United States Department of Agriculture

NRCS

Natural Resources Conservation Service
P.O. Box 2890
Washington, D.C. 20013

Date: May 12, 2008

Subject: May 1, 2008 Western Snowpack Conditions and Water Supply Forecasts

The following information is provided for your use in describing western climate and water supply conditions as of May 1, 2008.

OVERVIEW

Western snowpack has remained exceptionally high over much of the Pacific Northwest and Rockies. While snow cover has essentially melted out over the mountains of Arizona and southern New Mexico as expected, it is considerably below average over California (see news stories at the end of this report) and scattered deficits exist across basins in Nevada and southern Utah.

Surplus runoff (higher than average streamflows) is forecasted in most areas that are reporting above normal snowpack. The Pacific Northwest and along the Colorado, Arkansas, and including the upper Platte Rivers are also expecting above average runoff through July. There are scattered basins across the Sierra, Great Basin, and Wyoming that are expecting lower streamflows.

Despite one of the snowiest winters in the past decade, all states in the West (except Arizona) have below normal reservoir levels for this time of year. The delayed snow melt is a partial explanation for this situation but some consideration must be given to the decade long drought that has plagued much of the West.

SNOWPACK

On May 1, 2008, the western snowpack is above average compared to the long-term climate statistics across the Cascades and eastern ranges in Oregon and Washington (>180%). At the opposite extreme, the Sierra and portions of Nevada, Arizona, and southern New Mexico are reflecting large deficits (Fig. 1). Much of the low values in the deep Southwest are not unexpected for this late into the snowpack season. Values are up over western Alaska (>130%) and <70% over portions of eastern Alaska.

The snowpack during April increased more than 30% in many ranges in the Pacific Northwest due to exceptional cold temperatures (i.e., much of the precipitation fell as snow along with little if any snow melt). Areas south of a line from south central Oregon to southeast New Mexico dropped to less than 30% of average for many basins (Fig. 2).

A map containing a daily update of the westwide snowpack may be obtained from the following: http://www.wcc.nrcs.usda.gov/gis/snow.html.

SEASONAL PRECIPITATION

Preliminary precipitation values for the 2008 Water Year indicate that below average accumulations persist across much of the West excluding the higher elevations of the Rockies, Idaho Panhandle, and southwest Arizona. Near average conditions prevail across the Central Cascades, central Utah, and portions of southern California. Below average totals dominate most of California, the Great Basin, and the eastern slope of the Rockies (Fig. 3).

Monthly and seasonal precipitation maps are available from the following location - http://www.wcc.nrcs.usda.gov/gis/precip.html and http://www.cbrfc.noaa.gov/wsup/westwide/westwide.cgi

SPRING AND SUMMER STREAMFLOW FORECASTS

The May 1 (May-July) streamflow forecast is calling for above average runoff over most of the Pacific Northwest and Rockies (>110% to <180%). Near average flows are expected over the Northern Columbia River Basin, the middle Snake River Basin in Idaho, the Powder-Tongue drainage in Wyoming and Montana, and the Lower Platte River in Wyoming. Below average conditions are likely over the eastern slope of the Sierra, much of central Wyoming, and southwest Utah (Fig. 4).

From the beginning of April to the end of the month, streamflow forecasts increased (improved) north of a line from southern Oregon to the Little Bear drainage in western Wyoming then north of a line from here to northeast Montana. Forecast values decreased (worsened) south of these lines (Fig. 5).

Specific state streamflow summaries can be obtained from the Internet location - http://www.wcc.nrcs.usda.gov/cgibin/bor.pl

RESERVOIR STORAGE

As of May 1, 2008, reservoir storages, shown in Fig. 6, shows that for all the Western States, below average reservoir levels exist (Arizona not yet available but will likely show above average levels). Based on the late snow melt and improved streamflow forecasts, reservoir levels may increase somewhat for Oregon, Washington, Idaho, and Montana in the next month.

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/ NOLLER HERBERT
Director, Conservation Engineering Division

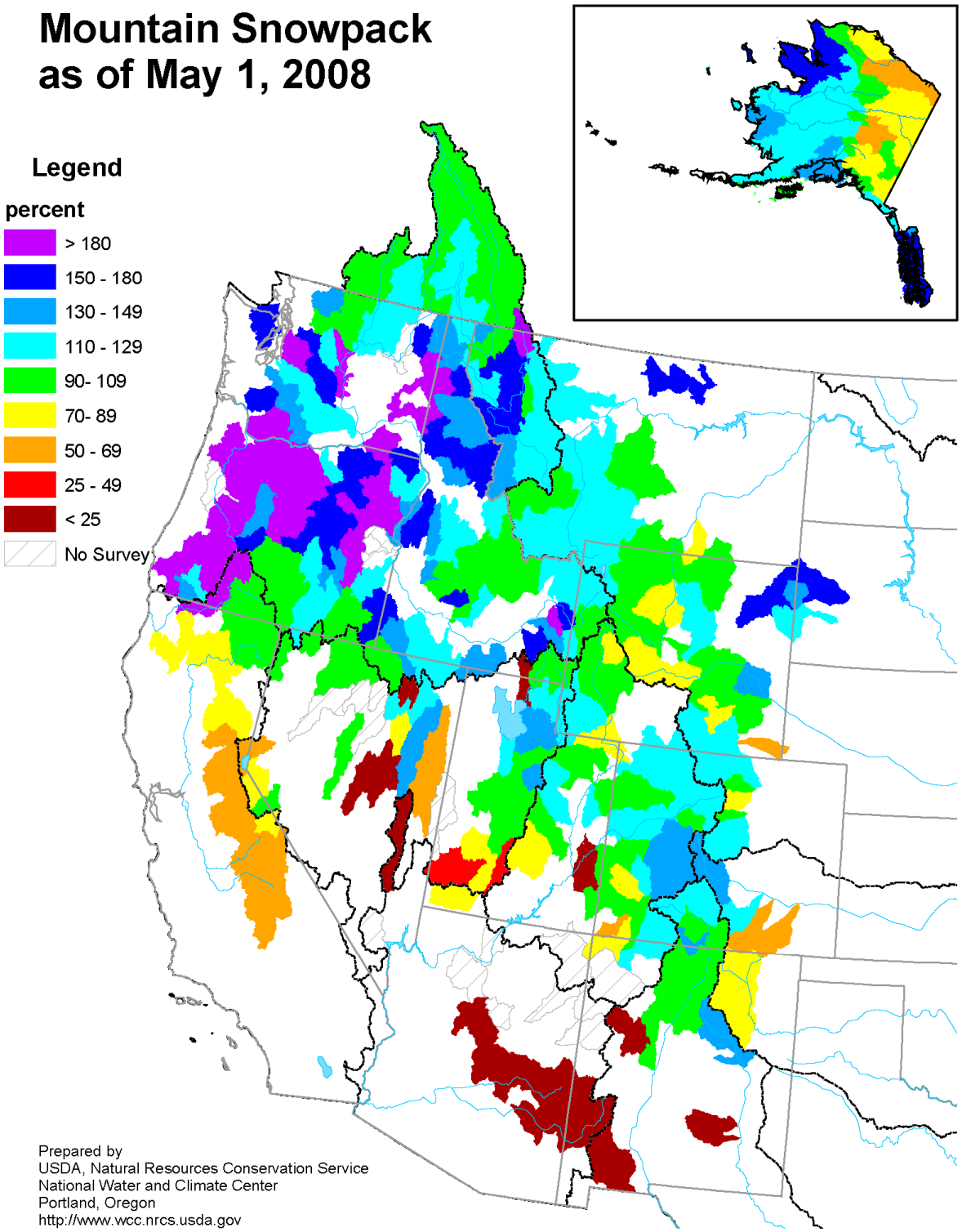

Fig. 1. Mountain Snowpack, May 1, 2008
ftp://ftp.wcc.nrcs.usda.gov/support/water/westwide/snowpack/wy2008/snow0805.gif

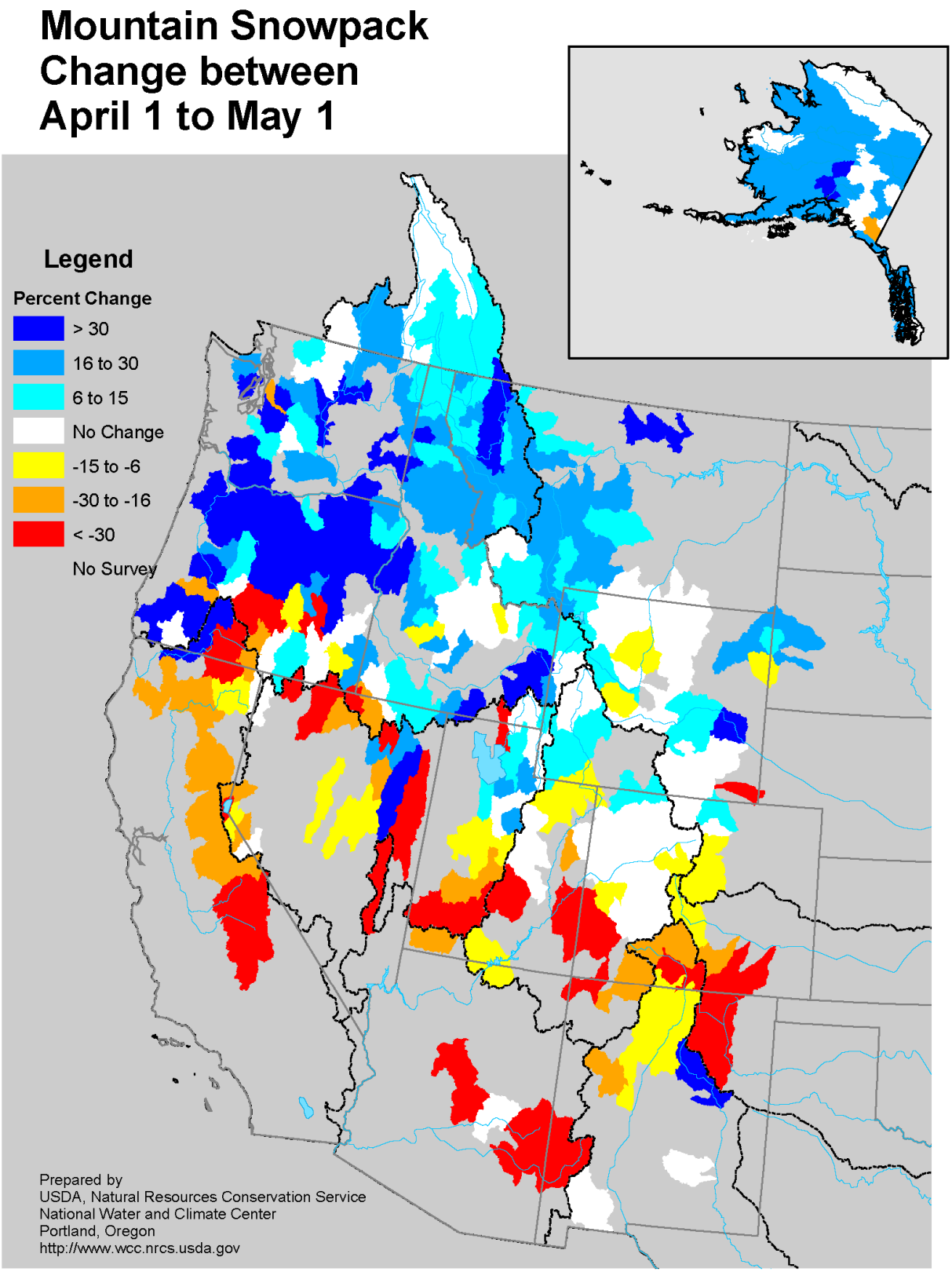

Fig. 2. Mountain Snowpack Change between 1 April and 1 May 2008.
ftp://ftp.wcc.nrcs.usda.gov/support/water/westwide/snowpack/wy2008/difsnow0805.gif

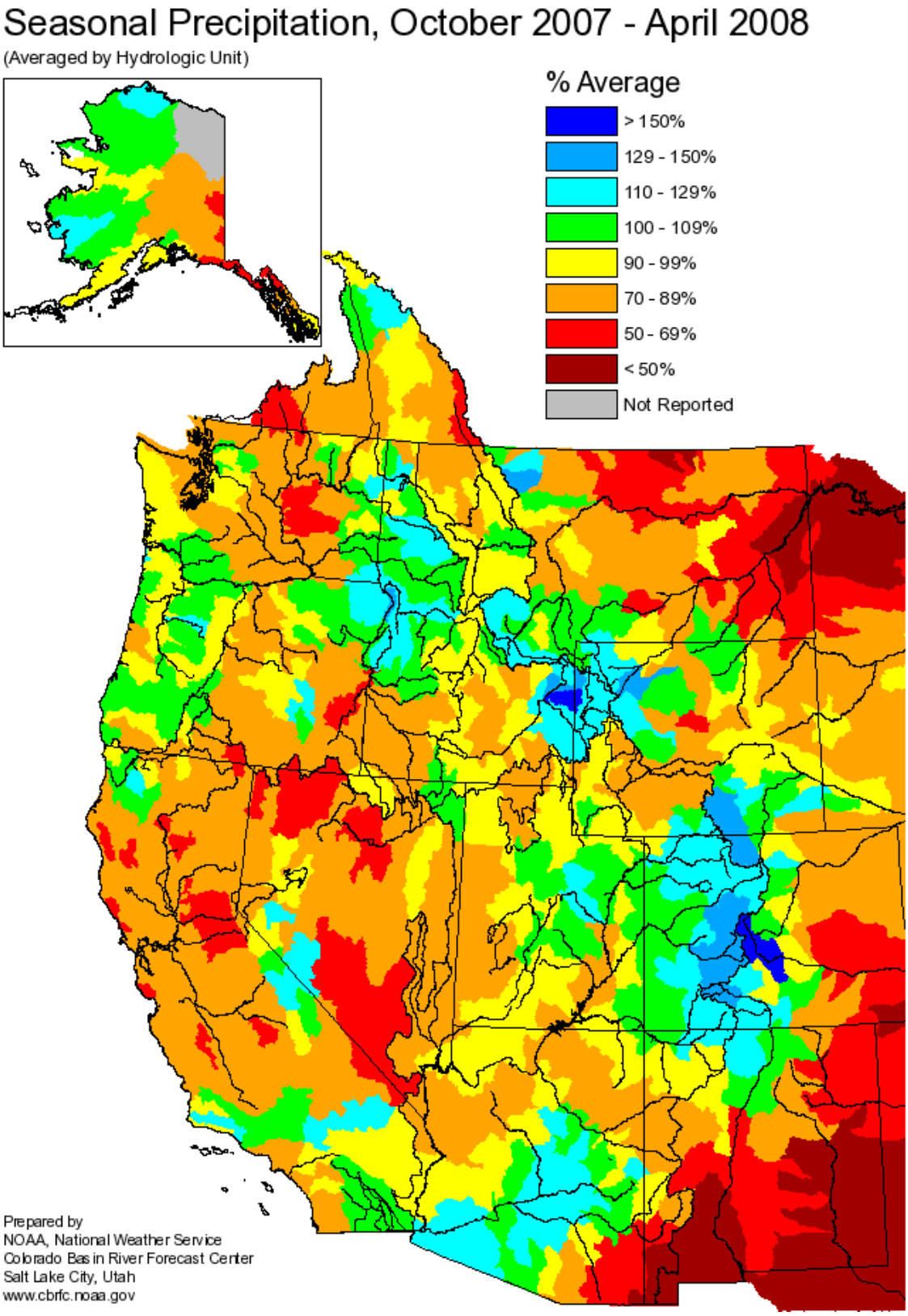

Fig. 3. Seasonal Precipitation, October 2007 to April 2008.
http://www.cbrfc.noaa.gov/precip/qpe/mapsum/map/westS200804.png

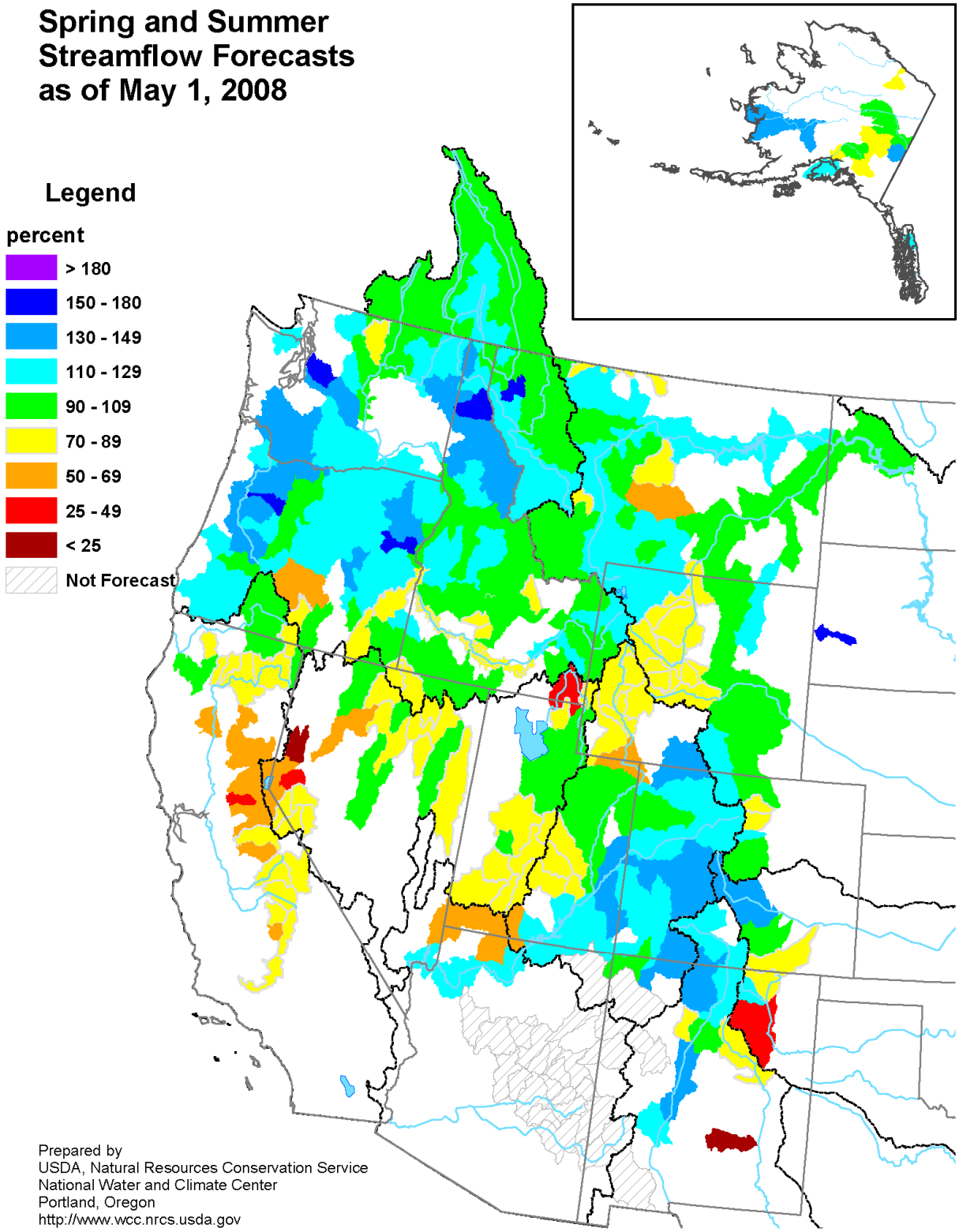

Fig. 4. Water Supply Forecasts - May 1, 2008.
ftp://ftp.wcc.nrcs.usda.gov/support/water/westwide/streamflow/wy2008/strm0805.gif

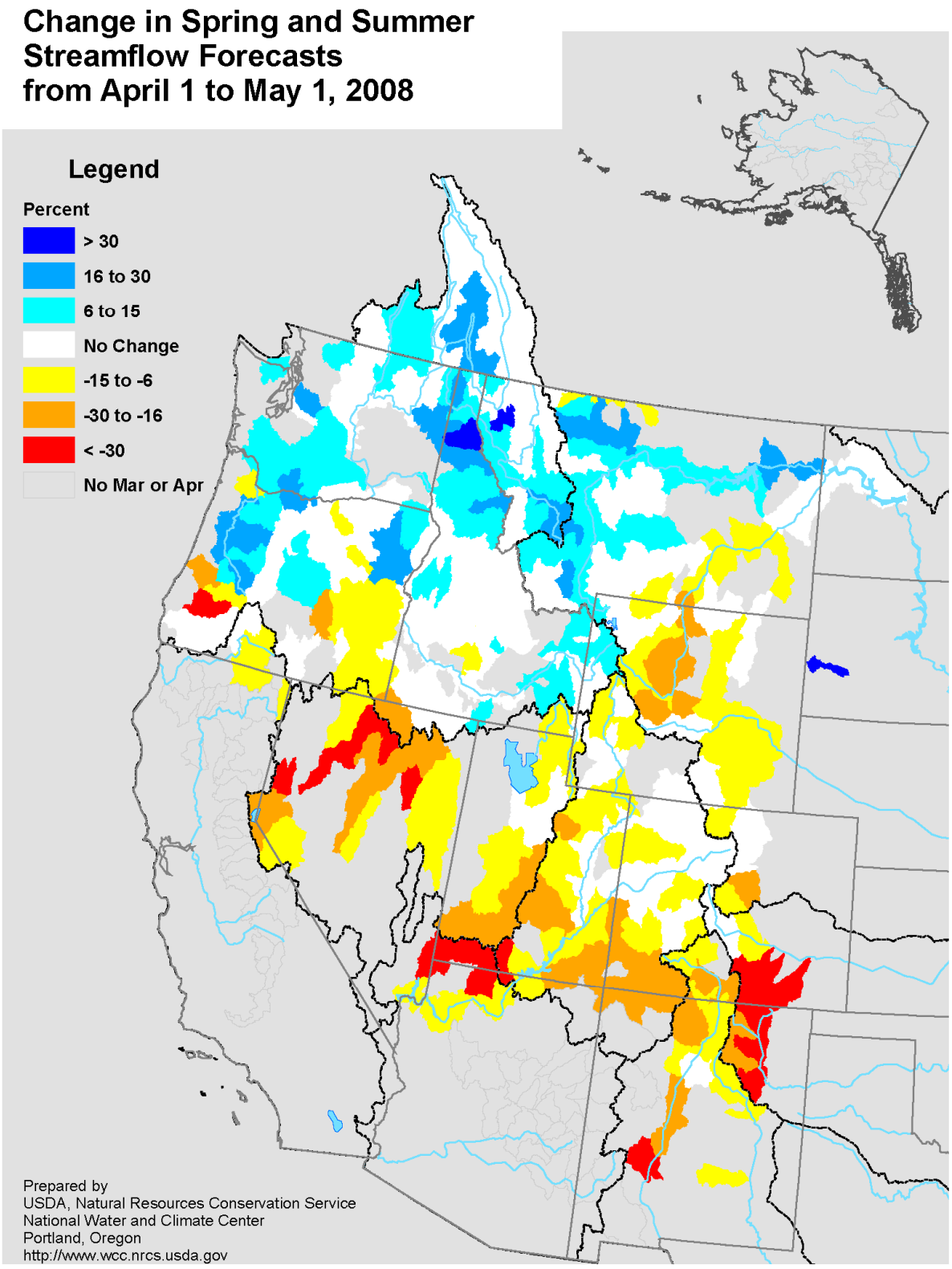

Fig. 5. Change in streamflow forecast between 1 April and 1 May 2008.
ftp://ftp.wcc.nrcs.usda.gov/support/water/westwide/streamflow/wy2008/difstrm0805.gif

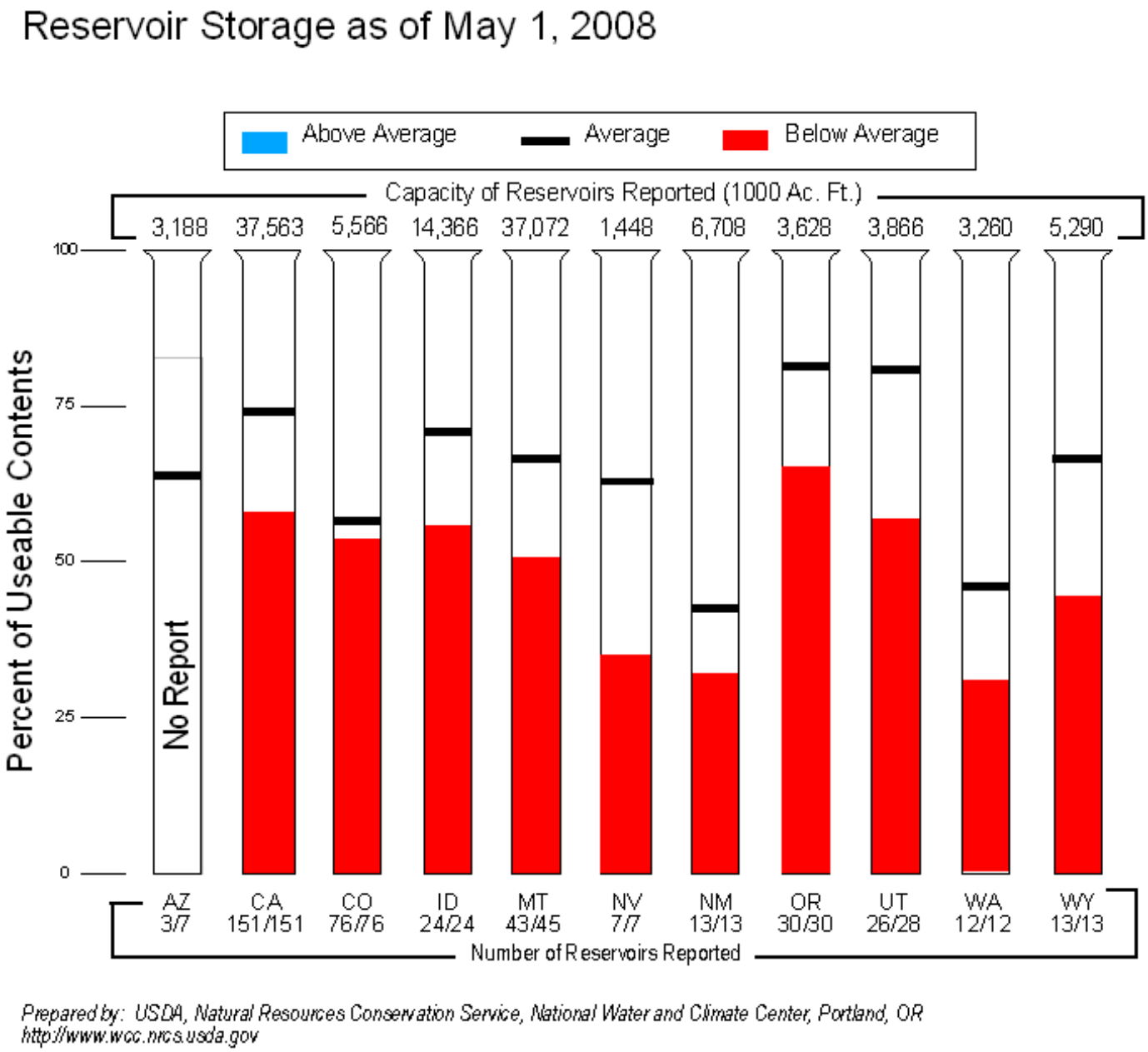

Fig. 6. Reservoir Storage - May 1, 2008.
ftp://ftp.wcc.nrcs.usda.gov/support/water/westwide/reservoir/wy2008/resv0805.gif

SUPPLEMENTAL NEWS STORIES

California

Drought Impact Event

Farmers in Shasta County who receive water from the U.S. Bureau of Reclamation will receive only 45 % of the water they normally receive, according to the area manager for the Northern California Bureau of Reclamation office. http://www.redding.com/news/2008/may/04/county-ma...

Roseville water customers are asked to reduce their water use by 10 % because the city is in a stage 1 drought alert. The U.S. Bureau of Reclamation informed the city that it would receive 25 % less water from Folsom Lake this year as two years of low snowfall have depleted the lake. Roseville usually gets 32,000 acre feet, or 90 % of the city's supply, from the lake, but will only get 24,000 acre feet in 2008. The city also gets water from the Placer County Water Agency. Residents are asked not to use water to clean pavement, while restaurants are to serve water only if a customer requests it. http://www.sacbee.com/placer/story/902170.html

Crops were not sown on roughly 200,000 acres in Fresno. http://cbs5.com/environment/california.drought.wo...

Long Beach Water Applauds the MWD's Regional Call for Immediate Cut in Outdoor Water Use. http://www.pwmag.com/industry-news.asp?sectionID=760&articleID=690464

The Castaic Lake Water Agency is asking people to use a little common sense to become waterwise as temperatures climb and water supplies become less available. http://www.hometownstation.com/local-news/water-shortage-clarita-2008-05-01-14-43-8.html

Hydrologic Conditions in California (for latest update):
http://cdec.water.ca.gov/cgi-progs/reports/EXECSUM

AS OF 5 May 2008

Spring of 2008 is turning out to be extremely dry. The Water Year 2008, Northern Sierra 8-Station Index seasonal total of 33.7 inches is now less than last year's seasonal total of 34.4 inches at this time. The Water Year 2008, 8-Station Index, October through April total of 33.7 inches is the 22nd driest year out of 88 years of record. March 2008, with a precipitation total of 1.6 inches (23% of average) was the sixth driest March of 88 years of record. (Statewide, March precipitation was about 20% of average.) April 2008 was also the sixth driest April on record. For the 8-Stations, the Water Year 2008 combined March and April total precipitation is only 2.3 inches, the driest on record (since 1921). As of April 22, the date of the last forecast, the projected median April-July runoff for the water supply basins ranged from 83% (Kings River) to 61% (Tule River). Statewide, the forecast is down about 2% from the previous forecast (April 15). January and early February brought significant amounts of precipitation to California, including heavy snowfall in the mountains. The large water supply reservoirs received some inflow from these storms; however, the amounts were muted because much of the precipitation fell as snow. Because precipitation was significantly below average last year, dry hydrologic conditions still prevail. Storage in most of the major water supply reservoirs is still well below average. No significant precipitation for California is forecasted for this week, but there may be some periods of isolated showers and thunderstorms over the Sierra. The latest National Weather Service Climate Prediction Center (CPC) long-range weather outlook for May 2008, issued April 30, 2008, is forecasting below average precipitation for Northern and Southern California. Average precipitation is forecasted for Central California. The May 1, Water Supply Indices will be available later in the week. Updates to the Executive Summary will generally be issued weekly through the wet months of winter and spring. Beginning about June 1, this product is updated monthly through the dry season during the summer and fall. The next update of this product will be issued about Tuesday, May 20, 2008, unless there are significant hydrologic changes.