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STATE OF CALIFORNIA

Department of Water Resources

SACRAMENTO

June 12, 1957

CALIFORNIA COOPERATIVE SNOW SURVEY PROGRAM

JUNE 1 FORECAST REVISIONS

THE FOLLOWING SPECIAL REPORT IS BEING SENT TO COOPERATORS IN THE CALIFORNIA COOPERATIVE SNOW SURVEY PROGRAM. THIS REPORT, CONSISTING PRIMARILY OF FORECAST REVISIONS, WAS NECESSITATED BY THE HEAVY MAY PRECIPITATION.

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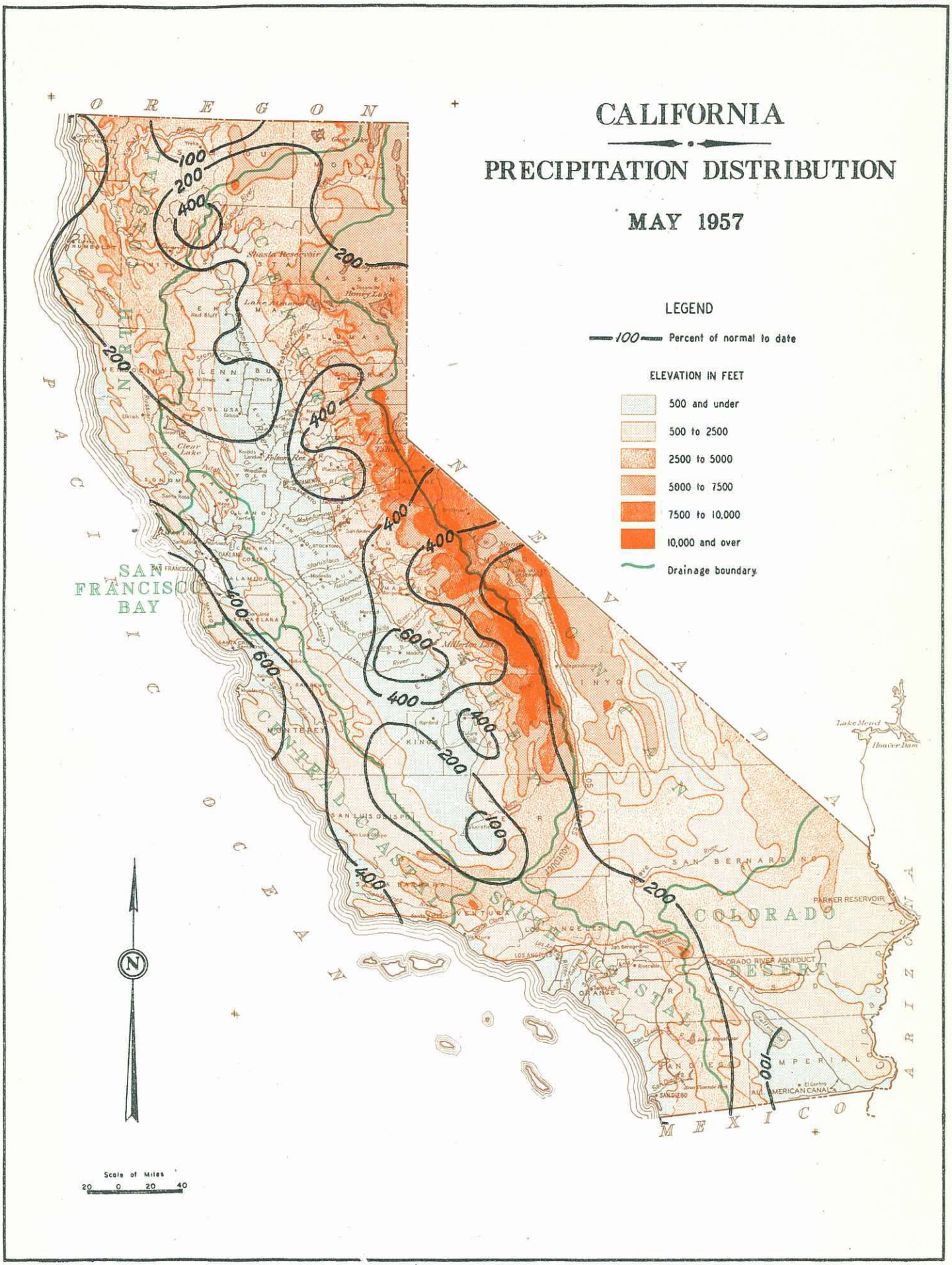
CALIFORNIA
PRECIPITATION DISTRIBUTION
MAY 1957
LEGEND
100 Percent of normal to date
ELEVATION IN FEET
500 and under
500 to 2500
2500 to 5000
5000 to 7500
7500 to 10,000
10,000 and over
Drainage boundary
OREGON
NEVADA
ARIZONA
MEXICO
PACIFIC OCEAN
SAN FRANCISCO BAY
COLORADO DESERT
Shasta Reservoir
Lake Mead
Hoover Dam
PARKER RESERVOIR
COLORADO RIVER AQUEDUCT
ALL AMERICAN CANAL
Scale of Miles
20 0 20 40

Irrigation season water supply conditions in the Central Valley Area of California have improved significantly as a result of abnormally heavy May precipitation. However, with the exception of Shasta Lake inflow, runoff will still be below normal on all streams. April through July runoff on streams tributary to Sacramento Valley will vary from 76 per cent of normal on the Yuba River to 104 per cent of normal for the inflow to Shasta Lake. On streams tributary to San Joaquin Valley, runoff will vary from 57 per cent of normal on the Kern River to 86 per cent of normal on the Mokelumne River.

All reservoirs on streams heading in the Sierra Nevada and tributary to the Sacramento Valley are now full. In the San Joaquin Valley, reservoirs on all streams except the Kern River are full or will fill.

The outstanding feature of May's weather was the heavy rain which fell on most of the State during the middle of the month. Rainfall during May, for many stations, was the heaviest ever reported for that month. Several stations in the San Joaquin Valley received over a quarter of this season's precipitation during May, and at some stations, rainfall during May was greater than in any other month of this season. Rainfall in California during May, 1957, expressed in per cent of normal, is shown on Plate 1.

In spite of the heavy May rains, only a few stations report normal or above normal seasonal precipitation. Over the entire State, the seasonal rainfall is about 80 per cent of normal for this date.

During the May storms, new snow fell at higher elevations, and aerial inspection of the San Joaquin, Kings, and Kern River watersheds indicated the effective snowline was at about 10,000 feet elevation on June 1.

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Snow depths obtained from photographs of aerial snow depth markers taken on June 4, 1957, compared with last year and with 1952 are set forth in the following tabulation. It should be noted that snow depths at many of these snow stakes are comparable to those for the heavy snow year of 1952.

Stream basin and name of marker	Elevation	Depth of snow in inches June 4, 1957	June 2, 1956	June 2, 1952
San Joaquin River				
Humphrey Basin	11,700	53	78	54
Pioneer Basin	10,500	36	66	60
Emerald Lake	10,500	37	66	78
Bench Canyon	10,200	37	84	N.R.
Heart Lake	10,100	35	52	36
Volcanic Knob	10,100	36	58	N.R.
Rose-Marie Mdw.*	10,000	29	50	36
Kaiser Pass*	9,200	26	30	N.R.
Mammoth Pass	8,200	70	92	N.R.
Kings River				
Blackcap Basin	10,800	42	60	N.R.

N.R. - No Record
* - Actual snow surveys were taken at these courses on June 5, 1957. Results, in inches, were as follows: Rose-Marie: depth = 23.6; water content = 12.4
Kaiser Pass: depth = 44.0; water content = 24.6

Revised forecasts of April-July runoff in acre-feet for the major Sierra Nevada streams are listed below. The tabulation sets forth: (1) the 50-year (1906-1956) average April-July natural runoff, (2) forecasts of unimpaired runoff during the April-July snowmelt period made by the Department of Water Resources on May 1, (3) forecasts as revised on June 1 to reflect precipitation during May, (4) actual runoff during April and May, (5) the 50-year normal April and May runoff, and (6) anticipated runoff which will occur during June and July. Forecasts of April-July runoff for major basins in the Central Valley, expressed in per cent of normal, are shown on Plate 2.

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River and Station	Unimpaired runoff in acre-feet					
	April 1 - July 31, inc.					
	50-year Average (1906-1956)	Forecasts May 1	Forecasts June 1	Actual April-May	50-year average April-May	Anticipated June-July
Inflow to Shasta Lake	1,855,000	1,650,000	1,920,000	1,320,000	1,274,000	600,000
Feather at Oroville	2,045,000	1,350,000	1,550,000	1,120,000	1,534,000	430,000
Yuba at Smartville	1,162,000	820,000	1,050,000	760,000	861,000	290,000
American at Fair Oaks	1,440,000	1,000,000	1,250,000	885,000	1,038,000	365,000
Mokelumne near Mokelumne Hill	505,000	345,000	435,000	275,000	337,000	160,000
Stanislaus below Melones	777,000	470,000	620,000	420,000	516,000	200,000
Tuolumne at La Grange	1,263,000	800,000	980,000	555,000	749,000	425,000
Merced at Exchequer	654,000	380,000	500,000	280,000	405,000	220,000
San Joaquin at Friant	1,277,000	750,000	940,000	470,000	689,000	470,000
Kings at Piedra	1,241,000	760,000	940,000	445,000	664,000	495,000
Kaweah nr. Three Rivers*	279,000	170,000	220,000	120,000	169,000	100,000
Tule near Porterville*	48,900	16,000	33,000	25,000	37,300	8,000
Kern near Bakersfield*	472,000	210,000	270,000	117,000	261,000	153,000

* Not corrected for upstream impairments

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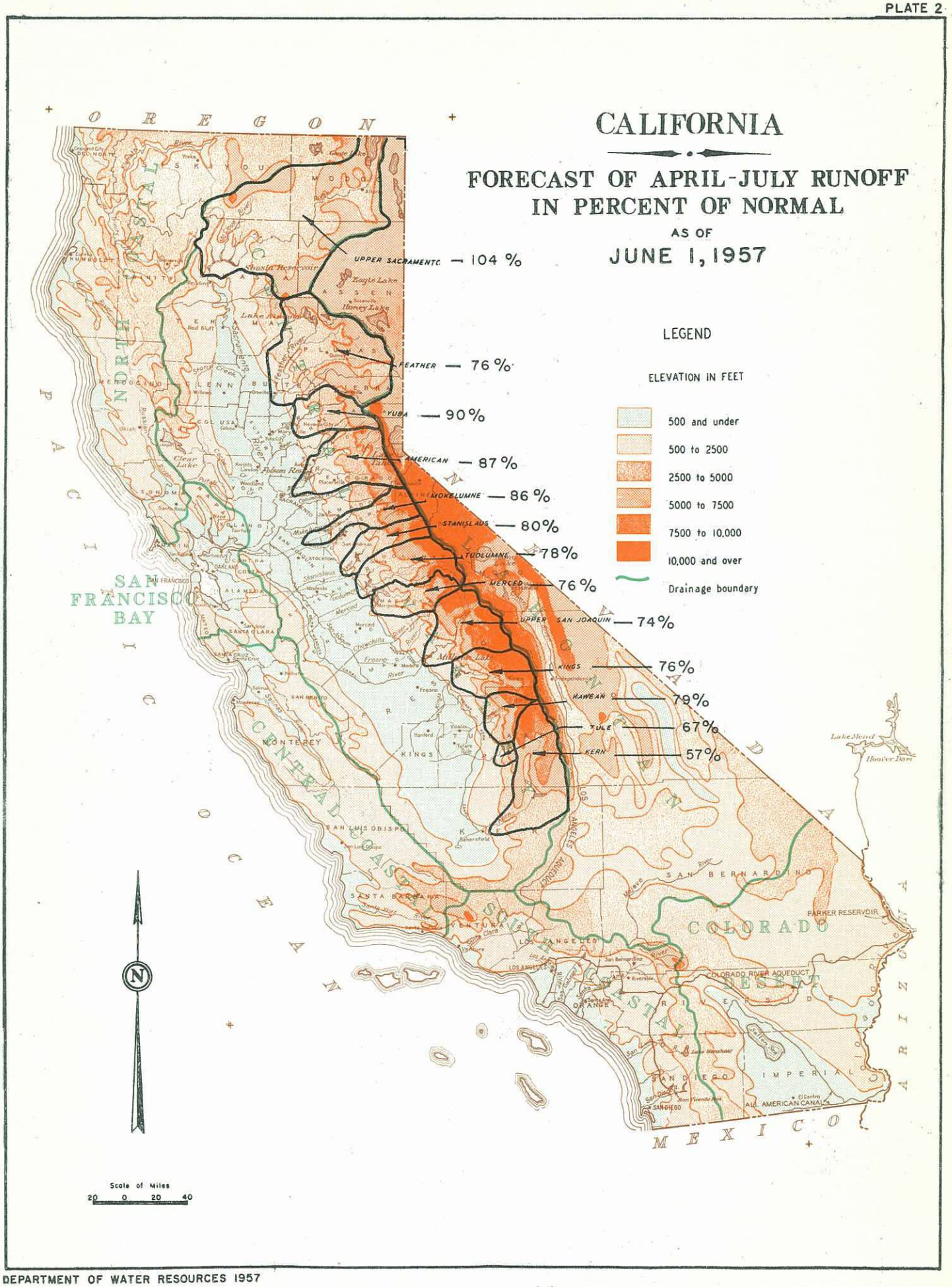
CALIFORNIA
FORECAST OF APRIL-JULY RUNOFF
IN PERCENT OF NORMAL
AS OF
JUNE 1, 1957
UPPER SACRAMENTO — 104 %
FEATHER — 76 %
YUBA — 90 %
AMERICAN — 87 %
MOKELUMNE — 86 %
STANISLAUS — 80 %
TUOLUMNE — 78 %
MERCED — 76 %
UPPER SAN JOAQUIN — 74 %
KINGS — 76 %
KAWEAH — 79 %
TULE — 67 %
KERN — 57 %
LEGEND
ELEVATION IN FEET
500 and under
500 to 2500
2500 to 5000
5000 to 7500
7500 to 10,000
10,000 and over
Drainage boundary
OREGON
PACIFIC OCEAN
MEXICO
ARIZONA
NEVADA
SAN FRANCISCO BAY
COLORADO DESERT
PARKER RESERVOIR
COLORADO RIVER AQUEDUCT
ALL AMERICAN CANAL
Lake Mead
Hoover Dam
Scale of Miles
20 0 20 40