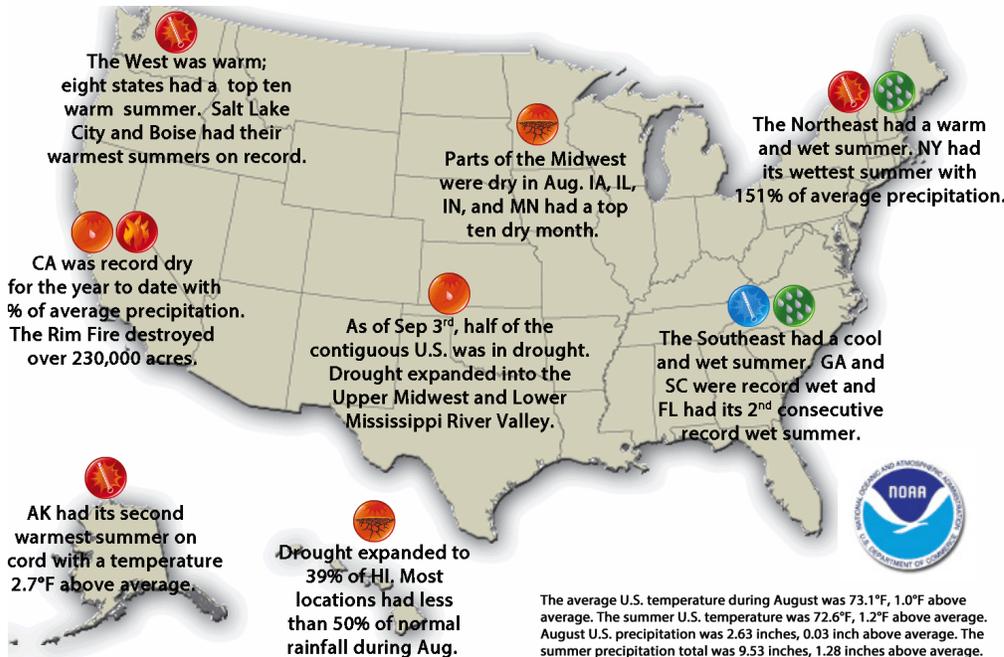


Significant events for June - August 2013



Highlights for the West

Nearly all of the West was in the warmest 10th percentile for the June-August period.

After a cool spring, record high temperatures impacted the inland Northwest and northern Great Basin.

Frequent monsoon showers eased drought conditions in the Southwest though caused damaging flash floods.

Several large fires resulted in major losses of life, property, and natural resources.

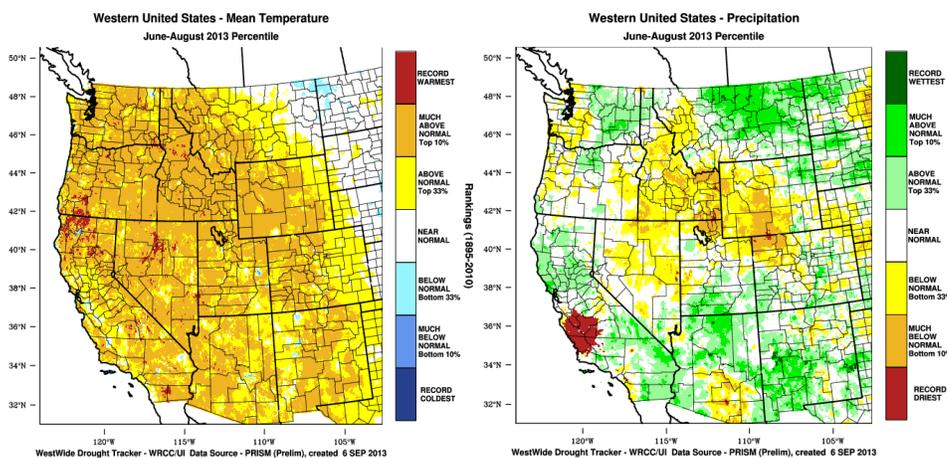
The Upper Missouri was among the wettest 10 percent for summer months.

June and August wetter than normal in Pacific Northwest, though July was among top 10 driest.

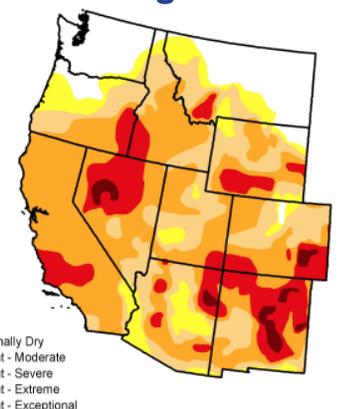
ENSO-neutral conditions are expected to persist through winter.

Regional Overview for June - August 2013

Temperature and Precipitation Percentile Rankings



Drought



US Drought Monitor 9/03/2013

Temperature percentile rankings shown in the left panel show above normal temperatures in the warmest 10th percentile for much of the West. Scattered small areas in the Southwest were cooler than normal due to frequent monsoon showers and cloudiness.

Much of the interior northern West remained dry during the summer. An active monsoon brought rain to the Southwest. Traveling weather systems brought precipitation along the northern tier of states and to northern California. (*Temperature and precipitation from the WRCC Westwide Drought Tracker*)

Drought conditions improved throughout Arizona, New Mexico and Colorado this summer, though 42% of Arizona, 78% of New Mexico, 60% of Colorado are still categorized in severe to exceptional drought. Drought worsened throughout the Great Basin, Southern California and portions of Wyoming. (*The Drought Monitor is a collaborative product from the USDA, NOAA, other state/federal agencies, and National Drought Mitigation Center www.droughtmonitor.unl.edu/monitor.html*)

Regional Impacts for June-August 2013

Climate and Weather

The northern Great Basin, including Boise, ID and Salt Lake City, UT experienced a record warm summer.

Drought, Flooding and Water Resources

Drought impacts eased in Southwest, but large regions of extreme drought remain. Lake Powell flow releases to Lake Mead will be reduced; each reservoir 47% full.

Severe flash flooding in CO, NV, NM.

Agricultural withdrawals curtailed in many Intermountain West river basins.

Low flows, high temperatures leave California fish runs vulnerable to excessively warm water.

Health and Tourism

Air quality reductions from wildfires affected metro area populations.

Popular recreation areas impacted at Rogue River OR, Columbia Gorge, Lake Tahoe, Sun Valley ID and Wolf Creek Pass, CO.

Fire

Though fewer fires burned fewer acres than the 10-year average, the Yosemite Rim fire was CA's 3rd largest, the Black Forest Fire in CO burned 500+ homes, and the Yarnell Fire in AZ claimed lives of 19 firefighters.

Capacity of Reservoirs Reported in 1000s of Acre-Feet										
*	5247	12822	37079	704	8320	2195	3910	629	5290	
	44%	61%	50%	65%	76%	77%				
					12%	49%	16%	44%	25%	45%
						46%	60%	65%	57%	47%
										62%
AZ	CO	ID	MT	NV	NM	OR	UT	WA	WY	
0 of 4	66 of 74	21 of 24	43 of 45	6 of 7	13 of 13	24 of 31	27 of 28	4 of 13	13 of 13	

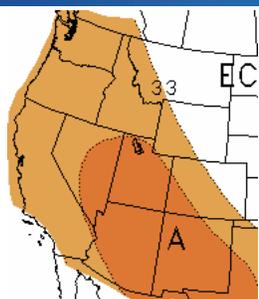
Storage is Below Average (% of Capacity)
 Storage is At or Above Average (% of Capacity)
 Average Storage as % of Capacity
 * = Data are not available for this state.

Western US reservoir status early Sept. 2013. 154 CA reservoirs were at approximately 79% capacity.

MODIS image of Yosemite Rim Fire and American Fire on Aug. 22. Southerly winds brought smoke over Lake Tahoe, Reno and Carson City NV for about 10 days.



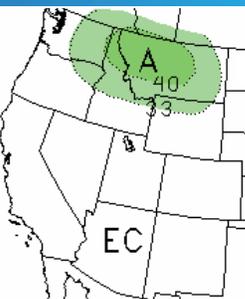
Regional Outlook for Sept-Oct-Nov 2013



Oct-Nov-Dec temperature outlook produced by CPC Sept. 19 2013

EC MEANS EQUAL CHANCES FOR A, N, B
 A MEANS ABOVE NORMAL
 B MEANS BELOW

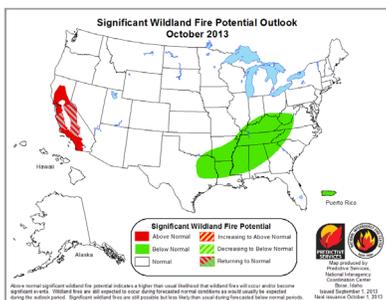
Numbers indicate percent chance of temperature in warmest one-third and of precipitation in wettest one-third



Oct-Nov-Dec precipitation outlook produced by CPC Sept. 19 2013

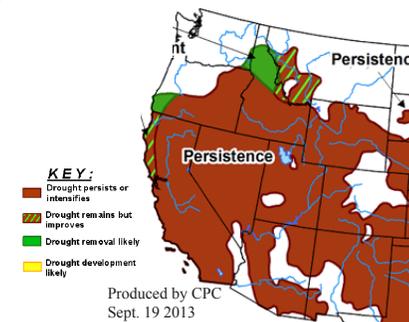
NOAA CPC Fall Seasonal Outlook

Warmer than usual conditions anticipated in most western states. Wetter than normal conditions projected for the northern Rockies. Tropical Pacific Ocean conditions show little sign of El Niño or La Niña development. The North Pacific is unusually warm from Canada to Asia. Combined effects of tropical and northern Pacific temperatures on autumn precipitation patterns are not clear.



NIFC Wildfire Outlook

Fire potential remains above normal throughout California, but has returned to normal levels elsewhere in the West.



NOAA Seasonal Drought Outlook

Drought expected to persist throughout most of the West for the fall season with some improvement in the Northwest.

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
- NOAA/ESRL Physical Sciences Division esrl.noaa.gov/psd
- NOAA Climate Prediction Center www.cpc.ncep.noaa.gov
- USDA/NRCS National Water and Climate Center - www.wcc.nrcs.usda.gov
- National Interagency Fire Center www.nifc.gov
- DOI WaterSMART www.usbr.gov/WaterSMART
- NOAA's Western Regional Collaboration Team www.regions.noaa.gov/western/western_region_team.html
- Western Water Assessment www.colorado.edu
- Climate Assessment for the Southwest climas.arizona.edu
- California Nevada Applications Program meteora.ucsd.edu/cnap
- Climate Impacts Research Consortium pnwclimate.org/resources
- NWS River Forecast Centers water.weather.gov/ahps/rfc/rfc.php
- NOAA Fisheries Service www.nmfs.noaa.gov
- NWS Western Region www.wrh.noaa.gov/
- State Climatologists - stateclimate.org

