SECTION 8
SHELF
ITEM .2

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

EARL WARREN
Governor
C. H. PURCELL, Director of Public Works
EDWARD HYATT, State Engineer

# SNOW SURVEY BULLETIN

# CALIFORNIA COOPERATIVE SNOW SURVEYS

April, 1948

83390

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DIVISION OF WATER RESOURCES
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# CALIFORNIA COOPERATIVE SNOW SURVEYS

## MONTHLY BULLETIN OF SNOW SURVEY AND PRECIPITATION DATA

April 10, 1948

This is the third snow survey bulletin issued this winter by the Division of Water Resources.

It contains the results of all snow measurements made at the first of April and also all available precipitation data.

The Division of Water Resources acts as coordinator of this work. The cooperating organizations are listed on the last page of this report.

April 10, 1948

CALIFORNIA COOPERATIVE SNOW SURVEYS

This bulletin contains statistics on the California snowpack as gathered during the closing days of March and the first few days of April. The forecasts of run-off contained herein are based upon these April 1st measurements and the assumption that precipitation during April and May will be normal.

Inasmuch as many areas, during the first 8 days of April, have already received as much additional snow as during a normal April, any additional precipitation that is received during the balance of April will increase the amounts of run-off to be expected.

The assured run-off from the combined areas of the Sacramento and San Joaquin Valley watersheds, on the above basis, is expected to be 51% of normal. Last year the corresponding overall run-off figure was 49% of normal.

Run-off will be relatively better in the Sacramento Valley than in the San Joaquin. For the tributaries of the Sacramento River the average is 56% of normal, while for the San Joaquin River Tributaries the average is 49%. Last year's comparable figures were 49% for both the Sacramento and San Joaquin Rivers.

Snow surveys from the Kings, Kaweah and Kern watersheds, tributaries of Tulare Lake, indicate 5% less run-off than last year.

With the exception of Shasta and one or two others, water stored in reservoirs is less than last year.

Although California is still faced with a short water year the outlook has improved a lot during the past month. March snow surveys showed such a poor snowpack that the outlook was for a record dry year similar to 1924. However, during March, more snow fell than during the entire three preceding months. Before the end of March, the outlook had improved until a year similar to 1939 could be expected, and by the end of March, continued improvement had raised the outlook to expectations equal to or better than last year.

In this bulletin, Table 1 on page 3 gives a summary, by stream basins, of the snowpack lying on each mountain watershed. This table also lists the precipitation averages. The precipitation situation is depicted on the plate following page 3. As the plate shows, precipitation over California, as of April 1st, was deficient; these deficiencies being less in the north and greater elsewhere.

In Tables 2 and 3, forecasts of run-off are listed, based upon April 1st snowpack and assuming normal precipitation during the snow-melt period. Because most areas have, since April 1st, already

received as much precipitation as the full April normal supply, any further precipitation during April will increase the run-off expectations. As a guide to the amount of increase in run-off that would be caused by further precipitation during April, a close approximation can be made by adding 6% to the figures in Table 2, for each 25% that the April precipitation is above normal. That is, if April precipitation reaches 125% of normal, add 6%; if it reaches 150% of normal, add 12% to Table 2 forecast figures.

The plate following page 4 indicates pictorially the relative run-off to be expected from the various watersheds. The figures shown are the April-July run-off expectations in per cent of normal; the same figures as listed in Table 2.

Table 4 lists the main reservoirs of the Sierra and tabulates the amount of water stored in each on April 1st.

Table 5 and 6 list in detail the results of the individual snow surveys and the precipitation data from each of the mountain and foothill stations.

On the second page of the appendix at the end of this report is a tabulation comparing this year's run-off expectation figures in Table 2 with the comparable flows experienced during last year and also the dry years of 1939 and 1934.

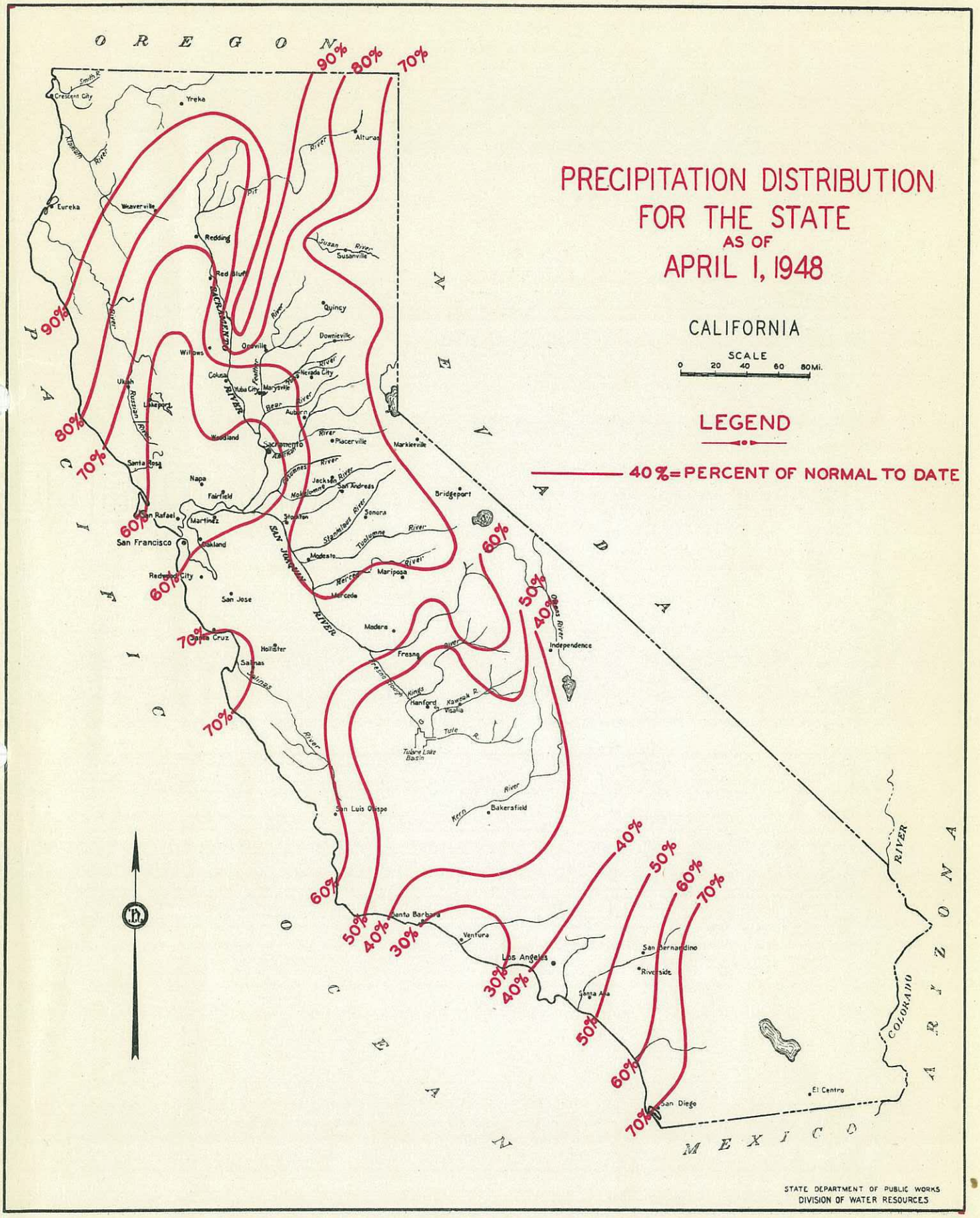
All of the forecasts contained herein are predicated upon the prevalence of normal weather conditions during the period of run-off. Abnormal storms will increase the run-off as explained above.

TABLE 1

SUMMARY OF SEASONAL PRECIPITATION AND SNOW PACK - APRIL 1, 1948

AVERAGES BY STREAM BASINS

| River Basin | Precipitation over mountain watersheds from July 1, 1947 to April 1, 1948 in per cent of Normal to April 1st. | Snowpack as of April 1, 1948 in Per cent of normal |
|---|---|---|
| Upper Sacramento-McCloud - Pit | 85% | 54% |
| Feather | 75% | 60% |
| Yuba | 75% | 51% |
| Truckee | 70% | - |
| Tahoe | 70% | - |
| American | 70% | 56% |
| Mokelumne | 75% | 57% |
| Stanislaus | 75% | 51% |
| Tuolumne | 70% | 54% |
| Merced | 65% | 55% |
| Upper San Joaquin | 60% | 54% |
| Kings | 55% | 53% |
| Kaweah | 55% | 53% |
| Kern | 55% | 50% |
| Los Angeles | 40% | - |
| San Gabriel | 40% | - |
| Santa Ana | 55% | - |
| San Diego County | 60% | - |




STATE DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

TABLE 2

STREAM FLOW FORECASTS - APRIL 1, 1948

| Drainage Area or Stream Gaging Station | Stream Flow[1] April 1 - July 31, inc. 58-Year Normal 1890-1947 Acre Feet | 1948 Forecast in per cent of Normal | Estimated 1948 flow April-July Acre Feet |
|---|---|---|---|
| South Fork Pit River near Likely | 40,000 | 95% | 38,000 |
| Sacramento River at Shasta Dam 2 | 1,900,000 | 71% | 1,350,000 |
| Feather River near Oroville | 2,230,000 | 58% | 1,300,000 |
| Bowman Area-Middle Yuba and Canyon Creek | 100,000 | 65% | 65,000 |
| South Fork of Yuba River at Langs Crossing | 243,000 | 60% | 145,000 |
| Yuba River at Smartsville | 1,211,000 | 54% | 650,000 |
| North Fork American River at Colfax | 309,000 | 45% | 140,000 |
| Middle Fork of American near E. Auburn | 682,000 | 44% | 300,000 |
| American River at Fairoaks | 1,537,000 | 50% | 770,000 |
| N.Fk.Mokelumne River near West Point | 464,000 | 54% | 250,000 |
| Mokelumne River near Mokelumne Hill | 536,000 | 49% | 260,000 |
| M.Fk. Stanislaus at Sand Bar Flat nr. Avery | 389,000 | 51% | 200,000 |
| Stanislaus River below Melones Power House | 834,000 | 49% | 410,000 |
| Tuolumne River near Hetch Hetchy | 678,000 | 54% | 365,000 |
| Tuolumne River at La Grange | 1,356,000 | 48% | 650,000 |
| Merced River at Pohono Bridge | 417,000 | 48% | 200,000 |
| Merced River at Exchequer | 713,000 | 47% | 335,000 |
| Big Creek at Huntington Lake | 109,000 | 43% | 47,000 |
| S. Fk. San Joaquin River at Florence Lake | 216,000 | 49% | 105,000 |
| San Joaquin River above mouth of Big Creek | 1,178,000 | 51% | 600,000 |
| San Joaquin River at Friant | 1,382,000 | 52% | 725,000 |
| N.Fk.Kings River below Rancheria Creek | 324,000 | 43% | 140,000 |
| Kings River at Piedra | 1,358,000 | 49% | 670,000 |
| Kaweah River near Three Rivers 2 | 300,000 | 40% | 120,000 |
| Kern River near Bakersfield 2 | 468,000 | 47% | 220,000 |
| Truckee River at Farad 3 | 290,000 | 40% | 115,000 |
| *Lake Tahoe 3 | Lake Rise 1.55 feet | 48% | .75 feet to Elev. 6225.92* |
| Carson River at Fort Churchill 3 | 200,000 | 34% | 68,000 |
| West Walker near Coleville 3 | 175,000 | 49% | 85,000 |
| 4East Walker at Bridgeport Dam 3 | 75,000 | 27% | 20,000 |

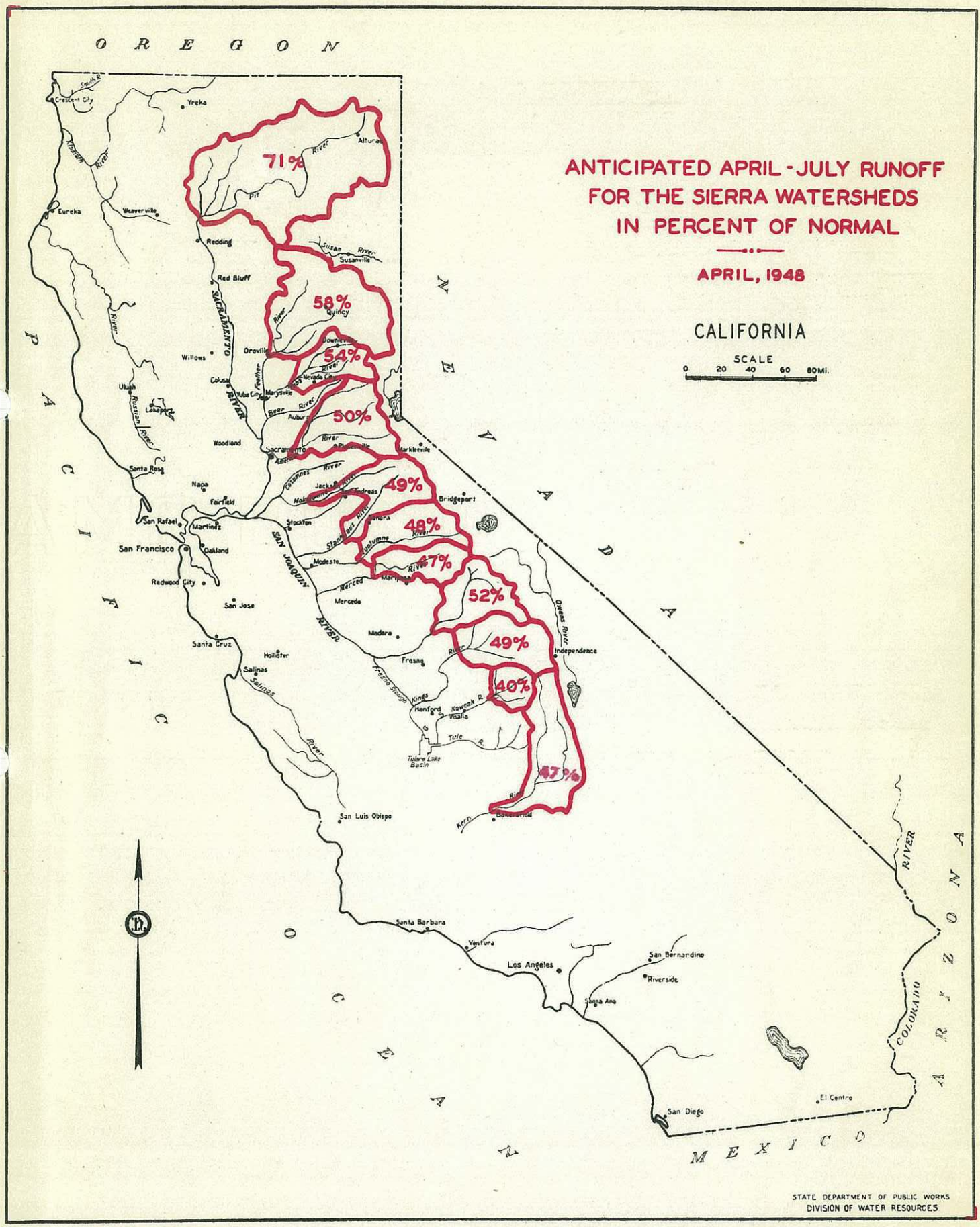
1 Full natural flow. That is the flow as measured in the stream with corrections applied for upstream regulation and diversions. The unimpaired flow.

2 Net flow at station after upstream irrigation use.

3 Forecasts by Nevada Cooperative Snow Surveys Committee.

4 The forecast period for the East Walker is April - August instead of April - July, on account of the late melting snow in the Saw Tooth Range west of Bridgeport.

* Elevation of Lake Tahoe water surface on April 1st was 6225.17.




STATE DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

TABLE 3

SEASONAL STREAM FLOW[1] IN PER CENT OF NORMAL
For the 12 Months Period
Beginning October 1st and Ending September 30th of Following Year

| River | Station | 50-year Mean (1889-1939) Acre-Feet | Seasonal Stream Flow in Per Cent of 50-Year Mean (1889-1939)[1] Actual 1943-44 | 1944-45 | 1945-46 | 1946-47 | Estimated 1947-48 |
|---|---|---|---|---|---|---|---|
| Sacramento | Red Bluff | 8,747,000 | 53% | 76% | 92% | 58% | 63% |
| Feather | Oroville | 4,853,000 | 57% | 77% | 85% | 52% | 54% |
| Yuba | Smartsville | 2,490,000 | 56% | 88% | 96% | 55% | 50% |
| American | Fairoaks | 2,879,000 | 51% | 88% | 100% | 49% | 46% |
| Sacramento | Sacramento | * | 54% | 79% | 92% | 54% | 56% |
| Mokelumne | Mokelumne Hill | 802,000 | 56% | 97% | 93% | 49% | 46% |
| Stanislaus | Melones | 1,273,000 | 53% | 100% | 93% | 51% | 43% |
| Tuolumne | La Grange | 1,985,000 | 66% | 106% | 95% | 55% | 44% |
| Merced | Exchequer | 1,069,000 | 64% | 103% | 88% | 53% | 40% |
| San Joaquin | Friant | 1,914,000 | 63% | 112% | 91% | 59% | 48% |
| San Joaquin | Vernalis | * | 62% | 106% | 92% | 55% | 44% |
| Combined Sacramento and San Joaquin Rivers | | * | 56% | 86% | 92% | 54% | 52% |
| Kings | Piedra | 1,818,000 | 64% | 114% | 89% | 61% | 44% |
| Kaweah | Three Rivers[2] | 433,000 | 73% | 127% | 82% | 61% | 35% |
| Kern | Bakersfield[2] | 694,000 | 88% | 126% | 99% | 65% | 46% |

1 Full natural flow. That is the flow as measured in the stream with corrections applied for upstream regulation and diversions. The unimpaired flow.

* The actual 50-year mean in acre feet not computed. The annual percentage is obtained by comparing the total of the major tributary streams with the total of the 50-year means for the same streams.

2 For the Kaweah and Kern Rivers there are some unmeasured diversions for irrigation above the measuring station. For these two rivers the figures in the above table are based upon the impaired flow as measured at the station.

TABLE 4

WATER STORED IN SIERRA NEVADA RESERVOIRS ON APRIL 1st.

| WATERSHED | RESERVOIR | CAPACITY Acre-Feet | WATER IN STORAGE April 1st. (Acre-feet) 1947 | 1948 |
|---|---|---|---|---|
| Sacramento | Shasta | 3,714,000 | 2,884,000 | 3,156,000 |
| Feather | Mountain Meadows | 24,000 | 24,000 | 8,000 |
| | Lake Almanor | 649,800 | 542,000 | 406,000 |
| | Bucks Storage | 103,000 | 88,100 | 59,100 |
| | Butt Valley | 50,000 | 39,000 | 44,100 |
| Yuba | Bullards Bar | 10,800 | 10,800 | 10,800 |
| | Bowman Lake | 68,000 | 16,700 | 3,000 |
| | French Lake | 12,000 | 1,500 | 2,000 |
| | Scotts Flat | 26,800 | 0 | 6,000 |
| | Spaulding System | 150,000 | 77,400 | 71,200 |
| | Narrows | 45,000 | 45,000 | 45,000 |
| Bear | Combie | 6,500 | 4,700 | 7,200 |
| American | Twin Lakes | 21,300 | 7,900 | 6,400 |
| | Silver Lake | 8,900 | 2,200 | 1,700 |
| Mokelumne | Salt Springs | 139,000 | 19,100 | 12,900 |
| | Pardee | 210,000 | 165,000 | 197,500 |
| Stanislaus | Relief | 15,100 | 3,400 | 1,400 |
| | Strawberry | 17,900 | 6,800 | 3,400 |
| | Melones | 112,500 | 113,200 | 42,800 |
| Tuolumne | Lake Eleanor | 26,000 | 24,200 | 7,700 |
| | Hetch Hetchy | 340,000 | 67,500 | 45,000 |
| | Don Pedro | 260,000 | 240,700 | 98,300 |
| | Owen | 49,000 | 35,000 | 35,500 |
| Merced | Lake McClure | 281,000 | 207,000 | 74,500 |
| San Joaquin | Crane Valley | 45,400 | 35,900 | 16,600 |
| | Florence Lake | 64,400 | 300 | 200 |
| | Huntington Lake | 88,800 | 36,100 | 18,700 |
| | Shaver Lake | 135,300 | 9,500 | 26,800 |
| | Millerton Lake | 520,500 | 358,100 | 133,200 |
| TOTAL FOR 29 RESERVOIRS | | 7,195,000 | 5,065,100 | 4,541,000 |

TABLE 5 - SNOW SURVEY DATA FOR ALL COURSES - APRIL, 1948 - (Continued)

| 1 DRAINAGE BASINS and SNOW COURSES | ELEVATION in FEET | DATE of SURVEY | DEPTH of SNOW Inches | DENSITY Per Cent | WATER CONTENT Inches | 2 Normal Water Content for entire season (to April 1st) Inches | Percentage of Total normal seasonal water content on ground at date of survey this year | CORRESPONDING WATER CONTENT AT SAME TIME: Last year 1947 Inches | 1939 Inches |
|---|---|---|---|---|---|---|---|---|---|
| McCLOUD RIVER (Cont'd.) | | | | | | | | | |
| Brewer Creek | 6000 | Survey delayed by storms | | | New Course 1946 | | - | 24.7 | - |
| Buck Mountain | 5560 | Survey delayed by storms | | | | 25.9 | - | 13.8 | 11.4 |
| Stouts Meadow | 5300 | Survey delayed by storms | | | | 50 | | 22.9 | - |
| Ash Creek | 5000 | Survey delayed by storms | | | | 23 | | 5.9 | - |
| Dead Horse Canyon | 4500 | Survey delayed by storms | | | | 12 | | 0.0 | - |
| PIT RIVER | | | | | | | | | |
| Mount Lassen | 8400 | 4-1-48 | 138.0 | 43.5% | 60.0 | 96.1 | 62% | 69.2 | 44.8 |
| Eagle Peak | 7500 | 3-29-48 | 42.9 | 33.6% | 14.4 | 18.8 | 77% | 6.4 | 10.4 |
| Blue Lake Ranch | 7300 | 4-1-48 | 27.3 | 37.0% | 10.1 | 11.5 | 88% | 5.3 | - |
| Cedar Pass | 7200 | 3-31-48 | 49.1 | 31.9% | 15.7 | 20.7 | 76% | 10.3 | 10.5 |
| Blacks Mountain | 6650 | 3-31-48 | 16.8 | 29.3% | 4.9 | 8 | 61% | 0.0 | - |
| Medicine Lake | 6520 | 4-1-48 | 60.8 | 33.9% | 20.4 | 32.8 | 62% | 22.3 | - |
| Adin Mountain | 6500 | 3-31-48 | 28.4 | 34.9% | 9.9 | 14.3 | 69% | 4.4 | 8.1 |
| Thousand Lakes | 6500 | Survey delayed by storms | | | New Course 1946 | | - | 20.9 | - |
| Snow Mountain | 6200 | 3-28-48 | 41.7 | 24.9% | 10.4 | 41.3 | 25% | 12.4 | 25.4 |
| Manzanita Lake | 6000 | 4-1-48 | 26.1 | 33.7% | 8.8 | 8 | 110% | - | Patches |
| McElroy Pass | 5800 | 3-31-48 | 10.1 | 33.7% | 3.4 | - | - | 0.0 | 0.0 |
| Willow Creek Summit | 5600 | 4-1-48 | No Snow on Course | | - | 2 | - | 0.0 | - |
| Halls Flat | 5600 | 3-31-48 | 10.0 | 36.0% | 3.6 | New Course 1946 | | 0.0 | - |
| Stouts Meadow | 5300 | Survey delayed by storms | | | | 50 | | 22.9 | - |
| Burney Springs | 4800 | Survey delayed by storms | | | - | | | - | - |
| Widow Valley Summit | 4700 | 4-1-48 | 15.9 | 34.6% | 5.5 | - | - | 0.0 | - |
| Dead Horse Canyon | 4500 | Survey delayed by storms | | | | 12 | | 0.0 | - |
| TRINITY RIVER | | | | | | | | | |
| Seven Up | 7400 | Survey delayed by storms | | | New Course 1947 | | | 43.2 | - |
| Deadfall Lakes | 7300 | 4-3-48 | 51.4 | 32.7% | 16.8 | New Course 1946 | | 28.2 | - |
| Red Rock Mountain | 6600 | 3-28-48 | 59.5 | 36.1% | 21.5 | New Course 1946 | | 27.5 | - |
| Bear Basin | 6500 | Survey delayed by storms | | | New Course 1947 | | | 26.8 | - |
| Wolford Cabin | 6400 | Survey delayed by storms | | | New Course 1947 | | | - | - |
| Shimmy Lake | 6400 | 4-3-48 | 65.0 | 31.1% | 20.2 | New Course 1947 | | 33.5 | - |
| Whalan Station | 5900 | 3-29-48 | 31.6 | 31.5% | 10.1 | 19.4 | 52% | 6.7 | 7.2 |
| Highland Lakes | 5700 | 4-3-48 | 46.4 | 36.3% | 16.8 | New Course 1946 | | 14.9 | - |
| Mumbo Basin | 5700 | 4-1-48 | 33.0 | 36.6% | 12.1 | New Course 1946 | | 12.7 | - |
| Big Flat | 5100 | 3-26-48 | 24.0 | 35.0% | 8.4 | New Course 1946 | | 1.8 | - |

1, 2 See footnotes first page of this table.

TABLE 5 - SNOW SURVEY DATA FOR ALL COURSES - APRIL, 1948 - (Continued)

| 1 DRAINAGE BASINS and SNOW COURSES | ELEVATION in FEET | DATE of SURVEY | DEPTH of SNOW INCHES | DENSITY Per Cent | WATER CONTENT Inches | 2 Normal Water Content for entire season (to April 1st) Inches | Percentage of Total normal seasonal water content on ground at date of survey this year | CORRESPONDING WATER CONTENT AT SAME TIME: Last year 1947 Inches | CORRESPONDING WATER CONTENT AT SAME TIME: 1939 Inches |
|---|---|---|---|---|---|---|---|---|---|
| STONY CREEK | | | | | | | | | |
| Anthony Peak | 6200 | 4-1-48 | 43.6 | 37.4% | 16.3 | 33 | 49% | 12.4 | - |
| Plaskett Meadows | 6000 | 4-1-48 | 32.4 | 35.5% | 11.5 | 22 | 52% | 10.4 | - |
| FEATHER RIVER | | | | | | | | | |
| Mount Lassen | 8400 | 4-1-48 | 138.0 | 43.5% | 60.0 | 96.1 | 62% | 69.2 | 44.8 |
| Mount Dyer | 7400 | 4-7-48 | 66.0 | 31.7% | 20.9 | 28.4 | 73% | 10.8 | 11.5 |
| Church Meadows | 6700 | 3-30-48 | 60.7 | 34.8% | 21.1 | 42.2 | 50% | 21.6 | 21.7 |
| Yuba Pass | 6700 | 3-29-48 | 57.0 | 34.0% | 19.4 | 39.4 | 49% | 23.1 | 19.0 |
| Letterbox | 6500 | 4-1-48 | 78.5 | 39.8% | 31.2 | 62.5 | 50% | 19.4 | - |
| Silver Lake | 6500 | 4-1-48 | 52.8 | 34.7% | 18.3 | 40 | 46% | 13.7 | - |
| Eureka Bowl | 6500 | 4-1-48 | 69.4 | 38.5% | 26.7 | New Course | This Year | - | - |
| Fredonia Pass | 6400 | 4-2-48 | 15.3 | 33.3% | 5.1 | 11.4 | 45% | Patches | 5.2 |
| Harkness Flat | 6400 | 3-31-48 | 57.1 | 35.6% | 20.3 | 31.2 | 65% | 11.5 | 16.4 |
| Eureka Lake | 6300 | 4-1-48 | 40.2 | 37.6% | 15.1 | 43.9 | 34% | 14.8 | 20.2 |
| Three Lakes | 6100 | 4-2-48 | 72.1 | 33.3% | 24.0 | 43.9 | 55% | 21.7 | 23.6 |
| Mill Creek Flat | 5800 | 4-2-48 | 63.1 | 33.9% | 21.4 | 43.2 | 50% | 24.7 | 30.5 |
| Mount Stover | 5500 | 4-6-48 | 52.9 | 26.7% | 14.1 | 17.7 | 80% | 3.9 | 6.2 |
| Browns Camp | 5400 | 4-1-48 | 40.2 | 36.0% | 14.5 | 25.5 | 57% | 0.0 | 8.2 |
| Haskins Flat | 5300 | Survey delayed by storms | | | | 36.6 | | 3.3 | 22.0 |
| Feather River Meadows | 5000 | 3-30-48 | 46.8 | 28.4% | 13.3 | 26.8 | 50% | 8.8 | 15.0 |
| Warner Creek | 5000 | 4-1-48 | 18.3 | 42.6% | 7.8 | 19.4 | 40% | - | 11.2 |
| Humbug Summit | 5000 | Survey delayed by storms | | | | 13.7 | | 1.6 | 3.8 |
| La Porte | 5000 | 4-1-48 | 41.0 | 35.1% | 14.4 | 26.5 | 54% | - | 17.5 |
| Chester Flat | 4600 | 4-6-48 | 20.8 | 35.1% | 7.3 | 8.0 | 91% | Patches | Patches |
| SUSAN RIVER | | | | | | | | | |
| Silver Lake | 6500 | 4-1-48 | 52.8 | 34.7% | 18.3 | 40 | 46% | 13.7 | - |
| Fredonia Pass | 6400 | 4-2-48 | 15.3 | 33.3% | 5.1 | 11.4 | 45% | Patches | 5.2 |
| Norvell Flat | 5700 | 4-1-48 | 20.1 | 33.8% | 6.8 | 19 | 36% | Patches | - |
| YUBA RIVER | | | | | | | | | |
| Webber Peak | 8000 | 4-3-48 | 100.7 | 29.8 | 30.0 | 49.1 | 61% | 34.2 | 28.8 |
| Castle Creek #5 | 7370 | Record not received | | | | New Course | 1947 | 40.4 | - |

1, 2 See footnotes first page of this table.

TABLE 5 - SNOW SURVEY DATA FOR ALL COURSES - APRIL, 1948 - (Continued)

| 1 DRAINAGE BASINS and SNOW COURSES | ELEVATION in FEET | DATE of SURVEY | DEPTH of SNOW Inches | DENSITY Per Cent | WATER CONTENT Inches | 2 Normal Water Content for entire season (to April 1st) Inches | Percentage of Total normal seasonal water content on ground at date of survey this year | CORRESPONDING WATER CONTENT AT SAME TIME: Last year 1947 Inches | CORRESPONDING WATER CONTENT AT SAME TIME: 1939 Inches |
|---|---|---|---|---|---|---|---|---|---|
| YUBA RIVER (Cont'd.) | | | | | | | | | |
| Meadow Lake | 7200 | 4-1-48 | 100.9 | 35.3% | 35.6 | 63.2 | 56% | 39.2 | 35.8 |
| Red Mountain | 7200 | 4-2-48 | 90.7 | 32.5% | 29.5 | 55.8 | 53% | 29.8 | 29.4 |
| English Mountain | 7100 | 3-31-48 | 77.3 | 32.3% | 24.9 | 49.8 | 50% | 28.3 | 31.0 |
| Donner Summit | 7020 | 3-29-48 | 78.5 | 31.4% | 24.7 | 46.4 | 53% | 29.1 | 25.3 |
| Lake Sterling | 7000 | Survey not received | | | | 62.4 | - | 40.1 | 34.3 |
| Sawmill Flat | 7000 | 4-2-48 | 91.1 | 33.7% | 30.7 | 58.3 | 53% | 31.2 | 31.6 |
| Haypress Valley | 6800 | 4-1-48 | 60.2 | 34.4% | 20.7 | 41.1 | 50% | 27.9 | 20.4 |
| Soda Springs | 6750 | 3-29-48 | 62.8 | 31.1% | 19.5 | 42.6 | 46% | 23.1 | 21.4 |
| Yuba Pass | 6700 | 3-29-48 | 57.0 | 34.0% | 19.4 | 39.4 | 49% | 23.1 | 19.0 |
| Church Meadows | 6700 | 3-30-48 | 60.7 | 34.8% | 21.1 | 42.2 | 50% | 21.6 | 21.7 |
| Furnace Flat | 6600 | 3-31-48 | 86.7 | 33.1% | 28.7 | 53.4 | 54% | 28.6 | 30.2 |
| Lake Fordyce | 6500 | 4-1-48 | 63.1 | 36.5% | 23.0 | 45.0 | 51% | 20.7 | 27.8 |
| Findley Peak | 6500 | 4-1-48 | 44.7 | 33.5% | 15.0 | 34.2 | 44% | 7.3 | 28.2 |
| Jackson Meadows | 6300 | 4-1-48 | 42.4 | 35.6% | 15.1 | 33.3 | 45% | 15.8 | 24.6 |
| Cisco | 5950 | 3-30-48 | 42.1 | 33.5% | 14.1 | 26.1 | 54% | 1.0 | 14.8 |
| Cisco Flat | 5800 | 3-30-48 | 39.3 | 33.3% | 13.1 | 24.0 | 55% | Patches | 17.1 |
| Sardine Flat | 5800 | 3-29-48 | 30.1 | 29.9% | 9.0 | 17.6 | 51% | 0.0 | 9.2 |
| Bowman Lake | 5630 | 3-30-48 | 35.8 | 31.3% | 11.2 | 23.5 | 48% | 1.8 | 17.6 |
| La Porte | 5000 | 4-1-48 | 41.0 | 35.1% | 14.4 | 26.5 | 54% | - | 17.5 |
| Carpenter Flat | 4900 | 3-29-48 | 39.7 | 32.5% | 12.9 | New Course | 1946 | 0.0 | - |
| Lake Spaulding | 4900 | 3-30-48 | 49.1 | 32.2% | 15.8 | 25.7 | 61% | Patches | 20.4 |
| TRUCKEE RIVER | | | | | | | | | |
| Mount Rose (In Nevada) | 10,000 | 4-1-48 | 43.5 | 31.0% | 13.5 | 30.8 | 44% | 28.9 | 22.4 |
| Independence Lake | 8400 | 4-3-48 | 79.0 | 31.4% | 24.8 | 40.4 | 61% | 31.7 | 23.0 |
| Webber Peak | 8000 | 4-3-48 | 100.7 | 29.8% | 30.0 | 49.1 | 61% | 34.2 | 28.8 |
| Donner Summit | 7020 | 3-29-48 | 78.5 | 31.4% | 24.7 | 46.4 | 53% | 29.1 | 25.3 |
| Independence Camp | 7000 | 4- 2-48 | 30.8 | 39.3% | 12.1 | 22 | 55% | 12.7 | - |
| Ward Creek | 7000 | 3-27-48 | 94.0 | 32.9% | 30.9 | 52.8 | 59% | 37.8 | 28.5 |
| Webber Lake | 6800 | 4-3-48 | 67.8 | 28.8% | 19.5 | 31.0 | 63% | 25.3 | 23.8 |
| Independence Creek | 6500 | 3-30-48 | 12.4 | 33.9% | 4.2 | 12.7 | 33% | 4.7 | 4.4 |
| Sage Hen Creek | 6500 | 3-30-48 | 20.2 | 31.7% | 6.4 | 17.5 | 37% | 9.7 | 7.9 |
| Truckee #2 | 6400 | 3-27-48 | 27.1 | 27.3% | 7.4 | 14.7 | 50% | 6.8 | 6.1 |

1, 2 See footnotes first page of this table

TABLE 5 - SNOW SURVEY DATA FOR ALL COURSES - APRIL, 1948 - (Continued)

| 1 DRAINAGE BASINS and SNOW COURSES | ELEVATION in FEET | DATE of SURVEY | DEPTH of SNOW Inches | DENSITY Per Cent | WATER CONTENT Inches | 2 Normal Water Content for entire season (to April 1st) Inches | Percentage of Total normal seasonal water content on ground at date of survey this year | CORRESPONDING WATER CONTENT AT SAME TIME: Last year 1947 Inches | CORRESPONDING WATER CONTENT AT SAME TIME: 1939 Inches |
|---|---|---|---|---|---|---|---|---|---|
| TRUCKEE RIVER (Cont'd.) | | | | | | | | | |
| Tahoe City | 6250 | 3-29-48 | 19.7 | 27.9% | 5.5 | 11.1 | 50% | | 5.6 |
| Truckee Ranger Station | 6000 | 3-28-48 | 21.7 | 30.0% | 6.5 | 8 | 81% | 0.0 | - |
| Donner Lake | 5950 | 3-28-48 | 40.3 | 29.8% | 12.0 | 20 | 60% | 8.8 | - |
| LAKE TAHOE | | | | | | | | | |
| Mount Rose (In Nevada) | 10,000 | 4-1-48 | 43.5 | 31.0% | 13.5 | 30.8 | 44% | 28.9 | 22.4 |
| Lake Lucille | 8400 | 4-1-48 | 128.0 | 34.2% | 43.8 | 65.9 | 66% | 49.3 | 38.6 |
| Rubicon Peak #1 | 8100 | 3-28-48 | 109.5 | 23.8% | 26.1 | 40.9 | 64% | 41.8 | 33.1 |
| Marlette Lake | 8000 | 4-2-48 | 36.7 | 34.3% | 12.6 | 25.0 | 50% | 20.5 | 10.5 |
| Hagans Mds. (Freel Peak) | 8000 | 3-30-48 | 30.2 | 33.4% | 10.1 | 17.0 | 59% | 13.6 | 10.9 |
| Rubicon Peak #2 | 7500 | 3-28-48 | 63.8 | 28.4% | 18.1 | 31.8 | 57% | 25.9 | 22.7 |
| Echo Summit | 7500 | 3-31-48 | 71.7 | 37.4% | 26.8 | 39.1 | 69% | 30.1 | - |
| Dagetts Pass (In Nevada) | 7350 | 3-31-48 | 21.6 | 31.0% | 6.7 | 11.9 | 56% | 7.6 | 5.1 |
| Freel Bench | 7300 | 3-30-48 | 19.4 | 34.5% | 6.7 | 10.1 | 66% | 4.6 | 5.7 |
| Ward Creek | 7000 | 3-27-48 | 94.0 | 32.9% | 30.9 | 52.8 | 59% | 37.8 | 28.5 |
| Rubicon Peak #3 | 6700 | 3-28-48 | 48.5 | 25.6 | 12.4 | 21.4 | 58% | 13.1 | 15.1 |
| Glenbrook (In Nevada) #2 | 6700 | 4-2-48 | 26.5 | 30.2% | 8.0 | 16 | 50% | 10.0 | - |
| Richardsons #2 | 6500 | 3-31-48 | 27.7 | 35.4% | 9.8 | 16 | 61% | 7.2 | - |
| Upper Truckee | 6400 | 4-2-48 | 8.5 | 32.9% | 2.8 | 6.6 | 42% | 0.6 | 1.8 |
| Little Valley (In Nevada) | 6300 | 3-26-48 | 17.1 | 15.2% | 2.6 | 9 | 29% | 0.3 | - |
| Tahoe City | 6250 | 3-29-48 | 19.7 | 27.9% | 5.5 | 11.1 | 50% | 0.0 | 5.6 |
| AMERICAN RIVER | | | | | | | | | |
| Carson Pass | 8600 | Record not received | | | | 44.1 | - | 30.5 | 23.8 |
| Lake Lucille | 8400 | 4-1-48 | 128.0 | 34.2% | 43.8 | 65.9 | 66% | 49.3 | 38.6 |
| Rubicon Peak #1 | 8100 | 3-28-48 | 109.5 | 23.8% | 26.1 | 49.5 | 53% | 41.8 | 33.1 |
| Tragedy Springs | 7900 | 3-31-48 | 90.0 | 32.1% | 28.9 | 51.6 | 56% | 33.7 | - |
| Twin Lakes | 7900 | Record not received | | | | 34.8 | - | 22.3 | 14.7 |
| Echo Summit | 7500 | 3-31-48 | 71.7 | 37.4% | 26.8 | 47.3 | 57% | 30.1 | - |
| Lake Audrain | 7300 | 4-1-48 | 69.8 | 30.3% | 21.2 | 44 | 48% | 28.7 | - |
| Silver Lake | 7300 | Record not Received | | | | 26.4 | - | 11.9 | 11.7 |
| Darrington | 7100 | 4-1-48 | 49.8 | 39.3% | 19.6 | 40 | 49% | 25.3 | - |
| Donner Summit | 7020 | 3-29-48 | 78.5 | 31.4% | 24.7 | 46.4 | 53% | 29.1 | 25.3 |
| Ward Creek | 7000 | 3-27-48 | 94.0 | 32.9% | 30.9 | 52.8 | 59% | 37.8 | 28.5 |
| Lyons Creek | 7000 | 3-31-48 | 66.1 | 33.6% | 22.2 | 37.6 | 59% | 20.5 | 19.4 |

1, 2 See footnotes first page of this table.

TABLE 5 - SNOW SURVEY DATA FOR ALL COURSES - APRIL, 1948 - (Continued)

| 1 DRAINAGE BASINS and SNOW COURSES | ELEVATION in FEET | DATE of SURVEY | DEPTH of SNOW Inches | DENSITY Per Cent | WATER CONTENT Inches | 2 Normal Water Content for entire season (to April 1st) Inches | Percentage of Total normal seasonal water content on ground at date of survey this year | CORRESPONDING WATER CONTENT AT SAME TIME: Last year 1947 Inches | 1939 Inches |
|---|---|---|---|---|---|---|---|---|---|
| AMERICAN RIVER (Cont'd.) | | | | | | | | | |
| Phillips | 6800 | 3-30-48 | 52.6 | 34.8% | 18.3 | 34 | 54% | 19.8 | - |
| Soda Springs | 6750 | 3-29-48 | 62.8 | 31.1% | 19.5 | 42.6 | 46% | 23.1 | 21.4 |
| Wabena Meadows | 6700 | 3-31-48 | 71.7 | 34.9% | 25.0 | 45.1 | 55% | 25.7 | 24.2 |
| Tamarack Flat | 6600 | 3-30-48 | 57.6 | 34.4% | 19.8 | 34.2 | 58% | 19.9 | 18.2 |
| Huysink | 6600 | 3-29-48 | 90.8 | 28.5% | 25.9 | 54.4 | 48% | 28.9 | 32.7 |
| South Loon Lake | 6500 | 4-2-48 | 56.3 | 31.1% | 17.5 | 35.2 | 50% | 16.2 | - |
| Gopher Flat | 6200 | 4-1-48 | 52.2 | 37.9% | 19.8 | 40 | 50% | 18.8 | - |
| Onion Creek | 6100 | 3-30-48 | 37.3 | 37.3% | 13.9 | 26.1 | 53% | 5.3 | 9.5 |
| Deadman Flat | 6100 | 3-31-48 | 60.9 | 37.9% | 23.1 | 39.4 | 59% | 16.8 | 19.7 |
| Talbot Camp | 6000 | 3-31-48 | 29.1 | 38.1% | 11.1 | 19 | 58% | 2.9 | - |
| Cisco | 5950 | 3-30-48 | 42.1 | 33.5% | 14.1 | 26.1 | 54% | 1.0 | 14.8 |
| Six Mile Valley | 5700 | 3-30-48 | 45.3 | 31.8% | 14.4 | 25.4 | 57% | Patches | 17.8 |
| Strawberry | 5700 | 3-30-48 | 24.0 | 35.8% | 8.6 | 10 | 86% | 0.0 | - |
| Orellis (Robs Valley) | 5600 | 4-3-48 | 57.5 | 34.9% | 20.1 | 29.3 | 68% | 6.0 | 20.0 |
| Ice House | 5300 | 3-31-48 | 37.8 | 43.1% | 16.3 | 16.6 | 99% | 0.0 | 10.6 |
| Carpenter Flat | 4900 | 3-29-48 | 39.7 | 12.9% | 32.5 | New Course 1946 | | 0.0 | - |
| CARSON RIVER | | | | | | | | | |
| Carson Pass | 8600 | Record not received | | | | 44.1 | - | 30.5 | 23.8 |
| Blue Lakes | 8000 | 3-31-48 | 79.1 | 30.7% | 24.3 | 42.8 | 57% | 29.4 | 22.3 |
| CONSUMNES RIVER | | | | | | | | | |
| Corral Flat | 7300 | 3-30-48 | 70.8 | 35.9% | 25.4 | 46.7 | 54% | 31.1 | 27.2 |
| Lumberyard | 6600 | 3-29-48 | 66.0 | 31.5% | 20.8 | 37.2 | 56% | 13.6 | 21.2 |
| Hams Station | 5600 | 3-29-48 | 30.5 | 34.3% | 10.5 | 6.8 | 154% | 0.0 | 0.0 |
| MOKELUMNE RIVER | | | | | | | | | |
| Carson Pass | 8600 | Record not Received | | | | 44.1 | - | 30.5 | 23.8 |
| Blue Lakes | 8000 | 3-31-48 | 79.1 | 30.7% | 24.3 | 42.8 | 57% | 29.4 | 22.3 |
| Twin Lakes | 7900 | Record not received | | | | 34.8 | - | 22.3 | 14.7 |
| Tragedy Springs | 7900 | 3-31-48 | 90.0 | 32.1% | 28.9 | 51.6 | 56% | 33.7 | - |
| Wheeler Lake | 7800 | 4-2-48 | 98.2 | 33.8% | 33.2 | 62.4 | 53% | 45.4 | 31.6 |
| Pacific Valley | 7500 | 4-1-48 | 70.9 | 33.4% | 24.4 | 42.3 | 58% | 30.5 | 21.7 |
| Lake Alpine | 7500 | 3-30-48 | 82.5 | 36.4% | 30.0 | 46.5 | 64% | 29.5 | 22.5 |

1, 2 See footnotes first page of this table.

TABLE 5 - SNOW SURVEY DATA FOR ALL COURSES - APRIL, 1948 - (Continued)

| 1 DRAINAGE BASINS and SNOW COURSES | ELEVATION in FEET | DATE of SURVEY | DEPTH of SNOW Inches | DENSITY Per Cent | WATER CONTENT Inches | 2 Normal Water Content for entire season (to April 1st) Inches | Percentage of Total normal seasonal water content on ground at date of survey this year | CORRESPONDING WATER CONTENT AT SAME TIME: Last year 1947 Inches | 1939 Inches |
|---|---|---|---|---|---|---|---|---|---|
| MOKELUMNE RIVER (Cont'd.) | | | | | | | | | |
| Silver Lake | 7300 | Record not received | | | | 26.4 | - | 11.9 | 11.7 |
| Corral Flat | 7300 | 3-30-48 | 70.8 | 35.9% | 25.4 | 46.7 | 54% | 31.1 | 27.2 |
| Bear Valley Ridge | 6700 | 3-27-48 | 70.7 | 27.7% | 19.6 | 31.0 | 63% | 14.5 | 20.4 |
| Lumberyard | 6600 | 3-29-48 | 66.0 | 31.5% | 20.8 | 37.2 | 56% | 13.6 | 21.2 |
| Big Meadow | 6500 | Survey delayed by storms | | | | 33 | | 13.9 | - |
| Cottage Springs | 5700 | 4-1-48 | 32.6 | 36.8% | 12.0 | 12.6 | 95% | 0.0 | Patches |
| Hams Station | 5600 | 3-29-48 | 30.5 | 34.3% | 10.5 | 6.8 | 154% | 0.0 | 0.0 |
| Dorrington | 4800 | 4-1-48 | 21.8 | 39.4% | 8.6 | 6.0 | 143% | 0.0 | 0.0 |
| Antelope Springs | 4350 | 3-29-48 | 25.1 | 36.3% | 9.1 | - | - | 0.0 | Patches |
| STANISLAUS RIVER | | | | | | | | | |
| Sonora Pass | 8800 | 3-26-48 | 52.7 | 26.8% | 14.1 | 28.2 | 50% | 17.9 | 15.1 |
| Lower Relief Valley | 8300 | 3-28-48 | 71.0 | 34.8% | 24.7 | 47.3 | 52% | 31.7 | 21.6 |
| Soda Creek Flat | 7900 | 3-30-48 | 33.0 | 30.9% | 10.2 | 27.4 | 37% | 16.0 | 11.5 |
| Eagle Meadows | 7500 | 4-1-48 | 39.7 | 33.5% | 13.3 | 29.9 | 44% | 16.3 | 16.8 |
| Lake Alpine | 7500 | 3-30-48 | 82.5 | 36.4% | 30.0 | 46.5 | 64% | 29.5 | 22.5 |
| Pacific Valley | 7500 | 4-1-48 | 70.9 | 33.4% | 24.4 | 42.3 | 58% | 30.5 | 21.7 |
| Herring Creek | 7400 | Survey not received | | | | 34.6 | | 18.0 | 18.9 |
| Relief Dam | 7300 | 3-31-48 | 35.5 | 33.2% | 11.8 | 25.4 | 46% | 14.9 | 11.5 |
| Spicers | 6600 | 3-31-48 | 49.2 | 31.9% | 15.7 | 33.3 | 47% | 17.7 | 17.7 |
| Niagara Flat | 6500 | 4-1-48 | 36.2 | 36.4% | 13.2 | 24.6 | 54% | 9.4 | 13.1 |
| Big Meadow | 6500 | 3-29-48 | 61.2 | 33.5% | 20.5 | 33 | 62% | 13.9 | - |
| Strawberry Lake | 5700 | 4-2-48 | 15.3 | 39.2% | 6.0 | 9.6 | 63% | 0.0 | 0.0 |
| Cottage Springs | 5700 | 4-1-48 | 32.6 | 36.8% | 12.0 | 12.6 | 95% | 0.0 | Patches |
| Dorrington | 4800 | 4-1-48 | 21.8 | 39.4% | 8.6 | 6.0 | 143% | 0.0 | 0.0 |
| WALKER RIVER | | | | | | | | | |
| Virginia Lakes | 9500 | 3-31-48 | 37.4 | 27.8% | 10.4 | New Course 1947 | | 15.9 | - |
| Center Mountain | 9400 | Survey delayed by storms | | | | 42.3 | - | 30.9 | 24.7 |
| Sonora Pass | 8800 | 3-26-48 | 52.7 | 26.8% | 14.1 | 28.2 | 50% | 17.9 | 15.1 |
| Buckeye Forks | 8500 | Survey not received | | | | 20.7 | - | 16.1 | 11.6 |
| Willow Flat | 8250 | 3-25-48 | 23.4 | 23.5% | 5.5 | 14.2 | 39% | 7.8 | 11.2 |
| Buckeye Roughs | 7900 | 4-4-48 | 36.1 | 22.4% | 8.1 | 20.7 | 39% | 15.0 | 10.9 |
| Leavitt Meadows | 7200 | 3-26-48 | 15.9 | 19.5% | 3.1 | 10.1 | 31% | 1.4 | 5.5 |

1, 2 See footnotes first page of this table.

TABLE 5 - SNOW SURVEY DATA FOR ALL COURSES - APRIL, 1948 - (Continued)

| 1 DRAINAGE BASINS and SNOW COURSES | ELEVATION in FEET | DATE of SURVEY | DEPTH of SNOW Inches | DENSITY Per Cent | WATER CONTENT Inches | 2 Normal Water Content for entire season (to April 1st) Inches | Percentage of Total normal seasonal water content on ground at date of survey this year | CORRESPONDING WATER CONTENT AT SAME TIME: Last year 1947 Inches | 1939 Inches |
|---|---|---|---|---|---|---|---|---|---|
| TUOLUMNE RIVER | | | | | | | | | |
| Fletcher Lake | 10,300 | 4-1-48 | 72.0 | 31.5% | 22.7 | 38.3 | 59% | 25.2 | 18.0 |
| Tioga Pass | 9900 | 3-31-48 | 49.7 | 31.6% | 15.7 | 31.7 | 50% | 19.4 | 12.4 |
| Dana Meadows | 9700 | 3-31-48 | 66.1 | 31.9% | 21.1 | 34.3 | 62% | 23.9 | 18.0 |
| Rafferty Meadows | 9600 | 4-1-48 | 66.9 | 33.8% | 22.6 | New Course | this year | | |
| Center Mountain | 9400 | Survey delayed by storms | | | | 42.3 | - | 30.9 | 24.7 |
| Bond Pass | 9300 | Survey delayed by storms | | | | New Course | 1947 | 35.9 | - |
| Grace Meadows | 8800 | Survey delayed by storms | | | | New Course | 1947 | 30.6 | - |
| Snow Flat | 8700 | 4-2-48 | 86.8 | 30.7% | 26.7 | 48.8 | 55% | 31.4 | 26.2 |
| Tuolumne Meadows | 8600 | 4-2-48 | 31.8 | 33.8% | 10.7 | 25.6 | 42% | 17.4 | 10.2 |
| Horse Meadow | 8400 | Survey delayed by storms | | | | New Course | This year | - | - |
| Lower Relief Valley | 8300 | 3-28-48 | 71.0 | 34.8% | 24.7 | 47.3 | 52% | 30.8 | 21.6 |
| Spotted Fawn | 8000 | Survey delayed by storms | | | | New Course | this year | - | - |
| Wilmer Lake | 8000 | Survey delayed by storms | | | | New Course | 1946 | 32.6 | - |
| Saches Springs | 7900 | Survey delayed by storms | | | | New Course | this year | - | - |
| Huckleberry Lake | 7800 | Survey delayed by storms | | | | New Course | 1946 | - | - |
| Paradise | 7600 | Survey delayed by storms | | | | New Course | 1946 | 30.0 | - |
| Gin Flat | 7100 | 4-2-48 | 60.2 | 36.9% | 22.2 | 39.4 | 56% | 18.1 | 23.6 |
| Kibbey Ridge - Upper | 6700 | Survey delayed by storms | | | | 24.4 | | 1.0 | 14.2 |
| Vernon Lake | 6700 | Survey delayed by storms | | | | New Course | 1946 | 11.4 | - |
| Smith Meadows | 6600 | Survey delayed by storms | | | | 12.5 | | Patches | 4.5 |
| Beehive Meadow | 6500 | Survey delayed by storms | | | | 29.6 | | 9.9 | 17.8 |
| Bell Meadows | 6500 | Survey delayed by storms | | | | 21.6 | | 3.5 | 9.3 |
| Kibbey Ridge - Lower | 6200 | Survey delayed by storms | | | | 32.1 | | 9.3 | 19.7 |
| Cottonwood Meadows | 6000 | Survey delayed by storms | | | | 8.2 | | 0.0 | 1.6 |
| Strawberry Lake | 5700 | 4-2-48 | 15.3 | 39.2% | 6.0 | 9.3 | 65% | 0.0 | 0.0 |
| MERCED RIVER | | | | | | | | | |
| Fletcher Lake | 10,300 | 4-1-48 | 72.0 | 31.5% | 22.7 | 38.3 | 59% | 25.2 | 18.0 |
| Snow Flat | 8700 | 4-2-48 | 86.8 | 30.7% | 26.7 | 48.8 | 55% | 31.4 | 26.2 |
| Ostrander Lake | 8200 | 4-1-48 | 67.7 | 32.6% | 22.1 | 43.4 | 51% | 24.7 | 22.8 |
| Lake Tenaya | 8150 | 4-2-48 | 61.8 | 33.8% | 20.9 | 39.7 | 53% | 23.7 | 20.1 |
| Gin Flat | 7100 | 4-2-48 | 60.2 | 36.9% | 22.2 | 39.4 | 56% | 18.1 | 23.6 |

1, 2 See footnotes first page of this table.

TABLE 5 - SNOW SURVEY DATE FOR ALL COURSES - APRIL, 1948 - (Continued)

| 1 DRAINAGE BASINS and SNOW COURSES | ELEVATION in FEET | DATE of SURVEY | DEPTH of SNOW Inches | DENSITY Per Cent | WATER CONTENT Inches | 2 Normal Water Content for entire season (to April 1st) Inches | Percentage of Total normal seasonal water content on ground at date of survey this year | CORRESPONDING WATER CONTENT AT SAME TIME: Last year 1947 Inches | 1939 Inches |
|---|---|---|---|---|---|---|---|---|---|
| MERCED RIVER (Cont'd.) | | | | | | | | | |
| Peregoy Meadows | 7000 | 3-31-48 | 64.3 | 29.5% | 19.0 | 32.5 | 58% | 16.3 | 19.5 |
| MONO LAKE | | | | | | | | | |
| Tioga Pass | 9900 | 3-31-48 | 49.7 | 31.6% | 15.7 | 31.7 | 50% | 19.4 | 12.4 |
| Dana Meadows | 9700 | 3-31-48 | 66.1 | 31.9% | 21.1 | 34.3 | 62% | 23.9 | 18.0 |
| Agnew Pass | 9450 | 3-31-48 | 65.8 | 27.7% | 18.2 | 35.1 | 52% | 23.4 | 17.0 |
| UPPER SAN JOAQUIN RIVER | | | | | | | | | |
| Piute Pass | 11,200 | Survey delayed by storms | | | | 36.0 | - | 28.4 | 22.4 |
| Emerald Lake | 10,800 | Survey delayed by storms | | | | 41 | - | 28.3 | - |
| Blackcap Basin | 10,800 | 3-31-48 | 60.0 | 31.4% | 18.8 | 39.7 | 47% | 26.2 | 20.2 |
| Heart Lake | 10,100 | Survey delayed by storms | | | | 32 | | 19.8 | - |
| Volcanic Knob | 10,100 | Survey delayed by storms | | | | New Course 1946 | | 25.4 | - |
| Rose Marie | 10,000 | Survey delayed by storms | | | | New Course 1946 | | 22.2 | - |
| Colby Meadow | 10,000 | Survey delayed by storms | | | | 26 | | 17.5 | - |
| Upper Burnt Corral | 9700 | 4-1-48 | 69.8 | 31.0% | 21.6 | 39.5 | 55% | 30.4 | 19.4 |
| Mammoth Pass | 9500 | 4-2-48 | 81.0 | 31.3% | 27.9 | 50.3 | 55% | 35.1 | 21.2 |
| Agnew Pass | 9450 | 3-31-48 | 65.8 | 27.7% | 18.2 | 35.1 | 52% | 23.4 | 17.0 |
| Kaiser Pass | 9200 | 3-29-48 | 78.7 | 28.2% | 22.2 | 43.2 | 51% | 32.7 | 23.5 |
| Dutch Lake | 9100 | 3-30-48 | 56.2 | 28.1% | 15.8 | 31.7 | 50% | 20.4 | 16.8 |
| Coyote Lakes | 8600 | Survey delayed by storms | | | | New Course 1946 | | 23.4 | - |
| Cora Lakes | 8500 | 3-31-48 | 64.6 | 32.5% | 21.0 | 40.7 | 52% | 22.0 | 18.3 |
| Nellie Lake | 8250 | 3-27-48 | 73.9 | 29.4% | 21.7 | 39 | 56% | 26.2 | - |
| Vermilion Valley | 7500 | Survey delayed by storms | | | | 14.4 | | 6.2 | - |
| Chilkoot Lake | 7450 | 4-1-48 | 65.4 | 34.4% | 22.5 | 45.1 | 50% | 20.8 | 21.2 |
| Chilkoot Meadow | 7250 | 3-30-48 | 70.3 | 31.1% | 21.9 | 43.6 | 50% | 18.7 | 20.7 |
| Florence Lake | 7200 | 3-29-48 | 16.8 | 28.0% | 4.7 | 8.7 | 54% | Patches | 0.0 |
| Huntington Lake | 7000 | 3-27-48 | 58.1 | 27.9% | 16.2 | 23.7 | 68% | 8.5 | 13.0 |
| Clover Meadow | 7000 | 3-31-48 | 40.1 | 33.4% | 13.4 | 27.2 | 49% | 10.2 | 12.2 |
| Jackass Meadows | 7000 | 4-1-48 | 35.2 | 38.2% | 13.4 | 25.3 | 53% | 7.1 | 10.3 |
| Chiquito Creek | 6800 | 4-1-48 | 39.4 | 37.1% | 14.6 | 24.0 | 61% | 7.4 | 12.7 |
| Beasore Meadow | 6800 | 3-30-48 | 57.0 | 34.2% | 19.5 | 32.0 | 61% | 14.4 | 19.5 |
| Poison Meadow | 6500 | 3-30-48 | 62.4 | 33.2% | 20.7 | 27 | 77% | 3.4 | - |

1, 2 See footnotes first page of this table.

TABLE 5 - SNOW SURVEY DATA FOR ALL COURSES - APRIL, 1948 - (Continued)

| 1 DRAINAGE BASINS and SNOW COURSES | ELEVATION in FEET | DATE of SURVEY | DEPTH of SNOW Inches | DENSITY Per Cent | WATER CONTENT Inches | 2 Normal Water Content for entire season (to April 1st) Inches | Percentage of Total normal seasonal water content on ground at date of survey this year | CORRESPONDING WATER CONTENT AT SAME TIME: Last year 1947 Inches | 1939 Inches |
|---|---|---|---|---|---|---|---|---|---|
| KINGS RIVER | | | | | | | | | |
| Bishop Pass | 11,400 | 4-5-48 | 58.0 | 30.2% | 17.5 | 36.1 | 48% | 27.3 | 23.5 |
| Blackcap Basin | 10,800 | 3-31-48 | 60.0 | 31.4% | 18.8 | 39.7 | 47% | 26.2 | 20.2 |
| Upper Burnt Corral | 9700 | 4-1-48 | 69.8 | 31.0% | 21.6 | 39.5 | 55% | 30.4 | 19.4 |
| Beard Meadow | 9300 | 3-30-48 | 61.8 | 29.2% | 18.0 | 36.7 | 49% | 27.8 | 18.6 |
| Rowell Meadow | 9200 | Survey delayed by storms | | | | 33.0 | - | 19.1 | 14.4 |
| Woodchuck Meadow | 9100 | 3-30-48 | 62.0 | 30.0% | 18.6 | 36.1 | 52% | 22.3 | 19.3 |
| Swamp Meadow | 9000 | 4-4-48 | 78.6 | 30.7% | 24.1 | 42.5 | 57% | 27.7 | 22.2 |
| Round Corral | 9000 | 3-29-48 | 60.8 | 29.6% | 18.0 | 39.7 | 45% | 26.4 | 19.8 |
| Junction Meadows | 8500 | 3-31-48 | 32.3 | 29.7% | 9.6 | 23.5 | 41% | 8.8 | 8.9 |
| Helm Meadow | 8500 | 4-4-48 | 52.2 | 29.3% | 15.3 | 31.1 | 49% | 15.8 | 14.8 |
| Long Meadow | 8500 | 4-1-48 | 53.0 | 34.7% | 18.4 | 33.3 | 55% | 20.2 | 13.4 |
| Statum Meadow | 8300 | 3-29-48 | 53.8 | 29.6% | 15.9 | 36.6 | 43% | 19.8 | 18.7 |
| Post Corral Meadow | 8200 | 4-1-48 | 44.6 | 34.5% | 15.4 | 31.5 | 49% | 17.0 | 13.0 |
| Sand Meadow | 8050 | 4-2-48 | 50.5 | 33.7% | 17.0 | 33.7 | 50% | 18.1 | 15.4 |
| Big Meadows | 7660 | Survey delayed by storms | | | | 30.3 | - | 14.6 | 13.2 |
| Horse Corral Meadow | 7600 | Survey delayed by storms | | | | 22.1 | - | 6.4 | 9.7 |
| Bear Ridge | 7400 | 4-6-48 | 73.6 | 33.7% | 24.8 | 30.5 | 81% | 12.6 | 20.6 |
| Fred Meadows | 7200 | 4-6-48 | 61.2 | 31.7% | 19.4 | 25.2 | 77% | 3.4 | 12.4 |
| Grant Grove | 6660 | 4-1-48 | 44.9 | 36.5% | 16.4 | 15.3 | 107% | 0.0 | 7.3 |
| Cliff Camp | 6300 | 3-28-48 | 36.5 | 37.5% | 13.7 | 15.4 | 89% | 0.0 | 7.3 |
| Dinkey Sand Flat | 5500 | 4-5-48 | 46.4 | 39.2% | 18.2 | 14.3 | 127% | 0.0 | 11.0 |
| KAWEAH RIVER | | | | | | | | | |
| Panther Meadow | 8650 | 4-2-48 | 76.0 | 27.0% | 20.5 | 40.6 | 50% | 20.2 | 24.7 |
| Hockett Meadow | 8600 | 3-28-48 | 69.1 | 28.2% | 19.5 | 34.7 | 56% | 20.4 | 20.3 |
| Quinn Ranger Station | 8000 | 3-31-48 | 41.7 | 34.7% | 14.5 | 23.5 | 62% | 12.3 | 14.5 |
| Big Meadows | 7660 | Survey delayed by storms | | | | 30.3 | | 14.6 | 13.2 |
| Giant Forest | 6360 | 4-1-48 | 45.7 | 33.9% | 15.5 | 18.6 | 83% | 0.0 | 13.0 |
| TULE RIVER | | | | | | | | | |
| Quaking Aspen | 7000 | 3-31-48 | 42.6 | 32.1% | 13.7 | 15.6 | 88% | Patches | 10.9 |
| Old Enterprise Mill | 6600 | 4-4-48 | 57.1 | 37.1 | 21.2 | 18.7 | 113% | 0.0 | 18.4 |

1, 2 See footnotes first page of this table.

TABLE 5 - SNOW SURVEY DATA FOR ALL COURSES - APRIL, 1948 - (Continued)

| 1 DRAINAGE BASINS and SNOW COURSES | ELEVATION in FEET | DATE of SURVEY | DEPTH of SNOW Inches | DENSITY Per Cent | WATER CONTENT Inches | 2 Normal Water Content for entire season (to April 1st) Inches | Percentage of Total normal seasonal water content on ground at date of survey this year | CORRESPONDING WATER CONTENT AT SAME TIME: Last year 1947 Inches | CORRESPONDING WATER CONTENT AT SAME TIME: 1939 Inches |
|---|---|---|---|---|---|---|---|---|---|
| DEER CREEK | | | | | | | | | |
| Dead Horse Meadow | 7200 | 4-1-48 | 39.4 | 35.0% | 13.8 | 14.5 | 95% | N.S.M. | 16.0 |
| KERN RIVER | | | | | | | | | |
| Cottonwood Pass | 11,100 | 4-1-48 | 13.4 | 28.4% | 3.8 | New Snow Course this year | | | |
| Siberian Pass | 10,800 | 4-2-48 | 23.0 | 27.4% | 6.3 | New Snow Course this Year | | | |
| Big Whitney Meadows | 9,800 | 4-1-48 | 14.5 | 33.1% | 4.8 | New Snow Course this Year | | | |
| Round Meadow | 9000 | 4-8-48 | 67.7 | 27.6% | 18.7 | 27.7 | 67% | 18.1 | 25.0 |
| Ramshaw Meadows | 8800 | 4-4-48 | 15.0 | 29.3% | 4.4 | 12.6 | 35% | 7.4 | 10.3 |
| Little Whitney Meadows | 8500 | 4-2-48 | 14.7 | 32.7% | 4.8 | 15.2 | 32% | 6.7 | 8.6 |
| Bonita Meadows | 8400 | 4-7-48 | 28.7 | 34.4% | 9.9 | 15.3 | 65% | 0.0 | 15.3 |
| Casa Vieja Meadows | 8400 | 4-6-48 | 35.8 | 28.5% | 10.2 | 21.2 | 48% | 12.2 | 17.0 |
| Monache Meadows | 8000 | 4-5-48 | 6.0 | 36.7% | 2.2 | 10.1 | 22% | - | 5.9 |
| Quinn Ranger Station | 8000 | 3-31-48 | 41.7 | 34.7% | 14.5 | 23.5 | 62% | 12.3 | 14.5 |
| Beach Meadows | 7800 | 4-7-48 | 22.0 | 30.4% | 6.7 | 11.3 | 59% | 0.0 | 9.8 |
| Burnt Corral Meadow | 6200 | 4-1-48 | Snow in patches only | | | 5.6 | - | 0.0 | 3.4 |
| Lloyd Meadows | 5600 | 4-1-48 | Snow in patches only | | | 4.7 | - | 0.0 | 0.0 |
| OWENS RIVER | | | | | | | | | |
| UPPER OWENS | | | | | | | | | |
| Mammoth Pass #1 | 9500 | 4-2-48 | 81.0 | 31.3% | 27.9 | 50.3 | 55% | 35.1 | 21.2 |
| Minarettes #2 | 9000 | 4-4-48 | 74.3 | 27.6% | 20.5 | 36.2 | 57% | 24.9 | 13.6 |
| Minarettes #1 | 8300 | 4-4-48 | 40.6 | 27.6% | 11.2 | 23.7 | 47% | 13.2 | 4.9 |
| Mammoth Pass #2 | 8300 | 4-2-48 | 31.0 | 30.5% | 10.9 | 24.2 | 45% | 15.5 | 5.0 |
| BISHOP CREEK | | | | | | | | | |
| Bishop Pass | 11,400 | 4-5-48 | 58.0 | 30.2% | 17.5 | 36.1 | 48% | 27.3 | 23.5 |
| Piute Pass | 11,200 | Survey delayed by storms | | | | 36.0 | | 28.4 | 22.4 |
| East Piute Pass | 10,800 | Survey delayed by storms | | | | 19.9 | | 10.2 | 10.1 |
| Sawmill | 10,200 | 4-6-48 | 39.0 | 24.6% | 9.6 | 21.8 | 44% | 14.1 | 12.2 |
| North Lake | 9500 | Survey delayed by storms | | | | 11.8 | | 5.3 | 5.1 |
| South Fork | 9000 | 4-6-48 | Patches of snow only | | | 7.5 | - | 0.0 | 0.0 |

1, 2 See footnotes first page of this table.

TABLE 5 - SNOW SURVEY DATA FOR ALL COURSES - APRIL, 1948 - (Continued)

| 1 DRAINAGE BASINS and SNOW COURSES | ELEVATION in FEET | DATE of SURVEY | DEPTH of SNOW Inches | DENSITY Per Cent | WATER CONTENT Inches | 2 Normal Water Content for entire season (to April 1st) Inches | Percentage of Total normal seasonal water content on ground at date of survey this year | CORRESPONDING WATER CONTENT AT SAME TIME: Last year 1947 Inches | CORRESPONDING WATER CONTENT AT SAME TIME: 1939 Inches |
|---|---|---|---|---|---|---|---|---|---|
| BISHOP CREEK (cont'd.) | | | | | | | | | |
| Bishop Park | 8500 | Survey delayed by storms | | | | 6.5 | | 0.0 | 0.0 |
| ROCK CREEK | | | | | | | | | |
| Rock Creek #3 | 10,000 | 4-1-48 | 23.2 | 28.9% | 6.7 | 16.1 | 42% | 12.1 | 5.5 |
| Rock Creek #2 | 9000 | 4-1-48 | 6.6 | 31.8% | 2.1 | 11.0 | 19% | 5.1 | 0.0 |
| Rock Creek #1 | 8700 | 4-1-48 | 1.9 | 36.8% | 0.7 | 10.4 | 7% | 4.2 | 0.0 |
| BIG PINE CREEK | | | | | | | | | |
| Big Pine Creek #1 | 10,000 | 3-30-48 | 31.4 | 27.1% | 8.5 | 26.9 | 32% | 21.3 | 14.0 |
| Big Pine Creek #3 | 9800 | 3-30-48 | 23.8 | 26.0% | 6.2 | 19.1 | 32% | 12.9 | 7.8 |
| Big Pine Creek #2 | 9700 | 3-30-48 | 22.3 | 26.9% | 6.0 | 19.2 | 31% | 14.7 | 9.2 |
| COTTONWOOD CREEK | | | | | | | | | |
| Cottonwood #2 | 11,100 | 3-31-48 | 19.0 | 30.1% | 6.2 | 13.4 | 46% | 9.9 | 11.4 |
| Cottonwood #1 | 10,600 | 3-31-48 | 10.6 | 29.7% | 3.6 | 12.6 | 29% | 10.2 | 11.4 |
| SOUTHERN CALIFORNIA | | | | | | | | | |
| SANTA ANA RIVER | | | | | | | | | |
| San Antonio #2 | 8400 | 3-30-48 | 48.4 | 32.9% | 15.9 | R.N.C. | - | 10.8 | - |
| Ice House #3 | 8000 | 3-29-48 | 49.3 | 37.7% | 18.6 | R.N.C. | - | 22.2 | 21.5 |
| Ice House #2 | 7660 | 3-29-48 | 27.6 | 39.5% | 10.9 | R.N.C. | - | 6.6 | 13.5 |

1, 2 See footnotes first page of this table.

PROGRESS REPORT ON SNOW SURVEY AND PRECIPITATION DATA
TO APRIL 1, 1948
TABLE 6 - PRECIPITATION DATA

| 1 BASIN AND PRECIPITATION STATION | ELEVATION IN FEET | PRECIPITATION DURING MARCH 1948 | | | PRECIPITATION FROM JULY 1, 1947 TO APRIL 1, 1948 | | | 2 Normal Seasonal Precipitation (July to June) Inches |
|---|---|---|---|---|---|---|---|---|
| | | Total (Inches) | 2 Normal (Inches) | In per cent of Normal | Total (Inches) | 2 Normal (Inches) | In per cent of Normal | |
| UPPER SACRAMENTO-PIT AND McCLOUD RIVERS | | | | | | | | |
| Jess Valley | 5400 | 2.30 | 1.60 | 144% | 9.57 | 11.74 | 81% | 15.68 |
| Alturas | 4460 | 1.57 | 1.19 | 132% | 7.06 | 9.19 | 77% | 17.03 |
| Bieber | 4200 | 4.16 | 1.80 | 231% | 13.76 | 13.18 | 104% | 16.02 |
| Mount Shasta | 3555 | 3.82 | 4.43 | 86% | 24.96 | 29.53 | 85% | 34.86 |
| Hat Creek | 3400 | 4.13 | 1.94 | 213% | 12.84 | 14.71 | 87% | 17.95 |
| Fall River Mills | 3340 | 4.35 | 2.93 | 148% | 14.89 | 15.74 | 95% | 18.97 |
| McCloud | 3270 | 6.55 | 5.75 | 114% | 31.96 | 42.43 | 75% | 49.66 |
| FEATHER RIVER | | | | | | | | |
| Bucks Storage Dam | 5100 | 15.53 | 10.43 | 149% | 47.04 | 62.09 | 76% | 71.27 |
| Sierraville | 5000 | 2.37 | 3.34 | 71% | 13.69 | 22.23 | 62% | 25.57 |
| Mineral | 4935 | 12.38 | 7.03 | 176% | 41.99 | 44.62 | 94% | 51.90 |
| Portola | 4832 | 2.45 | 2.60 | 94% | 8.16 | 15.61 | 52% | 18.12 |
| Prattville | 4600 | 8.32 | 5.18 | 161% | 24.95 | 32.30 | 77% | 37.16 |
| Canyon Dam | 4570 | 7.80 | 5.29 | 147% | 25.14 | 32.85 | 77% | 38.24 |
| Chester | 4550 | No Report | 4.26 | - | - | 27.14 | - | 31.66 |
| Veramont | 3500 | 4.59 | 4.57 | 100% | 19.10 | 29.89 | 64% | 34.21 |
| Quincy | 3409 | 7.19 | 5.61 | 128% | 24.34 | 34.57 | 70% | 40.21 |
| West Branch | 3216 | 16.27 | 9.17 | 177% | 56.05 | 62.91 | 89% | 72.52 |
| Caribou | 3000 | 8.53 | 5.86 | 146% | 27.22 | 35.64 | 76% | 41.17 |

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

2 These are computed 58 year normals for the period 1890-1947, inclusive. Where the periods of record are less than 58 years, the normals have been computed by comparison with the records of stations for which the actual 58 year data are complete. This gives all normals based upon the same period of years and comparable.

3 R.N.C. Record not complete.

TABLE 6 - PRECIPITATION DATA - TO APRIL 1, 1948 (Continued)

| 1 BASIN AND PRECIPITATION STATION | ELEVATION IN FEET | PRECIPITATION DURING MARCH 1948 | | | PRECIPITATION FROM JULY 1, 1947 TO APRIL 1, 1948 | | | 2 Normal Seasonal Precipitation (July to June) Inches |
|---|---|---|---|---|---|---|---|---|
| | | Total (Inches) | 2 Normal (Inches) | In per cent of Normal | Total (Inches) | 2 Normal (Inches) | In per cent of Normal | |
| FEATHER RIVER (Cont'd.) | | | | | | | | |
| Lake Wilenor | 2000 | 10.07 | 8.44 | 119% | 34.30 | 47.20 | 73% | 55.23 |
| Storrie | 1760 | 14.35 | 9.46 | 152% | 43.49 | 56.77 | 77% | 65.03 |
| Las Plumas | 506 | 10.86 | 6.38 | 170% | 32.84 | 43.73 | 75% | 49.66 |
| YUBA RIVER | | | | | | | | |
| Soda Springs | 6870 | 8.07 | 7.66 | 105% | 32.08 | 41.28 | 78% | 47.38 |
| Bowman Dam | 5346 | 14.95 | 11.47 | 130% | 49.01 | 60.00 | 82% | 70.06 |
| Lake Spaulding | 4600 | 10.99 | 10.77 | 102% | 40.95 | 57.37 | 71% | 67.47 |
| Deer Creek | 3700 | No Report | 10.15 | - | - | 59.43 | - | 68.76 |
| Nevada City | 2570 | 9.94 | 7.64 | 130% | 31.91 | 43.74 | 73% | 50.45 |
| Dobbins (Near) | 1650 | 6.96 | 5.97 | 117% | 26.83 | 36.09 | 74% | 41.77 |
| TRUCKEE & TAHOE BASINS | | | | | | | | |
| Twin Lakes | 7970 | 8.42 | 7.51 | 112% | 27.15 | 39.14 | 69% | 45.74 |
| Soda Springs | 6870 | 8.07 | 7.66 | 105% | 32.08 | 41.28 | 78% | 47.38 |
| Tahoe | 6230 | 3.69 | 4.60 | 80% | 16.46 | 28.43 | 58% | 32.50 |
| Truckee | 6200 | 4.84 | 4.29 | 113% | 16.79 | 23.48 | 72% | 26.40 |
| AMERICAN RIVER | | | | | | | | |
| Twin Lakes | 7970 | 8.42 | 7.51 | 112% | 27.15 | 39.14 | 69% | 45.74 |
| Soda Springs | 6870 | 8.07 | 7.66 | 105% | 32.08 | 41.28 | 78% | 47.38 |
| Colfax | 2420 | 8.03 | 7.43 | 108% | 26.83 | 41.33 | 65% | 47.80 |
| Placerville | 1924 | No Report | 6.71 | - | - | 35.32 | - | 40.68 |
| CARSON RIVER | | | | | | | | |
| Blue Lakes | 8040 | 10.60 | 7.67 | 138% | 28.49 | 42.74 | 67% | 49.94 |
| Twin Lakes | 7970 | 8.42 | 7.51 | 112% | 27.15 | 39.14 | 69% | 45.74 |
| MOKELUMNE RIVER | | | | | | | | |
| Blue Lakes | 8040 | 10.60 | 7.67 | 138% | 28.49 | 42.74 | 67% | 49.94 |
| Twin Lakes | 7970 | 8.42 | 7.51 | 112% | 27.15 | 39.14 | 69% | 45.74 |

1, 2 See footnotes first page of this table.
Data for Norden or Summit where daily snow depths reported by Southern Pacific Company are read. U.S.W.B. station was moved a short distance from Norden to Soda Springs in April, 1931.

TABLE 6 - PRECIPITATION DATA - TO APRIL 1, 1948 (Continued)

| 1 BASIN AND PRECIPITATION STATION | ELEVATION IN FEET | PRECIPITATION DURING MARCH 1948 | | | PRECIPITATION FROM JULY 1, 1947 TO APRIL 1, 1948 | | | 2 Normal Seasonal Precipitation (July to June) Inches |
|---|---|---|---|---|---|---|---|---|
| | | Total (Inches) | 2 Normal (Inches) | In per cent of Normal | Total (Inches) | 2 Normal (Inches) | In per cent of Normal | |
| MOKELUMNE RIVER (Cont'd.) | | | | | | | | |
| Salt Springs Reservoir | 3660 | 9.00 | 6.90 | 130% | 28.25 | 34.54 | 82% | 44.53 |
| Tiger Creek | 2400 | 10.31 | 7.40 | 139% | 30.62 | 39.37 | 78% | 45.78 |
| West Point | 2326 | 8.98 | 6.73 | 133% | 24.92 | 34.37 | 72% | 39.98 |
| Electra | 699 | 7.71 | 5.43 | 142% | 22.65 | 27.39 | 83% | 31.45 |
| STANISLAUS RIVER | | | | | | | | |
| Strawberry Lake | 5620 | 9.26 | 6.00 | 154% | 24.74 | 32.99 | 75% | 38.65 |
| Calaveras Big Trees | 4700 | 11.90 | 9.14 | 130% | 34.64 | 45.41 | 76% | 53.26 |
| WALKER RIVER | | | | | | | | |
| Bridgeport | 6473 | 0.61 | 0.99 | 62% | 1.80 | 9.16 | 20% | 10.73 |
| TUOLUMNE RIVER | | | | | | | | |
| Strawberry Lake | 5620 | 9.26 | 6.00 | 154% | 24.74 | 32.99 | 75% | 38.65 |
| Lake Eleanor | 4650 | 8.73 | 7.03 | 124% | 24.45 | 38.05 | 64% | 44.63 |
| Hetch Hetchy | 3530 | 7.31 | 5.87 | 125% | 22.01 | 29.74 | 74% | 35.67 |
| Groveland | 2828 | 8.76 | 6.50 | 135% | 19.15 | 33.46 | 57% | R.N.C. |
| Sonora | 1825 | 7.51 | 5.81 | 129% | 20.00 | 28.94 | 69% | 33.22 |
| MERCED RIVER | | | | | | | | |
| Yosemite | 3960 | 7.75 | 5.39 | 144% | 22.25 | 31.12 | 71% | 36.43 |
| Dudley's | 3000 | No Report | - | - | - | - | - | - |
| Mariposa | 1932 | 8.12 | 5.39 | 151% | 16.16 | 27.30 | 59% | 30.66 |
| Merced Falls | 351 | 4.25 | 2.68 | 159% | 9.37 | 14.14 | 66% | 16.13 |
| MONO BASIN | | | | | | | | |
| Ellery Lake | 9600 | 2.99 | 4.49 | 67% | 8.61 | 26.21 | 33% | 31.93 |
| Gem Lake | 9120 | 2.33 | 3.70 | 63% | 8.60 | 23.17 | 37% | 27.25 |

1, 2 See footnotes first page of this table.

TABLE 6 - PRECIPITATION DATA - TO APRIL 1, 1948 (Continued)

| 1 BASIN AND PRECIPITATION STATION | ELEVATION IN FEET | PRECIPITATION DURING MARCH 1948 | | | PRECIPITATION FROM JULY 1, 1947 TO APRIL 1, 1948 | | | 2 Normal Seasonal Precipitation (July to June) Inches |
|---|---|---|---|---|---|---|---|---|
| | | Total (Inches) | 2 Normal (Inches) | In per cent of Normal | Total (Inches) | 2 Normal (Inches) | In per cent of Normal | |
| UPPER SAN JOAQUIN | | | | | | | | |
| Huntington Lake | 7000 | 6.02 | 4.95 | 122% | 17.23 | 27.29 | 63% | 32.49 |
| Big Creek | 4900 | 7.09 | 5.21 | 136% | 17.98 | 27.57 | 65% | 33.04 |
| Crane Valley | 3500 | 9.21 | 6.72 | 137% | 20.46 | 36.92 | 55% | 42.39 |
| North Fork | 3000 | 7.70 | 5.83 | 132% | 15.73 | 30.65 | 51% | 35.07 |
| Auberry | 2050 | 6.01 | 4.91 | 122% | 12.52 | 23.46 | 53% | 26.67 |
| OWENS BASIN | | | | | | | | |
| South Lake | 9620 | 2.77 | 2.14 | 129% | 7.63 | 15.43 | 49% | 17.77 |
| Lake Sebrina | 9100 | 2.71 | 2.06 | 132% | 6.87 | 15.62 | 44% | 17.88 |
| Birch Creek | 8000 | 2.08 | 1.79 | 116% | 5.13 | 12.62 | 41% | 14.42 |
| Intake #2 Bishop Creek | 8000 | 1.33 | 1.90 | 70% | 3.55 | 10.76 | 33% | R.N.C. |
| Crooked Creek | 6700 | 0.91 | 1.33 | 68% | 1.89 | 8.78 | 22% | 10.04 |
| Big Pines Power House #3 | 5400 | 0.12 | 1.04 | 12% | 0.98 | 7.62 | 13% | 8.27 |
| Independence | 3957 | - | 0.46 | - | 0.54 | 4.28 | 13% | 4.73 |
| L. A. Aqueduct at Intake | 3880 | T | 0.46 | 0.0% | 0.45 | 4.07 | 11% | 4.47 |
| Cottonwood Gates | 3600 | 0.11 | 0.61 | 18% | 1.43 | 4.86 | 29% | 5.32 |
| KINGS RIVER | | | | | | | | |
| Grant Grove | 6775 | 8.49 | 6.55 | 130% | 20.04 | 35.10 | 57% | 42.45 |
| Balch Camp | 1300 | 6.67 | 4.53 | 147% | 14.71 | 24.35 | 60% | 29.06 |
| Piedra | 500 | 5.05 | 3.18 | 159% | 8.74 | 16.25 | 54% | 18.49 |
| KAWEAH RIVER | | | | | | | | |
| Grant Grove | 6775 | 8.49 | 6.55 | 130% | 20.04 | 35.10 | 57% | 42.45 |
| Giant Forest | 6360 | 11.16 | 7.46 | 150% | 22.39 | 37.16 | 60% | 44.33 |
| Ash Mountain | 1600 | 6.64 | 4.97 | 134% | 13.18 | 22.05 | 60% | 26.56 |
| Three Rivers | 870 | 4.39 | 3.56 | 123% | 9.23 | 17.58 | 52% | 20.81 |
| KERN RIVER | | | | | | | | |
| Springville (Near) | 4050 | 9.22 | 6.32 | 146% | 21.16 | 30.91 | 68% | 36.63 |

1, 2, 3 See footnotes first page of this table.

TABLE 6 - PRECIPITATION DATA - TO APRIL 1, 1948 (Continued)

| 1 BASIN AND PRECIPITATION STATION | ELEVATION IN FEET | PRECIPITATION DURING MARCH 1948 | | | PRECIPITATION FROM JULY 1, 1947 TO APRIL 1, 1948 | | | 2 Normal Seasonal Precipitation (July to June) Inches |
|---|---|---|---|---|---|---|---|---|
| | | Total (Inches) | 2 Normal (Inches) | In per cent of Normal | Total (Inches) | 2 Normal (Inches) | In per cent of Normal | |
| KERN RIVER (Cont'd.) | | | | | | | | |
| Kern River #3 Intake | 3640 | 3.64 | 2.74 | 133% | 6.97 | 15.76 | 44% | 17.53 |
| Glennville | 3300 | No Report | 3.83 | - | - | 17.57 | - | 21.08 |
| Kernville | 2600 | 1.78 | 1.63 | 109% | R.N.C. | 9.48 | - | 10.44 |
| LOS ANGELES RIVER | | | | | | | | |
| Opids Camp | 4480 | 5.12 | 7.60 | 67% | 14.79 | 37.15 | 40% | 41.27 |
| Haines Canyon (Upper) | 3450 | 4.35 | 5.57 | 78% | 10.57 | 25.65 | 41% | 30.16 |
| Clear Creek | 3300 | 4.42 | 5.95 | 74% | 11.35 | 29.43 | 39% | 32.16 |
| Lower Haines USGS | 2250 | 3.86 | 4.78 | 81% | 9.10 | 23.20 | 39% | 26.50 |
| La Crescenta | 2069 | 4.07 | 4.73 | 86% | 8.92 | 24.84 | 36% | 28.27 |
| Big Tujunga Dam | 2050 | 4.06 | 5.69 | 71% | 10.74 | 27.41 | 39% | 30.66 |
| Little Tujunga | 1700 | 3.34 | 3.77 | 89% | 9.12 | 19.24 | 47% | 21.57 |
| Arroyo Seco Ranger Station | 1530 | 3.66 | 4.63 | 79% | 8.76 | 24.15 | 36% | 26.84 |
| SAN GABRIEL RIVER | | | | | | | | |
| Table Mountain Observ. | 7500 | 0.77 | 2.20 | 35% | 5.13 | 13.04 | 39% | 14.49 |
| Mt. Wilson | 5850 | 4.73 | 6.03 | 78% | 12.20 | 30.30 | 40% | 33.84 |
| Crystal Lake - East | 5740 | 4.30 | 7.69 | 56% | 16.50 | 37.62 | 44% | 41.00 |
| Opids Camp | 4480 | 5.12 | 7.60 | 67% | 14.79 | 37.15 | 40% | 41.27 |
| Camp Baldy | 4300 | 4.42 | 6.30 | 70% | 14.51 | 30.32 | 48% | 34.49 |
| Henninger Flats | 2650 | 3.92 | 5.49 | 71% | 10.44 | 26.23 | 40% | 29.60 |
| Winter Creek | 2650 | 5.78 | 8.31 | 70% | 14.56 | 40.27 | 36% | 41.56 |
| Mouth San Antonio Canyon | 2500 | 4.00 | 4.90 | 82% | R.N.C. | 24.52 | - | 27.60 |
| Sawpit Canyon | 2000 | 4.36 | 5.74 | 76% | 10.54 | 28.23 | 37% | 31.86 |
| San Gabriel Dam #1 Camp | 1600 | 4.25 | 6.24 | 68% | 10.48 | 29.03 | 36% | 31.31 |
| Monrovia Falls | 1450 | 4.71 | 5.95 | 79% | 10.62 | 28.20 | 38% | 31.24 |
| Big Santa Anita Dam | 1400 | 4.12 | 4.58 | 90% | 9.08 | 23.55 | 39% | 26.34 |
| San Dimas Dam | 1350 | 3.18 | 4.54 | 70% | 8.71 | 22.25 | 39% | 24.22 |

1, 2, 3 See footnotes first page of this table.

TABLE 6 - PRECIPITATION DATA - TO APRIL 1, 1948 (Continued)

| 1 BASIN AND PRECIPITATION STATION | ELEVATION IN FEET | PRECIPITATION DURING MARCH 1948 | | | PRECIPITATION FROM JULY 1, 1947 TO APRIL 1, 1948 | | | 2 Normal seasonal Precipitation (July to June) Inches |
|---|---|---|---|---|---|---|---|---|
| | | Total (Inches) | 2 Normal (Inches) | In per cent of Normal | Total (Inches) | 2 Normal (Inches) | In per cent of Normal | |
| SANTA ANA RIVER | | | | | | | | |
| Table Mountain Observ. | 7500 | 0.77 | 2.20 | 35% | 5.13 | 13.04 | 39% | 14.49 |
| Big Bear Lake Dam | 6800 | 7.48 | 6.71 | 111% | 25.42 | 33.03 | 77% | 36.88 |
| Running Springs | 6230 | 7.33 | 6.92 | 106% | 22.73 | 38.09 | 60% | 42.95 |
| Squirrel Inn | 5700 | 7.29 | 8.08 | 90% | 19.71 | 37.52 | 53% | 42.90 |
| Camp Baldy | 4300 | 4.42 | 6.30 | 70% | 14.51 | 30.32 | 48% | 34.49 |
| Beaumont (Near) | 3045 | 2.72 | 4.05 | 67% | 10.24 | 19.45 | 53% | 22.84 |
| Mill Creek #2 | 2950 | 2.63 | 4.20 | 63% | 9.58 | 19.64 | 49% | 23.28 |
| Santa Ana River | 2850 | 5.32 | 4.95 | 107% | 14.19 | 23.48 | 60% | 27.32 |
| Beaumont | 2589 | 2.13 | 3.63 | 59% | 11.10 | 16.74 | 66% | 19.32 |
| Mouth San Antonio Canyon | 2500 | 4.00 | 4.90 | 82% | R.N.C. | 24.52 | - | 27.60 |
| Lytle Creek | 2250 | 4.74 | 6.00 | 79% | 14.48 | 31.16 | 46% | 35.29 |
| SAN DIEGO COUNTY | | | | | | | | |
| PACIFIC SLOPE BASINS | | | | | | | | |
| Mt. Palomar Observ. | 5600 | 2.41 | - | - | 17.27 | - | - | - |
| Cuyamaca | 4680 | 10.01 | 6.92 | 145% | 23.58 | 34.14 | 69% | 39.39 |
| Warner Springs | 3170 | 2.10 | 5.55 | 38% | 8.60 | 27.37 | 31% | 31.71 |
| Campo | 3000 | 2.32 | 2.91 | 80% | 8.75 | 16.92 | 52% | 19.18 |
| Barrett Dam | 1750 | 2.80 | 3.40 | 82% | 10.16 | 16.73 | 61% | 19.10 |
| Escondido | 750 | 2.25 | 2.83 | 80% | 8.10 | 14.65 | 53% | 16.57 |
| El Capitan Dam | 610 | 2.76 | 3.25 | 85% | 9.35 | 15.16 | 62% | 18.23 |
| El Cajon | 560 | 1.81 | 2.37 | 76% | 10.28 | 12.50 | 82% | 14.21 |

1, 2, 3 See footnotes first page of this table.

# A P P E N D I X

The sheet following contains the results of several snow surveys, some of which, although made during the early part of March, were received too late to be included in the regular March bulletin, and others which have been made since March 10th and prior to the period covered in this regular April bulletin.

## APPENDIX

RESULTS OF SNOW SURVEYS MADE DURING THE PERIOD
MARCH 2, 1948 TO March 21, 1948

| DRAINAGE BASINS and SNOW COURSES | ELEVATION IN FEET | DATE of SURVEY | DEPTH of SNOW Inches | DENSITY Per Cent | WATER CONTENT Inches | 2 Normal Water Content for entire season (to April 1st) Inches | Percentage of total normal seasonal water content on ground at date of survey this year |
|---|---|---|---|---|---|---|---|
| UPPER SACRAMENTO RIVER | | | | | | | |
| Mount Shasta | 8000 | 3-16-48 | 74.8 | 34.0% | 25.4 | 56.9 | 45% |
| Sand Flats | 7000 | 3-16-48 | 56.5 | 28.7% | 16.2 | New Course 1945 | |
| STONY CREEK | | | | | | | |
| Anthony Peak | 6200 | 3- 3-48 | 14.6 | 45.9% | 6.7 | 33 | 20% |
| YUBA RIVER | | | | | | | |
| Castle Creek #5 | 7370 | 3- 5-48 | 54.2 | 35.8% | 19.4 | New Course 1946 | |
| " " | 7370 | 3-12-48 | 54.0 | 36.3% | 19.6 | " " 1946 | |
| " " | 7370 | 3-21-48 | 85.8 | 31.8% | 27.2 | " " 1946 | |
| MERCED RIVER | | | | | | | |
| Peregoy Meadows | 7000 | 3-15-48 | 50.8 | 21.4% | 10.9 | 32.5 | 34% |
| UPPER SAN JOAQUIN RIVER | | | | | | | |
| Dutch Lake | 9100 | 3-5-48 | 27.6 | 27.2% | 7.5 | 31.7 | 24% |
| Nellie Lake | 8250 | 3-11-48 | 33.2 | 28.3% | 9.4 | 39 | 24% |
| Vemillion Valley | 7500 | 3-9-48 | 6.8 | 23.5% | 1.6 | 14.4 | 11% |
| Florence Lake | 7200 | 3-4-48 | Patches | - | - | 8.7 | - |
| KAWEAH RIVER | | | | | | | |
| Mineral King | 8000 | 3-2-48 | 18.4 | 28.8% | 5.3 | New Course 1948 | |
| SAN GABRIEL RIVER | | | | | | | |
| Buckhorn * | 7100 | 3-12-48 | 12.1 | 38.0% | 4.6 | New Course 1948 | |
| Cedar Springs* | 6500 | 3-12-48 | 7.5 | 34.5% | 2.6 | New Course 1948 | |

2 See footnotes page 7.

* Snow course actually located in Little Rock Drainage just over the divide from the San Gabriel River Drainage.

# CALIFORNIA COOPERATIVE SNOW SURVEYS

## Agencies Cooperating in the Collection of Data Contained in this Bulletin

### Governmental Agencies

#### State

- California State Department of Public Works
  - Division of Water Resources
- Nevada Cooperative Snow Surveys
- Oregon Cooperative Snow Surveys

#### Federal

- Department of Agriculture
  - Bureau of Entomology & Plant Quarantine
  - Forest Service (11 National Forests)
  - Soil Conservation Service
- Department of Commerce
  - Weather Bureau
- Department of the Interior
  - Bureau of Reclamation
  - Geological Survey. Water Resources Branch
  - National Park Service (4 National Parks)
- War Department
  - Corps of Engineers

### Public Utilities

- California Electric Power Company
- Pacific Gas and Electric Company
- Southern California Edison Company, Ltd.
- The California Oregon Power Company

### Municipalities

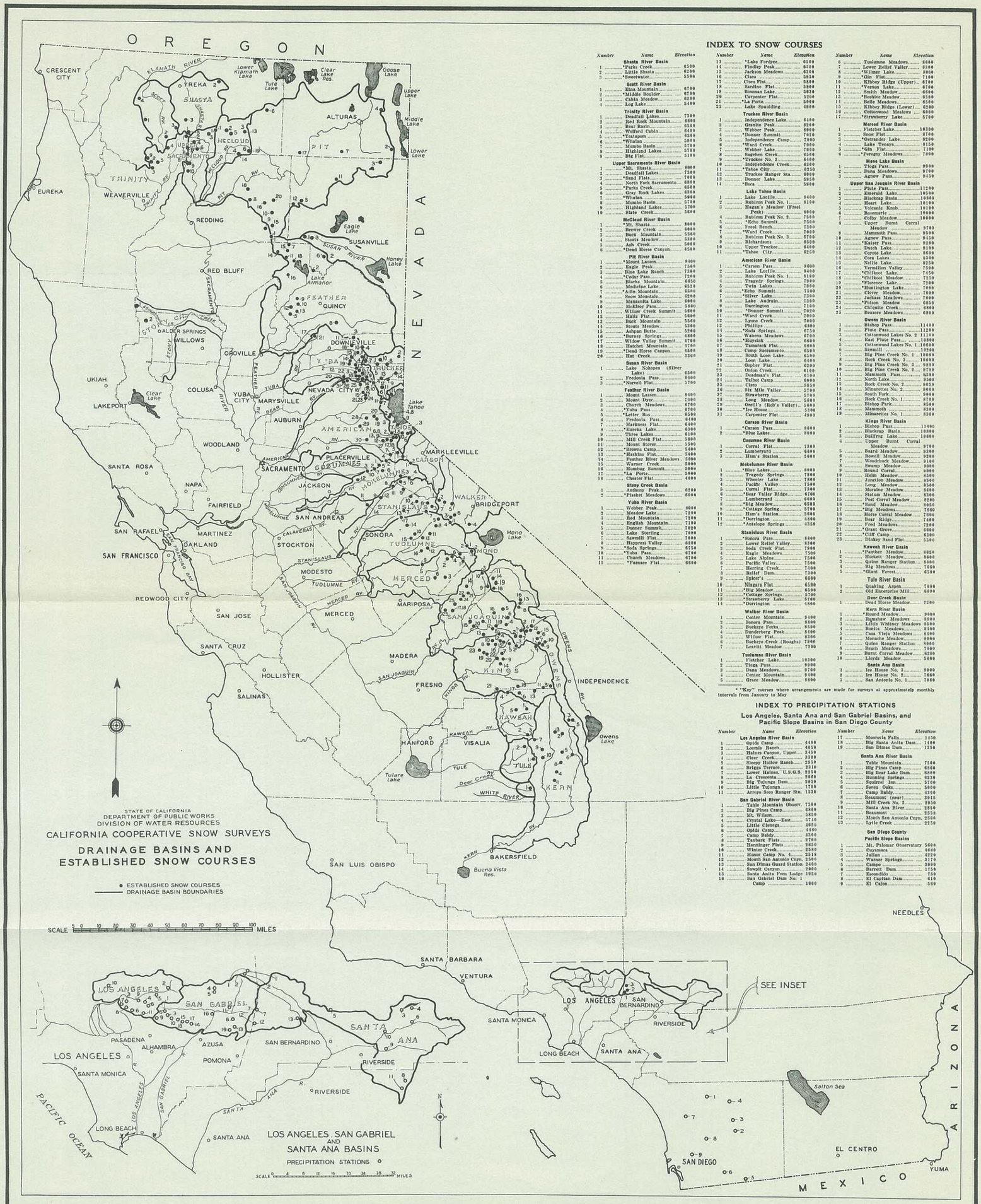
- City of Los Angeles
  - Department of Water and Power
- City of San Francisco
  - Public Utilities Commission

### Organized Public Agencies

- Los Angeles County Flood Control District
- East Bay Municipal Utility District
- Tulare Lake Basin Water Storage District
- Buena Vista Water Storage District
- Kaweah Delta Water Conservation District
- Kaweah River Association
- St. Johns River Association
- Kings River Water Association
- Nevada Irrigation District
- Turlock Irrigation District
- Modesto Irrigation District
- Merced Irrigation District

### Private Organizations

- Kern County Land Company
- The San Joaquin Canal Company




## INDEX TO SNOW COURSES

| Number | Name | Elevation |
|---|---|---|
| | **Shasta River Basin** | |
| 1 | *Parks Creek | 6500 |
| 2 | Little Shasta | 6200 |
| 3 | *Sweetwater | 5500 |
| | **Scott River Basin** | |
| 1 | Etna Mountain | 6700 |
| 2 | *Middle Boulder | 6700 |
| 3 | Cabin Meadow | 6200 |
| 4 | Log Lake | 5400 |
| | **Trinity River Basin** | |
| 1 | Deadfall Lakes | 7300 |
| 2 | Red Rock Mountain | 6600 |
| 3 | Bear Basin | 6500 |
| 4 | Wolford Cabin | 6200 |
| 5 | *Yanksonn | 5900 |
| 6 | *Whalan | 5700 |
| 7 | Mumbo Basin | 5700 |
| 8 | Highland Lakes | 5700 |
| 9 | Big Flat | 5100 |
| | **Upper Sacramento River Basin** | |
| 1 | *Mt. Shasta | 6000 |
| 2 | Deadfall Lakes | 7300 |
| 3 | *Sand Flats | 7000 |
| 4 | North Fork Sacramento | 6800 |
| 5 | *Parks Creek | 6500 |
| 6 | Gray Rock Lakes | 6300 |
| 7 | *Whalan | 5900 |
| 8 | Mumbo Basin | 5700 |
| 9 | Highland Lakes | 5700 |
| 10 | Slate Creek | 5600 |
| | **McCloud River Basin** | |
| 1 | *Mt. Shasta | 8000 |
| 2 | Brewer Creek | 6800 |
| 3 | Buck Mountain | 5500 |
| 4 | Stouts Meadow | 5300 |
| 5 | Ash Creek | 5000 |
| 6 | *Dead Horse Canyon | 4500 |
| | **Pit River Basin** | |
| 1 | *Mount Lassen | 8100 |
| 2 | Eagle Peak | 7500 |
| 3 | Blue Lake Ranch | 7200 |
| 4 | *Cedar Pass | 7200 |
| 5 | Diarks Mountain | 6850 |
| 6 | Medicine Lake | 6525 |
| 7 | *Adin Mountain | 6300 |
| 8 | Snow Mountain | 6200 |
| 9 | Mammoth Lake | 6000 |
| 10 | McElroy Pass | 5800 |
| 11 | Willow Creek Summit | 5600 |
| 12 | Halls Flat | 5400 |
| 13 | Bald Mountain | 5500 |
| 14 | Stouts Meadow | 5300 |
| 15 | Ashpan Butte | 5200 |
| 16 | *Burney Springs | 4800 |
| 17 | Widow Valley Summit | 4700 |
| 18 | Hatchet Mountain | 4700 |
| 19 | *Dead Horse Canyon | 4500 |
| 20 | Hat Creek | 3300 |
| | **Susan River Basin** | |
| 1 | Lake Nokogen (Silver Lake) | 6300 |
| 2 | Fredonia Pass | 6100 |
| 3 | *Norevil Flat | 5700 |
| | **Feather River Basin** | |
| 1 | Mount Lassen | 8100 |
| 2 | Mount Dyer | 7100 |
| 3 | Church Meadows | 6700 |
| 4 | *Tuba Pass | 6700 |
| 5 | *Letter Box | 6500 |
| 6 | Fredonia Pass | 6100 |
| 7 | Harkness Flat | 6000 |
| 8 | *Eureka Lake | 6300 |
| 9 | Three Lakes | 6100 |
| 10 | Mill Creek Flat | 5800 |
| 11 | Mount Hover | 5500 |
| 12 | *Browns Camp | 5400 |
| 13 | *Meadow Lake | 7200 |
| 14 | Feather River Meadows | 5000 |
| 15 | Warner Creek | 5000 |
| 16 | Humbug Summit | 5000 |
| 17 | *La Porte | 5000 |
| 18 | Chester Flat | 4600 |
| | **Stony Creek Basin** | |
| 1 | Anthony Peak | 6200 |
| 2 | *Plaskett Meadows | 6000 |
| | **Yuba River Basin** | |
| 1 | Webber Peak | 8000 |
| 2 | Meadow Lake | 7200 |
| 3 | Red Mountain | 7200 |
| 4 | English Mountain | 7100 |
| 5 | Donner Summit | 7020 |
| 6 | Lake Sterling | 7000 |
| 7 | Sawmill Flat | 7000 |
| 8 | Haypress Valley | 6800 |
| 9 | *Soda Springs | 6750 |
| 10 | *Yuba Pass | 6700 |
| 11 | *Church Meadows | 6700 |
| 12 | *Furnace Flat | 6600 |
| 13 | *Lake Fordyce | 6500 |
| 14 | Findley Peak | 6500 |
| 15 | Jackson Meadows | 6300 |
| 16 | Cisco | 5950 |
| 17 | Cisco Flat | 5800 |
| 18 | Sardine Flat | 5800 |
| 19 | Bowman Lake | 5820 |
| 20 | Carpenter Flat | 5200 |
| 21 | *La Porte | 5000 |
| 22 | Lake Spaulding | 4800 |
| | **Truckee River Basin** | |
| 1 | Independence Lake | 8100 |
| 2 | Granite Peak | 8200 |
| 3 | Webber Peak | 8000 |
| 4 | *Donner Summit | 7020 |
| 5 | Independence Camp | 7400 |
| 6 | *Ward Creek | 7000 |
| 7 | Webber Lake | 7000 |
| 8 | Sagehen Creek | 6500 |
| 9 | *Truckee No. 2 | 6400 |
| 10 | Independence Creek | 6300 |
| 11 | *Tahoe City | 6250 |
| 12 | Truckee Ranger Sta. | 6000 |
| 13 | Donner Lake | 5950 |
| 14 | *Boca | 5900 |
| | **Lake Tahoe Basin** | |
| 1 | Lake Lucille | 8400 |
| 2 | Rubicon Peak No. 1 | 8100 |
| 3 | Hagan's Meadow (Fyrel Peak) | 8000 |
| 4 | Rubicon Peak No. 2 | 7500 |
| 5 | *Echo Summit | 7500 |
| 6 | Fyrel Bench | 7300 |
| 7 | *Ward Creek | 7000 |
| 8 | Rubicon Peak No. 3 | 6700 |
| 9 | Richardsons | 6500 |
| 10 | Upper Truckee | 6400 |
| 11 | *Tahoe City | 6250 |
| | **American River Basin** | |
| 1 | *Carson Pass | 8000 |
| 2 | Lake Lucille | 8400 |
| 3 | Rubicon Peak No. 1 | 8100 |
| 4 | Tragedy Springs | 7900 |
| 5 | Twin Lakes | 7900 |
| 6 | *Echo Summit | 7500 |
| 7 | *Silver Lake | 7300 |
| 8 | Lake Aloha | 7300 |
| 9 | Durrington | 7100 |
| 10 | *Donner Summit | 7020 |
| 11 | *Ward Creek | 7000 |
| 12 | Lyons Creek | 7000 |
| 13 | Phillips | 6900 |
| 14 | *Soda Springs | 6750 |
| 15 | Wabena Meadows | 6700 |
| 16 | *Hagerish | 6600 |
| 17 | Tamarack Flat | 6600 |
| 18 | Camp Sacramento | 6500 |
| 19 | South Loon Lake | 6500 |
| 20 | Loon Lake | 6400 |
| 21 | Gopher Flat | 6200 |
| 22 | Onion Creek | 6100 |
| 23 | Deadman's Flat | 6100 |
| 24 | Talbot Camp | 6000 |
| 25 | Cleo | 5850 |
| 26 | Six Mile Valley | 5700 |
| 27 | Strawberry | 5700 |
| 28 | Long Meadow | 5600 |
| 29 | Orrell's (Rob's Valley) | 5600 |
| 30 | *Ice House | 5300 |
| 31 | Carpenter Flat | 4800 |
| | **Carson River Basin** | |
| 1 | *Carson Pass | 8000 |
| 2 | *Blue Lakes | 8000 |
| | **Cosumne River Basin** | |
| 1 | Corral Flat | 7300 |
| 2 | Lumberyard | 6600 |
| 3 | Hans's Station | 5600 |
| | **Mokelumne River Basin** | |
| 1 | *Blue Lakes | 8000 |
| 2 | Tragedy Springs | 7900 |
| 3 | Wheeler Lake | 7800 |
| 4 | Pacific Valley | 7500 |
| 5 | Corral Flat | 7300 |
| 6 | Bear Valley Bridge | 6700 |
| 7 | Lumberyard | 6600 |
| 8 | *Big Meadow | 6550 |
| 9 | *Cottage Spring | 5700 |
| 10 | Hans's Station | 5600 |
| 11 | *Durrington | 4800 |
| 12 | *Antelope Springs | 4350 |
| | **Stanislaus River Basin** | |
| 1 | *Sonora Pass | 8800 |
| 2 | Lower Relief Valley | 8300 |
| 3 | Soda Creek Flat | 7900 |
| 4 | Eagle Meadows | 7500 |
| 5 | Lake Alpine | 7500 |
| 6 | Pacific Valley | 7500 |
| 7 | Herring Creek | 7400 |
| 8 | Relief Dam | 7300 |
| 9 | Spicer's | 6600 |
| 10 | Niagara Flat | 6500 |
| 11 | *Big Meadow | 6500 |
| 12 | *Cottage Springs | 5700 |
| 13 | *Strawberry Lake | 5700 |
| 14 | *Durrington | 4800 |
| | **Walker River Basin** | |
| 1 | Center Mountain | 9400 |
| 2 | Sonora Pass | 8800 |
| 3 | Buckeye Forks | 8500 |
| 4 | Dunderberg Peak | 8400 |
| 5 | Willow Flat | 8300 |
| 6 | Buckeye Creek (Roughs) | 7900 |
| 7 | Leavitt Meadow | 7300 |
| | **Tuolumne River Basin** | |
| 1 | Fletcher Lake | 10300 |
| 2 | Tioga Pass | 9900 |
| 3 | Dana Meadows | 9700 |
| 4 | Center Mountain | 9400 |
| 5 | Grace Meadow | 8800 |
| 6 | Tuolumne Meadows | 8400 |
| 7 | Lower Relief Valley | 8300 |
| 8 | *Wilmer Lake | 8000 |
| 9 | *Gin Flat | 7100 |
| 10 | Kibbey Ridge (Upper) | 6700 |
| 11 | *Vernon Lake | 6700 |
| 12 | Smith Meadow | 6500 |
| 13 | *Bushlee Meadow | 6500 |
| 14 | Belle Meadows | 6300 |
| 15 | Kibbey Ridge (Lower) | 6200 |
| 16 | Cottonwood Meadows | 6000 |
| 17 | *Strawberry Lake | 5700 |
| | **Merced River Basin** | |
| 1 | Fletcher Lake | 10300 |
| 2 | Snow Flat | 8700 |
| 3 | *Gertrudes Lake | 8200 |
| 4 | Lake Tenaya | 8150 |
| 5 | *Gin Flat | 7100 |
| 6 | *Peregoy Meadows | 7000 |
| | **Mono Lake Basin** | |
| 1 | Tioga Pass | 9900 |
| 2 | Dana Meadows | 9700 |
| 3 | Agnew Pass | 9450 |
| | **Upper San Joaquin River Basin** | |
| 1 | Piute Pass | 11200 |
| 2 | Emerald Lake | 10500 |
| 3 | Blackrock Basin | 10000 |
| 4 | Heart Lake | 10100 |
| 5 | Volcanic Knob | 10100 |
| 6 | Rosemarie | 10000 |
| 7 | Colby Meadow | 10000 |
| 8 | Upper Burnt Corral Meadow | 9700 |
| 9 | Mammoth Pass | 9500 |
| 10 | Agnew Pass | 9150 |
| 11 | *Kaiser Pass | 9200 |
| 12 | Dutch Lake | 9100 |
| 13 | Cupids Lake | 8600 |
| 14 | Cora Lakes | 8300 |
| 15 | Nellie Lake | 8250 |
| 16 | Vermilion Valley | 7500 |
| 17 | *Chilkoot Lake | 7450 |
| 18 | *Chilkoot Meadow | 7230 |
| 19 | *Florence Lake | 7200 |
| 20 | *Huntington Lake | 7000 |
| 21 | Clover Meadow | 7000 |
| 22 | Jackass Meadows | 7000 |
| 23 | *Poison Meadow | 6950 |
| 24 | Chiquito Creek | 6800 |
| 25 | Bennett Meadows | 6800 |
| | **Owens River Basin** | |
| 1 | Bishop Pass | 11400 |
| 2 | Piute Pass | 11200 |
| 3 | Cottonwood Lakes No. 2 | 11100 |
| 4 | East Piute Pass | 10800 |
| 5 | Cottonwood Lakes No. 1 | 10600 |
| 6 | Sawmill | 10200 |
| 7 | Big Pine Creek No. 1 | 10000 |
| 8 | Rock Creek No. 3 | 10000 |
| 9 | Big Pine Creek No. 3 | 9800 |
| 10 | Big Pine Creek No. 2 | 9700 |
| 11 | Mammoth Pass | 9500 |
| 12 | North Lake | 9500 |
| 13 | Rock Creek No. 2 | 9050 |
| 14 | Minarettes No. 2 | 9000 |
| 15 | South Fork | 9000 |
| 16 | Rock Creek No. 1 | 8700 |
| 17 | Bishop Park | 8500 |
| 18 | Mammoth | 8500 |
| 19 | Minarettes No. 1 | 8300 |
| | **Kings River Basin** | |
| 1 | Bishop Pass | 11400 |
| 2 | Blackrap Basin | 10800 |
| 3 | Bullfrog Lake | 10400 |
| 4 | Upper Burnt Corral Meadow | 9700 |
| 5 | Beard Meadow | 9300 |
| 6 | Sawell Meadow | 9200 |
| 7 | Woodchuck Meadow | 9100 |
| 8 | Swamp Meadow | 9000 |
| 9 | Round Corral | 9000 |
| 10 | Helm Meadow | 8700 |
| 11 | Junction Meadow | 8500 |
| 12 | Long Meadow | 8500 |
| 13 | Moraine Meadow | 8400 |
| 14 | Station Meadow | 8300 |
| 15 | Post Corral Meadow | 8200 |
| 16 | *Sand Meadow | 8050 |
| 17 | *Big Meadows | 7600 |
| 18 | Horse Corral Meadow | 7500 |
| 19 | Bear Ridge | 7400 |
| 20 | Fred Meadows | 7200 |
| 21 | *Grant Grove | 6000 |
| 22 | *Cliff Camp | 6300 |
| 23 | Hinkey Sand Flat | 5100 |
| | **Kaweah River Basin** | |
| 1 | *Panther Meadow | 8650 |
| 2 | Hockett Meadow | 8600 |
| 3 | Quinn Ranger Station | 8000 |
| 4 | Big Meadows | 7600 |
| 5 | *Giant Forest | 6500 |
| | **Tule River Basin** | |
| 1 | Quaking Aspen | 7000 |
| 2 | Old Enterprise Mill | 6800 |
| | **Deer Creek Basin** | |
| 1 | Dead Horse Meadow | 7200 |
| | **Kern River Basin** | |
| 1 | *Round Meadow | 9000 |
| 2 | Sugarloaf Meadows | 8000 |
| 3 | Little Whitney Meadows | 8500 |
| 4 | Bonita Meadows | 8100 |
| 5 | Casa Vieja Meadows | 8100 |
| 6 | Monache Meadow | 8000 |
| 7 | Quinn Ranger Station | 8000 |
| 8 | Beach Meadows | 7900 |
| 9 | Burnt Corral Meadow | 8200 |
| 10 | Lloyds Meadow | 5600 |
| | **Santa Ana Basin** | |
| 1 | Ice House No. 2 | 8000 |
| 2 | Ice House No. 3 | 7600 |
| 3 | San Antonio No. 1 | 7000 |
| 4 | Monroeia Falls | 3150 |
| 5 | Big Santa Anita Dam | 1400 |
| 6 | San Dimas Dam | 1350 |
| | **Santa Ana River Basin** | |
| 1 | Table Mountain | 7500 |
| 2 | Big Pines Camp | 6500 |
| 3 | Big Bear Lake Dam | 6400 |
| 4 | Running Springs | 6230 |
| 5 | Squirrel Inn | 5700 |
| 6 | Seven Oaks | 5000 |
| 7 | Camp Baldy | 4500 |
| 8 | Beaumont (near) | 3045 |
| 9 | Mill Creek No. 2 | 2930 |
| 10 | Santa Ana River | 2850 |
| 11 | Beaumont | 2558 |
| 12 | Mouth San Antonio Cnyn. | 2500 |
| 13 | Lytle Creek | 2250 |
| | **San Diego County** | |
| | **Pacific Slope Basins** | |
| 1 | Mt. Palomar Observatory | 5600 |
| 2 | Cuyamaca | 4900 |
| 3 | Julian | 4200 |
| 4 | Warner Springs | 3170 |
| 5 | Campo | 3000 |
| 6 | Barrett Dam | 1750 |
| 7 | Escondido | 750 |
| 8 | El Capitan Dam | 610 |
| 9 | El Cajon | 500 |

* "Key" courses where arrangements are made for surveys at approximately monthly intervals from January to May

## INDEX TO PRECIPITATION STATIONS

### Los Angeles, Santa Ana and San Gabriel Basins, and Pacific Slope Basins in San Diego County

| Number | Name | Elevation |
|---|---|---|
| | **Los Angeles River Basin** | |
| 1 | Opids Camp | 4400 |
| 2 | Loomis Ranch | 4050 |
| 3 | Haines Canyon, Upper | 3400 |
| 4 | Clear Creek | 3300 |
| 5 | Sleepy Hollow Ranch | 2950 |
| 6 | Briggs Terrace | 2310 |
| 7 | Lower Haines, U.S.G.S. | 2250 |
| 8 | La Crescenta | 2000 |
| 9 | Big Tujunga Dam | 2050 |
| 10 | Little Tujunga | 1700 |
| 11 | Arroyo Seco Ranger Sta. | 1520 |
| | **San Gabriel River Basin** | |
| 1 | Table Mountain Observ. | 7500 |
| 2 | Big Pines Camp | 6400 |
| 3 | Mt. Wilson | 5850 |
| 4 | Crystal Lake—East | 5740 |
| 5 | Little Cienega | 4650 |
| 6 | Opids Camp | 4400 |
| 7 | Camp Baldy | 4300 |
| 8 | Tanbark Flats | 3700 |
| 9 | Henninger Flats | 2850 |
| 10 | Winter Creek | 2550 |
| 11 | Manor Camp No. 4 | 2518 |
| 12 | Mouth San Antonio Cnyn. | 2500 |
| 13 | San Dimas Guard Station | 2400 |
| 14 | Sawpit Canyon | 2000 |
| 15 | Santa Anita Fern Lodge | 1950 |
| 16 | San Gabriel Dam No. 1 Camp | 1600 |
| 17 | Monroeia Falls | 3150 |
| 18 | Big Santa Anita Dam | 1400 |
| 19 | San Dimas Dam | 1350 |
| | **Santa Ana River Basin** | |
| 1 | Table Mountain | 7500 |
| 2 | Big Pines Camp | 6500 |
| 3 | Big Bear Lake Dam | 6400 |
| 4 | Running Springs | 6230 |
| 5 | Squirrel Inn | 5700 |
| 6 | Seven Oaks | 5000 |
| 7 | Camp Baldy | 4500 |
| 8 | Beaumont (near) | 3045 |
| 9 | Mill Creek No. 2 | 2930 |
| 10 | Santa Ana River | 2850 |
| 11 | Beaumont | 2558 |
| 12 | Mouth San Antonio Cnyn. | 2500 |
| 13 | Lytle Creek | 2250 |
| | **San Diego County** | |
| | **Pacific Slope Basins** | |
| 1 | Mt. Palomar Observatory | 5600 |
| 2 | Cuyamaca | 4900 |
| 3 | Julian | 4200 |
| 4 | Warner Springs | 3170 |
| 5 | Campo | 3000 |
| 6 | Barrett Dam | 1750 |
| 7 | Escondido | 750 |
| 8 | El Capitan Dam | 610 |
| 9 | El Cajon | 500 |