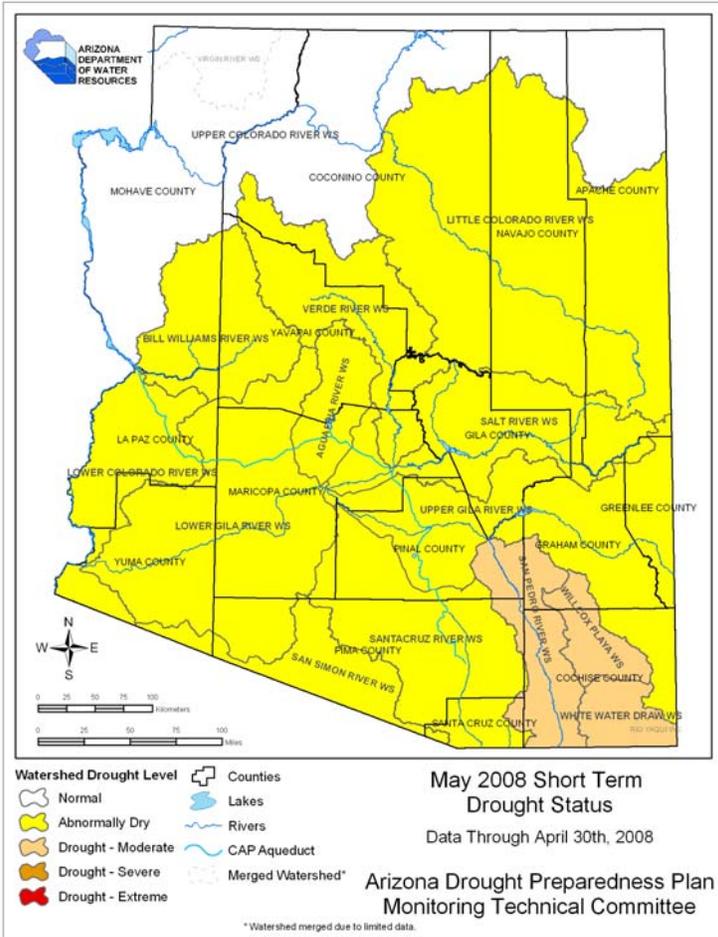


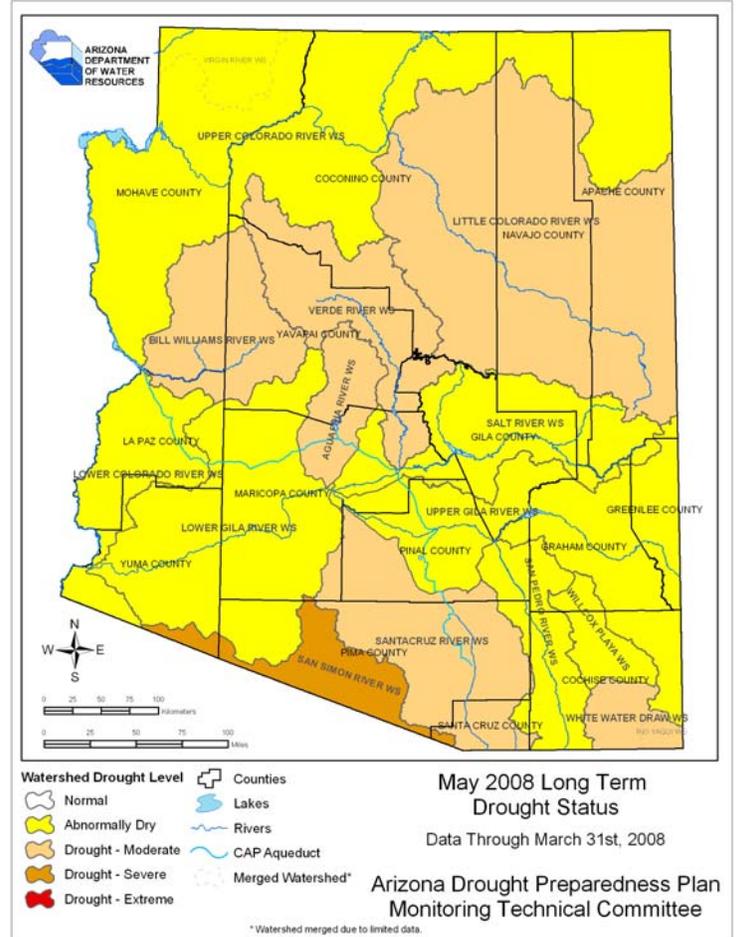
Arizona Drought Monitor Report

May 2008

Short-term Drought Status



Long-term Drought Status



Short-term Update

The extremely dry conditions in March and April contributed to nine watersheds worsening from normal to abnormally dry, and one watershed, San Pedro, from abnormally dry to moderate drought. Only the upper Colorado and Virgin River watersheds remain at normal. March is typically a very wet winter month across most of Arizona, while April is a transition from frontal storms to the dry pre-monsoon summer. This year very few storms entered the state and the precipitation that did fall was very light and scattered. Hardest hit by the dryness are the southeast watersheds. The cold front that moved through the state in mid-May did not bring relief to these watersheds.

Long-term Update

While the long-term drought map will not be changed until the July update, using data through June, the dryness in March and April will likely have an impact, particularly in the southeastern region. The long-term map reflects the previous 2-, 3-, and 4-year periods of precipitation and streamflow, which affect forest health and groundwater supplies. It is difficult to estimate how the dry late winter and unusual May weather will change the long-term picture. Nonetheless, the southeastern watersheds continue to be very dry.



Reservoir Storage



Vegetation Health

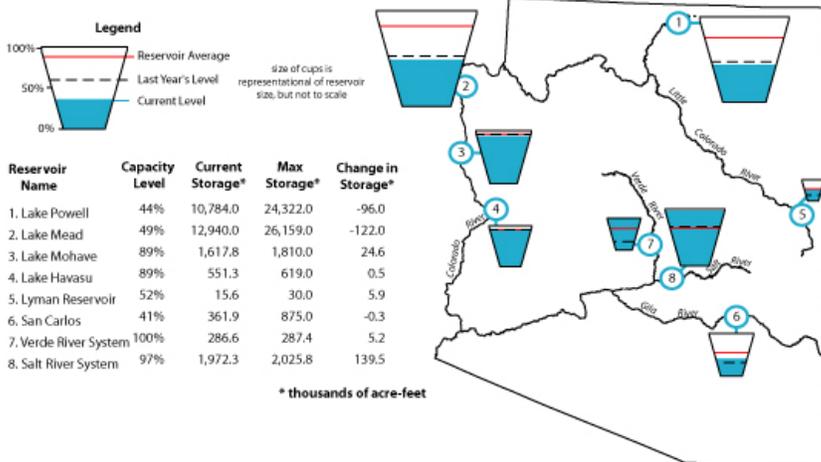


Arizona Reservoir Status

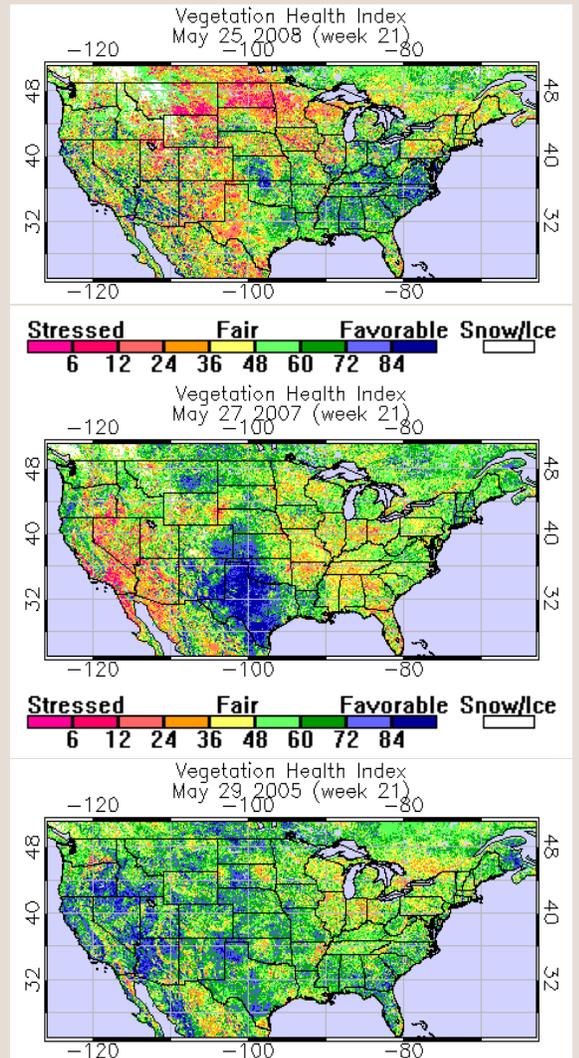
Storage declined slightly in reservoirs within Arizona's borders over the past month (see figure below). Storage in the Salt River reservoirs rose by more than 10,000 acre-feet; however, storage in the Verde River reservoirs decreased by almost 8,000 acre-feet. Storage in Lakes Mead and Powell decreased slightly during April, and combined storage in these large reservoirs is still less than 50 percent of capacity. In late July, Lake Powell elevation is projected to peak at approximately 64 feet below full pool elevation.

In water-related news, the San Xavier Coop Farm is using an underground irrigation system to grow alfalfa, hay, and beans, restoring an age-old crop growing tradition to Tohono O'odham Nation using a Central Arizona Project allotment (KOLD-TV, April 26). Also, Payson approved a contract with the Salt River Project to secure water rights to the Blue Ridge Reservoir (The Payson Roundup, May 8). The town expects to bring in 3,000 acre-feet of water annually.

Arizona reservoir levels for April 2008 as a percent of capacity. The map depicts the average level and last year's storage for each reservoir, while the table also lists current and maximum storage levels.



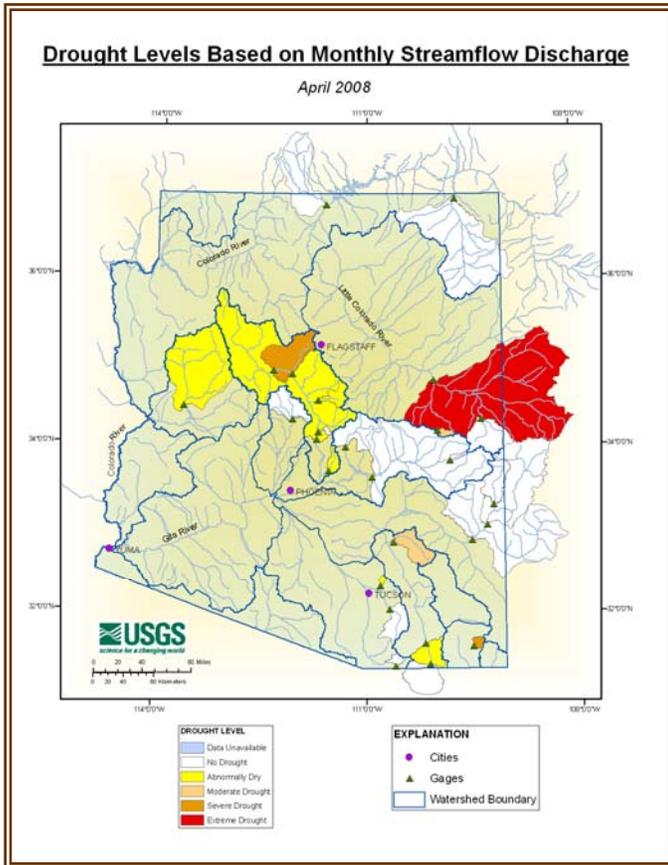
Recent vegetation health index data from the NOAA Center for Satellite Applications and Research (top figure) shows improvement in contrast to one year ago (middle figure), with a notable exception in southeastern Arizona. Dark blue areas across the southern half of the state probably indicate mid- and late-May precipitation as much as vegetation condition. In contrast with 2005 (bottom figure), vegetation health is not as robust. The 2008 Arizona wildland fire season has been quiet thus far. The Southwest Coordination Center cautions that fire potential is above normal for southern Arizona.



Photos by the National Park Service

Images are obtained from the NOAA National Environmental Satellite, Data and Information Service (NESDIS).

Mountain Streamflow



April Streamflow

Water body	April Runoff in Acre Feet	% of Median
Salt River near Roosevelt	71,107	77%
Tonto Creek above Gun Creek near Roosevelt	3,005	50%
Verde River at Horseshoe Dam	11,931	35%
Combined Inflow to Salt River Project (SRP) reservoir system	86,043	60%
Little Colorado River above Lyman Lake	2,886	86%
Gila River to San Carlos Reservoir	9,967	60%

Streamflow Observed at USGS Gauging Stations

Note: The extreme drought status in the Little Colorado River watershed is caused by irrigation drawing water from the stream. This is a usual occurrence at this time of year.

Mountain Precipitation

As of May 1, the snowpack is essentially melted out with only the San Francisco Peaks showing any measurable snowpack (left table). Monitoring stations show very little precipitation during April, ranging from 0% to 35% of average, while cumulative precipitation for the water year (Oct. 1 to Apr. 30) remains at or above average in all basins (right table).

Watershed	Percent of 30-Year Average	
	Snowpack Levels as of	
	Apr. 1	May 1
Salt River Basin	68%	0%
Verde River Basin	47%	0%
Little Colorado River Basin	47%	0%
San Francisco-Upper Gila River Basin	66%	0%
Other Points of Interest		
Chuska Mountains	135%	0%
Central Mogollon Rim	46%	0%
Grand Canyon	86%	0%
San Francisco Peaks	147%	141%
Arizona Statewide	87%	61%

Watershed	Percent of 30-Year Average
	Precipitation Oct 1-Apr 30
Salt River Basin	118%
Verde River Basin	118%
Little Colorado River Basin	127%
San Francisco-Upper Gila River Basin	95%
Other Points of Interest	
Chuska Mountains	<i>no data</i>
Central Mogollon Rim	125%
Grand Canyon	79%
San Francisco Peaks	75%
Arizona Statewide	<i>no data</i>

Temperature and Precipitation



April was extremely dry across the entire state. Precipitation was below the 10th percentile for all watersheds except the lower Colorado, San Simon, and Santa Cruz. Even the wettest watershed was only at the 19th percentile. Just as in March, only one winter storm moved through the state during April. Temperatures were only slightly above average across most of the state.

The 3-month winter period of February through April was also drier than average across the state, as most places have not had precipitation since mid-February. Temperatures were slightly warmer than average across the entire state, but significantly cooler than this period has been in previous years.

The 6-month period precipitation, from November through April, was near- to slightly above-average in most watersheds, ranging from the 47th to the 71st percentile. The storms tracked from the southwest to the northeast, leaving the southeast and northwest corners of the state dry. Temperatures were near average on the Colorado Plateau, and slightly warmer in the central and western parts of the state. Gila and the southeastern counties were much warmer than average.

The 12-month period had near- to above-average precipitation in 11 watersheds, and below-average precipitation in the Virgin, Santa Cruz, San Pedro and Willcox watersheds. Temperatures were above the 75th percentile for all climate divisions.

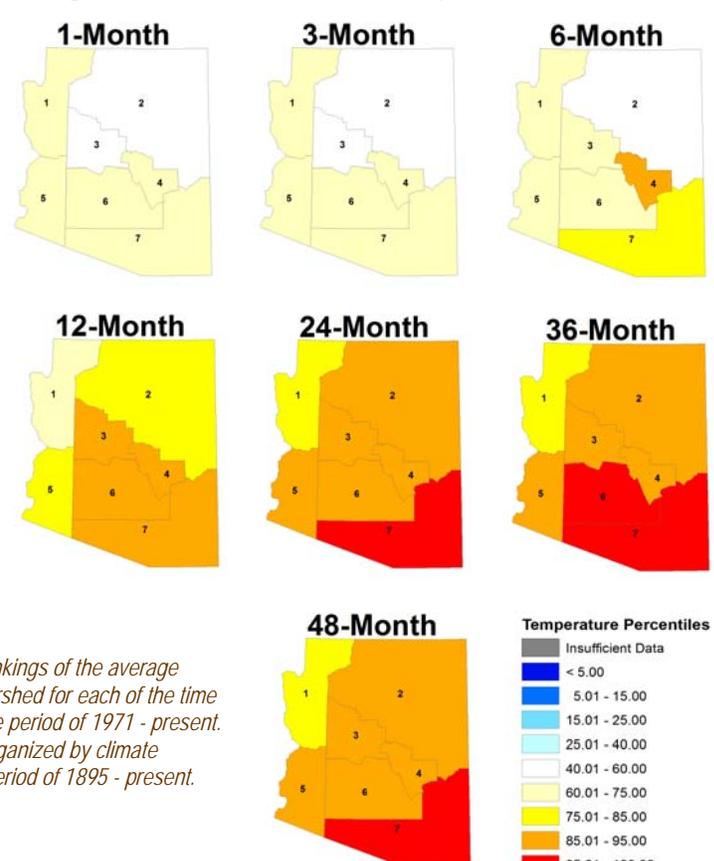
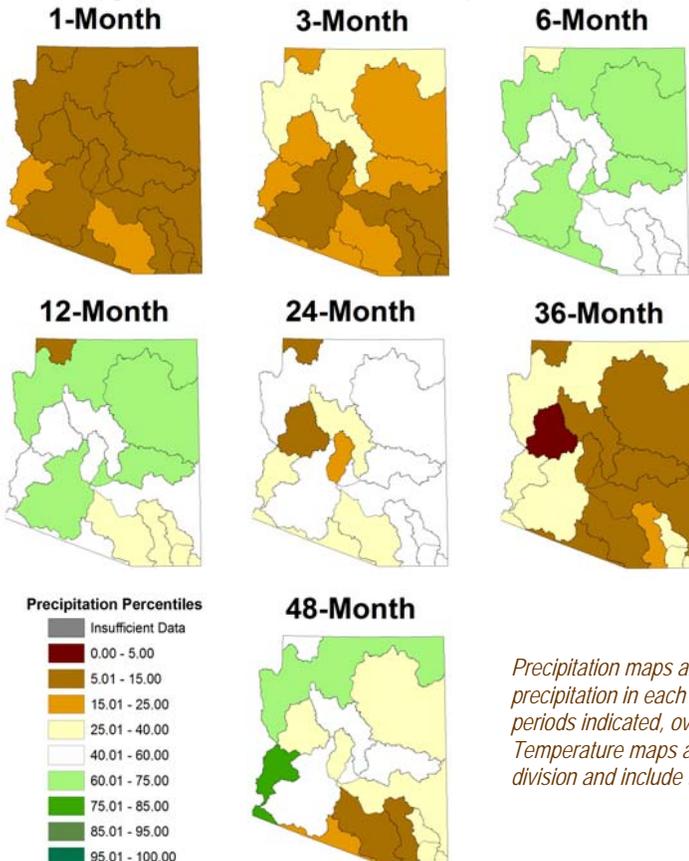
The 24-month period was much drier than it was last month, with no watersheds above the 59th percentile. Three watersheds are still at or below the 25th percentile, nine are between the 40th and 59th percentiles, while last month six watersheds were above the 60th percentile. Temperatures for the 24-month period warmed above the 86th percentile everywhere but the northwest, where they dropped slightly to the 78th percentile.

The 36-month period continues to be the driest long-term period, especially in the eastern half of the state. All watersheds remain below the 35th percentile, and nine watersheds are below the 15th percentile. For temperature, the southeast climate divisions are above the 95th percentile and even the coolest climate division, in the northwest, is above the 75th percentile.

The 48-month period had very dry conditions in the southeast, near average conditions in central Arizona, and slightly wetter than average conditions in the northern and western watersheds. The Santa Cruz and San Pedro watersheds are at the 9th and 12th percentiles, respectively, while the upper and lower Colorado watersheds are at the 68th and 76th percentiles, respectively. Again, all climate divisions are above the 75th percentile for temperature. The past four years have been much warmer than the average of the past 112 years.

Precipitation Percentiles by Watershed

Temperature Percentiles by Climate Division



Precipitation maps are rankings of the average precipitation in each watershed for each of the time periods indicated, over the period of 1971 - present. Temperature maps are organized by climate division and include the period of 1895 - present.

Weather Outlook



Arizona Drought Monitor Report - Produced by the Arizona State Drought Monitoring Technical Committee

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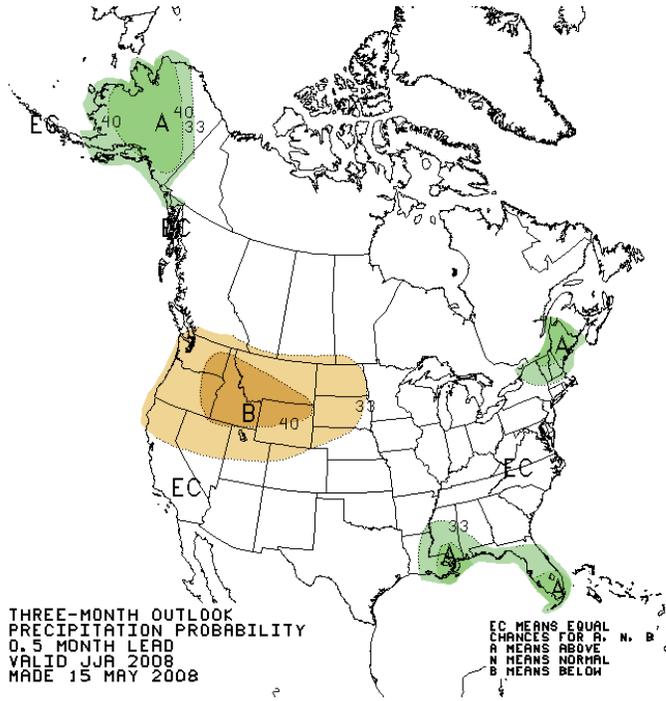
Charlie Ester, Salt River Project

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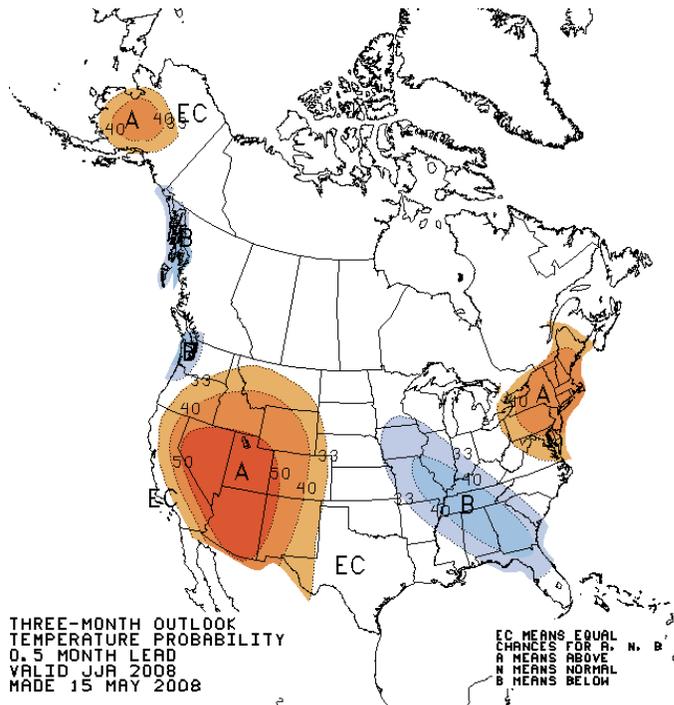
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There is an equal likelihood of above-average, average, or below-average precipitation across the state during the 90-day period (June through August). Precipitation during this period is of a showery nature, so it is common for the amount of rain during the period to vary considerably even across relatively small regions of the state.



The temperature outlook indicates a high level of confidence temperatures will be above average across the entire state for the 90-day period (June through August).