Quarterly Climate Impacts and Outlook

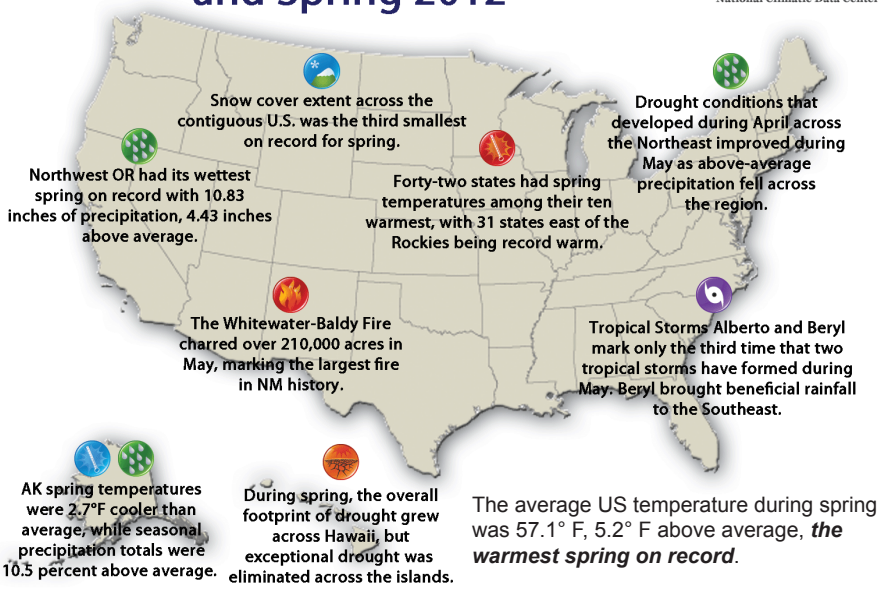
Western Region

June 2012

National - *Significant Events for March - May 2012*

Significant Events for May and Spring 2012

NOAA's National Climatic Data Center



The average US temperature during spring was 57.1° F, 5.2° F above average, ***the warmest spring on record***.

Highlights for the West

Mountain snowpack in the Northwest continued to increase due to below-average temperatures and above-average precipitation.

Sub-par mountain snowpack in the Southwest rapidly disappeared in response to exceptional warmth and lack of moisture.

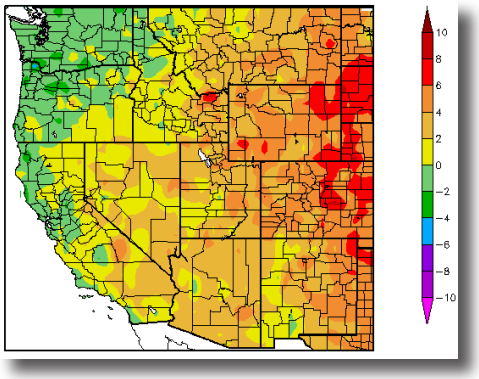
Critical fire conditions (low relative humidity, high wind, drought conditions) persisted across much of the Southwest, allowing wildfires to develop and spread rapidly.

Southwest winds in excess of 50 mph drove a **dust storm** into the Four Corners region which combined with wildfire smoke to reduce regional visibility and air quality.

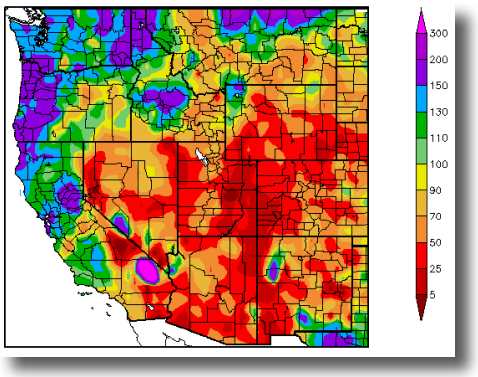
Equatorial Pacific sea surface conditions have transitioned from La Niña to **ENSO-neutral conditions**. These conditions are expected to continue through the summer.

Regional - *Climate Overview for March - May 2012*

Temperature and Precipitation Anomalies

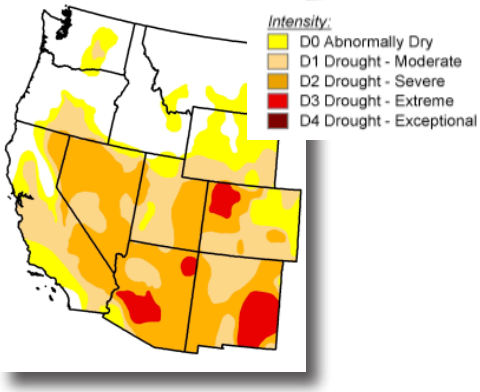


Departure from Normal Temperature (F)
3/1/2012 - 5/31/2012



Percent of Normal Precipitation (%)
3/1/2012 - 5/31/2012

Drought in the West



US Drought Monitor
6/5/2012

The temperature anomalies shown in the left panel indicate that most of the interior West had above-normal temperatures (warm colors), with slightly cooler-than-normal temperatures in the Northwest and the northern and central California coastal region.

The Pacific Northwest and much of California had well above-normal precipitation, while most of the interior West received much less precipitation than normal. Oregon had the wettest spring in the last 118 years and Washington had the third wettest. (Provisional temperature and precipitation data courtesy of the High Plains Regional Climate Center, www.hprcc.unl.edu.)

The US Drought Monitor shows abnormally dry to extreme drought conditions in many parts of the West. (The Drought Monitor is a collaborative product from the USDA, NOAA and National Drought Mitigation Center, www.droughtmonitor.unl.edu/monitor.html.)

Contacts: Robert Webb (Robert.S.Webb@noaa.gov)
Carlee Brown (cbrown@westgov.org)

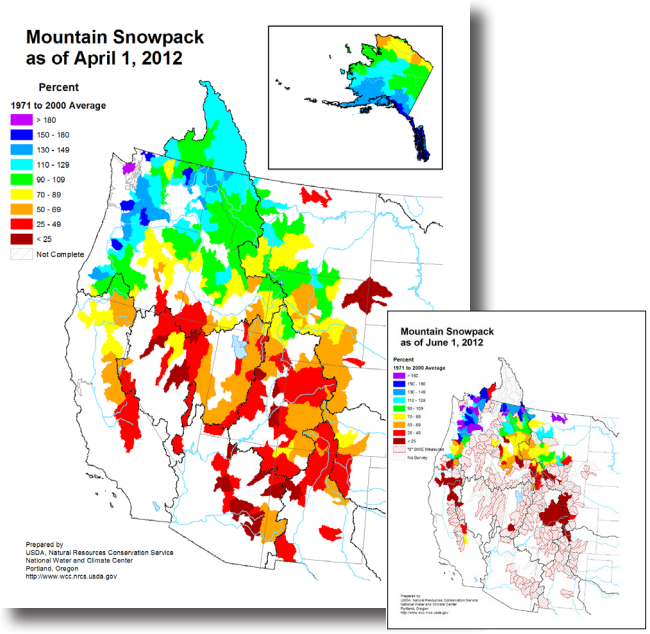
Regional Impacts - *for March - May 2012*

Climate and Weather
Continued warm and dry conditions across much of the southwest US resulted in a drastic reduction of the expected summer runoff in the Intermountain West. The most recent median forecast for the Colorado River April-July inflow to Lake Powell is 28% of the historical mean, which would be the fourth lowest in the last 108 years.

Drought, Flooding, and Water Resources Impacts
Despite low snowpack and dry conditions across the Southwest, the impact on water supply has been mitigated for many sectors due to carryover of full reservoirs resulting from high inflows for the 2010-11 water year. The impacts on sectors and regions dependent on rainfall for water supply are now emerging.

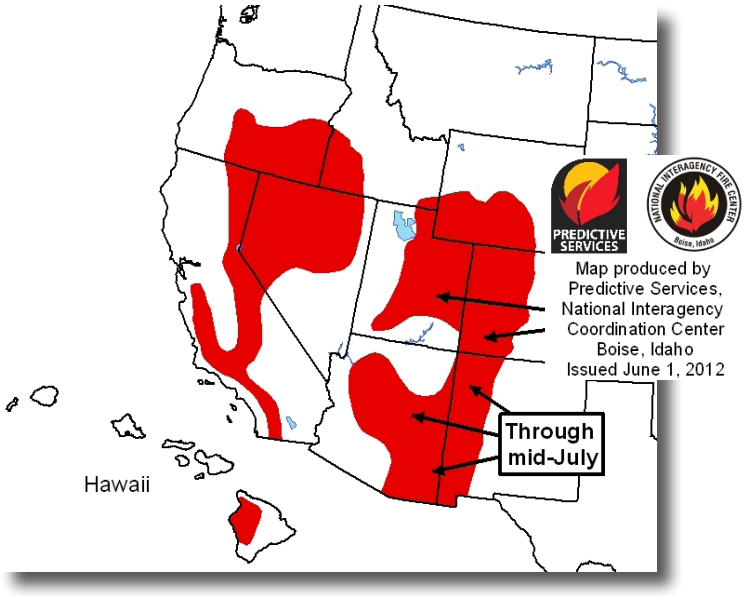
Health
Air quality warnings were issued due to wildfire smoke and dust storms (Colorado, New Mexico, Nevada and Arizona).

Recreation
Mild temperatures, strong winds and intermittent snowfall resulted in dangerous avalanche conditions for backcountry recreation in many mountainous areas (Wyoming, California and Colorado).



As of April 1, 2012, mountain snowpack in much of the southern part of the West was below 50% of normal. In some parts of the Northwest, mountain snowpack values continued to increase through June 1 (inset). Maps from the USDA/NRCS National Water and Climate Center (www.wcc.nrcs.usda.gov/snowcourse).

Regional Outlook - *for Summer 2012*



NIFC Seasonal Fire Potential (July - September)
The impact of drought on fuel moisture conditions has resulted in areas of above-average significant fire potential for the 2012 fire season. Areas shown in red will likely require mobilization of external resources (National Interagency Fire Center, www.nifc.gov).

NOAA Seasonal Climate Outlook
The summer 2012 temperature outlook indicates increased odds for above-normal temperatures for most of the southwest US. The precipitation outlook for summer 2012 shows increased odds for below-median total seasonal precipitation for parts of the northwest US. There is a 50% chance that El Niño conditions will develop during the second half of 2012 (Climate Prediction Center, www.cpc.ncep.noaa.gov).

Western Region Partners

Western Regional Climate Center
wrcc.dri.edu
National Integrated Drought Information System (NIDIS) - drought.gov
Western Governors' Association
westgov.org
Western States Water Council
westgov.org/wswc
National Interagency Fire Center
www.nifc.gov
USDA/NRCS National Water and Climate Center - www.wcc.nrcs.usda.gov
DOI WaterSMART
www.usbr.gov/WaterSMART
NOAA/ESRL Physical Sciences Division
esrl.noaa.gov/psd
NOAA's Western Regional Collaboration Team
www.regions.noaa.gov/western/western_region_team.html
Western Water Assessment
colorado.edu
Climate Assessment for the Southwest
climas.arizona.edu
California Nevada Applications Program
meteora.ucsd.edu/cap
Climate Impacts Research Consortium
pnwclimate.org/resources
Colorado Basin River Forecast Center
www.cbrfc.noaa.gov
California Nevada River Forecast Center
www.cnrfc.noaa.gov
NOAA Fisheries Service - www.nmfs.noaa.gov
NWS Western Region's Climate Service
nws.noaa.gov/om/csd/index.php?section=programs#western
State Climatologists - stateclimate.org

Contacts: Robert Webb (Robert.S.Webb@noaa.gov)
Carlee Brown (cbrown@westgov.org)