CALIFORNIA COOPERATIVE SNOW SURVEYS 4553/3

(18)

THE RESOURCES AGENCY OF CALIFORNIA

Department of Water Resources

BULLETIN No. 120-63

WATER CONDITIONS IN CALIFORNIA

REPORT No. 1: As of February 1

EDMUND G. BROWN
Governor
State of California

HUGO FISHER
Administrator
The Resources Agency of California

WILLIAM E. WARNE
Director
Department of Water Resources

Copy #1

FOREWORD

A REPORT ENTITLED "WATER CONDITIONS IN CALIFORNIA" IS PREPARED AS OF THE FIRST OF EACH MONTH, FROM 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 SURVEYS, EITHER INDEPENDENTLY OR IN COOPERATION WITH ANY PERSON OR ANY COUNTY, STATE, FEDERAL, OR OTHER AGENCY."

THIS REPORT IS PREPARED AS PART OF THE CALIFORNIA COOPERATIVE SNOW SURVEY PROGRAM, WHICH IS THE OPERATING VEHICLE DESIGNED TO CARRY OUT THE ABOVE PROVISIONS. DATA AND ASSISTANCE WERE FURNISHED BY MANY PUBLIC AND PRIVATE AGENCIES COOPERATING IN THE PROGRAM, BY THE OPERATORS OF STORAGE RESERVOIRS, AND BY AGENCIES WHICH COMPILE AND REPORT PRECIPITATION AND RUNOFF RECORDS. 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 FIRST OF THE 1963 SERIES OF REPORTS AND DESCRIBES WATER CONDITIONS AS OF FEBRUARY 1, 1963. 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. BAR GRAPHS AND EXPECTANCY CURVES ARE INCLUDED WITH THE AREA DISCUSSIONS 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 50-YEAR PERIOD 1906-55.

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 1930-59.

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 1953-1962.

STREAM FLOW - UNLESS OTHERWISE NOTED, STREAM FLOW IS THE COMPUTED UNIMPAIRED RUNOFF AS IT WOULD BE IF UNALTERED BY UPSTREAM DEVELOPMENT. STREAM FLOW AVERAGES ARE BASED ON THE 50-YEAR PERIOD 1908-57.

SUPPORTING DATA FOR THIS REPORT, INCLUDING RESULTS OF ALL SNOW MEASUREMENTS, AVAILABLE PRECIPITATION RECORDS, STREAM FLOW RECORDS FOR REPRESENTATIVE STREAMS, AND A SUMMARY OF WATER IN STORAGE IN MAJOR RESERVOIRS, WILL BE SENT TO COOPERATORS AND WILL BE MADE AVAILABLE TO OTHER AGENCIES AND INDIVIDUALS UPON REQUEST.

ALLIED REPORTS PUBLISHED BY THE DEPARTMENT OF WATER RESOURCES ARE: BULLETIN 23 - SURFACE WATER FLOW; BULLETIN 39 - WATER SUPPLY CONDITIONS IN SOUTHERN CALIFORNIA; AND BULLETIN 77 - GROUND WATER CONDITIONS IN CENTRAL AND NORTHERN CALIFORNIA. ADDITIONAL INFORMATION AND PRICES ON THE FOREGOING PUBLICATIONS MAY BE OBTAINED BY WRITING TO:

STATE OF CALIFORNIA
PRINTING DIVISION, DOCUMENTS SECTION
SACRAMENTO 14, CALIFORNIA

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STATE OF CALIFORNIA
THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

EDMUND G. BROWN, GOVERNOR
HUGO FISHER, ADMINISTRATOR, THE RESOURCES AGENCY OF CALIFORNIA
WILLIAM E. WARNE, DIRECTOR, DEPARTMENT OF WATER RESOURCES

ALFRED R. GOLZE . . . . . CHIEF ENGINEER

DIVISION OF OPERATIONS

ROBIN R. REYNOLDS . . . . . DIVISION ENGINEER

ACTIVITIES COVERED BY THIS REPORT ARE UNDER THE DIRECTION
OF
WILLIAM L. HORN - CHIEF, WATER OPERATIONS BRANCH

THIS REPORT WAS PREPARED
BY
ROBERT W. MILLER - CHIEF, WATER SUPPLY FORECAST AND SNOW SURVEYS UNIT

ASSISTED
BY

RAYMOND E. BARSCH . . . . . ASSISTANT CIVIL ENGINEER
NED R. PETERSON . . . . . ASSISTANT CIVIL ENGINEER
WILLIAM G. T. FONG . . . . . WATER RESOURCES TECHNICIAN I
WALTER M. HOWARD . . . . . WATER RESOURCES TECHNICIAN I
GERALD E. YOUNGBLOOD . . . . . ENGINEERING AID II

DATA FOR SOUTHERN CALIFORNIA WERE COMPILED UNDER THE DIRECTION
OF

JAMES J. DOODY . . . . . DISTRICT ENGINEER, SOUTHERN CALIFORNIA DISTRICT

BY

THE PLANNING BRANCH

AGENCIES COOPERATING WITH THE DEPARTMENT OF WATER RESOURCES IN THE CALIFORNIA SNOW SURVEY PROGRAM

STATE AND FEDERAL AGENCIES

- NEVADA COOPERATIVE SNOW SURVEYS
- OREGON COOPERATIVE SNOW SURVEYS
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- DEPARTMENT OF COMMERCE - WEATHER BUREAU
- DEPARTMENT OF THE INTERIOR - BUREAU OF RECLAMATION; GEOLOGICAL SURVEY, WATER RESOURCES DIVISION; NATIONAL PARK SERVICE (3 NATIONAL PARKS)
- DEPARTMENT OF THE ARMY - CORPS OF ENGINEERS

PUBLIC UTILITIES

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

MUNICIPALITIES

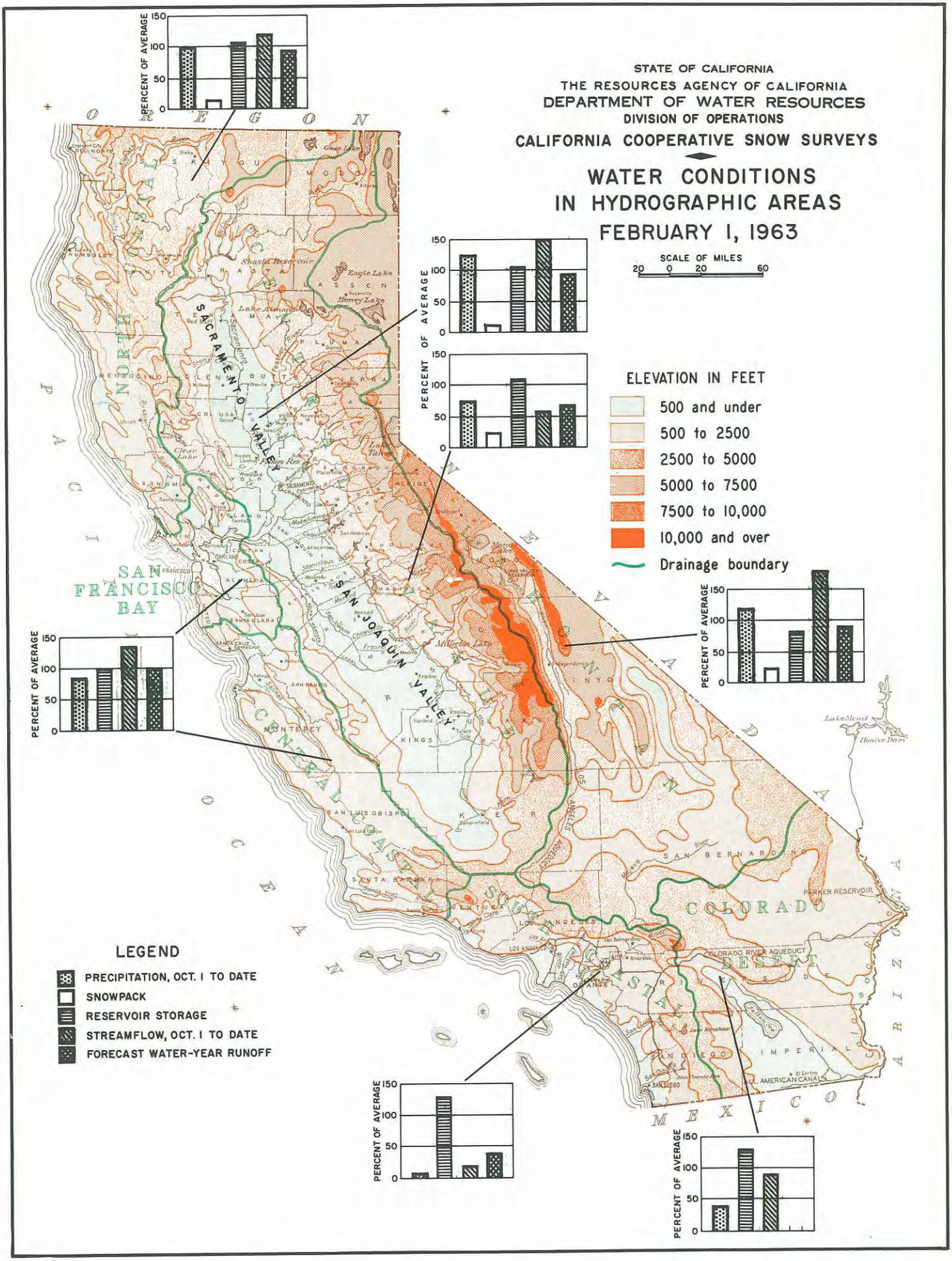
- CITY OF LOS ANGELES - DEPARTMENT OF WATER AND POWER
- CITY OF PORTERVILLE
- CITY OF SAN FRANCISCO - PUBLIC UTILITIES COMMISSION

ORGANIZED PUBLIC AGENCIES

- BUENA VISTA WATER STORAGE DISTRICT
- CAMP FAR WEST IRRIGATION 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
- TERRA BELLA IRRIGATION DISTRICT
- TURLOCK IRRIGATION DISTRICT
- VANDALIA IRRIGATION DISTRICT

PRIVATE ORGANIZATIONS

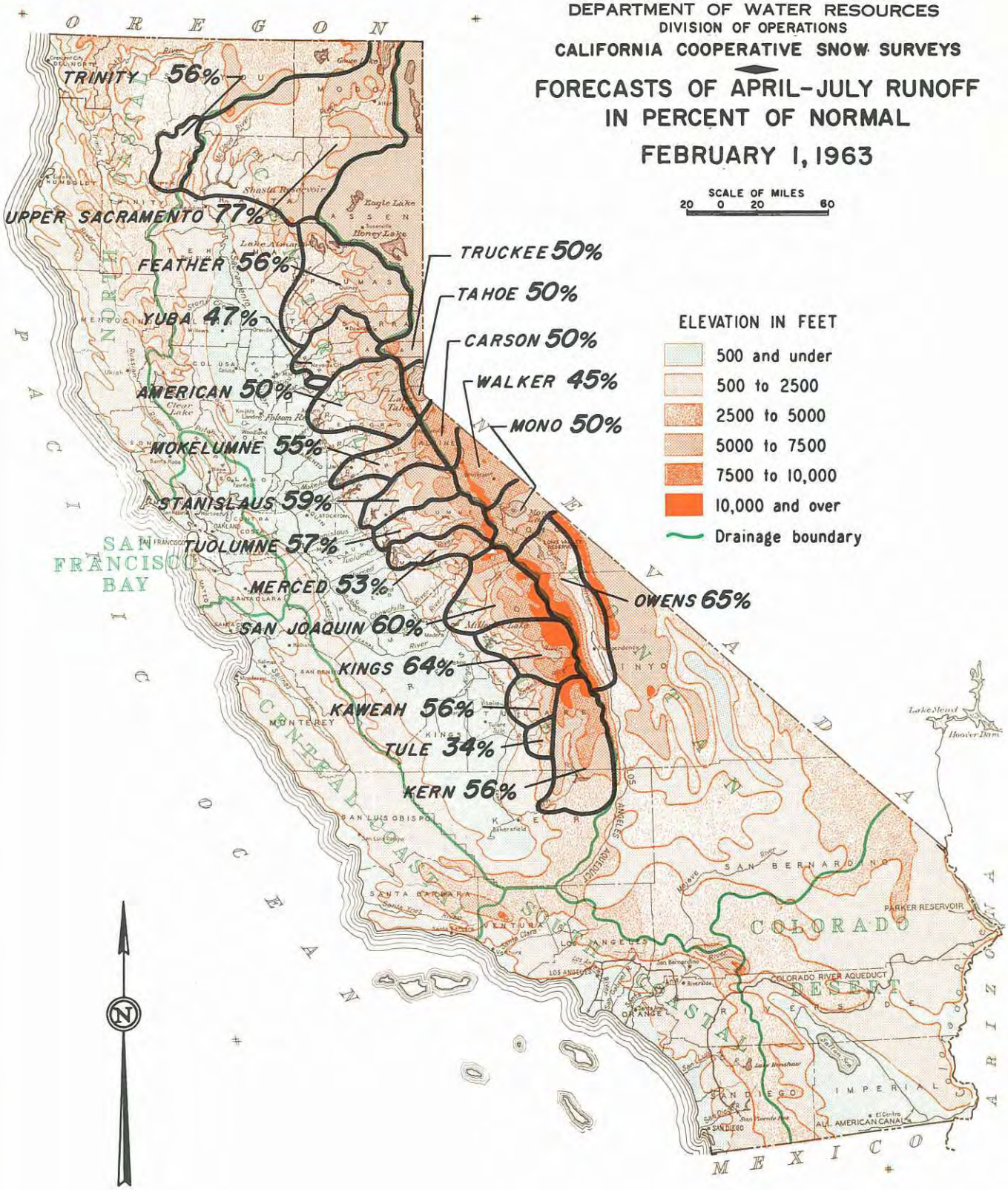
- J. G. BOSWELL COMPANY
- KERN COUNTY LAND COMPANY
- LIBERTY FARMS COMPANY
- MILLER & LUX, INC.
- UNITED HOP GROWERS OF CALIFORNIA, INC.


STATE OF CALIFORNIA
THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
DIVISION OF OPERATIONS
CALIFORNIA COOPERATIVE SNOW SURVEYS
WATER CONDITIONS
IN HYDROGRAPHIC AREAS
FEBRUARY 1, 1963
SCALE OF MILES
20 0 20 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
150
100
50
0
LEGEND
PRECIPITATION, OCT. 1 TO DATE
SNOWPACK
RESERVOIR STORAGE
STREAMFLOW, OCT. 1 TO DATE
FORECAST WATER-YEAR RUNOFF
OREGON
NEVADA
ARIZONA
MEXICO
PACIFIC OCEAN
SACRAMENTO VALLEY
SAN JOAQUIN VALLEY
SAN FRANCISCO BAY
COLORADO DESERT
COLORADO RIVER AQUEDUCT
PARKER RESERVOIR
AMERICAN CANAL
Shasta Reservoir
Eagle Lake
Honey Lake
Lake Almanor
Lake Tahoe
Clear Lake
Millerton Lake
Lake Mead
Boulder Dam

STATE OF CALIFORNIA
THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
DIVISION OF OPERATIONS
CALIFORNIA COOPERATIVE SNOW SURVEYS

FORECASTS OF APRIL-JULY RUNOFF IN PERCENT OF NORMAL

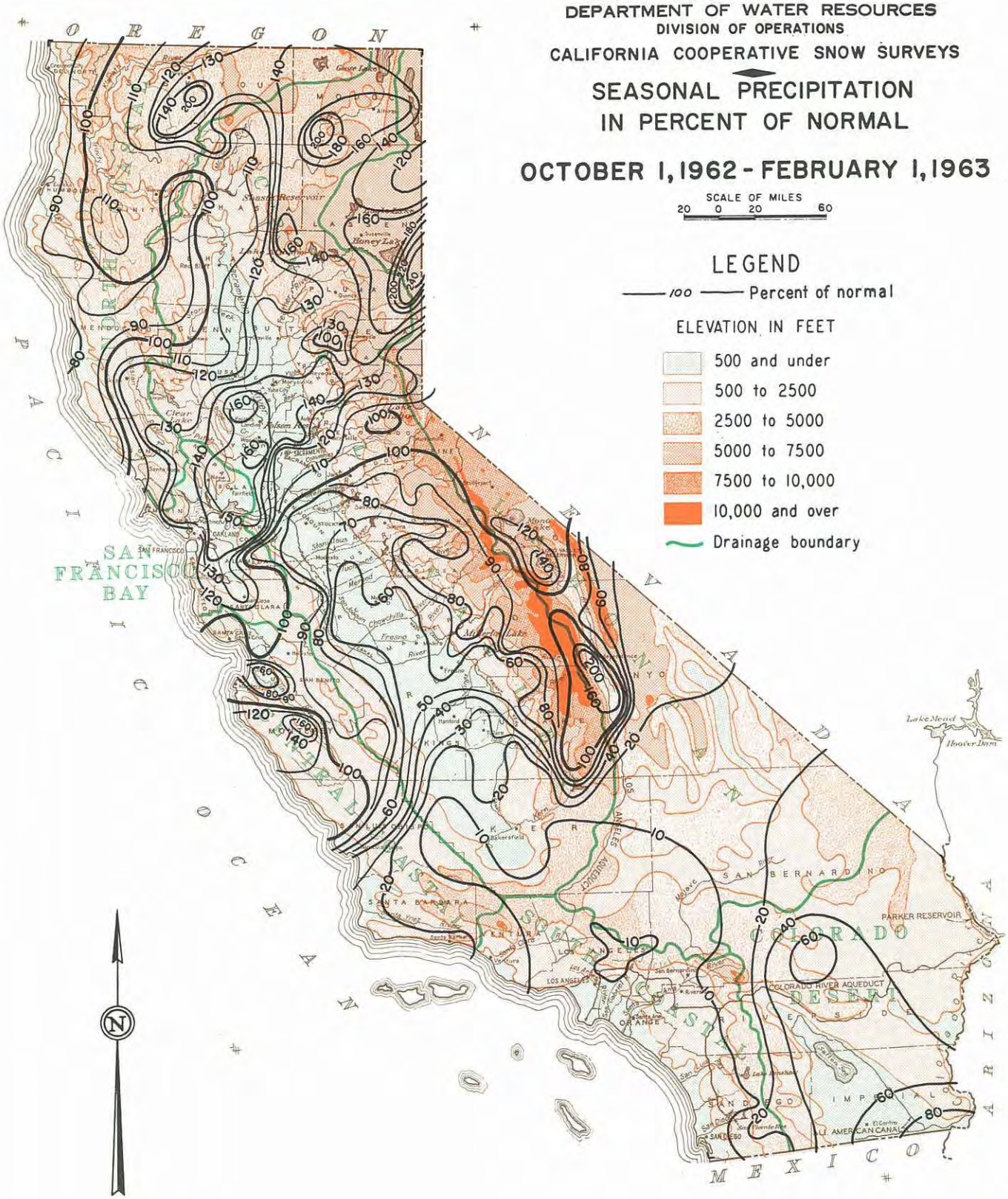
FEBRUARY 1, 1963

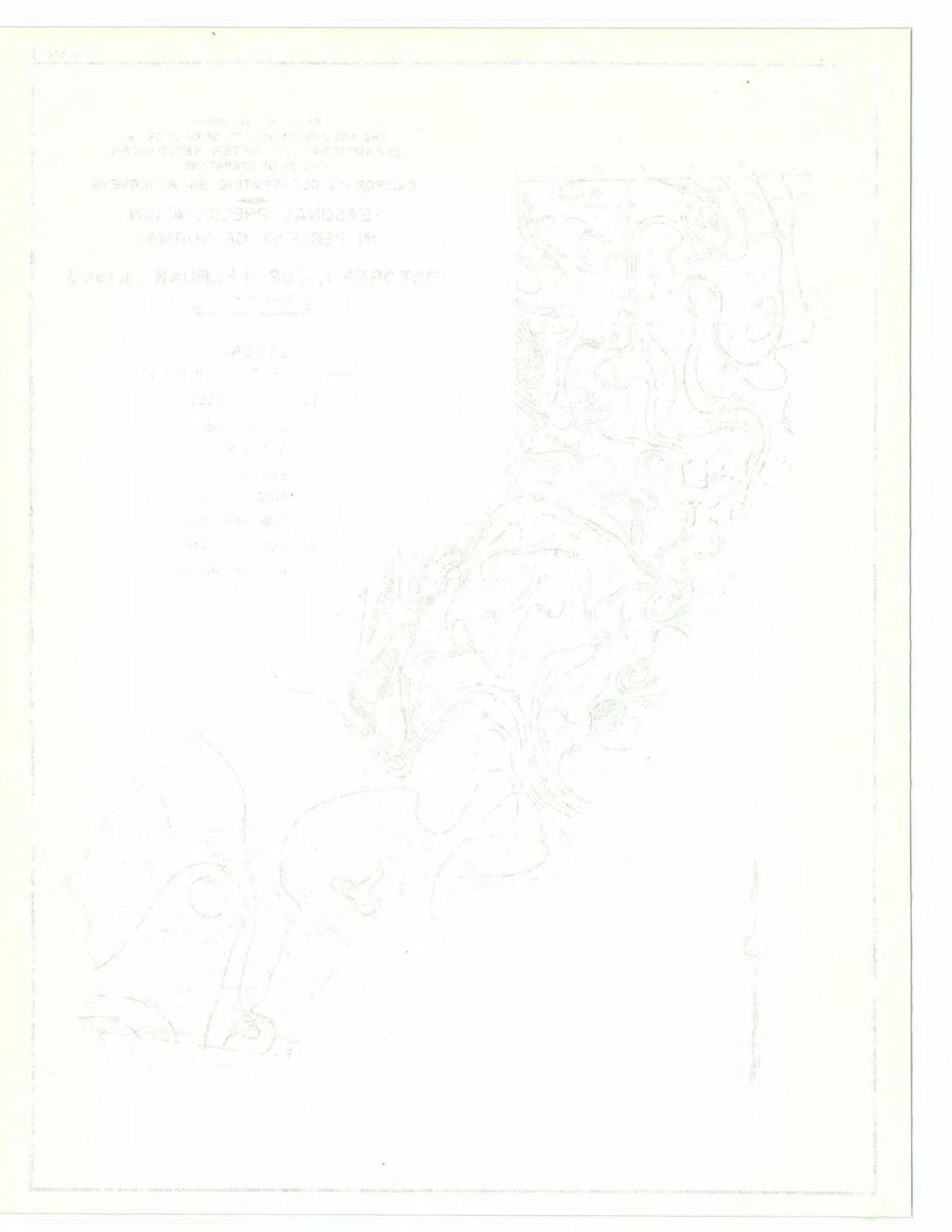


STATE OF CALIFORNIA
THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
DIVISION OF OPERATIONS
CALIFORNIA COOPERATIVE SNOW SURVEYS

SEASONAL PRECIPITATION IN PERCENT OF NORMAL

OCTOBER 1, 1962 - FEBRUARY 1, 1963





SUMMARY OF WATER CONDITIONS

Water supply conditions in California this coming spring and summer, based on February 1 data, will vary erratically in the various regions and locales of the state. Some streams of the Central Valley, for instance, are expected to have near normal streamflow for the water year as a whole, but may have late-season (April-July) flows of only 50 percent of normal. Thus, for many areas, spring and summer supplies will be directly related to water in storage in reservoirs. Fortunately, reservoir storage is generally good (based on February 6 data), and agencies and individuals in areas with access to stored water should have no great problem. However, there will probably be instances of agencies in adjacent areas which will suffer late-season shortages because they must rely directly on the flow of a relatively less developed stream.

All of the unusual aspects of this year's potential water supplies relate directly to the very odd season we are experiencing. Meteorologically speaking, California is undergoing one of the most unusual seasons of record. The first major deviation from the usual pattern occurred early last October when unusually heavy storms deluged most of Northern California with record-breaking amounts of precipitation (for October). This unusual storm was followed by fog, which covered most of the floor of the Central Valley during 54 days in a four-month period. Thus, another record fell--the prior record having been 45 days of fog within a four-month period.

Concern for summer water supplies mounted as December passed and January wore on without the usual storms. A forest fire hazard (relatively unheard of during the winter season) developed, and the Forest Service went on a fire alert status. Then, the first rainfall of 1963 occurred on January 28 to terminate a record-breaking 42-day period without significant precipitation during the rainfall season. Even this storm was unusual; it was an extremely warm type with precipitation falling as rain as high as 8,000 feet. The large amounts of precipitation falling on bare or frozen ground brought immediate and dramatic results. Resultant streamflow on all Central Valley streams was high, and the peak flow on the Yuba River at Narrows Dam exceeded the all-time record. Accordingly, many areas in California underwent a remarkably quick change from potential drought to a flood condition in a matter of days.

Precipitation this season is noteworthy in a number of respects, in addition to those which have already been mentioned. Essentially all of the precipitation this season has occurred during two storms; the first in October, and the recent storm which began January 28. During both of these storms, rainfall intensities were high enough over an extended period to be dangerous as flood producers. Although rain continued through only the first few days of February, many stations received their February normal amount in these first few days of the month. Rainfall for the season to date (February 1) in San Diego was the lowest of a 113-year record, and at Los Angeles, the second lowest in 86 years of record.

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-Jan. 31 Precipitation in Percent of Average	Feb. 1 Snow Water Content in Percent of Apr. 1 Average	Feb. 1 Reservoir Storage in Percent of Average	Runoff in Percent Average	
				Actual Oct. 1, 1962-Feb. 1, 1963	Forecast 1962-63 Water Year
North Coastal	100	15	105	120	90
San Francisco Bay	135	--	100	125	100
Central Coastal	70	--	100	140	100
South Coastal	10	--	130	20	40
Central Valley					
Sacramento Valley	125	15	105	150	90
San Joaquin Valley	75	25	110	60	70
Lahontan	120	25	85	180	90
Colorado Desert	40	--	130	90	--
Entire State	75	20	105 1/	125 2/	85

1/ California reservoirs only.
2/ Excluding Colorado River.

Snowpack measurements were obtained at 105 snow courses and numerous aerial snow depth markers throughout the state on or about February 1. At the present time the very high snow line ranges from approximately 7,000 feet in the northern half of the state to 8,000 feet in the southern Sierra. With normal conditions, the average snow line on February 1 is usually about 5,500 feet. Snowpack is virtually nonexistent in the snow accumulation areas of the northern half of the state where elevations are generally lower, and even on the high ridges, only 15 percent of a normal snowpack remains after the warm rains. Conditions are slightly better in the southern Sierra where to date approximately 25 percent of the normal snowpack has accumulated. Normally, 50 to 60 percent of the season's snowpack has accumulated on February 1. This month, 57 of the courses recorded no snow. Many of these "no snow" readings were the first on record for this time of year.

Although the recent unseasonable rain at high elevations has not permitted a normal snowpack to accumulate, it did result in some dramatic increases to reservoir storage. Many operators filled their reservoirs to flood control levels or significantly exceeded the storage quantities recorded on February 1 of last year. Storage in most of the reservoirs surpassed the 10-year February 1 average. This condition will help many water users to begin planning tentative operating schedules for the coming spring and summer. In some instances the present outlook for reduced snowmelt runoff next spring should probably be considered when determining carryover procedures during the coming months. Storage data for the individual reservoirs will be presented in the Basic Data Supplement to this report. This February 1 storage data should be considered to be on the conservative side, since the runoff recession from the end-of-month storm continued to feed above normal inflow into the reservoirs well into February.

SUMMARY OF WATER CONDITIONS

THE TOTAL UNIMPAIRED RUNOFF OF MAJOR CALIFORNIA STREAMS WAS ABOUT 125 PERCENT OF NORMAL FOR THE OCTOBER THROUGH JANUARY PERIOD, WITH ONLY THE SOUTH COASTAL, SAN JOAQUIN VALLEY, AND THE COLORADO DESERT AREAS EXPERIENCING BELOW AVERAGE FLOWS. THE FLOWS VARIED FROM ONLY 10 TO 30 PERCENT OF NORMAL IN SOUTH COASTAL AREA STREAMS TO OVER 250 PERCENT OF NORMAL IN STREAMS IN THE LAKE TAHOE AND TRUCKEE RIVER BASINS. DURING THIS PERIOD, VERY HIGH RUNOFF ALSO OCCURRED IN SACRAMENTO VALLEY WATERSHEDS; THIS WAS ESPECIALLY TRUE OF THE FEATHER, YUBA, AND AMERICAN RIVER BASINS DUE TO OCTOBER FLOWS WHICH FAR EXCEEDED ANY PREVIOUSLY RECORDED, AND CONTRIBUTED TO A SEASONAL TOTAL FOR THE COMBINED AREAS OF ABOUT 175 PERCENT OF NORMAL AMOUNT. SEASONAL RUNOFF FROM SAN JOAQUIN VALLEY STREAMS AVERAGED ABOUT 60 PERCENT OF NORMAL. UNIMPAIRED FLOW DURING JANUARY RANGED FROM ABOUT 10 PERCENT OF NORMAL IN THE SOUTH COASTAL AREA TO ABOUT 190 PERCENT OF NORMAL IN THE LAHONTAN AND CENTRAL COASTAL AREAS. THE USUAL JANUARY STORMS DID NOT MATERIALIZE IN THE NORTH COASTAL AREA, AND CONSEQUENTLY, RUNOFF FOR THE MONTH IN THIS AREA WAS LESS THAN 50 PERCENT OF AVERAGE.

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 1963 (Inches)	Snowpack Water Content 1962 (Inches)	April 1 Average (Inches)
Middle Boulder #1	Scott River	6600	1-28	6.3	2.4	13.6	32.9
Mount Shasta	Sacramento River	7900	1-29	25.8	10.6	20.2	49.4
Upper Lassen Peak	Feather River	8480	1-29	45.0	25.7	29.7	79.0
Donner Summit	Yuba River	6900	Data unavailable at this time				39.6
Echo Summit	American River	7450	2-4	18.0	7.1	15.9	38.9
Snow Flat	Tuolumne River	8700	Data unavailable at this time				42.8
Kaiser Pass	San Joaquin River	9200	Data unavailable at this time				38.2
Round Meadow	Kern River	9000	Data unavailable at this time				26.3
Virginia Lakes	Walker River	9500	1-28	2.0	.4	8.7	17.0
East Piute Pass	Owens River	10800	Data unavailable at this time				11.6

1B - Precipitation Data For Selected Key Stations

Station	Hydrographic Area	Elevation (Feet)	Precipitation in Inches: January 1963	January Average	Oct. 1 - Jan. 31 1962-63	Oct. 1 - Jan. 31 Average	Average Annual
Fort Bragg	North Coastal	80	2.79	7.67	16.77	21.48	37.44
Redwood City	San Francisco Bay	31	4.46	4.49	14.00	11.01	19.87
Santa Maria WBAP	Central Coastal	238	1.03	3.24	1.79	6.99	13.42
Mount Shasta City	Central Valley	3544	4.38	6.10	20.71	17.62	33.53
Bucks Lake		5100	13.95	13.81	45.70	36.21	68.72
Salt Springs		3700	9.71	8.62	20.16	22.18	43.69
Huntington Lake		7020	9.41	6.04	12.21	15.30	31.13
Grant Grove		6580	10.07	8.45	12.01	21.71	43.12
Red Bluff		341	3.49	3.78	11.58	10.67	19.41
Sacramento		25	2.68	3.87	11.67	9.81	18.05
Fresno		331	2.16	1.90	3.40	4.84	9.53
Doyle	Lahontan	4240	5.16	1.71	12.09	4.85	9.44
Tahoe		6228	5.73	6.47	20.01	16.40	30.65
Bishop		4108	3.22	1.44	3.22	3.34	6.30
Los Angeles	South Coastal	312	.52	3.23	.64	7.48	14.79
San Diego		19	.11	2.37	.35	6.18	12.12
Cuyamaca		4650	1.06	6.83	1.62	17.43	38.84
Twentynine Palms	Colorado Desert	1975	.51	.86	1.76	2.25	4.64

NORTH COASTAL AREA

PRECIPITATION - IN THE NORTH COASTAL AREA, PRECIPITATION WAS ABOUT NORMAL FOR THE PERIOD OCTOBER 1 THROUGH JANUARY 31. IT VARIED FROM 205 PERCENT OF NORMAL AT GAZELLE 4NNW IN SHASTA VALLEY TO 78 PERCENT OF NORMAL AT FORT BRAGG IN THE RUSSIAN RIVER DRAINAGE BASIN. HONEYDEW 2WSW IN THE MATTOLE RIVER DRAINAGE BASIN, THE WETTEST PLACE IN THE STATE, REPORTED THE STATE-WIDE HIGH OF 53.84 INCHES FOR THE FIRST QUARTER OF THE 1962-63 WATER YEAR. FOR THE MONTH OF JANUARY, PRECIPITATION VARIED FROM 16 PERCENT OF NORMAL AT EUREKA TO 125 PERCENT OF NORMAL AT HEALDSBURG. ALL OF THE AREA WAS MUCH BELOW NORMAL FOR THE MONTH EXCEPT FOR A VERY SMALL PART OF SONOMA AND MARIN COUNTIES.

SNOWPACK - MEASUREMENTS OBTAINED ABOUT FEBRUARY 1 AT FIVE SNOW COURSES IN THIS AREA INDICATED THAT SNOWPACK WATER CONTENT WAS ONLY 23 PERCENT OF AVERAGE FOR THAT DATE. ELEVATION OF THE EFFECTIVE SNOW LINE WAS ABOUT 6,500 FEET. LAST YEAR AT THIS TIME, SNOWPACK WATER CONTENT WAS 65 PERCENT OF THE FEBRUARY 1 AVERAGE, AND THE SNOWLINE WAS APPROXIMATELY 3,000 FEET. THE OREGON COOPERATIVE SNOW SURVEYS REPORTS THAT FURTHER NORTH, IN THE KLAMATH RIVER BASIN IN OREGON, SNOWPACK ON FEBRUARY 1 WAS THE LOWEST OF THE PAST 35 YEARS, WITH 22 PERCENT OF NORMAL.

RESERVOIR STORAGE - ON FEBRUARY 1, THE SEVEN MAJOR RESERVOIRS IN THIS AREA HAD ABOUT 2,800,000 ACRE-FEET OF WATER IN STORAGE. THIS IS 72 PERCENT OF TOTAL CAPACITY AND OVER 1,300,000 ACRE-FEET MORE THAN WAS IN STORAGE LAST YEAR AT THIS TIME. THE INCREASE IS DUE TO STORAGE IN THE COMPARATIVELY NEW TRINITY RESERVOIR WHICH INCREASED ITS CONTENTS BY 1,130,000 ACRE-FEET SINCE FEBRUARY 1, 1962. THE FIVE RESERVOIRS IN THIS AREA THAT HAVE BEEN IN OPERATION MORE THAN 10 YEARS HAD ABOUT 80 PERCENT OF THEIR 10-YEAR AVERAGE FEBRUARY 1 CONTENT, A PERCENTAGE INCREASE OF 30 PERCENT SINCE ONE YEAR AGO.

STREAMFLOW - THE UNIMPAIRED RUNOFF OF STREAMS IN THIS AREA SINCE OCTOBER 1, 1962, HAS BEEN ABOUT 120 PERCENT OF AVERAGE, AS COMPARED TO 45 PERCENT OF AVERAGE DURING THE SAME PERIOD LAST YEAR. HOWEVER, JANUARY 1963 RUNOFF WAS ONLY 45 PERCENT OF AVERAGE, JUST SLIGHTLY GREATER THAN THAT WHICH OCCURRED DURING JANUARY OF LAST YEAR.

FORECASTS - FEBRUARY 1, 1963

CONDITIONS AT THIS TIME INDICATE THAT RUNOFF OF THE NORTH COASTAL AREA DURING THE 1962-63 WATER YEAR WILL BE ABOUT 90 PERCENT OF AVERAGE, WHICH IS SOMEWHAT MORE THAN THE 80 PERCENT OF AVERAGE FORECAST MADE ON FEBRUARY 1 OF LAST YEAR. THIS FORECAST IS PREDICATED ON THE ASSUMPTION THAT NORMAL PRECIPITATION WILL FOLLOW. APRIL-JULY RUNOFF OF THE TRINITY RIVER AT LEWISTON IS FORECAST TO BE ABOUT 360,000 ACRE-FEET, WHICH IS 56 PERCENT OF THE AVERAGE RUNOFF AT THIS STATION.

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 305,000 ACRE-FEET, OR 59 PERCENT OF THE 1943-57 AVERAGE.

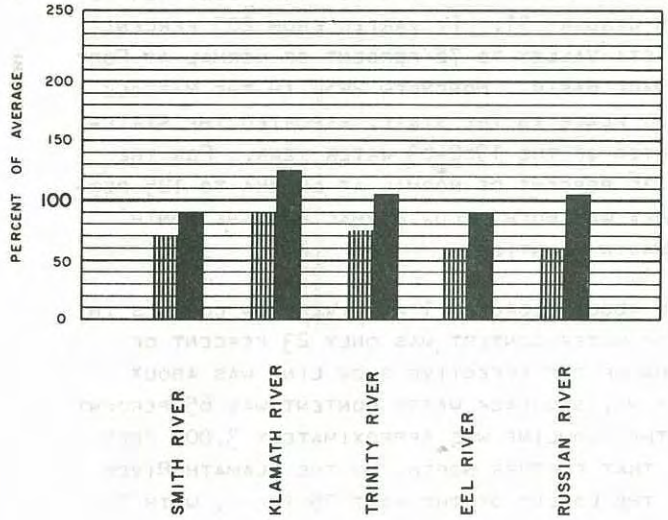
IMPACT

THE NORTH COASTAL AREA IS ALWAYS A PARADOX OF SURPLUSES AND SHORTAGES. SPECIFIC LOCALITIES IN THIS AREA MAY HAVE EARLY SEASON FLOODS AND BE WATER DEFICIENT SEVERAL MONTHS LATER BECAUSE ADEQUATE STORAGE HAS NOT YET BEEN DEVELOPED. THUS, WITH THE EXISTING WATER SUPPLY OUTLOOK, ALL AREAS SERVED BY STORAGE AND DISTRIBUTION SYSTEMS WILL HAVE MORE THAN ADEQUATE SUPPLIES. CONVERSELY, THERE WILL BE THE USUAL LATE-SEASON SHORTAGES WHERE STORED WATER IS NOT AVAILABLE.

NORTH COASTAL AREA

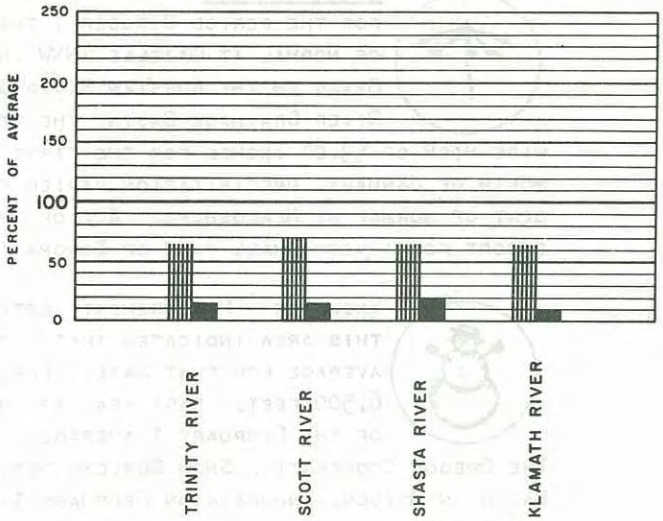
PRECIPITATION

SEASONAL PRECIPITATION
IN PERCENT OF AVERAGE TO DATE



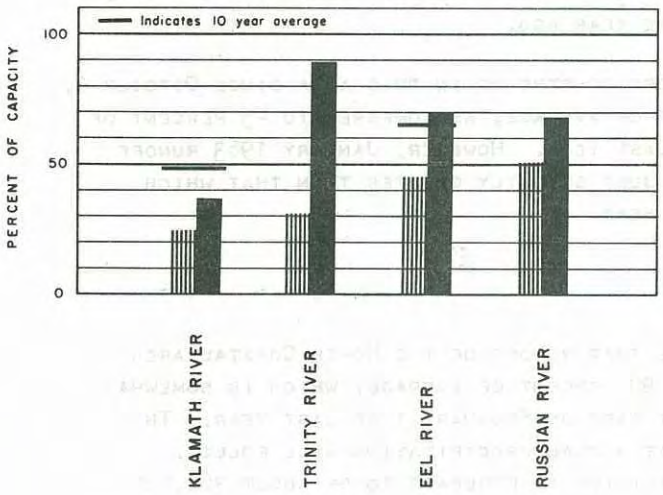
SNOWPACK

SNOWPACK WATER CONTENT
IN PERCENT OF AVERAGE TO DATE



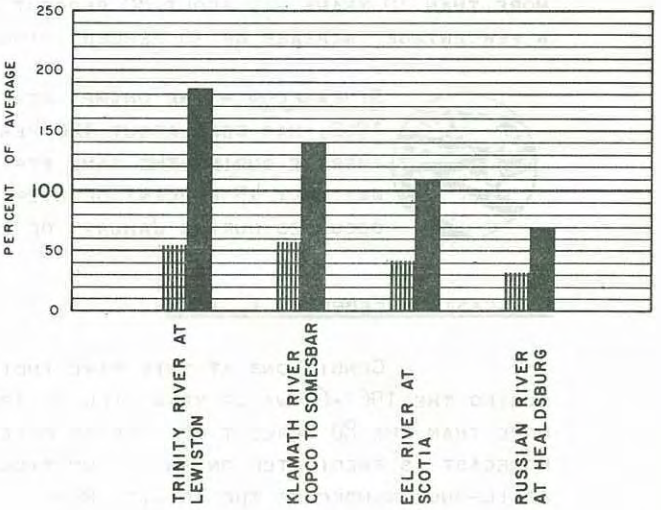
RESERVOIR STORAGE

CONTENTS OF MAJOR RESERVOIRS
IN PERCENT OF CAPACITY



STREAMFLOW

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

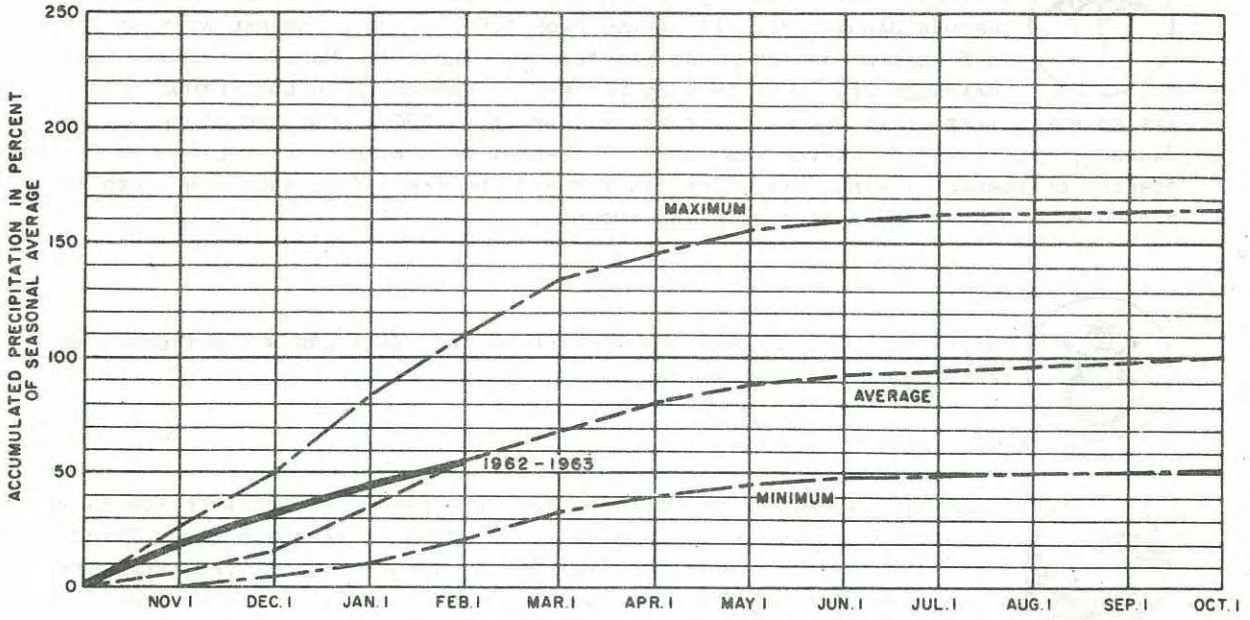


FEBRUARY 1, 1962
FEBRUARY 1, 1963

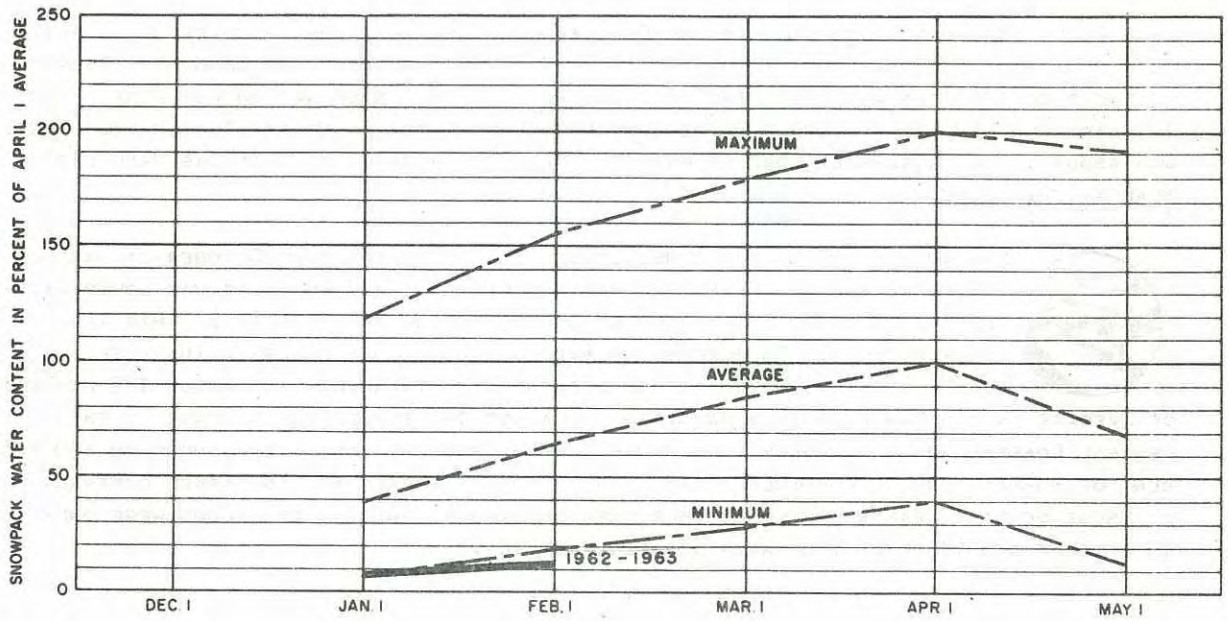
STATUS OF WATER SUPPLY

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 85 PERCENT OF NORMAL FOR THE PERIOD OCTOBER 1 THROUGH JANUARY 31. IT VARIED FROM 165 PERCENT OF NORMAL AT KING CITY TO 8 PERCENT OF NORMAL AT LOS ALAMOS. THE SANTA MARIA AND SANTA YNEZ DRAINAGES WERE LESS THAN 25 PERCENT OF NORMAL, WITH LOS ALAMOS RECORDING ITS FOURTH DRIEST FIRST QUATER SINCE RECORDS BEGAN IN 1909. FOR THE MONTH OF JANUARY, PRECIPITATION VARIED FROM ONLY 15 PERCENT OF NORMAL AT LOS ALAMOS TO 246 PERCENT OF NORMAL AT KING CITY. THE SANTA MARIA AND SANTA YNEZ AREA CONTINUED TO RECORD MUCH BELOW NORMAL PRECIPITATION AMOUNTS.

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

RESERVOIR STORAGE - REPORTS OF WATER IN STORAGE ARE RECEIVED FOR 14 MAJOR RESERVOIRS LOCATED ON STREAMS TRIBUTARY TO SAN FRANCISCO BAY. THESE RESERVOIRS HAD IN STORAGE ON FEBRUARY 1, 1963, ABOUT 320,200 ACRE-FEET. A MAJOR PORTION OF THIS WATER WAS IMPORTED FROM SIERRA WATERSHEDS. THIS TOTAL STORAGE IS ABOUT 120,000 ACRE-FEET MORE THAN THAT REPORTED FOR THESE RESERVOIRS ON FEBRUARY 1 OF LAST YEAR. HALF OF THE 14 RESERVOIRS WERE COMPLETELY FULL, AND TOTAL WATER IN STORAGE FOR ALL THE RESERVOIRS AMOUNTED TO 65 PERCENT OF THEIR AGGREGATE CAPACITY AND 98 PERCENT OF THE 10-YEAR AVERAGE FEBRUARY 1 CONTENTS. ALTHOUGH TOTAL WATER IN RESERVOIRS STORING ONLY LOCAL WATER AMOUNTED TO 56 PERCENT OF TOTAL CAPACITY AVAILABLE, THIS WATER IN STORAGE WAS ALSO EQUAL TO 98 PERCENT OF THE 10-YEAR AVERAGE FEBRUARY 1 SUPPLY.

THE SIX RESERVOIRS IN THE CENTRAL COASTAL AREA, FOR WHICH REPORTS ARE RECEIVED, HAD IN STORAGE ON FEBRUARY 1 ABOUT 369,000 ACRE-FEET, OR ABOUT 42 PERCENT OF THEIR COMBINED CAPACITIES. TWO OF THESE RESERVOIRS, IN OPERATION FOR MORE THAN 10 YEARS, HAD IN STORAGE ABOUT 98 PERCENT OF THEIR 10-YEAR FEBRUARY 1 AVERAGE. THERE WAS ABOUT 15,000 ACRE-FEET MORE STORAGE IN THESE TWO RESERVOIRS THAN WAS HELD LAST YEAR AT THIS TIME.

STREAMFLOW - FOR FOUR CONSECUTIVE YEARS, THE COMBINED OCTOBER-JANUARY RUNOFF IN THE SAN FRANCISCO BAY AND CENTRAL COASTAL AREAS WAS LOWER WITH RESPECT TO AVERAGE THAN IN ANY OTHER SECTION OF THE STATE. THIS YEAR, HOWEVER, ABOUT 135 PERCENT OF AVERAGE RUNOFF HAS OCCURRED IN THESE COASTAL REGIONS. CONSIDERED SEPARATELY, STREAMFLOW WAS ABOUT 125 PERCENT OF AVERAGE IN THE SAN FRANCISCO BAY AREA AND ABOUT 140 PERCENT OF AVERAGE IN THE CENTRAL COASTAL AREA. JANUARY RUNOFF WAS ALSO UNUSUALLY HIGH, AVERAGING OVER 150 PERCENT OF NORMAL FOR THE COMBINED AREAS. THESE RUNOFF TOTALS ARE IN MARKED CONTRACT TO THOSE OF LAST YEAR WHEN THE OCTOBER THROUGH JANUARY AND JANUARY FLOWS WERE ONLY 15 PERCENT AND 10 PERCENT OF AVERAGE, RESPECTIVELY.

SAN FRANCISCO BAY AND CENTRAL COASTAL AREAS

Forecasts - February 1, 1963

Conditions at this time indicate that runoff of the San Francisco Bay and Central Coastal areas during the 1962-63 water year will be about 100 percent of average. This forecast is predicated on the assumption that normal precipitation will follow. Last year at this time, a forecast was made that water year runoff would be only 35 percent of normal. However, late-season precipitation brought the actual water year flow up to 85 percent of normal.

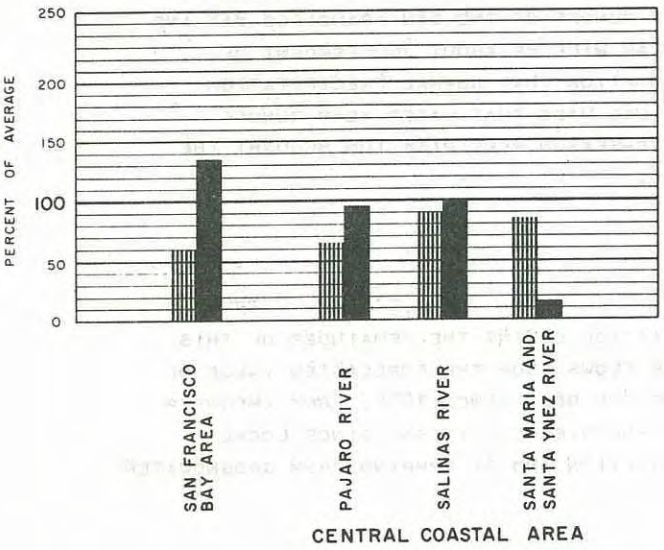
Impact

It should be noted that unless precipitation during the remainder of this season is so deficient as to significantly reduce flows from the forecasted value of 100 percent, seasonal runoff in this area will be the best since 1958. Any improvement in local runoff will be reflected in the groundwater condition, since local supplies in these areas are supplemented by importation and by pumping from groundwater.

SAN FRANCISCO BAY AND CENTRAL COASTAL AREAS

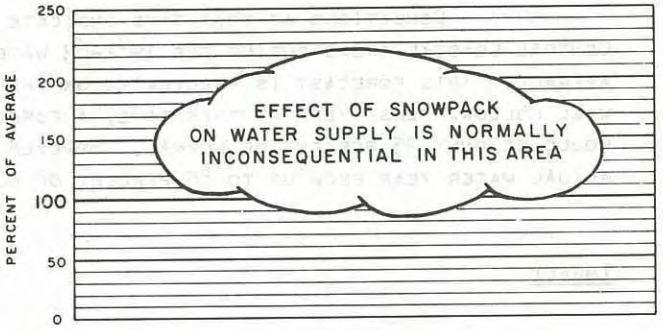
PRECIPITATION

SEASONAL PRECIPITATION
IN PERCENT OF AVERAGE TO DATE



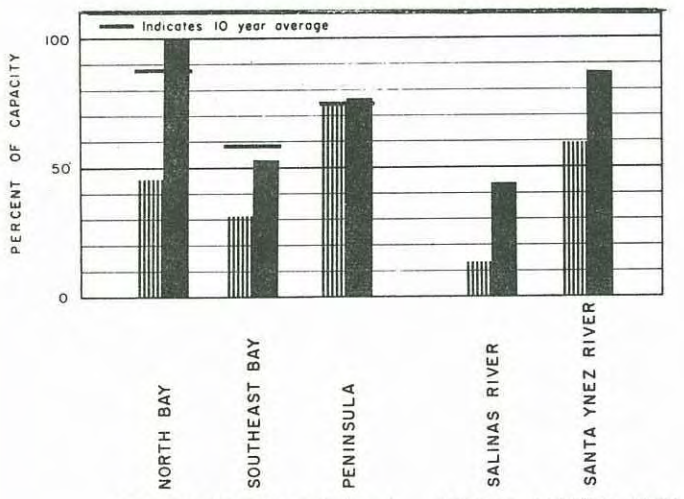
SNOWPACK

SNOWPACK WATER CONTENT
IN PERCENT OF AVERAGE TO DATE



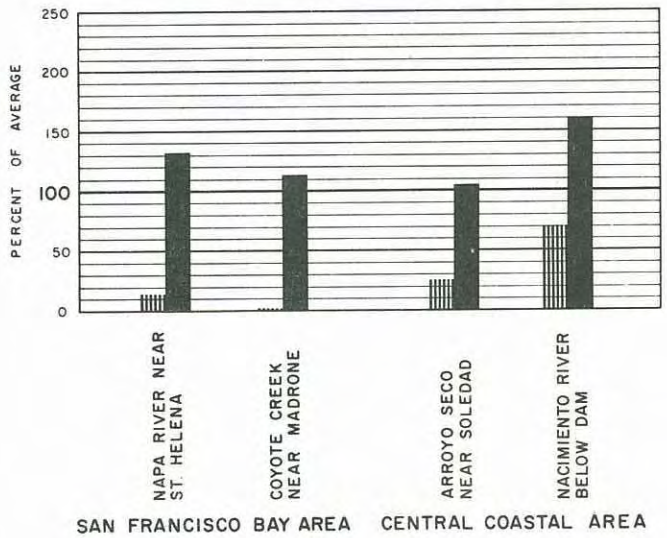
RESERVOIR STORAGE

CONTENTS OF MAJOR RESERVOIRS
IN PERCENT OF CAPACITY



STREAMFLOW

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

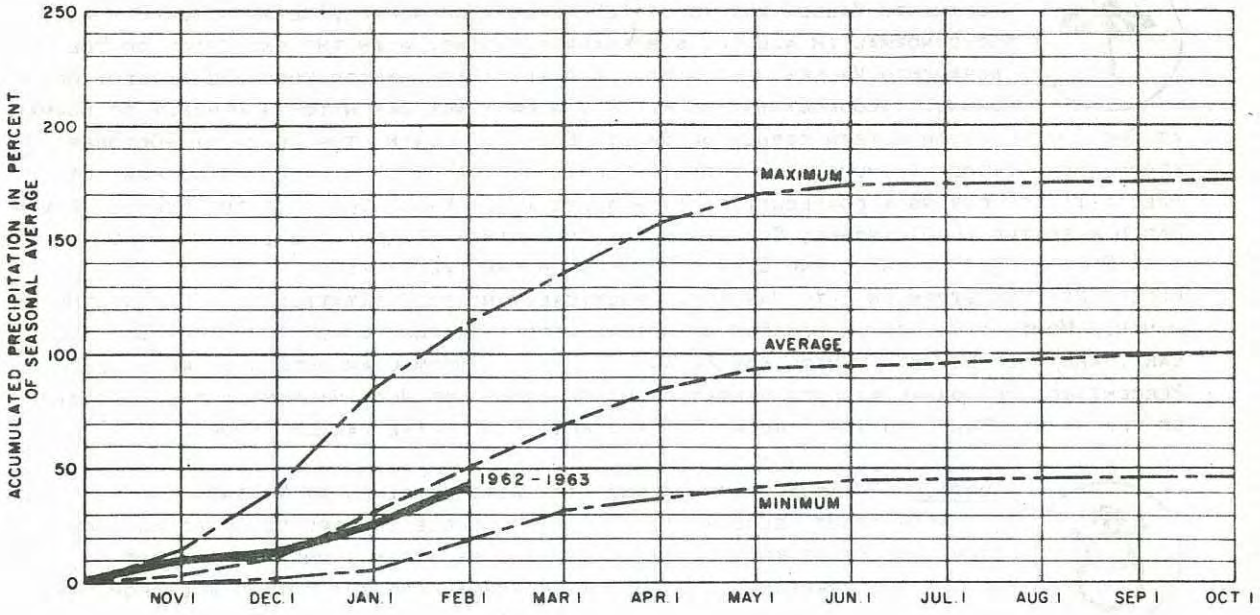


FEBRUARY 1, 1962
FEBRUARY 1, 1963

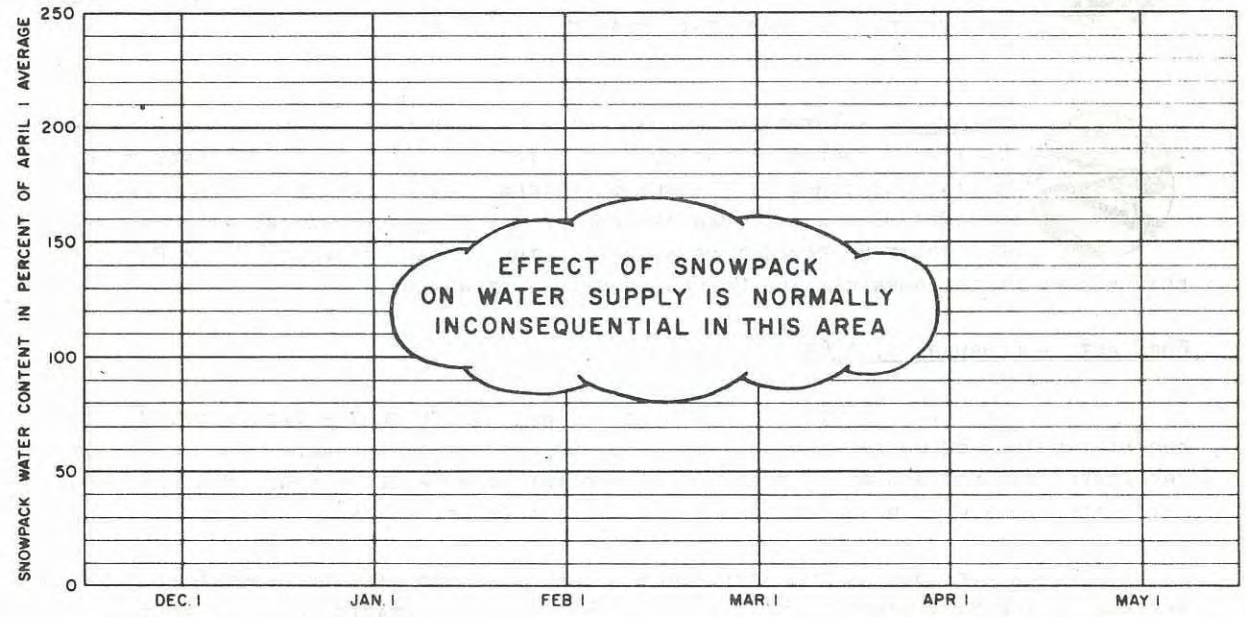
STATUS OF WATER SUPPLY

SAN FRANCISCO BAY AND CENTRAL COASTAL AREAS

PRECIPITATION



SNOWPACK ACCUMULATION



PRECIPITATION AND SNOWPACK ACCUMULATION

SACRAMENTO VALLEY
CENTRAL VALLEY AREA

PRECIPITATION - OCTOBER 1 THROUGH JANUARY 31 PRECIPITATION OVER THE SACRAMENTO VALLEY WAS ABOUT 125 PERCENT OF NORMAL, BEING GENERALLY WELL ABOVE NORMAL IN ALL THE SUBDRAINAGE BASINS, WITH THE EXCEPTION OF THE SACRAMENTO VALLEY WEST SIDE. PRECIPITATION RANGED FROM 218 PERCENT OF NORMAL AT LOOKOUT IN THE PIT RIVER DRAINAGE BASIN TO 83 PERCENT OF NORMAL AT ONO IN THE SOUTHWESTERN CORNER OF SHASTA COUNTY. DURING THE HEAVY MID-OCTOBER STORM, NEW RECORD MAXIMUMS WERE ESTABLISHED IN SEVERAL SUBDRAINAGE BASINS FOR TOTAL PRECIPITATION DURING A CONSECUTIVE FIVE-DAY PERIOD. BRUSH CREEK IN THE FEATHER RIVER BASIN REPORTED 26.01 INCHES; COLFAX IN THE AMERICAN - 21.36 INCHES; DOWNIEVILLE IN THE YUBA-BEAR - 23.77 INCHES; AND CITRUS HEIGHTS ON THE VALLEY FLOOR - 9.06 INCHES. EXCEPT FOR THE STORM IN LATE JANUARY, PRACTICALLY NO PRECIPITATION FELL DURING THE MONTH. MONTHLY VALUES IN PERCENT OF NORMAL WERE THEREFORE LOW, EXCEPT FOR COLUSA, LAKE, AND YOLO COUNTIES WHERE NORMAL AND WELL ABOVE NORMAL AMOUNTS WERE RECORDED. PERCENTAGES OF NORMAL AMOUNTS RANGED FROM 28 PERCENT AT JESS VALLEY ON THE WEST SIDE OF THE WARNER RANGE TO 164 PERCENT AT ARBUCKLE 5SSW ON THE VALLEY FLOOR.

SNOWPACK - MEASUREMENTS OF SNOWPACK WERE OBTAINED AT 44 SNOW COURSES IN THIS AREA ABOUT FEBRUARY 1. THIRTY OF THESE COURSES REPORTED NO SNOW. WATER CONTENT AT THE REMAINING 14 COURSES AVERAGE ONLY 25 PERCENT OF NORMAL. THIS REPRESENTS 15 PERCENT OF NORMAL FOR THE ENTIRE AREA FOR THE SEASON TO DATE AND 10 PERCENT OF THE APRIL 1 AVERAGE. ELEVATION OF THE EFFECTIVE SNOW LINE WAS 7,000 FEET. LAST YEAR AT THIS TIME, SNOWPACK WATER CONTENT WAS 70 PERCENT OF THE FEBRUARY AVERAGE, AND THE AVERAGE SNOW LINE WAS 4,000 FEET.

RESERVOIR STORAGE - TWENTY-SIX MAJOR RESERVOIRS IN THIS AREA HAD IN STORAGE ON FEBRUARY 1 A TOTAL OF ABOUT 6,533,000 ACRE-FEET OF WATER, WHICH IS ABOUT 68 PERCENT OF THEIR COMBINED USABLE CAPACITY. THIS IS 105 PERCENT OF AVERAGE FOR THIS DATE. SHASTA RESERVOIR HAD ABOUT 475,000 ACRE-FEET MORE WATER IN STORAGE THIS YEAR THAN ON FEBRUARY 1, 1962.

STREAMFLOW - TOTAL RUNOFF FROM SACRAMENTO VALLEY WATERSHEDS DURING THE FIRST FOUR MONTHS OF THE CURRENT WATER YEAR WAS ABOUT 150 PERCENT OF AVERAGE, AS COMPARED TO ONLY 60 PERCENT FOR THE CORRESPONDING PERIOD OF THE 1961-62 SEASON. JANUARY RUNOFF WAS 75 PERCENT OF AVERAGE, RANGING FROM ABOUT 55 PERCENT OF NORMAL IN THE UPPER SACRAMENTO RIVER BASIN TO NEAR NORMAL IN THE AMERICAN AND MOKELUMNE RIVER WATERSHEDS.

FORECASTS - FEBRUARY 1, 1963

CONDITIONS AT THIS TIME INDICATE THAT RUNOFF OF THE SACRAMENTO VALLEY DURING THE 1962-63 WATER YEAR WILL BE ABOUT 90 PERCENT OF AVERAGE. THIS FORECAST IS PREDICATED ON THE ASSUMPTION THAT NORMAL PRECIPITATION WILL FOLLOW. RUNOFF DURING THIS WATER YEAR WILL BE ABOUT THE SAME IN THIS AREA AS IT WAS LAST YEAR.

RUNOFF DURING THE APRIL-JULY SNOWMELT PERIOD WILL BE ABOUT 65 PERCENT OF AVERAGE IN THE SACRAMENTO VALLEY, ASSUMING NORMAL PRECIPITATION FOR THE REST OF THE SEASON.

SACRAMENTO VALLEY
CENTRAL VALLEY AREA

IMPACT

CONSIDERING THE ANTICIPATED NEAR NORMAL WATER YEAR STREAMFLOW, AND THE EXCELLENT CONDITION OF STORAGE IN MAJOR CONSERVATION RESERVOIRS IN THIS AREA, THE EXPECTED LOW APRIL-JULY FLOW SHOULD NOT CAUSE ANY EXTENSIVE PROBLEMS IN THE SACRAMENTO VALLEY. ISOLATED LATE SEASON SHORTAGES OF WATER MAY OCCUR IN SPECIFIC LOCALITIES NOT SERVED BY STORED WATER.

THE FOLLOWING TABULATION SUMMARIZES RUNOFF FORECASTS FOR SACRAMENTO VALLEY STREAMS FOR BOTH THE WATER YEAR AND THE APRIL-JULY SNOWMELT 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.

SACRAMENTO VALLEY
STREAMFLOW FORECASTS

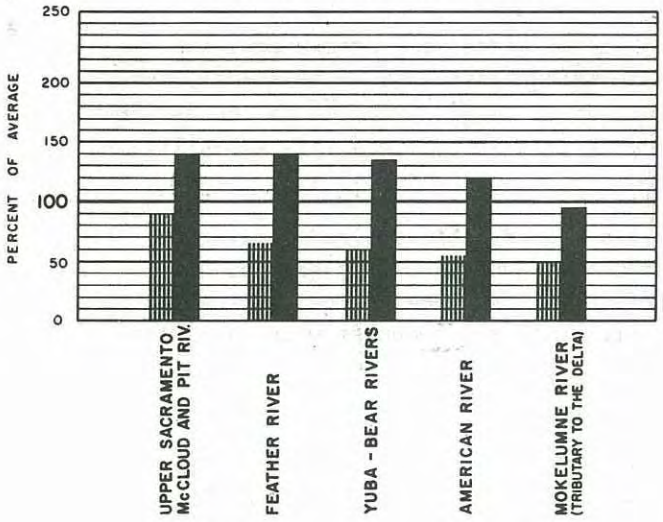
WATERSHED AND STATION	FEBRUARY 1, 1963, FORECASTS OF UNIMPAIRED RUNOFF				
	1962-63 WATER YEAR 1/		APRIL 1 - JULY 31 1/		APRIL 1-JULY 31 80% PROB. RANGE
	ACRE-FEET	% AVERAGE	ACRE-FEET	% AVERAGE	ACRE-FEET
SACRAMENTO, INFLOW TO SHASTA 2/	5,100,000	93	1,400,000	77	750,000 TO 2,230,000
SACRAMENTO AT RED BLUFF	7,100,000	89	1,800,000	72	900,000 TO 2,750,000
FEATHER NEAR OROVILLE	4,350,000	100	1,120,000	56	420,000 TO 2,320,000
YUBA AT SMARTVILLE	2,070,000	91	530,000	47	180,000 TO 1,200,000
BEAR NEAR WHEATLAND	-	-	50,000	70	-
AMERICAN, INFLOW TO FOLSOM	2,300,000	87	690,000	50	200,000 TO 1,600,000
COSUMNES AT MICHIGAN BAR	-	-	100,000	79	50,000 TO 220,000
MOKELUMNE, INFLOW TO PARDEE	490,000	68	265,000	55	130,000 TO 500,000

1/ ASSUMING NORMAL PRECIPITATION SUBSEQUENT TO FEBRUARY 1, 1963.
2/ NOT CORRECTED FOR UPSTREAM IMPAIRMENTS.

SACRAMENTO VALLEY
CENTRAL VALLEY AREA

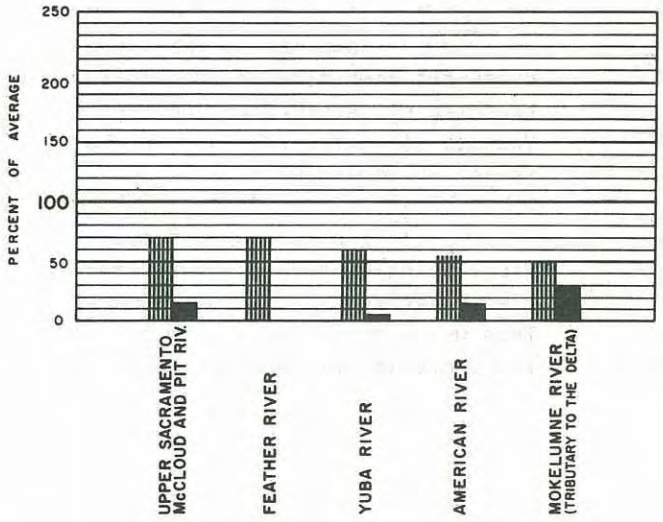
PRECIPITATION

SEASONAL PRECIPITATION
IN PERCENT OF AVERAGE TO DATE



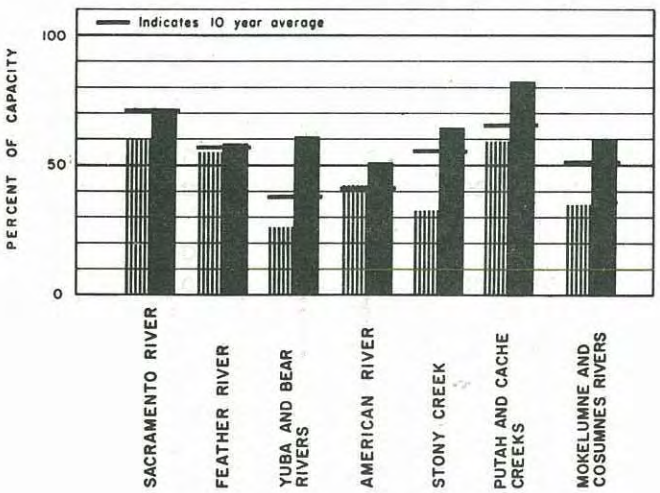
SNOWPACK

SNOWPACK WATER CONTENT
IN PERCENT OF AVERAGE TO DATE



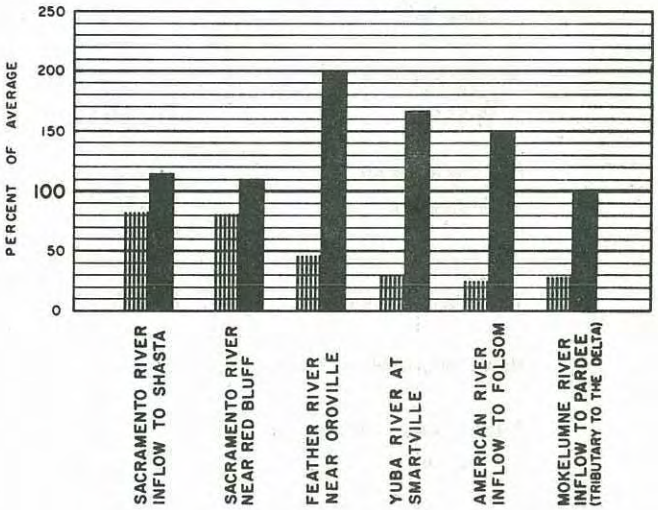
RESERVOIR STORAGE

CONTENTS OF MAJOR RESERVOIRS
IN PERCENT OF CAPACITY



STREAMFLOW

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

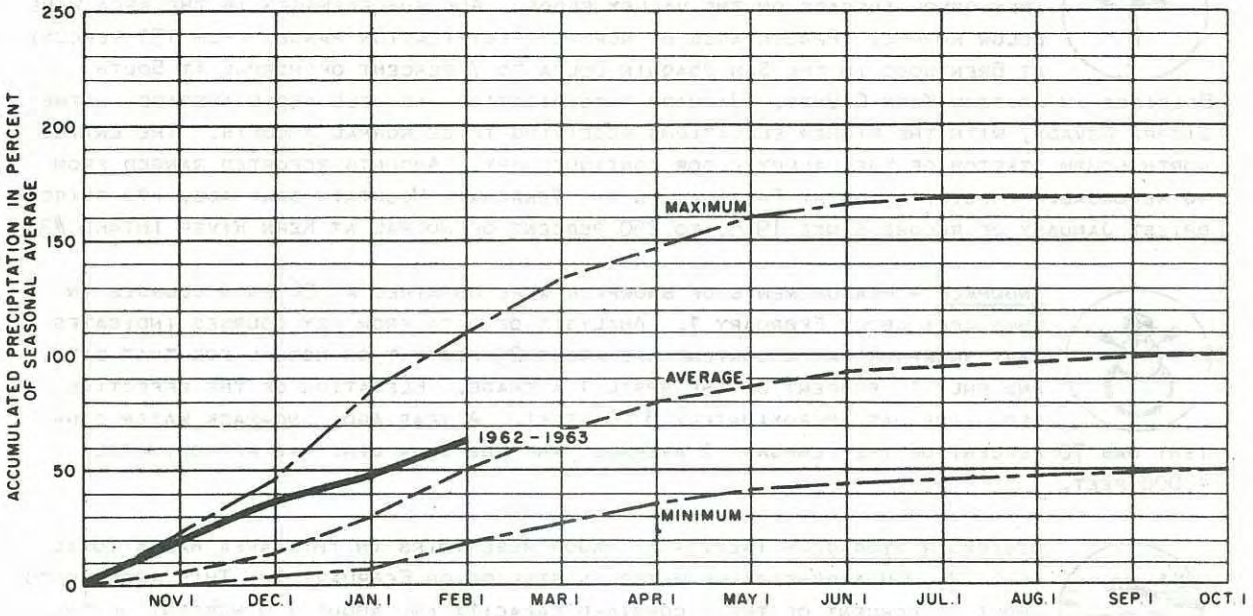


FEBRUARY 1, 1962
FEBRUARY 1, 1963

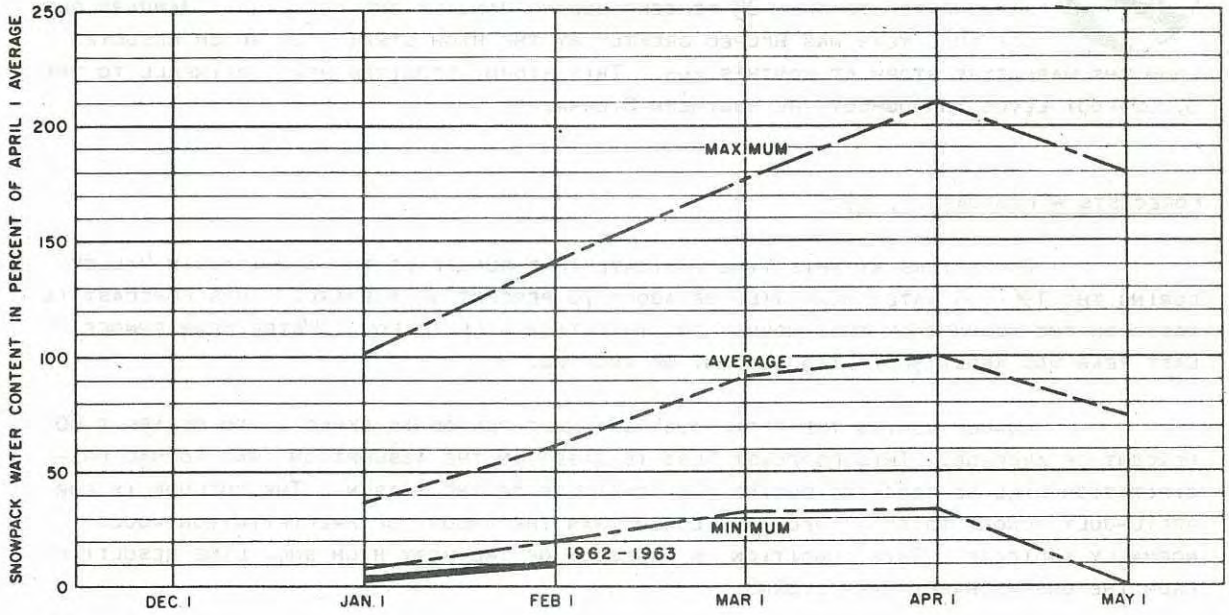
STATUS OF WATER SUPPLY

SACRAMENTO VALLEY
CENTRAL VALLEY AREA

PRECIPITATION



SNOWPACK ACCUMULATION



PRECIPITATION AND SNOWPACK ACCUMULATION

SAN JOAQUIN VALLEY
CENTRAL VALLEY AREA

PRECIPITATION - PRECIPITATION FROM OCTOBER 1 THROUGH JANUARY WAS ABOUT 75 PERCENT OF NORMAL, BEING NEAR AVERAGE IN THE SIERRA NEVADA, BUT CONSIDERABLY BELOW AVERAGE ON THE VALLEY FLOOR. ALL SUBDRAINAGES IN THE AREA WERE BELOW NORMAL. PERCENTAGES OF NORMAL PRECIPITATION RANGED FROM 151 PERCENT AT BRENTWOOD IN THE SAN JOAQUIN DELTA TO 7 PERCENT OF NORMAL AT SOUTH BELRIDGE IN WESTERN KERN COUNTY. JANUARY PRECIPITATION WAS WELL ABOVE AVERAGE IN THE SIERRA NEVADA, WITH THE HIGHER ELEVATIONS RECEIVING TWICE NORMAL AMOUNTS. THE ENTIRE NORTH-SOUTH STRETCH OF THE VALLEY FLOOR CONTINUED DRY. AMOUNTS REPORTED RANGED FROM NO RECORDABLE PRECIPITATION AT PATTIWAY IN THE TEHACHAPI MOUNTAIN DRAINAGE, ITS THIRD DRIEST JANUARY OF RECORD SINCE 1915, TO 250 PERCENT OF NORMAL AT KERN RIVER INTAKE #3.

SNOWPACK - MEASUREMENTS OF SNOWPACK WERE OBTAINED AT 26 SNOW COURSES IN THIS AREA ABOUT FEBRUARY 1. ANALYSIS OF DATA FROM KEY COURSES INDICATES THAT SNOWPACK WATER CONTENT WAS ABOUT 25 PERCENT OF NORMAL FOR THAT DATE, AND ONLY 15 PERCENT OF THE APRIL 1 AVERAGE. ELEVATION OF THE EFFECTIVE SNOW LINE WAS APPROXIMATELY 8,000 FEET. A YEAR AGO, SNOWPACK WATER CONTENT WAS 70 PERCENT OF THE FEBRUARY 1 AVERAGE, AND THE SNOW LINE WAS APPROXIMATELY 4,000 FEET.

RESERVOIR STORAGE - TWENTY-SIX MAJOR RESERVOIRS IN THIS AREA HAD A TOTAL OF 1,735,000 ACRE-FEET OF WATER IN STORAGE ON FEBRUARY 1. THIS REPRESENTS ABOUT 36 PERCENT OF THEIR COMBINED CAPACITY AND ABOUT 110 PERCENT OF THEIR 10-YEAR AVERAGE FEBRUARY 1 WATER SUPPLY. THERE HAS BEEN AN INCREASE IN STORED WATER OF ABOUT 1,000,000 ACRE-FEET DURING THE PAST YEAR.

STREAMFLOW - THE COMBINED RUNOFF FROM SAN JOAQUIN VALLEY STREAMS DURING OCTOBER THROUGH JANUARY PERIOD WAS 60 PERCENT OF NORMAL--ABOUT TWICE THAT FOR THE SAME PERIOD LAST YEAR. JANUARY RUNOFF WAS 85 PERCENT OF NORMAL, AS COMPARED TO ONLY 25 PERCENT DURING JANUARY ONE YEAR AGO. JANUARY RUNOFF THIS YEAR WAS HELPED GREATLY BY THE HIGH STREAMFLOW WHICH RESULTED FROM THE WARM TYPE STORM AT MONTH'S END. THIS STORM DEPOSITED HEAVY RAINFALL TO THE 8,000-FOOT LEVEL THROUGHOUT THE SOUTHERN SIERRA.

FORECASTS - FEBRUARY 1, 1963

CONDITIONS AT THIS TIME INDICATE THAT RUNOFF OF THE SAN JOAQUIN VALLEY DURING THE 1962-63 WATER YEAR WILL BE ABOUT 70 PERCENT OF AVERAGE. THIS FORECAST IS BASED ON THE ASSUMPTION THAT NORMAL PRECIPITATION WILL FOLLOW. WATER YEAR RUNOFF LAST YEAR WAS ABOUT 90 TO 115 PERCENT OF AVERAGE.

RUNOFF DURING THE APRIL-JULY SNOWMELT PERIOD IS EXPECTED TO BE ABOUT 60 PERCENT OF AVERAGE. THIS FORECAST ALSO IS BASED ON THE ASSUMPTION THAT NORMAL PRECIPITATION WILL BE RECEIVED DURING THE REMAINDER OF THE SEASON. THE OUTLOOK IS FOR APRIL-JULY RUNOFF TO BE APPRECIABLY LOWER THAN THE AMOUNT OF PRECIPITATION WOULD NORMALLY INDICATE. THIS CONDITION IS A RESULT OF THE VERY HIGH SNOW LINE RESULTING FROM THE UNSEASONABLY WARM STORMS.

SAN JOAQUIN VALLEY
CENTRAL VALLEY AREA

Impact

This year the San Joaquin Valley area, particularly, will be a region where the anticipated supplies will have widely varying effects. A dominant factor with respect to evaluation of San Joaquin supplies this season is the deficient April-July runoff indicated by present conditions. Reservoir storage, the defense against low late-season flows, is excellent on the Stanislaus River and good on the Tuolumne. Areas served by these streams should experience no shortages this season. Storage on streams to the south is fair to good, with the more southerly streams, such as the Kern, having less of a "hedge" against low summer flows. Shortages in these areas and areas of the valley not served by stored water will necessarily supplement surface supplies by pumping from groundwater. Unless conditions become significantly worse, however, activities and operations which depend on water will not be materially changed.

The following tabulation summarizes runoff forecasts for San Joaquin Valley streams for both the water year and the April-July snowmelt 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.

SAN JOAQUIN VALLEY
STREAMFLOW FORECASTS

Watershed and Station	February 1, 1963, Forecasts of Unimpaired Runoff				
	1962-63 Water Year 1/		April 1 - July 31 1/		April 1-July 31 80% Prob. Range
	Acre-Feet	% Average	Acre-Feet	% Average	Acre-Feet
Stanislaus, inflow to Melones	700,000	63	440,000	59	220,000 to 800,000
Tuolumne, inflow to Don Pedro	1,130,000	63	700,000	57	350,000 to 1,250,000
Merced, inflow to Exchequer	590,000	63	330,000	53	150,000 to 630,000
San Joaquin, inflow to Friant	1,200,000	70	740,000	60	350,000 to 1,300,000
Kings, inflow to Pine Flat	1,155,000	72	760,000	64	320,000 to 1,290,000
Kaweah near Three Rivers 2/	270,000	68	150,000	56	50,000 to 300,000
Tule, inflow to Success	61,000	46	20,000	34	5,000 to 65,000
Kern near Bakersfield	475,000	69	250,000	56	80,000 to 570,000

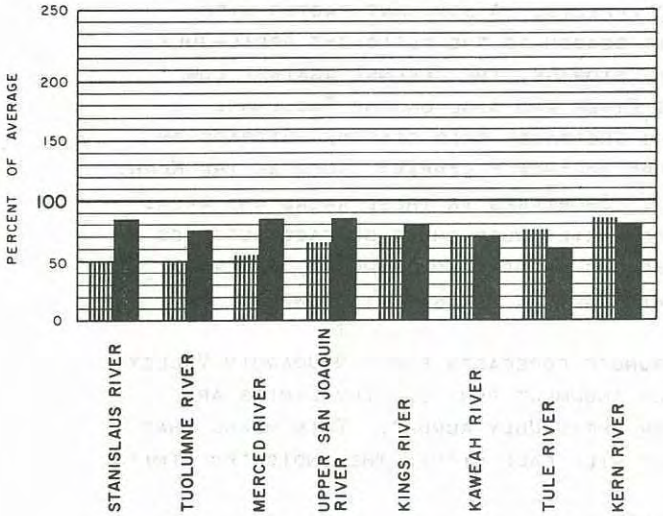
1/ Assuming normal precipitation subsequent to February 1, 1963.

2/ Not corrected for upstream impairments.

SAN JOAQUIN VALLEY
CENTRAL VALLEY AREA

PRECIPITATION

SEASONAL PRECIPITATION
IN PERCENT OF AVERAGE TO DATE



SNOWPACK

SNOWPACK WATER CONTENT
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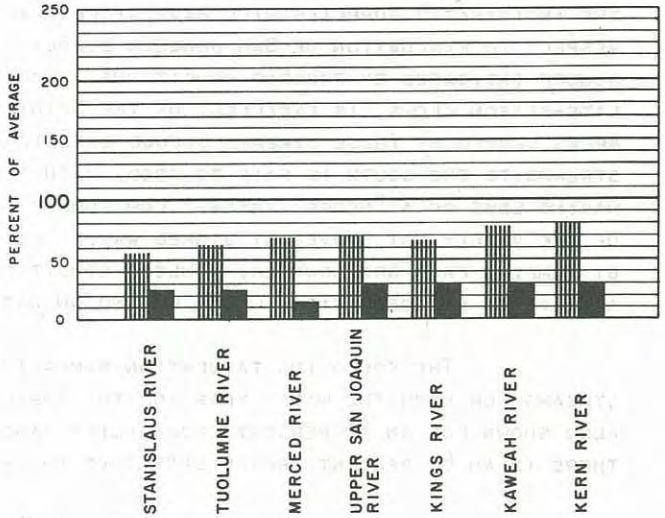
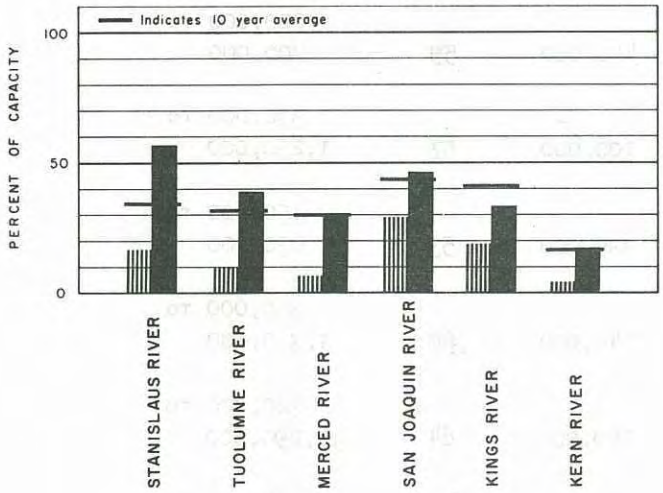


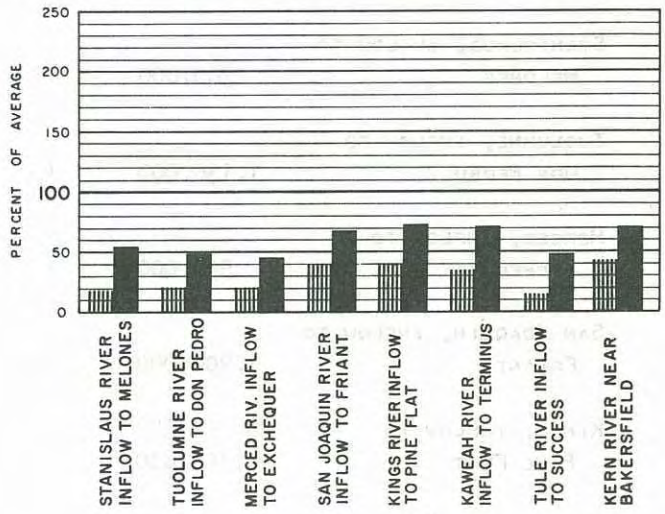
RESERVOIR STORAGE

CONTENTS OF MAJOR RESERVOIRS
IN PERCENT OF CAPACITY



STREAMFLOW

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

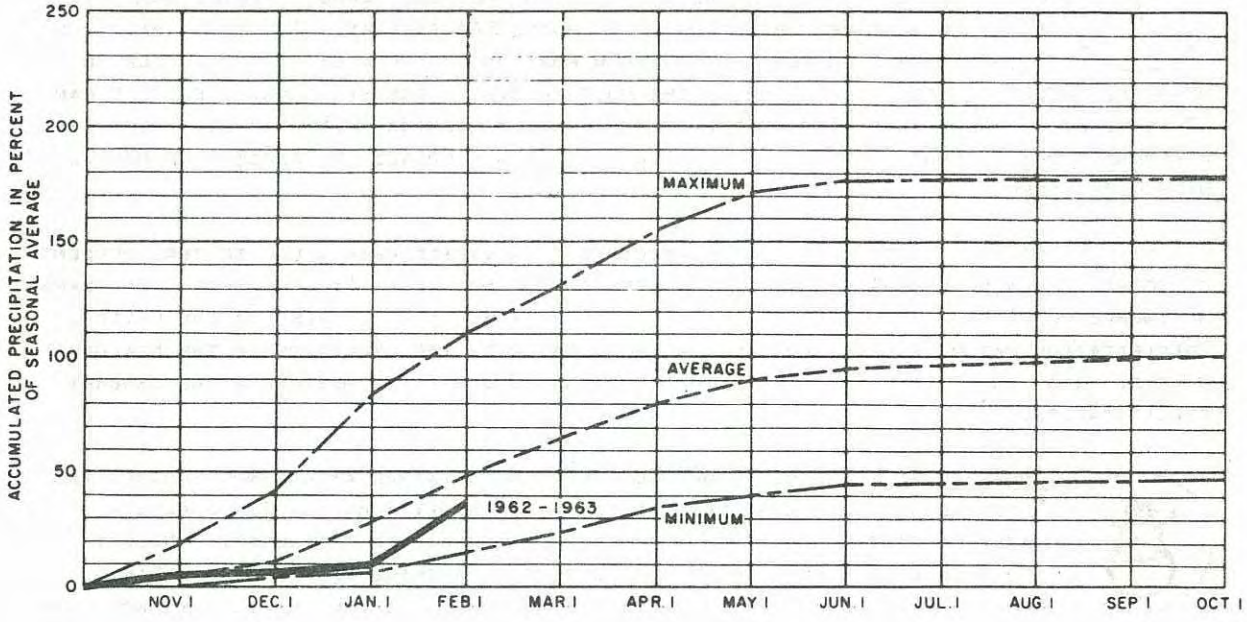


FEBRUARY 1, 1962
FEBRUARY 1, 1963

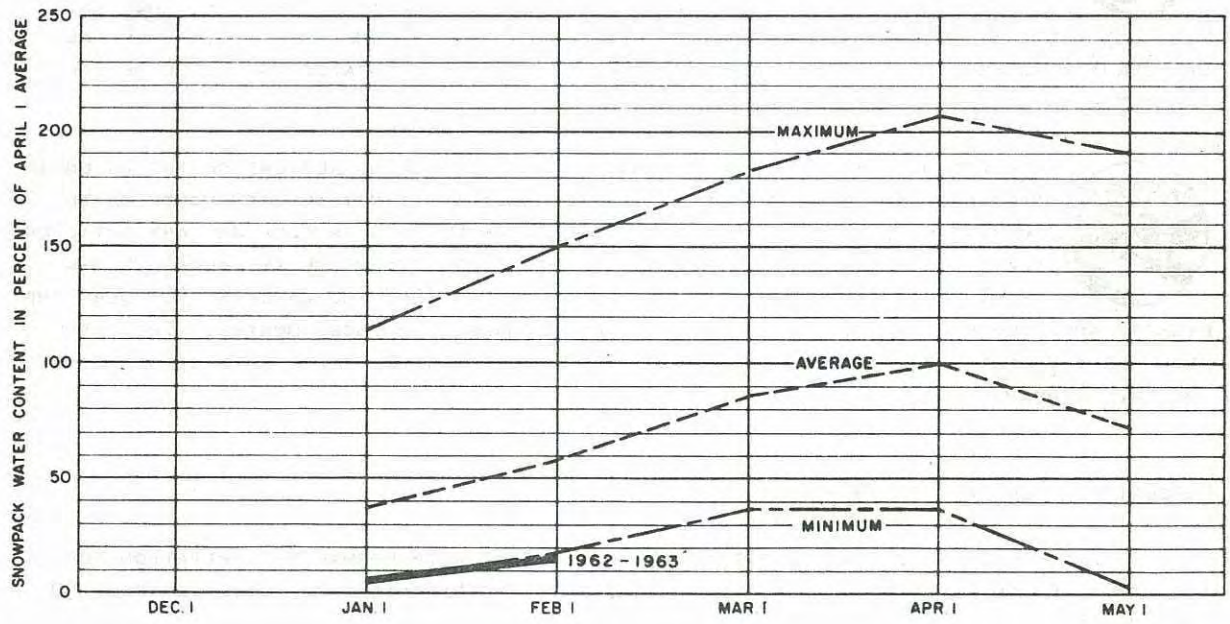
STATUS OF WATER SUPPLY

SAN JOAQUIN VALLEY
CENTRAL VALLEY AREA

PRECIPITATION



SNOWPACK ACCUMULATION



PRECIPITATION AND SNOWPACK ACCUMULATION

LAHONTAN AREA

PRECIPITATION - IN THE LAHONTAN AREA, PRECIPITATION WAS 120 PERCENT OF NORMAL FOR THE PERIOD OCTOBER 1 THROUGH JANUARY 31. IT VARIED WIDELY FROM 249 PERCENT OF NORMAL AT DOYLE IN THE HONEY LAKE DRAINAGE BASIN TO NO RECORDABLE PRECIPITATION AT PALMDALE FAA AIRPORT. THE HEAVY RAINS IN MID-OCTOBER DRENCHED THE NORTHERN PORTION OF THE AREA. CEDARVILLE IN SURPRISE VALLEY REPORTED 6.86 INCHES, THE MOST PRECIPITATION SINCE THIS RECORD BEGAN 67 YEARS AGO. SUSANVILLE AIRPORT REGISTERED A GULLY-WASHING 12.26 INCHES, WHICH WAS A RECORD 2,043 PERCENT OF THEIR OCTOBER NORMAL. TAHOE LOGGED 545 PERCENT OF NORMAL, WITH 8.34 INCHES.

FOR THE MONTH OF JANUARY, PRECIPITATION VARIED FROM A LOW OF ZERO PERCENT OF NORMAL AT PALMDALE FAA AIRPORT TO 526 PERCENT OF NORMAL AT INDEPENDENCE. IN TERMS OF INCHES OF WATER, THIS WAS A TRACE FOR THE FORMER AND 5.31 INCHES FOR THE LATTER. PRECIPITATION WAS MUCH BELOW NORMAL FOR THE AREA, WITH THE EXCEPTION OF THE HERLONG, WALKER, MONO, AND OWENS DRAINAGES. THESE DRAINAGES BENEFITED MOST FROM THE JANUARY PRECIPITATION.

SNOWPACK - MEASUREMENTS OF SNOWPACK WERE OBTAINED AT 23 SNOW COURSES AND 3 AERIAL SNOW DEPTH MARKERS IN THIS AREA ABOUT FEBRUARY 1. SNOWPACK WATER CONTENT RANGED FROM 5 PERCENT OF AVERAGE IN THE SURPRISE VALLEY AND TRUCKEE RIVER BASINS TO 30 PERCENT OF AVERAGE IN THE CARSON RIVER, WALKER RIVER, AND MONO LAKE BASINS. ELEVATION OF THE EFFECTIVE SNOW LINE WAS APPROXIMATELY 7,500 FEET. LAST YEAR AT THIS TIME, SNOWPACK WATER CONTENT WAS 60 PERCENT OF THE FEBRUARY 1 AVERAGE, AND THE SNOW LINE WAS APPROXIMATELY 5,000 FEET.

RESERVOIR STORAGE - TOTAL WATER IN STORAGE IN 10 MAJOR RESERVOIRS THROUGHOUT THIS AREA WAS 430,000 ACRE-FEET ON FEBRUARY 1, WHICH WAS ABOUT 65 PERCENT OF THE 10-YEAR AVERAGE AND 56 PERCENT OF THEIR TOTAL CAPACITY. THERE HAS BEEN AN INCREASE IN STORAGE OF APPROXIMATELY 270,000 ACRE-FEET SINCE FEBRUARY 1 OF LAST YEAR. THE WATER SURFACE ELEVATION OF LAKE TAHOE WAS 6,223.89 FEET ON FEBRUARY 1, AS COMPARED WITH 6,222.64 FEET ONE YEAR AGO. THUS, AS OF FEBRUARY 1, ALMOST 600,000 ACRE-FEET WOULD BE REQUIRED TO RAISE THE LEVEL OF LAKE TAHOE TO ITS MAXIMUM ALLOWABLE STAGE.

STREAMFLOW - RUNOFF FROM THE MAJOR WATER-PRODUCING REGIONS OF THE LAHONTAN AREA HAS RANGED FROM NEAR TO CONSIDERABLY ABOVE NORMAL EACH MONTH OF THE CURRENT WATER YEAR. THIS HAS PRODUCED AN OCTOBER THROUGH JANUARY TOTAL OF NEARLY 200 PERCENT OF AVERAGE FOR THE MAJOR STREAMS OF THE AREA. FLOWS IN THE TRUCKEE RIVER FOR THE MONTHS OF OCTOBER 1962 AND JANUARY 1963 WERE THE HIGHEST AND FOURTH HIGHEST, RESPECTIVELY, EVER RECORDED FOR THOSE MONTHS. THE TOTAL FLOW FOR THE SEASON TO DATE (ABOUT 136,000 ACRE-FEET) WAS THE THIRD HIGHEST OF RECORD FOR THIS STREAM.

FORECASTS - FEBRUARY 1, 1963

DATA RECEIVED AT THIS TIME INDICATES THAT WITH NORMAL PRECIPITATION FOR THE REMAINDER OF THE SEASON, WATER YEAR RUNOFF IN THE LAHONTAN AREA WILL BE ABOUT 90 PERCENT OF AVERAGE.

LAHONTAN AREA

The maximum rise of Lake Tahoe from April 1 is forecasted by the Department of Water Resources to be about 0.85 feet, assuming that the gates will remain closed.

The Nevada Cooperative Snow Surveys reported that the April-July flow on the West Walker River will be 65,000 acre-feet. This is 44 percent of the 1943-57 average.

The Department of Water and Power of the City of Los Angeles states that:

"No surveys have been made to date. On the basis of a few observations of precipitation and snow to February 2, 1963, water supply from the Eastern Sierra watershed into Owens Valley and Mono Basin will approximate normal or slightly below.

"It is estimated that flow of the Owens River below Long Valley Reservoir will be 50,000 acre-feet for the period April 1 to July 31, 1963."

Impact

The Lahontan area must be further divided to evaluate what effects indicated water supply conditions will have. In the northern portion of this area (such as the Surprise Valley region), storage is extremely limited and irrigation and other water-related operations are quite dependent upon natural stream flow. Thus, it might be expected that agriculture and other water-dependent activities will be adversely affected by the anticipated low late-season flows. In the central Lahontan area, Lake Tahoe and other storage reservoirs benefited greatly during the first few days of February from the runoff caused by the storm of late January; therefore, the expected low late-season flows will cause problems primarily only in areas not served by stored water. The southern end of the Lahontan area (primarily the Owens Valley) should experience no unusual water supply problems this year, since the City of Los Angeles forecasts that water supply from the eastern Sierra watershed into Owens Valley and Mono Basins will approximate normal or be slightly below.

SOUTH COASTAL AREA

PRECIPITATION - IN THE SOUTH COASTAL AREA, PRECIPITATION WAS ABOUT 10 PERCENT OF NORMAL FOR THE PERIOD OCTOBER 1 THROUGH JANUARY 31. DROUGHT CONDITIONS DOMINATED THE ENTIRE AREA IN ALL FOUR MONTHS OF THE FIRST QUARTER. SEASONAL PRECIPITATION VARIED FROM 22 PERCENT OF NORMAL AT SAN DIMAS DAM IN THE SAN GABRIEL RIVER DRAINAGE TO 2 PERCENT OF NORMAL AT SANTA ANA FIRE STATION. THE 0.10 INCH ACCUMULATED TOTAL AT SANTA ANA ESTABLISHED A RECORD 73-YEAR LOW. LOS ANGELES WITH A MEAGER 0.64 INCH, SECOND LOWEST IN 84 YEARS OF RECORD, EXCEEDED THE DRIEST FIRST QUARTER VALUE OF 0.14 INCH ESTABLISHED BACK IN 1903-04. SAN DIEGO REPORTED 0.35 INCH FOR ITS DRIEST FIRST QUARTER SINCE THE RECORD BEGAN IN 1850.

FOR THE MONTH OF JANUARY, PRECIPITATION VARIED FROM ONLY 1 PERCENT OF NORMAL AT DRY CANYON RESERVOIR IN THE UPPER SANTA CLARA RIVER DRAINAGE TO 43 PERCENT OF NORMAL AT SAN DIMAS DAM. THE INSIGNIFICANT 0.04 INCH AT DRY CANYON RESERVOIR WAS DRIER ONLY IN JANUARY 1948 WHEN A ZERO VALUE WAS RECORDED.

RESERVOIR STORAGE - TOTAL WATER IN STORAGE IN 19 MAJOR RESERVOIRS IN THIS AREA WAS 325,500 ACRE-FEET ON FEBRUARY 1. ALTHOUGH THIS IS ABOUT 130 PERCENT OF THE FEBRUARY 1 AVERAGE FOR THE LAST 10 YEARS, IT IS ONLY 24 PERCENT OF THEIR AGGREGATE CAPACITY. THE RESERVOIRS STORING COLORADO RIVER WATER, IMPORTED BY THE COLORADO AQUEDUCT, CONTAINED 66 PERCENT OF THE TOTAL AMOUNT OF WATER IN STORAGE IN THIS AREA. THE ELEVATION OF THE SURFACE OF THE SALTON SEA ON FEBRUARY 1, 1963, WAS 232.45 FEET BELOW SEA LEVEL. THIS IS 0.65 FOOT HIGHER THAN THE ELEVATION ON FEBRUARY 1, 1962, AND ALSO REPRESENTS A DROP OF 0.20 FOOT DURING THE MONTH OF JANUARY 1963.

STREAMFLOW - RUNOFF IN STREAMS IN THIS AREA DURING THE FIRST FOUR MONTHS OF THE 1962-63 WATER YEAR WAS ONLY 20 PERCENT OF AVERAGE, AS COMPARED TO 35 PERCENT FOR THE SAME PERIOD ONE YEAR AGO. STREAMFLOW DURING JANUARY 1963 WAS ONLY 10 PERCENT OF AVERAGE.

FORECASTS - FEBRUARY 1, 1963

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 50 PERCENT OF AVERAGE. LAST YEAR, RUNOFF WAS ABOVE AVERAGE NORTH OF THE LOS ANGELES RIVER; HOWEVER, IT WAS FAR BELOW AVERAGE SOUTH OF THIS AREA.

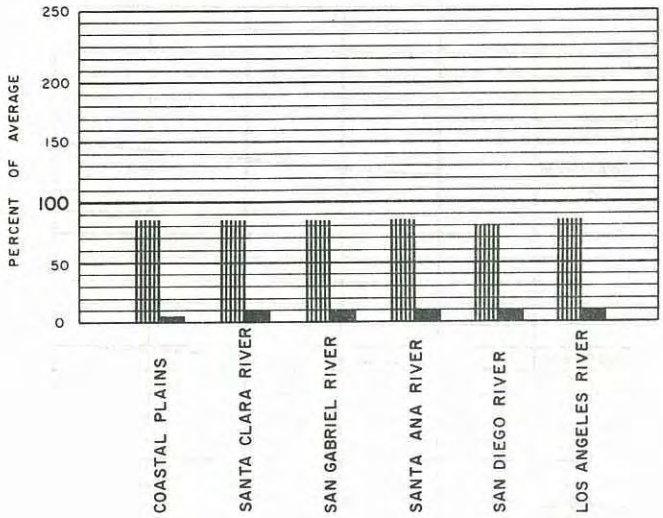
IMPACT

SHORT WATER SUPPLIES ARE ALMOST BECOMING A WAY OF LIFE IN SOUTHERN CALIFORNIA, WHICH HAS NOW HAD ONLY TWO YEARS ABOVE AVERAGE IN THE PAST 18. THIS AREA, HOWEVER, IS EXTREMELY DEPENDENT ON IMPORTED WATER, AND EVEN WITH NORMAL RUNOFF, THE DEMAND FOR WATER WILL EXCEED BY SOME TEN TIMES THE SUPPLY PROVIDED BY LOCAL STREAMFLOW. RESERVOIR STORAGE IN LAKE MEAD WAS 135 PERCENT OF AVERAGE ON FEBRUARY 1, INDICATING THAT THE MAJOR SOURCE OF IMPORTED SUPPLIES WAS IN SATISFACTORY CONDITION.

SOUTH COASTAL AREA

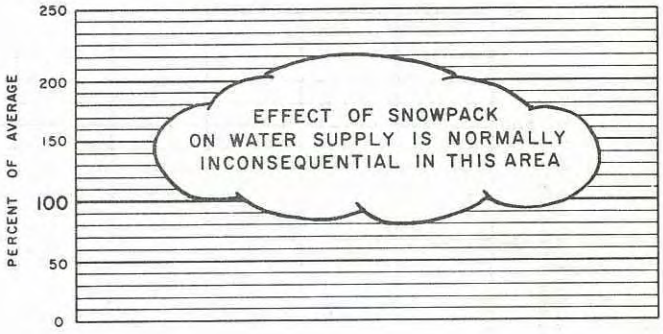
PRECIPITATION

SEASONAL PRECIPITATION
IN PERCENT OF AVERAGE TO DATE



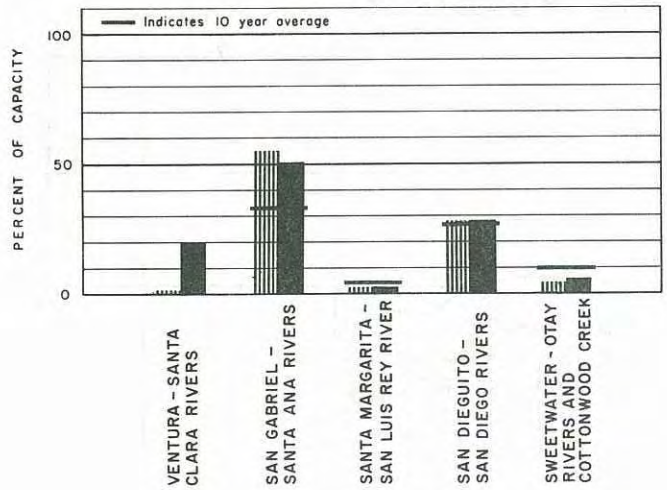
SNOWPACK

SNOWPACK WATER CONTENT
IN PERCENT OF AVERAGE TO DATE



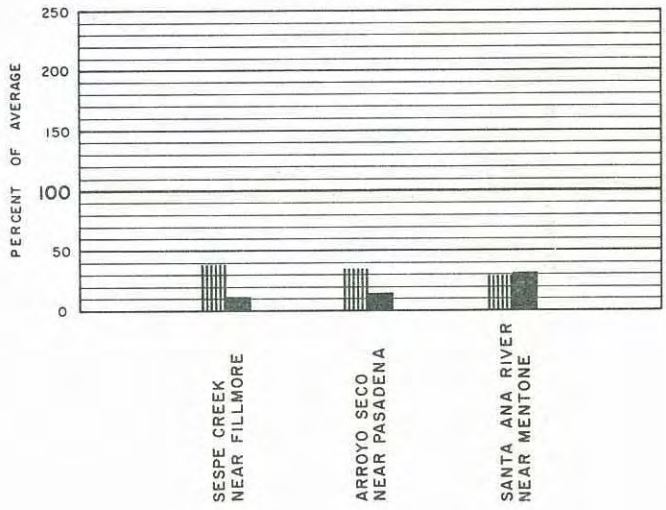
RESERVOIR STORAGE

CONTENTS OF MAJOR RESERVOIRS
IN PERCENT OF CAPACITY



STREAMFLOW

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



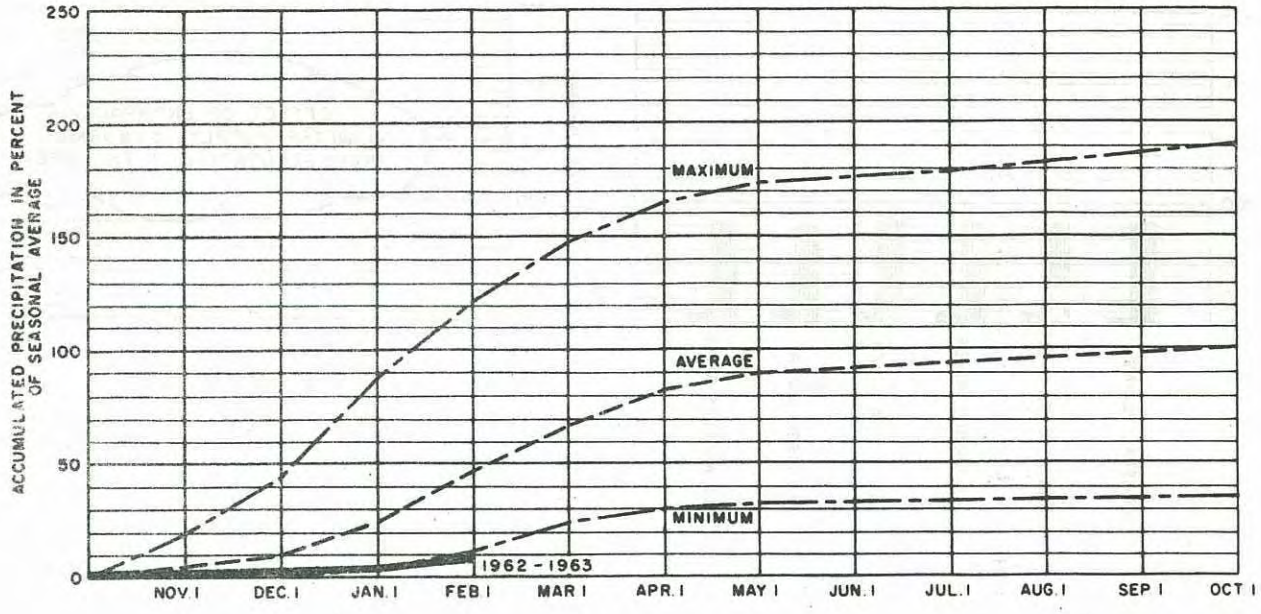
FEBRUARY 1, 1962

FEBRUARY 1, 1963

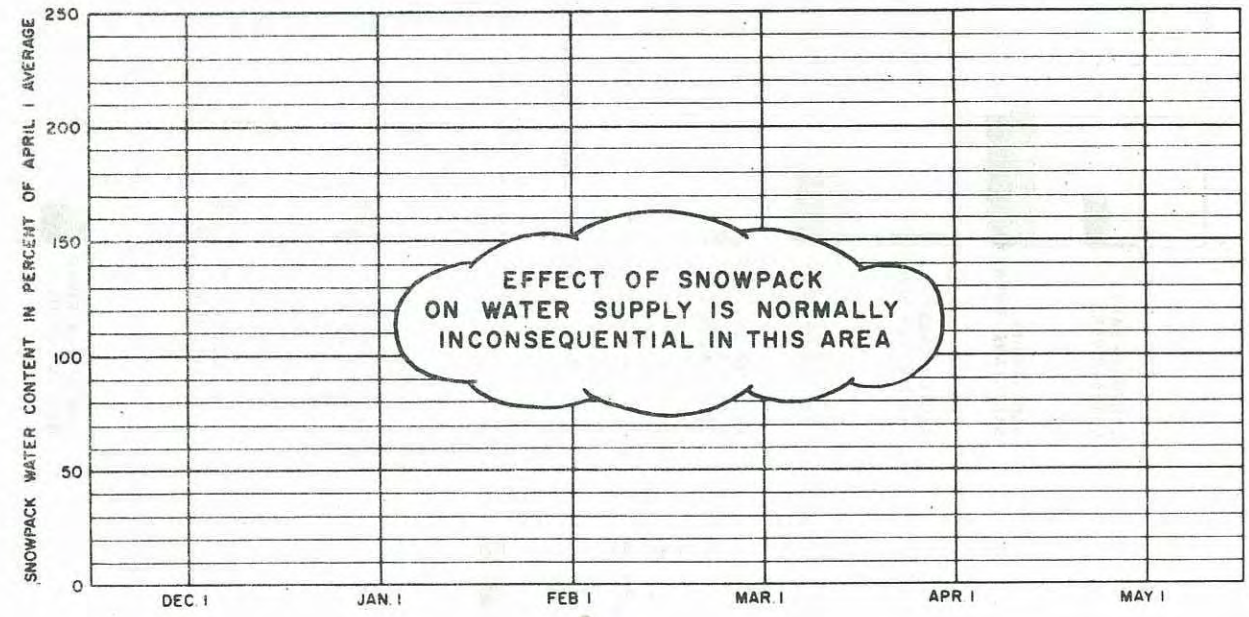
STATUS OF WATER SUPPLY

SOUTH COASTAL AREA

PRECIPITATION



SNOWPACK ACCUMULATION



PRECIPITATION AND SNOWPACK ACCUMULATION

COLORADO DESERT AREA

PRECIPITATION - IN THE COLORADO DESERT AREA, PRECIPITATION WAS ABOUT 40 PERCENT OF NORMAL FOR THE PERIOD OCTOBER 1 THROUGH JANUARY 31. PRECIPITATION VARIED FROM 78 PERCENT OF NORMAL AT TWENTYNINE PALMS NEAR JOSHUA TREE NATIONAL MONUMENT TO 23 PERCENT OF NORMAL AT NEEDLES FAA AIRPORT. FOR THE MONTH OF JANUARY, THE PRECIPITATION VARIED FROM NO RECORDABLE AMOUNT AT NEEDLES FAA AIRPORT TO 59 PERCENT OF NORMAL AT TWENTYNINE PALMS.

RESERVOIR STORAGE - THE U. S. BUREAU OF RECLAMATION, REGION 3, BOULDER CITY, NEVADA, REPORTS THAT THE STORAGE IN LAKE MEAD ON FEBRUARY 1 WAS 22,676,000 ACRE-FEET, WHICH IS ABOUT 135 PERCENT OF THE 10-YEAR AVERAGE FOR THE DATE AND 83 PERCENT OF TOTAL CAPACITY. STORAGE IN LAKE MEAD HAD INCREASED BY ABOUT 475,000 ACRE-FEET OVER WHAT IT WAS ONE YEAR AGO.

STREAMFLOW - THE U. S. BUREAU OF RECLAMATION, REGION 3, BOULDER CITY, NEVADA, REPORTS THAT THE RUNOFF TO DATE OF THE COLORADO RIVER NEAR GRAND CANYON DURING THE CURRENT WATER YEAR WAS 1,531,600 ACRE-FEET. THIS IS 90 PERCENT OF OCTOBER THROUGH JANUARY AVERAGE RUNOFF FOR THE 34-YEAR PERIOD 1922-23 TO 1955-56, INCLUSIVE. RUNOFF DURING JANUARY 1963 WAS ONLY 60 PERCENT OF AVERAGE.

FORECAST - FEBRUARY 1, 1963

THE U. S. BUREAU OF RECLAMATION, REGION 3, BOULDER CITY, NEVADA, FORECASTS THAT FLOW IN THE COLORADO RIVER NEAR GRAND CANYON, ARIZONA, DURING THE PERIOD APRIL THROUGH JULY, 1963, WILL BE:

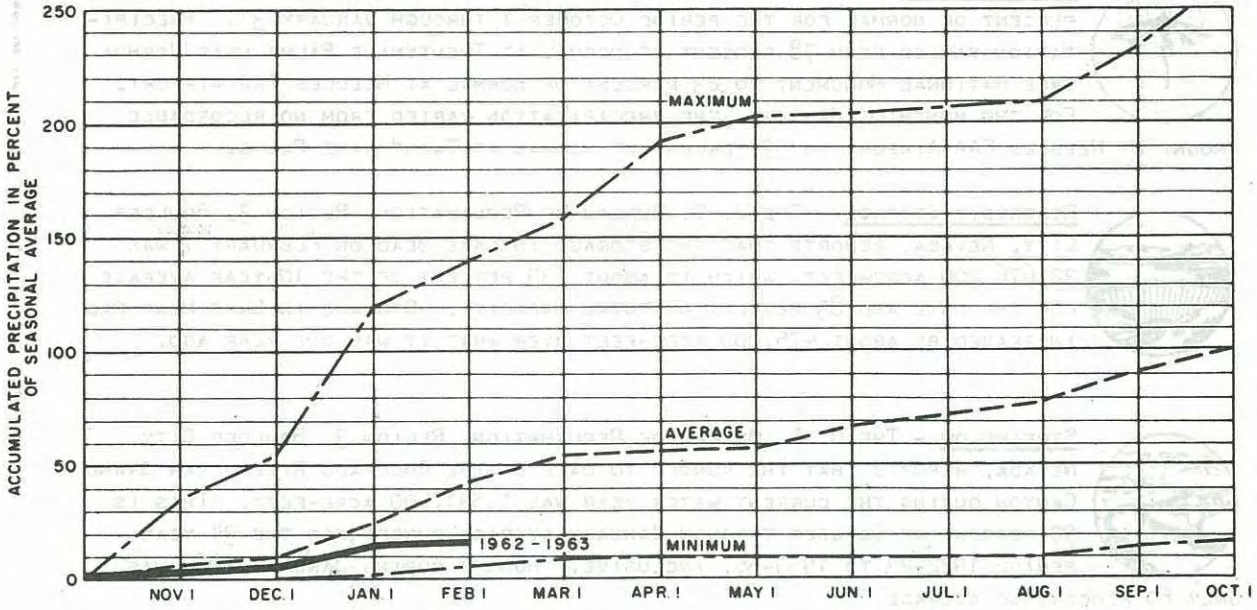
MAXIMUM	10,300,000 ACRE-FEET
MEAN	6,700,000 ACRE-FEET
MINIMUM	3,100,000 ACRE-FEET

THIS IS THE FORECAST AS OF JANUARY 10, 1963.

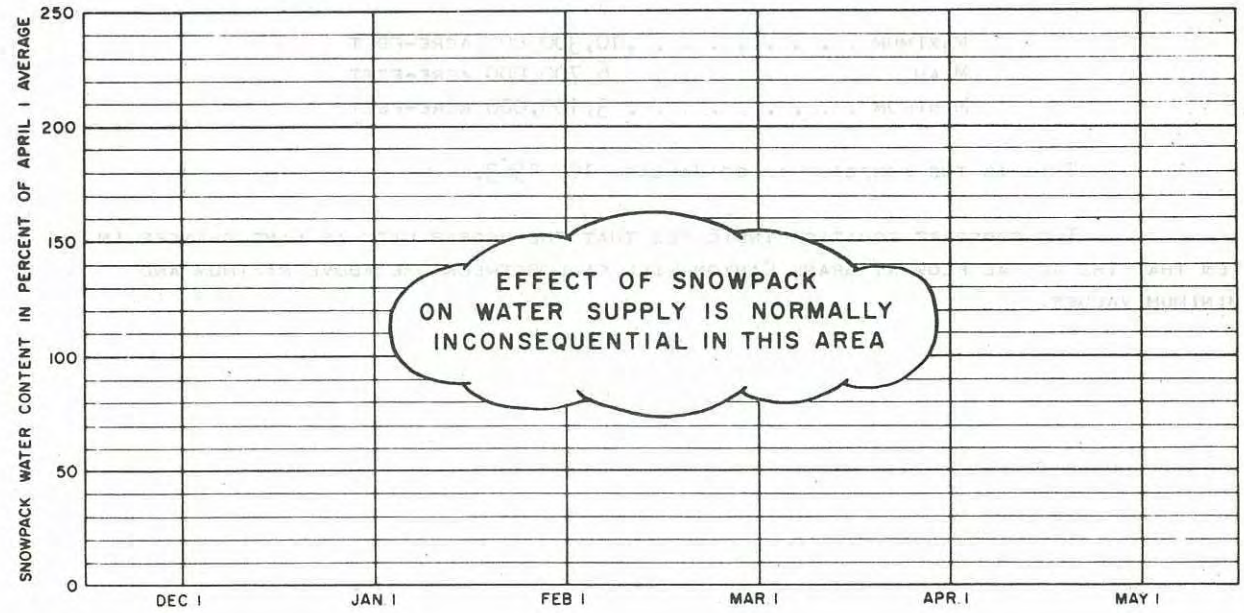
THE FORECAST EQUATION INDICATES THAT THE PROBABILITY IS NINE CHANCES IN TEN THAT THE ACTUAL FLOW AT GRAND CANYON WILL FALL BETWEEN THE ABOVE MAXIMUM AND MINIMUM VALUES.

COLORADO DESERT AREA

PRECIPITATION



SNOWPACK ACCUMULATION



PRECIPITATION AND SNOWPACK ACCUMULATION

SNOW LINES

Jet age snow surveyors are continually being subjected to a hazard that was unheard of ten years ago--the supersonic boom from aircraft in the vicinity breaking the sound barrier. In addition to the psychological hazard of never seeing or hearing what hits you, and at first not even realizing what it was, these supersonic booms can be the triggering action to potential avalanches.

Note to snow surveyors of cooperating agencies and the people who forward the data: When plunging the snow sampling tube through zero snow and the following weighing and computing process shows the water content is also zero, we in the Snow Surveys office would like to receive the resulting snow notes. A zero recorded in our records shows us that the measurement was not missed. Zero values are also as important as any other figure in statistical computations of the course record. So-o-o-o--when you know there is no snow, and even when you think that we know there is no snow, please forward the notes for the record.

Perhaps you couldn't care less--but for whatever interest it may be, the following is a brief history of this report.

The first issue was published in February 1930. It was titled "California Cooperative Snow Surveys, Monthly Bulletin of Snow Survey and Precipitation Data." It consisted of a one-page summary of conditions, a plate delineating snow course locations, and eight pages of tables. --- By May 1945, it had become the "Snow Survey Bulletin" and sported a printed paper cover. It had now grown to about 1½ pages of summary and about 14 pages of tables, plus several explanatory pages and plates. --- In February 1951, it ceased to be the Snow Survey Bulletin and became the report "Water Conditions in California." "California Cooperative Snow Surveys" disappeared from the new cover, but the report was now much more comprehensive. It had grown to 5 introductory pages, 7 pages of text, and 19 pages of tables. --- By 1956, it became impossible to publish the basic data tables with the text and forecasts and still get the report out on the 10th. Therefore, since then, the "Basic Data Supplement" has been published separately about a week after the main report.

--- Pictures were added to the cover in 1957. --- In 1961, the format was completely revised to make use of symbols and graphs. The revised format included returning "California Cooperative Snow Surveys" to the cover. --- Thus, we now have the February 1963 report--and if you are still with us and hadn't noticed it already, look at the cover and you'll see we have come full cycle--it's a bulletin again - 120-63.

SNOW LINES

CALIFORNIA COOPERATIVE SNOW SURVEYS

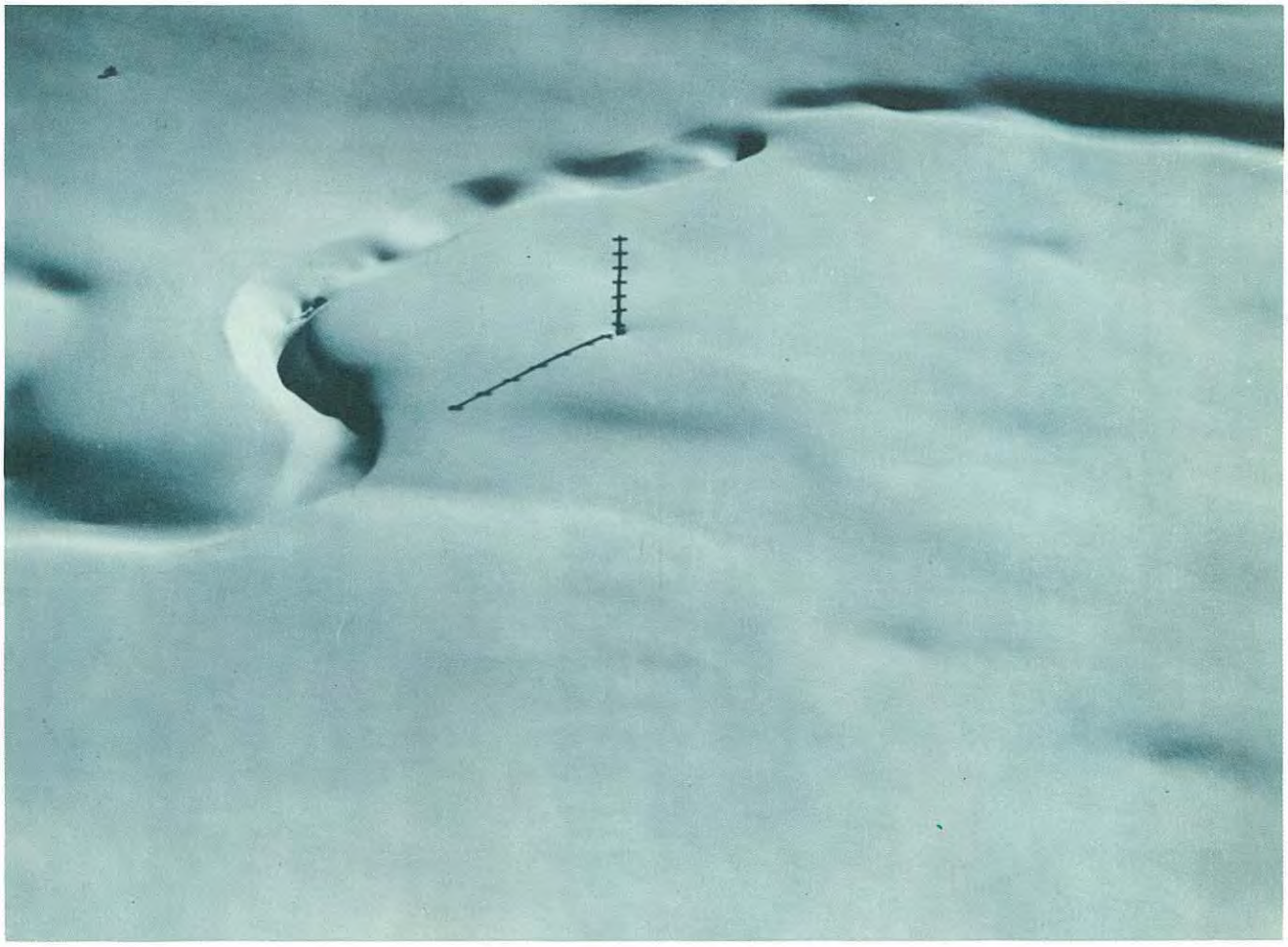
THE RESOURCES AGENCY OF CALIFORNIA

Department of Water Resources

BULLETIN No. 120-63

WATER CONDITIONS IN CALIFORNIA

REPORT No. 1-S: Basic Data Supplement



EDMUND G. BROWN
Governor
State of California

HUGO FISHER
Administrator
The Resources Agency of California

WILLIAM E. WARNE
Director
Department of Water Resources

FOREWORD

This supplement contains basic data for Bulletin No. 120-63, Report No. 1, entitled "Water Conditions in California." These reports are prepared 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."

This supplement contains snow measurements, available precipitation records, stream flow data for representative water courses, reports of water in storage in major reservoirs, and other pertinent data used in the preparation of the report.

This supplement is being forwarded to all cooperators in the water conditions program and will be made available to other interested parties upon specific request.

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AGENCIES COOPERATING WITH THE DEPARTMENT OF WATER RESOURCES IN THE CALIFORNIA SNOW SURVEY PROGRAM

STATE AND FEDERAL AGENCIES

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

PUBLIC UTILITIES

- CALIFORNIA ELECTRIC POWER COMPANY
- 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 OF SAN FRANCISCO - PUBLIC UTILITIES COMMISSION

ORGANIZED PUBLIC AGENCIES

- BUENA VISTA WATER STORAGE DISTRICT
- CAMP FAR WEST IRRIGATION 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
- TERRA BELLA IRRIGATION DISTRICT
- TURLOCK IRRIGATION DISTRICT
- VANDALIA IRRIGATION DISTRICT

PRIVATE ORGANIZATIONS

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

TABLE 1

PRECIPITATION DATA

Basin and Precipitation Station[1]	Elevation in Feet	Source of Data[2]	Precipitation						
			During January, 1963			From October 1, 1962, Through January 31, 1963			Average Water Year[3] (Inches)
			Total For Month (Inches)	Average[3] (Inches)	In Percent of Average	Season Total (Inches)	Average[3] (Inches)	In Percent of Average	
NORTH COASTAL AREA									
Smith River Area									
Elk Valley	1711	USWB	3.31	14.57	23	35.85	45.01	80	76.25
Gasquet RS	384	USWB	3.48	16.35	21	43.47	50.51	86	85.57
Crescent City 11E	360	DWR	4.04	17.29	23	48.29	53.44	90	90.54
Crescent City 1N	40	USWB	2.68	11.33	24	28.68	34.71	83	62.57
Klamath River Area									
Tulelake Inspection Station	4408	DWR	.73	2.47	30	11.43	8.40	143	15.94
Klamath Falls 2SSW, Oregon	4098	USBR	1.21	2.03	60	8.51	6.90	123	13.09
Tulelake	4034	USWB	.41	1.49	28	7.27	5.07	143	9.62
Callahan RS	3136	USWB	1.79	3.71	48	15.81	10.93	145	19.44
Gazelle 4NNW	2730	DWR	1.32	1.49	89	10.50	5.13	205	10.05
Yreka	2625	USWB	1.06	2.95	36	12.89	9.51	136	17.32
Happy Camp RS	1090	USWB	2.69	9.63	28	30.32	29.77	102	50.44
Orleans	403	USWB	3.62	9.14	40	29.84	28.24	106	47.84
Orick Arcata Redwood Co	75	DWR	2.44	11.79	21	30.29	35.63	85	64.43
Trinity River Area									
Burnt Ranch 1S	2150	USWB	1.93	6.90	28	21.53	20.85	103	37.70
Weaverville RS	2050	USWB	3.91	7.05	55	21.12	20.15	105	34.89
Big Bar RS	1272	USWB	1.80	7.39	24	20.52	21.31	96	36.75
Eel River Area									
Mad River RS	2775	USWB	4.29	11.05	39	35.20	32.09	110	55.15
Old Harris	2200	DWR	7.22	14.71	49	35.68	43.44	82	74.12

TABLE 1 - PRECIPITATION DATA (CONTINUED)

Basin and Precipitation Station 1/	Elevation in Feet	Source of Data 2/	Precipitation						
			During January, 1963			From October 1, 1962, Through January 31, 1963			Average Water Year 3/ (Inches)
			Total For Month (Inches)	Average 3/ (Inches)	In Percent of Average	Season Total (Inches)	Average 3/ (Inches)	In Percent of Average	
NORTH COASTAL AREA (CONTINUED)									
EEL RIVER AREA (CONTINUED)									
Honor Camp #42	1875	DWR	4.50	14.03	32	41.44	43.35	96	73.43
Covelo	1385	USWB	3.22	8.03	40	20.38	22.11	92	38.18
Standish-Hickey State Park	850	USWB	3.67	13.57	27	37.80	40.08	94	68.38
Honeydew 2WSW	375	USWB	8.20	21.33	38	53.84	63.01	85	107.48
Upper Mattole	255	USWB	7.70	15.17	51	40.46	44.79	90	76.41
Korbel	145	USWB	-	9.42	-	-	28.48	-	51.50
Scotia	139	USWB	2.73	8.41	32	22.98	25.41	90	45.93
Fort Bragg	80	USWB	2.79	7.67	36	16.77	21.48	78	37.44
Eureka WB City	43	USWB	1.51	6.71	22	17.35	20.27	86	36.66
RUSSIAN RIVER AREA									
Cazadero	1040	USWB	13.48	16.29	83	44.18	42.64	104	73.75
Potter Valley PH	1014	PG&E	6.51	9.43	69	26.24	24.86	106	42.45
Ukiah	623	USWB	7.75	7.85	99	25.33	20.53	123	35.06
Boonville Maintenance Sta	375	USWB	4.93	8.57	58	20.61	22.41	92	38.28
Santa Rosa	167	USWB	3.75	6.17	61	18.49	16.23	114	28.71
Fort Ross	114	USWB	4.79	8.50	56	19.73	22.88	86	40.32
Healdsburg	102	USWB	10.75	8.61	125	30.04	22.22	135	38.16
SAN FRANCISCO BAY AREA									
Mount Hamilton	4206	USWB	1.68	5.88	29	5.56	14.43	39	27.04
Gerber Ranch	2150	USWB	4.64	3.87	120	10.51	9.50	111	17.80
Angwin Pac Union College	1815	USWB	10.54	8.47	124	33.32	21.80	153	38.03
Lagunitas Lake	805	MMWD	11.44	10.78	106	36.68	27.25	135	47.04
Livermore 2SSW	545	USWB	1.40	3.21	44	6.87	7.89	87	14.10

TABLE 1 - PRECIPITATION DATA (CONTINUED)

Basin and Precipitation Station[1]	Elevation in Feet	Source of Data[2]	Precipitation						
			During January, 1963			From October 1, 1962, Through January 31, 1963			Average Water Year[3] (Inches)
			Total For Month (Inches)	Average[3] (Inches)	In Percent of Average	Season Total (Inches)	Average[3] (Inches)	In Percent of Average	
SAN FRANCISCO BAY AREA (CONTINUED)									
San Jose	70	CSJ	3.99	2.92	137	9.89	7.20	137	13.50
Napa State Hospital	60	USWB	4.71	5.05	93	19.98	13.13	152	23.25
San Francisco FOB	52	USWB	3.35	4.60	73	12.82	11.71	109	20.59
Redwood City	31	USWB	4.46	4.49	99	14.00	11.01	127	19.87
Oakland WB AP	3	USWB	2.68	3.81	70	14.32	9.88	145	17.81
CENTRAL COASTAL AREA									
Salinas River Area									
Priest Valley	2390	USWB	4.37	4.43	99	8.84	10.18	85	19.75
Paso Robles	700	USWB	4.41	2.92	151	7.73	7.04	110	13.31
San Bernardo Rancho	435	DWR	2.99	2.60	115	5.58	6.05	92	11.80
King City	320	USWB	5.99	2.43	246	8.58	5.20	165	10.31
San Luis Obispo Poly	300	USBR	3.56	5.04	71	7.85	11.66	67	21.57
Big Sur State Park	235	USWB	13.89	8.54	163	28.55	21.65	132	39.76
Salinas FAA AP	74	USWB	1.78	3.26	55	3.89	7.80	50	14.36
Pt. Piedras Blancas	32	USWB	6.12	3.80	161	13.32	9.63	138	17.76
Pajaro River Area									
Hollister	284	USWB	3.89	2.81	138	6.64	7.02	95	13.05
Santa Cruz	125	USWB	7.15	7.80	92	14.79	19.60	75	35.03
Watsonville Water Works	95	USWB	5.90	4.78	123	13.16	12.25	107	21.86
Santa Maria and Santa Ynez River Areas									
Ozena	3705	USWB	.74	2.89	26	.91	6.35	14	12.27
Cachuma Dam	781	USBR	.73	4.54	16	1.30	9.95	13	19.28
Los Alamos	565	USWB	.48	3.13	15	1.39	7.65	18	15.33
Santa Maria WB AP	238	USWB	1.03	3.24	32	1.79	6.99	26	13.42
Santa Barbara	100	USWB	1.79	4.37	41	2.33	9.58	24	18.56

TABLE 1 - PRECIPITATION DATA (CONTINUED)

Basin and Precipitation Station[1]	Elevation in Feet	Source of Data[2]	Precipitation						
			During January, 1963			From October 1, 1962, Through January 31, 1963			Average Water Year[3] (Inches)
			Total For Month (Inches)	Average[3] (Inches)	In Percent of Average	Season Total (Inches)	Average[3] (Inches)	In Percent of Average	
SOUTH COASTAL AREA									
Coastal Plain									
Los Angeles WB City	312	USWB	.52	3.23	16	.64	7.48	9	14.79
Santa Ana FS	115	USWB	.10	3.09	3	.18	7.56	2	14.75
Los Angeles WB AP	102	USWB	.62	2.79	22	.72	6.46	11	12.77
Laguna Beach	56	USWB	.09	2.64	3	.20	6.19	3	12.20
Ventura	45	USWB	-	3.57	-	-	7.69	-	14.80
Long Beach	34	USWB	.41	2.85	14	.49	6.60	7	13.06
San Diego WB AP	19	USWB	.11	2.37	5	.35	6.18	6	12.12
Santa Clara River									
Mint Canyon	2350	LACFCD	.50	2.80	18	.89	6.83	13	13.29
Saugus PP #1	2105	USWB	.16	3.98	4	.59	9.08	6	18.36
Dry Canyon Reservoir	1515	USWB	.04	2.77	1	.38	6.31	6	12.75
Santa Paula	282	USWB	.70	4.19	17	1.11	9.05	12	18.13
Los Angeles River									
Loomis Ranch	4050	LACFCD	1.12	4.10	27	1.64	9.71	17	20.30
Haines Canyon Upper	3450	LACFCD	.67	5.96	11	.74	14.11	5	30.20
Big Tujunga Dam	2315	LACFCD	.77	5.80	13	.87	13.53	6	28.17
Arroyo Seco RS	1220	LACFCD	.81	5.02	16	1.40	11.62	12	23.91
Burbank WB AP	699	USWB	.47	3.54	13	.51	8.04	6	15.85
San Gabriel River									
Big Pines Camp	6860	LACFCD	.82	5.24	16	1.70	13.23	13	27.34
Mt. Wilson	5709	USWB	1.54	6.31	24	2.13	15.18	14	31.28
San Dimas Tanbark Flats	2720	LACFCD	.97	5.88	16	1.12	13.66	8	28.14
Hoegee's	2650	LACFCD	1.71	8.31	21	2.20	19.71	11	40.96

TABLE 1 - PRECIPITATION DATA (CONTINUED)

Basin and Precipitation Station [1]	Elevation in Feet	Source of Data [2]	Precipitation						
			During January, 1963			From October 1, 1962, Through January 31, 1963			Average Water Year [3] (Inches)
			Total For Month (Inches)	Average [3] (Inches)	In Percent of Average	Season Total (Inches)	Average [3] (Inches)	In Percent of Average	
SOUTH COASTAL AREA (CONTINUED)									
San Gabriel River (Continued)									
Henninger Flats	2550	LACFCD	1.04	5.69	18	1.60	13.38	12	27.96
San Gabriel Dam Camp	1481	LACFCD	.98	6.22	16	1.12	14.29	8	28.48
San Dimas Dam	1350	LACFCD	2.09	4.88	43	2.45	11.32	22	23.01
Claremont Pomona College	1201	USWB	1.14	3.93	29	1.54	9.20	17	18.64
Santa Ana River									
Big Pines Camp	6860	LACFCD	.82	5.24	16	1.70	13.23	13	27.34
Big Bear Lake Dam	6815	USWB	.77	8.98	9	1.73	20.48	8	44.23
Squirrel Inn #2	5723	USWB	.88	8.17	11	1.50	20.32	7	43.22
Mill Creek #2	2965	USWB	.98	3.82	26	1.68	10.09	17	22.66
Santa Ana River PH #1	2765	USWB	1.21	4.87	25	1.69	12.31	14	26.52
Lytle Creek PH	2250	USWB	.81	7.33	11	1.22	17.18	7	34.36
Elsinore	1300	USWB	.09	2.41	4	.16	5.84	3	11.35
San Bernardino Co Hospital	1125	USWB	.50[E]	3.49	14	.68[E]	8.79	8	17.93
San Diego County									
Cuyamaca	4650	USWB	1.06	6.83	16	1.62	17.43	9	38.84
Julian Wynola	3650	USWB	1.11	5.74	19	1.90	14.40	13	31.25
Warner Springs	3180	USWB	.55	3.07	18	.93	8.09	11	17.42
Campo	2612	USWB	.42	3.31	13	1.14	8.20	14	17.99
Barrett Dam	1623	CSD	.73	3.62	20	1.75	8.90	20	18.91
El Capitan Dam	600	USWB	.68	3.22	21	1.29	7.97	16	17.02

TABLE 1 - PRECIPITATION DATA (CONTINUED)

Basin and Precipitation Station[1]	Elevation in Feet	Source of Data[2]	Precipitation						
			During January, 1963			From October 1, 1962, Through January 31, 1963			Average Water Year[3] (Inches)
			Total For Month (Inches)	Average[3] (Inches)	In Percent of Average	Season Total (Inches)	Average[3] (Inches)	In Percent of Average	
CENTRAL VALLEY AREA									
Sacramento Valley Floor									
French Gulch	1100	USWB	2.69	7.50	36	17.84	20.97	85	37.50
Redding FS #2	577	USWB	4.15	7.41	56	21.18	20.17	105	37.45
Ono	980	USWB	2.70	7.07	38	16.28[E]	19.59	83	36.01
Volta PH	2200	PG&E	4.34	5.88	74	17.53	16.86	104	32.90
Harrison Gulch RS	2710	USWB	2.42	7.09	34	20.75	19.86	104	34.94
Ferguson Ranch	800	USWB	3.14	5.43	58	13.08	15.06	87	27.69
Mineral	4911	USWB	5.72	9.09	63	42.78	25.98	165	48.91
Red Bluff WB AP	341	USWB	3.49	3.78	92	11.58	10.67	109	19.41
Centerville PH	522	USWB	6.26	8.80	71	30.92	23.21	133	42.99
Paskenta RS	755	USWB	2.85	4.36	65	10.43	12.05	87	21.52
Orland	254	USWB	2.74	3.57	77	10.92	9.84	111	17.83
Chico Experiment Station	205	USWB	3.93	5.02	78	19.14	13.80	139	25.32
Stony Gorge Reservoir	800	USBR	3.23	3.59	90	9.56	9.86	97	17.83
Willows	140	USWB	2.57	3.48	74	9.83	9.51	103	17.00
Oroville Bridge	220	USWB	3.25	5.51	59	20.50	14.74	139	26.95
East Park Reservoir	1205	USBR	3.59	3.77	95	10.70	10.03	107	17.82
Stonyford Cooley Ranch	3015	USWB	6.91	11.76	59	30.94	30.90	100	52.58
Colusa 1SSW	60	USWB	2.71	3.06	89	12.38	8.52	145	15.37
Marysville	62	USWB	3.42	4.05	84	16.11	11.14	145	20.32
Lakeport	1343	USWB	5.88	6.13	96	19.56	16.11	121	27.41
Leesville Keegan Ranch	1340	USWB	2.93	4.86	60	12.70[E]	8.04	158	22.91
Nicolaus	47	USWB	3.89	3.58	109	16.24	9.66	168	17.82
Dunnigan-Powers Ranch	104	DWR	4.34	3.41	127	14.45	8.68	166	15.56
Cobb	2520	DWR	12.72	13.48	94	44.40	35.43	125	60.30

TABLE 1 - PRECIPITATION DATA (CONTINUED)

Basin and Precipitation Station 1/	Elevation in Feet	Source of Data 2/	Precipitation						
			During January, 1963			From October 1, 1962, Through January 31, 1963			Average Water Year 3/ (Inches)
			Total For Month (Inches)	Average 3/ (Inches)	In Percent of Average	Season Total (Inches)	Average 3/ (Inches)	In Percent of Average	
CENTRAL VALLEY AREA (CONTINUED)									
Sacramento Valley Floor (Continued)									
Rocklin	239	USWB	2.90	4.77	61	15.80	12.04	131	22.74
Citrus Heights	138	DWR	4.63	4.54	102	16.87	11.47	147	21.39
Capay 4W	297	DWR	5.85	4.97	118	18.04	12.25	147	21.92
Woodland 1WNW	69	USBR	4.61	3.54	130	14.12	9.01	157	16.16
Sacramento WB City	25	USWB	2.68	3.87	69	11.67	9.81	119	18.05
Davis Agricultural College	51	USBR	4.87	3.67	133	15.71	9.11	172	16.37
Winters	135	USBR	6.54	4.02	163	15.12	9.93	152	17.80
Arbuckle 5SSW	360	DWR	5.20	3.17	164	13.07	8.71	150	15.89
San Joaquin Valley Floor									
Camp Pardee	658	USBR	1.25	4.36	29	9.51	11.05	86	20.83
Galt	49	DWR	1.81	3.27	55	8.82	8.13	108	15.27
Wallace	197	USWB	1.49	4.03	37	7.58	10.24	74	19.29
Rio Vista	22	USWB	3.37	3.29	102	9.83	8.26	119	14.93
Lodi	40	USBR	2.69	3.39	79	7.80	8.82	88	16.11
Brentwood	85	DWR	4.05	2.62	155	10.24	6.79	151	11.87
Antioch Fibreboard Mill	46	USWB	1.83	2.79	66	8.43	7.07	119	12.59
Stockton FS #4	11	USWB	1.96	3.03	65	5.90	7.62	77	13.91
Oakdale	155	DWR	.89	2.99	30	4.84	7.51	64	14.32
Oakdale Woodward Dam	215	USBR	.70	2.77	25	4.13	7.08	58	13.52
Tracy Carbona	140	USWB	1.08	1.81	60	3.60	4.63	78	8.76
Modesto	91	USBR	.99	2.29	43	4.31	6.12	70	11.76
Denair	124	USBR	1.65	2.54	65	3.68	6.41	57	12.24
Newman 2NW	108	USBR	3.17	2.10	151	4.97	5.37	93	10.01
Merced FS #2	169	USWB	1.80	2.46	73	4.65	6.11	76	11.91

TABLE 1 - PRECIPITATION DATA (CONTINUED)

Basin and Precipitation Station 1/	Elevation in Feet	Source of Data 2/	Precipitation						
			During January, 1963			From October 1, 1962, Through January 31, 1963			Average Water Year 3/ (Inches)
			Total For Month (Inches)	Average 3/ (Inches)	In Percent of Average	Season Total (Inches)	Average 3/ (Inches)	In Percent of Average	
CENTRAL VALLEY AREA (CONTINUED)									
San Joaquin Valley Floor (Continued)									
Los Banos	125	USWB	1.55	1.80	86	2.42	4.57	53	8.64
San Juan Hdqtrs M & L	90	DWR	.75	1.84	41	2.60	4.68	56	8.84
Friant Government Camp	410	USWB	2.41	2.90	83	4.43	6.96	64	13.41
Madera	270	USBR	1.10	1.98	56	2.86	5.03	57	10.01
Mendota Dam	166	USBR	.49	1.55	32	2.67	3.87	69	7.44
Fresno WB AP	331	USWB	2.16	1.90	114	3.40	4.84	70	9.53
Orange Cove	431	USBR	2.99	2.63	114	3.69	6.44	57	12.88
Panoche	1265	USWB	1.75	1.74	101	3.52	4.29	82	8.46
Lemon Cove	513	USWB	2.74	2.72	101	3.27	6.75	48	14.19
Visalia	354	USWB	.82	2.03	40	1.28	4.84	26	9.66
Hanford	242	USBR	1.19	1.70	70	1.48	4.07	36	8.27
Lindsay	395	USWB	1.55	2.31	67	2.06	5.46	38	11.03
Coalinga	671	USWB	1.85	1.42	130	3.25	3.39	96	7.03
Porterville	393	USWB	.66	2.18	30	.96	5.30	18	10.71
Angiola	205	USWB	.60	1.47	41	.72	3.58	20	7.33
Wasco	333	USBR	.22	1.22	18	.61	2.90	21	6.33
South Belridge	575	DWR	.07	1.04	7	.18	2.55	7	5.16
Bakersfield WB AP	494	USWB	.12	1.13	11	.35	2.91	12	6.29
San Emigdio Ranch	1450	DWR	.02	1.55	1	.57	4.14	14	8.81
Tehachapi	3975	USWB	.27	1.97	14	.40	5.17	8	11.17
Tejon Rancho	1425	USWB	.05	2.05	2	.93	5.37	17	11.55
Pattiway	3868	USWB	T	1.82	0	.43	4.67	9	9.82

TABLE 1 - PRECIPITATION DATA (CONTINUED)

Basin and Precipitation Station 1/	Elevation in Feet	Source of Data 2/	Precipitation						
			During January, 1963			From October 1, 1962, Through January 31, 1963			Average Water Year 3/ (Inches)
			Total For Month (Inches)	Average 3/ (Inches)	In Percent of Average	Season Total (Inches)	Average 3/ (Inches)	In Percent of Average	
CENTRAL VALLEY AREA (CONTINUED)									
AMERICAN RIVER (CONTINUED)									
Pacific House	3440	USWB	5.26	10.30	51	24.63	26.50	93	51.00
Georgetown RS	3001	USWB	6.23	10.98	57	33.21	28.12	118	54.00
Colfax	2418	USWB	8.98	9.34	96	36.66	23.79	154	45.59
Placerville	1890	USWB	4.05	7.89	51	21.04	20.30	104	39.07
Auburn	1297	USWB	4.11	7.45	55	23.72	18.43	129	34.82
Folsom Dam	350	USBR	2.68	5.04	53	15.54	12.60	123	23.63
MOKELUMNE RIVER									
Twin Lakes	7829	PG&E	10.26	8.69	118	25.20	23.48	107	47.59
Salt Spring PH	3700	PG&E	9.71	8.62	113	20.16	22.18	91	43.69
West Point 3SW	2400	USWB	5.93	7.23	82	18.34	18.72	98	36.67
Tiger Creek PH	2355	PG&E	7.68	8.92	86	21.92	23.20	94	45.11
Fiddletown Lynch Ranch	2100	USWB	3.08	6.94	44	20.86	17.77	117	33.93
Electra PH	715	PG&E	3.46	6.08	57	14.16	15.57	91	30.33
STANISLAUS RIVER									
Strawberry Lake	5620	PG&E	10.84	7.51	144	18.87	22.61	83	44.73
Spring Gap Forebay	4875	PG&E	11.20	8.50	132	19.91	21.49	93	41.87
Calaveras Big Trees	4696	USWB	11.39	10.78	106	23.91	27.30	88	53.36
TUOLUMNE RIVER									
Strawberry Lake	5620	PG&E	10.84	7.51	144	18.87	22.61	83	44.73
Lake Eleanor	4662	USWB	8.45E	8.45	100	13.88E	21.51	65	42.54
Hetch Hetchy	3870	USWB	6.51	6.56	99	11.41	17.25	66	34.91
Sonora	1830	USWB	3.99	6.37	63	10.83	15.96	68	31.31

TABLE 1 - PRECIPITATION DATA (CONTINUED)

BASIN AND PRECIPITATION STATION 1/	ELEVATION IN FEET	SOURCE OF DATA 2/	PRECIPITATION						
			DURING JANUARY, 1963			FROM OCTOBER 1, 1962, THROUGH JANUARY 31, 1963			AVERAGE WATER YEAR 3/ (INCHES)
			TOTAL FOR MONTH (INCHES)	AVERAGE 3/ (INCHES)	IN PERCENT OF AVERAGE	SEASON TOTAL (INCHES)	AVERAGE 3/ (INCHES)	IN PERCENT OF AVERAGE	
CENTRAL VALLEY AREA (CONTINUED)									
MERCED RIVER									
YOSEMITE NP	3985	USWB	10.06	6.76	149	13.72	18.47	74	35.92
DUDLEYS	3000	USWB	9.30	7.79	119	16.46	19.39	85	38.05
MARIPOSA	2011	USWB	7.48	6.25	120	14.18	15.20	93	29.33
EXCHEQUER RESERVOIR	484	USWB	2.36	4.42	53	6.62	10.75	62	20.75
UPPER SAN JOAQUIN RIVER									
FLORENCE LAKE	7355	SCEC	9.41	4.17	226	11.25	11.33	99	24.14
HUNTINGTON LAKE	7020	USWB	9.41	6.04	156	12.21	15.30	80	31.13
CRANE VALLEY	3500	PG&E	14.32	8.47	169	17.45	20.56	85	40.45
NORTH FORK RS	2630	USWB	8.81	6.90	128	11.77	16.82	70	33.08
AUBERRY	2003	USWB	9.43	4.94	191	11.41	12.33	93	24.50
KINGS RIVER									
GRANT GROVE	6580	USWB	10.07	8.45	119	12.01	21.71	55	43.12
BALCH PH	1750	USWB	10.93	5.31	206	12.64	13.70	92	27.32
PIEDRA	580	USWB	3.54	3.47	102	4.55	8.40	54	16.65
KAWEAH RIVER									
GRANT GROVE	6580	USWB	10.07	8.45	119	12.01	21.71	55	43.12
GIANT FOREST	6360	USWB	11.33	8.52	133	13.47	21.18	64	43.67
ASH MOUNTAIN	1698	USWB	6.37	5.06	126	7.44	12.50	60	26.19
THREE RIVERS EDISON PH #2	950	USWB	7.43	4.16	179	8.26	10.09	82	20.70
TULE RIVER									
SPRINGVILLE TULE HEADWORKS	4070	USWB	8.72E	7.27	120	9.97E	17.98	55	36.98
TULE RIVER INTAKE	2450	SCEC	8.93	6.13	146	10.24	14.87	69	30.51

TABLE 1 - PRECIPITATION DATA (CONTINUED)

Basin and Precipitation Station[1]	Elevation in Feet	Source of Data[2]	Precipitation						
			During January, 1963			From October 1, 1962, Through January 31, 1963			Average Water Year[3] (Inches)
			Total For Month (Inches)	Average[3] (Inches)	In Percent of Average	Season Total (Inches)	Average[3] (Inches)	In Percent of Average	
CENTRAL VALLEY AREA (CONTINUED)									
KERN RIVER									
KERN RIVER INTAKE #3	3650	USWB	9.31	3.73	250	9.43	8.69	109	16.88
GLENNVILLE	3130	USWB	1.10	3.98	28	1.10	9.77	11	20.94
KERN RIVER PH #3	2703	USWB	4.83	2.84	170	5.65	6.61	85	12.54
WOFFORD HEIGHTS	2700	USWB	2.91	2.34	124	2.93	5.35	55	10.14
LAHONTAN AREA									
SURPRISE VALLEY									
CEDARVILLE	4672	USWB	.83	1.84	45	9.76	5.75	170	12.12
FORT BIDWELL	4498	USWB	1.39	2.30	60	9.70	6.98	139	14.47
MADELINE PLAIN-HONEY LAKE									
RAVENDALE JIM MARR RANCH	5540	DWR	1.20[E]	2.18	55	7.02[E]	6.03	116	11.32
SUSANVILLE COURTHOUSE	4325	DWR	3.39	2.95	115	12.06	8.17	148	15.31
DOYLE	4240	USWB	5.16	1.71	302	12.09	4.85	249	9.44
SUSANVILLE AP	4148	USWB	3.61	2.12	170	17.38[E]	5.77	301	10.96
WENDEL 1E	4040	DWR	1.79	1.20	149	6.48	3.26	199	6.20
TRUCKEE AND TAHOE BASIN									
TAHOE	6228	USWB	5.73	6.47	89	20.01	16.40	122	30.65
TRUCKEE RS	5960	USWB	4.42	6.52	68	17.17	16.52	104	30.87
CARSON RIVER									
WOODFORDS	5671	USWB	2.91	3.98	73	8.65[E]	10.15	85	21.17
MINDEN, NEVADA	4700	USWB	4.81	1.69	285	-	4.49	-	8.84
WALKER RIVER									
BRIDGEPORT	6470	USWB	4.27	1.84	232	5.27	4.84	109	9.68
SMITH, NEVADA	4750	USWB	-	1.11	-	-	3.22	-	7.16

TABLE 1 - PRECIPITATION DATA (CONTINUED)

Basin and Precipitation Station 1/	Elevation in Feet	Source of Data 2/	Precipitation						
			During January, 1963			From October 1, 1962, Through January 31, 1963			Average Water Year 3/ (Inches)
			Total For Month (Inches)	Average 3/ (Inches)	In Percent of Average	Season Total (Inches)	Average 3/ (Inches)	In Percent of Average	
LAHONTAN AREA (CONTINUED)									
Mono Basin									
Ellery Lake	9600	USWB	9.60	3.23	297	11.82	9.37	126	19.45
Gem Lake	8970	USWB	5.55	2.77	200	7.79	8.04	97	16.69
Mono Lake	6520	USWB	8.38	2.27	369	9.49	7.48	127	14.42
Owens River									
White Mountain #2	12470	USWB	1.76	1.31	134	2.46	5.88	42	14.71
South Lake	9500	CEPC	9.00	2.52	357	9.73	8.28	118	17.63
Lake Sabrina	9065	CEPC	7.50	2.54	295	8.13	8.35	97	17.79
Crooked Creek	6700	LADWP	7.26	2.23	326	7.55	5.15	147	10.07
Big Pines PH #3	5200	LADWP	3.45	2.11	164	3.45	4.83	71	8.88
Bishop WB AP	4108	USWB	3.22	1.44	224	3.22	3.34	96	6.30
Independence	3950	USWB	5.31	1.01	526	5.46	2.63	208	4.76
LA Aqueduct at Intake	3830	LADWP	1.01	1.07	94	1.01	2.64	38	4.74
Haiwee	3810	USWB	.97	1.33	73	1.06	3.09	34	5.97
Cottonwood Gates	3600	LADWP	4.80	1.25	384	4.85	2.97	163	5.51
Death Valley Area									
Cow Creek	-125	USWB	.05E	.24	21	.26E	.72	36	1.72
Mojave Desert Area									
Fairmont	3060	USWB	.03	3.27	1	.10	7.52	1	14.78
Palmdale FAA AP	2517	USWB	T	1.25	0	T	2.87	0	5.65
Inyokern	2440	USWB	.15	.67	22	.17	1.84	9	4.19
Daggett FAA AP	1922	USWB	.07	.71	10	.20	1.85	11	3.81
Baker 9NNW	1045	USWB	.07	.45	31	.47	1.35	35	3.28

TABLE 1 - PRECIPITATION DATA (CONTINUED)

Basin and Precipitation Station 1/	Elevation in Feet	Source of Data 2/	Precipitation							
			During January, 1963			From October 1, 1962, Through January 31, 1963			Average Water Year 3/ (Inches)
			Total For Month (Inches)	Average 3/ (Inches)	In Percent of Average	Season Total (Inches)	Average 3/ (Inches)	In Percent of Average	
COLORADO DESERT AREA									
Twentynine Palms	1975	USWB	.51	.86	59	1.76	2.25	78	4.64
Iron Mountain	922	USWB	.34	.39	87	1.81	1.29	140	3.29
Needles FAA AP	913	USWB	T	.60	0	.45	1.96	23	5.00
Blythe FAA AP	390	USWB	.55	.47	117	1.15	1.60	72	3.84
Yuma, Arizona, WB AP	199	USWB	.50	.27	185	.96	.97	99	2.41
Imperial	-64	USWB	.06	.36	17	.84	1.39	60	3.14
Thermal FAA AP	-120	USWB	.06	.49	12	.63	1.43	44	2.90

1/ Certain of the stations are not in the basin shown, but are closely adjacent. Stations representative of more than one basin are listed under each basin.

2/ USWB - United States Weather Burea; 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; CEPC - California Electric Power Company; CSD - City of San Diego.

3/ Based upon the 50-year period 1905-06 through 1954-55. When the period of record is less than 50 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 SURVEY DATA

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
NORTH COASTAL AREA								
Scott River								
Middle Boulder No. 1	6600	1-28-63	6.3	38	2.4	7	32.9	13.6
Middle Boulder No. 3	6200	1-28-63	1.8	44	0.8	3	28.8	12.5
Dynamite Meadow	5700	1-28-63	2.0	50	1.0	New Course - 1955		10.0
Swampy John	5500	2- 4-63	0	0	0	New Course - 1951		
Trinity River								
Big Flat	5100	1-28-63	0	0	0	0	15.7	8.0
Eel River								
Anthony Peak	6200	No survey made					29.3	15.1
SOUTH COASTAL AREA								
Santa Ana River								
Christmas Tree	8500	No survey made						
San Yca	7500	No survey made						
CENTRAL VALLEY AREA								
Sacramento River								
Mount Shasta	7900	1-29-63	25.8	41	10.6	20	49.4	20.2
Sand Flat	6800	1-29-63	16.0	33	5.3	13	41.2	22.8
McCloud River								
Mount Shasta	7900	1-29-63	25.8	41	10.6	20	49.4	20.2
Stouts Meadow	5400	2- 1-63	1.9	53	1.0	2	40.9	27.5

TABLE 2 - SNOW SURVEY 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)								
PIT RIVER								
UPPER LASSEN PEAK	8480	1-29-63	45.0	57	25.7	33	79.0	29.7
LOWER LASSEN PEAK	8240	1-29-63	52.5	49	25.7	33	78.1	30.4
CEDAR PASS	7100	2- 4-63	1.8	33	0.6	6	17.0	9.7
THOUSAND LAKES	6500	2- 4-63	7.5	43	3.2	8	38.0	17.9
ADIN MOUNTAINS	6350	1-28-63	0	0	0	0	14.0	6.4
NEW MANZANITA LAKE	5900	1-30-63	2.5	40	1.0	15	6.7	8.0
FEATHER RIVER								
UPPER LASSEN PEAK	8480	1-29-63	45.0	57	25.7	33	79.0	29.7
LOWER LASSEN PEAK	8240	1-29-63	52.5	49	25.7	33	78.1	30.4
MOUNT DYER NO. 1	7080	2- 5-63	PATCHES	0	0	0	24.2	14.0
EUREKA BOWL	6800	1-28-63	0	0	0	0	41.9	18.1
YUBA PASS	6700	2- 3-63	0	0	0	0	31.8	12.0
ROWLAND CREEK	6700	2- 1-63	0	0	0	0	18.1	
HARKNESS FLAT	6200	1-25-63	0	0	0	0	28.4	12.5
EUREKA LAKE	6200	1-28-63	0	0	0	0	32.3	15.2
MOUNT DYER NO. 2	6040	2- 5-63	0	0	0	0	16.6	8.1
FRENCHMAN COVE	5800	2- 1-63	0	0	0	NEW COURSE - 1963		
FREDONYER PASS NO. 1	5750	1-29-63	2.0	10	0.2	5	9.7	4.2
ABBEY	5700	2- 1-63	0	0	0	NEW COURSE - 1963		
ANTELOPE RIDGE	5650	2- 1-63	0	0	0	NEW COURSE - 1963		
LETTERBOX	5600	1-29-63	2.5	10	0.2	0	46.9	27.1
MOUNT STOVER	5600	1-25-63	0	0	0	0	16.6	10.4

TABLE 2 - SNOW SURVEY 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)								
FEATHER RIVER (CONTINUED)								
BROWNS CAMP	5400	1-29-63	2.5	10	0.2	1	22.1	12.6
FEATHER RIVER MEADOWS	5400	1-28-63	0	0	0	0	22.8	13.0
HASKINS FLAT	5200	1-29-63	2.5	10	0.2	1	29.8	15.4
WARNER CREEK	5080	1-28-63	0	0	0	0	16.1	10.0
HUMBUG SUMMIT	4840	1-29-63	2.0	10	0.2	2	12.4	7.1
CHESTER FLAT	4530	1-30-63	12.2	16	2.0	27	7.3	7.7
STONY CREEK								
ANTHONY PEAK	6200	NO SURVEY MADE					29.3	15.1
YUBA RIVER								
CASTLE CREEK No. 5	7400	2- 2-63	25.9	43	11.1	20	55.9	19.0
DONNER SUMMIT	6900	2- 1-63	PATCHES	0	0	0	39.6	15.1
YUBA PASS	6700	2- 3-63	0	0	0	0	31.8	12.0
FURNACE FLAT	6700	2- 1-63	PATCHES	0	0	0	45.1	19.5
LAKE FORDYCE	6400	2- 1-63	PATCHES	0	0	0	38.8	19.5
GIBSONVILLE	5350	2- 1-63	0	0	0	0	34.4	17.5
AMERICAN RIVER								
UPPER CARSON PASS	8550	1-25-63	10.7	25	2.7	8	35.2	13.6
EMIGRANT VALLEY	8400	1-26-63	9.9	35	3.5	4	44.1	15.7
LOWER CARSON PASS	8400	1-25-63	10.6	25	2.6	7	37.9	14.1
TWIN LAKES	8000	1-25-63	0.7	37	0.3	1	30.5	12.9
TRAGEDY SPRINGS	7900	1-28-63	0.6	33	0.2	0	44.5	11.5

TABLE 2 - SNOW SURVEY 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)								
AMERICAN RIVER (CONTINUED)								
Lost Corner Mountain	7550	No survey made						11.7
Echo Summit	7450	2- 4-63	18.0	39	7.1	18	38.9	15.9
Corral Flat	7200	1-28-63	0	0	0	0	39.7	12.5
Silver Lake	7100	1-28-63	0	0	0	0	24.1	7.3
Phillips	6900	2- 4-63	0	0	0	0	29.8	12.8
Wrights Lake	6900	2- 5-63	0	0	0	New Course - 1956		12.4
Lyons Creek	6700	2- 5-63	0	0	0	0	32.0	11.6
Huysink	6600	2- 4-63	9.3	47	4.4	9	46.7	18.7
Tamarack Flat	6550	2- 4-63	0	0	0	0	29.2	12.1
South Loon Lake	6400	2- 5-63	0	0	0	0	28.3	10.6
Onion Creek	6100	2- 4-63	0	0	0	0	23.3	9.3
Strawberry	5700	2- 4-63	0	0	0	0	9.7	4.4
Robbs Valley (Orelli)	5600	2- 5-63	0	0	0	0	23.6	9.8
Ice House	5300	2- 5-63	0	0	0	0	13.2	4.9
MOKELUMNE RIVER								
Highland Meadow	8600	2- 2-63	42.5	37	15.8	31	51.4	17.8
Tragedy Springs	7900	1-28-63	0.6	33	0.2	0	44.5	11.5
Wheeler Lake	7800	2- 1-63	41.7	48	19.3	37	52.4	18.6
Pacific Valley	7600	2- 2-63	20.8	53	10.7	30	37.0	13.7
Corral Flat	7200	1-28-63	0	0	0	0	39.7	12.5
Silver Lake	7100	1-28-63	0	0	0	0	24.1	7.3
Bear Valley Ridge No. 1	6700	2- 4-63	0	0	0	0	26.3	7.9
Bear Valley Ridge No. 2	6600	2- 4-63	0	0	0	0	28.2	11.7
Lumberyard	6500	1-28-63	0	0	0	0	32.4	12.6
Hams Station	5450	1-28-63	0	0	0	0	9.8	2.7
Antelope Springs	4350	1-28-63	0	0	0	0	3.5	3.2

TABLE 2 - SNOW SURVEY 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)								
STANISLAUS RIVER								
DEADMAN CREEK	9250	2- 5-63	45.9	33	15.0	NEW COURSE - 1960		12.7
CLARK FORK MEADOW	8900	2- 4-63	51.9	33	17.0	NEW COURSE - 1960		12.1
SONORA PASS	8800	1-28-63	6.0	32	1.9	8	24.4	10.4
HIGHLAND MEADOW	8600	2- 2-63	42.5	37	15.8	31	51.4	17.8
LOWER RELIEF VALLEY	8100	2- 4-63	23.1	41	9.5	24	40.0	14.6
SODA CREEK FLAT	7800	2- 4-63	10.0	45	4.5	20	22.6	7.1
EAGLE MEADOW	7500	2- 4-63	6.9	38	2.6	10	25.0	9.7
LAKE ALPINE	7500	2- 4-63	18.0	56	10.0	24	41.7	15.8
HERRING CREEK	7400	2- 4-63	0	0	0	0	29.3	10.5
RELIEF DAM	7100	2- 4-63	0	0	0	0	20.6	8.2
SPICERS	6500	2- 3-63	3.0	33	1.0	3	29.8	15.2
NIAGARA FLAT	6500	2- 4-63	0	0	0	0	21.7	8.9
BIG MEADOW	6500	2- 4-63	0	0	0	0	29.4	12.6
COTTAGE SPRING	5700	2- 4-63	0	0	0	0	15.1	9.0
DORRINGTON	4800	2- 4-63	0	0	0	0	6.4	3.1
TUOLUMNE RIVER								
DANA MEADOWS	9850	NO SURVEY MADE					30.2	13.0
TIOGA PASS	9800	NO SURVEY MADE					26.3	10.9
RAFFERTY MEADOWS	9400	NO SURVEY MADE					31.0	9.4
BOND PASS	9300	NO SURVEY MADE					44.1	13.3
GRACE MEADOW	8900	NO SURVEY MADE					38.9	14.0
SNOW FLAT	8700	NO SURVEY MADE					42.8	16.8
TUOLUMNE MEADOWS	8600	NO SURVEY MADE					22.8	9.4
HORSE MEADOW	8400	NO SURVEY MADE					46.5	14.6
WILMER LAKE	8000	NO SURVEY MADE					43.8	16.4
SACHSE SPRINGS	7900	NO SURVEY MADE					39.5	15.2

TABLE 2 - SNOW SURVEY 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 (CONTINUED)								
SPOTTED FAWN	7800	No survey made					47.2	16.4
HUCKLEBERRY LAKE	7800	No survey made					43.2	16.8
PARADISE	7700	No survey made					41.4	15.8
GIN FLAT	7000	No survey made					35.3	18.9
UPPER KIBBIE RIDGE	6700	No survey made					21.2	9.2
VERNON LAKE	6700	No survey made					26.0	11.9
LOWER KIBBIE RIDGE	6700	No survey made					27.8	13.2
BEEHIVE MEADOW	6500	No survey made					27.8	13.2
MERCED RIVER								
SNOW FLAT	8700	No survey made					42.8	16.8
OSTRANDER LAKE	8200	No survey made					34.1	14.7
LAKE TENAYA	8150	No survey made					34.5	12.8
PEREGOY MEADOWS	7100	No survey made					32.9	14.1
GIN FLAT	7000	No survey made					35.3	18.9
SAN JOAQUIN RIVER								
MONO PASS	11450	No survey made					32.5	11.4
PIUTE PASS	11300	No survey made					34.4	13.6
EMERALD LAKE	10600	No survey made					35.1	
PIONEER BASIN	10400	No survey made					36.6	13.1
HEART LAKE	10100	No survey made					28.0	
VOLCANIC KNOB	10100	No survey made					31.5	
ROSE MARIE	10000	No survey made					29.3	
COLBY MEADOW	9800	No survey made					22.6	
MAMMOTH PASS	9500	2- 12-63	55.0	36	20.0	47	42.3	20.3
AGNEW PASS	9450	No survey made					31.4	11.7

TABLE 2 - SNOW SURVEY 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)								
SAN JOAQUIN RIVER (CONTINUED)								
KAISER PASS	9200	2- 7-63	33.3	68	22.7	59	38.2	16.2
DUTCH LAKE	9100	NO SURVEY MADE					28.3	10.6
COYOTE LAKE	8800	NO SURVEY MADE					32.2	
CORA LAKES	8400	NO SURVEY MADE					37.5	17.0
BADGER FLAT	8300	2- 7-63	21.6	62	13.4	NEW COURSE - 1960		13.4
NELLIE LAKE	8000	2- 7-63	22.4	43	9.6	24	39.9	16.4
LAKE THOMAS A. EDISON	7800	NO SURVEY MADE				NEW COURSE - 1958		8.4
CHILKOOT LAKE	7450	2- 7-63	10.5	46	4.8	13	37.6	17.0
TAMARACK CREEK	7250	2- 6-63	2.6	54	1.4	NEW COURSE - 1960		13.2
CHILKOOT MEADOW	7200	2- 7-63	3.6	56	2.0	5	36.9	18.2
FLORENCE LAKE	7200	2- 8-63	PATCHES	0	0	0	7.9	6.2
HUNTINGTON LAKE	7000	2- 8-63	0	0	0	0	21.0	9.6
CLOVER MEADOW	7000	NO SURVEY MADE					23.6	13.5
JACKASS MEADOW	7000	NO SURVEY MADE					23.9	12.7
CHIQUITO CREEK	6800	NO SURVEY MADE					22.4	12.1
BEASORE MEADOWS	6800	NO SURVEY MADE					28.7	14.9
POISON MEADOW	6800	2- 7-63	0	0	0	0	26.3	15.7
KINGS RIVER								
BISHOP PASS	11200	NO SURVEY MADE					30.1	15.2
CHARLOTTE RIDGE	10720	NO SURVEY MADE				NEW COURSE - 1955		
BULLFROG LAKE	10650	NO SURVEY MADE					28.7	
BLACKCAP BASIN	10300	2- 7-63	46.8	44	20.4	63	34.8	12.4
UPPER BURNT CORRAL MEADOW	9700	2- 7-63	50.8	32	16.3	47	34.9	15.8

TABLE 2 - SNOW SURVEY 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)								
KINGS RIVER (CONTINUED)								
Upper Woodchuck Meadow	9200	2- 7-63	35.8	37	13.4	New Course - 1955		
Rowell Meadow	8850	2- 6-63	20.8	70	14.5	54	27.0	15.4
Long Meadow	8500	2- 7-63	26.3	42	11.0	37	29.7	13.6
Post Corral Meadow	8200	2- 7-63	24.8	35	8.6	32	26.5	10.8
Dodsons Meadow	8050	2- 7-63	17.2	54	9.3	New Course - 1956		13.0
Big Meadows	7600	2- 4-63	5.8	46	2.7	10	26.5	13.0
Horse Corral Meadow	7600	2- 6-63	0	0	0	0	18.0	10.0
Grant Grove	6600	No survey made					15.3	12.9
KAWEAH RIVER								
Panther Meadow	8500	2- 3-63	26.5	43	11.5	31	37.4	15.2
Giant Forest	6400	2- 3-63	0	0	0	0	17.4	12.7
KERN RIVER								
Bighorn Plateau	11300	No survey made					24.2	
Siberian Pass	10880	No survey made					19.5	
Big Whitney Meadow	9750	No survey made					17.2	
Round Meadow	9000	No survey made					26.3	13.4
Ramshaw Meadows	8800	No survey made					12.0	
Little Whitney Meadow	8500	No survey made					14.5	
Casa Vieja Meadows	8320	No survey made					19.8	12.1
Bonita Meadows	8300	No survey made					14.6	10.4
Monache Meadows	8000	No survey made					8.7	8.0
Beach Meadows	7650	No survey made					10.1	8.1

TABLE 2 - SNOW SURVEY 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
LAHONTAN AREA								
Surprise Valley								
Cedar Pass	7100	2- 4-63	1.8	33	0.6	3	17.0	9.7
Barber Creek	6500	2- 1-63	4.8	29	1.4	New Course - 1958		7.0
Reservation Creek	5900	2- 1-63	1.6	50	0.8	New Course - 1958		8.3
Hays Canyon	6400	2- 1-63	0	0	0			
49 Mountain	6000	2- 1-63	0	0	0			
Susan River								
Fredonyer Pass No. 1	5750	1-29-63	2.0	10	0.2	5	9.7	4.2
Truckee River								
Squaw Valley No. 2	7500	1-30-63	0	0	0	0		19.9
Independence Camp	7000	No survey made					24.1	
Donner Summit	6900	2- 1-63	Patches	0	0	0	39.6	15.1
Sage Hen Creek	6500	1-31-63	0	0	0	0	18.9	8.0
Truckee No. 2	6400	1-31-63	0	0	0	0	16.9	7.0
Donner Lake	5950	No survey made					24.2	
Boca No. 2	5900	1-31-63	0	0	0	0	5.3	2.6
Donner Park		1-31-63	0	0	0			
Lake Tahoe Basin								
Hagans Meadow	8000	1-30-63	9.0	27	2.4	13	18.3	6.8
Marlette Lake (Nevada)	8000	1-29-63	7.0	23	1.6	7	23.5	6.9
Echo Summit	7450	2- 4-63	18.0	39	7.1	18	38.9	15.9
Daggetts Pass (Nevada)	7350	1-29-63	Patches	0	0	0	12.6	3.8
Freel Bench	7300	1-30-63	Patches	0	0	0	11.9	5.2

TABLE 2 - SNOW SURVEY DATA (CONTINUED)

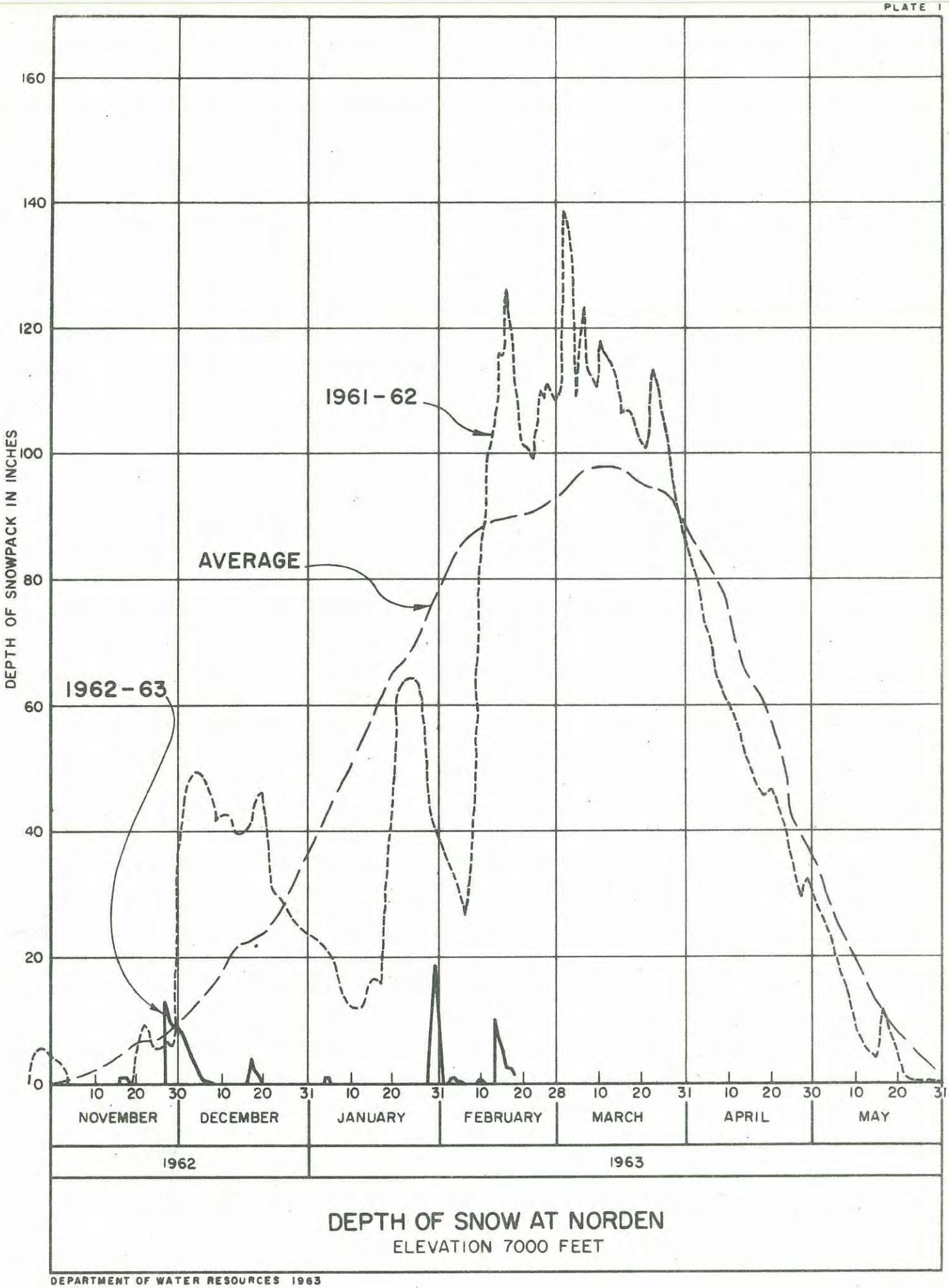
Area, Drainage Basin, and Snow Course[1]	Elevation in Feet	Date of Survey	Depth in Inches	Density in Percent	Water Content			
					In Inches	In Percent of April 1. Average	April 1 Average in Inches[2]	One Year Ago in Inches
LAHONTAN AREA (CONTINUED)								
LAKE TAHOE BASIN (CONTINUED)								
WARD CREEK	7000	1-31-63	4.0	25	1.0	2	46.7	17.8
GLENBROOK No. 2 (NEVADA)	6900	No survey made					13.9	4.2
RICHARDSONS No. 2	6500	1-29-63	5.0	20	1.0	0	17.4	7.6
UPPER TRUCKEE	6400	1-30-63	Patches	0	0	0	7.8	5.0
TAHOE CITY	6250	1-31-63	2.0	10	0.2	2	11.8	3.8
CARSON RIVER								
UPPER CARSON PASS	8550	1-25-63	10.7	25	2.7	8	35.2	13.6
LOWER CARSON PASS	8400	1-25-63	10.6	25	2.6	7	37.9	14.1
WALKER RIVER								
VIRGINIA LAKES	9500	1-28-63	2.0	20	0.4	2	17.0	8.7
SONORA PASS	8800	1-28-63	6.0	32	1.9	8	24.4	10.4
MONO LAKE BASIN								
GEM PASS	10400	No survey made					32.0	11.7
TIOGA PASS	9800	No survey made					26.3	10.9
SADDLEBAG LAKE	9800	No survey made					33.8	11.7
ELLERY LAKE (PINEDOLLAR)	9600	No survey made					30.6	11.8
AGNEW PASS	9450	No survey made					31.4	11.7
GEM LAKE	9150	No survey made					31.3	11.7
OWENS RIVER								
MONO PASS	11450	No survey made					32.5	11.4
PIUTE PASS	11300	No survey made					34.4	13.6
BISHOP LAKE	11300	No survey made					19.0	9.9
BISHOP PASS	11200	No survey made					30.1	15.2
COTTONWOOD LAKES No. 2	11100	2-12-63	43.8	31	13.5	105	12.8	8.4

TABLE 2 - SNOW SURVEY 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
LAHONTAN AREA (CONTINUED)								
OWENS RIVER (CONTINUED)								
EAST PIUTE PASS	10800	NO SURVEY MADE					11.6	7.4
COTTONWOOD LAKES NO. 1	10600	2-12-63	35.4	32	11.4	95	12.0	8.4
SAWMILL	10300	NO SURVEY MADE					18.0	9.1
ROCK CREEK NO. 3	10000	2-11-63	44.9	35	15.6	108	14.5	7.1
BIG PINE CREEK NO. 1	10000	2- 7-63	36.6	34	12.5	52	24.0	10.8
BIG PINE CREEK NO. 3	9800	2- 7-63	35.4	37	13.0	79	16.4	9.3
BIG PINE CREEK NO. 2	9700	2- 7-63	29.3	37	10.7	62	17.2	9.2
MAMMOTH PASS	9500	2-12-63	55.0	36	20.0	47	42.3	20.3
NORTH LAKE	9300	NO SURVEY MADE					8.9	6.0
ROCK CREEK NO. 2	9050	2-11-63	28.0	35	9.8	100	9.8	6.0
MINARETS NO. 2	9000	2-12-63	35.5	40	14.0	45	30.9	13.4
SOUTH FORK	8850	NO SURVEY MADE					5.0	2.3
ROCK CREEK NO. 1	8700	2-11-63	20.7	33	6.9	81	8.5	5.0
BISHOP PARK	8400	NO SURVEY MADE					3.9	3.0
MINARETS NO. 1	8300	2-12-63	17.1	37	6.4	32	20.2	9.3
MAMMOTH	8300	2-12-63	15.8	41	6.5	32	20.1	10.5
MOJAVE DESERT	NO SURVEYS MADE IN THIS AREA IN FEBRUARY							
COLORADO DESERT	NO SURVEYS MADE IN THIS AREA IN FEBRUARY							

1/ COURSES PERTINENT TO MORE THAN ONE BASIN ARE LISTED UNDER EACH BASIN.
2/ AVERAGES ARE COMPUTED FOR THE 30-YEAR PERIOD 1930-59.

PLATE 1



DEPTH OF SNOW AT NORDEN

ELEVATION 7000 FEET

DEPARTMENT OF WATER RESOURCES 1963

TABLE 3

AERIAL PHOTOGRAPHIC SNOW DEPTH MEASUREMENTS

FEBRUARY, 1963

AREA, DRAINAGE BASIN, AND AERIAL MARKER	SOURCE OF DATA 1/	ELEVATION (FEET)	DATE OF MEASUREMENT	DEPTH OF SNOW (INCHES)
CENTRAL VALLEY AREA				
AMERICAN RIVER				
UPPER CARSON PASS	EBMUD	8500	2- 5-63	28
SILVER LAKE	EBMUD	7100	2- 5-63	PATCHES
MOKELUMNE RIVER				
BLUE LAKES	EBMUD	8000	2- 5-63	31
PACIFIC VALLEY	EBMUD	7500	2- 5-63	14
BEAR VALLEY RIDGE #1	EBMUD	6700	2- 5-63	0
STANISLAUS RIVER				
LOWER RELIEF VALLEY	PG&E	8100	2- 4-63	23
SODA CREEK FLAT	PG&E	7800	2- 4-63	11
LAKE ALPINE	EBMUD	7550	2- 5-63	11
EAGLE MEADOW	PG&E	7500	2- 4-63	8
RELIEF DAM	PG&E	7100	2- 4-63	0
TUOLUMNE RIVER				
DANA MEADOWS	CEPC	9850	2- 6-63	56
SAN JOAQUIN RIVER				
ISLAND PASS	CEPC	10300	2- 6-63	75
AGNEW PASS	CEPC	9450	2- 6-63	48
MAMMOTH PASS	SCEC	8200	3/	72
KINGS RIVER				
CARDINAL LAKE	2/	11400	2-12-63	60
CHARLOTTE RIDGE	2/	10700	2-12-63	66
GRANITE BASIN	2/	10400	2-12-63	66
SCENIC MEADOW	2/	10200	2-12-63	42
STATE LAKES (RA)	USCE	10200	2-12-63	60
MITCHELL MEADOW (RA)	USCE	9700	2-12-63	40
UPPER WOODCHUCK MEADOW (RA)	USCE	9200	2-12-63	36
WOODCHUCK MEADOW	USCE	9100	2-12-63	27
KERN				
BIG HORN PLATEAU	2/	11450	2-12-63	60
SIBERIAN PASS	2/	10900	2-12-63	48
RATTLESNAKE CREEK BASIN	2/	10500	2-12-63	60
LAHONTAN AREA				
CARSON RIVER				
UPPER FISH VALLEY	NCSS	8100	2- 4-63	12
POISON FLAT	NCSS	7700	2- 4-63	6

TABLE 3 - AERIAL PHOTOGRAPHIC SNOW DEPTH MEASUREMENTS (CONTINUED)

FEBRUARY, 1963

AREA, DRAINAGE BASIN, AND AERIAL MARKER	SOURCE OF DATA 1/	ELEVATION (FEET)	DATE OF MEASUREMENT	DEPTH OF SNOW (INCHES)
LAHONTAN AREA (CONTINUED)				
WALKER RIVER				
CENTER MOUNTAIN	NCSS	9400	2- 4-63	26
MONO LAKE				
DONOHUE PASS	CEPC	10800	2- 6-63	72
ALGER LAKE	CEPC	10500	2- 6-63	60
SADDLEBAG LAKE	CEPC	10400	2- 6-63	87
SLATE CREEK	CEPC	10300	2- 6-63	63
WARREN CREEK	CEPC	9500	MARKER DOWN	
BISHOP CREEK				
SCHOBER PASS	CEPC	12300	2- 6-63	53
COYOTE RIDGE	CEPC	11700	2- 6-63	72
BISHOP LAKES	CEPC	11300	2- 6-63	72
HUNGRY PACKER LAKE	CEPC	11300	2- 6-63	70
DRUNKEN SAILOR	CEPC	11000	2- 6-63	87
PIUTE LAKE (EAST)	CEPC	11000	2- 6-63	45
GEORGE LAKE	CEPC	10600	2- 6-63	36
TREASURE LAKE	CEPC	10200	2- 6-63	78
OWENS RIVER				
MT. MORGAN	LADWP	12,000	3/	60
BIG PINE CREEK BASIN	LADWP	11500	MARKER DOWN	
KEARSARGE PASS	LADWP	11500	3/	72
LAKE DOROTHY	LADWP	11400	3/	54
SAWMILL PASS	LADWP	11400	3/	72
COTTONWOOD LAKES	LADWP	11200	3/	54
TABOOSE PASS	LADWP	11200	3/	66
HORSESHOE MEADOWS	LADWP	11100	3/	36
SHEPHERDS PASS	LADWP	11000	3/	36
GOLDEN TROUT CABIN	LADWP	10600	3/	36
BIG PINE LAKES	LADWP	10100	3/	36
ROCK CREEK LAKES	LADWP	10000	MARKER DOWN	
ONION VALLEY	LADWP	9000	3/	36

1/ CEPC - CALIFORNIA ELECTRIC POWER COMPANY; 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.

2/ UNITED STATES CORPS OF ENGINEERS AND DEPARTMENT OF WATER RESOURCES COOPERATING.

3/ DATE OF READING REPORTED AS FEBRUARY 3, 5, AND 6, 1963.

TABLE 4

SUMMARY OF STORAGE IN MAJOR RESERVOIRS

Area	Number of Reservoirs Reported	Total Capacity (Acre-Feet)	Water in Storage (Acre-Feet)			February 1, 1963, Storage	
			February 1, 1962	October 1, 1962	February 1, 1963	Percent of 10-Year Average	Percent of Capacity
INTRASTATE							
North Coastal	3	2,663,900	1,158,410	1,898,190	2,328,710	108	87
San Francisco Bay	14	491,700	197,590	230,450	320,200	98	65
Central Coastal	6	875,800	182,660	321,360	368,930	98	42
South Coastal	20	1,394,000	266,280	277,550	328,720	100	24
Sacramento Valley	26	9,611,900	5,250,470	5,570,720	6,533,500	106	68
San Joaquin Valley	26	4,855,400	803,820	1,764,810	1,769,340	109	36
Lahontan	7	348,200	149,010	206,070	200,550	86	58
Subtotal	102	20,240,900	8,008,240	10,269,150	11,849,950	106	59
INTERSTATE							
North Coastal	3	1,205,100	277,240	259,780	447,010	76	37
Lahontan	3	828,300	13,320	115,060	230,560	54	28
Colorado Desert 1/	3	29,636,000	20,146,200	25,539,700	24,896,200	130	84
Subtotal	9	31,669,400	20,436,760	25,914,540	25,573,770	127	81
TOTAL 1/	111	51,910,300	28,445,000	36,183,690	37,423,720	121	72

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

TABLE 5

WATER CONTENT OF MAJOR STORAGE RESERVOIRS

Watershed	Reservoir	Operator	Capacity[1] (Acre-Feet)	Water in Storage as of February 1			
				10-Year Average 1953-1962 (Acre-Feet)	1962 (Acre-Feet)	1963 (Acre-Feet)	1963 in % of Avg.
NORTH COASTAL AREA							
Klamath River	Clear Lake[2]	US Bureau of Reclamation	526,800	239,940	69,930	125,510	52
	Gerber[2]	US Bureau of Reclamation	94,300	35,880	1,780	28,200	79
	Upper Klamath[2]	US Bureau of Reclamation	584,000	311,810	205,530	293,300	94
Trinity River	Trinity Dam	US Bureau of Reclamation	2,447,700	5/	1,052,500	2,179,900	-
Shasta River	Dwinnell	Montague Water Cons Dist	50,000	23,100	15,580	-	-
South Eel River	Lake Pillsbury	Pac Gas and Electric Co	93,700	61,200	43,190	65,760	107
Russian River	Lake Mendocino	US Corps of Engineers	122,500	5/	62,720	83,050	-
SAN FRANCISCO BAY AREA							
Conn Creek	Lake Hennessey	City of Napa	31,000	32,820	19,750	31,000	94
Nicasio Creek	Nicasio	Marin Municipal Water Dist	22,500	5/	6,650	22,400	-
Lagunitas Creek	Kent	Marin Municipal Water Dist	16,500	12,000[6]	7,330	16,700	139
	Alpine	Marin Municipal Water Dist	9,200	4,970	2,550	8,900	179
San Pablo Creek	San Pablo[3]	East Bay Mun Utility Dist	43,200	33,350	26,020	26,260	79
San Leandro Creek	Upper San Leandro[3]	East Bay Mun Utility Dist	41,400	29,620	27,840	31,880	107
	Chabot[3]	East Bay Mun Utility Dist	12,600	9,440	6,220	10,340	110
Coyote Creek	Coyote	Santa Clara Valley WCD	24,600	9,700	210	15,240	157
	Leroy Anderson	Santa Clara Valley WCD	75,000	38,910	0	4,200	11
Los Gatos Creek	Lexington	Santa Clara Valley WCD	21,500	4,250[6]	100	20,310	477
	Austrian	San Jose Water Works	6,200	1,860	820	6,090	327
Calaveras Creek	Calaveras[3]	City and Co of San Francisco	100,000	60,030	41,370	59,010	98
San Andreas Creek	San Andreas[3]	City and Co of San Francisco	18,500	15,120	15,740	16,260	107
Laguna Creek	Upper Crystal Spgs)[3]	City and Co of San Francisco	69,500	50,680	42,990	51,610	102
San Mateo Creek	Lower Crystal Spgs)[3]						

TABLE 5 - WATER CONTENT OF MAJOR STORAGE RESERVOIRS (CONTINUED)

WATERSHED	RESERVOIR	OPERATOR	CAPACITY 1/ (ACRE-FEET)	WATER IN STORAGE AS OF FEBRUARY 1			
				10-YEAR AVERAGE 1953-1962 (ACRE-FEET)	1962 (ACRE-FEET)	1963 (ACRE-FEET)	1963 IN % OF AVG.
CENTRAL COASTAL AREA							
SALINAS RIVER	SALINAS	SAN LUIS OBISPO CO FCWCD	26,000	15,910	8,320	18,500	116
	NACIMIENTO	MONTEREY COUNTY FCWCD	350,000	5/	41,900	149,000	-
SANTA YNEZ RIVER	GIBRALTAR	SANTA BARBARA CITY	14,800	10,680	2,890	7,650	72
	CACHUMA	US BUREAU OF RECLAMATION	204,900	5/	129,450	183,840	-
CUYAMA RIVER	TWITCHELL	US BUREAU OF RECLAMATION	240,100	5/	0	2,340	-
OLD CREEK	WHALE ROCK	CITY OF SAN LUIS OBISPO	40,000	5/	100	7,600	-
SOUTH COASTAL AREA							
VENTURA-SANTA CLARA RIVERS							
COYOTE CREEK	CASITAS	VENTURA RIVER MUN WATER DIST	254,000	5/	3,900	47,370	-
PIRU CREEK	LAKE PIRU (LK FELICIA)	UNITED WATER CONS DIST	101,200	4,610 6/	1,750	24,150	522
SAN GABRIEL-SANTA ANA RIVERS							
SAN GABRIEL RIVER	COGSWELL	LA COUNTY FLOOD CONTROL DIST	10,900	940	1,130	10,230	1090
	SAN GABRIEL	LA COUNTY FLOOD CONTROL DIST	43,800	3,590	4,320	1,280	36
BEAR CREEK	BEAR VALLEY	BEAR VALLEY MUTUAL WATER CO	72,200	10,860	700	6,440	59
TRIBUTARY, CAJALCO CR	LAKE MATHEWS 4/	METROPOLITAN WATER DISTRICT	182,000	148,000 6/	153,910	141,920	95
SAN JACINTO RIVER	LAKE HEMET	LAKE HEMET WATER COMPANY	13,400	2,440	890	590	24
	RAILROAD CANYON 3/	TEMESCAL WATER COMPANY	14,700	1,510	3,210	2,180	145
SANTIAGO CREEK	SANTIAGO 3/	SERRANO AND CARPENTER ID AND IRVINE COMPANY	25,000	7,570	3,650	1,780	24
SANTA MARGARITA-SAN LUIS REY RIVERS							
SAN LUIS REY RIVER	HENSHAW	VISTA IRRIGATION DISTRICT	194,300	7,360	5,690	5,910	80

TABLE 5 - WATER CONTENT OF MAJOR STORAGE RESERVOIRS (CONTINUED)

WATERSHED	RESERVOIR	OPERATOR	CAPACITY 1/ (ACRE-FEET)	WATER IN STORAGE AS OF FEBRUARY 1			
				10-YEAR AVERAGE 1953-1962 (ACRE-FEET)	1962 (ACRE-FEET)	1963 (ACRE-FEET)	1963 IN % OF AVG.
SOUTH COASTAL AREA (CONTINUED)							
SAN DIEGUITO-SAN DIEGO RIVERS							
SAN DIEGUITO RIVER	LAKE HODGES 3/	CITY OF SAN DIEGO	33,600	5,900 6/	2,730	2,840	48
SAN YSABEL CREEK	SUTHERLAND	CITY OF SAN DIEGO	29,700	3,110 6/	2,570	3,100	100
SAN VICENTE CREEK	SAN VICENTE 3/	CITY OF SAN DIEGO	90,200	49,770	65,620	63,680	128
SAN DIEGO RIVER	EL CAPITAN	CITY OF SAN DIEGO	112,800	15,880	7,740	7,610	48
BOULDER CREEK	CUYAMACA	HELIX IRRIGATION DISTRICT	11,600	80	10	0	0
SWEETWATER-OTAY RIVERS AND COTTONWOOD CREEK							
SWEETWATER RIVER	LAKE LOVELAND	CALIFORNIA WATER AND TELEPHONE	25,400	2,420	960	1,560	65
	SWEETWATER MAIN 3/	COMPANY	27,700	6,180	2,290	2,570	42
OTAY RIVER	LOWER OTAY	CITY OF SAN DIEGO	56,500	8,850	3,640	3,600	41
COTTONWOOD CREEK	MORENA	CITY OF SAN DIEGO	50,200	1,930	560	470	24
BARRETT	BARRETT	CITY OF SAN DIEGO	44,800	1,610	1,010	1,440	90
CENTRAL VALLEY AREA							
SACRAMENTO RIVER	SHASTA	US BUREAU OF RECLAMATION	4,500,000	3,095,750	2,716,700	3,191,600	100
	WHISKEYTOWN	US BUREAU OF RECLAMATION	241,100	-	-	7/	-
FEATHER RIVER	MOUNTAIN MEADOWS	PAC GAS AND ELECTRIC COMPANY	24,000	7,160	550	16,860	235
	FRENCHMAN	DEPT OF WATER RESOURCES	51,000	5/	200	15,150	-
	LAKE ALMANOR	PAC GAS AND ELECTRIC COMPANY	649,800	381,120	342,770	320,180	84
	BUCKS STORAGE	PAC GAS AND ELECTRIC COMPANY	101,700	46,720	47,140	80,220	172
	BUTT VALLEY	PAC GAS AND ELECTRIC COMPANY	49,900	35,330	46,120	40,550	115
	LITTLE GRASS VALLEY	OROVILLE WYANDOTTE ID	93,000	5/	4,670	82,460	-
	SLY CREEK	OROVILLE WYANDOTTE ID	65,000	5/	4,730	47,900	-
YUBA RIVER	BOWMAN LAKE	NEVADA IRRIGATION DISTRICT	69,800	19,920	8,130	46,700	234
	SCOTTS FLAT	NEVADA IRRIGATION DISTRICT	27,400	15,720	8,920	26,710	170
	SPAULDING SYSTEM	PAC GAS AND ELECTRIC COMPANY	137,400	51,740	43,950	69,320	134

TABLE 5 - WATER CONTENT OF MAJOR STORAGE RESERVOIRS (CONTINUED)

WATERSHED	RESERVOIR	OPERATOR	CAPACITY 1/ (ACRE-FEET)	WATER IN STORAGE AS OF FEBRUARY 1			
				10-YEAR AVERAGE 1953-1962 (ACRE-FEET)	1962 (ACRE-FEET)	1963 (ACRE-FEET)	1963 IN % OF AVG.
CENTRAL VALLEY AREA (CONTINUED)							
BEAR RIVER	COMBIE	NEVADA IRRIGATION DISTRICT	7,800	4,980	3,580	5,550	111
AMERICAN RIVER	TWIN LAKES	PAC GAS AND ELECTRIC COMPANY	21,600	4,840	4,270	5,480	113
	SILVER LAKE	PAC GAS AND ELECTRIC COMPANY	8,600	310	160	1,120	361
	LOON LAKE	SACRAMENTO MUN UTILITY DIST	76,500	-	-	1/	-
	ICE HOUSE	SACRAMENTO MUN UTILITY DIST	46,000	5/	8,500	5,400	-
	UNION VALLEY	SACRAMENTO MUN UTILITY DIST	271,000	5/	-	55,000	-
	FOLSOM	US BUREAU OF RECLAMATION	1,010,300	421,220 6/	444,200	612,100	145
	STUMPY MEADOWS	GEORGETOWN DIVIDE PUD	20,000	5/	1,000	20,000	-
STONY CREEK	EAST PARK	US BUREAU OF RECLAMATION	50,900	31,120	15,750	29,120	94
	STONY GORGE	US BUREAU OF RECLAMATION	50,000	25,680	16,230	35,000	136
	BLACK BUTTE	US CORPS OF ENGINEERS	160,000	-	-	1/	-
CACHE CREEK	CLEAR LAKE	CLEAR LAKE WATER COMPANY	314,000	206,450	128,000	215,000	104
PUTAH CREEK	BERRYESSA	US BUREAU OF RECLAMATION	1,602,300	5/	1,000,390	1,348,500	-
COSUMNES RIVER	JENKINSON LAKE (SLY PK)	US BUREAU OF RECLAMATION	41,000	28,850 6/	7,900	28,640	99
MOKELUMNE RIVER	LOWER BEAR	PAC GAS AND ELECTRIC COMPANY	48,500	6,940 6/	8,320	8,820	127
	SALT SPRINGS	PAC GAS AND ELECTRIC COMPANY	140,900	22,370	0	27,040	121
	PARDEE	EAST BAY MUN UTILITY DISTRICT	210,000	167,630	27,470	199,080	119
STANISLAUS RIVER	RELIEF	PAC GAS AND ELECTRIC COMPANY	15,600	1,240	300	0	0
	STRAWBERRY	PAC GAS AND ELECTRIC COMPANY	18,300	5,190	3,340	5,720	110
	DONNELLS	OAKDALE & SO SAN JOAQUIN ID	64,700	22,670 6/	16,290	45,780	201
	HARTLEY LAKE	OAKDALE & SO SAN JOAQUIN ID	98,300	36,970 6/	20,620	72,530	196
	MELONES	PAC GAS AND ELECTRIC COMPANY	112,600	24,910	11,620	32,290	129
	TULLOCH	OAKDALE & SO SAN JOAQUIN ID	68,200	38,930 6/	50,320	57,380	147

TABLE 5 - WATER CONTENT OF MAJOR STORAGE RESERVOIRS (CONTINUED)

WATERSHED	RESERVOIR	OPERATOR	CAPACITY 1/ (ACRE-FEET)	WATER IN STORAGE AS OF FEBRUARY 1			
				10-YEAR AVERAGE 1953-1962 (ACRE-FEET)	1962 (ACRE-FEET)	1963 (ACRE-FEET)	1963 IN % OF AVG.
CENTRAL VALLEY AREA (CONTINUED)							
TUOLUMNE RIVER	CHERRY LAKE (CHERRY VALLEY)	CITY AND CO OF SAN FRANCISCO	268,200	39,570 6/	15,200	80,170	204
	LAKE ELEANOR	CITY AND CO OF SAN FRANCISCO	26,100	10,040	7,060	11,810	118
	HETCH HETCHY	CITY AND CO OF SAN FRANCISCO	360,400	118,560	41,960	116,860	98
	DON PEDRO	TURLOCK AND MODESTO ID	290,400	112,430	34,300	144,140	128
	TURLOCK LAKE (OWEN)	TURLOCK AND MODESTO ID	49,000	31,760	21,270	38,800	122
	MODESTO	MODESTO IRRIGATION DISTRICT	27,000	15,010	-	11,000	73
MERCED RIVER	LAKE MCCLURE	MERCED IRRIGATION DISTRICT	281,000	84,720	20,090	83,600	99
SAN JOAQUIN RIVER	CRANE VALLEY (BASS LK)	PAC GAS AND ELECTRIC CO	45,400	19,410	20,670	25,880	133
	THOMAS A. EDISON	SOUTHERN CALIF EDISON CO	125,200	51,470 6/	21,360	59,450	119
	FLORENCE LAKE	SOUTHERN CALIF EDISON CO	64,600	340	290	1,480	435
	HUNTINGTON LAKE	SOUTHERN CALIF EDISON CO	89,800	41,800	40,130	55,030	132
	SHAVER LAKE	SOUTHERN CALIF EDISON CO	135,400	27,860	13,530	54,800	197
	MAMMOTH POOL	SOUTHERN CALIF EDISON CO	122,700	5/	26,600	49,430	-
	MILLERTON LAKE	US BUREAU OF RECLAMATION	520,600	291,970	204,400	270,700	93
KINGS RIVER	PINE FLAT	US CORPS OF ENGINEERS	1,013,400	413,700 6/	166,200	346,300	84
	WISHON	PAC GAS AND ELECTRIC CO	128,600	5/	50,540	17,200	-
	COURTRIGHT	PAC GAS AND ELECTRIC CO	129,900	5/	0	56,290	-
KERN RIVER	ISABELLA	US CORPS OF ENGINEERS	570,000	95,600 6/	17,650	97,600	102
KAWEAH	TERMINUS	US CORPS OF ENGINEERS	150,000	5/	0	21,700	-
TULE	SUCCESS	US CORPS OF ENGINEERS	80,000	5/	80	13,400	-

TABLE 5 - WATER CONTENT OF MAJOR STORAGE RESERVOIRS (CONTINUED)

WATERSHED	RESERVOIR	OPERATOR	CAPACITY 1/ (ACRE-FEET)	WATER IN STORAGE AS OF FEBRUARY 1			
				10-YEAR AVERAGE 1953-1962 (ACRE-FEET)	1962 (ACRE-FEET)	1963 (ACRE-FEET)	1963 IN % OF AVG.
LAHONTAN AREA							
TRUCKEE RIVER	LAKE TAHOE 2/	TRUCKEE-CARSON ID	744,600	397,510	0	175,000	44
LITTLE TRUCKEE RIVER	BOCA 2/	TRUCKEE-CARSON ID	41,200	7,500	1,000	26,500	353
EAST WALKER RIVER	BRIDGEPORT 2/	WALKER RIVER IRRIGATION DIST	42,500	24,740	12,320	29,060	117
MONO LAKE BASIN	SADDLEBAG LAKE	CALIFORNIA ELECTRIC POWER CO	11,100	3,600	3,080	4,150	115
	GEM LAKE	CALIFORNIA ELECTRIC POWER CO	17,600	5,740	3,760	2,850	50
	GRANT LAKE	CITY OF LOS ANGELES	47,500	31,620	11,210	21,980	69
OWENS RIVER	LAKE CROWLEY	CITY OF LOS ANGELES	183,500	133,250	78,960	113,390	85
	TINNEMAHA	CITY OF LOS ANGELES	16,600	1,340	40	2,710	202
	HAIWEE (SOUTH)	CITY OF LOS ANGELES	58,500	52,300	48,720	49,210	94
	HILLSIDE	CALIF ELECTRIC POWER CO	13,400	4,180	3,240	6,260	150
COLORADO DESERT AREA							
COLORADO RIVER	LAKE MEAD 2/	US BUREAU OF RECLAMATION	27,207,000	16,847,700	17,901,000	22,676,000	134
	LAKE MOJAVE 2/	US BUREAU OF RECLAMATION	1,810,000	1,665,300	1,680,400	1,682,000	101
	LAKE HAVASU 2/	US BUREAU OF RECLAMATION	619,000	573,100	564,800	538,200	94

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.
7/ UNDER CONSTRUCTION.

TABLE 6

RUNOFF DATA[1]

Area, Stream, and Station	Source of Data[2]	January 1963				Oct. 1, 1962, Through Jan. 31, 1963			
		Measured Flow (Acre-Feet)	Unimpaired Runoff[3] Total For Month (Acre-Feet)	50-Year[4] Average (Acre-Feet)	In % of Avg.	Measured Flow (Acre-Feet)	Unimpaired Runoff[3] Total For Season (Acre-Feet)	50-Year[4] Average (Acre-Feet)	In % of Avg.
NORTH COASTAL AREA									
Trinity at Lewiston	USGS-USBR	10,300	67,200	96,600	70	51,900	447,600	240,500	186
Klamath, Copco to Somesbar	USGS	254,700[7]	272,700	601,800	45	1,871,500[7]	1,932,700	1,369,900	140
Eel at Scotia	USGS	253,000	273,400	1,169,500	24	2,156,000	2,253,200	2,300,600	98
Russian at Healdsburg	USGS	99,300	95,300	215,000	44	343,500	289,700	407,900	71
SAN FRANCISCO BAY AREA									
Napa near St. Helena	USGS	20,380	20,380[5]	17,040	120	41,040	41,040[5]	31,100	132
Coyote Creek near Madrone	USGS	100	18,860	11,900	159	950	19,570	17,360	113
CENTRAL COASTAL AREA									
Arroyo Seco near Soledad	USGS	32,070	32,070[5]	22,800	140	39,600	39,600[5]	37,490	105
Nacimiento below Nacimiento Dam, near Bradley	USGS	50	76,430	35,950	212	37,550	94,250	59,050	160
SOUTH COASTAL AREA									
Sespe Creek near Fillmore	USGS	110	640	10,860	6	330	2,000	18,700	11
Arroyo Seco near Pasadena	USGS	70	70[5]	910	8	240	240[5]	1,680	14
Santa Ana near Mentone	USGS	0	1,330	7,000	19	0	5,240	16,660	31
SACRAMENTO VALLEY AREA									
Sacramento, Inflow to Shasta	USBR	386,500	386,500[5]	621,900	62	1,991,800	1,991,800[5]	1,713,700	116
Sacramento near Red Bluff	USGS-USBR	620,000	558,100	1,112,380	50	2,434,000	2,774,000	2,549,200	109
Feather near Oroville	USGS	343,400	384,900	446,180	86	1,966,200	2,059,000	1,031,600	199
Yuba at Smartville[6]	USGS-PG&E	225,400	191,900	238,960	80	797,600	1,003,900	517,800	193
Bear near Wheatland	USGS	32,900	28,900	53,000	55	173,000	163,400	113,900	144
American, Inflow to Folsom	USGS-PG&E	123,000[7]	250,400	275,820	91	651,300[7]	802,800	541,000	148
Cosumnes at Michigan Bar	USGS	17,570	18,260	52,810	35	51,900	55,140	86,530	64
Mokelumne, Inflow to Pardee	EBMUD	61,040[7]	47,200	44,600	106	175,420[7]	95,820	98,300	98

TABLE 6 - RUNOFF DATA[1]

Area, Stream, and Station	Source of Data[2]	January 1963				Oct. 1, 1962, Through Jan. 31, 1963			
		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	5,100[7]	43,400	68,180	64	85,600[7]	79,300	146,400	54
Tuolumne, inflow to Don Pedro	USGS-CCSF	46,900[7]	67,500	108,120	62	292,300[7]	118,600	241,330	49
Merced, inflow to Exchequer	USGS	2,700[7]	41,300	60,240	68	11,100[7]	56,500	125,000	45
San Joaquin, inflow to Friant	USGS-USBR	3,900[7]	83,300	73,670	113	18,100[7]	122,200	179,300	68
Kings, inflow to Pine Flat	USGS-USCE	13,800[7]	76,400	63,420	120	46,300[7]	113,000	156,400	73
Kaweah near Three Rivers	USGS	33,500[7]	33,500[5]	22,020	152	42,440[7]	42,440[5]	51,000	83
Tule, inflow to Success	USGS-USCE	3,720	9,760	12,900	76	6,040	12,930	27,000	48
Kern near Bakersfield	KCLC	12,070	27,790	35,040	79	59,190	66,180	95,600	69
LAHONTAN AREA									
Truckee, Tahoe to Farad	USGS	23,180	48,080	17,200	280	122,170	136,270	48,600	280
Owens, near Round Valley	LADW&P	16,620	13,870	10,900	127	55,820	45,550	43,100	106
COLORADO DESERT AREA									
Colorado near Grand Canyon	USGS-USBR	190,800	190,800[5]	347,700	55	1,531,600	1,531,600[5]	1,741,300[8]	88

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.

3/ Corrected for upstream regulation.

4/ Computed for the 50-year period 1907-08 through 1956-57; 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 at Somesbar; American at Fair Oaks; Mokelumne near Mokelumne Hill; Stanislaus below Melones Powerhouse; Tuolumne above La Grange Dam; Merced below Exchequer; San Joaquin below Friant Dam; Kings below Pine Flat Dam; Tule below Success Dam; Kaweah at Three Rivers and South Fork Kaweah at Three Rivers.

8/ Based on the 34-year period 1922-23 through 1955-56.

TABLE 7

ESTIMATED DISCHARGE TO THE OCEAN
FROM SELECTED STREAMS IN SOUTHERN CALIFORNIA

Area and Stream	January 1963				Discharge During January 1962 (Acre-Feet)
	Discharge Duration In Days	Date of Maximum Instantaneous Discharge	Maximum Instantaneous Discharge (Second-Feet)	Total Discharge (Acre-Feet)	
CENTRAL COASTAL AREA					
Santa Maria River	0	None	0	0	0
Santa Ynez River	0	None	0	0	252
SOUTH COASTAL AREA					
Ventura River	31	1-10-63	2	47	57
Santa Clara River	0	None	0	0	6
Ballona Creek	31	1-31-63	1,321	1,519	6,790
Dominguez Channel	31	1-31-63	96	545	2,790
Los Angeles River	31	1-31-63	2,234	1,650	13,410
Los Cerritos Channel	31	1-31-63	106	95	960
San Gabriel River	0	None	0	0	1,760
Coyote Creek	1	1-31-63	104	25	4,280
Santa Ana River	0	0	0	0	184
Santa Ana Delhi Drain					1/
Peters Canyon Drain	31	1-22-63	2	51	98
Aliso Creek	0	None	0	0	5
Trabuco Creek	23	1- 9-63	1	7	6
San Juan Creek	31	Constant	0.2	12	355
Santa Margarita River	0	None	0	0	0
San Luis Rey River	0	None	0	0	0
Tia Juana River	0	None	0	0	0

1/ No record due to channel construction.

TABLE 8

TABLE 8 - WATER SPREAD AT MAJOR ARTIFICIAL RECHARGING GROUNDS IN SOUTHERN CALIFORNIA

Artificial Recharging Project	Ground Water Basin	Source of Water	Agency Conducting Spreading	Estimated Amounts Spread (Acre-Feet)	
				Oct. 1, 1962-Jan. 31, 1963	January 1963
Ojai	Ojai Valley	Matilija Dam on Matilija Creek	Ventura County Flood Control District	0	0
Piru	Piru	Piru Creek	United Water Conservation District	60	0
Saticoy	Oxnard Plain Forebay	Santa Clara River	United Water Conservation District	960	300
El Rio	Oxnard Plain Forebay	Santa Clara River	United Water Conservation District	0	0
Injection well	Oxnard Plain Pressure Area	Ground water at El Rio via El Rio - Port Hueneme conduit	United Water Conservation District	0	0
Lopez	Tujunga	Lopez and Pacoima Reservoirs via pipeline	Los Angeles County Flood Control District		6/
Pacoima	San Fernando	Pacoima Wash	Los Angeles County Flood Control District		6/
Branford	San Fernando	Storm runoff collected by Branford-Catara Channel	Los Angeles County Flood Control District		6/
Hansen	San Fernando	Tujunga Wash	Los Angeles County Flood Control District		6/
Los Angeles River Headworks	San Fernando	Los Angeles River	Los Angeles Department of Water and Power	2,209	577

TABLE 8 - WATER SPREAD AT MAJOR ARTIFICIAL RECHARGING GROUNDS IN SOUTHERN CALIFORNIA (CONTINUED)

ARTIFICIAL RECHARGING PROJECT	GROUND WATER BASIN	SOURCE OF WATER	AGENCY CONDUCTING SPREADING	ESTIMATED AMOUNTS SPREAD (ACRE-FEET)	
				OCT. 1, 1962-JAN. 31, 1963	JANUARY 1963
WEST COAST BASIN BARRIER PROJECT	WEST COAST	COLORADO RIVER 1/	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT	1,277.19	382.47
DOMINGUEZ GAP	WEST COAST	LOS ANGELES RIVER AND STREET RUNOFF	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
ARROYO SECO	MONK HILL	ARROYO SECO	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
EATON WASH	PASADENA SUBAREA	EATON WASH	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
SIERRA MADRE	SANTA ANITA SUBAREA	SANTA ANITA CREEK, LITTLE SANTA ANITA CREEK, AND STREET RUNOFF	CITY OF SIERRA MADRE WATER DEPARTMENT	111	0
SANTA ANITA	SANTA ANITA SUBAREA	SANTA ANITA CREEK	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
SAWPIT	MAIN SAN GABRIEL	SAWPIT CREEK	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
SANTA FE RESERVOIR	MAIN SAN GABRIEL	SAN GABRIEL RIVER	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
EATON	MAIN SAN GABRIEL	EATON WASH	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
LIVE OAK	LIVE OAK	LIVE OAK	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/

TABLE 8 - WATER SPREAD AT MAJOR ARTIFICIAL RECHARGING GROUNDS IN SOUTHERN CALIFORNIA (CONTINUED)

ARTIFICIAL RECHARGING PROJECT	GROUND WATER BASIN	SOURCE OF WATER	AGENCY CONDUCTING SPREADING	ESTIMATED AMOUNTS SPREAD (ACRE-FEET)	
				OCT. 1, 1962-JAN. 31, 1963	JANUARY 1963
BUENA VISTA	MAIN SAN GABRIEL	STORM RUNOFF COLLECTED BY DUARTE DRAIN	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
SAN GABRIEL CANYON MOUTH (WEST SIDE)	UPPER CANYON	SAN GABRIEL RIVER	DUARTE MUTUAL WATER COMPANY	2,747.33	5/
SAN GABRIEL CANYON MOUTH (EAST SIDE)	UPPER CANYON	SAN GABRIEL RIVER	SAN GABRIEL RIVER SPREADING CORPORATION	3,973.0	385.0
LITTLE DALTON	GLENDORA	LITTLE DALTON CREEK	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
BIG DALTON CANYON	GLENDORA	BIG DALTON CREEK	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
RIO HONDO COASTAL	MONTEBELLO FOREBAY	COLORADO RIVER AND RIO HONDO 2/	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
RIO HONDO COASTAL (WEST SIDE)	MONTEBELLO FOREBAY	COLORADO RIVER AND RIO HONDO 2/	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
SAN GABRIEL COASTAL	MONTEBELLO FOREBAY	SAN GABRIEL RIVER AND COLORADO RIVER 2/	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
BEN LOMOND	MAIN SAN GABRIEL	UNUSED IRRIGATION WATER FROM SAN GABRIEL RIVER VIA COVINA IRRIGATING COMPANY CONDUIT	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/

TABLE 8 - WATER SPREAD AT MAJOR ARTIFICIAL RECHARGING GROUNDS IN SOUTHERN CALIFORNIA (CONTINUED)

ARTIFICIAL RECHARGING PROJECT	GROUND WATER BASIN	SOURCE OF WATER	AGENCY CONDUCTING SPREADING	ESTIMATED AMOUNTS SPREAD (ACRE-FEET)	
				OCT. 1, 1962-JAN. 31, 1963	JANUARY 1963
BIG DALTON (CITRUS)	MAIN SAN GABRIEL	UNUSED IRRIGATION WATER FROM SAN GABRIEL RIVER VIA AZUSA IRRIGATING COMPANY CONDUIT	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
IRWINDALE (BIG DALTON)	MAIN SAN GABRIEL	COLORADO RIVER 4/ BIG DALTON WASH	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
PECK ROAD	MAIN SAN GABRIEL	SANTA ANITA, SAWPIT WASHES, AND DIVERSION FROM SAN GABRIEL CANYON VIA SANTA FE AND BUENA VISTA CHANNELS	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT		6/
EAST AVENUE	CHINO	DAY CANYON VIA ETIWANDA WATER COMPANY'S CONDUIT	ETIWANDA WATER COMPANY	0	0
LYTLE CREEK	LYTLE	LYTLE CREEK	FONTANA UNION WATER COMPANY	42.99	11.11
WATERMAN CANYON AND TWIN CREEK	DEVIL CANYON	WATERMAN CREEK AND EAST TWIN CREEK WASH	SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT	0	0
SANTA ANA RIVER NEAR MENTONE	BUNKER HILL	SANTA ANA RIVER	SAN BERNARDINO VALLEY WATER CONSERVATION DISTRICT	0	0
MILL CREEK (LOWER)	BUNKER HILL	MILL CREEK	SAN BERNARDINO VALLEY WATER CONSERVATION DISTRICT	0	0
MILL CREEK (UPPER)	BUNKER HILL	MILL CREEK	SAN BERNARDINO VALLEY WATER CONSERVATION DISTRICT	0	0

TABLE 8 - WATER SPREAD AT MAJOR ARTIFICIAL RECHARGING GROUNDS IN SOUTHERN CALIFORNIA (CONTINUED)

ARTIFICIAL RECHARGING PROJECT	GROUND WATER BASIN	SOURCE OF WATER	AGENCY CONDUCTING SPREADING	ESTIMATED AMOUNTS SPREAD (ACRE-FEET)	
				OCT. 1, 1962-JAN. 31, 1963	JANUARY 1963
RIALTO - BASELINE	BUNKER HILL	STORM RUNOFF	SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT	6.86	1.26
SAN JACINTO	SAN JACINTO	SAN JACINTO RIVER	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DIST	0	0
THOMPSON CREEK	CLAREMONT HEIGHTS	THOMPSON, COBAL, WILLIAMS, PALMER, AND PADUA CREEKS	POMONA VALLEY PROTECTIVE ASSOCIATION	0	0
POMONA	CLAREMONT HEIGHTS	SAN ANTONIO CREEK VIA LOOP MERSERVE CANYON WATER COMPANY PIPE LINE	CITY OF POMONA WATER DEPARTMENT	0	0
SAN ANTONIO	CLAREMONT HEIGHTS	SAN ANTONIO CREEK	POMONA VALLEY PROTECTIVE ASSOCIATION	0	0
CUCAMONGA CREEK (UPPER)	CUCAMONGA	FRANKISH AND STAMM TUNNEL AND SAN ANTONIO CREEK VIA PIPE LINE AND 19TH STREET STORM DRAIN	SAN ANTONIO WATER COMPANY AND SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT	48.73	48.73
RED HILL	CUCAMONGA	STORM RUNOFF AND DRAINAGE FROM CITRUS ORCHARDS	SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT	6.54	2.78
MILLER STREET	SANTA ANA FOREBAY	COLORADO RIVER 1/	ORANGE COUNTY FLOOD CONTROL DISTRICT	16,520.00	5,080.00
EIGHTH STREET	CHINO	CUCAMONGA CREEK AND STORM RUNOFF	SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT	2.18	2.18

TABLE 8 - WATER SPREAD AT MAJOR ARTIFICIAL RECHARGING GROUNDS IN SOUTHERN CALIFORNIA (CONTINUED)

ARTIFICIAL RECHARGING PROJECT	GROUND WATER BASIN	SOURCE OF WATER	AGENCY CONDUCTING SPREADING	ESTIMATED AMOUNTS SPREAD (ACRE-FEET)	
				OCT. 1, 1962-JAN. 31, 1963	JANUARY 1963
DAY CANYON	CHINO	DAY CANYON	ETIWANDA WATER COMPANY	0	0
LITTLE SAN GORGONIO	BEAUMONT	LITTLE SAN GORGONIO CREEK	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DIST	0	0
ARLINGTON	TEMESCAL	STORM RUNOFF VIA ARLINGTON DRAIN	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DIST	0	0
COLDWATER CREEK	COLDWATER	COLDWATER, INDIAN, AND HORSETHIEF CREEKS, AND RAILROAD CANYON RESERVOIR	TEMESCAL WATER COMPANY	0	0
MAYHEW WASH	COLDWATER	MAYHEW WASH	TEMESCAL WATER COMPANY	0	0
INDIAN CREEK	LEE LAKE	INDIAN CREEK	TEMESCAL WATER COMPANY	0	0
HORSETHIEF CREEK	LEE LAKE	HORSETHIEF CREEK	TEMESCAL WATER COMPANY	0	0
SHORB	SANTA ANA NARROWS	SANTA ANA RIVER AND COLORADO RIVER[1/]	ANAHEIM UNION WATER COMPANY	1,758.83	64.35
PETERS CANYON	IRVINE BASIN	COLORADO RIVER[1/]	ORANGE COUNTY WATER DISTRICT	140.8	31.0
CRILL MEMORIAL	SANTA ANA FOREBAY	COLORADO RIVER[1/]	ORANGE COUNTY WATER DISTRICT	25,127.6	6,965.2
YORBA	YORBA LINDA	SANTA ANA RIVER AND COLORADO RIVER[1/]	ANAHEIM UNION WATER COMPANY	0	0

TABLE 8 - WATER SPREAD AT MAJOR ARTIFICIAL RECHARGING GROUNDS IN SOUTHERN CALIFORNIA (CONTINUED)

ARTIFICIAL RECHARGING PROJECT	GROUND WATER BASIN	SOURCE OF WATER	AGENCY CONDUCTING SPREADING	ESTIMATED AMOUNTS SPREAD (ACRE-FEET)	
				OCT. 1, 1962-JAN. 31, 1963	JANUARY 1963
SANTA ANA RIVER NEAR OLIVE	SANTA ANA FOREBAY	COLORADO RIVER 3/	ORANGE COUNTY WATER DISTRICT	51,438	4,793
GARDNER (BATAVIA STREET)	SANTA ANA FOREBAY	SANTA ANA RIVER AND COLORADO RIVER 1/	SANTA ANA VALLEY IRRIGATION COMPANY AND ORANGE COUNTY WATER DISTRICT	0	0
GOMBER AND HAZARD	SANTA ANA FOREBAY	SANTA ANA RIVER AND COLORADO RIVER 1/	ANAHEIM UNION WATER COMPANY	1,371.89	238.57
PLACENTIA	SANTA ANA FOREBAY	STORM RUNOFF, SANTA ANA RIVER AND COLORADO RIVER 1/	ANAHEIM UNION WATER COMPANY	17.02	17.02
WEST ANAHEIM	SANTA ANA FOREBAY	RUNOFF FROM CITY OF ANAHEIM	ORANGE COUNTY FLOOD CONTROL DISTRICT	22.59	4.68
SAN DIEGO CREEK	IRVIN BASIN	COLORADO RIVER 1/	ORANGE COUNTY WATER DISTRICT	1,382.7	286.3
LITTLE JOAQUIN	IRVIN BASIN	COLORADO RIVER 1/	ORANGE COUNTY WATER DISTRICT	0	0

1. VIA METROPOLITAN WATER DISTRICT AQUEDUCT.
2. VIA METROPOLITAN WATER DISTRICT AQUEDUCT AND MIDDLE FEEDER.
3. AMOUNT OF COLORADO RIVER WATER PURCHASED AND RELEASED INTO SANTA ANA RIVER FROM THE METROPOLITAN WATER DISTRICT LOWER FEEDER AT A POINT ABOUT SIX MILES DOWNSTREAM FROM PRADO DAM.
4. VIA METROPOLITAN WATER DISTRICT AQUEDUCT AND UPPER FEEDER.
5. AMOUNT SPREAD FROM SEPTEMBER 1, 1962, THROUGH DECEMBER 31, 1962.
6. DATA NOT RECEIVED IN TIME FOR PUBLICATION.