



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

Date: April 9, 2010

Subject: April 1, 2010 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 April 1, 2010.

OVERVIEW

The typical El Niño pattern of moisture is dominating the West with above normal snowpack over the Southwest and below normal snowpack over the Northwest (Fig.1). Alaska's south central coast saw near normal to above snowpack while much of the state experienced deficits. Since last month, snowpack has decreased across much of the West although some locations over the Southwest and eastern Interior Alaska saw increases (Fig. 2).

For the 2010 Water Year that began on 1 October 2009, precipitation percent of normal totals reflects a typical El Niño pattern with a wetter Southern Tier States and a drier Northern Tier States (Fig. 3).

As of April 1, 2010 the spring and summer streamflow forecasts are calling for well below normal values across all but the southwest mountains of Utah, Arizona, New Mexico, and south-central Colorado where surplus moisture is expected to dominate (Fig. 4). During the past month, the spring and summer streamflow forecasts have increased across areas of the Great Basin, Wind River Range in Wyoming, and much of Arizona and New Mexico River Basins (Fig. 5).

The Western States show a lot of state to state variability in reservoir levels with Nevada at the lower range and Arizona at the higher range.

SNOWPACK

On April 1, 2010, western snowpack is below the long-term average over much of the Snake and Columbia River Drainages, and much of Interior Alaska as shown in Fig. 1. Above normal values are noted over parts of the Northern Sierra, eastern Great Basin, and especially near the 4-Corner States region. Increases in snowpack this month were more significant over much of the Southern Tier States (Fig. 2). A map containing a daily update of the westwide snowpack may be obtained from the following URL - <http://www.wcc.nrcs.usda.gov/gis/snow.html>.

SEASONAL PRECIPITATION

Preliminary seasonal precipitation is above normal, >110% of average generally south of 37°N Latitude as shown in Fig. 3. Precipitation is well below normal (<70% of average) along the Northern California-Nevada Line, Northern Rockies and Northern Wasatch.

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> http://www.hprcc.unl.edu/maps/current/index.php?action=update_product&product=PNorm

SPRING AND SUMMER STREAMFLOW FORECASTS

Abundant snowfall during April has resulted in streamflow forecasts (>130%) across southwest Utah, most of Arizona, and the New Mexico Rockies. Forecasts (<70%) are noted much of the remainder of the West as shown in Fig 4. Forecast improvement since March is most notable over the Great Basin, Wind River Range in Wyoming, and much of Arizona and New Mexico River Basins (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 April 1, 2010, reservoir storage by state is shown in Fig. 5. About a half of the West has reservoir levels near average, one well above, and two much below average. As of 9 April, California and Wyoming data are unavailable.

<http://www.wcc.nrcs.usda.gov/cgibin/resvgrph2.pl?area=west&year=2010&month=04>.

FOR MORE INFORMATION

The National Water and Climate Center Homepage provide 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

Mountain Snowpack as of April 1, 2010

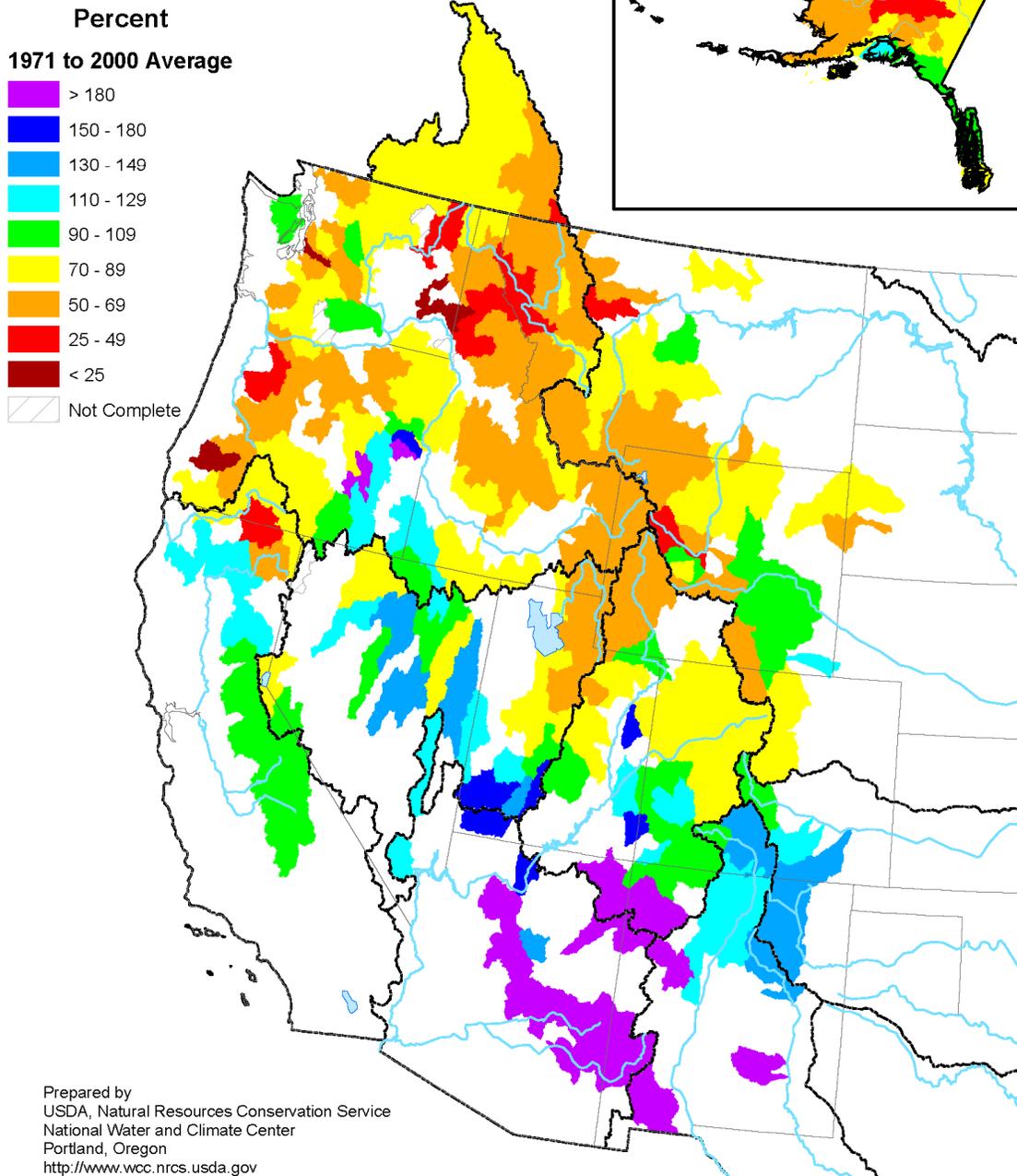


Fig. 1. Mountain Snowpack, April 1, 2010 reveals a nearly classic El Niño pattern across the Western States.

Ref: <ftp://ftp.wcc.nrcs.usda.gov/support/water/westwide/snowpack/wy2010/snow1004.gif>

Mountain Snowpack Change between March 1 and April 1

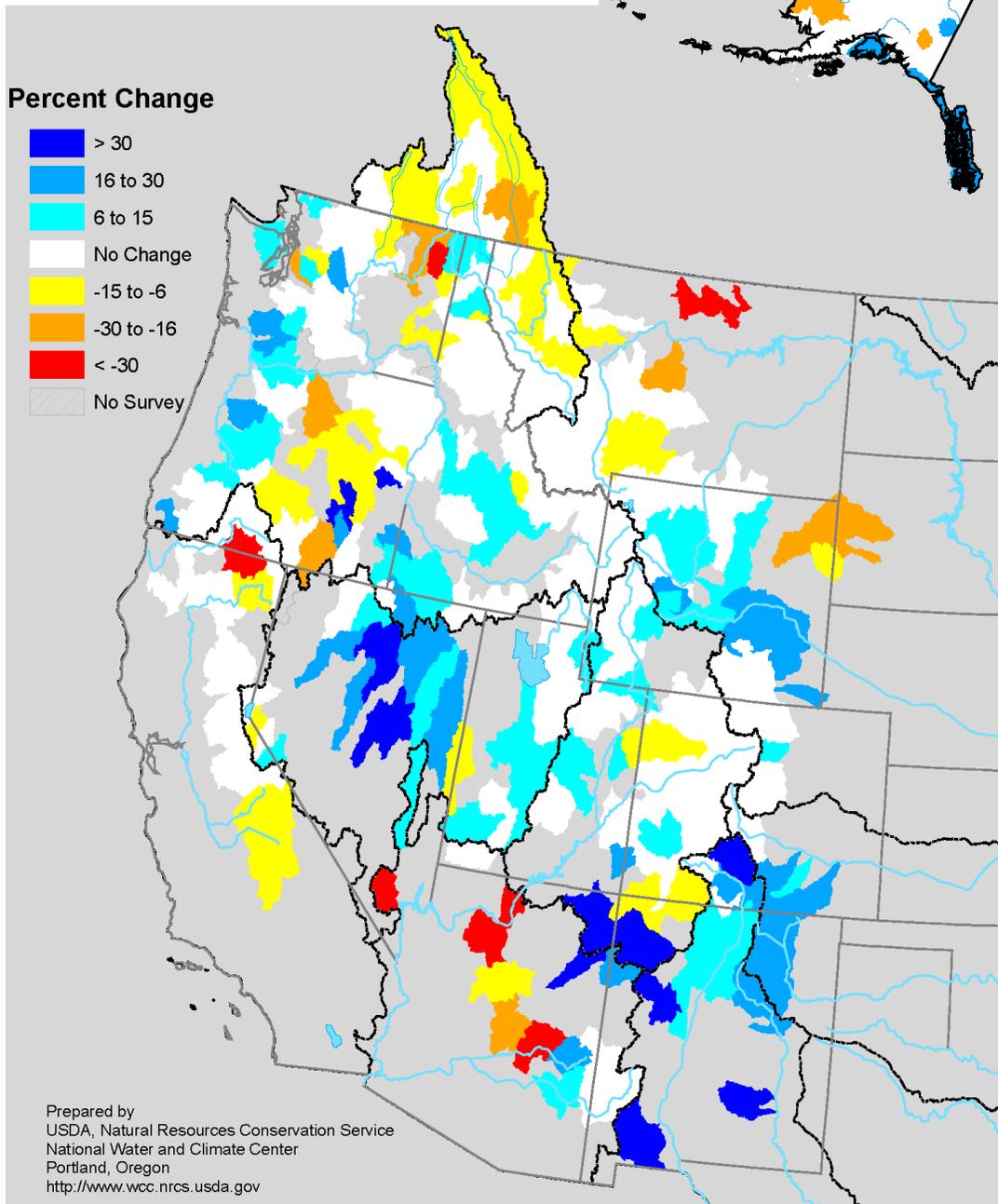


Fig. 2. Mountain Snowpack Difference between, March 1 to April 1, 2010. The red area depictions over the Southwest only reflect a greater than 30 percent decrease from very high snowpack levels (e.g., relatively not significant in this region of the West). Nevada, Wyoming, and the 4-Corners Regions to the Southern Rockies were the big winning in March.

Ref: <ftp://ftp.wcc.nrcs.usda.gov/support/water/westwide/snowpack/wy2010/difsnow0410.gif>

Seasonal Precipitation, October 2009 - March 2010

(Averaged by Hydrologic Unit)

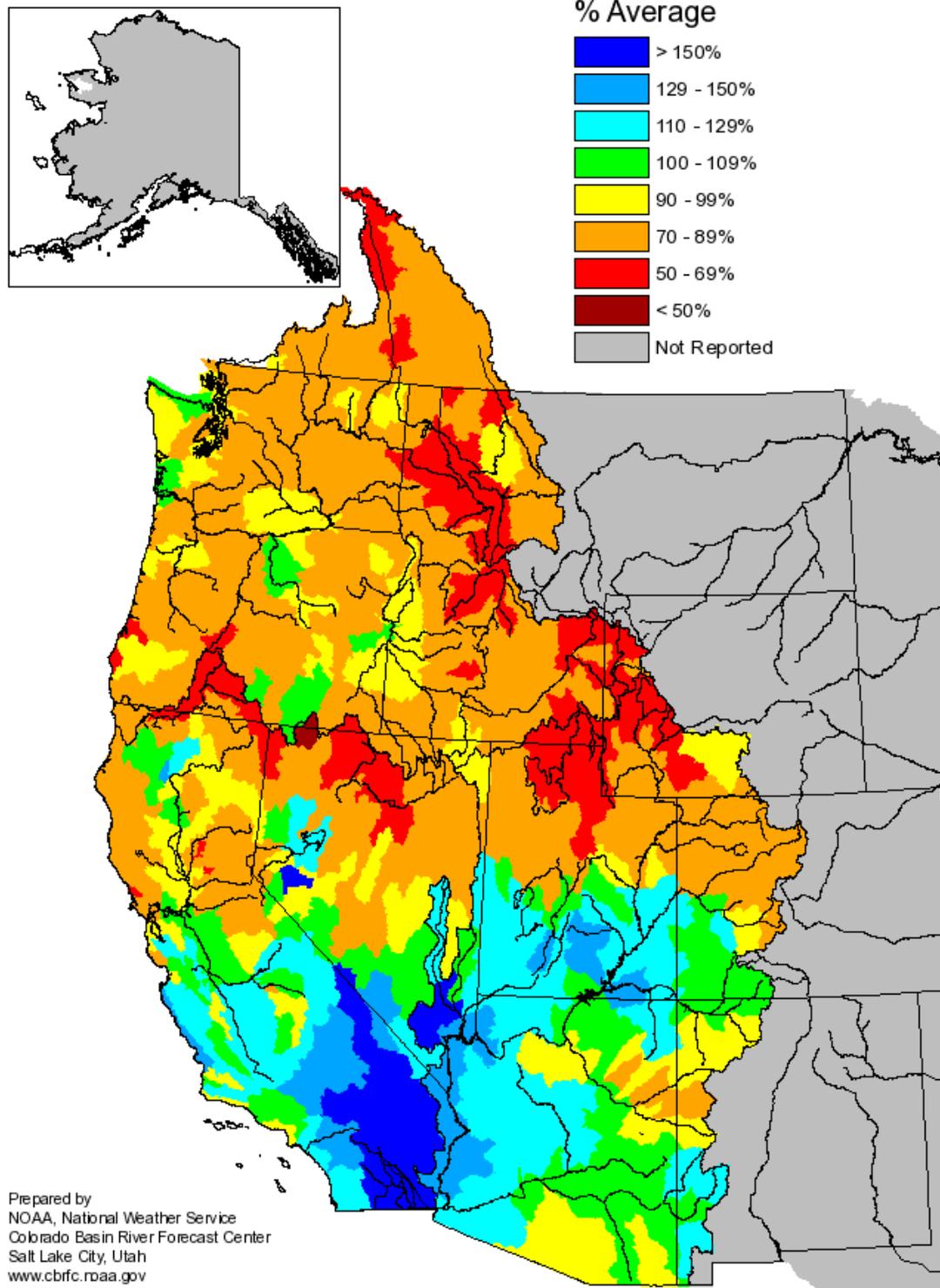


Fig. 3. Seasonal Precipitation, October 2009 to March 2010 shows the classic El Niño precipitation pattern across the West (i.e., drier north, wetter south).

Ref: <http://www.cbrfc.noaa.gov/wsuf/westwide/precip/westS201003.png>

Spring and Summer Streamflow Forecasts as of April 1, 2010

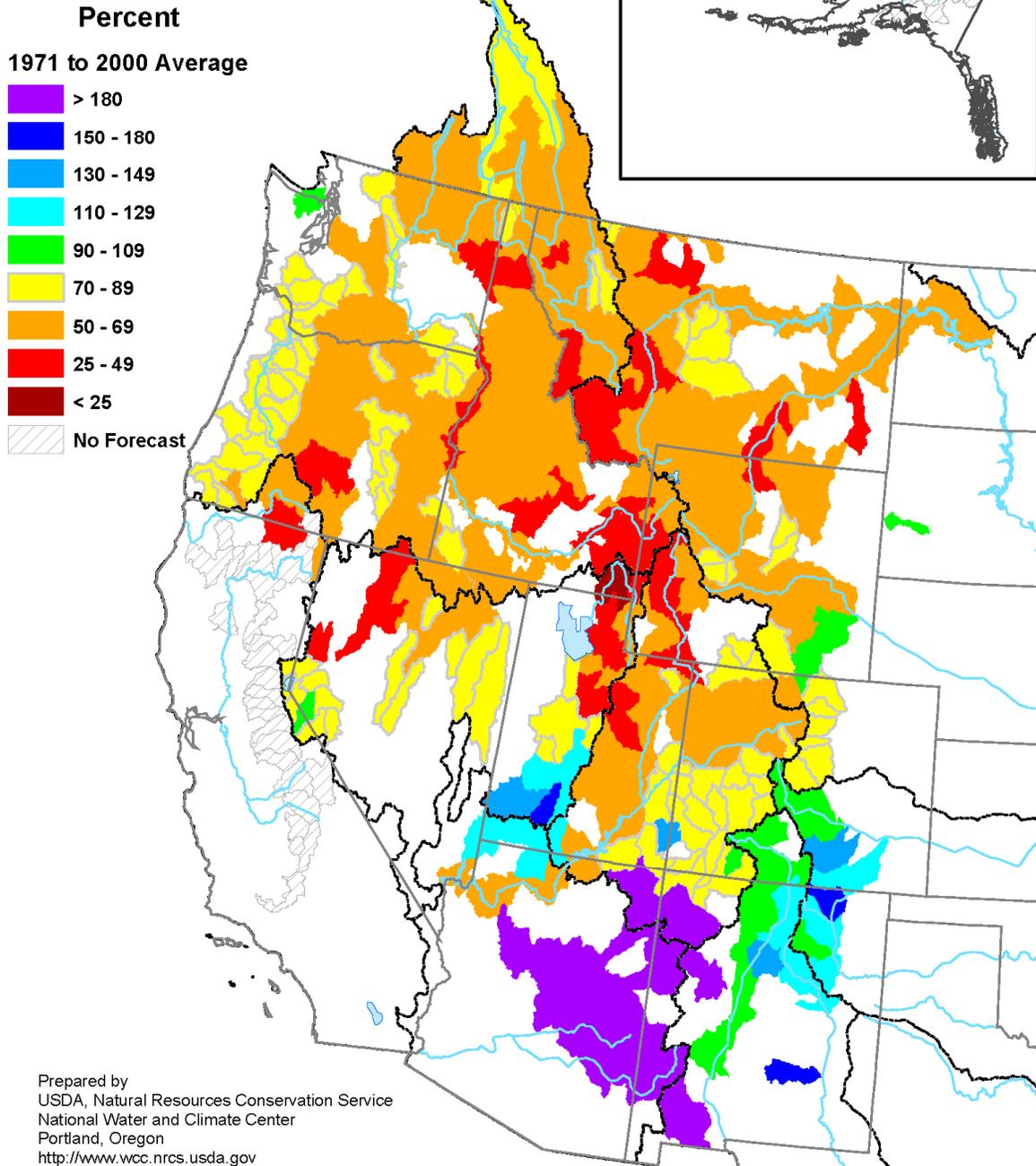


Fig. 4. Seasonal Water Supply Forecasts - April 1, 2010. Lower flow dominates north while higher flows are expected over the Southwest. California data will be available soon.

Ref: <ftp://ftp.wcc.nrcs.usda.gov/support/water/westwide/streamflow/wy2010/strm1004.gif>

Change in Spring and Summer Streamflow Forecasts from March 1 to April 1, 2010

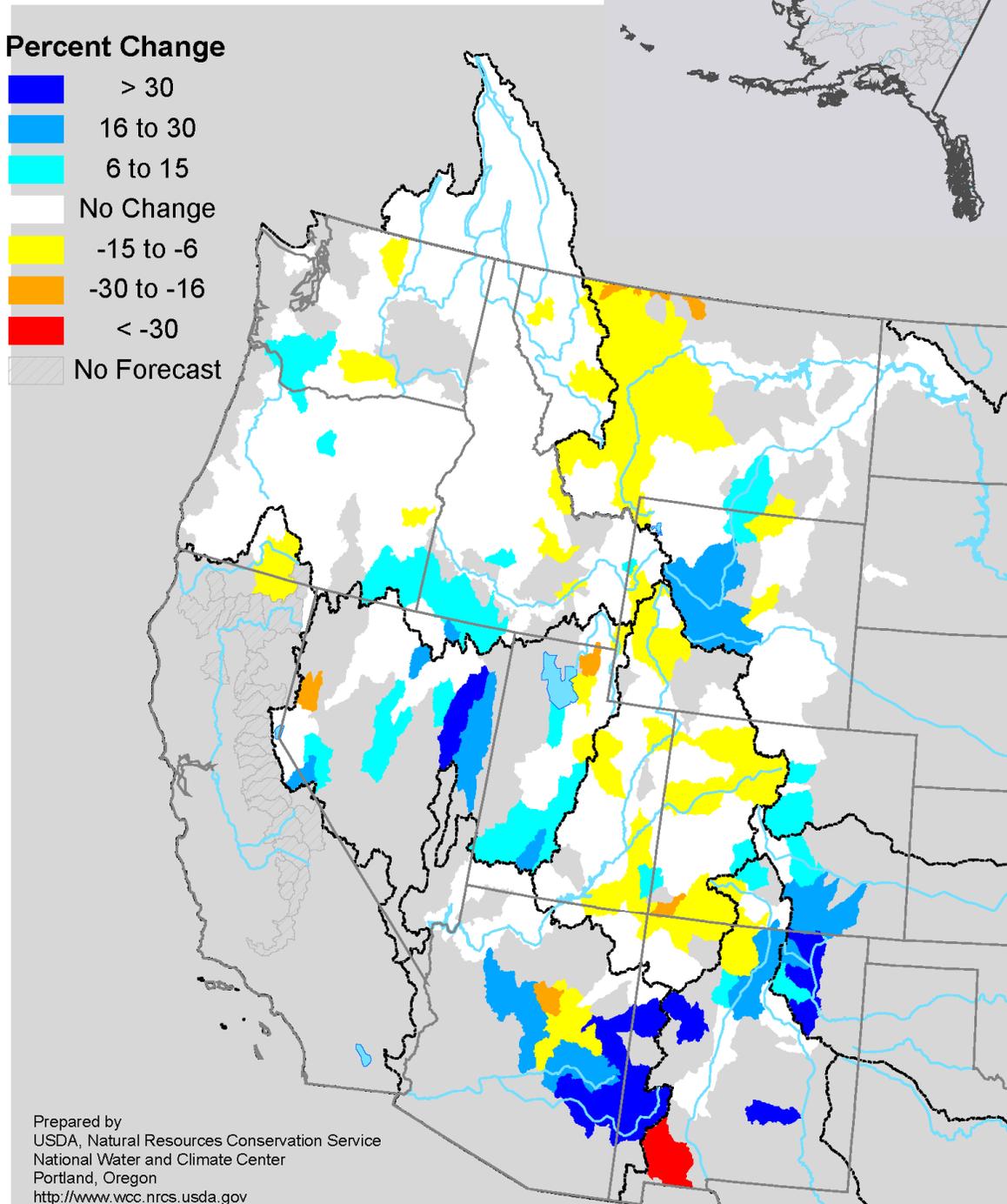
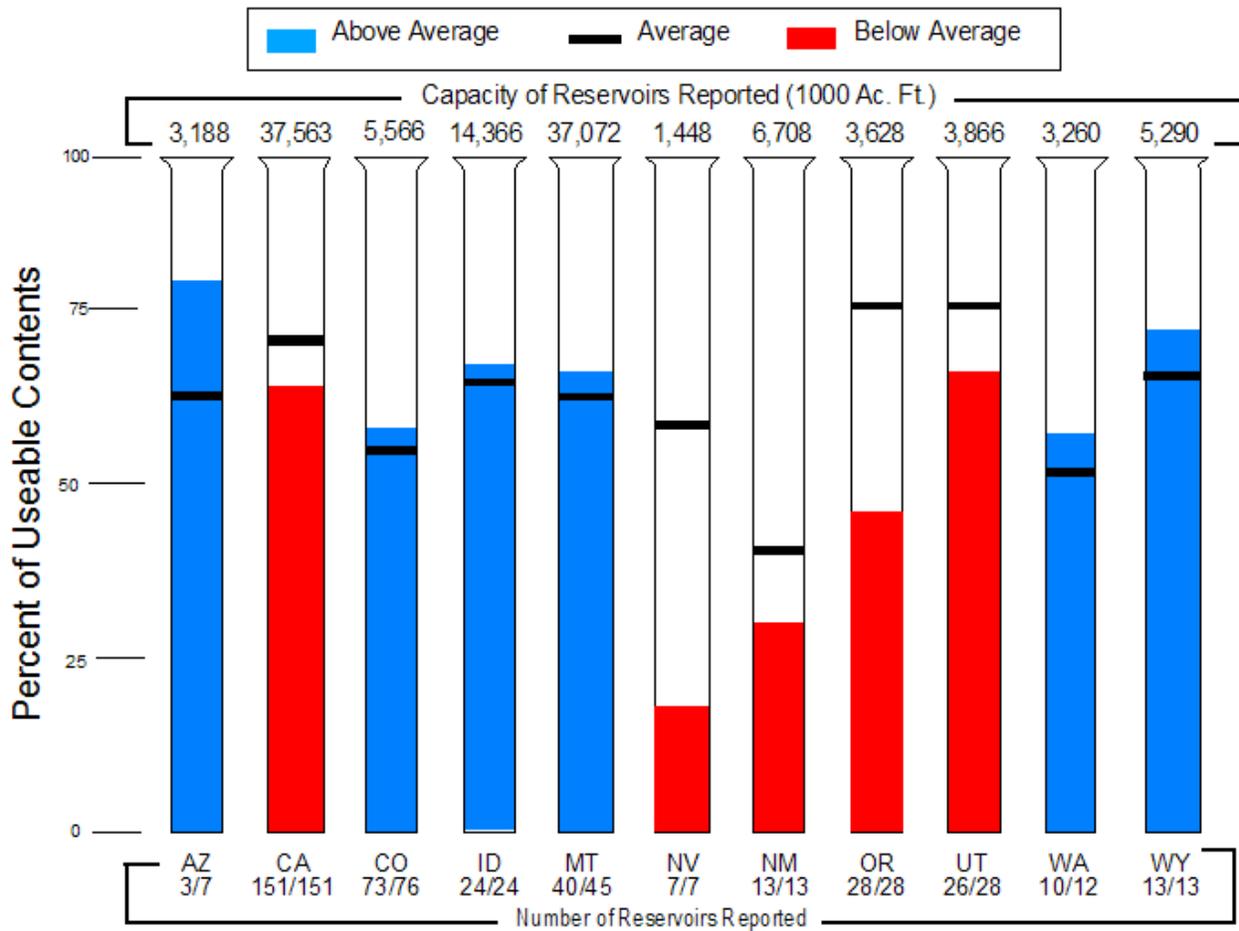


Fig. 5. Change in streamflow forecast between March 1 and April 1, 2010. Improvement stream flows are forecasted for areas of the Great Basin, Wind River Range in Wyoming, and much of Arizona and New Mexico River Basins. Note: California will be available later. Ref: <ftp://ftp.wcc.nrcs.usda.gov/support/water/westwide/streamflow/wy2010/difstrm0410.gif>

Reservoir Storage as of April 1, 2010



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

Fig. 6. Reservoir Storage - April 1, 2010. California and Wyoming data are not available as of 9 April. Arizona continues to have the largest surplus while Nevada has the greatest deficit.

Ref: <http://www.wcc.nrcs.usda.gov/cgibin/resvgrph2.pl?area=west&year=2010&month=04>