DEFINITIONS:

Acre-Feet: The volume equal to one acre covered one foot deep (43,560 cubic feet).

Forecast Period: Generally, April 1st through July 31st, unless otherwise noted.

April-High Forecast Period: For the Lake Tahoe Stage Rise, the period from April 1st to the highest recorded lake stage level.

April 1st Average: The April 1st snowpack average is used as a reference point because it is normally the end of the winter snowfall season and the beginning of the spring runoff season.

Residual Period: The forecast period from the first of the current month through September 30th.

Probability Forecasts: Precipitation and snowfall accumulation of known probability as determined by analysis of past records are utilized in the preparation of probability runoff forecasts. The forecasts include an evaluation of the standard error of the prediction model. The forecasts are presented at three levels of probability as follows:

- **Most Probable Volume**: Given the current hydrometeorological conditions to date, this is the best estimate of what the actual runoff volume will be this season.
- **Most Probable Volume (% Normal)**: Most probable volume in percent of the 1961-1990 average.
- **Reasonable Maximum Volume**: Given current hydrometeorological conditions, the seasonal runoff that has a 10 percent chance of being exceeded.
- **Reasonable Minimum Volume**: Given current hydrometeorological conditions, the seasonal runoff that has a 90 percent chance of being exceeded.

SNOTEL: Acronym for SNOW TELEmetry. This is an automated snow measurement system operated by the USDA - Natural Resources Conservation Service. These sites use meteor burst communications technology to transmit hydrometeorological information such as snow water equivalent from snow pillows, accumulated precipitation and maximum, minimum and average air temperature.

Water equivalent: The depth of water that would result from melting the snowpack at a point.

Water Year: The period from October 1st through September 30th.
General Outlook
March 1, 2005

Most water supply basins experienced much below average February precipitation except for some in the San Joaquin drainage. While most spring runoff forecasts showed a decrease from last month due to the dry conditions, the reduction was most evident in the upper Klamath, Scott, Truckee, and Humboldt basins. However, with one month of snow accumulation left, the snowpack in the central and southern Sierra Nevada remains healthy and the April through July forecasts for that region are above average.

February precipitation amounts were generally much below average. The best amounts fell in the San Joaquin drainage with amounts ranging from 74 percent for the Mokelumne basin to 110 percent for the upper San Joaquin. The upper Klamath Lake basin was the driest at only 20 percent. Amounts were generally in the 40 to 50 percent range in the Trinity and Sacramento basins. Monthly precipitation varied from 50 to 70 percent in the Tulare Lake drainage. The Walker River basin received 70 percent of the monthly average, the Carson 67, and the Truckee 38 percent. About 70 percent of the February average fell in the Humboldt basin.

The Sierra Nevada snowpack did not increase substantially during February although the April 1st average rose slightly from last month for most basins. The California Department of Water Resources reports that the March 1st average is about 112 percent in the northern Sierra basin, 124 percent in the central Sierra and 154 percent in the southern Sierras. The April 1st average stands at 101 percent for the northern Sierra, 109 percent for the central Sierra and 132 percent in the southern Sierra. Snow packs in the Tahoe-Truckee are at 124 percent of the average-to-date, the Carson-Walker, 145 percent and the Humboldt basin about 99 percent. The upper Klamath Lake basin stands at only 45 percent.

The monthly runoff average was greatest in the San Joaquin drainage ranging from 91 percent for the Mokelumne to 114 for the Tuolumne. February runoff was only in the 49 to 64 percent range for the Trinity and Sacramento basins and varied from 49 to 98 percent in the Tulare Lake drainage. Runoff for the east side Sierra basins varied from 38 percent for the Truckee at Farad to 109 percent for the West Walker basin. The Humboldt River at Palisade received 45 percent of the February average while the upper Klamath Lake basin received 44 percent.

Reservoir storage in the Sacramento basin was at 94 percent of average for the date, the San Joaquin at 114 percent and the Tulare Lake basin at 78 percent. East side Sierra reservoirs are at 66 percent of average. The lake level at Lake Tahoe stood at 6223.19 on February 28. This is 0.19 feet above the natural rim and represents only 6 percent of the average-to-date. Storage at Lahontan Reservoir stands at 69 percent while Rye Patch Reservoir in Nevada is at only 30 percent of the average-to-date. The upper Klamath Lake is at 87 percent of the average-to-date.

Runoff forecasts follow a pronounced gradient from north to south in California’s central valley. They range from 78 percent for the Pit River nr Montgomery Creek to 138 percent for the San Joaquin River at Millerton Lake. Forecasts are above average from the American River to the Kern River basins. Streamflow forecasts for the east-side Sierra basins vary from 102 to 142 percent. Forecasts for the Humboldt basin range from 86 to 112 percent. The March through September forecast for the upper Klamath Lake inflow is 51 percent.

Mid-month updates are scheduled for selected east side Sierra forecast points and the upper Klamath inflow. These will be posted on the CNRFC web page.

The Water Supply Outlook is available in pdf format on the World Wide Web at:

http://www.wrh.noaa.gov/cnrfc
## Water Supply Forecasts

<table>
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<th>Most Prob</th>
<th>Reas Max</th>
<th>Reas Min</th>
<th>Reas Year Avg</th>
<th>Vol KAF %Norm KAF KAF KAF</th>
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</thead>
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### COASTAL BASINS

**Williamson River**
- Sprague, blo
  - Mar-Sep 270 53 385 150 505

**Sprague River**
- Chiloquin, nr
  - Mar-Sep 155 51 250 61 305

**Upper Klamath Falls River**
- Inflow
  - Mar-Sep 365 51 530 200 715

**Lost River**
- Gerber Reservoir Inflow
  - Mar-Jul 11.0 30 30 0.40 37
- Clear Lake Reservoir Inflow
  - Mar-Jul 30 38 64 4.0 80

**Scott River**
- Fort Jones, nr
  - Apr-Jul 150 83 210 92 181

**Trinity River**
- Trinity Lake Inflow
  - Apr-Jul 590 93 855 425 635

Trinity River - Inflow at Lewiston Lake Distribution (kAF)

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<td>160 195 235</td>
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<td>10%</td>
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<td>230 285 320</td>
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### SACRAMENTO RIVER BASIN

**SACRAMENTO RIVER ABOVE BEND BRIDGE**

**Pit River**
- Montgomery Ck, nr
  - Apr-Jul 830 78 965 705 1070

**Mccloud River**
- Shasta Lk, abv
  - Apr-Jul 350 95 465 235 370

**Sacramento River**
- Delta
  - Apr-Jul 275 95 405 145 290
- Shasta Lake, Redding, nr
  - Apr-Jul 1500 84 2010 1000 1790
- Bend Bridge, abv, Red Bluff, nr
  - Apr-Jul 2000 82 2780 1220 2440

**FEATHER RIVER ABOVE OROVILLE RESERVOIR**

**NF Feather River**
- Pratville, nr
  - Apr-Jul 260 78 345 175 333*
- Big Bar
  - Apr-Jul 820 85 1140 490 962*

**Feather River**
- Oroville Reservoir Inflow
  - Apr-Jul 1450 82 1920 970 1760
## Water Supply Forecasts

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*30 Year Averages for 1971-2000 are incomplete. Those forecast points with an asterisk have incomplete averages, so 1961-1990 averages are listed. The new averages will be incorporated into this report when the complete data sets become available.
Sacramento/Trinity/Klamath River Basins

Seasonal Basin Precipitation
October 1 to Date

Seasonal Basin Snowpack
Water Content in % of April 1 Average

Percent of Average

American  Yuba  Feather  Upper Sac  Trinity  Klamath

113  98  94  99  97  77

American Yuba Feather Upper Sac Trinity Klamath

Percent of Average

1-Jan  1-Feb  1-Mar  1-Apr  1-May

61  85  95  116  110

Observed  Maximum  Average  Minimum
Sacramento/Trinity/Klamath River Basins

**Basin Reservoir Storage**

Contents of Major Reservoirs in % of Average

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Percent of Average</th>
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<td>American</td>
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<td>Yuba</td>
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<td>Feather</td>
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<td>Upper Sac</td>
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<tr>
<td>Trinity</td>
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<tr>
<td>Klamath</td>
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**Seasonal Basin Runoff**

October 1 to Date

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<th>Percent of Average</th>
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<td>American</td>
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<td>Feather</td>
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<td>Upper Sac</td>
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<td>Trinity</td>
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<td>Klamath</td>
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## Water Supply Forecasts

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<th>Location</th>
<th>Month</th>
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<th>Most Prob</th>
<th>Reas Max</th>
<th>Reas Min</th>
<th>30 Year Avg</th>
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<tr>
<td>SF San Joaquin River</td>
<td>Apr-Jul</td>
<td>270</td>
<td>141</td>
<td>350</td>
<td>180</td>
<td>192*</td>
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<td>Hooper Ck, blo, Florence Lk, nr</td>
<td>Apr-Jul</td>
<td>1750</td>
<td>138</td>
<td>2140</td>
<td>1400</td>
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<td>470</td>
<td>131</td>
<td>580</td>
<td>350</td>
<td>360*</td>
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<td>Millerton Lk</td>
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<td>840</td>
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<td>820</td>
<td>138</td>
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<td>680</td>
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<td>1670</td>
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<td>1110</td>
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<td>La Grange, nr</td>
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<td>470</td>
<td>113</td>
<td>660</td>
<td>280</td>
<td>416*</td>
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<tr>
<td>Stanislaus River</td>
<td>Apr-Jul</td>
<td>520</td>
<td>113</td>
<td>690</td>
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<td>120</td>
<td>98</td>
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<tr>
<td>Stanislaus River</td>
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<td>98</td>
<td>200</td>
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<td>Goodwin Dam, blo, Knights Ferry</td>
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<td>120</td>
<td>98</td>
<td>200</td>
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<td>123</td>
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<td>120</td>
<td>98</td>
<td>200</td>
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<td>Mokelumne River</td>
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<td>200</td>
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<td>Mokelumne Hill</td>
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<td>Cosumnes River</td>
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<td>120</td>
<td>98</td>
<td>200</td>
<td>40</td>
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</tbody>
</table>

*30 Year Averages for 1971-2000 are incomplete. Those forecast points with an asterisk have incomplete averages, so 1961-1990 averages are listed. The new averages will be incorporated into this report when the complete data sets become available.*
San Joaquin Basin

Seasonal Basin Precipitation
October 1 to Date

Seasonal Basin Snowpack
Water Content in % of April 1 Average
San Joaquin Basin

Basin Reservoir Storage
Contents of Major Reservoirs in % of Average

Season Basin Runoff
October 1 to Date
| Water Supply Forecasts |
|------------------------|-------------------|-----------------|-----------------|-----------------|------------------|
|                        | Most Prob Vol KAF | Most Prob Vol KAF | Reas Max Vol KAF | Reas Min Vol KAF | 30 Year Avg Year |
| Kern River             |                   |                 |                 |                 |                  |
| Kernville, nr          | Apr-Jul           | 490             | 123             | 605             | 380              | 398              |
| Isabella Dam, blo      | Apr-Jul           | 610             | 127             | 770             | 470              | 480              |
| Bakersfield, nr        | Apr-Jul           | 630             | 129             | 810             | 480              | 490              |
| Tule River             |                   |                 |                 |                 |                  |
| Success Dam            | Apr-Jul           | 75              | 114             | 110             | 40               | 66               |
| Kaweah River           |                   |                 |                 |                 |                  |
| Terminus Dam           | Apr-Jul           | 380             | 131             | 500             | 260              | 290              |
| NF Kings River         |                   |                 |                 |                 |                  |
| Cliff Camp, nr         | Apr-Jul           | 310             | 129             | 390             | 230              | 240              |
| Kings River            |                   |                 |                 |                 |                  |
| Pine Flat Dam, blo     | Apr-Jul           | 1600            | 128             | 1950            | 1250             | 1250             |

*30 Year Averages for 1971-2000 are incomplete. Those forecast points with an asterisk have incomplete averages, so 1961-1990 averages are listed. The new averages will be incorporated into this report when the complete data sets become available.
Tulare Lake Basin
Seasonal Precipitation
October 1 to Date

Seasonal Basin Snowpack
Water Content in % of April 1 Average
East Side Sierra Nevada Basins
## Water Supply Forecasts

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<thead>
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<th>Most Prob</th>
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<td>KAF</td>
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### Truckee River

**Truckee River**

- **Lake Tahoe Stage Rise**
  - Apr-High: 1.50, 109, 2.3, 0.70, 1.38

**Ltl Truckee River**

- **Boca Res, abv, Truckee, nr**
  - Apr-Jul: 82, 102, 122, 42, 80

**Truckee River**

- **Farad**
  - Apr-Jul: 270, 104, 375, 164, 260

### Carson River

**EF Carson River**

- **Gardnerville, nr**
  - Apr-Jul: 230, 122, 285, 177, 189

**WF Carson River**

- **Woodfords**
  - Apr-Jul: 68, 121, 83, 53, 56

**Carson River**

- **Carson City, nr**
  - Apr-Jul: 235, 125, 305, 167, 188

- **Fort Churchill, nr**
  - Apr-Jul: 240, 135, 315, 167, 178

### Walker River

**East Walker River**

- **Bridgeport, nr**
  - Apr-Aug: 95, 142, 111, 79, 67

**West Walker River**

- **Ltl Walker, blo, Coleville, nr**
  - Apr-Jul: 215, 138, 275, 158, 156
East Side Sierra Nevada Basins

Seasonal Basin Precipitation
October 1 to Date

Basin Snowpack
% of Average SWE to Date
### Humboldt River Basin

#### Water Supply Forecasts

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*30 Year Averages for 1971-2000 are incomplete. Those forecast points with an asterisk have incomplete averages, so 1961-1990 averages are listed. The new averages will be incorporated into this report when the complete data sets become available.*
Humboldt River Basin

Seasonal Basin Precipitation
October 1 to Date

Basin Snowpack
% of Average SWE to Date