



Natural Resources Conservation Service  
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**Date: May 10, 2010**

**Subject: May 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 May 1, 2010.

### **OVERVIEW**

The typical El Niño pattern of moisture dominated California and much of Oregon and Washington with above normal precipitation. Snowpack persisted over the Sierra and parts of the Cascades in particular due to temperatures that averaged 2°F to 6°F below normal in April (Fig.1). Alaska's south central coast (see photo below) and Panhandle regions saw above snowpack persist 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 Coastal Alaska saw increases (Fig. 2).



Turnagain Pass, Alaska taken by Jan Curtis on 8 May shows a lot of snow remaining on the Kenai Peninsula. <http://www.wcc.nrcs.usda.gov/nwcc/site?sitenum=954&state=ak>

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 May 1, 2010 the spring and summer streamflow forecasts are calling for well below normal values across most of the West (Fig. 4). During the past month, the spring and summer streamflow forecasts have increased across much of the Northern Tier States due to some moisture and cooler than normal temperatures (Fig. 5).

The Western States show mixed values.

### **SNOWPACK**

On May 1, 2010, western snowpack is below the long-term average over much of the Snake and Columbia River Drainages, and much of western Alaska as shown in Fig. 1. Above normal values are noted over the Sierra, eastern Great Basin, and along the Upper Rio Grande River. Increases in snowpack this month were noted over much of the West Coast States and scattered across the Interior West (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 over much of the southwest corner of the West as shown in Fig. 3. Precipitation is well below normal (<70% of average) was scattered across the Northern and Central Rockies. 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](http://www.hprcc.unl.edu/maps/current/index.php?action=update_product&product=PNorm)

### **SPRING AND SUMMER STREAMFLOW FORECASTS**

Abundant cold over the western parts of the West helped delay snow melt and helped maintain streamflow forecasts (>110%) across southwest Utah, the Southern Rockies, and Kenai Peninsula of Alaska. Forecasts (<70%) are noted across scattered areas of the Great Basin and Intermountain West (Fig 4). Forecast improvement since April is most notable over much of the Northern Tier States (Fig. 5) due in part to increased precipitation and cooler temperatures in April.

Specific state streamflow summaries can be obtained from the Internet location -

<http://www.wcc.nrcs.usda.gov/cqibin/bor.pl>

### **RESERVOIR STORAGE**

The best reservoir storage is found in Arizona and Wyoming and the worst in Nevada and Oregon. California is near average.

<http://www.wcc.nrcs.usda.gov/cqibin/resvgrph2.pl?area=west&year=2010&month=05>

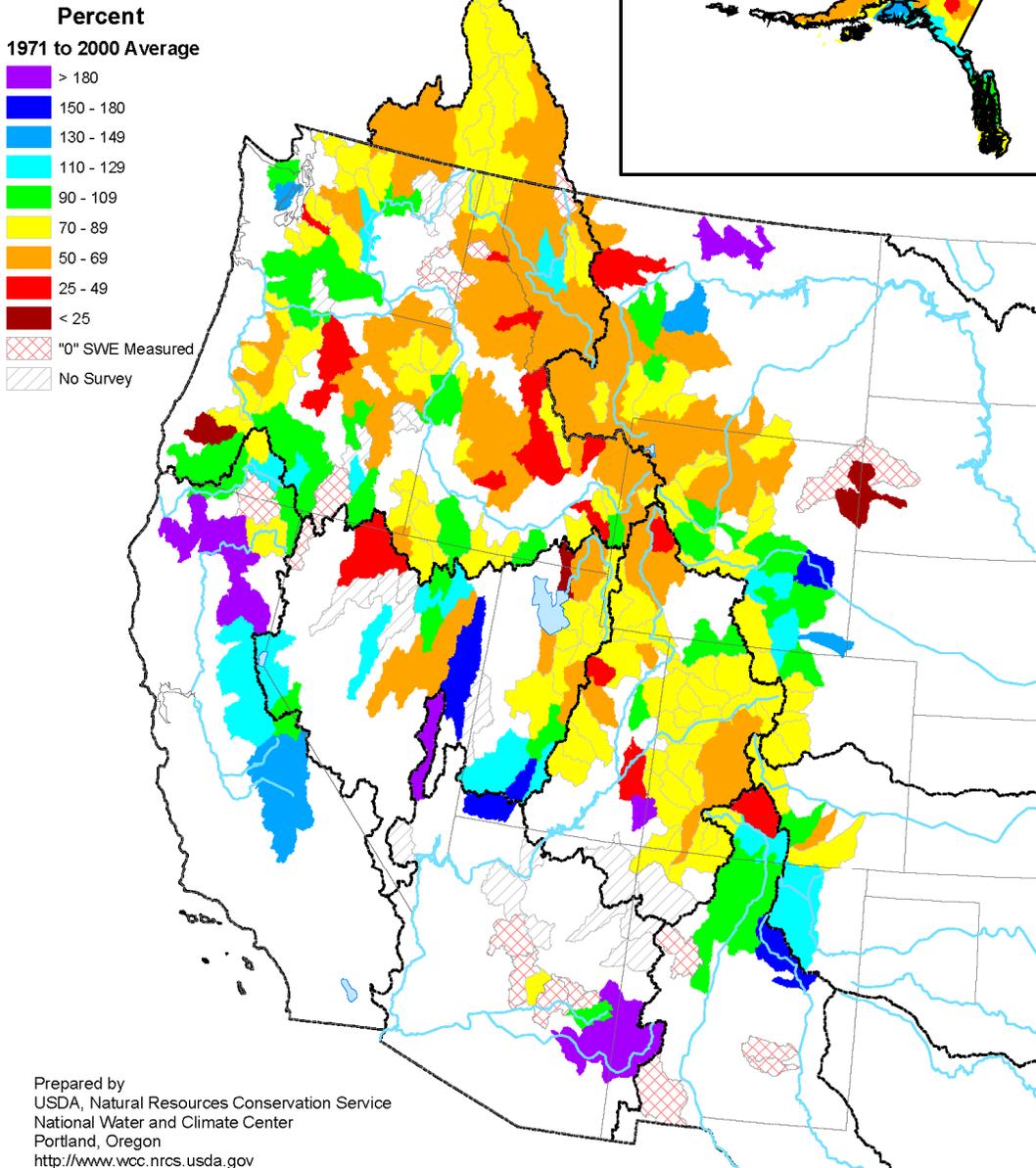
### **FOR MORE INFORMATION**

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

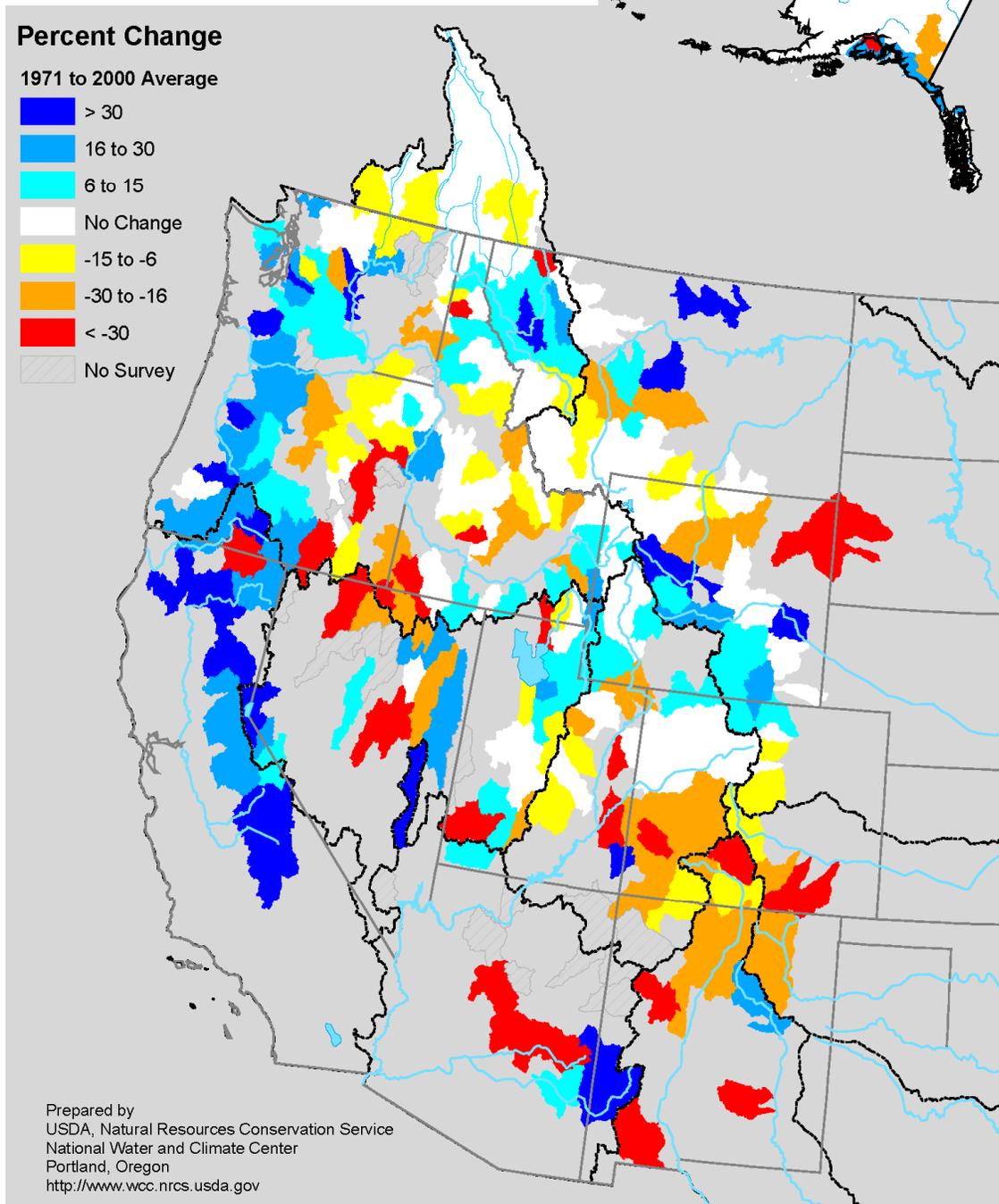
# Mountain Snowpack as of May 1, 2010



**Fig. 1. Mountain Snowpack, May 1, 2010 reveals a nearly classic El Niño pattern across the Western States. The Gulf of Alaska from the Kenai Peninsula to the Alaska Panhandle has had above normal snowfall this season.**

Ref: <ftp://ftp.wcc.nrcs.usda.gov/support/water/westwide/snowpack/wy2010/snow1005.gif>

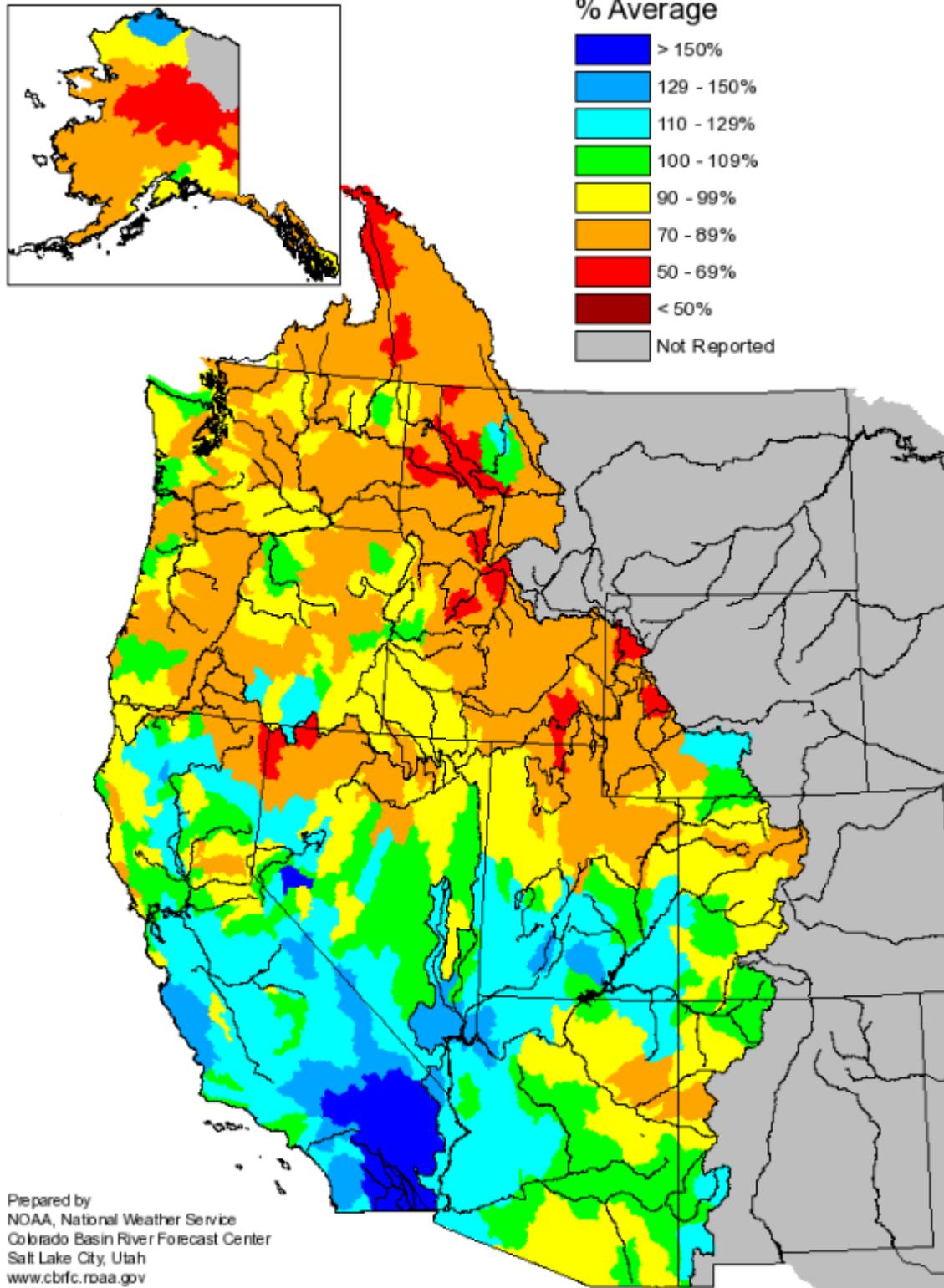
# Mountain Snowpack Change between April 1 and May 1



**Fig. 2. Mountain Snowpack Difference between April 1 to May 1, 2010.** The red area depictions over the Southwest and Great Basin reflect a greater than 30 percent decrease from very high snowpack levels. The Sierra and Cascades increased in snowpack is due to unseasonably cooler and wetter weather.  
Ref: <ftp://ftp.wcc.nrcs.usda.gov/support/water/westwide/snowpack/wy2010/difsnow0510.gif>

## Seasonal Precipitation, October 2009 - April 2010

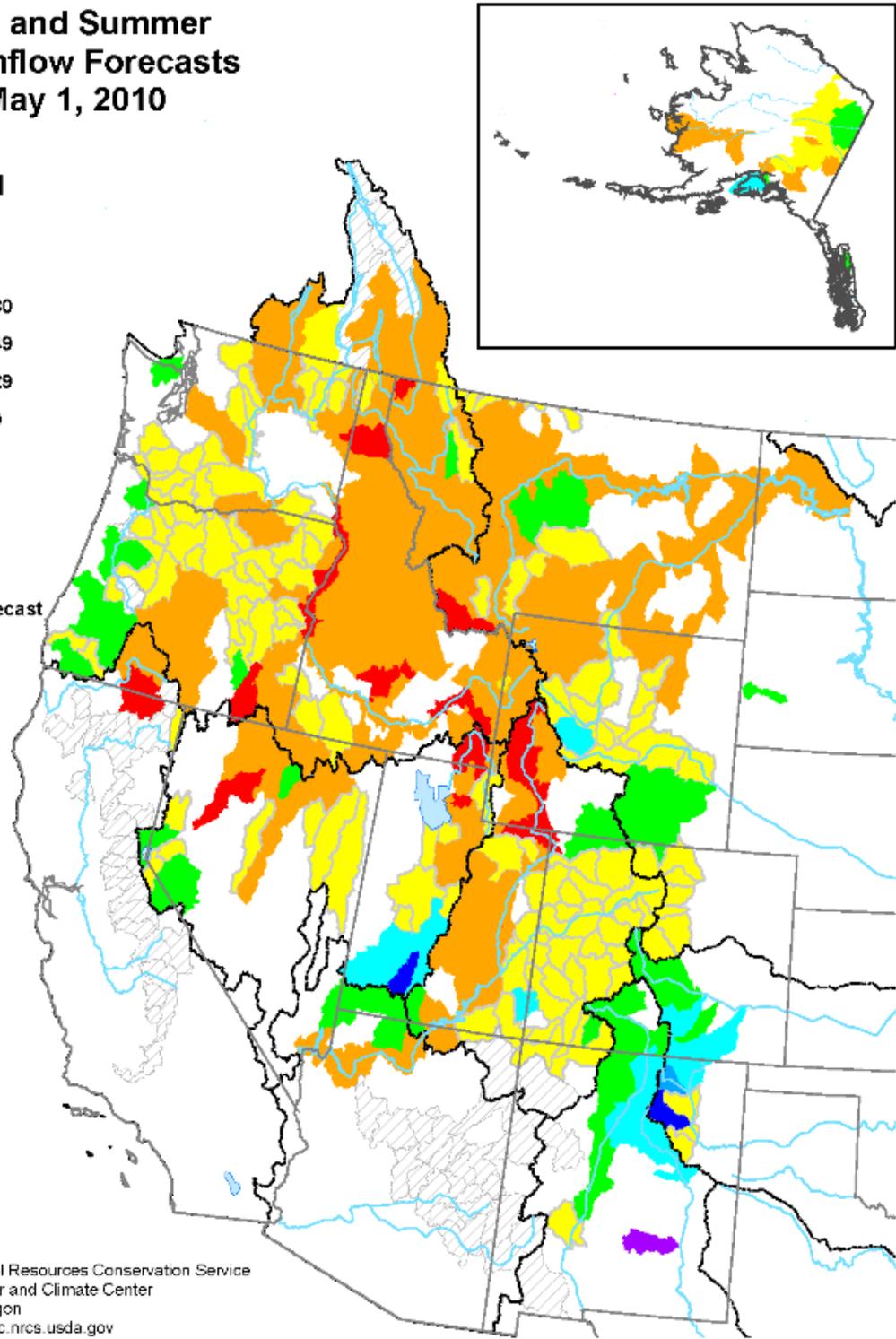
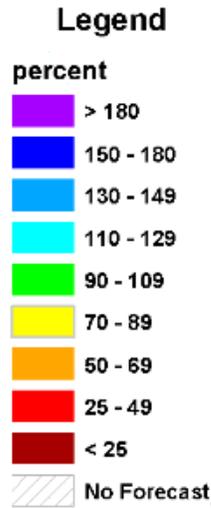
(Averaged by Hydrologic Unit)



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

Ref: <http://www.cbrc.noaa.gov/wsuf/westwide/precip/westS201004.png>

### Spring and Summer Streamflow Forecasts as of May 1, 2010

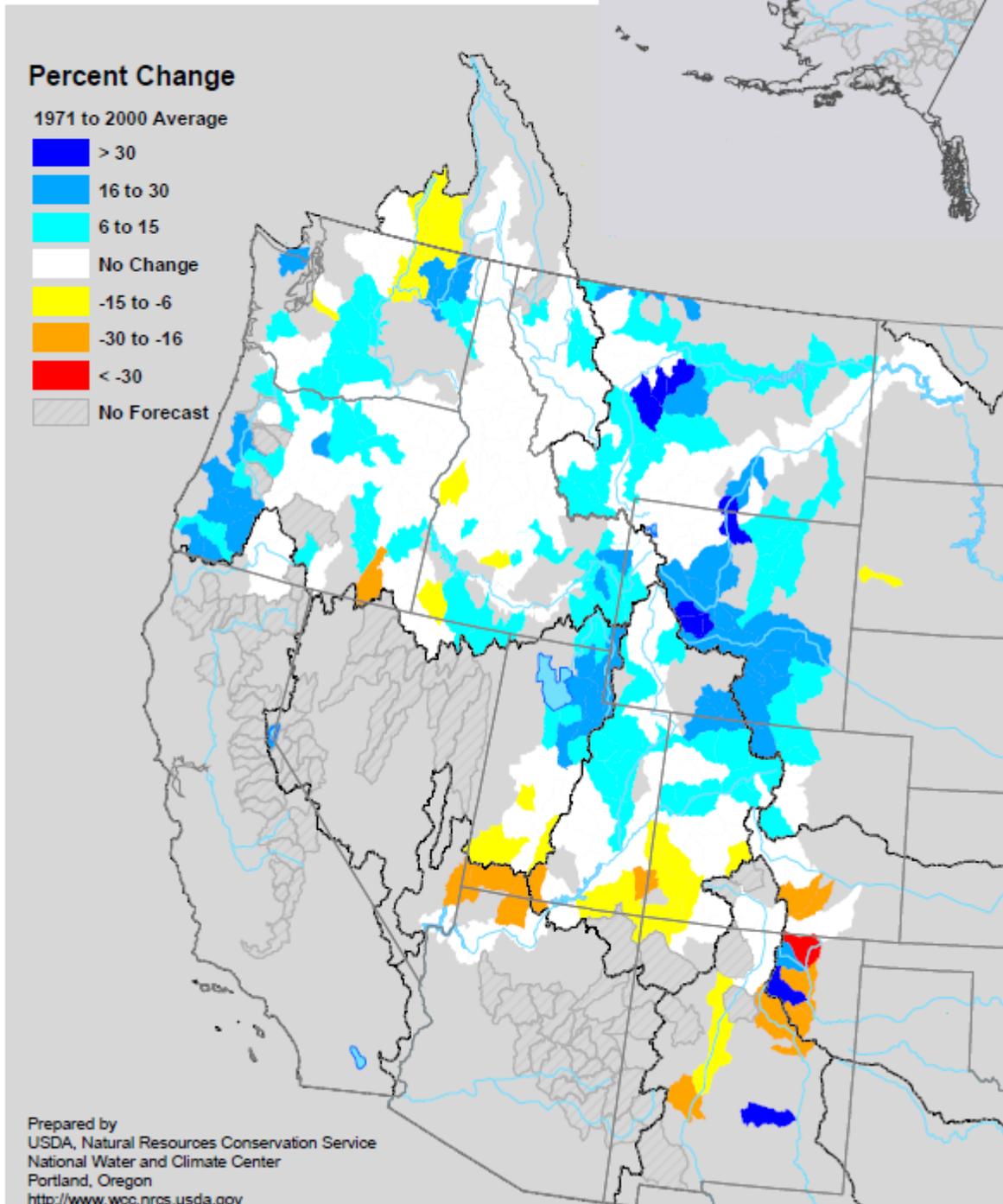


Prepared by  
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<http://www.wcc.nrcs.usda.gov>

**Fig. 4. Seasonal Water Supply Forecasts - May 1, 2010. Lower flow dominates north while higher flows are expected over the southwest Utah and the Southern Rockies.**

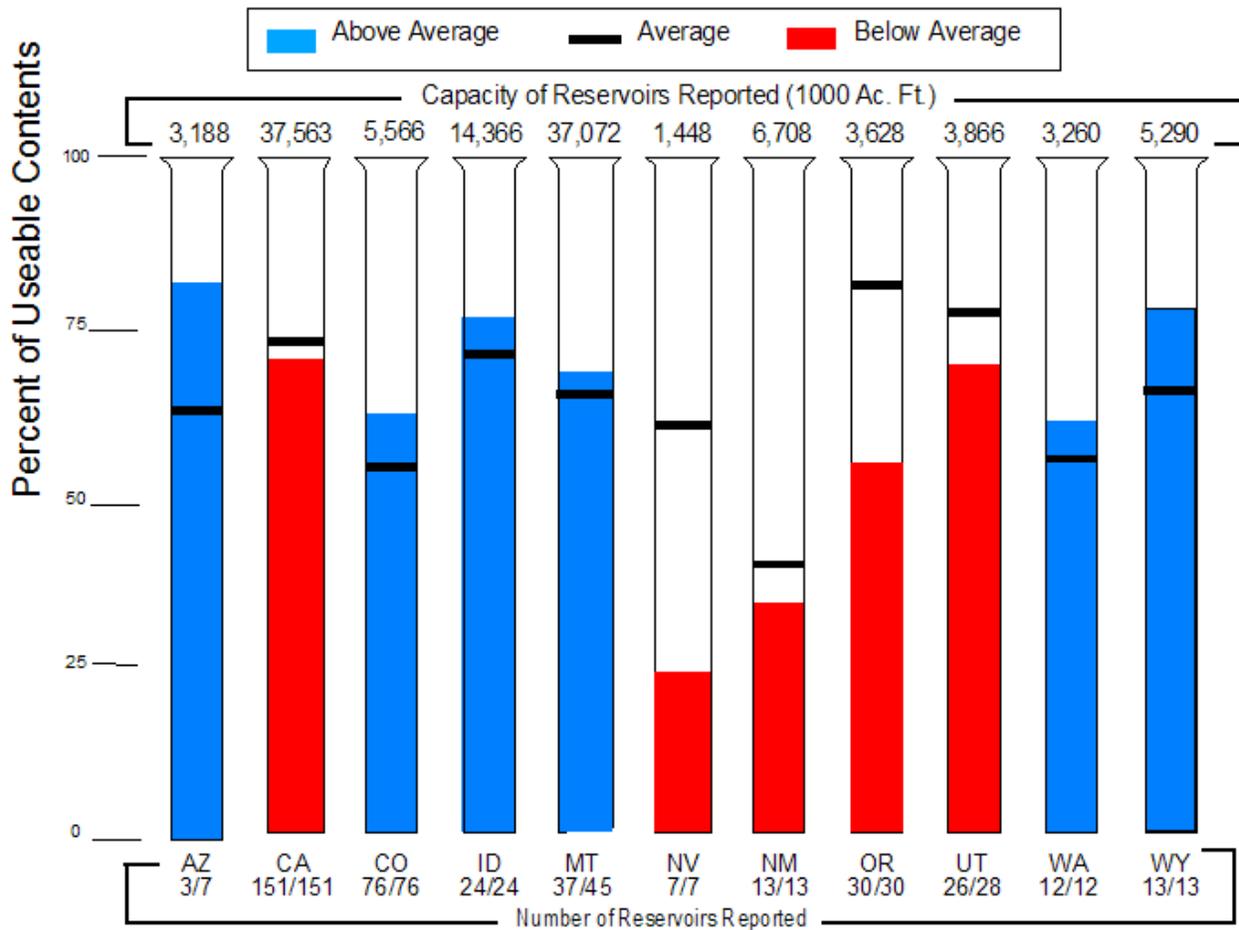
Ref: <ftp://ftp.wcc.nrcs.usda.gov/support/water/westwide/streamflow/wy2010/strm1005.gif>

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



**Fig. 5. Change in streamflow forecast** between April 1 and May 1, 2010. Improvement stream flows are forecasted for areas north of the 4-Corner Region due to cooler than normal temperatures slowing snow melt. Ref: <ftp://ftp.wcc.nrcs.usda.gov/support/water/westwide/streamflow/wy2010/difstrm0510.jpg>

## Reservoir Storage as of May 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 - May 1, 2010.** Note surpluses in Arizona, Colorado, Idaho, Montana, Washington, and Wyoming. Deficits are in Nevada, New Mexico, Oregon, and Utah. This is the best overall total since May 2001.

Ref: <http://www.wcc.nrcs.usda.gov/cgibin/resvgrph2.pl?area=west&year=2010&month=05>