATIONS, WITH AN AVERAGE OF 150 PERCENT OVER THE WHOLE AREA. SUBDRAINAGES VARIED FROM 200 PERCENT OF NORMAL IN THE FEATHER RIVER DRAINAGE TO 140 PERCENT IN THE PIT RIVER DRAINAGE. THE VALLEY FLOOR ALSO RECEIVED A SUBSTANTIAL AMOUNT WHICH AVERAGED 140 PERCENT OF NORMAL.

SNOWPACK - MEASUREMENTS OF SNOWPACK WERE OBTAINED AT 103 SNOW COURSES AND 31 AERIAL SNOW DEPTH MARKERS ON OR ABOUT APRIL 1. ALSO, DAILY READINGS OF WATER CONTENT WERE OBTAINED FROM 5 SNOW SENSORS.

THESE MEASUREMENTS INDICATE THAT SNOWPACK WATER CONTENT WAS 130 PERCENT OF THE APRIL 1 AVERAGE, AS COMPARED TO 95 PERCENT ONE YEAR AGO. THE WATER CONTENT RANGES FROM A HIGH OF 130 PERCENT IN THE FEATHER RIVER BASIN TO A LOW OF 115 PERCENT IN THE MOKELUMNE RIVER BASIN. SNOW SENSORS IN THE AMERICAN RIVER BASIN INDICATE THERE WAS APPROXIMATELY A 13-INCH INCREASE IN WATER CONTENT DURING THE MONTH OF MARCH. THIS INCREASE IS ABOUT TWICE THE NORMAL AMOUNT EXPECTED DURING MARCH. UNUSUALLY HIGH SNOW DEPTHS PILED UP BY MIDMONTH (NORDEN 210 INCHES), BUT WERE IMMEDIATELY REDUCED SUBSTANTIALLY DURING THE FOLLOWING DAYS BY WARM RAIN ON THE SNOWPACK.

RESERVOIR STORAGE - STORAGE IN THE AREA'S 35 MAJOR RESERVOIRS WAS ABOUT 9,489,000 ACRE-FEET ON APRIL 1 -- 527,000 ACRE-FEET MORE THAN ON APRIL 1, 1966. THIS IS OVER 80 PERCENT OF THE RESERVOIRS' COMBINED CAPACITY AND 110 PERCENT OF THEIR APRIL 1 AVERAGE. THE INCREASE IN STORAGE DURING MARCH WAS 1,161,000 ACRE-FEET.

STREAMFLOW - RUNOFF DURING THE PAST MONTH IN UPPER SACRAMENTO VALLEY WATERSHEDS WAS ABOUT 140 PERCENT OF AVERAGE. STREAMFLOW ABOVE SHASTA DAM WAS ABOUT 130 PERCENT OF NORMAL AND WAS GENERALLY BETWEEN 140 AND 150 PERCENT OF NORMAL IN OTHER SACRAMENTO VALLEY WATERSHEDS. SEASON-TO-DATE RUNOFF IN THE AREA REMAINS AT ABOUT 135 PERCENT OF NORMAL.

FORECASTS APRIL 1, 1967 - CONDITIONS AS OF APRIL 1 INDICATE THAT RUNOFF OF THE SACRAMENTO VALLEY DURING THE 1966-67 WATER YEAR WILL BE ABOUT 130 PERCENT OF AVERAGE. THE FORECASTS RANGE FROM 112 PERCENT OF AVERAGE FOR THE INFLOW TO SHASTA RESERVOIR TO A HIGH OF 138 PERCENT OF AVERAGE FOR THE FEATHER RIVER. THESE FORECASTS ARE PREDICATED ON THE ASSUMPTION THAT NORMAL PRECIPITATION WILL FOLLOW.

RUNOFF DURING THE APRIL-JULY SNOWMELT PERIOD IS ESTIMATED TO BE 125 PERCENT OF AVERAGE IN THE SACRAMENTO VALLEY, ASSUMING NORMAL PRECIPITATION FOR THE REMAINDER OF THE SEASON. LAST YEAR, RUNOFF DURING THE PERIOD APRIL 1 THROUGH JULY 31 WAS ONLY 70 PERCENT OF AVERAGE.

SACRAMENTO VALLEY
CENTRAL VALLEY AREA

THE FOLLOWING TABULATION SUMMARIZES RUNOFF FORECASTS AS OF APRIL 1 FOR SACRAMENTO VALLEY STREAMS FOR BOTH THE WATER YEAR AND THE APRIL-JULY RUNOFF PERIOD. THE LIMITS ARE ALSO SHOWN FOR AN 80 PERCENT PROBABILITY RANGE FOR APRIL-JULY RUNOFF. THIS MEANS THAT THERE IS AN 80 PERCENT PROBABILITY THAT THE RUNOFF WILL FALL WITHIN THE INDICATED LIMITS.

STREAM AND STATION	FORECASTS OF UNIMPAIRED RUNOFF				
	WATER YEAR 1/		APRIL 1-JULY 31 1/		APRIL 1-JULY 31 80% PROB. RANGE
	ACRE-FEET	% AVERAGE	ACRE-FEET	% AVERAGE	1,000 ACRE-FEET
TOTAL INFLOW TO SHASTA 2/	6,650,000	122	2,000,000	112	1,700 TO 2,600
SACRAMENTO AT RED BLUFF	9,400,000	119	2,850,000	114	2,490 TO 3,570
FEATHER NEAR OROVILLE	5,800,000	138	2,600,000	134	2,320 TO 3,260
YUBA AT SMARTVILLE	2,980,000	134	1,400,000	124	1,250 TO 1,770
AMERICAN, INFLOW TO FOLSOM	3,300,000	128	1,680,000	121	1,520 TO 2,160
COSUMNES AT MICHIGAN BAR	463,000	133	175,000	134	140 TO 240
MOKELUMNE, INFLOW TO PARDEE	930,000	131	600,000	125	550 TO 710

1/ ASSUMING NORMAL PRECIPITATION SUBSEQUENT TO APRIL 1, 1967.
2/ NOT CORRECTED FOR UPSTREAM IMPAIRMENTS.

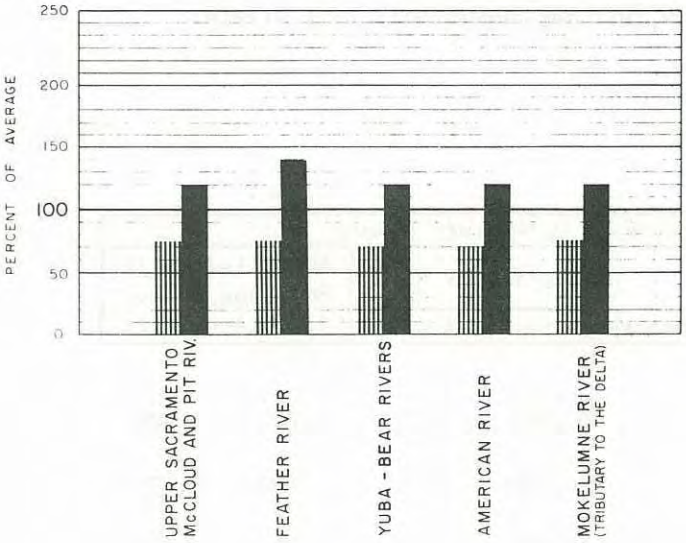
IMPACT

THE PROSPECTS OF NORMAL WATER SUPPLIES THIS YEAR, AS FORECASTED ONE MONTH AGO, HAVE NOW BEEN BOLSTERED BY ABOVE NORMAL MARCH PRECIPITATION AND THE RESULTING ACCUMULATION OF ADDITIONAL SNOW STORED WATER IN THE TRIBUTARY WATERSHEDS. THUS, THE PREDICTION THAT NORMAL WATER USE PLANNING IS IN ORDER FOR 1967 HAS BEEN FIRMLY JUSTIFIED BY THE RECENT STORM CONTRIBUTIONS. THE ABOVE NORMAL WATER CONDITIONS WHICH WILL PREVAIL THIS YEAR SHOULD RESULT IN THE RETENTION OF BETTER THAN AVERAGE CARRYOVER SUPPLIES IN THOSE RESERVOIRS WHERE THIS PRACTICE CAN BE APPLIED.

SACRAMENTO VALLEY
CENTRAL VALLEY AREA

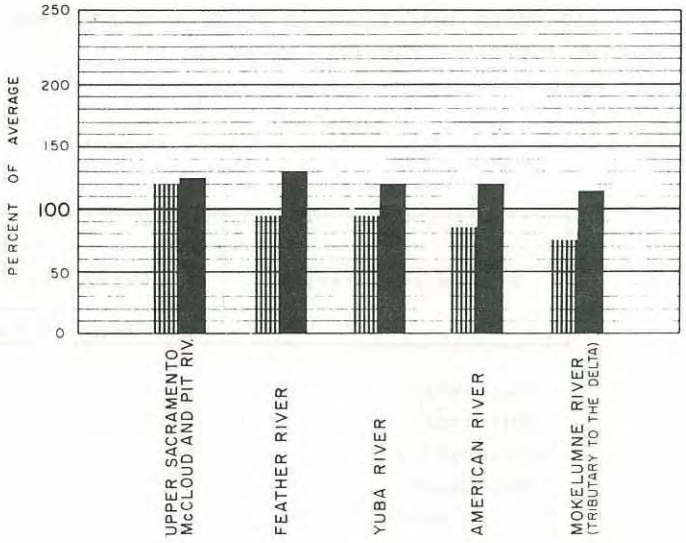
PRECIPITATION

SEASONAL PRECIPITATION
IN PERCENT OF AVERAGE TO DATE



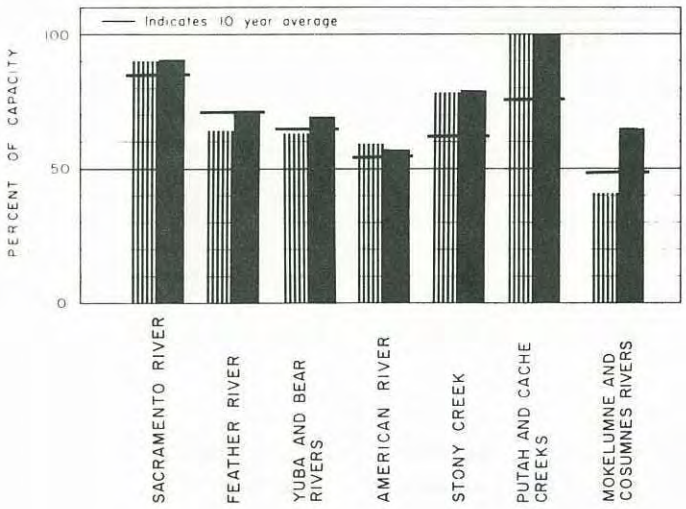
SNOWPACK

SNOWPACK WATER CONTENT
IN PERCENT OF AVERAGE TO DATE



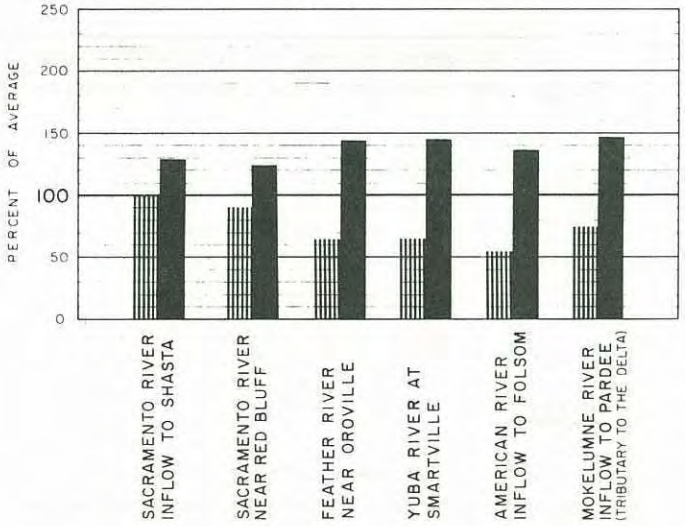
RESERVOIR STORAGE

CONTENTS OF MAJOR RESERVOIRS
IN PERCENT OF CAPACITY



STREAMFLOW

ACCUMULATED UNIMPAIRED RUNOFF SINCE OCTOBER 1
IN PERCENT OF AVERAGE TO DATE

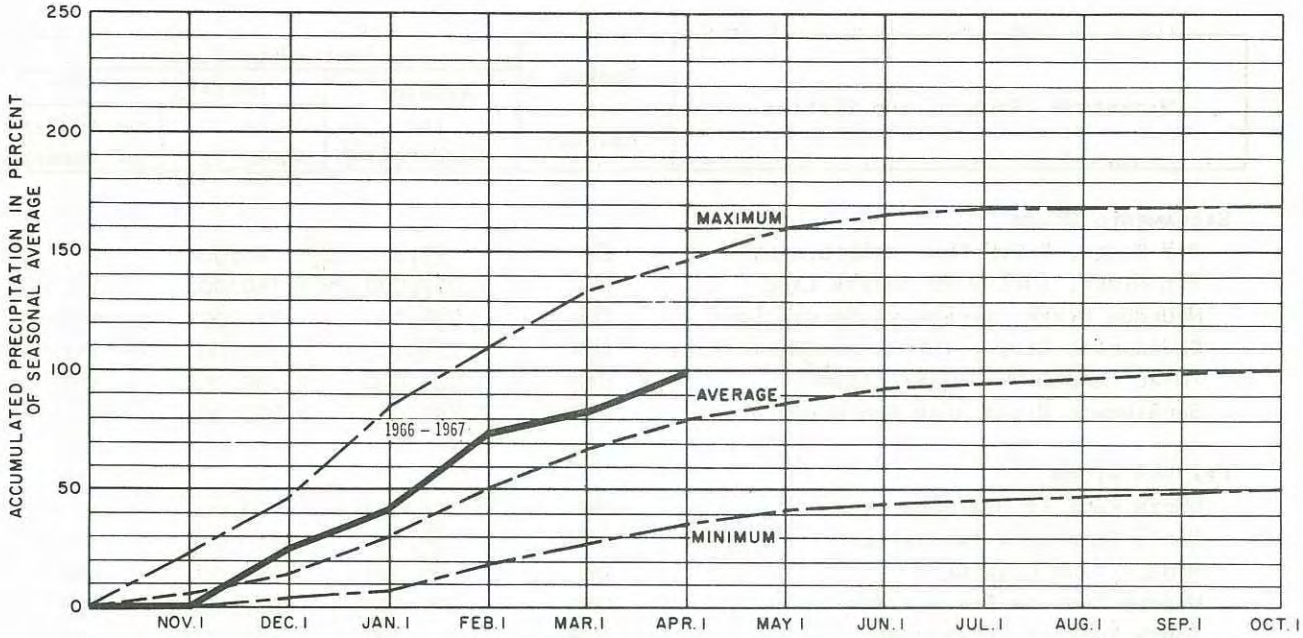


APRIL 1, 1966
APRIL 1, 1967

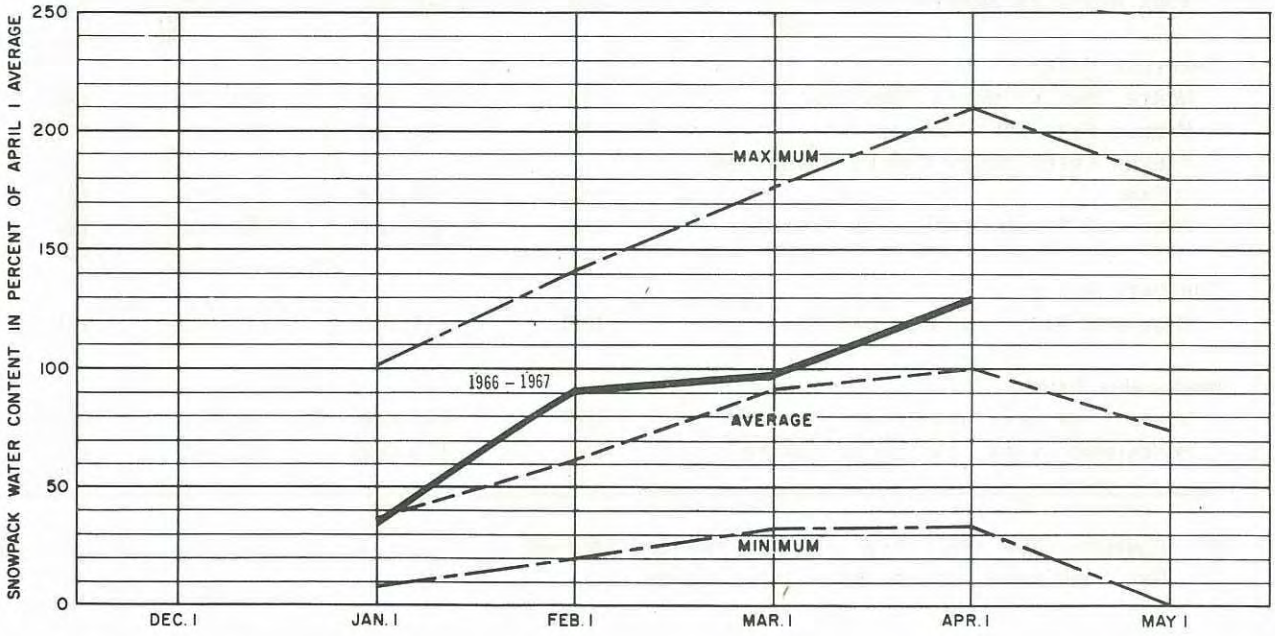
STATUS OF WATER SUPPLY

SACRAMENTO VALLEY
CENTRAL VALLEY AREA

PRECIPITATION



SNOWPACK ACCUMULATION



PRECIPITATION AND SNOWPACK ACCUMULATION

TABLE 2

FORECASTS OF UNIMPAIRED APRIL-JULY RUNOFF
SACRAMENTO VALLEY STREAMS

APRIL 1, 1967

WATERSHED, STREAM, AND STATION	SOURCE OF FORECAST	APRIL-JULY RUNOFF		
		AVERAGE IN ACRE-FEET 1/	FORECAST FOR 1967	
			IN ACRE-FEET	IN PERCENT OF AVERAGE
SACRAMENTO RIVER				
PIT RIVER, SOUTH FORK NEAR LIKELY	DWR	39,000	40,000	103
PIT RIVER, INFLOW TO SHASTA LAKE	DWR	1,037,000	1,140,000	110
MCCLOUD RIVER, INFLOW TO SHASTA LAKE	DWR	436,000	470,000	108
SACRAMENTO RIVER, INFLOW TO SHASTA LAKE	DWR	288,000	320,000	111
TOTAL INFLOW TO SHASTA LAKE 2/	DWR	1,788,000	2,000,000	112
SACRAMENTO RIVER NEAR RED BLUFF	DWR	2,492,000	2,850,000	114
FEATHER RIVER				
NORTH FORK AT BIG BAR	DWR	1,035,000	1,400,000	135
NORTH FORK NEAR PRATTVILLE	DWR	338,000	410,000	121
MIDDLE FORK NEAR CLIO	DWR	86,000	115,000	134
MIDDLE FORK AT BIDWELL BAR	DWR	692,000	960,000	139
SOUTH FORK AT ENTERPRISE	DWR	114,000	150,000	132
FEATHER RIVER NEAR OROVILLE	DWR	1,942,000	2,600,000	134
YUBA RIVER				
NORTH YUBA RIVER BELOW GOODYEARS BAR	DWR	301,000	375,000	125
BOWMAN AREA-MIDDLE YUBA RIVER AND CANYON CREEK	DWR	112,000	140,000	125
SOUTH YUBA RIVER AT LANGS CROSSING	DWR	234,000	295,000	126
YUBA RIVER AT SMARTVILLE	DWR	1,126,000	1,400,000	124
AMERICAN RIVER				
NORTH FORK AT NORTH FORK DAM	DWR	275,000	340,000	124
MIDDLE FORK NEAR AUBURN	DWR	591,000	700,000	118
SILVER CREEK BELOW CAMINO DIVERSION DAM	DWR	188,000	235,000	125
AMERICAN RIVER, INFLOW TO FOLSOM	DWR	1,387,000	1,680,000	121
COSUMNES RIVER				
COSUMNES RIVER AT MICHIGAN BAR	DWR	131,000	175,000	134
MOKELUMNE RIVER				
NORTH FORK NEAR WEST POINT	DWR	427,000	530,000	124
MOKELUMNE RIVER, INFLOW TO PARDEE	DWR	480,000	600,000	125

1/ COMPUTED FOR THE PERIOD 1910-11 THROUGH 1959-60.
2/ NOT CORRECTED FOR UPSTREAM IMPAIRMENTS.

TABLE 3

FORECASTS OF UNIMPAIRED APRIL-JULY RUNOFF
SAN JOAQUIN VALLEY STREAMS

APRIL 1, 1967

WATERSHED, STREAM, AND STATION	SOURCE OF FORECAST	APRIL-JULY RUNOFF		
		AVERAGE IN ACRE-FEET 1/	FORECAST FOR 1967	
			IN ACRE-FEET	IN PERCENT OF AVERAGE
STANISLAUS RIVER				
MIDDLE FORK AT SAND BAR NEAR AVERY	DWR	347,000	410,000	118
STANISLAUS RIVER, INFLOW TO MELONES	DWR	737,000	880,000	119
TUOLUMNE RIVER				
CHERRY CREEK PLUS ELEANOR CREEK NEAR HETCH HETCHY	DWR	314,000	370,000	118
TUOLUMNE RIVER NEAR HETCH HETCHY	DWR	606,000	740,000	122
TUOLUMNE RIVER, INFLOW TO DON PEDRO	DWR	1,213,000	1,425,000	117
MERCED RIVER				
MERCED RIVER AT POHONO BRIDGE	DWR	370,000	420,000	114
MERCED RIVER, INFLOW TO EXCHEQUER	DWR	622,000	700,000	113
SAN JOAQUIN RIVER				
SOUTH FORK NEAR FLORENCE LAKE	DWR	193,000	250,000	130
BIG CREEK BELOW HUNTINGTON LAKE	DWR	90,000	124,000	138
SAN JOAQUIN RIVER ABOVE BIG CREEK	DWR	1,023,000	1,350,000	132
SAN JOAQUIN RIVER, INFLOW TO MILLERTON LAKE	DWR	1,215,000	1,620,000	133
KINGS RIVER				
NORTH FORK NEAR CLIFF CAMP	DWR	236,000	330,000	140
KINGS RIVER, INFLOW TO PINE FLAT	DWR	1,175,000	1,650,000	140
KAWEAH RIVER				
KAWEAH RIVER, INFLOW TO TERMINUS	DWR	263,000	400,000	152
TULE RIVER				
TULE RIVER, INFLOW TO SUCCESS	DWR	56,000	80,000	143
KERN RIVER				
KERN RIVER, NEAR KERNVILLE	DWR	343,000	550,000	160
KERN RIVER, INFLOW TO ISABELLA	DWR	423,000	680,000	161
KERN RIVER, NEAR BAKERSFIELD	DWR	433,000	700,000	162

1/ COMPUTED FOR THE PERIOD 1910-11 THROUGH 1959-60.

TABLE 4

UNIMPAIRED APRIL-JULY RUNOFF OF CENTRAL VALLEY STREAMS IN RECENT YEARS
(THOUSANDS OF ACRE-FEET)

STREAM AND STATION	50-YEAR AVERAGE 1/	MAXIMUM OF RECORD	MINIMUM OF RECORD	1961	1962	1963	1964	1965	1966	1967 FORECAST
INFLOW TO SHASTA 2/	1,788	3,064	726	1,499	1,506	2,995	1,183	2,030	1,598	2,000
SACRAMENTO AT RED BLUFF	2,492	4,407	943	2,019	1,985	4,258	1,534	3,049	2,008	2,850
FEATHER NEAR OROVILLE	1,942	4,676	396	1,136	1,825	6,651	1,165	2,262	1,324	2,600
YUBA AT SMARTVILLE	1,126	2,424	239	600	1,142	1,426	767	1,287	770	1,400
AMERICAN, INFLOW TO FOLSOM	1,387	2,864	257	631	1,272	1,757	912	1,519	761	1,680
MOKELUMNE, INFLOW TO PARDEE	480	959	127	211	508	565	309	581	286	600
STANISLAUS, INFLOW TO MELONES	737	1,438	167	292	799	857	432	880	463	880
TUOLUMNE, INFLOW TO DON PEDRO	1,213	2,164	385	528	1,318	1,429	743	1,493	767	1,425
MERCED, INFLOW TO EXCHEQUER	622	1,253	175	227	662	677	310	745	387	700
SAN JOAQUIN, INFLOW TO MILLERTON	1,215	2,573	310	451	1,486	1,413	643	1,421	837	1,620
KINGS, INFLOW TO PINE FLAT	1,175	2,316	280	401	1,485	1,396	615	1,300	825	1,650
KAWEAH, INFLOW TO TERMINUS	263	588	69	77	310	325	163	314	149	400
TULE, INFLOW TO SUCCESS	56	169	2	7	49	65	33	64	13	80
KERN NEAR BAKERSFIELD	433	1,120	87	87	515	476	183	456	220	700

1/ COMPUTED FOR THE 50-YEAR PERIOD 1910-11 THROUGH 1959-60.
2/ NOT CORRECTED FOR UPSTREAM IMPAIRMENTS.

TABLE 5

UNIMPAIRED WATER YEAR RUNOFF OF CENTRAL VALLEY STREAMS[1]

Stream and Station	1966-1967 Runoff in 1,000 Acre-feet							50-Year Average[2] (1,000 AF)	Water Year Runoff in Percent of Average		
	October 1 to March 31	Forecast For									
		April	May	June	July	Aug. & Sept.	Water Year		1964-1965	1965-1966	1966-1967 Forecast
Inflow to Shasta[3]	4,193	850	600	330	220	457	6,650	5,441	128	97	122
Feather near Oroville	2,988	970	980	470	180	212	5,800	4,209	165	68	138
Yuba at Smartville	1,525	440	580	300	80	55	2,980	2,232	174	65	134
American, inflow to Folsom	1,587	560	680	350	90	33	3,300	2,581	173	55	128
Sacramento River at Sacramento[4]											
Mokelumne, inflow to Pardee	326	150	250	165	35	4	930	708	173	64	131
Stanislaus, inflow to Melones	497	230	350	230	70	23	1,400	1,089	163	67	129
Tuolumne, inflow to Don Pedro	849	330	530	450	115	26	2,300	1,776	155	74	130
Merced, inflow to Exchequer	404	155	300	205	40	16	1,120	928	143	69	121
San Joaquin, inflow to Millerton	684	310	530	540	240	76	2,380	1,670	136	78	143
San Joaquin River near Vernalis[4]									150	73	132
Combined Sacramento and San Joaquin Rivers[4]									152	76	130
Kings, inflow to Pine Flat	722	270	570	570	240	78	2,450	1,570	123	76	156
Kaweah, inflow to Terminus	361	90	150	120	40	14	775	385	127	64	201
Tule, inflow to Success	197	30	30	16	4	1	278	127	108	36	219
Kern near Bakersfield	566	140	260	200	100	54	1,320	662	108	64	199

1/ Based on preliminary data, subject to revision.
2/ Computed for the period 1910-11 through 1959-60.
3/ Not corrected for upstream impairments.
4/ Summations of unimpaired flows at foothill stations on major tributaries only. Figures do not include runoff from minor tributaries and from the valley floor.

SAN JOAQUIN VALLEY
CENTRAL VALLEY AREA

PRECIPITATION - FROM OCTOBER 1, 1966, THROUGH MARCH 31, 1967, PRECIPITATION WAS 120 PERCENT OF NORMAL OVER THE SAN JOAQUIN VALLEY. SEASONAL PRECIPITATION VALUES RANGED FROM 213 PERCENT OF NORMAL AT KERN RIVER PH #3 TO 57 PERCENT OF NORMAL AT SAN EMIGDIO RANCH. THE ENTIRE CHAIN OF SIERRA NEVADA DRAINAGES ARE WELL ABOVE NORMAL, ESPECIALLY THE KINGS, TULE AND KERN RIVER BASINS, AND THEIR COLLECTIVE AVERAGE IS ABOUT 140 PERCENT OF NORMAL. THE VALLEY FLOOR AVERAGED ABOUT 105 PERCENT OF NORMAL. TOTAL SEASONAL AMOUNTS ARE ALMOST DOUBLE THAT RECEIVED BY THIS DATE A YEAR AGO. PRECIPITATION DURING MARCH AVERAGED 145 PERCENT OF NORMAL. IT VARIED FROM 267 PERCENT OF NORMAL AT PINECREST STRAWBERRY, IN THE STANISLAUS RIVER DRAINAGE, TO ONLY 27 PERCENT OF NORMAL AT WOFFORD HEIGHTS, IN THE KERN RIVER DRAINAGE. GENERALLY, THE BAKERSFIELD AREA WAS MUCH BELOW NORMAL FOR THE MONTH WHEN ONLY 50 PERCENT OF MARCH EXPECTANCY FELL OVER THE AREA.

SNOWPACK - MEASUREMENTS OF SNOWPACK WERE OBTAINED AT 109 SNOW COURSES AND 69 AERIAL SNOW DEPTH MARKERS ON OR ABOUT APRIL 1. ALSO, DAILY READINGS OF WATER CONTENT WERE OBTAINED FROM THREE SNOW SENSORS. THESE MEASUREMENTS INDICATE THAT SNOWPACK WATER CONTENT WAS 130 PERCENT OF THE APRIL 1 AVERAGE AS COMPARED TO 70 PERCENT ONE YEAR AGO. THE WATER CONTENT RANGES FROM HIGHS OF 140 PERCENT ON THE KINGS AND KERN RIVER BASINS TO A LOW OF 110 PERCENT ON THE MERCED RIVER BASIN. PIUTE PASS AT ELEVATION 11,300 FEET IN THE SAN JOAQUIN RIVER BASIN SHOWED A WATER CONTENT OF 58.1 INCHES, 169 PERCENT OF THE APRIL 1 AVERAGE. NORMALLY DURING THE MONTH OF MARCH, THE SNOWPACK WATER CONTENT SHOULD INCREASE ABOUT 15 PERCENT. THIS YEAR SNOWFALL PERSISTED OVER MOST OF MARCH CAUSING AN INCREASE OF 30 PERCENT.

RESERVOIR STORAGE - APRIL 1 STORAGE IN 27 MAJOR RESERVOIRS IN THIS AREA WAS ABOUT 3,437,000 ACRE-FEET, REPRESENTING A NET INCREASE OF 487,000 ACRE-FEET DURING MARCH AND OF 1,109,000 ACRE-FEET DURING THE PAST YEAR. TOTAL STORAGE IN THESE RESERVOIRS IS ABOUT 160 PERCENT OF APRIL 1 AVERAGE AND 60 PERCENT OF CAPACITY.

STREAMFLOW - EXCEPT FOR THE TULE RIVER BASIN (95 PERCENT OF NORMAL), STREAMFLOW DURING THE PAST MONTH WAS FAR ABOVE AVERAGE IN ALL MAJOR WATERSHEDS OF THIS AREA AND TOTALED 165 PERCENT OF THE MARCH NORMAL. TOTAL RUNOFF SINCE OCTOBER 1, 1966, IS EQUAL TO 190 PERCENT OF NORMAL.

FORECASTS APRIL 1, 1967 - DATA AT THIS TIME INDICATES THAT RUNOFF OF THE SAN JOAQUIN VALLEY FOR THE 1966-67 WATER YEAR WILL BE ABOUT 145 PERCENT OF AVERAGE. THIS FORECAST IS BASED ON THE ASSUMPTION THAT NORMAL PRECIPITATION WILL FOLLOW.

RUNOFF FOR THE APRIL-JULY SNOWMELT PERIOD IS EXPECTED TO BE 130 PERCENT OF AVERAGE. THE FORECASTS RANGE FROM 162 PERCENT OF NORMAL FOR KERN RIVER AT BAKERSFIELD TO A LOW OF 113 PERCENT OF NORMAL FOR THE MERCED RIVER INFLOW TO EXCHEQUER. THESE FORECASTS ARE ALSO PREDICATED ON THE ASSUMPTION THAT NORMAL PRECIPITATION WILL FOLLOW. RUNOFF LAST YEAR DURING THE PERIOD APRIL 1 THROUGH JULY 31 WAS ONLY 65 PERCENT OF AVERAGE.

SAN JOAQUIN VALLEY
CENTRAL VALLEY AREA

THE FOLLOWING TABULATION SUMMARIZES RUNOFF FORECASTS AS OF APRIL 1 FOR SAN JOAQUIN VALLEY STREAMS FOR BOTH THE WATER YEAR AND THE APRIL-JULY SNOWMELT SEASON. THE LIMITS ARE ALSO SHOWN FOR AN 80 PERCENT PROBABILITY RANGE FOR APRIL-JULY RUNOFF. THIS MEANS THAT THERE IS AN 80 PERCENT PROBABILITY THAT THE RUNOFF WILL FALL WITHIN THE INDICATED LIMITS.

STREAM AND STATION	FORECASTS OF UNIMPAIRED RUNOFF				
	WATER YEAR 1/		APRIL 1-JULY 31 1/		APRIL 1-JULY 31 80% PROB. RANGE
	ACRE-FEET	% AVERAGE	ACRE-FEET	% AVERAGE	1,000 ACRE-FEET
STANISLAUS, INFLOW TO MELONES	1,400,000	129	880,000	119	780 TO 1,100
TUOLUMNE, INFLOW TO DON PEDRO	2,300,000	130	1,425,000	117	1,275 TO 1,700
MERCED, INFLOW TO EXCHEQUER	1,120,000	121	700,000	113	630 TO 870
SAN JOAQUIN, INFLOW TO FRIANT	2,380,000	143	1,620,000	133	1,440 TO 1,870
KINGS, INFLOW TO PINE FLAT	2,450,000	156	1,650,000	140	1,500 TO 1,875
KAWEAH, INFLOW TO TERMINUS	775,000	201	400,000	152	365 TO 455
TULE, INFLOW TO SUCCESS	278,000	219	80,000	143	70 TO 95
KERN NEAR BAKERSFIELD	1,320,000	199	700,000	162	650 TO 800

1/ ASSUMING NORMAL PRECIPITATION SUBSEQUENT TO APRIL 1, 1967.

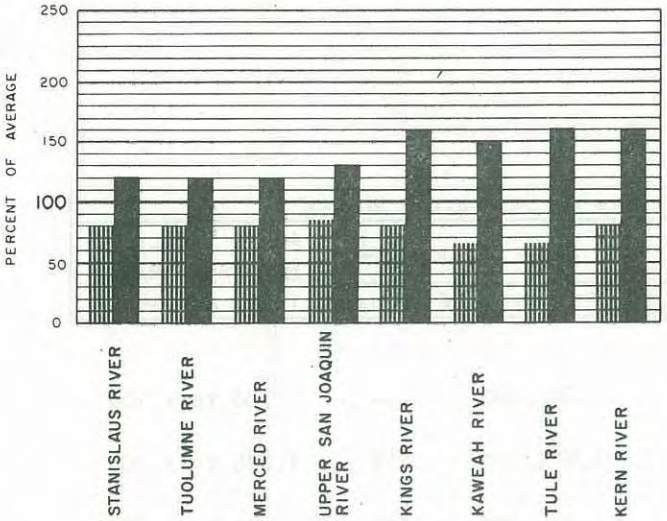
IMPACT

WATER SUPPLIES AVAILABLE TO THE SAN JOAQUIN VALLEY DURING 1967 ARE NOW PREDICATED TO BE FIRMLY ON THE PLUS SIDE. SNOW ACCUMULATION IN THE MOUNTAINOUS WATERSHEDS IS WELL ABOVE AVERAGE AND MANY RESERVOIRS ARE STORING UNUSUALLY HIGH LEVELS FOR THIS DATE AS COMPARED TO NORMAL. THIS ABUNDANCE OF SURFACE SUPPLIES SHOULD RESULT IN A SIGNIFICANT REDUCTION IN GROUND WATER USE, PROVIDING BOTH DOLLAR SAVINGS TO IRRIGATION INTERESTS AND AN OPPORTUNITY TO RELAX THE USE PRESSURE ON THOSE GROUND WATER BASINS WHICH ARE EXPERIENCING OVERDRAFT CONDITIONS. THE PROBLEM NOW FACED BY WATER USERS IS GENERALLY CONFINED TO ONE OF BALANCING USE OF AVAILABLE SURFACE AND GROUND WATER SUPPLIES.

SAN JOAQUIN VALLEY
CENTRAL VALLEY AREA

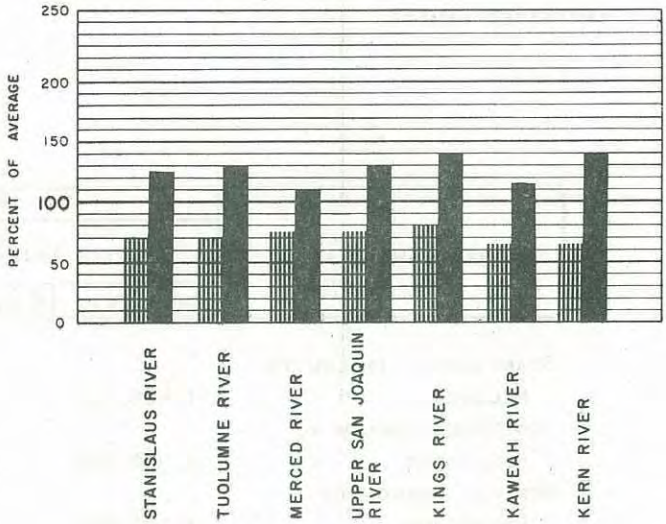
PRECIPITATION

SEASONAL PRECIPITATION
IN PERCENT OF AVERAGE TO DATE



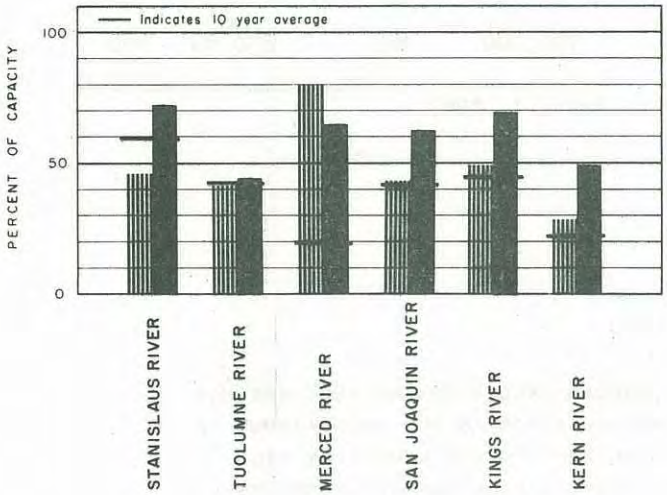
SNOWPACK

SNOWPACK WATER CONTENT
IN PERCENT OF AVERAGE TO DATE



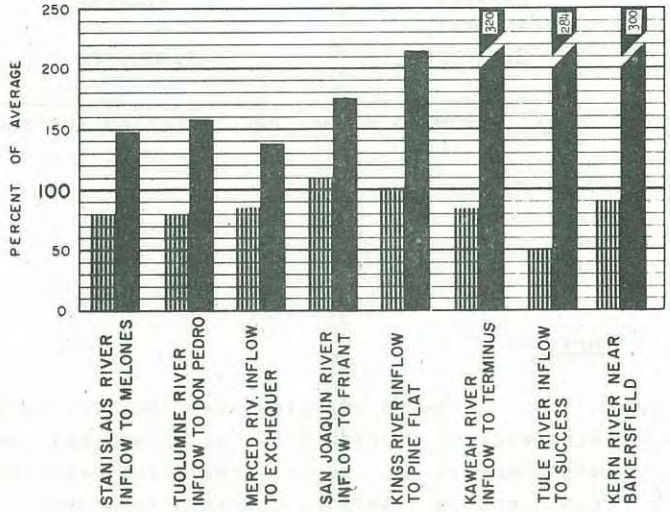
RESERVOIR STORAGE

CONTENTS OF MAJOR RESERVOIRS
IN PERCENT OF CAPACITY



STREAMFLOW

ACCUMULATED UNIMPAIRED RUNOFF SINCE OCTOBER 1
IN PERCENT OF AVERAGE TO DATE

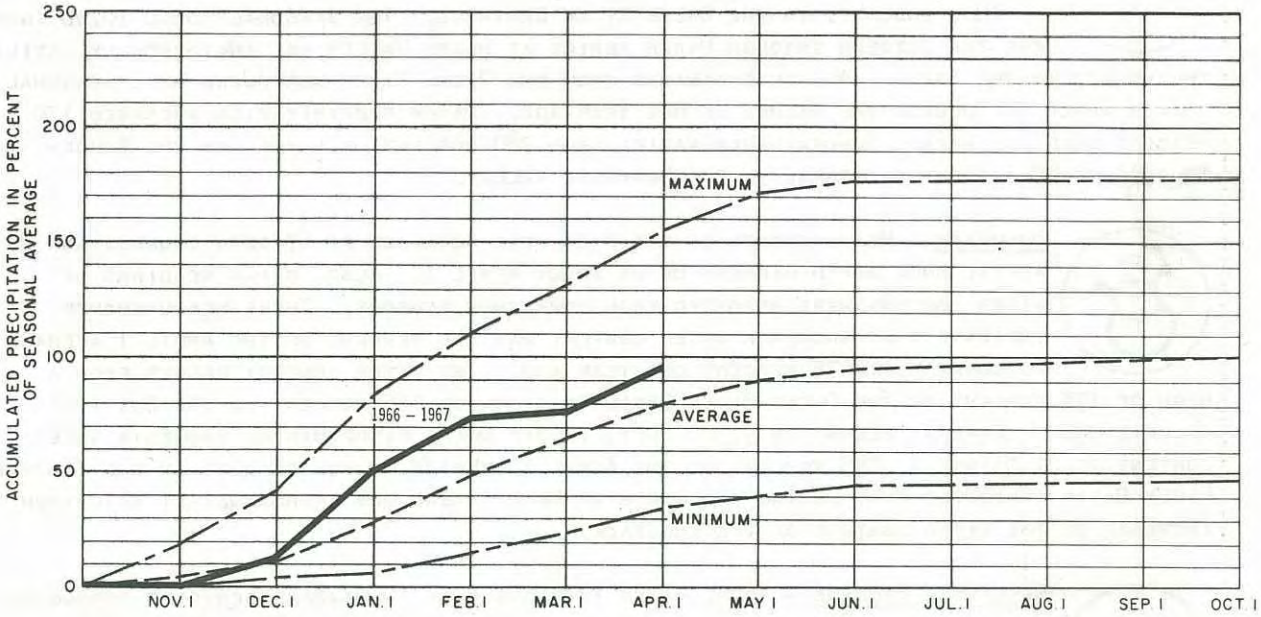


APRIL 1, 1966
APRIL 1, 1967

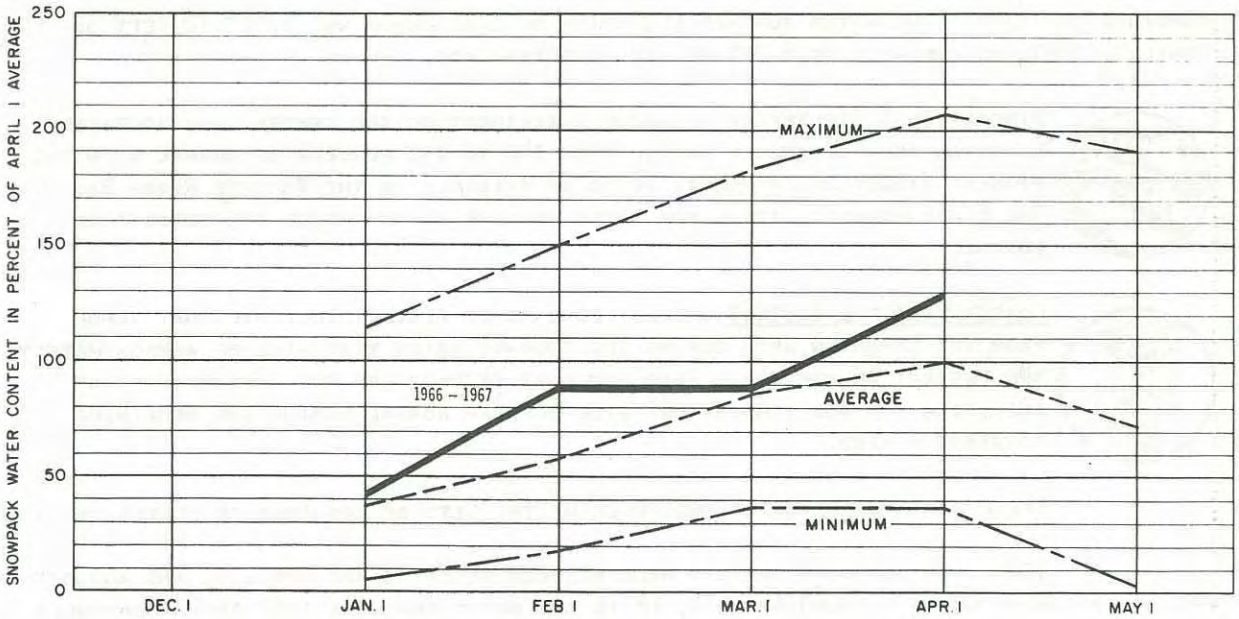
STATUS OF WATER SUPPLY

SAN JOAQUIN VALLEY
CENTRAL VALLEY AREA

PRECIPITATION



SNOWPACK ACCUMULATION



PRECIPITATION AND SNOWPACK ACCUMULATION

LAHONTAN AREA

PRECIPITATION - OCTOBER THROUGH MARCH PRECIPITATION AVERAGED ABOUT 140 PERCENT OF NORMAL FOR THE LAHONTAN AREA. SEASONAL AMOUNTS WITH RESPECT TO NORMAL VARIED WIDELY FROM A LOW OF 9 PERCENT AT DEATH VALLEY, TO 300 PERCENT AT INDEPENDENCE, IN THE OWENS RIVER DRAINAGE. THE SEASONAL TOTAL (0.10 INCH) FOR THE OCTOBER THROUGH MARCH PERIOD AT DEATH VALLEY IS, INCIDENTALLY, STILL THE LOWEST IN THE STATE. ALL SUBDRAINAGES FROM THE OWENS RIVER NORTHWARD HAVE SEASONAL TOTALS WHICH ARE DOUBLE THE VALUES OF ONE YEAR AGO. MARCH PRECIPITATION AVERAGED 170 PERCENT OVER THE AREA. SUBDRAINAGES VARIED FROM 280 PERCENT OF NORMAL IN THE TAHOE-TRUCKEE TO 80 PERCENT OF NORMAL IN THE SURPRISE VALLEY.

SNOWPACK - MEASUREMENTS OF SNOWPACK WERE OBTAINED AT 67 SNOW COURSES AND 33 AERIAL SNOW DEPTH MARKERS ON OR ABOUT APRIL 1. ALSO, DAILY READINGS OF WATER CONTENT WERE REPORTED FROM FOUR SNOW SENSORS. THESE MEASUREMENTS INDICATE THAT SNOWPACK WATER CONTENT WAS 140 PERCENT OF THE APRIL 1 AVERAGE AS COMPARED TO 75 PERCENT ONE YEAR AGO. THE WATER CONTENT RANGES FROM A HIGH OF 175 PERCENT IN THE OWENS RIVER BASIN TO A LOW OF 105 PERCENT IN THE SURPRISE VALLEY. NORTH LAKE AT ELEVATION 9,300 FEET, IN THE OWENS RIVER BASIN, SHOWED A WATER CONTENT OF 21.8 INCHES, 245 PERCENT OF THE APRIL 1 AVERAGE. SNOW SENSORS IN THE TRUCKEE RIVER BASIN INDICATED THAT DURING THE MONTH OF MARCH THERE WAS APPROXIMATELY A 10-INCH INCREASE IN THE WATER CONTENT OF THE SNOWPACK.

RESERVOIR STORAGE - TOTAL WATER IN STORAGE IN 10 MAJOR RESERVOIRS THROUGHOUT THIS AREA WAS 800,000 ACRE-FEET ON APRIL 1, WHICH IS ABOUT 120 PERCENT OF THE 10-YEAR AVERAGE AND 68 PERCENT OF THEIR TOTAL CAPACITY. SEVEN OF THE 10 MAJOR RESERVOIRS SERVING THE LAHONTAN AREA ARE LOCATED ENTIRELY WITHIN CALIFORNIA AND STORE WATER FOR USE IN CALIFORNIA ONLY. THESE SEVEN RESERVOIRS HELD 226,000 ACRE-FEET ON APRIL 1. THIS ABOUT EQUALS THEIR 10-YEAR APRIL 1 AVERAGE AND IS 65 PERCENT OF THEIR COMBINED CAPACITY. THE OTHER THREE RESERVOIRS IN THE AREA STORE WATER FOR USE IN NEVADA AND CALIFORNIA. THEY CONTAINED 573,000 ACRE-FEET OF WATER ON APRIL 1, WHICH IS 130 PERCENT OF AVERAGE AND 69 PERCENT OF THEIR COMBINED CAPACITY. THE WATER SURFACE ELEVATION OF LAKE TAHOE WAS 6,227.40 FEET ON APRIL 1, 1967, AS COMPARED TO 6,277.45 FEET ONE YEAR AGO.

STREAMFLOW - STREAMFLOW IN MAJOR WATERSHEDS OF THE CENTRAL AND SOUTHERN LAHONTAN AREA GENERALLY VARIED FROM 140 TO 190 PERCENT OF NORMAL WITH THE HIGHEST (ABOUT 200 PERCENT) BEING EXPERIENCED IN THE TRUCKEE RIVER BASIN. THE SEASON-TO-DATE TOTAL FOR THESE REGIONS IS NOW ABOUT 145 PERCENT OF NORMAL.

FORECASTS APRIL 1, 1967 - CONDITIONS AS OF APRIL 1 INDICATE THAT RUNOFF FROM THE LAHONTAN AREA DURING THE 1966-67 WATER YEAR WILL BE APPROXIMATELY 140 PERCENT OF AVERAGE. THIS FORECAST IS BASED ON THE ASSUMPTION THAT PRECIPITATION AND TEMPERATURE WILL BE NEAR NORMAL DURING THE REMAINING FORECAST PERIOD.

THE DEPARTMENT OF WATER AND POWER OF THE CITY OF LOS ANGELES STATES THAT:

"BASED ON OUR SNOW SURVEYS MADE BETWEEN MARCH 28 AND APRIL 4, AND ADJUSTED FOR PRECIPITATION OCCURING THROUGH APRIL 4, IT IS ESTIMATED THAT THE 1967 APRIL-SEPTEMBER RUNOFF FROM THE EASTERN SIERRA WATERSHED OF THE OWENS VALLEY AND MONO BASIN WILL BE 160 PERCENT OF THE LONG-TERM MEAN".

LAHONTAN AREA

THE FOLLOWING TABULATION SUMMARIZES UNIMPAIRED RUNOFF FORECASTS FOR LAHONTAN AREA STREAMS FOR THE APRIL-JULY SNOWMELT PERIOD. FORECASTS IN THIS AREA ARE PROVIDED BY CALIFORNIA COOPERATIVE SNOW SURVEYS AND THE DEPARTMENT OF WATER AND POWER OF THE CITY OF LOS ANGELES.

WATERSHED, STREAM, AND STATION	SOURCE OF FORECAST	APRIL-JULY RUNOFF		
		AVERAGE IN ACRE-FEET 1/	FORECAST FOR 1967	
			IN ACRE-FEET	IN PERCENT OF AVERAGE
BIDWELL CREEK NEAR FT. BIDWELL 2/	CCSS-NCSS	14,300	9,300	65
MILL CREEK ABOVE DIVERSIONS 2/	CCSS-NCSS	5,500	3,700	67
DEEP CREEK ABOVE DIVERSIONS 2/	CCSS-NCSS	3,800	2,300	61
EAGLE CREEK AT EAGLEVILLE 2/	CCSS-NCSS	5,200	3,600	69
LITTLE TRUCKEE RIVER AT BOCA	TBWC	78,000	128,000	164 6/
TRUCKEE RIVER AT FARAD 3/	TBWC	269,000	380,000	141
LAKE TAHOE RISE 4/	TBWC	1.47 FT.	2.1 FT.	143
EAST CARSON RIVER NEAR GARDNERVILLE	CCSS	179,000	260,000	142
WEST CARSON RIVER AT WOODFORDS	CCSS	52,000	75,000	144
CARSON RIVER NEAR CARSON CITY	NCSS	169,000	260,000	153
CARSON RIVER NEAR FORT CHURCHILL	NCSS	155,000	240,000	155
EAST WALKER RIVER NEAR BRIDGEPORT	CCSS	57,000	100,000	176
WEST WALKER RIVER NEAR COLEVILLE	CCSS	140,000	205,000	144
OWENS RIVER AT LONG VALLEY RESERVOIR	LADWP	57,000 5/	82,000	144

1/ COMPUTED FOR THE PERIOD 1948-1962.
2/ APRIL THROUGH SEPTEMBER.
3/ EXCLUSIVE OF LAKE TAHOE AND CORRECTED FOR STORAGE AT BOCA RESERVOIR.
4/ ASSUMING LAKE TAHOE GATES CLOSED.
5/ 25-YEAR AVERAGE, 1941-1965.
6/ THIS FORECAST IS 135 PERCENT OF THE LONG-TERM AVERAGE.

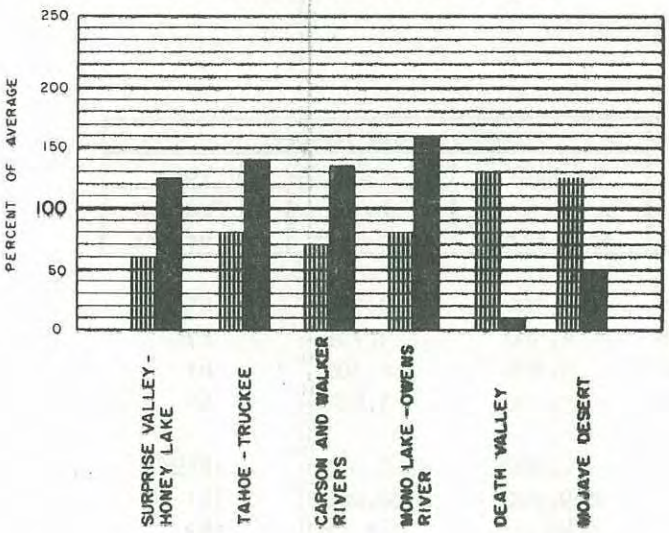
IMPACT

THROUGHOUT THIS AREA THE MARCH RAINS IN VALLEY AREAS, AND THE RETENTION OF ABOVE NORMAL SNOW STORED WATER AT HIGHER ELEVATIONS, WILL TEND TO PROLONG MOISTURE SUPPLIES THIS SEASON. IN THE CENTRAL AND SOUTHERN PORTIONS THE ABOVE NORMAL SNOWPACK AND STORAGE IN SURFACE RESERVOIRS ASSURE WATER USERS OF AN ADEQUATE SUPPLY. WATER USERS DEPENDENT UPON NATURAL STREAMFLOW CAN EXPECT SUSTAINED FLOWS TO EQUAL OR EXCEED THOSE RECEIVED IN AN AVERAGE YEAR. DRY FARMING AND GRAZING OPERATORS SHOULD EXPERIENCE GOOD SOIL MOISTURE CONDITIONS THIS YEAR, ESPECIALLY IN NORTHERN VALLEY AND FOOTHILL AREAS.

LAHONTAN AREA

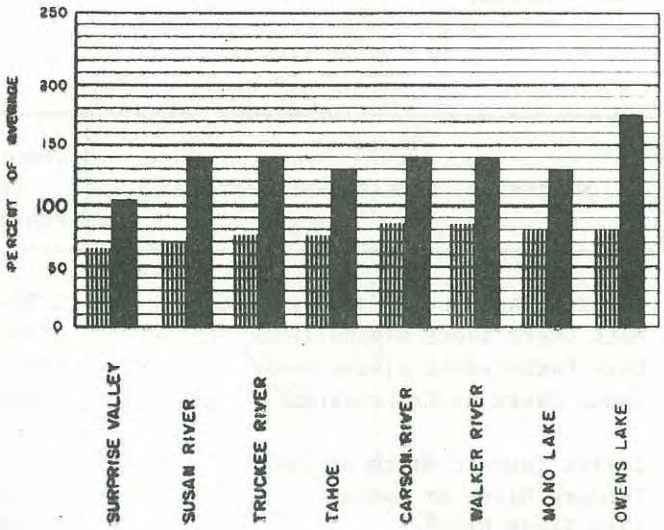
PRECIPITATION

SEASONAL PRECIPITATION
IN PERCENT OF AVERAGE TO DATE



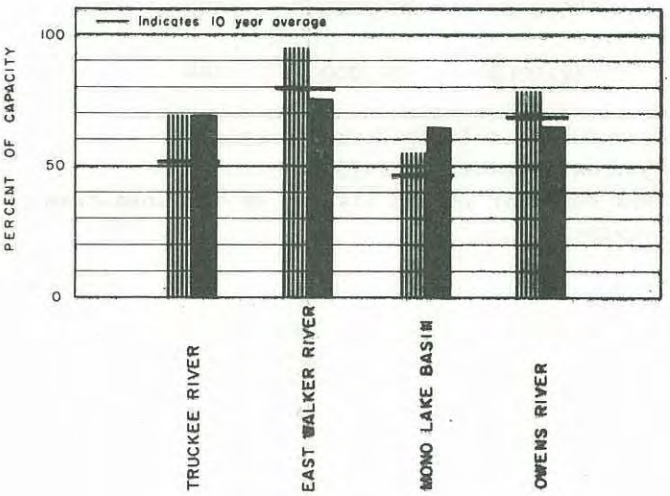
SNOWPACK

SNOWPACK WATER CONTENT
IN PERCENT OF AVERAGE TO DATE



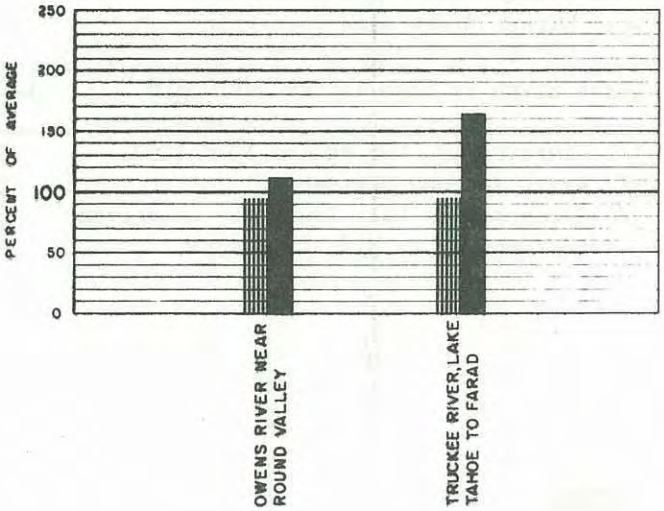
RESERVOIR STORAGE

CONTENTS OF MAJOR RESERVOIRS
IN PERCENT OF CAPACITY



STREAMFLOW

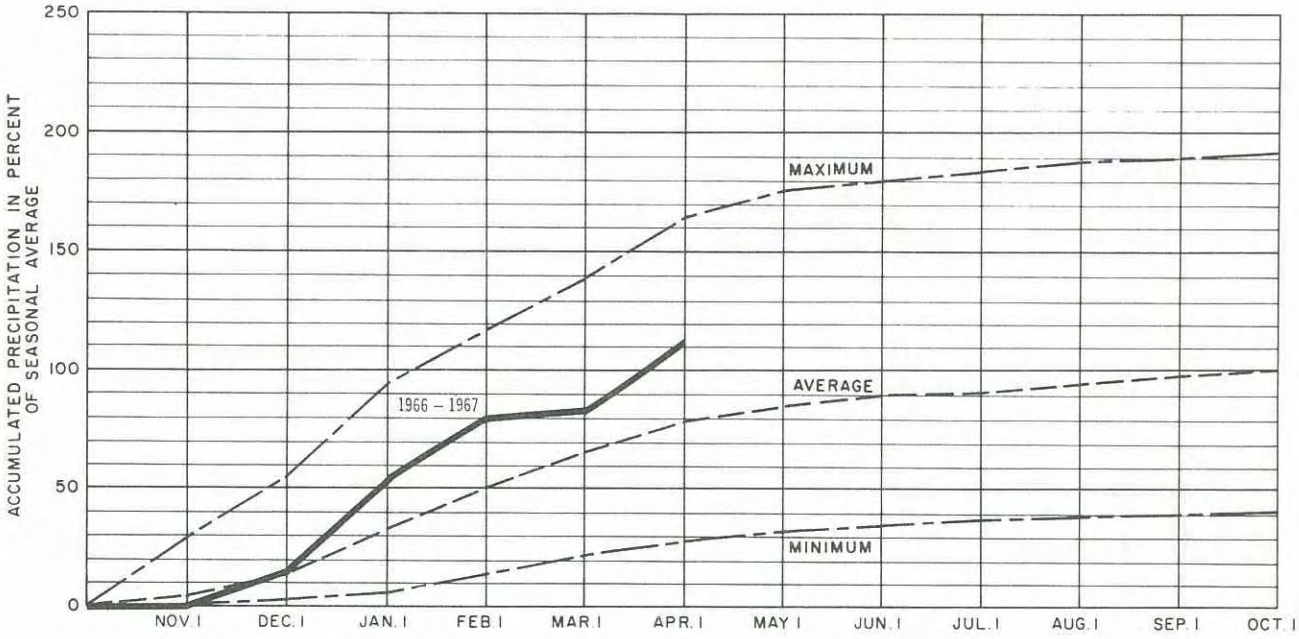
ACCUMULATED UNIMPAIRED RUNOFF SINCE OCTOBER 1
IN PERCENT OF AVERAGE TO DATE



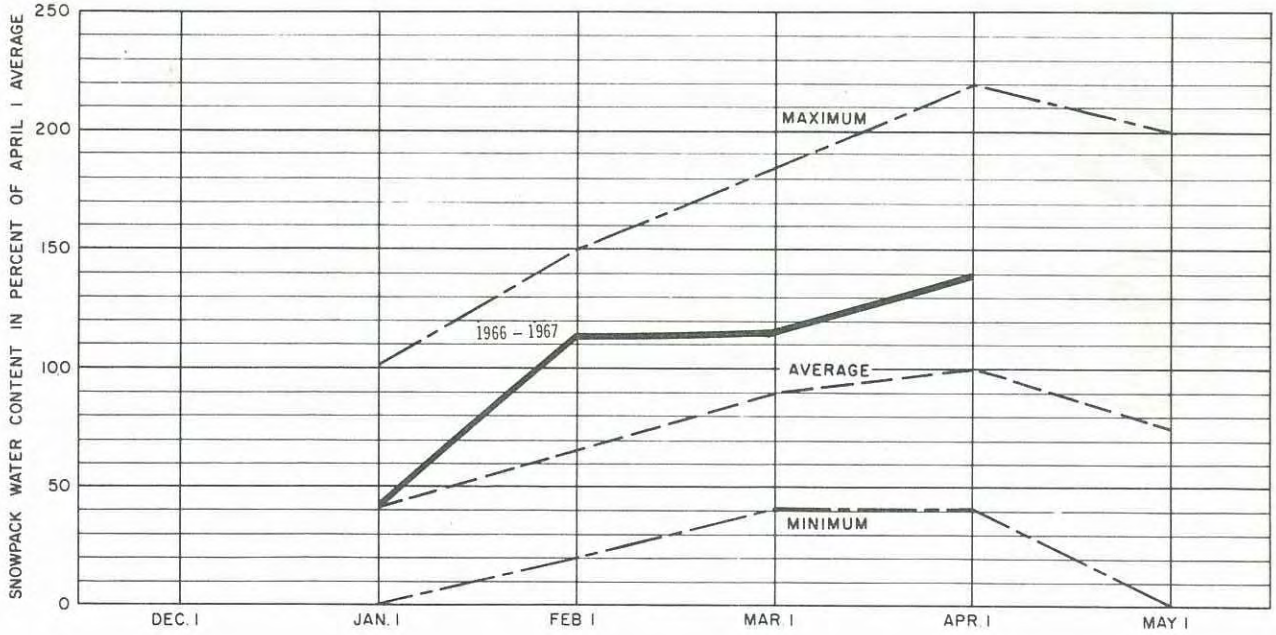
APRIL 1, 1966
APRIL 1, 1967

STATUS OF WATER SUPPLY

PRECIPITATION



SNOWPACK ACCUMULATION



PRECIPITATION AND SNOWPACK ACCUMULATION

SOUTH COASTAL AREA

PRECIPITATION - IN THE SOUTH COASTAL AREA PRECIPITATION WAS ABOUT 125 PERCENT OF NORMAL FOR THE PERIOD OCTOBER 1, 1966, THROUGH MARCH 31, 1967, SLIGHTLY LESS THAN THAT EXPERIENCED DURING THE SAME PERIOD LAST YEAR. TOTALS VARIED FROM 84 PERCENT OF NORMAL AT SAN DIEGO TO 179 PERCENT OF NORMAL AT SAN DIMAS TANBARK FLATS, IN THE SAN GABRIEL RIVER DRAINAGE.

MARCH PRECIPITATION AVERAGED ABOUT NORMAL OVER THE AREA. HOWEVER, IT VARIED FROM ONE AND ONE-HALF TIMES NORMAL IN THE SAN GABRIEL AND SAN BERNARDINO MOUNTAINS TO ABOUT 50 PERCENT OF NORMAL OVER THE SAN DIEGO DRAINAGE.

SNOWPACK - MEASUREMENTS OF SNOWPACK WERE OBTAINED AT 11 SNOW COURSES ON OR ABOUT APRIL 1. THESE MEASUREMENTS INDICATE THAT SNOW DEPTHS EXIST UP TO TWO FEET IN SOME AREAS, AND WILL HAVE ONLY A MINOR INFLUENCE ON SPRING RUNOFF THIS YEAR.

RESERVOIR STORAGE - WATER IN STORAGE IN 26 MAJOR RESERVOIRS IN THE SOUTH COASTAL AREA ON APRIL 1 WAS 583,800 ACRE-FEET, 159 PERCENT OF THEIR APRIL 1 AVERAGE, AND 39 PERCENT OF THEIR COMBINED CAPACITY.

NINE OF THE RESERVOIRS, COMPRISING ABOUT ONE-FOURTH OF THE 26-RESERVOIR CAPACITY, INCLUDED COLORADO RIVER WATER IN THEIR STORAGE. ON APRIL 1, THESE RESERVOIRS WERE STORING 292,000 ACRE-FEET OF WATER OR 133 PERCENT OF THEIR APRIL 1 AVERAGE. THE REMAINING 17 RESERVOIRS, WHICH STORE ONLY LOCAL WATER, CONTAINED 291,800 ACRE-FEET, OR 198 PERCENT OF AVERAGE.

STREAMFLOW - MARCH FLOWS IN KEY SOUTH COASTAL STREAMS GENERALLY RANGED BETWEEN 70 AND 190 PERCENT OF AVERAGE WITH TOTAL MONTHLY RUNOFF ESTIMATED AT ABOUT 105 PERCENT OF NORMAL. TOTAL RUNOFF SINCE OCTOBER 1, 1966, IS NOW ABOUT 170 PERCENT OF NORMAL IN THIS AREA.

FORECASTS APRIL 1, 1967 - CONDITIONS AT THIS TIME INDICATE THAT WITH NORMAL PRECIPITATION FOR THE REMAINDER OF THE SEASON, WATER YEAR RUNOFF IN THE SOUTH COASTAL AREA WILL BE ABOUT 150 PERCENT OF AVERAGE. LAST YEAR, THE WATER YEAR RUNOFF WAS 160 PERCENT OF AVERAGE.

SOUTH COASTAL AREA

IMPACT

AMPLE WATER SUPPLIES WILL BE AVAILABLE TO THIS AREA DURING 1967. PRECIPITATION HAS BEEN NORMAL OR ABOVE, AND DURING MARCH WAS OF CONSIDERABLE BENEFIT TO AGRICULTURAL INTERESTS. THE MAJORITY OF WATER USERS IN THIS AREA ARE DEPENDENT ON IMPORTED SUPPLIES. THE RESERVOIR DATA FOR COLORADO RIVER STORAGE PROJECTS AND THE MONO LAKE-OWENS VALLEY AREA CONFIRM THAT WATER USERS CAN EXPECT NORMAL DELIVERIES THIS YEAR.

COLORADO DESERT AREA

PRECIPITATION - PRECIPITATION IN THE COLORADO DESERT AREA DURING THE OCTOBER THROUGH MARCH PERIOD WAS ABOUT 60 PERCENT OF AVERAGE, VARYING FROM 74 PERCENT OF NORMAL AT BLYTHE TO 54 PERCENT OF NORMAL AT IMPERIAL. MARCH PRECIPITATION WAS GENERALLY LIGHT, AVERAGING ONLY 40 PERCENT OF NORMAL. AMOUNTS VARIED FROM 0.22 INCH AT BLYTHE TO NO MEASURABLE AMOUNT AT THERMAL.

SNOWPACK - SNOW CONDITIONS IN THE UPPER COLORADO RIVER BASIN, ACCORDING TO THE U. S. SOIL CONSERVATION SERVICE, ARE 85 PERCENT OF NORMAL. THEY RANGE FROM A HIGH OF 98 PERCENT IN THE GREEN RIVER BASIN TO A LOW OF 73 PERCENT OF NORMAL IN THE SAN JUAN RIVER BASIN.

RESERVOIR STORAGE - WATER SURFACE ELEVATION OF THE SALTON SEA ON APRIL 1, 1967, MEASURED FROM DATUM AT FIG TREE JOHN'S GAGE, WAS 231.25 FEET BELOW SEA LEVEL, REPRESENTING A RISE OF 0.25 OF A FOOT FOR THE MONTH AND A RISE OF 0.10 OF A FOOT OVER THE LEVEL A YEAR AGO.

THE U. S. BUREAU OF RECLAMATION, REGION 3, BOULDER CITY, NEVADA, REPORTS THAT THE STORAGE IN LAKE MEAD ON APRIL 1 WAS 15,438,000 ACRE-FEET, WHICH IS 91 PERCENT OF THE 10-YEAR AVERAGE FOR THE DATE AND 57 PERCENT OF TOTAL CAPACITY. LAKE POWELL, UPSTREAM FROM LAKE MEAD, HAD 7,368,000 ACRE-FEET OF WATER STORED ON APRIL 1; THIS IS ABOUT 1,540,000 ACRE-FEET LESS THAN ONE YEAR AGO AND 30 PERCENT OF ITS TOTAL CAPACITY.

STREAMFLOW - RUNOFF TO DATE OF THE COLORADO RIVER INFLOW TO LAKE POWELL, CORRECTED FOR REGULATION OF UPPER COLORADO RIVER STORAGE PROJECT RESERVOIRS, WAS ABOUT 2,192,100 ACRE-FEET OR 83 PERCENT OF THE OCTOBER THROUGH MARCH AVERAGE. UNIMPAIRED RUNOFF OF THE COLORADO RIVER DURING MARCH WAS 531,100 ACRE-FEET WHICH IS 85 PERCENT OF AVERAGE.

FORECASTS APRIL 1, 1967 - THE U. S. BUREAU OF RECLAMATION, REGION 4, SALT LAKE CITY, UTAH, FORECASTS THAT FLOW IN THE COLORADO RIVER, INFLOW TO LAKE POWELL, DURING APRIL-JULY 1967, WILL BE:

MAXIMUM	8,800,000 ACRE-FEET
MEAN	6,300,000 ACRE-FEET
MINIMUM	3,800,000 ACRE-FEET

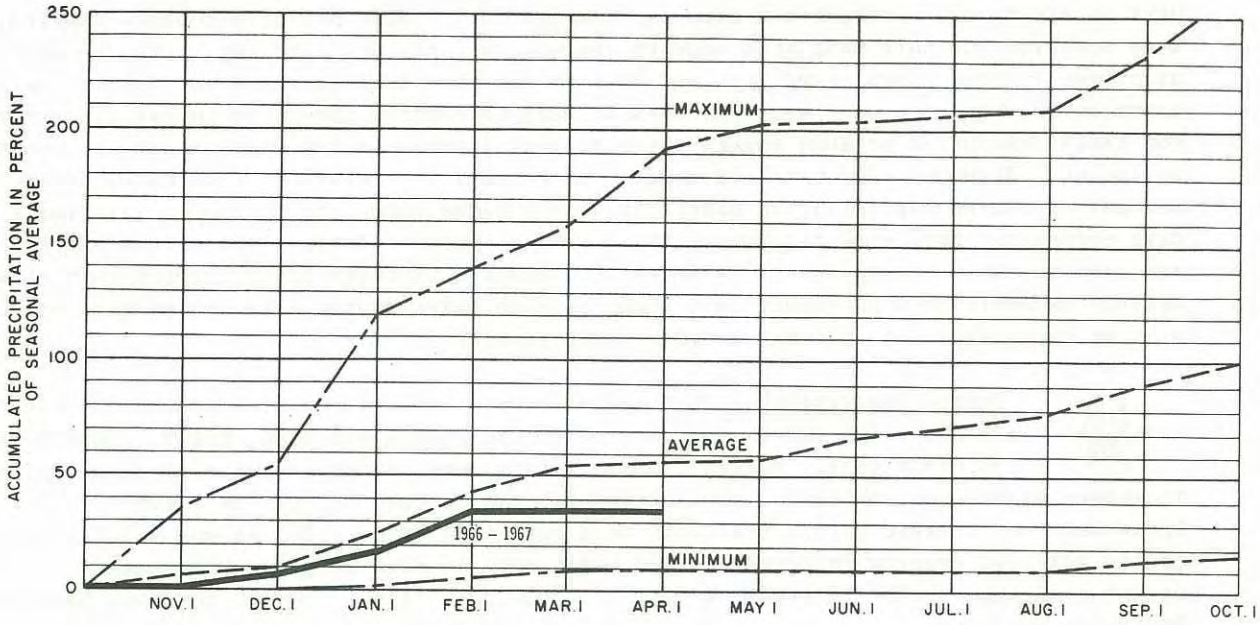
THE HISTORICAL APRIL-JULY INFLOW FROM THE PARIA AND LITTLE COLORADO RIVERS BETWEEN LAKE POWELL AND GRAND CANYON HAS AVERAGED ONLY 51,700 ACRE-FEET. THEREFORE, THE FORECAST FOR APRIL-JULY INFLOW TO LAKE POWELL CAN BE CONSIDERED AS ESSENTIALLY EQUIVALENT TO THE FORECAST FOR FLOW OF THE COLORADO RIVER NEAR GRAND CANYON, ASSUMING NO COLORADO RIVER STORAGE PROJECT RESERVOIRS.

IMPACT

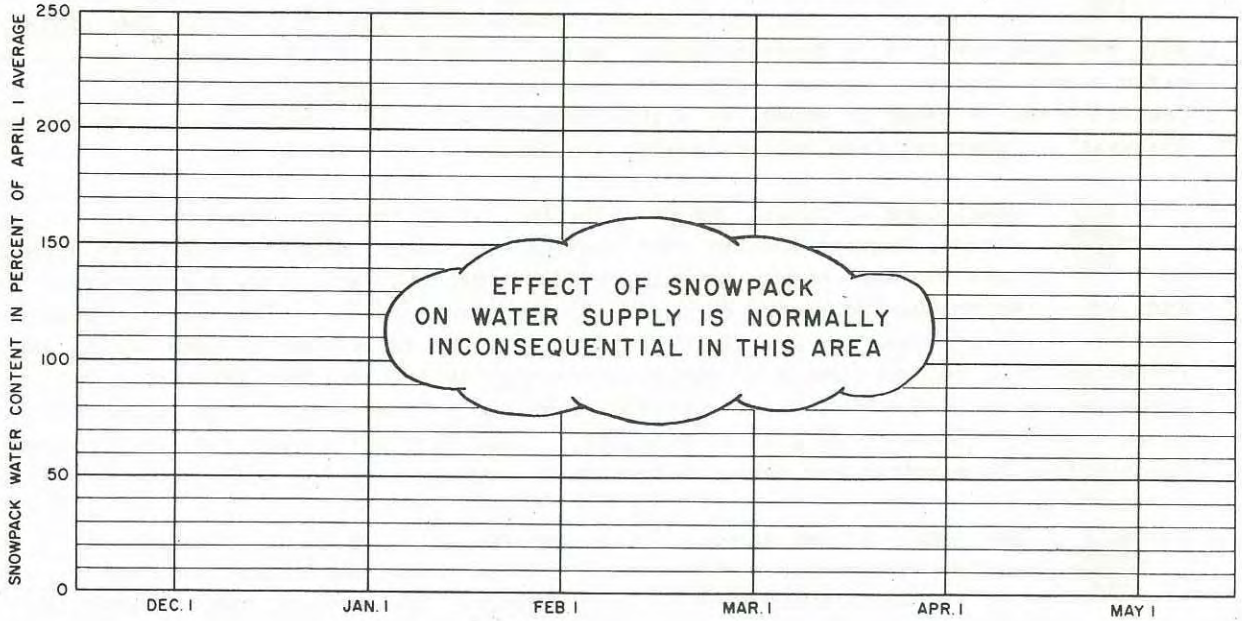
WITH THIS AREA DEPENDING PREDOMINATELY ON IMPORTED WATER FROM THE COLORADO RIVER, THE OCCURRENCE OF BELOW NORMAL PRECIPITATION SO FAR THIS SEASON WILL HAVE LITTLE BEARING ON WATER SUPPLY CONDITIONS. THE AVAILABILITY OF IMPORTED SUPPLIES CAN BE EXPECTED TO REMAIN NORMAL THIS SEASON, CONSIDERING THAT LAKES POWELL AND MEAD ARE NOW STORING A COMBINED TOTAL OF 22,806,000 ACRE-FEET, WHICH IS CONSIDERED TO BE ABOUT AVERAGE FOR THIS DATE.

COLORADO DESERT AREA

PRECIPITATION



SNOWPACK ACCUMULATION



PRECIPITATION AND SNOWPACK ACCUMULATION

SNOW LINES

APRIL SNOW SURVEYS - CONTINUOUSLY UNSETTLED WEATHER DURING MOST OF THE 10-DAY SNOW SURVEY PERIOD, TYPIFIED BY SNOW SHOWERS AND HIGH WINDS, HAS DELAYED MANY SNOW SURVEY TRIPS THIS MONTH. SOME HELICOPTER TRIPS TO REMOTE SNOW COURSES HAVE BEEN SCHEDULED AND RESCHEDULED TO NO AVAIL. GROUND PARTIES IN OVERSNOW VEHICLES HAVE BUCKED THROUGH DEEP, LIGHT SNOW AND MANAGED TO GET MOST OF THEIR COURSES SAMPLED. SNOW SURVEYORS ON SKIS HAVE ALSO SLUGGED THROUGH THE DEEP NEW SNOW AND, ALTHOUGH HELD UP BY STORMS IN SOME CASES, HAVE ALSO OBTAINED ENOUGH SNOW DATA TO ALLOW THE RUNOFF FORECASTS TO BE COMPLETED ON TIME. THE CURRENT WEATHER PATTERN SERVES TO EMPHASIZE THE NEED FOR EARLY SCHEDULING OF SNOW SURVEY TRIPS SO THAT A BREAK IN THE WEATHER CAN BE USED TO ADVANTAGE. ALTHOUGH SNOW DATA ARE ALWAYS CORRECTED TO THE FIRST OF THE MONTH, USING THE NEAREST RECORDING PRECIPITATION GAGE, THE SNOW SURVEYS SHOULD BE SCHEDULED STARTING FIVE DAYS BEFORE THE 1ST, WITH THE 5TH OF THE MONTH AS A CUTOFF DATE. THIS ALLOWS SURVEYORS TEN DAYS TO GET THE SNOW DATA. -- AFTER THIS MONTH'S EXPERIENCE, WE SUSPECT THAT CLEAR WEATHER ON APRIL 26 WILL RESULT IN A FLOOD OF SNOW NOTES ON THE 27TH AND NO DATA PROBLEMS WILL BE EXPERIENCED FOR THE MAY 1 WATER CONDITIONS REPORT.

"FROZEN RESERVOIRS" - THIS AWARD WINNING 16 MM COLOR FILM ABOUT SNOW SURVEYING AND WATER SUPPLY FORECASTING IN CALIFORNIA HAS BEEN WIDELY VIEWED DURING ITS FIRST YEAR. AUDIENCES HAVE VARIED FROM SELECT GROUPS OF SNOW SURVEYORS TO AGENCY MANAGEMENT PERSONNEL, SERVICE GROUPS, AND GENERAL TELEVISION VIEWERS. THE DEPARTMENT HAS SEVERAL PRINTS AVAILABLE ON A FREE LOAN BASIS. SO, IF YOU HAVE AN UPCOMING TRAINING SESSION OR OTHER MEETING WHERE PRESENTATION OF WATER MANAGEMENT ORIENTATION WOULD BE OF INTEREST, ARRANGE TO SHOW THIS FILM. CONTACT THE SNOW SURVEYS OFFICE OR WRITE TO:

DEPARTMENT OF WATER RESOURCES
GRAPHIC SERVICES BRANCH
P. O. BOX 388
SACRAMENTO, CALIFORNIA 95802

ON MOUNTAIN NAMES - IN NEW DEHLI DURING A RECENT SEMINAR OF 40 SPECIALISTS IN HIMALAYAN STUDIES, IT WAS RECOMMENDED THE ANGLICIZED PLURAL "HIMALAYAS" BE DROPPED AND THE LOFTY MOUNTAIN RANGE BE CALLED "HIMALAYA". THE GROUP SAID THE WORD HIMALAYA IN SANSKRIT MEANS "ABODE OF SNOW". -- IN CALIFORNIA THE ANGLICIZED PLURAL "SIERRAS" IS ALSO OFTEN USED INSTEAD OF THE CORRECT "SIERRA". SIERRA IN SPANISH MEANS "A RANGE OF MOUNTAINS WITH A SERRATED OUTLINE". THEREFORE, USING THE NAME "SIERRAS" IS SOMEWHAT LIKE SAYING "MOUNTAIN'S RANGES".

JÖKULHLAUP - TOUCHED OFF BY A VOLCANIC ERUPTION UNDER THICK GLACIER ICE, A RAGING, EDDYING TORRENT THAT CARRIED MORE WATER THAN ANY RIVER EVER SEEN BY MAN PROBABLY FLOWED BRIEFLY IN WRIGHT VALLEY, ANTARCTICA A FEW CENTURIES AGO, ACCORDING TO CHARLES WARREN OF THE U. S. GEOLOGICAL SURVEY. THE MASSIVE FLOOD IS BELIEVED TO HAVE CARVED THE HEAD OF WRIGHT VALLEY INTO ITS NETWORK OF DEEP BASINS AND INTERCONNECTING CHANNELS KNOWN AS THE "LABYRINTH". IN ICELAND, THE DREADED FLOODS THAT OCCUR WHEN A VOLCANO ERUPTS UNDER GLACIERS IS CALLED A "JÖKULHLAUP". TO ILLUSTRATE THEIR CONSTANT CONCERN OVER GLACIAL BEHAVOIR, IT HAS BEEN NOTED THAT THE EARLIEST KNOWN DESCRIPTIONS OF GLACIERS ARE FOUND IN ICELANDIC LITERATURE OF 900 YEARS AGO.

SKI TIPS - IF THE SNOW IS "SLOW" AND THE GOING IS TOUGH, EVEN DOWNHILL, YOU SKIERS SHOULD CONSIDER THIS AS A POSSIBLE SOLUTION (EXCEPT SNOW SURVEYORS WHO ARE NOTORIOUSLY FAST). IN ST. MORITZ, SWITZERLAND, THE RAZZLE-DAZZLE GIRLS IN THAT CHIC WINTER RESORT HAVE BEEN WARNED OFF THE SKI SLOPES BECAUSE THEIR OUTFITS ARE CONSIDERED TOO DANGEROUS. INSTRUCTORS ARE REFUSING TO TAKE GIRLS WEARING GOLD AND SILVER LAME SKI CLOTHES OR SHINY LACQUERED TROUSERS. SAID ONE INSTRUCTOR, "WHEN A GIRL FALLS, WEARING SUCH AN OUTFIT, SHE SLIDES DOWN THE SLOPE LIKE BUTTER IN A HOT PAN. ONE INSTRUCTOR NEARLY BROKE HIS NECK TRYING TO RESCUE A GIRL WHO SLIPPED DOWN THE FULL LENGTH OF THE OLYMPIC RUN".

CALIFORNIA COOPERATIVE SNOW SURVEYS

State of California

Department of Water Resources

BULLETIN No. 120-67

WATER CONDITIONS IN CALIFORNIA

REPORT No. 3: Basic Data Supplement

APRIL 1, 1967

RONALD REAGAN
Governor
State of California

WILLIAM R. GIANELLI
Director
Department of Water Resources

FOREWORD

REPORTS ENTITLED "WATER CONDITIONS IN CALIFORNIA" ARE PREPARED AS OF THE FIRST OF EACH MONTH, FEBRUARY THROUGH MAY, AND IN THE FALL OF EACH YEAR BY THE DEPARTMENT OF WATER RESOURCES, DIVISION OF OPERATIONS, PURSUANT TO SECTION 228, ARTICLE 2, CHAPTER 2, DIVISION 1, OF THE WATER CODE WHICH PROVIDES THAT:

> "THE DEPARTMENT SHALL GATHER AND CORRELATE INFORMATION AND DATA PERTINENT TO AN ANNUAL FORECAST OF SEASONAL WATER CROP, INCLUDING THE MAKING OF SNOW SURVEYS, EITHER INDEPENDENTLY OR IN COOPERATION WITH ANY PERSON OR ANY COUNTY, STATE, FEDERAL, OR OTHER AGENCY."

THE APRIL 1, 1967 REPORT, PUBLISHED EARLIER AS A SEPARATE VOLUME, WAS BASED UPON THE PRECIPITATION, SNOW SURVEY, RESERVOIR STORAGE AND STREAMFLOW DATA PRESENTED IN THIS SUPPLEMENT.

ALLIED AND SUPPLEMENTARY HYDROLOGIC INFORMATION IS AVAILABLE IN THE BULLETIN 130 SERIES. INFORMATION ON THIS AND OTHER PUBLICATIONS BY THE DEPARTMENT OF WATER RESOURCES MAY BE OBTAINED BY WRITING TO:

STATE OF CALIFORNIA
OFFICE OF PROCUREMENT, DOCUMENTS SECTION
P. O. BOX 1612
SACRAMENTO, CALIFORNIA 95807

TABLE OF CONTENTS

	Page
FOREWORD	iii
AGENCIES COOPERATING IN THE CALIFORNIA SNOW SURVEY PROGRAM	vi

LIST OF TABLES

Table Number		
1.	PRECIPITATION DATA	1
2.	SNOW SURVEY MEASUREMENT DATA	12
3.	AERIAL SNOW DEPTH MEASUREMENTS	23
4.	SUMMARY OF STORAGE IN MAJOR RESERVOIRS	27
5.	STORAGE IN MAJOR RESERVOIRS	28
6.	RUNOFF DATA	33

LIST OF PLATES

Plate Number		
1.	SNOW DEPTH AT NORDEN	Following Page 22
2.	WATER CONTENT OF SNOW -- AMERICAN RIVER BASIN	Following Page 22
3.	WATER CONTENT OF SNOW -- KINGS RIVER BASIN	Following Page 22
4.	WATER CONTENT OF SNOW -- INDEPENDENCE CAMP	Following Page 22

COVER

One of the duties of snow surveyors is to record the total precipitation catch in storage gages such as this. Here, a Department snow surveyor measures the precipitation catch at Tuolumne Meadows in Yosemite National Park while on a snow survey trip with Park rangers. This precipitation data will supplement snow survey data when computing the season's runoff from the Tuolumne River watershed.

AGENCIES COOPERATING IN THE CALIFORNIA SNOW SURVEY PROGRAM

STATE AND FEDERAL AGENCIES

- CALIFORNIA DEPARTMENT OF WATER RESOURCES
- CALIFORNIA DEPARTMENT OF PARKS AND RECREATION
- DEPARTMENT OF AGRICULTURE - FOREST SERVICE (14 NATIONAL FORESTS); SOIL CONSERVATION SERVICE
- DEPARTMENT OF COMMERCE - WEATHER BUREAU
- DEPARTMENT OF INTERIOR - BUREAU OF RECLAMATION
  - GEOLOGICAL SURVEY, WATER RESOURCES DIVISION;
  - NATIONAL PARK SERVICE (3 NATIONAL PARKS)
- DEPARTMENT OF THE ARMY - CORPS OF ENGINEERS

PUBLIC UTILITIES

- PACIFIC GAS AND ELECTRIC COMPANY
- SIERRA PACIFIC POWER COMPANY
- SOUTHERN CALIFORNIA EDISON COMPANY

MUNICIPALITIES

- CITY OF LOS ANGELES - DEPARTMENT OF WATER AND POWER
- CITY OF PORTERVILLE
- CITY AND COUNTY OF SAN FRANCISCO - PUBLIC UTILITIES COMMISSION

PUBLIC AGENCIES

- BUENA VISTA WATER STORAGE DISTRICT
- CENTRAL CALIFORNIA IRRIGATION DISTRICT
- EAST BAY MUNICIPAL UTILITY DISTRICT
- KAWEAH DELTA WATER CONSERVATION DISTRICT
- KAWEAH RIVER ASSOCIATION
- KINGS RIVER WATER ASSOCIATION
- LOS ANGELES COUNTY FLOOD CONTROL DISTRICT
- LOWER TULE RIVER IRRIGATION DISTRICT
- MERCED IRRIGATION DISTRICT
- MODESTO IRRIGATION DISTRICT
- NEVADA IRRIGATION DISTRICT
- OAKDALE IRRIGATION DISTRICT
- OMOCHUMNE-HARTNELL WATER DISTRICT
- PORTERVILLE IRRIGATION DISTRICT
- SACRAMENTO MUNICIPAL UTILITY DISTRICT
- SAUCELITO IRRIGATION DISTRICT
- SOUTH SAN JOAQUIN IRRIGATION DISTRICT
- ST. JOHNS RIVER ASSOCIATION
- TULE RIVER ASSOCIATION
- TURLOCK IRRIGATION DISTRICT
- VANDALIA IRRIGATION DISTRICT

PRIVATE ORGANIZATIONS

- J. G. BOSWELL COMPANY
- KERN COUNTY LAND COMPANY
- LIBERTY FARMS COMPANY
- MILLER & LUX, INC.
- UNION CARBIDE NUCLEAR COMPANY
- UNITED HOP GROWERS OF CALIFORNIA, INC.

OTHER COOPERATIVE PROGRAMS

- NEVADA COOPERATIVE SNOW SURVEYS
- OREGON COOPERATIVE SNOW SURVEYS

TABLE 1

PRECIPITATION DATA

AREA, DRAINAGE BASIN, AND PRECIPITATION STATION (1)	ELEVATION IN FEET	SOURCE OF DATA	PRECIPITATION						
			MARCH 1967			OCTOBER 1, 1966-MARCH 31, 1967			AVERAGE WATER YEAR (3) (INCHES)
			TOTAL FOR MONTH (INCHES)	AVERAGE (3) (INCHES)	IN PER-CENT OF AVERAGE	SEASON TOTAL (INCHES)	AVERAGE (3) (INCHES)	IN PER-CENT OF AVERAGE	
NORTH COASTAL AREA									
SMITH RIVER									
ELK VALLEY	1711	USWB	11.21	10.35	108	69.93	70.22	100	81.55
GASQUET RS	384	USWB	14.83	10.01	148	81.20	78.01	104	93.00
CRESCENT CITY 11E	360	DWR	15.48	13.29	116	79.75	83.16	96	102.53
BROOKINGS, OREGON	80	USWB	11.39	10.29	111	63.28	65.81	96	81.17
CRESCENT CITY 1N	40	USWB	11.52	9.39	123	57.05	60.15	95	75.87
KLAMATH RIVER									
TULELAKE INSPECTION STATION	4408	DWR	1.86	1.40	133	9.57	9.49	101	15.54
KLAMATH FALLS 2SSW, OREGON	4098	USBR	1.58	1.17	135	9.73	9.90	98	14.00
TULELAKE	4034	USWB	1.37	.96	143	7.73	6.33	122	10.21
CALLAHAN RS	3136	USWB	3.03	2.17	140	15.63	15.98	98	19.44
GAZELLE-TUCKER	2690	DWR	-	1.12	-	-	8.02	-	11.58
MONTAGUE	2635	DWR	1.08	1.14	95	9.98	8.86	113	12.36
YREKA	2625	USWB	1.82	1.61	113	14.24	13.84	103	17.76
HAPPY CAMP RS	1090	USWB	7.59	6.45	118	53.25	47.73	112	54.96
ORLEANS	403	USWB	7.45	6.25	119	42.34	43.48	97	51.22
ORICK ARCATA REDWOOD CO	75	DWR	10.33	8.79	118	49.92	55.79	89	67.42
TRINITY RIVER									
COFFEE CREEK RS	2500	USWB	10.44	4.23	247	56.79	40.44	140	52.18
BURNT RANCH 1S	2150	USWB	6.67	5.23	128	38.52	35.69	108	41.54
WEAVERVILLE RS	2050	USWB	4.39	4.19	105	33.42	31.00	108	36.87
BIG BAR RS	1272	USWB	5.32	4.10	130	43.34	31.19	139	36.75
EEL RIVER									
MAD RIVER RS	2775	USWB	10.48	8.12	129	49.21	50.27	98	58.42
OLD HARRIS	2200	DWR	12.60	8.73	144	57.36	62.70	91	72.46
HONOR CAMP NO 42	1875	DWR	12.41	9.39	132	56.87	64.08	89	74.57
COVELO	1385	USWB	8.97	5.37	167	39.19	34.70	113	39.47
STANDISH-HICKEY STATE PARK	850	USWB	13.39	9.70	138	45.99	66.23	69	75.72
HONEYDEW 2WSW	375	USWB	21.34	15.51	138	98.97	98.17	101	112.09
UPPER MATTOLE	255	USWB	18.02	10.46	172	77.78	69.78	111	80.26
BLUE LAKE	105	DWR	8.53	5.84	146	52.91	39.86	133	46.38
SCOTIA	139	USWB	12.42	6.32	197	44.71	41.99	106	48.50
FORT BRAGG	80	USWB	9.33	5.04	185	36.90	32.78	113	38.34
EUREKA WB CITY	43	USWB	7.44	5.25	142	35.18	31.99	110	38.43

TABLE I - PRECIPITATION DATA (Continued)

AREA, DRAINAGE BASIN, AND PRECIPITATION STATION (1)	ELEVATION IN FEET	SOURCE OF DATA	PRECIPITATION						
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			TOTAL FOR MONTH (INCHES)	AVERAGE (3) (INCHES)	IN PER-CENT OF AVERAGE	SEASON TOTAL (INCHES)	AVERAGE (3) (INCHES)	IN PER-CENT OF AVERAGE	
NORTH COASTAL AREA (CONTINUED)									
RUSSIAN RIVER									
CAZADERO	1040	USWB	15.29	9.83	156	76.62	63.99	120	74.25
POTTER VALLEY PH.	1014	PG+E	9.36	5.24	179	55.31	38.12	145	44.05
UKIAH	623	USWB	7.46	4.37	171	36.32	31.48	115	35.94
BOONVILLE MAINT STATION	375	USWB	8.07	4.50	179	39.02	32.35	121	36.89
SANTA ROSA	167	USWB	5.86	3.98	147	33.51	25.27	133	29.25
FORT ROSS	114	USWB	6.09	5.07	120	32.00	33.55	95	39.62
HEALDSBURG	102	USWB	8.60	4.89	176	48.70	34.74	140	39.81
SAN FRANCISCO BAY AREA									
MOUNT HAMILTON	4206	USWB	2.75	3.93	70	14.98	23.66	63	27.20
GERBER RANCH	2150	USWB	6.21	2.30	270	21.71	15.76	138	17.96
ANGWIN PAC UNION COLLEGE	1815	USWB	8.03	4.91	164	46.49	32.98	141	37.52
LAGUNITAS LAKE	805	MMWD	11.40	6.84	167	61.53	41.92	147	47.91
LIVERMORE 2SSW	545	USWB	4.15	1.94	214	16.36	12.53	131	14.40
SAN JOSE	70	CSJ	5.14	1.91	269	15.37	11.40	135	13.11
NAPA STATE HOSPITAL	60	USWB	6.08	3.32	183	29.35	20.85	141	23.88
SAN FRANCISCO FOB	52	USWB	4.35	2.93	148	23.51	18.30	128	20.78
REDWOOD CITY	31	USWB	5.44	2.55	213	24.11	17.09	141	19.26
OAKLAND WB AP	3	USWB	5.12	2.42	212	21.66	15.55	139	17.93
CENTRAL COASTAL AREA									
SALINAS RIVER									
PRIEST VALLEY	2390	USWB	7.04	3.09	228	24.89	17.34	144	19.87
PASO ROBLES	700	USWB	3.99	2.24	178	19.30	11.67	165	13.29
SAN BERNARDO RANCHO	435	DWR	3.08	2.12	145	12.32	11.46	108	12.17
KING CITY	320	USWB	2.80	1.61	174	11.05	9.15	121	10.46
SAN LUIS OBISPO POLY	300	USWB	6.38	3.10	206	25.10	18.89	133	21.53
BIG SUR STATE PARK	235	USWB	9.34	5.86	159	45.86	35.81	128	40.85
SALINAS FAA AP	74	USWB	2.33	2.07	113	12.40	12.16	102	14.14
PT PIEDRAS BLANCAS	32	USWB	4.74	2.69	176	21.31	16.43	130	18.74
PAJARO RIVER									
HOLLISTER	284	USWB	3.18	1.87	170	13.33	11.38	117	13.15
SANTA CRUZ	125	USWB	7.26	4.15	175	29.83	27.56	108	31.25
WATSONVILLE WATER WORKS	95	USWB	6.42	2.98	215	25.00	18.46	135	21.00

TABLE I - PRECIPITATION DATA (Continued)

AREA, DRAINAGE BASIN, AND PRECIPITATION STATION (1)	ELEVATION IN FEET	SOURCE OF DATA	PRECIPITATION						
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CENTRAL COASTAL AREA (CONTINUED)									
SANTA MARIA AND SANTA YNEZ RIVERS									
CACHUMA DAM	781	USBR	4.23	3.35	126	17.06	17.07	100	19.01
LOS ALAMOS	565	USWB	2.30	2.56	90	13.67	13.18	104	15.13
SANTA MARIA WB AP	238	USWB	2.31	2.06	112	11.27	11.60	97	13.37
SANTA BARBARA	100	USWB	2.04	2.74	74	19.13	15.61	123	17.63
SOUTH COASTAL AREA									
COASTAL PLAIN									
LOS ANGELES WB CITY	312	USWB	2.02	2.26	89	17.42	13.02	134	14.68
SANTA ANA FS	115	USWB	1.97	2.16	91	13.76	12.73	108	14.58
LOS ANGELES WB AP	102	USWB	1.22	1.79	68	13.60	11.20	121	12.63
LAGUNA BEACH	56	USWB	1.16	1.91	61	10.89	10.80	101	12.47
VENTURA	45	USWB	1.22	2.41	51	9.75	12.79	76	14.22
LONG BEACH	34	USWB	1.36	1.82	75	12.67	11.59	109	13.00
SAN DIEGO WB AP	19	USWB	.70	1.57	45	7.74	9.17	84	10.40
SANTA CLARA RIVER									
MINT CANYON	2350	LACFCD	3.12	2.04	153	15.20	11.33	134	13.16
SAUGUS PP NO 1	2105	USWB	4.57	2.82	162	19.46	15.73	124	18.22
DRY CANYON RESERVOIR	1515	USWB	1.69	2.03	83	12.58	11.18	113	12.93
SANTA PAULA	282	USWB	2.91	2.91	100	18.12	15.39	118	17.22
LOS ANGELES RIVER									
LOOMIS RANCH	4050	LACFCD	2.57	3.00	86	16.69	16.33	102	19.00
HAINES CANYON UPPER	3450	LACFCD	8.39	4.31	195	32.70	24.82	132	28.69
BIG TUJUNGA DAM	2315	LACFCD	7.46	4.16	179	33.31	23.58	141	26.72
ARROYO SECO RS	1220	LACFCD	4.68	3.41	137	25.90	19.59	132	22.45
BURBANK WB AP	699	USWB	3.08	2.16	143	14.85	12.77	116	14.53
SAN GABRIEL RIVER									
BIG PINES CAMP	6860	LACFCD	7.07	3.56	199	29.16	21.32	137	25.04
MT WILSON	5709	USWB	8.83	5.14	172	39.72	28.97	137	33.02
SAN DIMAS TANBARK FLAT	2720	LACFCD	5.99	3.66	164	35.88	19.99	179	22.76
HOEGEES	2650	LACFCD	11.01	5.58	197	51.99	33.50	155	38.46
HENNINGER FLATS	2550	LACFCD	5.75	4.05	142	28.08	22.54	125	26.42
SAN GABRIEL DAM CAMP	1481	LACFCD	7.00	4.03	174	37.08	23.34	159	26.29
SAN DIMAS DAM	1350	LACFCD	4.25	3.74	114	30.46	18.71	163	21.66
CLAREMONT POMONA COLLEGE	1201	USWB	2.77	2.83	98	19.86	15.79	126	18.05

TABLE I - PRECIPITATION DATA (Continued)

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SAN JOAQUIN VALLEY FLOOR (CONTINUED)									
NEWMAN 2NW	108	USWB	1.88	1.58	119	10.64	8.78	121	10.38
MERCED FS NO 2	169	USWB	2.53	1.86	136	10.42	10.22	102	12.12
LOS BANOS	125	USWB	1.17	1.35	87	8.12	7.39	110	8.74
SAN JUAN HDQRS M + L	90	DWR	1.58	1.45	109	8.48	7.72	110	9.51
FRIANT GOVERNMENT CAMP	410	USWB	3.04	2.71	112	13.39	12.89	104	14.54
MADERA	270	USWB	2.23	1.73	129	10.81	8.95	121	10.75
MENDOTA DAM	166	USWB	1.78	1.17	152	6.81	6.36	107	7.65
FRESNO WB AP	331	USWB	3.15	1.96	161	10.19	9.53	107	11.14
ORANGE COVE	431	USWB	2.37	2.08	114	11.54	11.29	102	13.20
PANOCHE	1265	USWB	1.92	1.12	171	8.63	7.28	119	8.59
LEMON COVE	513	USWB	3.11	2.06	151	12.90	11.73	110	14.06
VISALIA	354	USWB	1.68	1.60	105	8.10	8.63	94	10.13
HANFORD	242	USWB	2.42	1.34	181	7.82	6.99	112	8.12
LINDSAY	395	USWB	1.90	1.86	102	11.04	9.69	114	11.62
COALINGA	671	USWB	1.17	1.09	107	7.86	6.19	127	7.28
PORTERVILLE	393	USWB	1.65	1.91	86	10.95	9.30	118	11.06
ANGIOLA	205	USWB	1.14	1.22	93	6.21	6.31	98	7.55
WASCO	333	USWB	.61	1.11	55	4.56	5.37	85	6.56
SOUTH BELRIDGE	575	DWR	.41	.81	51	2.75	4.14	66	5.16
BAKERSFIELD WB AP	494	USWB	.52	1.06	49	4.00	5.15	78	6.36
SAN EMIGDIO RANCH	1450	DWR	.82	1.33	62	3.96	6.93	57	8.57
TEHACHAPI	3975	USWB	.97	1.68	58	8.69	9.14	95	11.44
TEJON RANCHO	1425	USWB	1.66	2.02	82	6.68	9.72	69	12.18
PATTIWAY	3868	USWB	.49	1.64	30	4.82	8.06	60	9.78
UPPER SACRAMENTO, PIT, AND MCCLOUD RIVERS									
JESS VALLEY	5290	USWB	1.81	1.88	96	10.64	10.61	100	17.22
ALTURAS RS	4365	USWB	.94	1.57	60	8.55	8.69	98	12.82
BIEBER	4130	DWR	1.38	2.07	67	15.16	12.90	118	17.43
MOUNT SHASTA WB CITY	3544	USWB	8.49	4.46	190	35.00	29.36	119	36.72
MCCLOUD	3300	USWB	12.63	6.03	209	53.99	41.01	132	50.51
HAT CREEK PH NO 1	3015	PG+E	3.64	2.02	180	17.67	13.77	128	18.06

TABLE I - PRECIPITATION DATA (Continued)

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UPPER SACRAMENTO PIT AND MCCLOUD RIVERS (CONTINUED)									
DUNSMUIR RS	2420	USWB	13.39	8.10	165	61.14	47.58	128	58.12
PIT RIVER PH NO 5	1450	PG+E	17.92	9.53	188	73.42	61.38	120	75.37
VOLLMERS	1359	USWB	13.43	9.21	146	67.31	56.10	120	66.98
SHASTA DAM	1076	USBR	11.25	7.70	146	55.76	48.25	116	57.96
FEATHER RIVER									
BUCKS STORAGE RESERVOIR	5100	PG+E	17.32	9.73	178	74.09	58.42	127	69.50
SIERRAVILLE RS	4975	USWB	7.46	2.84	263	31.45	21.09	149	25.39
VINTON	4945	DWR	3.13	1.43	219	13.69	9.69	141	12.91
PORTOLA	4838	USWB	4.77	2.57	186	24.86	16.60	150	20.47
CANYON DAM	4555	USWB	10.95	5.06	216	46.29	31.98	145	38.37
CHESTER	4530	USWB	8.13	4.02	202	34.32	26.26	131	32.09
BRUSH CREEK RS	3560	USWB	12.46	10.00	125	69.95	60.79	115	71.41
QUINCY RS	3409	USWB	9.67	5.38	180	48.38	33.29	145	39.99
CARIBOU	2990	PG+E	10.40	5.58	186	40.87	34.14	120	40.60
LAKE WILENOR	2000	DWR	10.31	7.32	141	55.69	42.32	132	50.50
BUCKS CREEK PH (STORRIE)	1760	PG+E	14.94	8.88	168	66.51	54.51	122	64.58
LAS PLUMAS	506	USWB	10.14	7.16	142	53.78	43.19	125	50.55
YUBA RIVER									
SODA SPRINGS 1E	6885	USWB	13.80	9.51	145	55.14	55.00	100	66.36
BOWMAN DAM	5347	USWB	14.05	10.13	139	63.92	55.75	115	66.77
BLUE CANYON WB AP	5280	USWB	15.94	8.45	189	64.07	50.74	126	60.37
LAKE SPAULDING	5156	USWB	17.18	9.44	182	67.91	54.59	124	65.86
DEER CREEK PH	3700	USWB	15.25	9.91	154	74.25	56.84	131	67.08
DOWNIEVILLE RS	2895	USWB	14.66	8.63	170	70.43	50.87	138	60.99
CAMPTONVILLE RS	2745	USWB	9.81	8.42	117	54.52	50.49	108	59.76
GRASS VALLEY	2693	USWB	9.82	8.38	117	53.12	46.43	114	54.75
NEVADA CITY	2600	USWB	10.84	7.92	137	53.11	44.94	118	53.01
BULLARDS BAR PH	1640	USWB	12.44	10.53	118	65.98	58.91	112	69.44
DOBBINS COLGATE FOREBAY	1550	USWB	7.50	5.96	126	39.62	34.95	113	41.15
COLGATE PH	585	PG+E	7.62	5.83	131	38.91	33.95	115	40.10
NORTH SAN JUAN	2081	DWR	10.35	7.00	148	44.99	40.76	110	48.13

TABLE I - PRECIPITATION DATA (Continued)

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			TOTAL FOR MONTH (INCHES)	AVERAGE (3) (INCHES)	IN PER-CENT OF AVERAGE	SEASON TOTAL (INCHES)	AVERAGE (3) (INCHES)	IN PER-CENT OF AVERAGE	
CENTRAL VALLEY AREA (CONTINUED)									
AMERICAN RIVER									
TWIN LAKES	7829	PG+E	12.90	7.08	182	49.39	37.56	131	46.47
BIG BEND RS	5739	USWB	16.10	9.86	163	69.32	56.99	122	68.76
BLUE CANYON WB AP	5280	USWB	15.94	8.45	189	64.07	50.74	126	60.37
DRUM FOREBAY	4563	PG+E	12.68	9.58	132	52.65	51.61	102	61.89
SLY PARK	3480	USBR	11.21	7.69	146	42.63	42.01	101	49.73
PACIFIC HOUSE	3440	USWB	11.75	8.13	145	42.22	43.71	97	51.00
GEORGETOWN RS	3001	USWB	10.62	8.40	126	51.77	46.09	112	54.00
COLFAX	2418	USWB	10.87	7.13	152	48.98	39.60	124	46.70
PLACERVILLE	1890	USWB	7.73	6.23	124	36.20	34.02	106	40.27
AUBURN	1297	USWB	7.90	5.38	147	37.54	29.90	126	35.10
FOLSOM DAM	350	USBR	5.30	3.59	148	25.58	20.24	126	23.74
MOKELUMNE RIVER									
TWIN LAKES	7829	PG+E	12.90	7.08	182	49.39	37.56	131	46.47
SALT SPRINGS PH	3700	PG+E	12.76	6.39	200	45.69	36.11	127	43.78
WEST POINT 3 SW	2400	USWB	8.59	6.03	142	38.05	31.18	122	36.65
TIGER CREEK PH	2355	PG+E	11.59	6.95	167	45.03	38.55	117	45.75
FIDDLETOWN LYNCH RANCH	2100	USWB	8.48	5.58	152	34.67	29.46	118	33.93
ELECTRA PH	715	PG+E	6.97	4.68	149	28.83	25.43	113	29.99
STANISLAUS RIVER									
STRAWBERRY LAKE	5620	PG+E	15.72	5.88	267	46.15	33.88	136	41.40
SPRING GAP FOREBAY	4875	PG+E	12.89	5.59	231	40.89	33.95	120	41.10
CALAVERAS BIG TREES	4696	USWB	16.10	8.26	195	55.19	45.35	122	53.56
TUOLUMNE RIVER									
STRAWBERRY LAKE	5620	PG+E	15.72	5.88	267	46.15	33.88	136	41.40
LAKE ELEANOR	4662	USWB	9.10	6.24	146	39.58	36.44	109	43.47
HETCH HETCHY	3870	USWB	9.82	5.02	196	33.37	28.62	117	35.18
SONORA RS	1830	USWB	6.36	5.06	126	28.63	27.24	105	32.01
MERCED RIVER									
YOSEMITE NP	3985	USWB	11.53	5.07	227	40.58	30.33	134	36.51
DUDLEYS	3000	USWB	9.78	5.88	166	35.45	32.89	108	38.51
MARIPOSA	2011	USWB	7.62	4.58	166	27.57	25.88	107	29.95
EXCHEQUER RESERVOIR	484	USWB	5.21	3.21	162	15.93	16.29	98	19.16

TABLE I - PRECIPITATION DATA (Continued)

AREA, DRAINAGE BASIN, AND PRECIPITATION STATION (1)	ELEVATION IN FEET	SOURCE OF DATA	PRECIPITATION						
			MARCH 1967			OCTOBER 1, 1966-MARCH 31, 1967			AVERAGE WATER YEAR (3) (INCHES)
			TOTAL FOR MONTH (INCHES)	AVERAGE (3) (INCHES)	IN PER-CENT OF AVERAGE	SEASON TOTAL (INCHES)	AVERAGE (3) (INCHES)	IN PER-CENT OF AVERAGE	
CENTRAL VALLEY AREA (CONTINUED)									
UPPER SAN JOAQUIN RIVER									
FLORENCE LAKE	7355	SCEC	6.83	3.03	225	29.35	17.41	169	22.73
HUNTINGTON LAKE	7020	USWB	10.94	4.37	250	37.07	26.33	141	32.45
CRANE VALLEY	3500	PG+E	10.94	6.30	174	44.82	34.65	129	40.91
NORTH FORK RS	2630	USWB	10.37	5.17	201	35.61	28.57	125	33.72
AUBERRY	2003	USWB	7.72	3.85	201	26.55	21.48	124	25.27
KINGS RIVER									
GRANT GROVE	6580	USWB	12.97	8.47	153	51.45	38.51	134	44.83
BALCH PH	1750	USWB	8.41	4.30	196	35.90	23.53	153	28.15
PINE FLAT DAM	615	USCE	4.24	3.18	133	18.54	17.00	109	19.80
KAWEAH RIVER									
GRANT GROVE	6580	USWB	12.97	8.47	153	51.45	38.51	134	44.83
GIANT FOREST	6360	USWB	11.98	6.88	174	58.14	36.97	157	44.40
ASH MOUNTAIN	1698	USWB	5.63	4.28	132	33.15	21.81	152	26.52
THREE RIVERS EDISON PH NO 2	950	USWB	4.16	3.32	125	24.72	17.62	140	21.22
TULE RIVER									
SPRINGVILLE TULE HEADWORKS	4070	USWB	5.51	5.67	97	44.99	27.83	162	33.39
TULE RIVER INTAKE	2450	SCEC	6.21	4.97	125	38.81	23.53	165	26.87
KERN RIVER									
KERN RIVER INTAKE NO 3	3650	USWB	2.62	2.73	96	21.43	15.49	138	17.72
GLENNVILLE	3130	USWB	2.63	3.11	85	16.80	14.83	113	18.19
KERN RIVER PH NO 3	2703	USWB	1.42	1.72	83	20.55	9.67	213	11.10
WOFFORD HEIGHTS	2700	USWB	.40	1.47	27	15.70	9.13	172	10.28
LAHONTAN AREA									
SURPRISE VALLEY									
CEDARVILLE	4672	USWB	.92	1.45	63	10.66	9.06	118	12.88
FORT BIDWELL	4498	USWB	1.43	1.64	87	11.53	10.63	108	14.71
MADELINE PLAINS-HONEY LAKE									
RAVENDALE JIM MARR RANCH	5540	DWR	.90	.81	111	7.10	5.66	125	8.07
SUSANVILLE COURTHOUSE	4325	DWR	3.94	1.85	213	17.98	13.66	132	16.99
DOYLE	4240	USWB	2.68	.92	291	14.63	7.42	197	9.54
SUSANVILLE AP	4148	USWB	3.69	1.51	244	16.09	11.54	139	14.48
WENDEL 1E	4040	DWR	1.01	.74	136	7.13	5.98	119	7.71

TABLE I - PRECIPITATION DATA (Continued)

AREA, DRAINAGE BASIN, AND PRECIPITATION STATION (1)	ELEVATION IN FEET	SOURCE OF DATA	PRECIPITATION						
			MARCH 1967			OCTOBER 1, 1966-MARCH 31, 1967			AVERAGE WATER YEAR (3) (INCHES)
			TOTAL FOR MONTH (INCHES)	AVERAGE (3) (INCHES)	IN PER-CENT OF AVERAGE	SEASON TOTAL (INCHES)	AVERAGE (3) (INCHES)	IN PER-CENT OF AVERAGE	
LAHONTAN AREA (CONTINUED)									
TRUCKEE AND TAHOE BASIN									
TAHOE CITY	6228	USWB	10.95	3.95	277	36.38	26.09	139	30.90
TRUCKEE RS	5960	USWB	11.41	4.02	284	38.61	25.99	149	31.14
CARSON RIVER									
WOODFORDS	5671	USWB	6.57	2.51	262	23.25	15.93	146	21.36
WALKER RIVER									
BRIDGEPORT	6470	USWB	1.92	.85	226	8.80	6.74	131	8.96
MONO BASIN									
ELLERY LAKE	9600	USWB	5.70	2.86	200	25.20	18.29	138	23.71
GEM LAKE	8970	USWB	7.00	2.54	276	20.52	16.65	123	21.12
MONO LAKE	6520	USWB	2.93	2.51	117	15.34	14.81	104	17.58
OWENS RIVER									
WHITE MOUNTAIN NO 2	12470	USWB	6.08	1.28	475	30.30	10.87	279	13.62
SOUTH LAKE	9500	SCEC	5.50	2.14	257	23.72	12.97	183	17.31
LAKE SABRINA	9065	SCEC	3.90	2.07	188	18.76	13.40	140	17.62
CROOKED CREEK	6700	LADWP	1.32	1.19	111	13.51	7.89	171	10.02
BIG PINES PH NO 3	5200	LADWP	.53	.83	64	13.36	7.20	186	8.41
BISHOP WB AP	4108	USWB	.45	.55	82	7.81	4.66	168	5.84
INDEPENDENCE	3950	USWB	.03	.38	8	12.04	4.01	300	4.97
LA AQUEDUCT AT INTAKE	3830	LADWP	.00	.42	0	13.01	4.37	298	5.28
HAIWEE	3810	USWB	.01	.65	2	8.05	4.81	167	5.95
COTTONWOOD GATES	3600	LADWP	.19	.66	29	12.28	4.99	246	6.12
DEATH VALLEY									
DEATH VALLEY	-194	USWB	.00	.17	0	.10	1.17	9	1.78
MOJAVE DESERT									
FAIRMONT	3060	USWB	3.07	2.32	132	16.43	13.23	124	15.02
PALMDALE FAA AP	2517	USWB	.03	1.40	2	3.70	7.72	48	8.87
INYOKERN	2440	USWB	.00	.50	0	1.84	3.05	60	4.17
DAGGETT FAA AP	1922	USWB	.00	.59	0	.89	3.44	26	4.70
BAKER 9NNW	1045	USWB	.00	.44	0	1.23	2.67	46	4.04

TABLE I - PRECIPITATION DATA (Continued)

AREA, DRAINAGE BASIN, AND PRECIPITATION STATION (1)	ELEVATION IN FEET	SOURCE OF DATA	PRECIPITATION						
			MARCH 1967			OCTOBER 1, 1966-MARCH 31, 1967			AVERAGE WATER YEAR (3) (INCHES)
			TOTAL FOR MONTH (INCHES)	AVERAGE (3) (INCHES)	IN PER-CENT OF AVERAGE	SEASON TOTAL (INCHES)	AVERAGE (3) (INCHES)	IN PER-CENT OF AVERAGE	
COLORADO DESERT AREA									
TWENTYNINE PALMS	1975	USWB	.00	.29	0	.77	2.45	31	3.96
IRON MOUNTAIN	922	USWB	.08	.30	27	2.07	1.95	106	3.06
NEEDLES FAA AP	913	USWB	.01	.39	3	2.15	2.82	76	4.63
BLYTHE FAA AP	390	USWB	.22	.40	55	1.78	2.40	74	3.96
YUMA, ARIZONA, WB AP	199	USWB	.07	.17	41	.35	1.23	28	2.18
IMPERIAL	-64	USWB	.12	.18	67	1.00	1.85	54	2.84
THERMAL FAA AP	-120	USWB	.00	.22	0	1.31	2.07	63	2.93

(1) STATIONS LOCATED NEAR BASIN BOUNDARIES ARE LISTED UNDER EACH BASIN.

(2) USWB - UNITED STATES WEATHER BUREAU. LACFCD - LOS ANGELES COUNTY FLOOD CONTROL DISTRICT. DWR - STATE OF CALIFORNIA, DEPARTMENT OF WATER RESOURCES. PG+E - PACIFIC GAS AND ELECTRIC COMPANY. SCEC - SOUTHERN CALIFORNIA EDISON COMPANY. LADWP - LOS ANGELES DEPARTMENT OF WATER AND POWER. MMWD - MARIN MUNICIPAL WATER DISTRICT. CSJ - CITY OF SAN JOSE. USBR - UNITED STATES BUREAU OF RECLAMATION. CSD - CITY OF SAN DIEGO. USCE - UNITED STATES ARMY CORPS OF ENGINEERS.

(3) BASED UPON THE 30-YEAR PERIOD 1930-31 THROUGH 1959-60. WHEN THE PERIOD OF RECORD IS LESS THAN 30 YEARS, THE AVERAGE HAS BEEN COMPUTED BY COMPARISON WITH STATIONS HAVING COMPLETE RECORDS. AVERAGES ARE THEREFORE BASED UPON THE SAME PERIOD AND ARE COMPARABLE. ALL RECORDS HAVE BEEN CHECKED FOR HOMOGENEITY, AND ADJUSTED TO MOST RECENT LOCATION AND EXPOSURE.

TABLE 2

SNOW COURSE DATA

AREA, DRAINAGE BASIN, AND SNOW COURSE (1)	ELEVATION IN FEET	DATE OF SURVEY	DEPTH IN INCHES	DENSITY IN PERCENT	WATER CONTENT IN INCHES	WATER CONTENT IN PERCENT OF APRIL 1 AVERAGE	WATER CONTENT APRIL 1 AVERAGE IN INCHES (2)	WATER CONTENT ONE YEAR AGO IN INCHES
NORTH COASTAL AREA								
SHASTA RIVER								
PARKS CREEK	6700	3-29-67	100.8	37	36.9	108	34.1	44.4
LITTLE SHASTA	6200	2-29-67	71.2	32	22.7	106	21.4	14.3
SWEETWATER	5850	3-29-67	46.5	30	14.1	99	14.2	18.7
SCOTT RIVER								
MIDDLE BOULDER NO 1	6600	3-29-67	78.6	40	31.2	95	32.9	32.4
MIDDLE BOULDER NO 3	6200	3-29-67	72.2	41	29.4	102	28.8	28.3
ETNA MOUNTAIN	5900	3-30-67	96.5	36	35.1	96	36.6	41.0
MARBLE VALLEY	5900	3-30-67	129.2	36	46.5	104	44.7	67.5
DYNAMITE MEADOW	5700	3-29-67	49.6	36	18.1	102	17.8	22.0
SWAMPY JOHN	5500	3-30-67	110.2	36	39.2	106	37.0	45.8
TRINITY RIVER								
DEADFALL LAKES	7200	3-29-67	84.8	37	31.0	94	33.0	34.8
RED ROCK MOUNTAIN	6700	4 -4-67	115.9	43	50.2	113	44.3	54.6
BEAR BASIN	6500	4 -4-67	98.2	41	40.2	100	40.1	46.7
WOLFORD CABIN	6150	3-28-67	85.0	37	31.6	86	36.8	35.3
SHIMMY LAKE	6200	4 -4-67	130.2	41	53.5	111	48.0	66.8
HIGHLAND LAKES	6000	3-27-67	87.6	43	37.7	115	32.7	45.0
MUMBO BASIN	5700	3-28-67	76.0	36	27.2	103	26.5	34.4
WHALAN	5400	3-28-67	62.5	37	23.3	117	20.0	30.4
BIG FLAT	5100	4 -4-67	37.4	44	16.3	104	15.7	23.4
EEL RIVER								
PLASKETT MEADOWS	6000	3-29-67	41.6	34	14.0	71	19.6	26.2
SOUTH COASTAL AREA								
PIRU CREEK								
MOUNT PINOS	8600	4 -3-67	9.2	27	2.5	32	7.8	1.0
SANTA ANA RIVER								
UPPER THUNDER MOUNTAIN	8500	4 -2-67	52.0	33	17.3	117	14.8	12.1
CHRISTMAS TREE HILL	8500	4 -3-67	13.1	31	4.1	-	(3)	7.4
LOWER THUNDER MOUNTAIN	7500	4 -3-67	20.6	31	6.4	123	5.2	0.0
SAN YCA	7500	4 -3-67	0.0	-	0.0	-	(3)	0.0
MANKER FLAT	6500	4 -6-67	2.4	29	.7	-	(3)	0.0
ICE HOUSE NO 4	5800	4 -6-67	3.4	38	1.3	-	(3)	0.0

TABLE 2 - SNOW COURSE DATA (Continued)

AREA, DRAINAGE BASIN, AND SNOW COURSE (1)	ELEVATION IN FEET	DATE OF SURVEY	DEPTH IN INCHES	DENSITY IN PERCENT	WATER CONTENT IN INCHES	WATER CONTENT IN PERCENT OF APRIL 1 AVERAGE	WATER CONTENT APRIL 1 AVERAGE IN INCHES (2)	WATER CONTENT ONE YEAR AGO IN INCHES
SOUTH COASTAL AREA (CONTINUED)								
SAN GABRIEL RIVER								
DEER FLATS	6800	4 -5-67	12.8	31	4.0	-	(3)	0.0
SAN JACINTO RIVER								
CINCO POSES	7500	3-28-67	1.6	44	.7	19	3.7	2.7
MARION MOUNTAIN	6700	3-28-67	0.0	-	0.0	0	2.4	0.0
THOMAS MOUNTAIN	6600	3-27-67	0.0	-	0.0	-	(3)	0.0
COTTONWOOD CREEK								
LITTLE LAGUNA MEADOW	5500			NO SURVEY MADE				
CENTRAL VALLEY AREA								
SACRAMENTO RIVER								
MOUNT SHASTA	7900	4 -5-67	168.3	43	71.6	145	49.4	63.0
NORTH FORK SACRAMENTO	6900	3-29-67	65.0	34	22.1	94	23.4	29.6
SAND FLAT	6800	4 -5-67	136.2	40	54.0	131	41.2	53.6
GRAY ROCK LAKES	6200	3-31-67	128.8	40	50.9	116	44.0	59.2
SLATE CREEK	5600	3-27-67	70.9	44	31.2	110	28.3	41.9
MCCLOUD RIVER								
BREWER CREEK	6250	4 -4-67	114.1	42	47.4	137	34.5	43.8
BUCK MOUNTAIN	5550	4 -3-67	103.6	37	38.6	146	26.5	33.5
STOUTS MEADOW	5400	4 -3-67	144.5	44	64.2	157	40.9	61.8
ASH CREEK	5000	4 -4-67	64.9	44	28.6	129	22.1	24.8
DEAD HORSE CANYON	4500	3-29-67	39.2	48	18.8	136	13.8	21.4
PIT RIVER								
BLUE LAKE RANCH	7300	4 -3-67	36.8	34	12.5	121	10.3	2.8
EAGLE PEAK	7200	3-31-67	57.8	27	15.6	96	16.2	8.9
CEDAR PASS	7100	3-30-67	48.3	29	13.8	81	17.0	12.2
BLACKS MOUNTAIN	6700	3-29-67	41.0	35	14.4	171	8.4	6.4
MEDICINE LAKE	6700	4 -3-67	117.2	40	46.8	153	30.5	36.7
THOUSAND LAKES	6500	4 -3-67	114.1	34	38.5	105	36.8	36.3
ADIN MOUNTAINS	6350	3-30-67	43.4	38	16.7	119	14.0	10.4
NEW MANZANITA LAKE	5900	4 -5-67	28.0	33	9.1	126	7.2	6.5
MCELROY PASS	5300	4 -4-67	2.4	33	.8	31	2.6	0.0
BURNEY SPRINGS	4700	4 -4-67	11.0	34	3.7	148	2.5	3.1

TABLE 2 - SNOW COURSE DATA (Continued)

AREA, DRAINAGE BASIN, AND SNOW COURSE (1)	ELEVATION IN FEET	DATE OF SURVEY	DEPTH IN INCHES	DENSITY IN PERCENT	WATER CONTENT IN INCHES	WATER CONTENT IN PERCENT OF APRIL 1 AVERAGE	WATER CONTENT APRIL 1 AVERAGE IN INCHES (2)	WATER CONTENT ONE YEAR AGO IN INCHES
CENTRAL VALLEY AREA (CONTINUED)								
FEATHER RIVER								
UPPER LASSEN PEAK	8500			NO SURVEY MADE				
LOWER LASSEN PEAK	8250			NO SURVEY MADE				
KETTLE ROCK	7300	3-30-67	87.2	36	31.6	-	(3)	13.8
MOUNT DYER NO 1	7100	4 -5-67	89.6	35	31.4	128	24.6	25.1
GRIZZLY	6900	3-28-67	97.8	40	38.8	-	(3)	25.0
EUREKA BOWL	6800	4 -3-67	135.9	44	59.7	146	40.8	38.4
CHURCH MEADOWS	6700	3-28-67	96.8	45	43.1	142	30.4	28.8
ROWLAND CREEK	6700	3-27-67	69.4	35	24.6	142	17.3	11.3
MT HOUGH	6700	3-29-67	100.6	38	38.4	-	(3)	22.2
THREE LAKES	6250	4 -3-67	131.6	38	49.4	126	39.2	38.7
HARKNESS FLAT	6200	4 -4-67	88.8	38	33.8	116	29.2	27.3
EUREKA LAKE	6200	4 -3-67	108.6	43	46.9	145	32.3	30.4
MOUNT DYER NO 2	6050	4 -5-67	66.9	28	18.5	119	15.6	14.9
MILL CREEK FLAT	5900	3-28-67	97.6	43	41.5	107	38.8	39.4
FRENCHMAN COVE	5800	3-27-67	22.6	43	9.7	-	(3)	0.0
FREDONYER PASS NO 1	5750	3-29-67	25.0	43	10.8	116	9.3	3.5
ANTELOPE RIDGE	5650	3-30-67	24.4	34	8.4	-	(3)	0.0
ABBEY	5650	3-28-67	38.0	40	15.3	-	(3)	6.8
LETTERBOX	5600	4 -3-67	144.3	41	58.9	126	46.9	53.6
MOUNT STOVER	5600	3-29-67	62.7	36	22.4	135	16.6	15.4
BROWNS CAMP	5400	3-29-67	70.0	42	29.5	133	22.1	30.1
FEATHER RIVER MEADOWS	5400	4 -4-67	77.9	38	29.3	129	22.8	26.3
HASKINS FLAT	5200	3-29-67	79.7	44	34.7	119	29.2	31.9
WARNER CREEK	5100	4 -4-67	54.4	37	20.1	125	16.1	17.7
HUMBUG SUMMIT	4850	4 -4-67	34.0	36	12.4	100	12.4	10.6
CHESTER FLAT	4600	3-29-67	36.8	36	13.4	184	7.3	5.4
STONY CREEK								
ANTHONY PEAK	6200	4 -4-67	85.5	37	32.0	109	29.3	44.7
YUBA RIVER								
CASTLE CREEK NO 5	7400	3-28-67	149.8	45	67.6	128	52.7	41.5
MEADOW LAKE	7200	4 -8-67	192.0	39	75.5	134	56.4	45.8
RED MOUNTAIN	7200	4 -8-67	180.3	39	70.9	143	49.6	44.3
ENGLISH MOUNTAIN	7100	3-25-67	123.2	46	56.4	125	45.1	41.0
LAKE STERLING	7100	4 -8-67	182.4	38	70.1	126	55.5	45.1

TABLE 2 - SNOW COURSE DATA (Continued)

AREA, DRAINAGE BASIN, AND SNOW COURSE (1)	ELEVATION IN FEET	DATE OF SURVEY	DEPTH IN INCHES	DENSITY IN PERCENT	WATER CONTENT IN INCHES	WATER CONTENT IN PERCENT OF APRIL 1 AVERAGE	WATER CONTENT APRIL 1 AVERAGE IN INCHES (2)	WATER CONTENT ONE YEAR AGO IN INCHES
YUBA RIVER (CONTINUED)								
SAWMILL FLAT	7100	4 -8-67	171.8	40	69.3	133	52.2	44.2
DONNER SUMMIT	6900	3-29-67	115.8	42	48.7	122	39.9	31.3
HAYPRESS VALLEY	6800	3-25-67	98.4	46	45.0	136	33.0	(4)
YUBA PASS	6700	3-27-67	97.9	45	44.0	138	31.8	29.5
FURNACE FLAT	6700	4 -8-67	152.6	45	68.7	143	48.1	40.7
LAKE FORDYCE	6500	4 -8-67	142.9	41	59.0	143	41.4	34.0
FINDLEY PEAK	6500	3-25-67	77.4	44	33.9	116	29.3	25.6
CISCO	5900	3-29-67	85.0	42	36.1	144	25.0	25.6
SARDINE FLAT	5800	3-29-67	58.6	40	23.5	131	18.0	19.2
BOWMAN LAKE	5650	3-25-67	61.6	43	26.5	126	21.1	21.0
GIBSONVILLE	5400	4 -2-67	92.4	40	37.3	114	32.6	34.0
LAKE SPAULDING	5200	4 -4-67	88.7	37	32.8	131	25.0	25.9
AMERICAN RIVER								
UPPER CARSON PASS	8500	4 -3-67	131.1	38	50.0	142	35.2	27.8
EMIGRANT VALLEY	8400	4 -3-67	148.3	38	56.4	128	44.1	33.7
LOWER CARSON PASS	8400			NO SURVEY MADE				
TWIN LAKES	8000	4 -3-67	119.9	37	44.6	146	30.5	25.4
ALPHA	7600	3-30-67	104.4	37	38.2	-	(3)	25.7
LOST CORNER MOUNTAIN	7500	4 -3-67	138.3	37	51.4	-	(3)	27.6
ECHO SUMMIT	7450	3-27-67	105.5	44	46.2	119	38.9	28.7
LAKE AUDRAIN	7300	3-27-67	103.0	43	44.2	121	36.4	29.5
SILVER LAKE	7100	3-28-67	57.8	43	25.1	104	24.1	15.0
DARRINGTON	7100	3-27-67	78.0	45	35.0	109	32.1	15.4
WRIGHTS LAKE	6900	4 -3-67	118.5	37	43.3	130	33.2	24.6
MCKINSTRY MEADOW	6900	4 -3-67	120.7	43	52.1	-	(3)	(4)
PHILLIPS	6800	4 -3-67	104.6	37	39.1	131	29.8	22.3
LYONS CREEK	6700	4 -3-67	106.4	37	39.0	120	32.4	23.6
HUYSINK	6600	4 -3-67	139.6	40	56.4	121	46.7	42.5
TAMARACK FLAT	6550	4 -3-67	106.7	37	40.0	137	29.2	23.5
MIRANDA CABIN	6500	4 -3-67	124.6	43	53.3	-	(3)	(4)
WABENA MEADOWS	6300	4 -3-67	136.8	41	55.8	140	40.0	(4)
TALBOT CAMP	6250	4 -3-67	81.2	43	34.7	186	18.7	(4)
ONION CREEK	6100	3-28-67	65.4	47	30.6	131	23.3	16.9

AREA, DRAINAGE BASIN, AND SNOW COURSE (1)	ELEVATION IN FEET	DATE OF SURVEY	DEPTH IN INCHES	DENSITY IN PERCENT	WATER CONTENT			
					IN INCHES	IN PERCENT OF APRIL 1 AVERAGE	APRIL 1 AVERAGE IN INCHES (2)	ONE YEAR AGO IN INCHES
AMERICAN RIVER (CONTINUED)								
DIAMOND CROSSING	6050	4 -3-67	79.1	40	31.7	-	(3)	(4)
SIXMILE VALLEY	5750	4 -4-67	83.3	38	31.3	135	23.2	23.5
STRAWBERRY	5700	4 -3-67	42.9	34	14.6	151	9.7	4.5
ROBBS VALLEY (ORELLI)	5600	4 -3-67	78.6	36	28.6	121	23.6	12.8
ICE HOUSE	5300	3-31-67	47.8	26	12.2	92	13.2	8.1
CARPENTER FLAT	5300	4 -4-67	65.2	37	24.1	129	18.7	19.7
MOKELUMNE RIVER								
TRAGEDY CREEK	8150	3-27-67	122.7	44	54.4	-	(3)	32.8
BLUE LAKES	8000	4 -4-67	143.9	35	50.1	141	35.6	28.7
TRAGEDY SPRINGS	7900	3-27-67	125.4	45	56.6	127	44.5	35.0
WHEELER LAKE	7800	3-30-67	160.0	40	63.3	121	52.4	41.5
PACIFIC VALLEY	7500	3-29-67	111.9	37	41.9	113	37.0	27.5
CORRAL FLAT	7200	4 -3-67	123.4	41	51.0	128	39.7	29.8
PODESTA	7200	4 -3-67	151.4	39	58.3	-	(3)	36.2
BEAR VALLEY RIDGE NO 1	6700	4 -3-67	86.1	34	28.9	110	26.3	18.7
BEAR VALLEY RIDGE NO 2	6600	4 -3-67	100.9	35	34.9	124	28.2	24.6
LUMBERYARD	6500	3-29-67	79.4	41	32.2	99	32.4	22.6
MUD SPRINGS	5800	3-29-67	14.5	33	4.8	-	(3)	1.6
HAMS STATION	5500	3-29-67	6.8	28	1.9	19	9.8	0.0
ANTELOPE SPRINGS	4350	4 -4-67	17.7	20	3.6	103	3.5	1.8
STANISLAUS RIVER								
DEADMAN CREEK	9250	4 -8-67	138.5	38	52.6	156	33.8	26.7
CLARK FORK MEADOW	8900	4 -8-67	149.2	37	55.8	150	37.1	30.5
HIGHLAND MEADOW	8800	3-29-67	142.8	40	57.0	113	50.4	39.0
LOWER RELIEF VALLEY	8100	4 -8-67	149.9	39	58.3	146	40.0	32.4
SODA CREEK FLAT	7800	4 -8-67	93.9	37	34.4	152	22.6	16.3
LAKE ALPINE	7550	4 -1-67	143.6	35	49.6	119	41.7	34.2
EAGLE MEADOW	7500	4 -8-67	93.7	37	34.5	138	25.0	15.9
HERRING CREEK	7300	4 -8-67	110.0	34	37.9	129	29.3	17.1
RELIEF DAM	7100	4 -8-67	84.5	37	31.2	151	20.6	14.3
SPICERS	6600	3-27-67	67.9	45	30.8	103	29.8	16.8
BIG MEADOW	6550	3-27-67	64.7	44	28.2	96	29.4	18.3
NIAGARA FLAT	6500	4 -8-67	87.4	35	30.5	141	21.7	11.7
COTTAGE SPRING	5750	3-27-67	33.8	48	16.1	107	15.1	10.6
DORRINGTON	4750	4 -3-67	15.4	32	5.0	78	6.4	0.0

TABLE 2 - SNOW COURSE DATA (Continued)

AREA, DRAINAGE BASIN, AND SNOW COURSE (1)	ELEVATION IN FEET	DATE OF SURVEY	DEPTH IN INCHES	DENSITY IN PERCENT	WATER CONTENT			
					IN INCHES	IN PERCENT OF APRIL 1 AVERAGE	APRIL 1 AVERAGE IN INCHES (2)	ONE YEAR AGO IN INCHES
CENTRAL VALLEY AREA (CONTINUED)								
TUOLUMNE RIVER								
DANA MEADOWS	9850	3-29-67	107.2	34	36.3	120	30.2	22.4
RAFFERTY MEADOWS	9400	3-29-67	113.0	42	47.0	152	31.0	24.7
BOND PASS	9300	4 -9-67	165.8	39	64.6	146	44.1	30.9
GRACE MEADOW	8900	4 -9-67	139.7	41	57.7	148	38.9	36.6
TUOLUMNE MEADOWS	8600	3-29-67	88.7	33	28.9	127	22.8	20.6
HORSE MEADOW	8400	4 -9-67	161.8	40	65.5	141	46.5	39.3
WILMER LAKE	8000	4 -9-67	155.1	39	60.9	139	43.8	33.2
SACHSE SPRINGS	7900	4-12-67	129.4	39	50.5	128	39.5	30.0
SPOTTED FAWN	7800	4-11-67	166.4	37	61.6	131	47.2	39.2
HUCKLEBERRY LAKE	7800	4-11-67	155.3	41	63.8	148	43.2	33.4
PARADISE	7700	4-10-67	118.5	45	53.6	129	41.4	27.4
KERRICK CORRAL	7000	4 -5-67	73.1	32	23.6	-	(3)	11.0
UPPER KIBBIE RIDGE	6700	4-13-67	63.6	39	24.5	116	21.2	6.5
VERNON LAKE	6700	4-11-67	87.5	37	32.1	123	26.0	12.5
LOWER KIBBIE RIDGE	6700	4-13-67	92.0	38	34.5	124	27.8	12.2
BEEHIVE MEADOW	6500	4-11-67	98.6	34	33.1	119	27.8	12.1
BELL MEADOW	6500	4 -5-67	62.5	33	20.7	105	19.7	4.2
MERCED RIVER								
SNOW FLAT	8700	3-30-67	131.1	39	50.6	118	42.8	41.9
OSTRANDER LAKE	8200	3-31-67	123.7	32	39.4	116	34.1	27.1
LAKE TENAYA	8150	3-30-67	107.0	39	41.4	120	34.5	28.3
GIN FLAT	7000	3-30-67	77.5	38	29.4	84	34.8	21.2
PEREGOY MEADOWS	7000	3-31-67	108.8	31	33.7	102	32.9	22.4
SAN JOAQUIN RIVER								
MONO PASS	11450	3-29-67	122.3	41	50.4	155	32.5	24.0
PIUTE PASS	11300	4 -4-67	142.5	41	58.1	169	34.4	30.2
EMERALD LAKE	10600	3-30-67	134.7	42	56.1	160	35.1	30.6
PIONEER BASIN	10400	3-29-67	119.5	38	45.9	124	37.0	26.1
HEART LAKE	10100	3-30-67	100.1	36	36.5	130	28.0	21.8
VOLCANIC KNOB	10100	3-29-67	107.4	35	37.8	120	31.5	21.7
ROSE MARIE	10000	3-29-67	109.1	39	42.8	146	29.3	22.7
COLBY MEADOW	9700	3-30-67	92.8	37	34.7	154	22.6	15.8
MAMMOTH PASS	9500	3-28-67	139.0	40	55.7	133	42.0	38.3
AGNEW PASS	9450	3-29-67	125.7	36	45.6	145	31.4	26.6

TABLE 2 - SNOW COURSE DATA (Continued)

AREA, DRAINAGE BASIN, AND SNOW COURSE (1)	ELEVATION IN FEET	DATE OF SURVEY	DEPTH IN INCHES	DENSITY IN PERCENT	WATER CONTENT IN INCHES	WATER CONTENT IN PERCENT OF APRIL 1 AVERAGE	WATER CONTENT APRIL 1 AVERAGE IN INCHES (2)	WATER CONTENT ONE YEAR AGO IN INCHES
SAN JOAQUIN RIVER (CONTINUED)								
KAISER PASS	9100	4 -1-67	147.8	37	54.7	143	38.2	31.0
DUTCH LAKE	9100	3-28-67	95.1	39	36.8	130	28.3	21.2
COYOTE LAKE	8850	3-27-67	109.5	39	43.2	134	32.2	29.8
CORA LAKES	8400	4 -4-67	144.5	37	52.9	141	37.5	37.8
BADGER FLAT	8300	4 -5-67	117.8	34	39.7	121	32.7	25.0
NELLIE LAKE	8000	3-27-67	95.0	42	39.7	104	38.0	27.6
LAKE THOMAS A EDISON	7800	4 -1-67	53.7	36	19.4	123	15.8	0.0
CHILKOOT LAKE	7450	3-28-67	82.6	45	37.0	98	37.6	25.6
TAMARACK CREEK	7250	3-30-67	59.9	41	24.6	-	(3)	15.8
FLORENCE LAKE	7200	3-30-67	13.2	51	6.7	85	7.9	0.0
CHILKOOT MEADOW	7150	3-28-67	77.4	42	32.8	89	36.9	23.2
HUNTINGTON LAKE	7000	3-27-67	43.7	41	18.1	86	21.0	7.6
CLOVER MEADOW	7000	4 -3-67	84.2	35	29.6	125	23.6	15.1
JACKASS MEADOW	6950			NO SURVEY MADE				
CHIQUITO CREEK	6800	3-28-67	54.5	45	24.7	110	22.4	10.0
BEASORE MEADOWS	6800	3-28-67	54.5	43	23.7	83	28.7	16.7
POISON MEADOW	6800	3-28-67	49.8	45	22.2	84	26.3	9.6
KINGS RIVER								
BISHOP PASS	11200	3-31-67	118.7	37	44.2	147	30.1	32.2
CHARLOTTE RIDGE	10700	4 -9-67	127.9	40	51.1	164	31.2	21.9
BULLFROG LAKE	10650	4 -9-67	117.3	40	46.7	156	30.0	20.0
BLACKCAP BASIN	10300			NO SURVEY MADE				
BEARD MEADOW	9800			NO SURVEY MADE				
UPPER BURNT CORRAL MEADOW	9700			NO SURVEY MADE				
VIDETTE MEADOW	9500			NO SURVEY MADE				
UPPER WOODCHUCK MEADOW	9100			NO SURVEY MADE				
SWAMP MEADOW	9000			NO SURVEY MADE				
ROUND CORRAL	9000			NO SURVEY MADE				
ROWELL MEADOW	8850			NO SURVEY MADE				
WOODCHUCK MEADOW	8800			NO SURVEY MADE				
HELMS MEADOW	8250			NO SURVEY MADE				
LONG MEADOW	8500			NO SURVEY MADE				
STATUM MEADOW	8300			NO SURVEY MADE				

TABLE 2 - SNOW COURSE DATA (Continued)

AREA, DRAINAGE BASIN, AND SNOW COURSE (1)	ELEVATION IN FEET	DATE OF SURVEY	DEPTH IN INCHES	DENSITY IN PERCENT	WATER CONTENT IN INCHES	WATER CONTENT IN PERCENT OF APRIL 1 AVERAGE	WATER CONTENT APRIL 1 AVERAGE IN INCHES (2)	WATER CONTENT ONE YEAR AGO IN INCHES
KINGS RIVER (CONTINUED)								
POST CORRAL MEADOW	8200			NO SURVEY MADE				
DODSONS MEADOW	8050			NO SURVEY MADE				
BIG MEADOWS	7600			NO SURVEY MADE				
HORSE CORRAL MEADOW	7600			NO SURVEY MADE				
FRED MEADOW	7200			NO SURVEY MADE				
GRANT GROVE	6600	4 -1-67	41.5	32	13.3	87	15.3	0.0
KAWEAH RIVER								
FAREWELL GAP	9000	3-28-67	110.0	38	41.7	124	33.5	30.6
PANTHER MEADOW	8600	3-30-67	119.9	38	45.4	121	37.4	30.1
HOCKETT MEADOWS	8500			NO SURVEY MADE				
MINERAL KING	8000	3-27-67	54.0	45	24.2	117	20.6	9.7
GIANT FOREST	6400	4 -1-67	42.8	30	13.0	75	17.4	5.4
TULE RIVER								
QUAKING ASPEN	7000	3-30-67	13.0	42	5.4	37	14.7	1.6
OLD ENTERPRISE MILL	6600	3-31-67	31.8	29	9.2	51	18.2	4.0
DEER CREEK								
DEAD HORSE MEADOW	7300	4 -3-67	18.1	20	3.7	26	14.5	1.1
KERN RIVER								
BIGHORN PLATEAU	11350	3-25-67	93.8	40	37.1	153	24.2	15.7
COTTONWOOD PASS	11050	3-31-67	68.1	37	25.2	174	14.5	7.1
SIBERIAN PASS	10900	3-27-67	84.5	39	32.9	165	20.0	14.0
CRABTREE MEADOW	10700	3-25-67	85.7	38	32.2	159	20.2	12.9
GUYOT FLAT	10650	3-26-67	93.7	38	35.8	166	21.6	15.3
TYNDALL CREEK	10650	3-24-67	81.3	37	30.0	153	19.6	13.2
SANDY MEADOWS	10650	3-25-67	78.9	39	30.6	156	19.6	11.9
BIG WHITNEY MEADOW	9750	3-27-67	78.4	39	30.3	166	18.3	11.6
ROCK CREEK	9600	3-26-67	83.1	37	30.4	168	18.1	10.9
ROUND MEADOW	9000	3-24-67	48.8	40	19.7	75	26.3	18.6
RAMSHAW MEADOWS	8800	3-29-67	35.3	38	13.5	113	12.0	5.3
LITTLE WHITNEY MEADOW	8500	3-28-67	49.7	40	20.0	138	14.5	6.3
CASA VIEJA MEADOWS	8400	3-27-67	65.5	42	27.8	140	19.8	14.2
QUINN RANGER STATION	8350			NO SURVEY MADE				
BONITA MEADOWS	8300	3-25-67	31.2	46	14.5	99	14.6	10.9

TABLE 2 - SNOW COURSE DATA (Continued)

AREA, DRAINAGE BASIN, AND SNOW COURSE (1)	ELEVATION IN FEET	DATE OF SURVEY	DEPTH IN INCHES	DENSITY IN PERCENT	WATER CONTENT IN INCHES	WATER CONTENT IN PERCENT OF APRIL 1 AVERAGE	WATER CONTENT APRIL 1 AVERAGE IN INCHES (2)	WATER CONTENT ONE YEAR AGO IN INCHES
KERN RIVER (CONTINUED)								
MONACHE MEADOWS	8000	3-30-67	19.3	44	8.5	98	8.7	0.0
BEACH MEADOWS	7650	3-26-67	6.9	43	3.0	30	10.1	4.7
LAHONTAN AREA								
SURPRISE VALLEY								
BARBER CREEK	6500	3-27-67	31.0	35	10.7	99	10.8	7.9
HAYS CANYON (NEVADA)	6400	3-31-67	11.0	29	3.2	178	1.8	0.0
49 MOUNTAIN (NEVADA)	6000	3-31-67	14.0	34	4.7	181	2.6	.9
RESERVATION CREEK	5900	3-27-67	25.0	36	9.0	78	11.6	10.2
SUSAN RIVER								
SILVER LAKE MDWS (L NOKOPEN)	6450	4 -4-67	99.1	41	41.0	148	27.7	27.6
NORVELL FLAT	5700	4 -4-67	58.2	29	16.9	106	15.9	13.0
TRUCKEE RIVER								
MOUNT ROSE (NEVADA)	9000	4 -8-67	130.0	43	55.7	168	33.2	19.5
INDEPENDENCE LAKE	8450	3-30-67	158.0	39	61.6	150	41.1	32.4
WEBBER PEAK	7800	3-25-67	145.9	41	59.3	134	44.1	40.1
SQUAW VALLEY NO 2	7500	4 -4-67	172.0	41	70.9	133	53.5	39.7
INDEPENDENCE CAMP	7000	3-30-67	92.0	38	35.4	151	23.5	19.2
WEBBER LAKE	7000	3-25-67	103.8	40	41.4	127	32.6	27.7
SAGE HEN CREEK	6500	3-31-67	71.0	41	29.0	153	18.9	12.7
INDEPENDENCE CREEK	6500	3-30-67	64.0	36	23.3	174	13.4	9.0
TRUCKEE NO 2	6400	3-31-67	82.0	32	26.3	156	16.9	9.2
DONNER PARK NO 2	6000	3-30-67	72.0	35	25.1	127	19.8	14.0
BOCA NO 2	5900	3-30-67	21.0	33	7.0	132	5.3	0.0
LAKE TAHOE BASIN								
LAKE LUCILLE	8200	3-24-67	175.0	41	72.4	120	60.1	44.3
RUBICON PEAK NO 1	8100	3-24-67	156.0	37	57.7	118	49.1	40.7
HAGANS MEADOW	8000	3-28-67	64.0	39	25.2	138	18.3	10.9
MARLETTE LAKE (NEVADA)	8000	3-27-67	76.0	42	32.1	137	23.5	20.1
RUBICON PEAK NO 2	7500	3-24-67	94.0	42	39.2	124	31.5	26.2
DAGGETTS PASS (NEVADA)	7350	3-27-67	50.0	42	21.2	168	12.6	9.8
FREEL BENCH	7300	3-28-67	36.0	43	15.4	129	11.9	6.1
WARD CREEK	7000	3-29-67	143.0	38	53.9	115	46.7	31.4
GLENBROOK NO 2 (NEVADA)	6900	3-24-67	57.0	34	19.6	141	13.9	10.4
RICHARDSONS NO 2	6500	3-24-67	58.0	37	21.6	124	17.4	12.8

TABLE 2 - SNOW COURSE DATA (Continued)

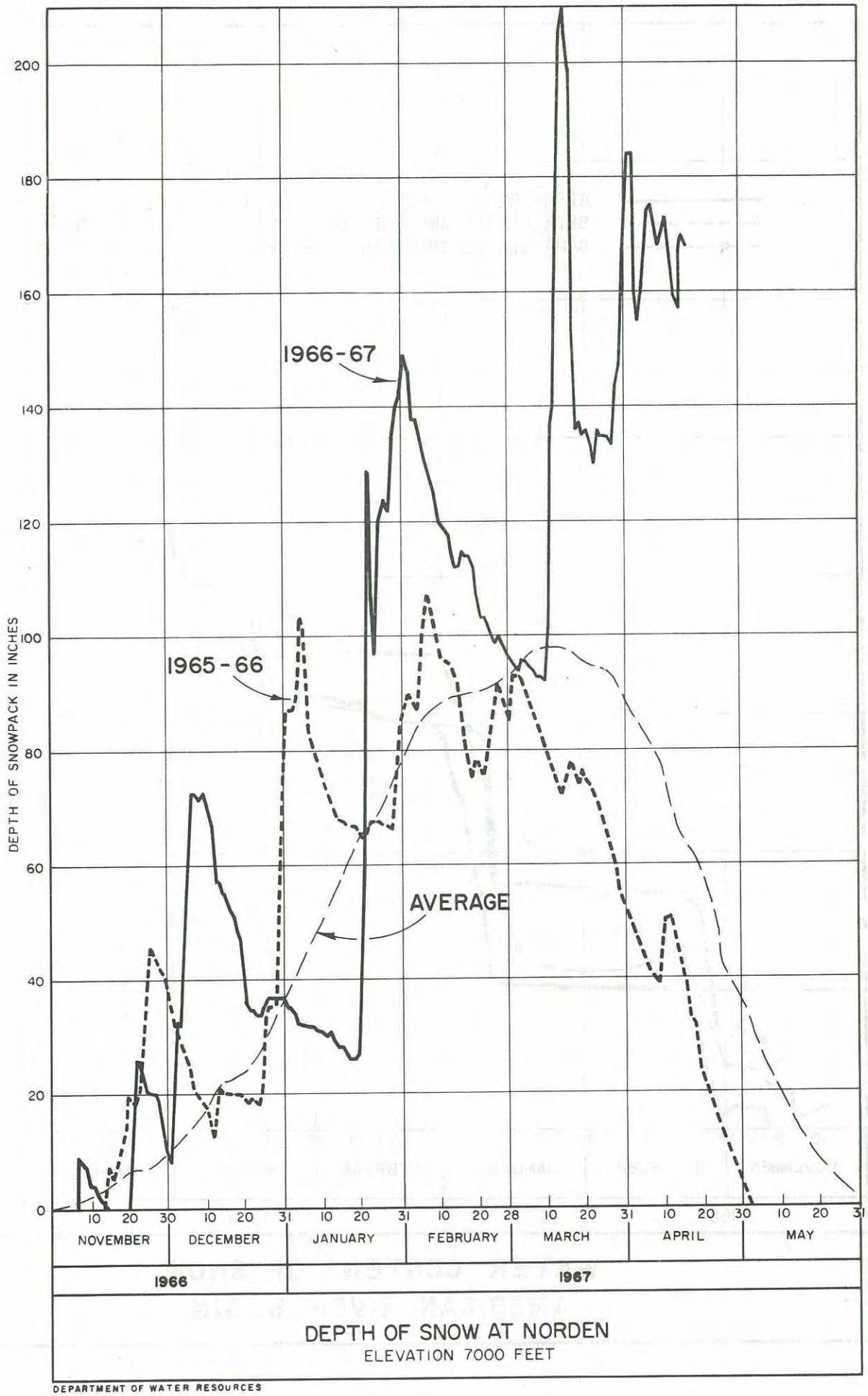
AREA, DRAINAGE BASIN, AND SNOW COURSE (1)	ELEVATION IN FEET	DATE OF SURVEY	DEPTH IN INCHES	DENSITY IN PERCENT	WATER CONTENT			
					IN INCHES	IN PERCENT OF APRIL 1 AVERAGE	APRIL 1 AVERAGE IN INCHES (2)	ONE YEAR AGO IN INCHES
LAKE TAHOE BASIN (CONTINUED)								
UPPER TRUCKEE	6400	3-28-67	28.0	49	13.7	176	7.8	5.0
TAHOE CITY	6250	3-24-67	36.0	45	16.2	137	11.8	4.8
WALKER RIVER								
VIRGINIA LAKES	9500	3-22-67	81.0	37	29.6	164	18.0	16.2
CENTER MOUNTAIN	9400	3-24-67	127.0	39	49.4	133	37.2	31.4
SONORA PASS	8800	3-23-67	86.0	38	32.4	133	24.4	20.6
BUCKEYE FORKS	8500	3-25-67	81.0	37	29.8	150	19.9	21.2
WILLOW FLAT	8250	3-24-67	39.0	37	14.6	138	10.6	6.4
BUCKEYE ROUGHS	7900	3-25-67	67.0	38	25.7	121	21.2	17.1
LEAVITT MEADOW	7200	3-23-67	33.0	42	13.9	174	8.0	2.6
MONO LAKE BASIN								
GEM PASS	10400	4 -6-67	146.5	37	54.0	169	32.0	25.0
TIOGA PASS	9800	3-29-67	88.1	37	32.9	125	26.3	18.8
SADDLEBAG LAKE	9750	3-29-67	115.0	36	41.9	124	33.8	24.1
ELLERY LAKE (RHINEDOLLAR)	9600	3-29-67	105.6	35	37.2	122	30.6	21.8
GEM LAKE	9150	3-29-67	124.0	35	43.8	140	31.3	28.0
OWENS RIVER								
BISHOP LAKE	11300	3-30-67	72.6	41	29.6	156	19.0	10.1
COTTONWOOD LAKES NO 2	11100	3-29-67	60.8	39	24.0	167	14.4	11.8
EAST PIUTE PASS	10800	4 -3-67	70.0	38	26.4	228	11.6	6.8
COTTONWOOD LAKES NO 1	10600	3-29-67	66.8	36	23.9	198	12.1	7.8
SAWMILL	10300	3-30-67	90.9	37	33.8	188	18.0	13.6
ROCK CREEK NO 3	10000	3-29-67	66.5	35	23.5	154	15.3	7.8
BIG PINE CREEK NO 1	10000	3-30-67	101.2	39	39.5	170	23.2	22.0
BIG PINE CREEK NO 3	9800	3-36-67	78.4	36	28.4	174	16.3	16.4
BIG PINE CREEK NO 2	9700	3-30-67	99.2	40	39.6	244	16.2	13.2
NUCLEAR NO 2	9500	3-31-67	40.8	46	18.8	-	(3)	0.0
NORTH LAKE	9300	4 -3-67	56.6	39	21.8	245	8.9	0.0
ROCK CREEK NO 2	9050	3-29-67	50.6	30	15.1	162	9.3	4.6
MINARETS NO 2	9000	3-28-67	98.7	38	37.9	131	28.9	26.9
SOUTH FORK	8850	3-30-67	34.2	38	13.0	260	5.0	0.0
ROCK CREEK NO 1	8700	3-29-67	36.5	35	12.6	156	8.1	3.4

TABLE 2 - SNOW COURSE DATA (Continued)

AREA, DRAINAGE BASIN, AND SNOW COURSE (1)	ELEVATION IN FEET	DATE OF SURVEY	DEPTH IN INCHES	DENSITY IN PERCENT	WATER CONTENT			
					IN INCHES	IN PERCENT OF APRIL 1 AVERAGE	APRIL 1 AVERAGE IN INCHES (2)	ONE YEAR AGO IN INCHES
OWENS RIVER BASIN (CONTINUED)								
BISHOP PARK	8400	4 -4-67	28.0	37	10.3	229	4.5	0.0
MAMMOTH	8300	3-28-67	75.4	34	26.0	133	19.5	21.6
MINARETS NO 3	8200	3-28-67	70.7	39	27.8	-	(3)	(4)
NUCLEAR NO 1	7800	4 -3-67	3.8	13	.5	-	(3)	0.0
MOJAVE DESERT								
ISLIP NO 3	7600	4 -8-67	54.7	46	25.2	166	15.2	4.6
ISLIP NO 4	7550	4 -8-67	67.7	43	29.1	180	16.2	5.0
ISLIP NO 2	7400	4 -8-67	29.9	41	12.4	105	11.8	0.0
BLUE RIDGE	7200	4 -6-67	13.7	28	3.8	-	(3)	0.0
BUCKHORN	7100	4 -3-67	27.5	32	8.8	166	5.3	0.0
CEDAR SPRINGS	6500	4 -2-67	37.9	34	12.7	289	4.4	0.0
SQUAW CAMP	5800	4 -5-67	5.4	31	1.7	-	(3)	0.0
COLORADO DESERT AREA								
WHITEWATER RIVER								
TAHQUITZ VALLEY	7800	3-27-67	6.2	52	3.2	37	8.7	6.3

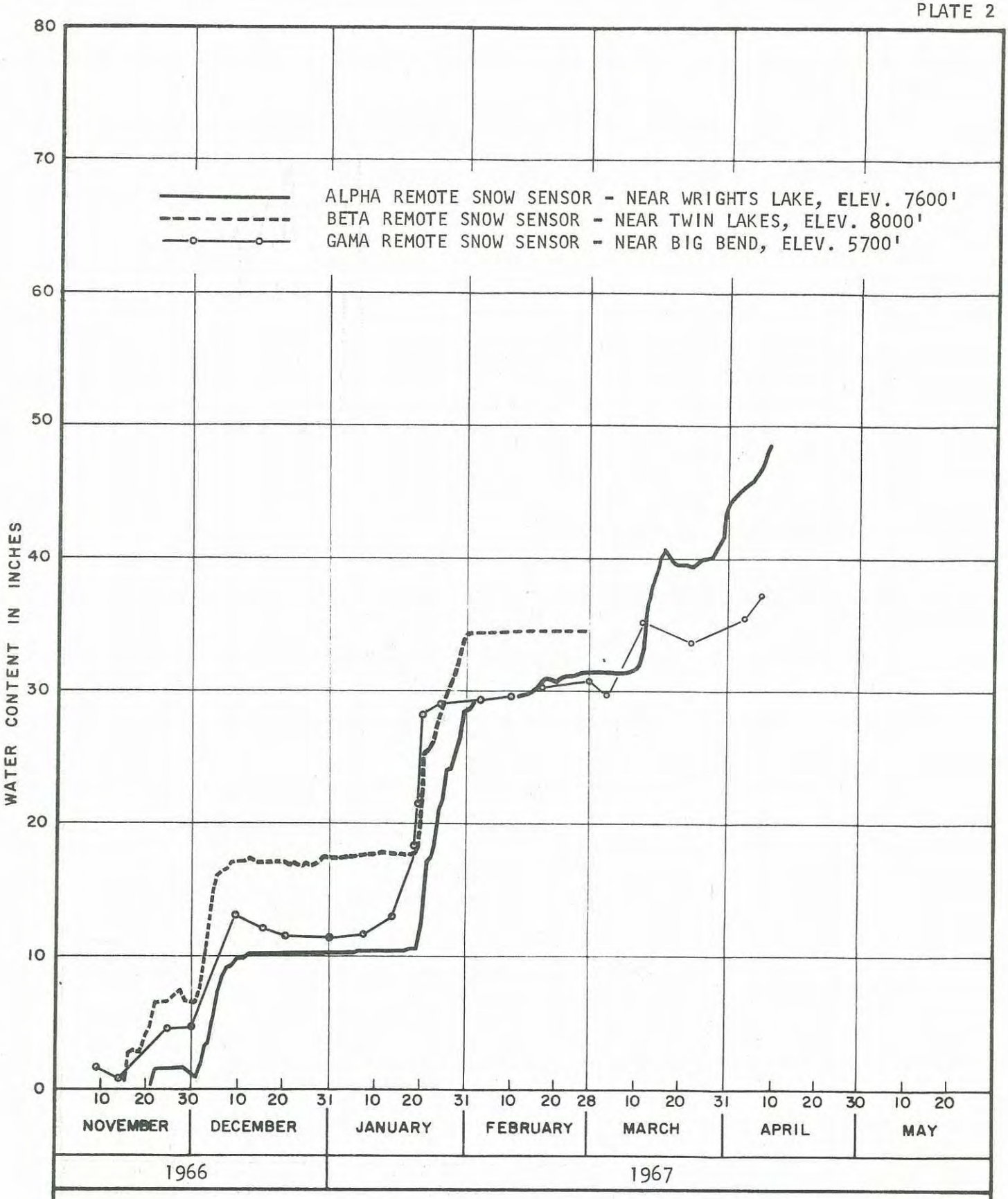
(1) LATE DATA AND DATA FOR COURSES NOT SCHEDULED FOR MEASUREMENTS WILL BE PUBLISHED IN THE FALL REPORT.
(2) AVERAGES ARE COMPUTED FOR THE 30-YEAR PERIOD, 1931-1960.
(3) INSUFFICIENT RECORD FOR COMPUTATION OF AVERAGE.
(4) NO SURVEY MADE.
(5) DENSITY AND WATER CONTENT ESTIMATED.

PLATE 1



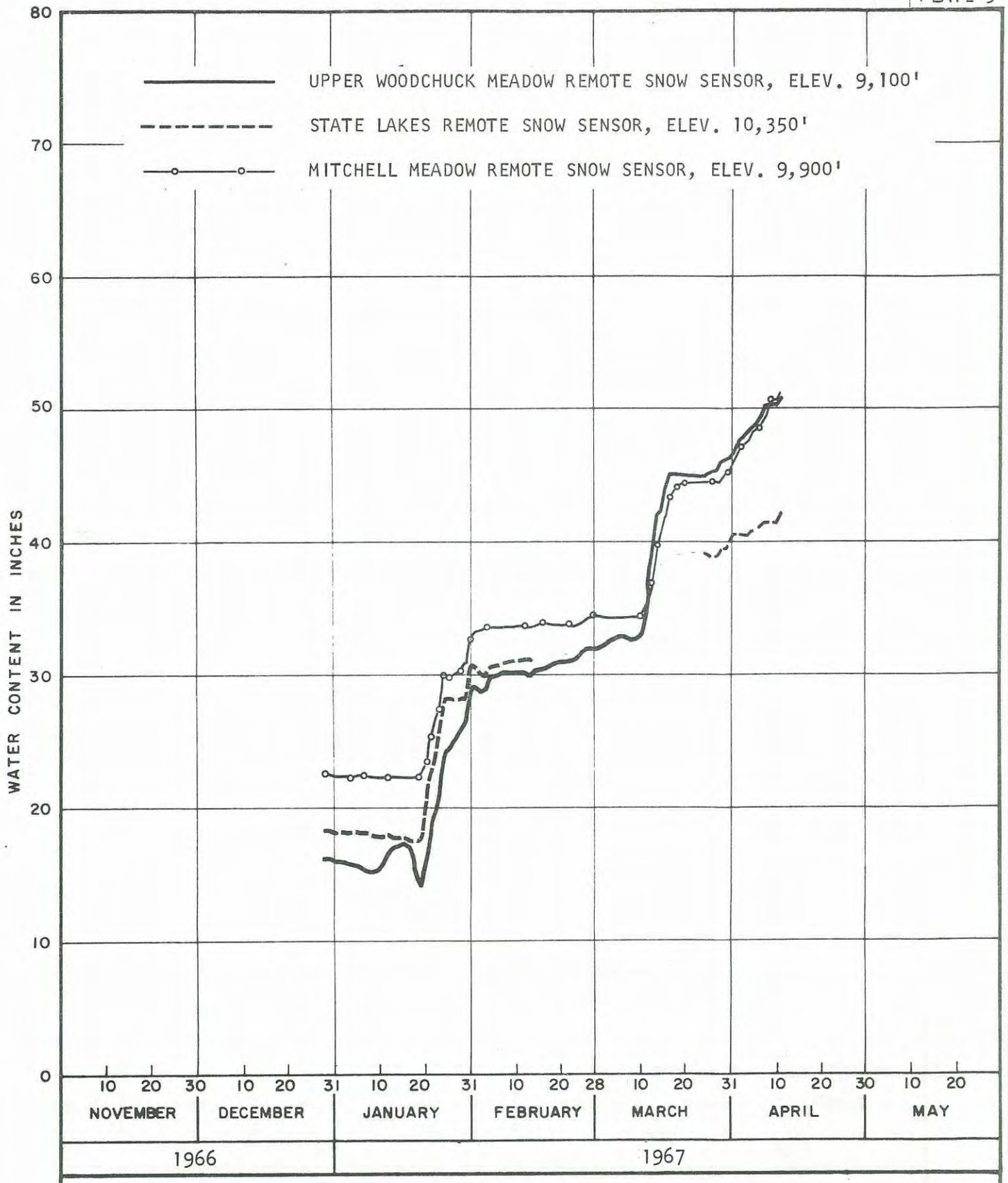
DEPTH OF SNOW AT NORDEN
ELEVATION 7000 FEET

DEPARTMENT OF WATER RESOURCES

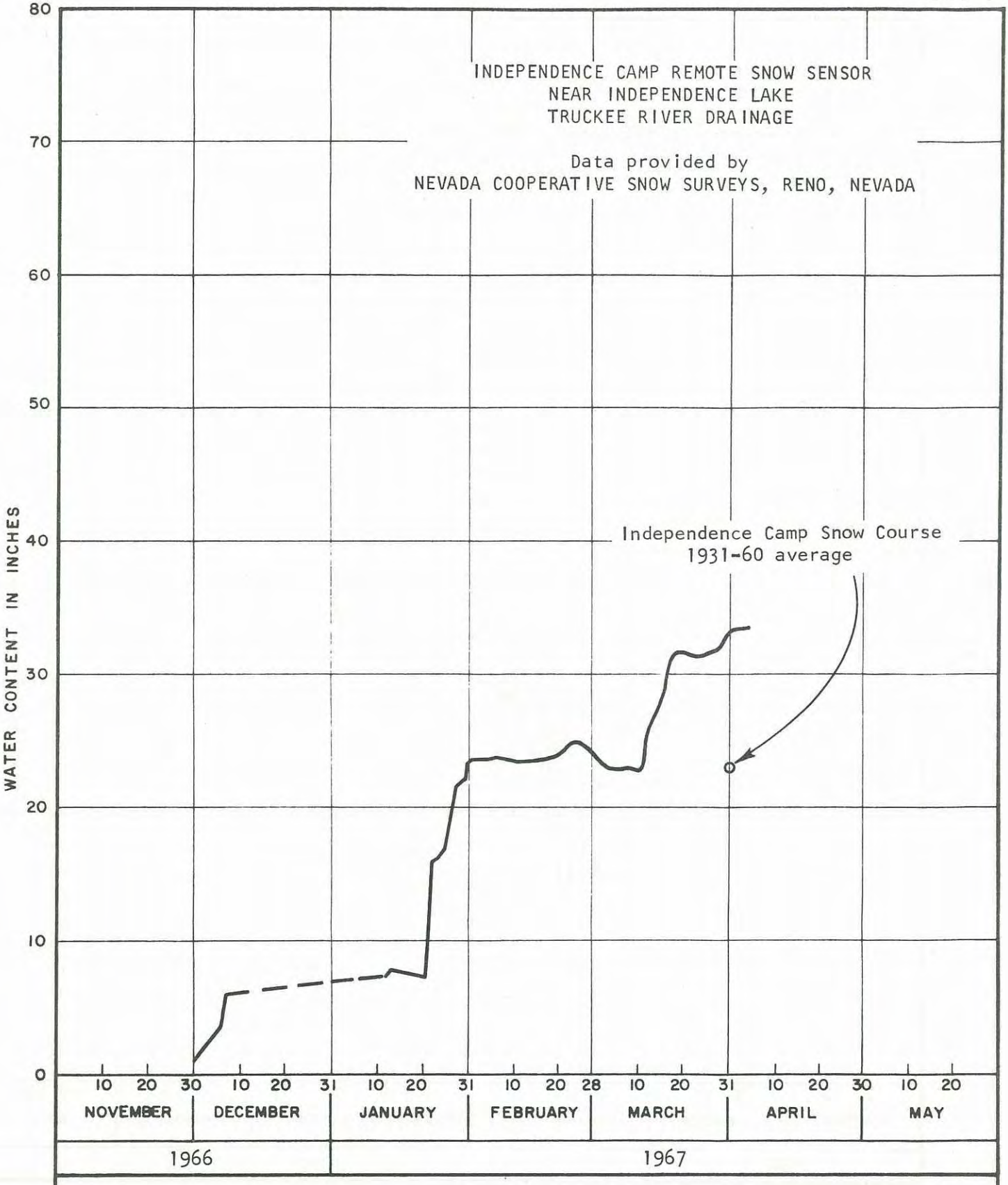


WATER CONTENT OF SNOW
AMERICAN RIVER BASIN

PLATE 3



WATER CONTENT OF SNOW
KINGS RIVER BASIN



WATER CONTENT OF SNOW AT INDEPENDENCE CAMP
ELEVATION 7,000'

TABLE 3

AERIAL PHOTOGRAPHIC SNOW DEPTH MEASUREMENTS

Area, Drainage Basin, and Aerial Marker	Source of Data 1/	Elevation (Feet)	Date of Measurement	Depth of Snow (Inches)	Water Content 2/
CENTRAL VALLEY AREA					
Feather River					
53 Three Lakes	PG&E	6250	4-3-67	128	49
51 Harkness Flat	PG&E	6200	4-3-67	88	33
54 Mill Creek Flat	PG&E	5900	4-3-67	132	50
50 Fredonyer Pass No. 1	PG&E	5750	4-3-67	24	10
49 Letterbox	PG&E	5600	4-3-67	135	54
58 Feather River Meadows	PG&E	5400	4-3-67	76	29
59 Warner Creek	PG&E	5100	4-3-67	57	22
60 Humbug Summit	PG&E	4850	4-3-67	36	14
Yuba River					
67 Red Mountain	PG&E	7200	4-3-67	156	62
70 Lake Sterling	PG&E	7100	4-3-67	168	67
69 Donner Summit	PG&E	6900	4-3-67	144	56
76 Furnace Flat	PG&E	6700	4-3-67	132	55
77 Lake Fordyce	PG&E	6500	4-3-67	120	50
American River					
552 Lyons Lake	SMUD	8500	4-9-67	206	76
106 Upper Carson Pass	EBMUD	8500	4-3-67	136	52
502 Lake Lois	SMUD	8250	4-9-67	116	44
501 Lake No. 3	SMUD	8200	4-9-67	214	79
503 Phipps Creek	SMUD	7600	4-9-67	108	41
338 Lost Corner Mountain	SMUD	7500	4-9-67	123	49
551 Willow Flat	SMUD	7400	4-9-67	144	55
548 Two Peaks	SMUD	7350	4-9-67	108	41
550 Shadow Lake	SMUD	7300	4-9-67	164	62
109 Silver Lake	EBMUD	7100	4-3-67	75	27
555 Nigger Flat	SMUD	6950	4-9-67	92	36
316 Wrights Lake	SMUD	6900	4-9-67	123	45
553 Quinns Corral	SMUD	6800	4-9-67	139	53
549 Upper Bassi	SMUD	6350	4-9-67	79	31
554 Hell's Delight	SMUD	5750	4-9-67	46	18
Mokelumne River					
129 Blue Lakes	EBMUD	8000	4-3-67	152	58
132 Pacific Valley	EBMUD	7500	4-3-67	112	44
134 Bear Valley Ridge No. 1	EBMUD	6700	4-3-67	81	28
Stanislaus River					
345 Deadman Creek	PG&E	9250	4-3-67	132	52
344 Clark Fork Meadow	PG&E	8900	4-3-67	144	56
323 Highland Meadow	PG&E	8800	4-3-67	154	60

TABLE 3 - AERIAL PHOTOGRAPHIC SNOW DEPTH MEASUREMENTS (CONTINUED)

AREA, DRAINAGE BASIN, AND AERIAL MARKER	SOURCE OF DATA 1/	ELEVATION (FEET)	DATE OF MEASUREMENT	DEPTH OF SNOW (INCHES)	WATER CONTENT 2/
LAHONTAN AREA (CONTINUED)					
MONO LAKE					
522 DONAHUE PASS	SCEC	10800	NO SURVEY MADE		
521 ALGER LAKE	SCEC	10600	NO SURVEY MADE		
520 SLATE CREEK	SCEC	10300	NO SURVEY MADE		
519 SADDLEBAG LAKE	SCEC	10200	NO SURVEY MADE		
523 WARREN CREEK	SCEC	10200	NO SURVEY MADE		
OWENS RIVER					
525 SCHOBER PASS	SCEC	12300	4- 2-67	84	32
533 MT. MORGAN	LADWP	12000	4- 3-67	102	39
565 PIUTE PASS	NCSS	11700	4-12-67	30	12
527 COYOTE RIDGE	SCEC	11500	4- 2-67	139	53
534 BIG PINE CREEK BASIN	LADWP	11500	NO SURVEY MADE		
539 KEARSARGE PASS	LADWP	11500	4- 3-67	120	44
531 LAKE DOROTHY	LADWP	11400	4- 3-67	126	46
537 SAWMILL PASS	LADWP	11400	4- 2-67	121	46
284 BISHOP LAKE	SCEC	11300	4- 2-67	89	34
526 HUNGRY PACKER LAKE	SCEC	11300	4- 2-67	147	56
541 COTTONWOOD LAKES	LADWP	11200	4- 2-67	102	39
543 HORSESHOE MEADOWS	LADWP	11100	4- 2-67	78	30
524 PIUTE LAKE (EAST)	SCEC	11000	4- 2-67	112	42
530 DRUNKEN SAILOR	SCEC	11000	4- 2-67	116	44
529 GEORGE LAKE	SCEC	10600	4- 2-67	86	38
542 GOLDEN TROUT CABIN	LADWP	10600	4- 2-67	66	29
540 SHEPHERDS PASS	LADWP	10500	4- 2-67	150	66
528 TREASURE LAKE	SCEC	10200	4- 2-67	98	43
535 BIG PINE LAKES	LADWP	10100	4- 3-67	96	36
532 ROCK CREEK LAKES	LADWP	10000	4- 3-67	66	26
538 ONION VALLEY	LADWP	9000	4- 3-67	54	21

1/ SCEC - SOUTHERN CALIFORNIA EDISON COMPANY; LADWP - LOS ANGELES DEPARTMENT OF WATER AND POWER; DWR - STATE OF CALIFORNIA, DEPARTMENT OF WATER RESOURCES; USCE - UNITED STATES CORPS OF ENGINEERS; PG&E - PACIFIC GAS AND ELECTRIC COMPANY; NCSS - NEVADA COOPERATIVE SNOW SURVEYS; EBMUD - EAST BAY MUNICIPAL UTILITY DISTRICT; SMUD - SACRAMENTO MUNICIPAL UTILITY DISTRICT.

TABLE 4

SUMMARY OF STORAGE IN MAJOR RESERVOIRS

Area	Number of Reservoirs Reported	Total Capacity (Acre-Feet)	Water in Storage (Acre-Feet)			April 1, 1967, Storage	
			April 1, 1966	March 1, 1967	April 1, 1967	Percent of 10-Year Average	Percent of Capacity
INTRASTATE							
North Coastal	4	2,713,900	2,408,760	2,172,370	2,312,460	94	85
San Francisco Bay	17	620,400	324,630	417,300	472,470	114	74
Central Coastal	6	985,700	477,770	556,400	657,690	146	67
South Coastal	26	1,486,100	538,420	568,860	583,760	159	39
Sacramento Valley	35	11,506,100	8,961,750	8,327,920	9,488,600	112	82
San Joaquin Valley	27	5,925,400	2,328,100	2,949,860	3,436,870	160	58
Lahontan	7	348,200	262,320	215,790	224,760	102	65
Subtotal	122	23,585,800	15,301,750	15,208,500	17,176,610	118	73
INTERSTATE							
North Coastal	3	1,205,100	724,520	539,300	700,040	99	58
Lahontan	3	828,300	580,000	480,460	572,970	129	69
Colorado Desert	4	54,638,000	26,700,500	25,336,000	25,033,100	100	46
Subtotal	10	56,671,400	28,005,020	26,355,760	26,306,110	101	46
TOTAL 1/	132	80,257,200	43,306,770	41,564,260	43,482,720	107	54

1/ Includes data for Lake Mead and Lake Powell which regulate flow of the Lower Colorado River, the major source of water for the Colorado Desert and South Coastal areas.

TABLE 5

STORAGE IN MAJOR RESERVOIRS

AREA AND DRAINAGE BASIN	RESERVOIR	OPERATOR	CAPACITY (1) (1000 AF)	STORAGE AS OF APRIL 1: 10-YEAR AVERAGE 1957-1966 (1000 AF)	1966 (1000 AF)	1967 (1000 AF)	1967 IN % OF AVG
NORTH COASTAL AREA							
KLAMATH RIVER	UPPER KLAMATH (2)	US BUREAU OF RECLAMATION	584.000	415.420	401.070	406.290	98
	CLEAR LAKE (2)	US BUREAU OF RECLAMATION	526.800	236.340	254.930	232.680	98
	GERBER (2)	US BUREAU OF RECLAMATION	94.300	52.360	68.520	61.070	117
SHASTA RIVER	DWINNELL	MONTAGUE WATER CONS DIST	50.000	34.050	35.400	37.000	109
TRINITY RIVER	CLAIR ENGLE LAKE	US BUREAU OF RECLAMATION	2447.700	2270.460(6)	2225.770	2135.100	94
SOUTH EEL RIVER	LAKE PILLSBURY	PAC GAS AND ELECTRIC CO	93.700	79.810	74.910	65.760	82
RUSSIAN RIVER	LAKE MENDOCINO	US CORPS OF ENGINEERS	122.500	71.730(6)	72.680	74.600	104
SAN FRANCISCO BAY AREA							
NORTH BAY							
CONN CREEK	LAKE HENNESSEY	CITY OF NAPA	31.000	30.390	31.000	31.000	102
NICASIO CREEK	NICASIO	MARIN MUNICIPAL WTR DIST	22.500	21.890(6)	21.800	22.500	103
LAGUNITAS CREEK	KENT	MARIN MUNICIPAL WTR DIST	16.700	15.670	16.700	16.700	107
	ALPINE	MARIN MUNICIPAL WTR DIST	8.900	7.200	8.700	8.900	123
SOUTH EAST BAY							
SAN PABLO CREEK	SAN PABLO (3)	EAST BAY MUN UTILITY DIST	43.200	35.300	29.580	27.240	77
SAN LEANDRO CREEK	UPPER SAN LEANDRO (3)	EAST BAY MUN UTILITY DIST	41.400	33.750	34.010	42.010	124
	CHABOT(3)	EAST BAY MUN UTIL DIST	12.600	9.910	10.370	10.710	108
BEAR CREEK	BRIONES (3)	EAST BAY MUN UTIL DIST	60.400	(5)	30.180	36.550	-
SAN ANTONIO CREEK	SAN ANTONIO	CITY AND CO SAN FRANCISCO	50.500	(5)	10.970	20.710	-
COYOTE CREEK	COYOTE	SANTA CLARA VALLEY WCD	24.500	14.090	8.530	20.880	148
	LEROY ANDERSON	SANTA CLARA VALLEY WCD	93.100	29.480	7.800	35.840	122
LOS GATOS CREEK	LEXINGTON	SANTA CLARA VALLEY WCD	21.400	9.450	2.610	21.430	227
	AUSTRIAN	SAN JOSE WATER WORKS	6.200	4.200	3.380	6.090	145
CALAVERAS CREEK	CALAVERAS (3)	CITY AND CO SAN FRANCISCO	100.000	72.360	68.220	95.820	132
PENINSULA							
SAN ANDREAS CREEK	SAN ANDREAS	CITY AND CO SAN FRANCISCO	18.500	16.160	16.810	17.520	108
LAGUNA CREEK	UPPER CRYSTAL SPGS)						
SAN MATEO CREEK	LOWER CRYSTAL SPGS)(3)	CITY AND CO SAN FRANCISCO	69.500	54.680	55.770	58.570	107
CENTRAL COASTAL AREA							
SALINAS RIVER	SALINAS	SAN LUIS OBISPO CO FCWCD	26.000	21.400	25.800	26.000	121
	SAN ANTONIO	MONTEREY COUNTY FCWCD	350.000	(5)	21.420	113.200	-
	NACIMIENTO	MONTEREY COUNTY FCWCD	350.000	174.050	210.630	282.300	162
SANTA YNEZ RIVER	GIBRALTAR	SANTA BARBARA CITY	14.800	10.480	13.790	13.610	130
	CACHUMA	US BUREAU OF RECLAMATION	204.900	157.080	192.500	205.710	131
OLD CREEK	WHALE ROCK	CITY OF SAN LUIS OBISPO	40.000	10.740(6)	13.630	16.870	157

TABLE 5 - STORAGE IN MAJOR RESERVOIRS (Continued)

AREA AND DRAINAGE BASIN	RESERVOIR	OPERATOR	CAPACITY (1) (1000 AF)	STORAGE AS OF APRIL 1: 10-YEAR AVERAGE 1957-1966 (1000 AF)	1966 (1000 AF)	1967 (1000 AF)	1967 IN % OF AVG
SOUTH COASTAL AREA							
VENTURA-SANTA CLARA RIVERS							
COYOTE CREEK	CASITAS	VENTURA R MUN WATER DIST	254.000	54.020(6)	86.140	116.470	216
PIRU CREEK	LAKE PIRU	UNITED WATER CONS DIST	101.200	23.510	57.340	38.680	165
MATILIJA CREEK	MATILIJA	VENTURA COUNTY FCD	3.500	4.820	2.000	3.500	73
SAN GABRIEL-SANTA ANA RIVERS							
SAN GABRIEL RIVER	COGSWELL	LA CO FLOOD CONTROL DIST	10.900	2.610	5.190	5.940	227
	SAN GABRIEL	LA CO FLOOD CONTROL DIST	43.800	6.510	0.000	6.320	97
BEAR CREEK	BEAR VALLEY	BEAR VALLEY MUT WATER CO	72.200	10.620	23.650	36.290	341
TRIBUTARY, CAJALCO CR	LAKE MATHEWS (4)	METROPOLITAN WATER DIST	182.000	122.900	175.390	165.640	135
SAN JACINTO RIVER	LAKE HEMET	LAKE HEMET WATER CO	13.400	3.190	5.840	8.690	272
	RAILROAD CANYON (3)	TEMESCAL WATER CO	14.700	2.880	5.490	5.160	179
SANTIAGO CREEK	SANTIAGO (3)	SERRANO AND CARPENTER ID AND IRVINE COMPANY	25.000	9.380	11.870	22.480	240
	VILLA PARK	ORANGE COUNTY FCD	15.600	.120(6)	.450	1.540	1208
SANTA MARGARITA-SAN LUIS REY RIVERS							
TEMECULA CREEK	VAIL	VAIL COMPANY	49.500	2.970	5.920	11.730	394
SAN LUIS REY RIVER	HENSHAW	VISTA ID	194.300	9.420	14.760	16.870	179
SAN DIEGUITO-SAN DIEGO RIVERS							
SAN DIEGUITO RIVER	LAKE HODGES (3)	CITY OF SAN DIEGO	33.600	3.430	3.970	8.500	247
SAN YSABEL CREEK	SUTHERLAND	CITY OF SAN DIEGO	29.700	4.290	6.470	2.560	60
SAN VICENTE CREEK	SAN VICENTE (3)	CITY OF SAN DIEGO	90.200	63.290	71.100	69.630	110
SAN DIEGO RIVER	EL CAPITAN	CITY OF SAN DIEGO	112.800	15.450	24.280	24.350	158
BOULDER CREEK	CUYAMACA	HELIX ID	11.600	.850	3.680	2.730	318
QUAIL CANYON CREEK	LAKE JENNINGS (3)	HELIX ID	10.500	4.750(6)	6.510	6.590	139
CHAPPAREL CANYON	MURRAY (3)	CITY OF SAN DIEGO	5.700	3.720	3.790	3.220	87
SWEETWATER-OTAY RIVERS AND COTTONWOOD CREEK							
SWEETWATER RIVER	LAKE LOVELAND	CALIFORNIA WATER AND TEL CO	25.400	2.060	5.460	.990	48
	SWEETWATER MAIN (3)	CALIFORNIA WATER AND TEL CO	27.700	4.420	2.800	4.920	111
OTAY RIVER	LOWER OTAY	CITY OF SAN DIEGO	56.500	4.590	7.150	12.740	278
COTTONWOOD CREEK	MORENA	CITY OF SAN DIEGO	50.200	.710	.730	1.450	204
	BARRETT	CITY OF SAN DIEGO	44.800	1.700	4.280	.860	51
SOLEDAD VALLEY							
BIG SURR CREEK	MIRAMAR (3)	CITY OF SAN DIEGO	7.300	5.000(6)	4.160	5.910	118

TABLE 5 - STORAGE IN MAJOR RESERVOIRS (Continued)

AREA AND DRAINAGE BASIN	RESERVOIR	OPERATOR	CAPACITY (1) (1000 AF)	STORAGE AS OF APRIL 1			
				10-YEAR AVERAGE 1957-1966 (1000 AF)	1966 (1000 AF)	1967 (1000 AF)	1967 IN % OF AVG
CENTRAL VALLEY AREA							
SACRAMENTO RIVER	SHASTA	US BUREAU OF RECLAMATION	4500.000	3834.040	4089.500	4099.200	107
	WHISKEYTOWN	US BUREAU OF RECLAMATION	241.100	198.610(6)	197.870	202.220	102
FEATHER RIVER	MOUNTAIN MEADOWS	PAC GAS AND ELECTRC CO	24.000	14.920	13.610	16.160	108
	LAKE ALMANOR	PAC GAS AND ELECTRIC CO	1035.500	734.380(6)	653.630	699.790	95
	BUTT VALLEY	PAC GAS AND ELECTRIC CO	49.900	39.450	41.770	44.940	114
	BUCKS STORAGE	PAC GAS AND ELECTRIC CO	101.700	58.830	46.300	63.390	108
	FRENCHMAN	DEPT OF WATER RESOURCES	51.000	41.370(6)	50.240	51.900	125
	LITTLE GRASS VALLEY	OROVILLE WYANDOTTE ID	93.000	72.050(6)	66.400	75.500	105
	SLY CREEK	OROVILLE WYANDOTTE ID	65.000	43.860(6)	36.800	56.300	128
YUBA RIVER	JACKSON MEADOWS	NEVADA ID	68.700	(5)	32.760	37.260	-
	BOWMAN LAKE	NEVADA ID	69.800	29.140	28.860	41.340	142
	SPAULDING SYSTEM	PAC GAS AND ELECTRIC CO	137.400	72.410	36.580	74.350	103
	SCOTT FLAT	NEVADA ID	48.500	(5)	43.930	48.550	-
BEAR RIVER	ROLLINS	NEVADA ID	66.000	(5)	65.990	65.990	-
	COMBIE	NEVADA ID	7.800	5.990	5.560	5.560	93
	CAMP FAR WEST	SOUTH SUTTER WATER DIST	101.500	101.930(6)	104.400	102.600	101
AMERICAN RIVER	FRENCH MEADOWS	PLACER CO WATER DIST	133.700	(5)	90.740	90.690	-
	LOWER HELL HOLE	PLACER CO WATER DIST	208.400	(5)	64.660	167.300	-
	LOON LAKE	SACRAMENTO MUN UTIL DIST	76.500	13.910(6)	12.930	22.770	164
	STUMPY MEADOWS	GEORGETOWN DIVIDE PUD	20.000	20.000(6)	20.000	20.000	100
	TWIN LAKES	PAC GAS AND ELECTRIC CO	21.600	7.360	5.860	6.610	90
	SILVER LAKE	PAC GAS AND ELECTRIC CO	8.600	1.060	1.240	1.000	94
	UNION VALLEY	SACRAMENTO MUN UTIL DIST	271.000	142.970(6)	123.200	140.900	99
	ICE HOUSE	SACRAMENTO MUN UTIL DIST	46.000	20.640(6)	10.500	11.440	55
	FOLSOM	US BUREAU OF RECLAMATION	1010.300	588.840	647.700	629.600	107
STONY CREEK	EAST PARK	US BUREAU OF RECLAMATION	50.900	49.440	51.130	51.320	104
	STONY GORGE	US BUREAU OF RECLAMATION	50.000	48.380	51.570	50.790	105
	BLACK BUTTE	US CORPS OF ENGINEERS	160.000	64.790(6)	101.300	103.810	160
CACHE CREEK	CLEAR LAKE	CLEAR LAKE WATER CO	314.000	293.750	301.730	319.650	109
PUTAH CREEK	BERRYESSA	US BUREAU OF RECLAMATION	1602.300	1162.210	1610.010	1632.700	140
COSUMNES RIVER	JENKINSON LAKE	US BUREAU OF RECLAMATION	41.000	37.340	41.320	41.220	110

TABLE 5 - STORAGE IN MAJOR RESERVOIRS (Continued)

AREA AND DRAINAGE BASIN	RESERVOIR	OPERATOR	CAPACITY (1) (1000 AF)	STORAGE AS OF APRIL 1 10-YEAR AVERAGE 1957-1966 (1000 AF)	1966 (1000 AF)	1967 (1000 AF)	1967 IN % OF AVG
CENTRAL VALLEY AREA (CONTINUED)							
MOKELUMNE RIVER	LOWER BEAR	PAC GAS AND ELECTRIC CO	48.500	16.560	12.880	8.260	50
	SALT SPRINGS	PAC GAS AND ELECTRIC CO	140.900	32.810	17.770	39.350	120
	PARDEE	EAST BAY MUN UTIL DIST	210.000	173.820	162.500	194.020	112
	CAMANCHE	EAST BAY MUN UTIL DIST	431.500	162.830(6)	118.940	272.120	167
CALAVERAS RIVER	NEW HOGAN	US CORPS OF ENGINEERS	325.000	(5)	203.810	183.990	-
STANISLAUS RIVER	RELIEF	PAC GAS AND ELECTRIC CO	15.600	3.860	2.700	5.190	134
	DONNELLS	OAKDALE-SO SAN JOAQUIN ID	64.700	26.930(6)	14.790	25.150	93
	HARTLEY LAKE	OAKDALE-SO SAN JOAQUIN ID	98.300	50.970(6)	54.200	68.300	134
	STRAWBERRY	PAC GAS AND ELECTRIC CO	18.300	8.110	7.140	10.220	126
	MELONES	PAC GAS AND ELECTRIC CO	112.600	78.400	56.380	103.980	133
	TULLOCH	OAKDALE-SO SAN JOAQUIN ID	68.200	53.770(6)	42.910	57.600	107
TUOLUMNE RIVER	HETCH HETCHY	CITY CO OF SAN FRANCISCO	360.400	106.740	162.860	99.020	93
	CHERRY LAKE	CITY CO OF SAN FRANCISCO	268.200	75.430	70.680	81.650	108
	LAKE ELEANOR	CITY CO OF SAN FRANCISCO	26.100	10.840	3.970	6.370	59
	DON PEDRO	TURLOCK AND MODESTO ID	290.400	184.110	157.700	200.400	109
	TURLOCK LAKE (OWEN)	TURLOCK ID	49.000	36.050	25.820	40.720	113
	MODESTO	MODESTO ID	27.000	19.140	18.470	18.900	99
MERCED RIVER	LAKE MCCLURE	MERCED ID	1026.000	199.930	300.290	653.980	327
SAN JOAQUIN RIVER	FLORENCE LAKE	SOUTHERN CALIF EDISON CO	64.600	.590	.670	.410	69
	THOMAS A EDISON	SOUTHERN CALIF EDISON CO	125.200	38.440	33.620	13.980	36
	MAMMOTH POOL	SOUTHERN CALIF EDISON CO	122.700	11.790(6)	11.220	59.960	508
	HUNTINGTON LAKE	SOUTHERN CALIF EDISON CO	89.800	28.190	23.310	41.620	148
	SHAVER LAKE	SOUTHERN CALIF EDISON CO	135.400	26.610	44.020	40.840	153
	CRANE VALLEY (BASS LK)	PAC GAS AND ELECTRIC CO	45.400	29.770	28.180	30.100	101
	MILLERTON LAKE	US BUREAU OF RECLAMATION	520.600	327.660	336.200	492.100	150
KINGS RIVER	COURTRIGHT	PAC GAS AND ELECTRIC CO	129.900	39.890(6)	58.410	32.630	82
	WISHON	PAC GAS AND ELECTRIC CO	128.600	32.090(6)	32.760	62.470	195
	PINE FLAT	US CORPS OF ENGINEERS	1013.400	482.840	528.500	780.380	162
KERN RIVER	ISABELLA	US CORPS OF ENGINEERS	570.000	122.800	154.980	280.340	228
KAWEAH	TERMINUS	US CORPS OF ENGINEERS	150.000	8.280(6)	9.270	14.910	180
TULE	SUCCESS	US CORPS OF ENGINEERS	80.000	19.800(6)	20.750	31.660	160

TABLE 5 - STORAGE IN MAJOR RESERVOIRS (Continued)

AREA AND DRAINAGE BASIN	RESERVOIR	OPERATOR	CAPACITY (1) (1000 AF)	STORAGE AS OF APRIL 1			
				10-YEAR AVERAGE 1957-1966 (1000 AF)	1966 (1000 AF)	1967 (1000 AF)	1967 IN % OF AVG
LAHONTAN AREA							
TRUCKEE RIVER	LAKE TAHOE (2)	TRUCKEE-CARSON ID	744.600	395.690	535.000	535.800	135
	BOCA (2)	TRUCKEE-CARSON ID	41.200	13.070	4.000	5.350	41
EAST WALKER RIVER	BRIDGEPORT (2)	WALKER RIVER ID	42.500	33.880	41.000	31.820	94
MONO LAKE BASIN	SADDLEBAG LAKE	SOUTHERN CALIF EDISON CO	11.100	2.410	2.410	1.260	52
	GEM LAKE	SOUTHERN CALIF EDISON CO	17.600	3.040	1.910	.850	28
	GRANT LAKE	CITY OF LOS ANGELES	47.500	30.060	45.250	46.110	153
OWENS RIVER	SOUTH LAKE (HILLSIDE)	SOUTHERN CALIF EDISON CO	13.400	2.220	1.660	2.540	114
	LAKE CROWLEY	CITY OF LOS ANGELES	183.500	136.330	166.110	128.100	94
	TINEMAHA	CITY OF LOS ANGELES	16.600	1.490	.030	6.140	410
	HAIWEE (SOUTH)	CITY OF LOS ANGELES	58.500	44.750	44.950	39.760	89
COLORADO DESERT AREA							
COLORADO RIVER	LAKE POWELL (2)	US BUREAU OF RECLAMATION	25002.000	5685.750(6)	8907.000	7368.000	130
	LAKE MEAD (2)	US BUREAU OF RECLAMATION	27207.000	16987.900	15502.000	15438.000	91
	LAKE MOJAVE (2)	US BUREAU OF RECLAMATION	1810.000	1685.480	1734.500	1677.200	100
	LAKE HAVASU (2)	US BUREAU OF RECLAMATION	619.000	559.320	557.000	549.900	98

(1) TOTAL CAPACITY TO THE NEAREST HUNDRED ACRE FEET.
(2) INTERSTATE RESERVOIR USED JOINTLY BY CALIFORNIA AND ADJACENT STATES.
(3) INCLUDES FOREIGN WATER.
(4) STORES ONLY IMPORTED COLORADO RIVER WATER.
(5) PERIOD OF OPERATION TOO SHORT TO COMPUTE A REPRESENTATIVE AVERAGE.
(6) LESS THAN 10-YEAR AVERAGE.

TABLE 6

RUNOFF DATA[1]

Area, Stream, and Station	Source of Data[2]	March 1967				October 1, 1966 - March 31, 1967			
		Measured Flow (Acre-Feet)	Unimpaired Runoff[3] Total For Month (Acre-Feet)	Unimpaired Runoff[3] 50-Year[4] Average (Acre-Feet)	Unimpaired Runoff[3] In % of Avg.	Measured Flow (Acre-Feet)	Unimpaired Runoff[3] Total For Season (Acre-Feet)	Unimpaired Runoff[3] 50-Year[4] Average (Acre-Feet)	Unimpaired Runoff[3] In % of Avg.
NORTH COASTAL AREA									
Klamath, Copco to Somesbar	USGS	507,300[7]	529,800	608,500	87	3,151,900[7]	3,250,400	2,532,100	129
Trinity at Lewiston	USBR	9,200	172,500	164,000	105	67,300	744,400	545,400	137
Eel at Scotia	USGS	985,100	1,003,700	832,800	120	4,921,700[8]	5,056,500[8]	4,282,600	118
Russian at Healdsburg	USGS	202,100	188,900	127,700	148	987,100	889,000	694,500	128
SAN FRANCISCO BAY AREA									
Napa near St. Helena	USGS	13,950	13,950[5]	9,770	143	94,020	94,020[5]	56,170	168
Coyote Creek near Madrone	USGS	1,350	19,480	10,030	195	2,980	58,130	40,420	145
CENTRAL COASTAL AREA									
Arroyo Seco near Soledad	USGS	40,000	40,000[5]	24,400	164	145,900	145,900[5]	91,210	160
Nacimiento below Nacimiento Dam, near Bradley	USGS	600	78,090	41,570	188	132,100	344,250	169,690	203
SOUTH COASTAL AREA									
Sespe Creek near Fillmore	USGS	25,500[9]	25,500	21,900	116	96,110[9]	96,110	60,600	158
Arroyo Seco near Pasadena	USGS	2,670	2,670[5]	1,390	192	10,350	10,350[5]	4,540	228
Santa Ana near Mentone	USGS	6,050[10]	8,140	12,090	67	51,190[10]	67,640	36,190	186
SACRAMENTO VALLEY AREA									
Sacramento, inflow to Shasta	USBR	1,005,100	1,005,100[5]	763,900	131	4,192,600	4,192,600[5]	3,239,600	129
Sacramento near Red Bluff	USGS-USBR	601,200	1,331,500	1,137,500	117	5,576,800	6,037,600	4,887,700	124
Feather near Oroville	USGS	778,300	870,300	598,000	146	2,802,000	2,988,400	2,077,100	144
Yuba at Smartville	USGS-PG&E	341,900[6]	439,600	308,400	142	1,167,600[6]	1,525,000	1,062,600	144
American, inflow to Folsom	USBR-PG&E	454,200[7]	539,900	369,000	150	1,679,200[7]	1,586,900	1,164,300	136
Cosumnes at Michigan Bar	USGS	103,000	103,450	71,380	145	267,260	286,690	215,990	133
Mokelumne, inflow to Pardee	EBMUD	98,410[7]	123,480	77,640	159	365,030[7]	326,130	222,340	147

TABLE 6 - RUNOFF DATA[1] (CONTINUED)

AREA, STREAM, AND STATION	SOURCE OF DATA[2]	MARCH 1967				OCTOBER 1, 1966 - MARCH 31, 1967			
		MEASURED FLOW (ACRE-FEET)	UNIMPAIRED RUNOFF[3] TOTAL FOR MONTH (ACRE-FEET)	UNIMPAIRED RUNOFF[3] 50-YEAR[4] AVERAGE (ACRE-FEET)	UNIMPAIRED RUNOFF[3] IN % OF AVG.	MEASURED FLOW (ACRE-FEET)	UNIMPAIRED RUNOFF[3] TOTAL FOR SEASON (ACRE-FEET)	UNIMPAIRED RUNOFF[3] 50-YEAR[4] AVERAGE (ACRE-FEET)	UNIMPAIRED RUNOFF[3] IN % OF AVG.
SAN JOAQUIN VALLEY AREA									
STANISLAUS, INFLOW TO MELONES	PG&E	151,300[7]	194,200	119,600	162	397,800[7]	496,600	335,300	148
TUOLUMNE, INFLOW TO DON PEDRO	TUR ID-CCSF	216,700[7]	306,100	179,300	171	714,400[7]	849,200	536,700	158
MERCED, INFLOW TO EXCHEQUER	USGS	4,260[7]	162,700	98,900	165	404,200[7]	404,200	292,100	138
SAN JOAQUIN, INFLOW TO MILLERTON	USBR	1,800[7]	242,900	135,000	180	80,600[7]	683,900	390,700	175
KINGS, INFLOW TO PINE FLAT	USCE	115,400[7]	201,400	112,200	179	190,400[7]	722,000	335,000	215
KAWEAH, INFLOW TO TERMINUS	USCE	60,960[7]	67,350	38,840	174	355,060[7]	361,270	112,580	320
TULE, INFLOW TO SUCCESS	USCE	23,190[7]	24,760	26,000	95	171,210[7]	197,280	69,400	284
KERN NEAR BAKERSFIELD	KCLC	57,000	86,000	60,480	142	370,590	566,150	188,490	300
LAHONTAN AREA									
TRUCKEE, TAHOE TO FARAD	USGS	65,100	68,900	34,780	198	155,150	158,600	96,830	164
OWENS, BELOW LONG VALLEY DAM	LADW&P	7,800	18,390	12,660	145	74,740	72,440	64,900	112
COLORADO DESERT AREA									
COLORADO, INFLOW TO LAKE POWELL	USBR	688,600[7]	531,100	622,000	85	3,303,600[7]	2,192,100	2,652,000	83

1/ ALL DATA PRELIMINARY, SUBJECT TO REVISION.

2/ USGS - UNITED STATES GEOLOGICAL SURVEY; PG&E - PACIFIC GAS AND ELECTRIC COMPANY; USBR - UNITED STATES BUREAU OF RECLAMATION; KCLC - KERN COUNTY LAND COMPANY; LADW&P - LOS ANGELES DEPARTMENT OF WATER AND POWER; EBMUD - EAST BAY MUNICIPAL UTILITY DISTRICT; USCE - UNITED STATES CORPS OF ENGINEERS; TUR ID - TURLOCK IRRIGATION DISTRICT.

3/ CORRECTED FOR UPSTREAM REGULATION.

4/ COMPUTED FOR THE 50-YEAR PERIOD 1910-11 THROUGH 1959-60; FOR STATIONS WITH LESS THAN 50 YEARS OF RECORD, AVERAGES WERE ESTIMATED BY COMPARISON WITH STATIONS HAVING RECORDS FOR THE 50-YEAR PERIOD.

5/ UNCORRECTED FOR UPSTREAM REGULATION.

6/ TOTAL OF NARROWS DAM SPILL, FLOW THROUGH NARROWS POWERHOUSE AND DEER CREEK NEAR SMARTVILLE.

7/ MEASURED FLOW AT OTHER THAN LISTED LOCATION AS FOLLOWS: KLAMATH BELOW IRON GATE DAM AND NEAR ORLEANS; AMERICAN AT FAIR OAKS; MOKELUMNE NEAR MOKELUMNE HILL; STANISLAUS BELOW MELONES POWERHOUSE, TUOLUMNE ABOVE LA GRANGE DAM; MERCED AT MERCED FALLS; SAN JOAQUIN BELOW FRIANT DAM; KINGS BELOW PINE FLAT DAM; TULE BELOW SUCCESS DAM; KAWEAH BELOW TERMINUS DAM; COLORADO AT LEES FERRY.

8/ MEASURED AND UNIMPAIRED FLOWS FOR OCTOBER-JANUARY REVISED TO 3,936,000 AND 4,052,800 ACRE-FEET, RESPECTIVELY.

9/ INCLUDES FILLMORE IRRIGATION COMPANY CANAL.

10/ INCLUDES SOUTHERN CALIFORNIA EDISON COMPANY CANAL.