



Natural Resources Conservation Service  
National Water and Climate Center  
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## May 1, 2002 Western Snowpack Conditions and Water Supply Forecasts      May 13, 2002

The following information is provided for your use in describing climate and water supply conditions in the West as of May 1, 2002.

### OVERVIEW

Extremely low seasonal snowpacks in the Southwest have resulted in **record minimum streamflow volume forecasts** for portions of **Arizona, New Mexico, southern Utah and southern Colorado** (see *the Special Assessment: Southwest Water Supply in the Streamflow Section*).

Below average snowpack in the Rockies has resulted in a **much below average** streamflow volume forecast for **central Montana, central Wyoming, central Colorado and northern Utah**. **Below average** streamflow is forecast for **central Idaho, central Oregon, northern Nevada, northern California and southwest Oregon** as a result of a very dry April.

**Near to slightly above average** streamflow is forecast for **western Oregon, Washington, northern Idaho and British Columbia**. In many drought areas, snowmelt runoff may be reduced as soil moisture is replenished. All major western storage reservoirs are below their seasonal averages.

### SNOWPACK

May 1, 2002 snowpacks continue to exhibit a wide contrast ranging from well above average totals in Pacific Northwest to virtually no snowpack in the Intermountain West and Southwest as shown in Figure 1. During April, snowpacks continued their decline westwide in the absence of any major storm systems. The northern Cascades of Oregon continue to report the highest snowpacks, which are generally 120% to 150% of average. The remainder of snowpacks throughout Oregon, Washington and northern Idaho remain near to slightly above average.

In stark contrast to the Pacific Northwest, snowpacks melted several weeks ahead of average in the southern Rockies and the Southwest. Snowpacks are also declining rapidly northward through the Rockies and Sierras of California and Nevada. Alaska snowpacks are near average or slightly above. The most recent snowpack information may be obtained from the following URL - [http://www.wcc.nrcs.usda.gov/water/w\\_qnty.html](http://www.wcc.nrcs.usda.gov/water/w_qnty.html)

### MONTHLY AND SEASONAL PRECIPITATION

April precipitation (Figure 2.) was extremely low (less than 50% of average) in the southern parts of the West. Below average precipitation (50% - 89% of average) was reported through most other parts of the West. Only northern Idaho, northwestern and central Montana and portions of northeastern Wyoming reported average or above average precipitation for April. Alaska's precipitation was well above average, especially in the interior.

Seasonal precipitation (October 1, 2001 through April 30, 2002) (Figure 3.) shows extremely low precipitation (less than 50% of average) in southern California, southern Nevada, Arizona, western New Mexico, southern Utah, and parts of Colorado. Below average precipitation (less than 70% of average) is observed in parts of southern California, southern Nevada, central Utah, central Colorado, central New Mexico, southwestern Wyoming and central Montana. The Pacific Northwest, northern California and northern Nevada report near average seasonal precipitation. The Oregon and Washington Cascades report above, to much above seasonal precipitation (greater than 129% of average). Most of Alaska reports near normal seasonal totals with the Anchorage area below average.

### **SPRING AND SUMMER STREAMFLOW**

The May 1, 2002 water supply forecasts (Figure 4.) are extremely low (less than 50% of average) in Arizona, New Mexico, Colorado, Utah, and central Wyoming. Well below average streamflows (50% - 70% of average) are forecast for northern Utah, western Wyoming, parts of southern Idaho, southwestern and central Montana, a small portion of central and western Nevada, parts of California and central and southwestern Oregon.

Water supplies are forecast to be generally below average (70% - 90% of average) in central California, northern Nevada, central Idaho, parts of northwestern Montana and southwest and eastern Oregon. Water supplies are forecast to be near, or slightly above average for the remainder of the Pacific Northwest and Canada. Water supply forecasts for Alaska are below average on the North Slope and in a portion of the south central regions. The rest of the state is forecast to receive near average streamflow .

### **SPECIAL ASSESSMENT: SOUTHWEST WATER SUPPLY**

In the Colorado, Platte, Arkansas, and Rio Grande basins, water year 2002 will probably have the reputation of being the driest on record for many, many years to come. Even records set during the dry year of 1977 will fall by the wayside by the time September 30th rolls around. The following statistics show just how dry it has been so far this year.

Forecasts in the Green River Basin range from 79% of average in the extreme upper headwaters, to 21% of average on the south slope of Utah's Uinta Mountains. All forecasts in the lower Green River Basin, below Flaming Gorge Reservoir, are less than 50% of average. Projected forecasts indicate that new minimums of record will be set at two forecast points.

Forecasts in the Platte River Basin range from 54% of average along the South Platte front range, to 9% of average at tributaries to the lower North Platte River. Projected forecasts indicate that new minimums of record will be set at two forecast points.

Forecasts in the Arkansas River Basin range from 45% in the northern headwaters, to 23% in the southern tributaries. Forecasts in the Canadian River Basin range from 20% or average to 8% of average.

Forecasts in the Rio Grande Basin range from 33% of average in the extreme headwaters in Colorado, to 2% of average on the mainstem Rio Grande above Elephant Butte Reservoir. Projected forecasts indicate that new minimums of record will be set at 16 forecast points. Forecasts in the Pecos River Basin range from 28% of average to 10% of average, with projected forecasts indicating that new minimums of record will be set at one forecast point.

Forecasts in the mainstem Colorado Basin range from 58% of average in the headwaters, to 5% of average on the San Juan River at Bluff, Utah. Projected forecasts indicate that new minimums of record will be set at 14 forecast points.

Forecasts in the Virgin River Basin range from 22% of average to 16% of average, with 4 new minimums of record likely to be set. In the Lower Colorado, already observed flows have assured that this will be the driest year on record. At some forecast points on the Gila, Salt, and Verde rivers, and Tonto Creek, we have published records going back nearly 100 years. All forecast points in the Lower Colorado Basin will establish new minimums of record!

Not one acre of the Colorado – Platte – Arkansas - Rio Grande geographical area has been spared from the drought this year.

### **RESERVOIR STORAGE**

All major western storage reservoirs are below seasonal averages as shown in Figure 5. This continues to reflect the carryover dryness of last year's drought that affected much of the West and the water year's seasonal precipitation deficiencies through most of the West.

### **FOR MORE INFORMATION**

The National Water and Climate Center Homepage provides the latest available snowpack and water supply information. Please visit us at <http://www.wcc.nrcs.usda.gov>

/s/ RON MARLOW

Director, Conservation Engineering Division, Natural Resources Conservation Division,  
Washington, DC

### Mountain Snowpack as of May 1, 2002

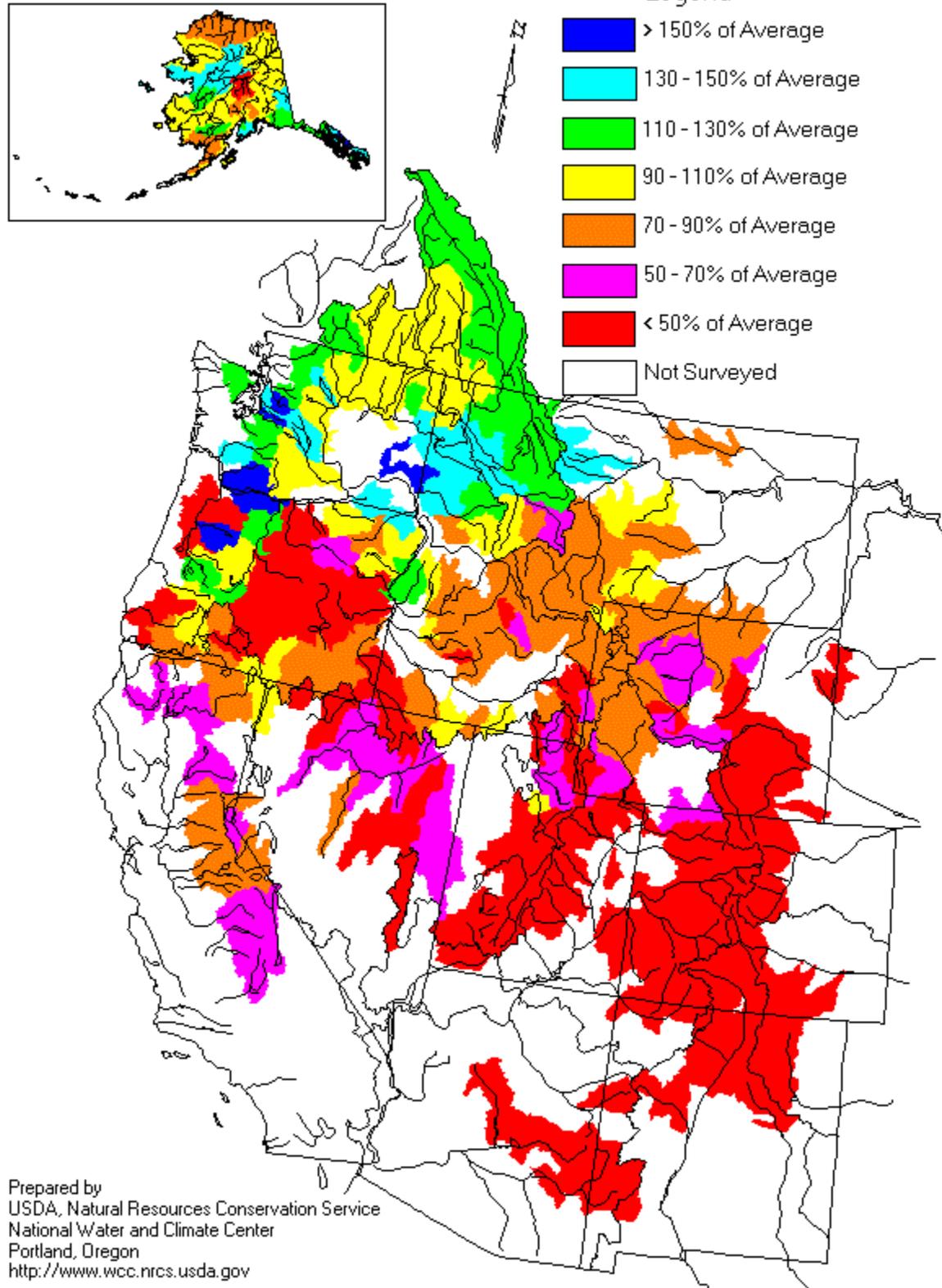


Figure 1. Mountain Snowpack - April 1, 2002

# Monthly Precipitation for April 2002

(Averaged by Hydrologic Unit)

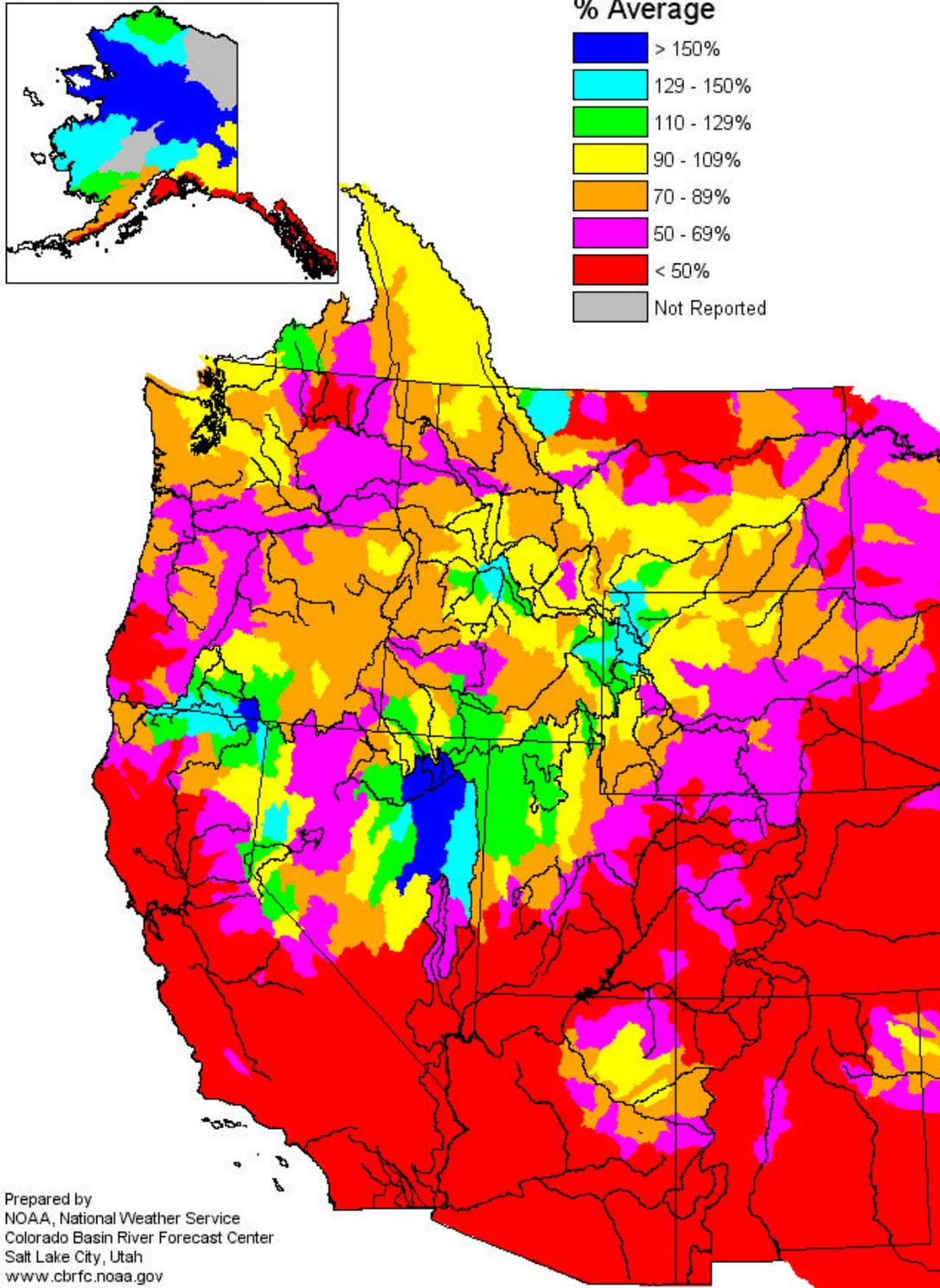


Figure 2. April 2002 Precipitation

# Seasonal Precipitation, October 2001 - April 2002

(Averaged by Hydrologic Unit)

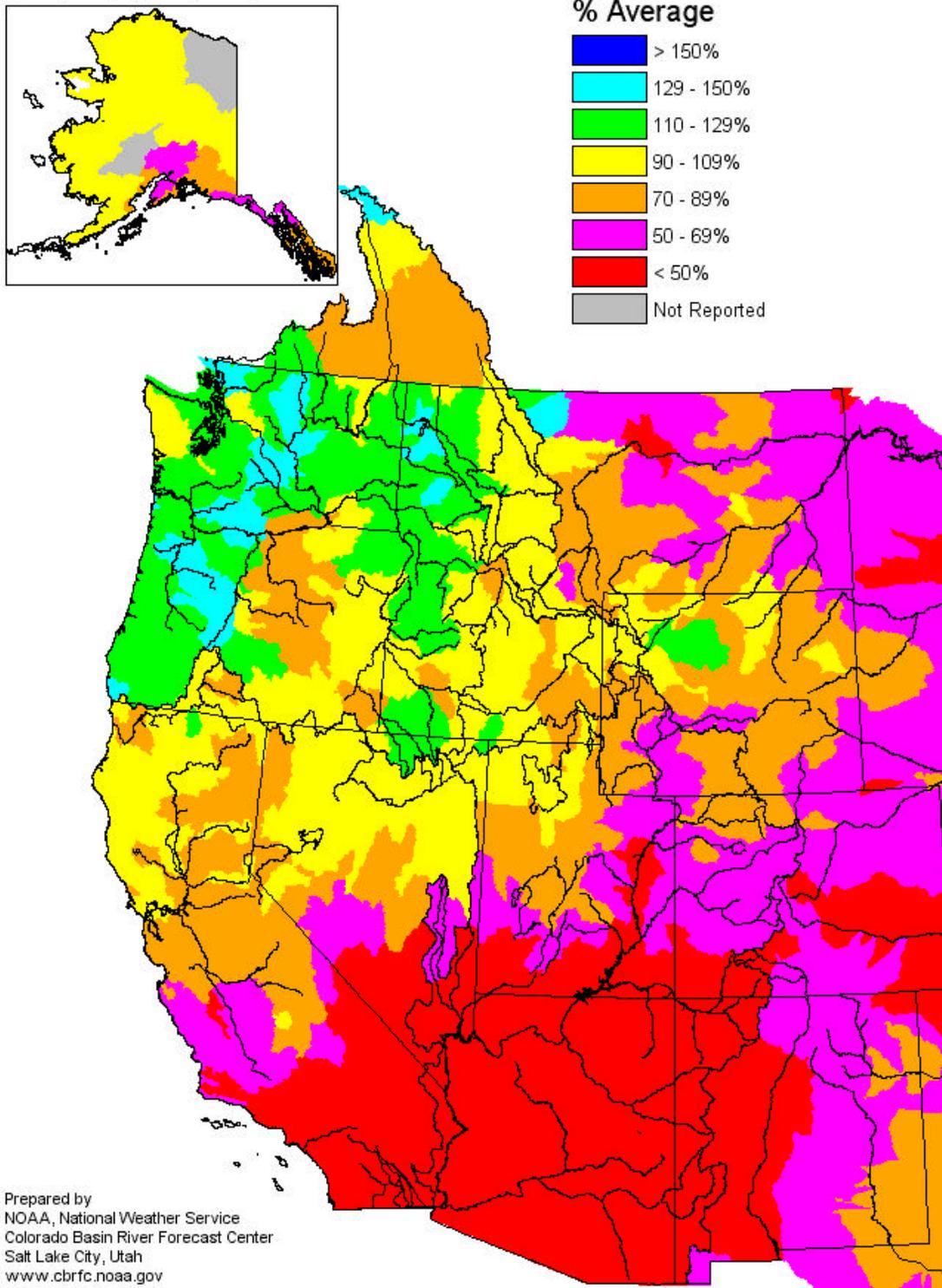


Figure 3. Seasonal Precipitation to Date Starting October 1, 2001

### Spring and Summer Streamflow Forecasts as of May 1, 2002

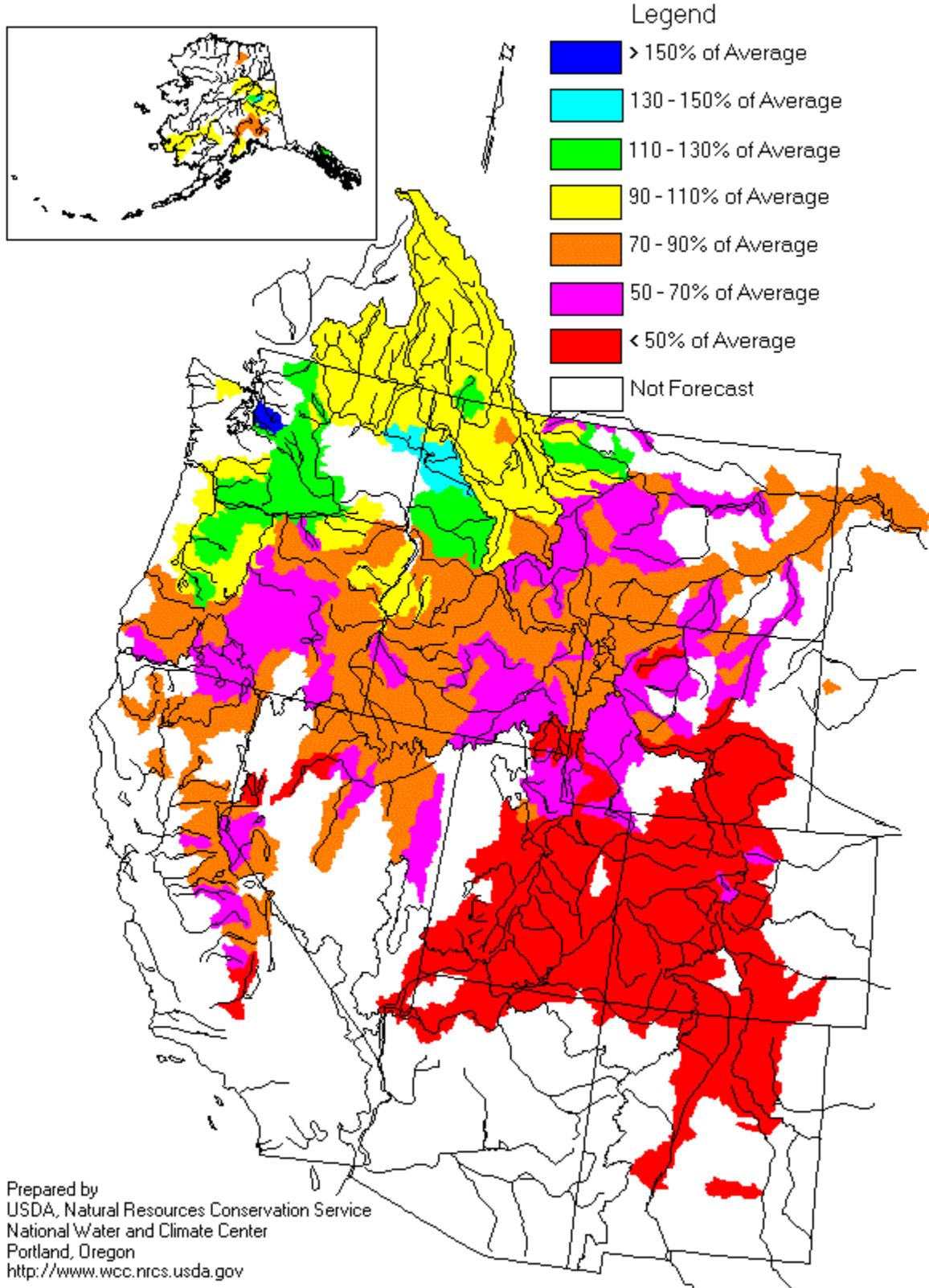
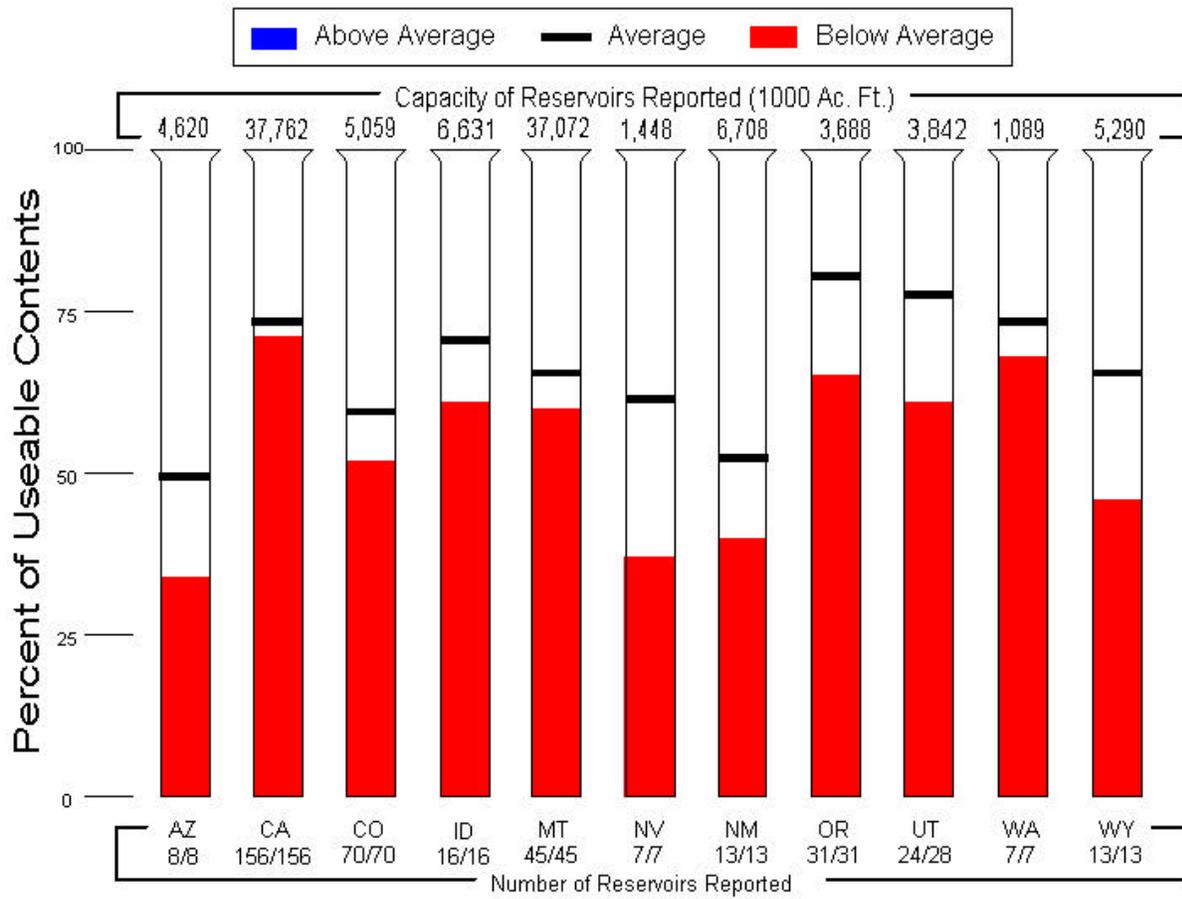


Figure 4. Seasonal Water Supply Forecasts - May 1, 2002

### Reservoir Storage as of May 1, 2002



Prepared by: USDA, Natural Resources Conservation Service, National Water and Climate Center, Portland, OR  
<http://www.wcc.nrcs.usda.gov>

Figure 5. Current Reservoir Storage - May 1, 2002