

California Cooperative  
Snow Surveys  
Bulletin 120-2-97

State of California  
The Resources Agency

Department of  
Water Resources

# Water Conditions in California

Report 2 March 1, 1997



**Pete Wilson**  
Governor  
State of California

**Douglas P. Wheeler**  
Secretary for Resources  
The Resources Agency

**David N. Kennedy**  
Director  
Department of Water Resources

**STATE OF CALIFORNIA**

Pete Wilson, Governor

**THE RESOURCES AGENCY**

Douglas P. Wheeler, Secretary for Resources

**Department of Water Resources**

David N. Kennedy, Director

Stephen L. Kashiwada  
Deputy Director

Robert G. Potter  
Chief Deputy Director

Raymond D. Hart  
Deputy Director

L. Lucinda Chipponeri  
Assistant Director for Legislation

Susan N. Weber  
Chief Counsel

**Division of Flood Management**

George T. Qualley ..... Chief  
Maurice Roos ..... Chief Hydrologist  
Gary Hester ..... Chief Forecaster

Prepared by

Frank Gehrke ..... Chief, Snow Surveys  
Robert R. Newton ..... Associate Engineer, W.R.  
J. Pierre Stevens ..... Associate Engineer, W.R.  
David M. Hart ..... Water Resources Engineering Associate  
Dudley E. McFadden ..... Assistant Engineer, W.R.  
Shawn T. Perkins ..... Water Resources Technician II

**COOPERATING AGENCIES**

**Public Agencies**

- Buena Vista Water Storage District
- Central California Irrigation District
- East Bay Municipal Utility District
- Friant Water Users Association
- Kaweah Delta Water Conservation District
- Kern Delta Water District
- Kings River Conservation District
- Lower Tule River Irrigation District
- Merced Irrigation District
- Modesto Irrigation District
- Nevada Irrigation District
- North Kern Water Storage District
- Northern California Power Agency
- Oakdale Irrigation District
- Omochumne-Hartnell Water District
- Oroville-Wyandotte Irrigation District
- Placer County Water Agency
- Sacramento Municipal Utility District
- South San Joaquin Irrigation District
- Tri-Dam Project
- Tulare Lake Basin Water Storage District
- Turlock Irrigation District
- Yuba County Water Agency

**Private Organizations**

- J.G. Boswell Company
- Kaweah River Association
- Kings River Water Association
- St. Johns River Association
- Tule River Association
- State Water Contractors

**Municipalities**

- City of Bakersfield Water Department
- City of Los Angeles Department of Water and Power
- City and County of San Francisco Hetch Hetchy Water and Power

**State Agencies**

- California Department of Forestry & Fire Protection
- California Department of Water Resources

**Public Utilities**

- Pacific Gas and Electric Company
- Southern California Edison Company

**Federal Agencies**

- U.S. Department of Agriculture
  - Forest Service (14 National Forests)
  - Pacific Southwest Forest and Range Experiment Station
  - Natural Resource Conservation Service
- U.S. Department of Commerce
  - National Weather Service
- U.S. Department of Interior
  - Bureau of Reclamation
  - Geological Survey, Water Resources
  - National Park Service (3 National Parks)
- U.S. Department of Army
  - Corps of Engineers

**Other Cooperative Programs**

- Nevada Cooperative Snow Surveys
- Oregon Cooperative Snow Surveys

## Summary of Water Conditions March 1, 1997

In a reversal so typical of California climate, February was dry with precipitation in the lowest 10 percent of the historical record. Snowpack water content in the mountains changed little during the month. Water supply prospects remain excellent because of the generally good snowpack and much above normal reservoir storage.

**Forecasts** of runoff for the April through July period have been reduced because of the dry February but are still above average overall at 125 percent. Snowmelt runoff percentages are higher in the south, less in the north even below average in the far north. Water year runoff percentages are much higher at 170 percent because of runoff which has occurred during this winter's floods.

**Snowpack** water content is about 115 percent of average statewide for this date and 100 percent of the average for April 1, the normal maximum accumulation. Last year the March 1 pack was average. Snowpack percentages remain much above average in the southern Sierra.

**Precipitation** during February was only about 20 percent of average statewide, one of the driest in the record. However, precipitation since October 1 is 145 percent of average. Last year seasonal precipitation was 115 percent at this time.

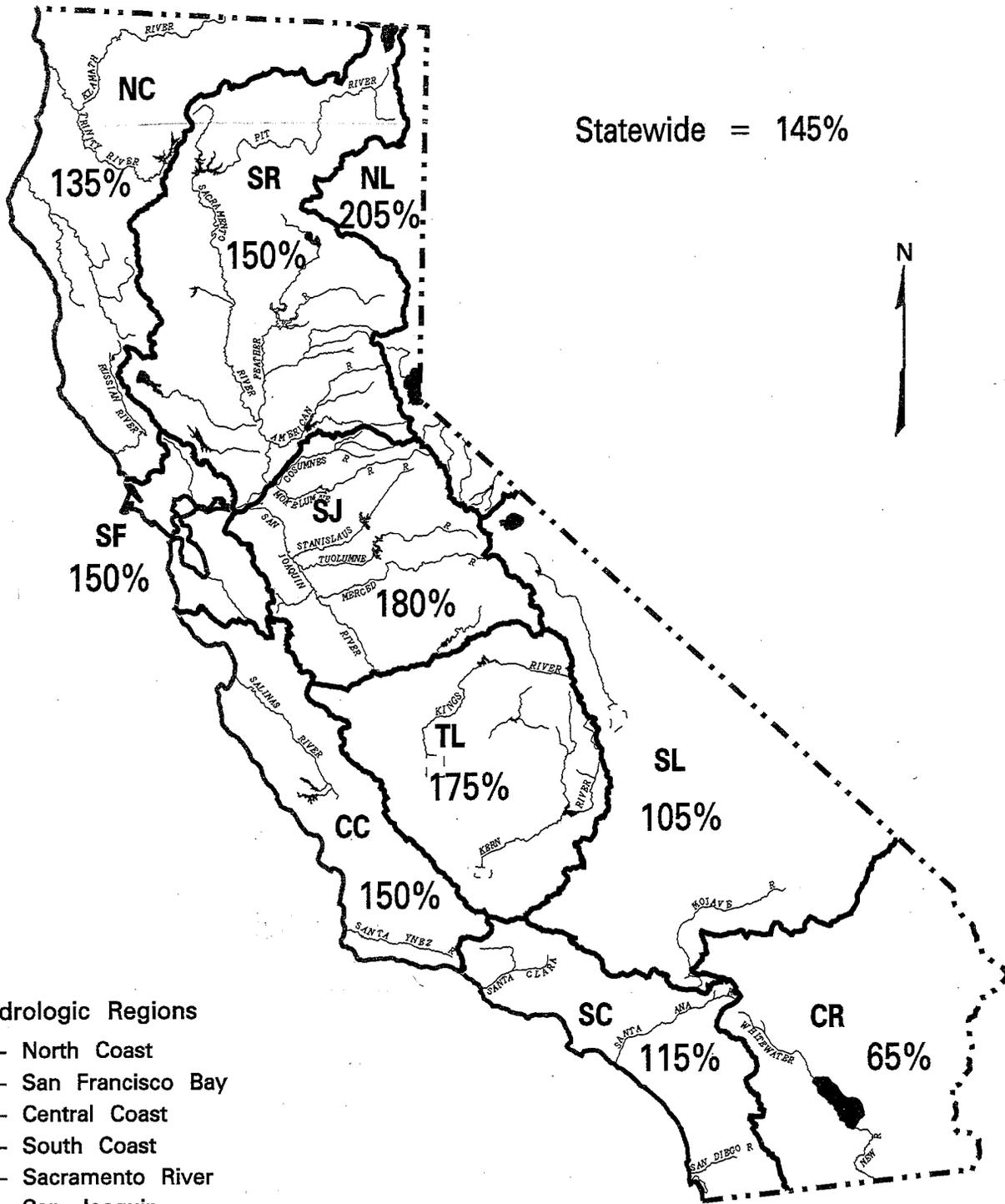
**Runoff** so far this season is 230 percent of average, nearly double the 120 percent last year. February runoff was about 90 percent of average, down dramatically from January. Estimated runoff during February of the 8 major rivers of the Sacramento and San Joaquin River hydrologic regions was 2.8 million acre-feet.

**Reservoir storage** continues to be excellent at 120 percent of average. Actual volume is down 2.4 MAF from last month because of restoring flood control space in the big multi-purpose reservoirs. Total storage last year was 125 percent of average.

### SUMMARY OF WATER CONDITIONS IN PERCENT OF AVERAGE

| HYDROLOGIC REGION         | PRECIPITATION<br>OCTOBER 1 TO<br>DATE | MARCH 1<br>SNOW<br>WATER<br>CONTENT | MARCH 1<br>RESERVOIR<br>STORAGE | RUNOFF<br>OCTOBER<br>1 TO DATE | APR-JULY<br>RUNOFF<br>FORECAST | WATER<br>YEAR<br>RUNOFF<br>FORECAST |
|---------------------------|---------------------------------------|-------------------------------------|---------------------------------|--------------------------------|--------------------------------|-------------------------------------|
| NORTH COAST               | 135                                   | 65                                  | 110                             | 190                            | 70                             | 130                                 |
| SAN FRANCISCO BAY         | 150                                   | --                                  | 120                             | 200                            | --                             | --                                  |
| CENTRAL COAST             | 150                                   | --                                  | 115                             | 250                            | --                             | --                                  |
| SOUTH COAST               | 115                                   | --                                  | 120                             | 110                            | --                             | --                                  |
| SACRAMENTO RIVER          | 150                                   | 85                                  | 110                             | 220                            | 105                            | 160                                 |
| SAN JOAQUIN RIVER         | 180                                   | 140                                 | 130                             | 380                            | 145                            | 200                                 |
| TULARE LAKE               | 175                                   | 150                                 | 165                             | 360                            | 165                            | 205                                 |
| NORTH LAHONTAN            | 205                                   | 145                                 | 155                             | 340                            | 155                            | 150                                 |
| SOUTH LAHONTAN            | 105                                   | 170                                 | 80                              | 130                            | 155                            | 150                                 |
| COLORADO RIVER-<br>DESERT | 65                                    | ---                                 | ---                             | ---                            | ---                            | ---                                 |
| STATEWIDE                 | 145                                   | 115                                 | 120                             | 230                            | 125                            | 170                                 |

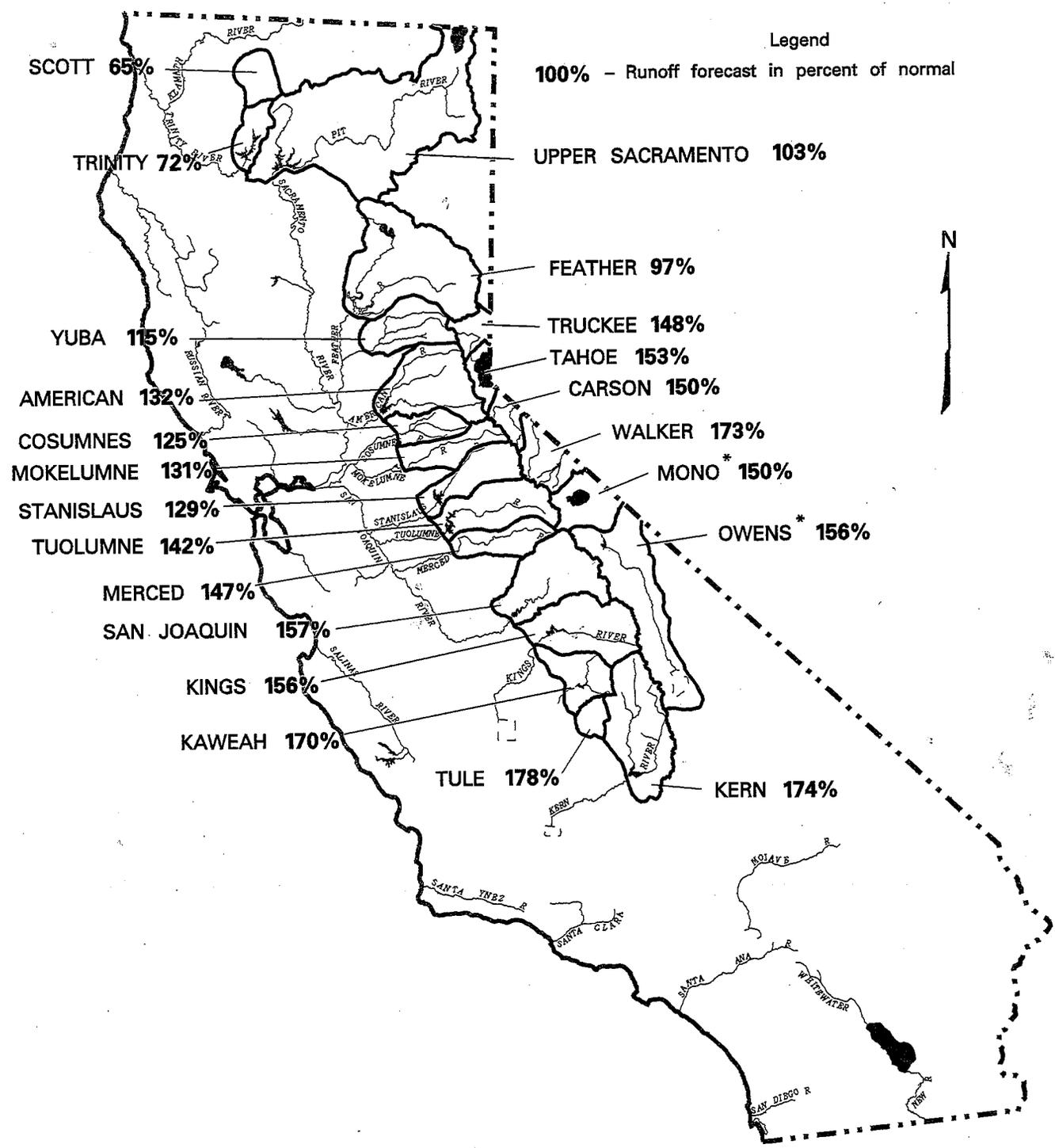
**SEASONAL PRECIPITATION**  
 IN PERCENT OF AVERAGE TO DATE  
 October 1, 1996 through February 28, 1997



- Hydrologic Regions**
- NC - North Coast
  - SF - San Francisco Bay
  - CC - Central Coast
  - SC - South Coast
  - SR - Sacramento River
  - SJ - San Joaquin
  - TL - Tulare Lake
  - NL - North Lahontan
  - SL - South Lahontan
  - CR - Colorado River-Desert

WATER YEAR IS OCTOBER 1 THROUGH SEPTEMBER 30

**FORECAST OF APRIL - JULY  
UNIMPAIRED SNOWMELT RUNOFF  
March 1, 1997**



\* FORECAST BY DEPARTMENT OF WATER AND POWER, CITY OF LOS ANGELES

**MARCH 1, 1997 FORECASTS  
APRIL-JULY UNIMPAIRED RUNOFF**

| HYDROLOGIC REGION<br>and Watershed                        | Unimpaired Runoff in 1,000 Acre-Feet (1) |                     |                     |                      |                  |                                  |
|---|--|---------------------|---------------------|----------------------|------------------|----------------------------------|
|   | HISTORICAL                               |                     |                     | FORECASTS            |                  |                                  |
|   | 50 Yr<br>Avg<br>(2)                      | Max<br>of<br>Record | Min<br>of<br>Record | Apr-Jul<br>Forecasts | Pct<br>of<br>Avg | 80 %<br>Probability<br>Range (1) |
| <b>SACRAMENTO RIVER</b>                                   |  |                     |                     |                      |                  |                                  |
| <b>Upper Sacramento River</b>                             |  |                     |                     |                      |                  |                                  |
| Sacramento River at Shasta Lake (3)                       | 297                                      | 702                 | 39                  | 200                  | 67%              |                                  |
| McCloud River at Shasta Lake                              | 392                                      | 850                 | 185                 | 370                  | 94%              |                                  |
| Pit River at Shasta Lake                                  | 1,056                                    | 1,796               | 480                 | 1,100                | 104%             |                                  |
| Total Inflow to Shasta Lake                               | 1,801                                    | 3,189               | 726                 | 1,850                | 103%             | 1,270 - 2,650                    |
| <b>Sacramento River above Bend Bridge, near Red Bluff</b> | 2,451                                    | 4,674               | 943                 | 2,380                | 97%              | 1,630 - 3,450                    |
| <b>Feather River</b>                                      |  |                     |                     |                      |                  |                                  |
| Feather River at Lake Almanor near Prattville (3)         | 333                                      | 675                 | 120                 | 320                  | 96%              |                                  |
| North Fork at Pulga (3)                                   | 1,028                                    | 2,416               | 243                 | 980                  | 95%              |                                  |
| Middle Fork near Clio (4)                                 | 86                                       | 518                 | 4                   | 80                   | 93%              |                                  |
| South Fork at Ponderosa Dam (3)                           | 110                                      | 267                 | 13                  | 105                  | 95%              |                                  |
| Total Inflow to Oroville Reservoir                        | 1,831                                    | 4,676               | 392                 | 1,780                | 97%              | 1,300 - 2,640                    |
| <b>Yuba River</b>   |  |                     |                     |                      |                  |                                  |
| North Yuba below Goodyears Bar (3)                        | 286                                      | 647                 | 51                  | 320                  | 112%             |                                  |
| Inflow to Jackson Mdws and Bowman Reservoirs (3)          | 112                                      | 236                 | 25                  | 125                  | 112%             |                                  |
| South Yuba at Langs Crossing (3)                          | 233                                      | 481                 | 57                  | 250                  | 107%             |                                  |
| Yuba River at Smartville                                  | 1,029                                    | 2,424               | 200                 | 1,180                | 115%             | 860 - 1,740                      |
| <b>American River</b>                                     |  |                     |                     |                      |                  |                                  |
| North Fork at North Fork Dam (3)                          | 262                                      | 716                 | 43                  | 330                  | 126%             |                                  |
| Middle Fork near Auburn (3)                               | 522                                      | 1,406               | 100                 | 680                  | 130%             |                                  |
| Silver Creek Below Camino Diversion Dam (3)               | 173                                      | 386                 | 37                  | 220                  | 127%             |                                  |
| Total Inflow to Folsom Reservoir                          | 1,261                                    | 3,074               | 229                 | 1,660                | 132%             | 1,200 - 2,350                    |
| <b>SAN JOAQUIN RIVER</b>                                  |  |                     |                     |                      |                  |                                  |
| <b>Cosumnes River at Michigan Bar</b>                     | 128                                      | 363                 | 8                   | 160                  | 125%             | 110 - 240                        |
| <b>Mokelumne River</b>                                    |  |                     |                     |                      |                  |                                  |
| North Fork near West Point (5)                            | 437                                      | 829                 | 104                 | 530                  | 121%             |                                  |
| Total Inflow to Pardee Reservoir                          | 459                                      | 1,065               | 102                 | 600                  | 131%             | 460 - 800                        |
| <b>Stanislaus River</b>                                   |  |                     |                     |                      |                  |                                  |
| Middle Fork below Beardsley Dam (3)                       | 334                                      | 702                 | 64                  | 420                  | 126%             |                                  |
| North Fork Inflow to McKays Point Dam (3)                 | 224                                      | 503                 | 34                  | 280                  | 125%             |                                  |
| Total Inflow to New Melones Reservoir                     | 699                                      | 1,710               | 116                 | 900                  | 129%             | 700 - 1,200                      |
| <b>Tuolumne River</b>                                     |  |                     |                     |                      |                  |                                  |
| Cherry Creek & Eleanor Creek near Hetch Hetchy (3)        | 322                                      | 727                 | 97                  | 420                  | 130%             |                                  |
| Tuolumne River near Hetch Hetchy (3)                      | 606                                      | 1,392               | 153                 | 820                  | 135%             |                                  |
| Total Inflow to New Don Pedro Reservoir                   | 1,184                                    | 2,682               | 301                 | 1,680                | 142%             | 1,400 - 2,100                    |
| <b>Merced River</b>                                       |  |                     |                     |                      |                  |                                  |
| Merced River at Pohono Bridge (3)                         | 362                                      | 888                 | 80                  | 520                  | 144%             |                                  |
| Total Inflow to Lake McClure                              | 611                                      | 1,587               | 123                 | 900                  | 147%             | 770 - 1,150                      |
| <b>San Joaquin River</b>                                  |  |                     |                     |                      |                  |                                  |
| San Joaquin River at Mammoth Pool (6)                     | 1,014                                    | 2,279               | 235                 | 1,490                | 147%             |                                  |
| Big Creek below Huntington Lake (6)                       | 95                                       | 264                 | 11                  | 150                  | 158%             |                                  |
| South Fork near Florence Lake (6)                         | 202                                      | 511                 | 58                  | 290                  | 144%             |                                  |
| Total Inflow to Millerton Lake                            | 1,212                                    | 3,355               | 262                 | 1,900                | 157%             | 1,550 - 2,350                    |
| <b>TULARE LAKE</b>  |  |                     |                     |                      |                  |                                  |
| <b>Kings River</b>  |  |                     |                     |                      |                  |                                  |
| North Fork Kings River near Cliff Camp (3)                | 239                                      | 565                 | 50                  | 360                  | 151%             |                                  |
| Total Inflow to Pine Flat Reservoir                       | 1,183                                    | 3,114               | 273                 | 1,850                | 156%             | 1,500 - 2,250                    |
| <b>Kaweah River at Terminus Reservoir</b>                 | 276                                      | 814                 | 61                  | 470                  | 170%             | 390 - 580                        |
| <b>Tule River at Success Reservoir</b>                    | 59                                       | 256                 | 2                   | 105                  | 178%             | 85 - 140                         |
| <b>Kern River</b>   |  |                     |                     |                      |                  |                                  |
| Kern River near Kernville (3)                             | 373                                      | 1,203               | 83                  | 620                  | 166%             |                                  |
| Total Inflow to Isabella Reservoir                        | 442                                      | 1,657               | 84                  | 770                  | 174%             | 650 - 1,050                      |

(1) See inside back cover for definition

(2) All 50 year averages are based on years 1946-1995 unless otherwise noted

(3) 50 year average based on years 1941-90

(4) 44 year average based on years 1936-79

(5) 36 year average based on years 1936-72

(6) 45 year average based on years 1936-81

**MARCH 1, 1997 FORECASTS  
WATER YEAR UNIMPAIRED RUNOFF**

| Unimpaired Runoff in 1,000 Acre-Feet (1) |                     |                     |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
|--|---------------------|---------------------|---------------------|----------|-------|-----|-----|-----|-----|-----------------|----------------------------|------------------|----------------------------------|
| HISTORICAL                               |                     |                     | DISTRIBUTION        |          |       |     |     |     |     | FORECASTS       |                            |                  |                                  |
| 50 Yr<br>Avg<br>(2)                      | Max<br>of<br>Record | Min<br>of<br>Record | Oct<br>Thru<br>Jan* | Feb<br>* | Mar   | Apr | May | Jun | Jul | Aug<br>&<br>Sep | Water<br>Year<br>Forecasts | Pct<br>of<br>Avg | 80 %<br>Probability<br>Range (1) |
| 856                                      | 1,964               | 165                 |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 1,184                                    | 2,353               | 577                 |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 3,078                                    | 5,150               | 1,484               |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 5,896                                    | 10,796              | 2,479               | 4,400               | 710      | 870   | 740 | 540 | 340 | 240 | 440             | 8,280                      | 140%             | 7,300 - 9,650                    |
| 8,518                                    | 17,180              | 3,294               | 6,210               | 1,030    | 1,100 | 890 | 750 | 430 | 310 | 530             | 11,250                     | 132%             | 10,000 - 13,100                  |
|  |                     |                     |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 780                                      | 1,269               | 366                 |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 2,417                                    | 4,400               | 666                 |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 219                                      | 637                 | 24                  |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 291                                      | 562                 | 32                  |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 4,526                                    | 9,492               | 994                 | 4,380               | 555      | 550   | 720 | 620 | 300 | 140 | 185             | 7,450                      | 165%             | 6,770 - 8,680                    |
|  |                     |                     |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 564                                      | 1,056               | 102                 |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 181                                      | 292                 | 30                  |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 379                                      | 565                 | 98                  |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 2,337                                    | 4,926               | 369                 | 2,500               | 300      | 290   | 430 | 470 | 220 | 60  | 50              | 4,320                      | 185%             | 3,910 - 5,050                    |
|  |                     |                     |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 616                                      | 1,234               | 66                  |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 1,070                                    | 2,575               | 144                 |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 318                                      | 705                 | 59                  |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 2,674                                    | 6,381               | 349                 | 3,180               | 340      | 410   | 550 | 630 | 380 | 100 | 40              | 5,630                      | 211%             | 5,070 - 6,550                    |
|  |                     |                     |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 378                                      | 1,253               | 20                  | 610                 | 75       | 82    | 80  | 55  | 20  | 5   | 3               | 930                        | 246%             | 870 - 1,100                      |
|  |                     |                     |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 626                                      | 1,009               | 197                 |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 736                                      | 1,800               | 129                 | 620                 | 85       | 105   | 150 | 230 | 180 | 40  | 10              | 1,420                      | 193%             | 1,250 - 1,660                    |
|  |                     |                     |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 471                                      | 929                 | 88                  |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 1,131                                    | 2,952               | 155                 | 980                 | 90       | 135   | 240 | 350 | 230 | 80  | 25              | 2,130                      | 188%             | 1,890 - 2,500                    |
|  |                     |                     |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 461                                      | 1,147               | 123                 |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 770                                      | 1,661               | 258                 |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 1,857                                    | 4,430               | 383                 | 1,540               | 160      | 230   | 350 | 570 | 560 | 200 | 50              | 3,660                      | 197%             | 3,330 - 4,160                    |
|  |                     |                     |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 461                                      | 1,020               | 92                  |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 952                                      | 2,859               | 150                 | 925                 | 100      | 130   | 210 | 330 | 270 | 90  | 35              | 2,090                      | 220%             | 1,920 - 2,400                    |
|  |                     |                     |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 1,337                                    | 2,964               | 308                 |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 112                                      | 298                 | 14                  |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 248                                      | 653                 | 71                  |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 1,753                                    | 4,642               | 362                 | 1,065               | 180      | 210   | 320 | 630 | 630 | 320 | 125             | 3,480                      | 199%             | 3,100 - 4,100                    |
|  |                     |                     |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 284                                      | 607                 | 58                  |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 1,647                                    | 4,294               | 383                 | 810                 | 145      | 150   | 270 | 600 | 660 | 320 | 125             | 3,080                      | 187%             | 2,680 - 3,600                    |
| 431                                      | 1,402               | 92                  | 335                 | 70       | 70    | 100 | 160 | 140 | 70  | 25              | 970                        | 225%             | 870 - 1,110                      |
| 135                                      | 615                 | 16                  | 225                 | 45       | 40    | 40  | 40  | 20  | 5   | 5               | 420                        | 311%             | 390 - 470                        |
|  |                     |                     |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 558                                      | 1,577               | 163                 |                     |          |       |     |     |     |     |                 |                            |                  |                                  |
| 694                                      | 2,309               | 175                 | 365                 | 95       | 125   | 170 | 270 | 230 | 100 | 75              | 1,430                      | 206%             | 1,270 - 1,800                    |

\* Indicates observed runoff

**MARCH 1, 1997 FORECASTS  
APRIL-JULY UNIMPAIRED RUNOFF**

| HYDROLOGIC REGION<br>and Watershed                   | Unimpaired Runoff in 1,000 Acre-Feet (1) |                     |                     |                      |                  |
|--|--|---------------------|---------------------|----------------------|------------------|
|  | HISTORICAL                               |                     |                     | FORECASTS            |                  |
|  | 50 Yr<br>Avg<br>(2)                      | Max<br>of<br>Record | Min<br>of<br>Record | Apr-Jul<br>Forecasts | Pct<br>of<br>Avg |
| <b>NORTH COAST</b>                                   |  |                     |                     |                      |                  |
| <b>Trinity River</b>                                 |  |                     |                     |                      |                  |
| Total Inflow to Lewiston Lake                        | 642                                      | 1,593               | 80                  | 460                  | 72%              |
| <b>Scott River</b>                                   |  |                     |                     |                      |                  |
| Near Fort Jones                                      | 200                                      | N/A                 | N/A                 | 130                  | 65%              |
| <b>Klamath River</b>                                 |  |                     |                     |                      |                  |
| Total inflow to Upper Klamath Lake (3,4)             | 508                                      | N/A                 | N/A                 | 600                  | 118%             |
| <hr/>  |  |                     |                     |                      |                  |
| <b>NORTH LAHONTAN</b>                                |  |                     |                     |                      |                  |
| <b>Truckee River</b>                                 |  |                     |                     |                      |                  |
| Lake Tahoe to Farad accretions                       | 264                                      | 713                 | 58                  | 390                  | 148%             |
| Lake Tahoe Rise (assuming gates closed, in feet) (3) | 1.5                                      | 3.8                 | 0.2                 | 2.3                  | 153%             |
| <b>Carson River</b>                                  |  |                     |                     |                      |                  |
| West Fork at Woodfords                               | 54                                       | 135                 | 12                  | 80                   | 148%             |
| East Fork near Gardnerville                          | 183                                      | 407                 | 43                  | 280                  | 153%             |
| <b>Walker River</b>                                  |  |                     |                     |                      |                  |
| West Fork near Coleville                             | 143                                      | 330                 | 35                  | 230                  | 161%             |
| East Fork near Bridgeport                            | 61                                       | 209                 | 7                   | 120                  | 197%             |
| <hr/>  |  |                     |                     |                      |                  |
| <b>SOUTH LAHONTAN</b>                                |  |                     |                     |                      |                  |
| <b>Owens River</b>                                   |  |                     |                     |                      |                  |
| Total tributary flow to Owens River (3,5)            | 233                                      | 579                 | 96                  | 363                  | 156%             |

(1) See inside back cover for definition

(2) All 50 year averages are based on years 1946-1995 unless otherwise noted

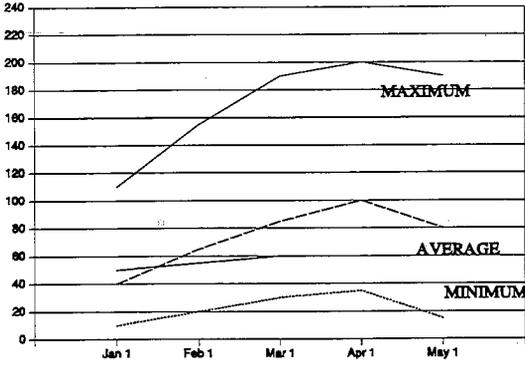
(3) 50 year average based on years 1941-1990

(4) Forecast by U.S. Natural Resources Conservation Service, Portland Oregon, for April through September.

(5) Forecast by Department of Water and Power, City of Los Angeles

# NORTH COAST REGION

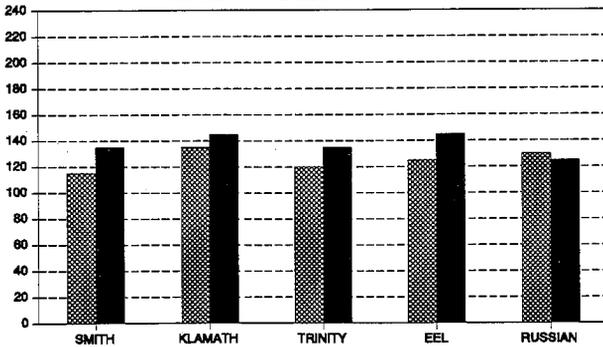
**SNOWPACK ACCUMULATION**  
WATER CONTENT IN % OF APRIL 1 AVERAGE



**SNOWPACK** - First of the month measurements made at 11 snow courses indicate an area wide snow water equivalent of 18.5 inches. This is 65 percent of the March 1 average and 60 percent of the seasonal (April 1) average. Last year at this time the pack was holding 23.3 inches of water.

**PRECIPITATION**

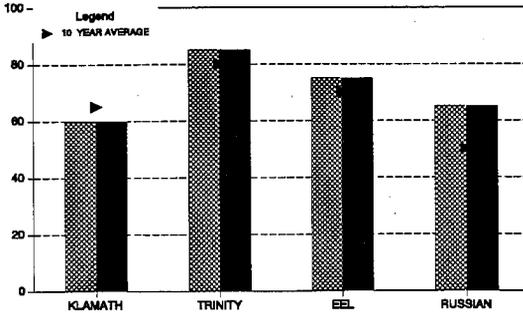
OCTOBER 1 TO DATE IN % OF AVERAGE



**PRECIPITATION** - Seasonal precipitation (October 1 through the end of last month) on this area was 135 percent of normal. Precipitation last month was about 35 percent of the monthly average. Seasonal precipitation at this time last year stood at 125 percent of normal.

**RESERVOIR STORAGE**

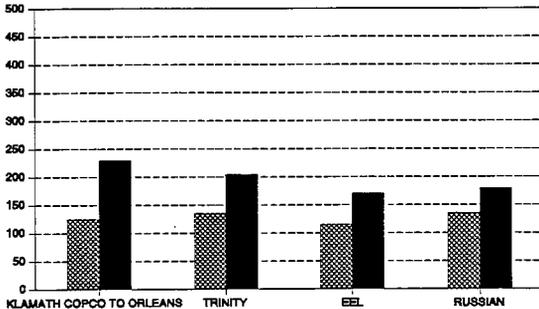
CONTENTS OF MAJOR RESERVOIRS IN % OF CAPACITY



**RESERVOIR STORAGE** - First of the month storage in 7 reservoirs was 2.5 million acre-feet which is 110 percent of average. About 80 percent of available capacity was being used. Storage in these reservoirs at this time last year was 110 percent of average.

**RUNOFF**

OCTOBER 1 TO DATE IN % OF AVERAGE



**RUNOFF** - Seasonal runoff of streams draining the area totaled 14.7 million acre-feet which is 190 percent of average for this period. Last year, runoff for the same period was 120 percent of average.

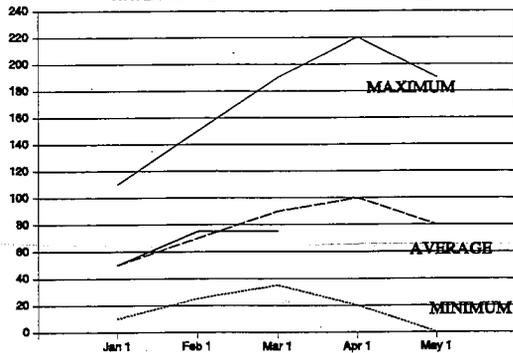


LAST YEAR



THIS YEAR

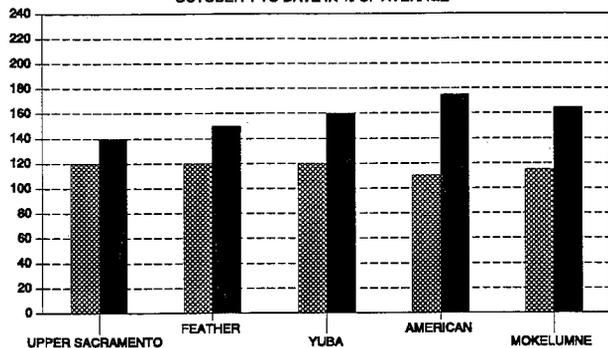
**SNOWPACK ACCUMULATION**  
WATER CONTENT IN % OF APRIL 1 AVERAGE



**SACRAMENTO RIVER REGION**

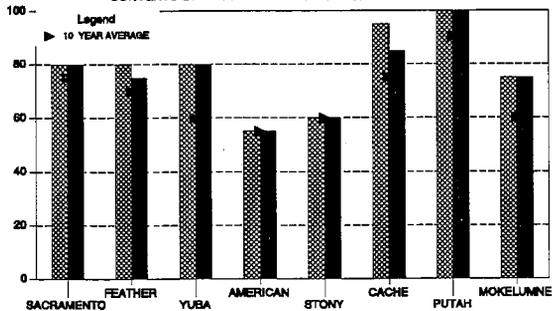
**SNOWPACK** - First of the month measurements made at 72 snow courses indicate an area wide snow water equivalent of 23.4 inches. This is 85 percent of the March 1 average and 75 percent of the seasonal (April 1) average. Last year at this time the pack was holding 25.0 inches of water.

**PRECIPITATION**  
OCTOBER 1 TO DATE IN % OF AVERAGE



**PRECIPITATION** - Seasonal precipitation (October 1 through the end of last month) on this area was 150 percent of normal. Precipitation last month was about 15 percent of the monthly average. Seasonal precipitation at this time last year stood at 125 percent of normal.

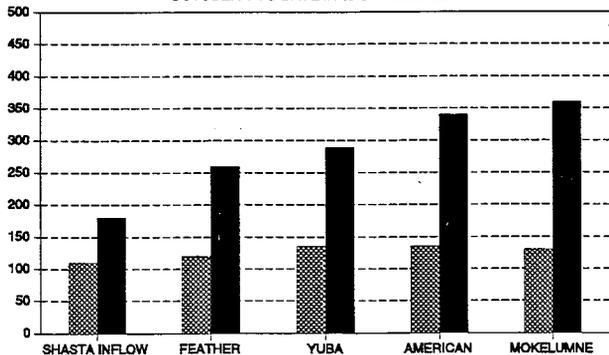
**RESERVOIR STORAGE**  
CONTENTS OF MAJOR RESERVOIRS IN % OF CAPACITY



**RESERVOIR STORAGE** - First of the month storage in 43 reservoirs was 12.4 million acre-feet which is 110 percent of average. About 75 percent of available capacity was being used. Storage in these reservoirs at this time last year was 115 percent of average.

**RUNOFF**

OCTOBER 1 TO DATE IN % OF AVERAGE

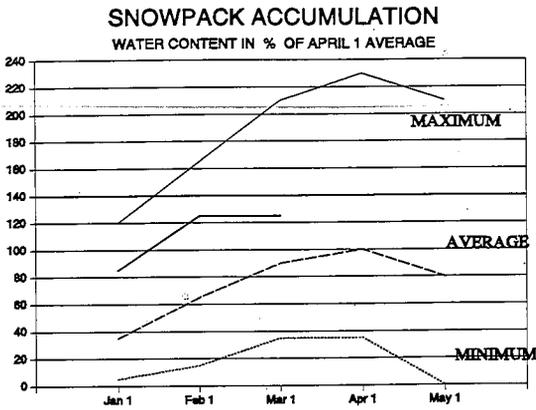


**RUNOFF** - Seasonal runoff of streams draining the area totaled 18.5 million acre-feet which is 225 percent of average for this period. Last year, runoff for the same period was 115 percent of average.

The Sacramento River Region 40-30-30 Water Supply Index is forecasted to be 12.1 million acre-feet assuming median meteorological conditions for the remainder of the year. This classifies the year as "wet" in the Sacramento-San Joaquin Delta according to the State Water Resources Control Board.

Legend: LAST YEAR THIS YEAR

# SAN JOAQUIN RIVER AND TULARE LAKE REGIONS



**SNOWPACK** - First of the month measurements made at 57 San Joaquin River Region snow courses indicate an area wide snow water equivalent of 37.0 inches. This is 140 percent of the March 1 average and 115 percent of the seasonal (April 1) average. Last year at this time the pack was holding 29.4 inches of water.

At the same time, 39 Tulare Lake Region snow courses indicated a basin-wide snow water equivalent of 29.7 inches which is 150 percent of the average for March 1 and 130 percent of the seasonal average. Last year at this time, the Region was holding 20.3 inches of water.

**PRECIPITATION** - Seasonal precipitation (October 1 through the end of last month) on the San Joaquin River Region was 180 percent of normal. Precipitation last month was about 10 percent of the monthly average. Seasonal precipitation at this time last year stood at 115 percent of normal.

Seasonal precipitation on the Tulare Lake Region was 175 percent of normal. Precipitation last month was 20 percent of the monthly average. Seasonal precipitation at this time last year stood at 115 percent of normal.

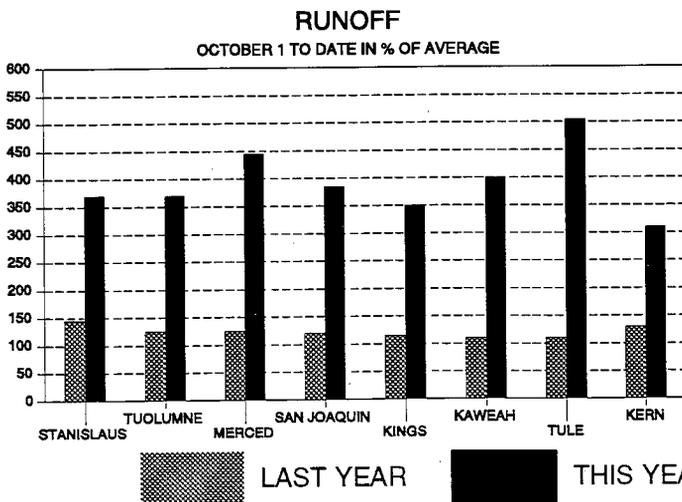
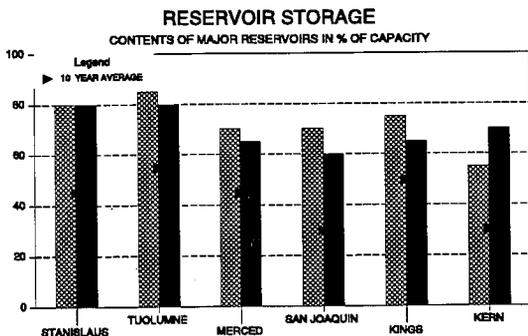
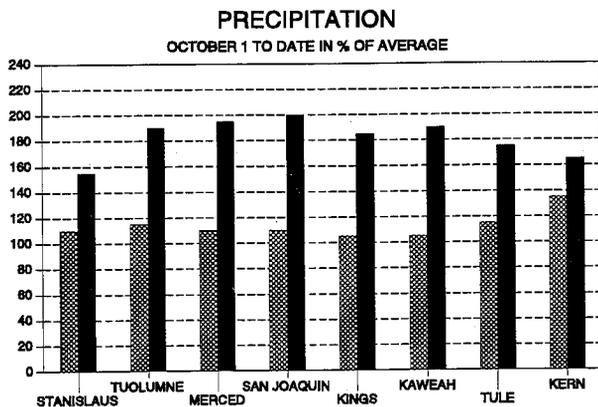
**RESERVOIR STORAGE** - First of the month storage in 33 San Joaquin River Region reservoirs was 8.8 million acre-feet which is 130 percent of average and about 80 percent of available capacity. Storage in these reservoirs at this time last year was 135 percent of average.

First of the month storage in 6 Tulare Lake Region reservoirs was 1.3 million acre-feet which is 165 percent of average. About 65 percent of available capacity was being used. Storage in these reservoirs at this time last year was 160 percent of average.

**RUNOFF** - Seasonal runoff of streams draining the area totaled 6.4 million acre-feet which is 385 percent of average for this period. Last year, runoff for the same period was 125 percent of average.

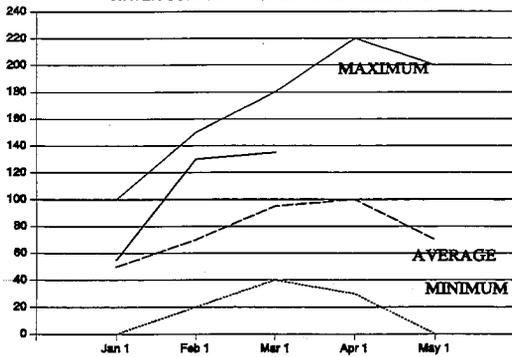
Stream runoff draining into the Tulare Lake Basin totaled 2.1 million acre-feet which is 360 percent of average for this period. Last year, runoff for this same period was 120 percent of average.

The San Joaquin River Region 60-20-20 Water Supply Index is forecasted to be 5.2 million acre-feet which classifies the year as "wet".

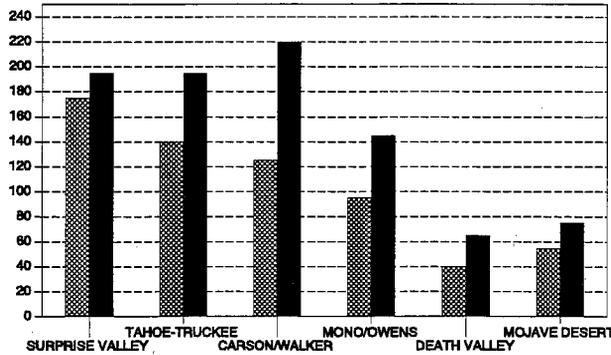


# NORTH AND SOUTH LAHONTAN REGIONS

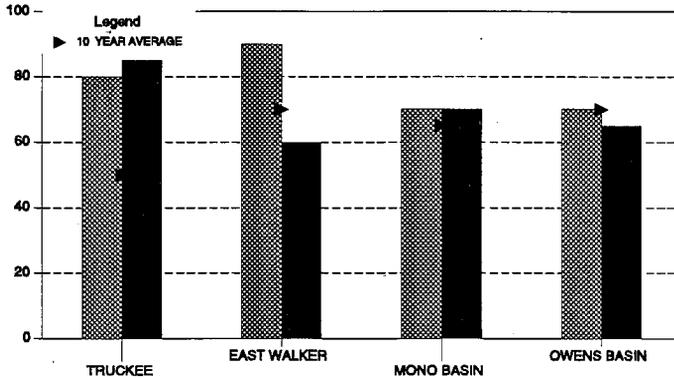
**SNOWPACK ACCUMULATION**  
WATER CONTENT IN % OF APRIL 1 AVERAGE



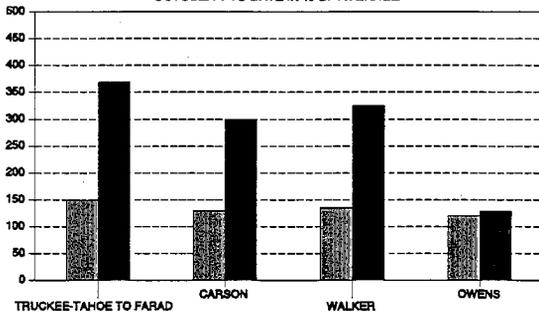
**PRECIPITATION**  
OCTOBER 1 TO DATE IN % OF AVERAGE



**RESERVOIR STORAGE**  
CONTENTS OF MAJOR RESERVOIRS IN % OF CAPACITY



**RUNOFF**  
OCTOBER 1 TO DATE IN % OF AVERAGE



 LAST YEAR
  THIS YEAR

**SNOWPACK** - First of the month measurements made at 15 North Lahontan snow courses indicate an area wide snow water equivalent of 40.1 inches. This is 145 percent of the March 1 average and 125 percent of the seasonal (April 1) average. Last year at this time the pack was holding 26.6 inches of water.

At the same time, 20 South Lahontan snow courses indicated a basin-wide snow water equivalent of 34.7 inches which is 170 percent of the average for March 1 and 145 percent of the seasonal average. Last year at this time, the pack was holding 25.6 inches of water.

**PRECIPITATION** - Seasonal precipitation (October 1 through the end of last month) on the North Lahontan Region was 205 percent of normal. Precipitation last month was about 20 percent of the monthly average. Seasonal precipitation at this time last year stood at 140 percent of normal.

Seasonal precipitation on the South Lahontan Region was 105 percent of normal. Precipitation last month was 5 percent of the monthly average. Seasonal precipitation at this time last year stood at 60 percent of normal.

**RESERVOIR STORAGE** - First of the month storage in 5 North Lahontan Region reservoirs was 904 thousand acre-feet which is 155 percent of average. About 85 percent of available capacity was being used. Storage in these reservoirs at this time last year was 145 percent of average.

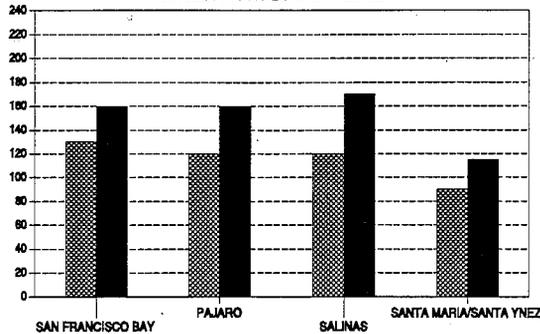
Lake Tahoe was 5.2 feet above its natural rim on March 1. First of the month storage in 8 South Lahontan Region reservoirs was 226 thousand acre-feet which is 80 percent of average. About 55 percent of available capacity was being used. Storage in these reservoirs at this time last year was 95 percent of average.

**RUNOFF** - Seasonal runoff of streams draining the North Lahontan area totaled 702 thousand acre-feet which is 340 percent of average for this period. Last year, runoff for the same period was 140 percent of average.

Seasonal runoff of the Owens River in the South Lahontan Region totaled 73 thousand acre-feet which is 130 percent of average for this period. Last year, runoff for this same period was 120 percent of average.

# SAN FRANCISCO BAY AND CENTRAL COAST REGIONS

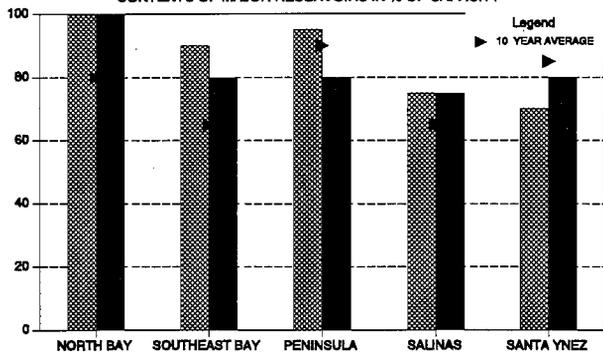
**PRECIPITATION**  
OCTOBER 1 TO DATE IN % OF AVERAGE



*PRECIPITATION* - Seasonal precipitation (October 1 through the end of last month) on the San Francisco Bay area was 155 percent of normal. Precipitation last month was about 10 percent of the monthly average. Seasonal precipitation at this time last year stood at 150 percent of normal.

Seasonal precipitation on the Central Coast area was 150 percent of normal. Precipitation last month was 5 percent of the monthly average. Seasonal precipitation at this time last year stood at 110 percent of normal.

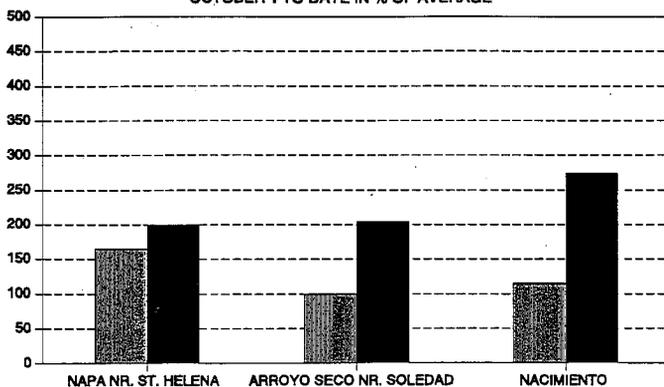
**RESERVOIR STORAGE**  
CONTENTS OF MAJOR RESERVOIRS IN % OF CAPACITY



*RESERVOIR STORAGE* - First of the month storage in 18 major Bay area reservoirs was 585 thousand acre-feet which is 120 percent of average. About 85 percent of available capacity was being used. Storage in these reservoirs at this time last year was 130 percent of average.

First of the month storage in 6 major Central Coast reservoirs was 737 thousand acre-feet which is 115 percent of average. About 80 percent of available capacity was being used. Storage in these reservoirs at this time last year was 115 percent of average.

**RUNOFF**  
OCTOBER 1 TO DATE IN % OF AVERAGE



*RUNOFF* - Seasonal runoff of the Napa River in the San Francisco Bay area totaled 103 thousand acre-feet which is 200 percent of average for this period. Last year, runoff for the same period was 160 percent of average.

Seasonal runoff of selected Central Coast streams totaled 527 thousand acre-feet, which is 250 percent of average for this period. Last year, runoff for this same period was 110 percent of average.

 LAST YEAR
  THIS YEAR

## **SOUTH COAST AND COLORADO RIVER AREAS**

**PRECIPITATION** - October through February (seasonal) precipitation on the South Coast area was 115 percent of normal. February precipitation was 15 percent of the monthly average. Seasonal precipitation at this time last year was 75 percent of normal.

Seasonal precipitation on the Colorado Desert area was 65 percent of normal. Precipitation in February was 15 percent of average. Seasonal precipitation at this time last year stood at 20 percent of average.

**RESERVOIR STORAGE** - March 1 storage in 29 major South Coast area reservoirs was 1.5 million acre-feet or 120 percent of average. About 75 percent of available capacity was being used. Storage in these reservoirs at this time last year was 125 percent of average.

On March 1 combined storage in Lakes Powell, Mead, Mohave and Havasu was about 44 million acre-feet or about 115 percent of average. About 80 percent of available capacity was in use. Last year at this time, these reservoirs were storing 120 percent of average.

**RUNOFF** - Seasonal runoff from selected South Coast streams totaled 35 thousand acre-feet which is 115 percent of average. Runoff from these streams during February totaled 7 thousand acre-feet or 60 percent of average. Seasonal runoff from these streams last year was 115 percent of average.

**COLORADO RIVER** - The February 1 snowpack in the Upper Colorado River basin according to U.S. Natural Resources Conservation Service reports was 145 percent of average, highest in the Dushesne at 150 percent and lowest in the Roaring Fork at 115 percent.

The April through July inflow to Lake Powell is forecast to be 12.5 million acre-feet, which is 162 percent of average.

### **CENTRAL VALLEY PROJECT**

Based on March 1 conditions, Bureau of Reclamation April-July forecasts for runoff into CVP reservoirs are: Trinity--90% of average, Shasta--111% of average, American--129% of average, Stanislaus--124% of average, San Joaquin above Friant--150% of average. As of February 28, 1997 CVP storage was 9.0 million acre feet which is a decrease of approximately 0.1 million acre feet compared to one year ago, and is approximately 122% of the average for that date.

The Bureau of Reclamation announced updated water allocations for the CVP on February 14, 1996. Agricultural contractors received 100% of their contract supply; urban contractors received 100% supplies. Wildlife refuges received 100% of level II supplies. Sacramento River water rights settlement contractors received 100% supplies, and San Joaquin Exchange contractors were allocated 100% supplies. Friant Division allocations were held at 100% Class I, and 60% Class II supplies.

### **STATE WATER PROJECT**

Despite a dry February, the general wetness in California this winter has allowed State Water Project deliveries to be approved at 2.98 million acre-feet. This amount is either 100 percent of each water contractor's "Table A" entitlement or 100 percent of their request for 1997, whichever is less.

## MAJOR WATER DISTRIBUTION PROJECTS

### RESERVOIR STORAGE

(AVERAGES BASED ON PERIOD RECORD)

| RESERVOIR                                  | CAPACITY<br>1,000 AF | AVERAGE<br>STORAGE<br>1,000 AF | STORAGE AT END OF FEBRUARY |                  |                    |                     |
|--|----------------------|--------------------------------|----------------------------|------------------|--------------------|---------------------|
|  |                      |                                | 1996<br>1,000 AF           | 1997<br>1,000 AF | PERCENT<br>AVERAGE | PERCENT<br>CAPACITY |
| <i>STATE WATER PROJECT</i>                 |                      |                                |                            |                  |                    |                     |
| Lake Oroville                              | 3,538                | 2,588                          | 2,729                      | 2,676            | 103%               | 76%                 |
| San Luis Reservoir (SWP)                   | 1,062                | 935                            | 1,077                      | 1,105            | 118%               | 104%                |
| Lake Del Valle                             | 77                   | 33                             | 39                         | 38               | 116%               | 50%                 |
| Lake Silverwood                            | 73                   | 66                             | 39                         | 11               | 17%                | 15%                 |
| Pyramid Lake                               | 171                  | 162                            | 165                        | 159              | 98%                | 93%                 |
| Castaic Lake                               | 324                  | 268                            | 277                        | 297              | 111%               | 92%                 |
| Perris Lake                                | 132                  | 115                            | 120                        | 121              | 104%               | 92%                 |
| <i>CENTRAL VALLEY PROJECT</i>              |                      |                                |                            |                  |                    |                     |
| Clair Engle Lake                           | 2,448                | 1,897                          | 2,074                      | 2,049            | 108%               | 84%                 |
| Lake Shasta                                | 4,552                | 3,377                          | 3,694                      | 3,575            | 106%               | 79%                 |
| Whiskeytown Lake                           | 241                  | 208                            | 220                        | 196              | 95%                | 81%                 |
| Folsom Lake                                | 977                  | 579                            | 362                        | 404              | 70%                | 41%                 |
| New Melones Reservoir                      | 2,420                | 1,491                          | 2,037                      | 2,057            | 138%               | 85%                 |
| Millerton Lake                             | 520                  | 306                            | 456                        | 270              | 88%                | 52%                 |
| San Luis Reservoir (CVP)                   | 971                  | 764                            | 948                        | 874              | 114%               | 90%                 |
| <i>COLORADO RIVER PROJECT</i>              |                      |                                |                            |                  |                    |                     |
| Lake Mead                                  | 26,159               | 20,023                         | 22,031                     | 22,414           | 112%               | 86%                 |
| Lake Powell                                | 25,002               | 15,410                         | 20,692                     | 19,321           | 125%               | 77%                 |
| Lake Mohave                                | 1,810                | 1,641                          | 1,666                      | 1,683            | 103%               | 93%                 |
| Lake Havasu                                | 619                  | 537                            | 570                        | 586              | 109%               | 95%                 |
| <i>EAST BAY MUNICIPAL UTILITY DISTRICT</i> |                      |                                |                            |                  |                    |                     |
| Pardee Reservoir                           | 198                  | 177                            | 200                        | 181              | 102%               | 92%                 |
| Camanche Reservoir                         | 417                  | 251                            | 278                        | 245              | 98%                | 59%                 |
| East Bay (4 reservoirs)                    | 151                  | 129                            | 142                        | 122              | 94%                | 81%                 |
| <i>CITY AND COUNTY OF SAN FRANCISCO</i>    |                      |                                |                            |                  |                    |                     |
| Hetch-Hetchy Reservoir                     | 360                  | 131                            | 271                        | 243              | 186%               | 67%                 |
| Cherry Lake                                | 268                  | 103                            | 245                        | 201              | 195%               | 75%                 |
| Lake Eleanor                               | 26                   | 10                             | 21                         | 24               | 243%               | 91%                 |
| South Bay/Peninsula (4 reservoirs)         | 225                  | 168                            | 216                        | 198              | 118%               | 88%                 |
| <i>CITY OF LOS ANGELES (D.W.P.)</i>        |                      |                                |                            |                  |                    |                     |
| Lake Crowley                               | 183                  | 130                            | 139                        | 129              | 99%                | 70%                 |
| Grant Lake                                 | 48                   | 30                             | 43                         | 45               | 150%               | 95%                 |
| Other Aqueduct Storage (6 res.)            | 83                   | 75                             | 59                         | 63               | 84%                | 75%                 |

# TELEMETERED SNOW WATER EQUIVALENTS

MARCH 1, 1997

(AVERAGES BASED ON PERIOD RECORD)

| BASIN NAME<br>STATION NAME               | ELEV  | APRIL 1<br>AVERAGE | INCHES OF WATER EQUIVALENT |                       |                    |                    |
|--|-------|--------------------|----------------------------|-----------------------|--------------------|--------------------|
|  |       |                    | MAR 1                      | PERCENT<br>OF AVERAGE | 24 HRS<br>PREVIOUS | 1 WEEK<br>PREVIOUS |
| <b>TRINITY RIVER</b>                     |       |                    |                            |                       |                    |                    |
| Peterson Flat                            | 7150' | 29.2               | 21.0                       | 72%                   | 20.8               | 21.8               |
| Red Rock Mountain                        | 6700' | 39.6               | 28.1                       | 71%                   | 28.1               | 26.1               |
| Bonanza King                             | 6450' | 40.5               | 19.1                       | 47%                   | 19.1               | 19.1               |
| Shimmy Lake                              | 6200' | 40.3               | —                          | —                     | —                  | —                  |
| Middle Boulder 3                         | 6200' | 28.3               | 10.5                       | 37%                   | 10.5               | 11.8               |
| Highland Lakes                           | 6030' | 29.9               | 15.8                       | 53%                   | 15.6               | 15.6               |
| Scott Mountain                           | 5900' | 16.0               | 11.0                       | 69%                   | 11.0               | 11.9               |
| Mumbo Basin                              | 5700' | 22.4               | 16.2                       | 72%                   | 15.8               | 16.8               |
| Big Flat                                 | 5100' | 15.8               | 5.9                        | 37%                   | 5.6                | 4.2                |
| <b>SACRAMENTO RIVER</b>                  |       |                    |                            |                       |                    |                    |
| Cedar Pass                               | 7100' | 18.1               | 18.8                       | 104%                  | 18.6               | 17.7               |
| Blacks Mountain                          | 7100' | 12.7               | 10.0                       | 79%                   | 9.9                | 9.4                |
| Sand Flat                                | 6750' | 42.4               | 29.9                       | 71%                   | 29.7               | 29.3               |
| Medicine Lake                            | 6700' | 32.6               | 11.2                       | 34%                   | 11.0               | 11.0               |
| Adin Mountain                            | 6350' | 13.6               | 9.8                        | 72%                   | 9.8                | 9.9                |
| Snow Mountain                            | 5950' | 27.0               | —                          | —                     | —                  | —                  |
| Slate Creek                              | 5600' | 29.0               | 6.5                        | 22%                   | 6.5                | 7.1                |
| Stouts Meadow                            | 5400' | 36.0               | —                          | —                     | —                  | —                  |
| <b>FEATHER RIVER</b>                     |       |                    |                            |                       |                    |                    |
| Kettle Rock                              | 7300' | 25.5               | 19.1                       | 75%                   | 19.1               | 19.3               |
| Grizzly Ridge                            | 6900' | 29.7               | 31.9                       | 107%                  | 31.9               | 31.3               |
| Pilot Peak (DWR)                         | 6800' | 52.6               | 34.9                       | 66%                   | 33.8               | 33.2               |
| Gold Lake                                | 6750' | 36.5               | 34.4                       | 94%                   | 34.4               | 34.3               |
| Humbug                                   | 6500' | 28.0               | 28.4                       | 102%                  | 28.3               | 28.7               |
| Rattlesnake                              | 6100' | 14.0               | 15.8                       | 113%                  | 15.8               | 15.5               |
| Bucks Lake                               | 5750' | 44.7               | 15.8                       | 35%                   | 15.8               | 15.8               |
| Four Trees                               | 5150' | 20.0               | 8.0                        | 40%                   | 8.2                | 8.9                |
| <b>EEL RIVER</b>                         |       |                    |                            |                       |                    |                    |
| Noel Spring                              | 5100' | —                  | 0.7                        | —                     | 0.6                | 1.2                |
| Plaskett Meadows                         | 6000' | —                  | 13.4                       | —                     | 13.8               | 14.6               |
| <b>YUBA &amp; AMERICAN RIVERS</b>        |       |                    |                            |                       |                    |                    |
| Lake Lois                                | 8800' | 39.5               | —                          | —                     | —                  | —                  |
| Schneiders                               | 8750' | 34.5               | 53.7                       | 156%                  | 53.7               | 53.8               |
| Caples Lake (DWR)                        | 7800' | 30.9               | 34.8                       | 113%                  | 34.7               | 34.0               |
| Alpha                                    | 7600' | 35.9               | 39.5                       | 110%                  | 39.6               | 39.0               |
| Beta                                     | 7600' | 35.9               | 34.1                       | 95%                   | 34.1               | 33.8               |
| Forni Ridge                              | 7600' | 37.0               | 24.4                       | 66%                   | 24.2               | 24.2               |
| Silver Lake (DWR)                        | 7100' | 22.7               | 27.7                       | 122%                  | 27.2               | 26.5               |
| Central Sierra Snow Lab                  | 6950' | 33.6               | 47.2                       | 140%                  | 47.0               | 46.5               |
| Huysink                                  | 6600' | 42.6               | 34.1                       | 80%                   | 34.1               | 33.9               |
| Van Vleck                                | 6700' | 35.9               | 45.1                       | 126%                  | 45.1               | 44.7               |
| Robbs Saddle                             | 5900' | 21.4               | 29.6                       | 138%                  | 29.3               | 29.0               |
| Greek Store                              | 5600' | 21.0               | 21.6                       | 103%                  | 21.6               | 21.5               |
| Blue Canyon                              | 5280' | 9.0                | 0.6                        | 7%                    | 0.8                | 1.6                |
| Robbs Powerhouse                         | 5150' | 5.2                | 8.1                        | 156%                  | 8.1                | 8.3                |
| <b>MOKELUMNE &amp; STANISLAUS RIVERS</b> |       |                    |                            |                       |                    |                    |
| Deadman Creek                            | 9250' | 37.2               | 36.6                       | 98%                   | 36.6               | 37.4               |
| Highland Meadow                          | 8800' | 47.9               | 65.0                       | 136%                  | 65.0               | 64.0               |
| Gianelli Meadow                          | 8350' | 55.5               | 59.3                       | 107%                  | 59.3               | 59.3               |
| Lower Relief Valley                      | 8100' | 41.2               | 52.1                       | 126%                  | 52.1               | 51.4               |
| Blue Lakes                               | 8000' | 33.1               | 36.8                       | 111%                  | 36.8               | 36.9               |
| Mud Lake                                 | 7900' | 44.9               | 68.3                       | 152%                  | 68.2               | 67.5               |
| Stanislaus Meadow                        | 7750' | 47.5               | 56.6                       | 119%                  | 57.0               | 57.8               |
| Bloods Creek                             | 7200' | 35.5               | 39.0                       | 110%                  | 38.9               | 38.3               |
| Black Springs                            | 6500' | 32.0               | 23.0                       | 72%                   | 22.9               | 23.9               |
| <b>TUOLUMNE &amp; MERCED RIVERS</b>      |       |                    |                            |                       |                    |                    |
| Dana Meadows                             | 9800' | 27.7               | 40.0                       | 144%                  | 40.0               | 40.0               |
| Slide Canyon                             | 9200' | 41.1               | 57.6                       | 140%                  | 57.6               | 57.6               |
| Snow Flat                                | 8700' | 44.1               | —                          | —                     | —                  | —                  |
| Tuolumne Meadows                         | 8600' | 22.6               | 33.0                       | 146%                  | 33.0               | 33.5               |
| Horse Meadow                             | 8400' | 48.6               | —                          | —                     | —                  | —                  |
| Ostrander Lake                           | 8200' | 34.8               | 47.1                       | 135%                  | 47.1               | 47.1               |
| Paradise Meadow                          | 7650' | 41.3               | —                          | —                     | —                  | —                  |
| Gin Flat                                 | 7050' | 34.2               | 36.0                       | 105%                  | 36.0               | 35.5               |
| Lower Kibbie Ridge                       | 6600' | 27.4               | 27.1                       | 99%                   | 27.1               | 27.1               |

# TELEMETERED SNOW WATER EQUIVALENTS

MARCH 1, 1997

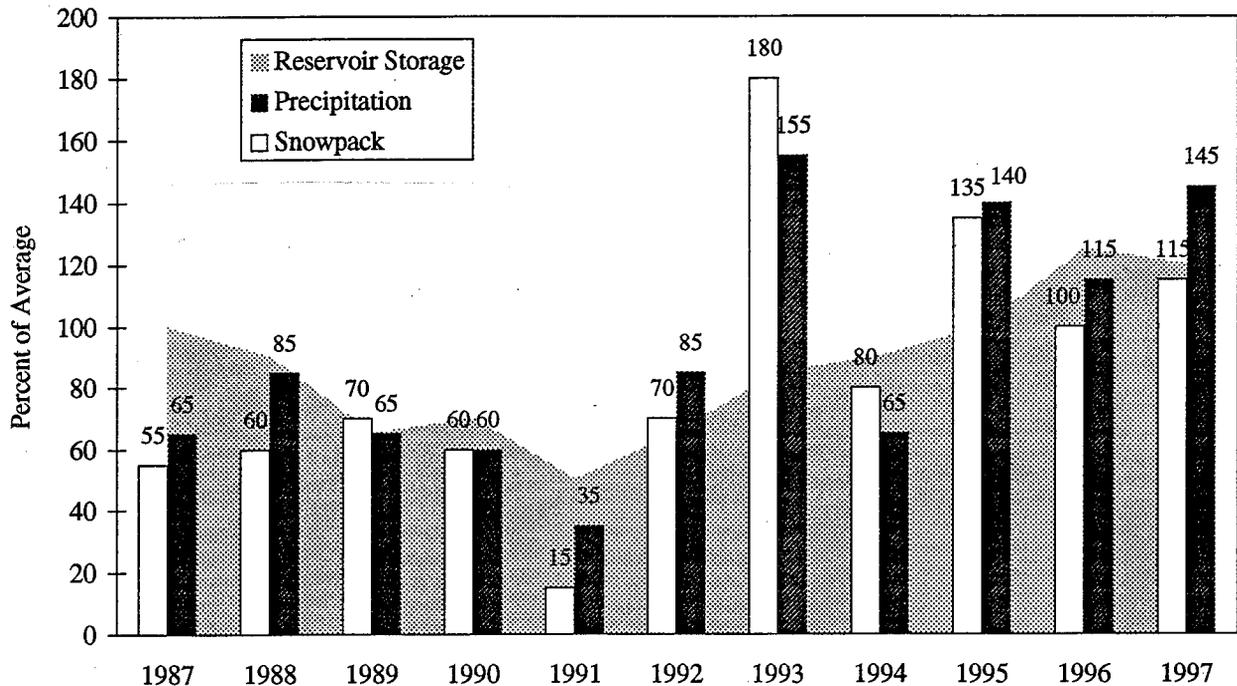
(AVERAGES BASED ON PERIOD RECORD)

| BASIN NAME<br>STATION NAME      | ELEV   | APRIL 1<br>AVERAGE | INCHES OF WATER EQUIVALENT |                       |                    |                    |
|---------------------------------|--------|--------------------|----------------------------|-----------------------|--------------------|--------------------|
|                                 |        |                    | MAR 1                      | PERCENT<br>OF AVERAGE | 24 HRS<br>PREVIOUS | 1 WEEK<br>PREVIOUS |
| <b>SAN JOAQUIN RIVER</b>        |        |                    |                            |                       |                    |                    |
| Volcanic Knob                   | 10100' | 30.1               | 25.5                       | 85%                   | 26.1               | 27.5               |
| Agnew Pass                      | 9450'  | 32.3               | —                          | —                     | —                  | —                  |
| Kaiser Point                    | 9200'  | 37.8               | —                          | —                     | —                  | —                  |
| Green Mountain                  | 7900'  | 30.8               | —                          | —                     | —                  | —                  |
| Tamarack Summit                 | 7600'  | 30.5               | 31.3                       | 103%                  | 31.3               | 31.2               |
| Chilkoot Meadow                 | 7150'  | 38.0               | 29.3                       | 77%                   | 29.3               | 29.3               |
| Huntington Lake (USBR)          | 7000'  | 20.1               | —                          | —                     | —                  | —                  |
| Graveyard Meadow                | 6900'  | 18.8               | 28.0                       | 149%                  | 28.0               | 28.3               |
| Poison Ridge                    | 6900'  | 28.9               | 26.1                       | 90%                   | 25.3               | 25.9               |
| <b>KINGS RIVER</b>              |        |                    |                            |                       |                    |                    |
| Bishop Pass                     | 11200' | 34.0               | 40.0                       | 118%                  | 40.0               | 39.3               |
| Charlotte Lake                  | 10400' | 27.5               | 39.8                       | 145%                  | 39.8               | 39.5               |
| State Lakes                     | 10400' | 29.0               | —                          | —                     | —                  | —                  |
| Mitchell Meadow                 | 10375' | 32.9               | 53.5                       | 163%                  | 53.5               | 53.4               |
| Blackcap Basin                  | 10300' | 34.3               | —                          | —                     | —                  | —                  |
| Upper Burnt Corral              | 9700'  | 34.6               | 50.3                       | 145%                  | 50.3               | 50.3               |
| West Woodchuck Meadow           | 9100'  | 32.8               | 55.1                       | 168%                  | 54.9               | 53.1               |
| Big Meadows (DWR)               | 7600'  | 25.9               | 26.4                       | 102%                  | 26.3               | 26.5               |
| <b>KAWEAH &amp; TULE RIVERS</b> |        |                    |                            |                       |                    |                    |
| Quaking Aspen                   | 7200'  | 21.0               | 24.8                       | 118%                  | 24.7               | 24.0               |
| Giant Forest (Corps)            | 6400'  | 10.0               | 16.4                       | 164%                  | 16.3               | 16.1               |
| <b>KERN RIVER</b>               |        |                    |                            |                       |                    |                    |
| Upper Tyndall Creek             | 11500' | 27.7               | 43.6                       | 157%                  | 43.5               | 42.7               |
| Crabtree Meadow                 | 10700' | 19.8               | 20.5                       | 104%                  | 20.5               | 20.5               |
| Chagoopa Plateau                | 10300' | 21.8               | 32.5                       | 149%                  | 32.5               | 31.8               |
| Pascoes                         | 9150'  | 24.9               | 45.5                       | 183%                  | 45.3               | 44.4               |
| Tunnel Guard Station            | 8950'  | 15.6               | 20.6                       | 132%                  | 20.6               | 19.9               |
| Wet Meadows                     | 8900'  | 30.3               | 30.4                       | 100%                  | 30.4               | 31.1               |
| Casa Vieja Meadows              | 8400'  | 20.9               | 20.3                       | 97%                   | 20.3               | 19.6               |
| Beach Meadows                   | 7650'  | 11.0               | 6.6                        | 60%                   | 6.3                | 8.6                |
| <b>SURPRISE VALLEY AREA</b>     |        |                    |                            |                       |                    |                    |
| Dismal Swamp                    | 7050'  | 29.2               | 32.7                       | 112%                  | 32.5               | 31.9               |
| <b>TRUCKEE RIVER</b>            |        |                    |                            |                       |                    |                    |
| Mount Rose Ski Area             | 8850'  | 38.5               | 52.4                       | 136%                  | 52.9               | 56.1               |
| Independence Lake (NRCS)        | 8450'  | 41.4               | 50.6                       | 122%                  | 50.4               | 49.9               |
| Big Meadows (NRCS)              | 8700'  | 25.7               | 31.7                       | 123%                  | 31.5               | 30.7               |
| Independence Camp               | 7000'  | 21.8               | 9.3                        | 43%                   | 9.5                | 10.2               |
| Independence Creek              | 6500'  | 12.7               | 7.7                        | 61%                   | 8.1                | 8.5                |
| <b>LAKE TAHOE BASIN</b>         |        |                    |                            |                       |                    |                    |
| Heavenly Valley                 | 8800'  | 28.1               | 34.1                       | 121%                  | 33.7               | 33.7               |
| Hagans Meadow                   | 8000'  | 16.5               | 22.1                       | 134%                  | 21.8               | 22.0               |
| Marlette Lake                   | 8000'  | 21.1               | 32.4                       | 154%                  | 32.2               | 30.5               |
| Echo Peak 5                     | 7800'  | 39.5               | 55.1                       | 139%                  | 55.1               | 55.0               |
| Rubicon Peak 2                  | 7500'  | 29.1               | 30.0                       | 103%                  | 30.1               | 30.3               |
| Ward Creek 3                    | 6750'  | 39.4               | 36.5                       | 93%                   | 36.4               | 36.5               |
| Fallen Leaf Lake                | 6300'  | 7.0                | 5.4                        | 77%                   | 5.6                | 6.1                |
| <b>CARSON RIVER</b>             |        |                    |                            |                       |                    |                    |
| Ebbetts Pass                    | 8700'  | 38.8               | 48.5                       | 125%                  | 48.5               | 49.2               |
| Poison Flat                     | 7900'  | 16.2               | 17.1                       | 106%                  | 17.1               | 18.1               |
| <b>WALKER RIVER</b>             |        |                    |                            |                       |                    |                    |
| Virginia Lakes                  | 9200'  | 20.3               | 25.9                       | 128%                  | 25.8               | 25.6               |
| Lobdell Lake                    | 9200'  | 17.3               | 28.6                       | 165%                  | 28.6               | 28.0               |
| Sonora Pass Bridge              | 8750'  | 26.0               | 35.8                       | 138%                  | 35.6               | 34.9               |
| Leavitt Meadows                 | 7200'  | 8.0                | 13.7                       | 171%                  | 13.7               | 13.0               |
| <b>OWENS RIVER/MONO LAKE</b>    |        |                    |                            |                       |                    |                    |
| Gem Pass                        | 10750' | 31.7               | 47.7                       | 150%                  | 47.7               | 47.7               |
| Sawmill                         | 10300' | 19.4               | 21.6                       | 111%                  | 21.6               | 22.2               |
| Cottonwood Lakes                | 10200' | 11.6               | 19.9                       | 172%                  | 19.9               | 19.9               |
| Big Pine Creek                  | 9800'  | 17.9               | 16.3                       | 91%                   | 16.3               | 16.3               |
| South Lake                      | 9600'  | 16.0               | 25.6                       | 160%                  | 25.6               | 25.3               |
| Mammoth Pass (USBR)             | 9500'  | 42.4               | 49.8                       | 117%                  | 49.8               | 49.4               |
| Rock Creek Lakes                | 10000' | 14.0               | 18.0                       | 129%                  | 17.9               | 17.9               |

NORMAL SNOWPACK ACCUMULATION EXPRESSED AS A PERCENT OF APRIL 1ST AVERAGE

| AREA                 | JANUARY | FEBRUARY | MARCH | APRIL | MAY |
|----------------------|---------|----------|-------|-------|-----|
| Central Valley North | 45%     | 70%      | 90%   | 100%  | 75% |
| Central Valley South | 45%     | 65%      | 85%   | 100%  | 80% |
| North Coast          | 40%     | 60%      | 85%   | 100%  | 80% |

## March 1 Statewide Conditions



## SNOWLINES

SNOW SURVEYS assisted in its first ever hazardous waste spill. DWR personnel from Sacramento and Beckworth, as well Forest Service gaugers helped map a diesel fuel spill at Norden and a petroleum product leak from a pipeline break into Summit Creek, both located near Truckee. The sampling sets proved to be ideal at quickly obtaining snow cores, including soil, from which the extent of the spread of the contamination could be determined.

SAMPLING CONDITIONS for the March 1 survey were some of the worst encountered in recent memory. Many of the courses had an impenetrable ice layer at the ground surface. This layer will not only effect the manual measurements but impede the snow sensors ability to accurately measure the water content as well. As the sun pumps more energy into the pack this ice layer will disappear and the sensor readings will suddenly increase at many of the locations..

THE AGENDA for the joint meeting of the Western Snow Conference with the Eastern Snow Conference and the Canadian Geophysical Union in Banff, Alberta Canada has not been published. The deadline for abstract submission was March 1 and the overall meeting dates are May 4-8. Whether the sessions for the WSC will be throughout that week or concentrated in three days isn't known. For further information try <http://www.geo.ucalgary.ca/~wu/cguconf.html> or contact Frank Gehrke at 916-574-2635.

SNOWPACK - Snow data is a major index of spring and summer runoff from Sierra Nevada watersheds. April 1 data historically reflects the magnitude of the snowpack at or near the maximum seasonal accumulation. Averages are based on April 1 data for the period 1946-1995 (50 years, except for data sites established after 1941).

PRECIPITATION - Averages are based on April 1 data for the period 1946-1995 (50 years, except for data sites established after 1941).

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

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

Runoff averages for most streams are based on the period 1946-1995. For more details contact California Cooperative Snow Surveys, P.O. Box 942836, Sacramento, CA 94236-0001, (916) 574-2635 or [gridley@water.ca.gov](mailto:gridley@water.ca.gov).

#### INDICES OF WATER AVAILABILITY

The Sacramento River Hydrologic Region 40-30-30 Water Supply Index. The 40-30-30 represent the percentage weight given to the three variables in the formula for the index. The first variable is the forecasted unimpaired runoff from April through July (40 Percent). The second variable is the forecasted unimpaired runoff from October through March (30 Percent). The third variable is the previous year's index with a cap to account for required flood control releases during wet years. The basins used in this computation are those used in the Sacramento River water year unimpaired runoff.

The Sacramento River water year unimpaired runoff is the sum of: Sacramento River above Bend Bridge, Feather River Inflow to Lake Oroville, Yuba River near Smartville and American River Inflow to Folsom Lake.

The San Joaquin River Hydrologic Region 60-20-20 Water Supply Index. In a similar manner, the 60-20-20 represents the percentage weights on April through July runoff, October through March runoff and previous year's index. The San Joaquin River unimpaired runoff is the sum of: Stanislaus River Inflow to New Melones Lake, Tuolumne River Inflow to New Don Pedro Reservoir, Merced River Inflow to Lake McClure and San Joaquin River Inflow to Millerton Lake.

Prior month unimpaired runoff is the sum of the runoff in the eight major rivers used in the two above indices.

A flow of 160,000 CFS nearly engulfing Yuba County Water Agency Narrows #2 Powerhouse on January 2, 1997. The powerhouse is just downstream from Englebright Dam on the Yuba River.

Photo by Dave Ward, Pacific, Gas and Electric Company

State of California – The Resources Agency  
DEPARTMENT OF WATER RESOURCES  
P.O. Box 942836  
Sacramento, CA 94236-0001

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