



Top 10 Weather Events of 2011 in Northern Arizona

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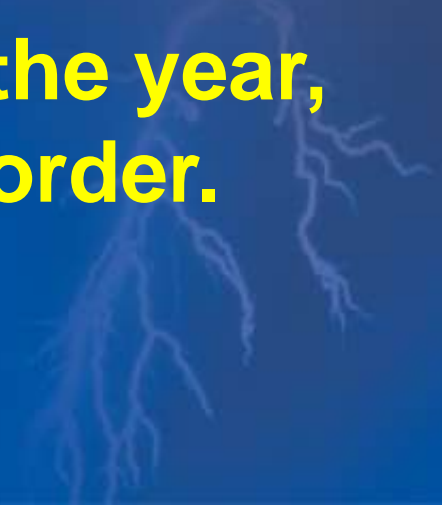
National Weather Service
Flagstaff, AZ





In 2011, Northern Arizona once again experienced a year of weather extremes. From two Arctic air invasions early in the year, to record warmth in August and even drought enhanced by La Niña, it was an active year.

The following is a description of the Top 10 weather events of the year, listed in chronological order.





Arctic Cold New Year's Morning

An Arctic air mass moved into northern Arizona on New Year's Eve. Deep new snow cover combined with calm and clear weather to bring record cold temperatures to some areas by New Year's morning. Here are some recorded low temperatures:

•Coldest temperatures since 1990 for many locations!

•Burst water pipes in many homes and businesses, including some Flagstaff Schools and Northern Arizona University

Greenbase (near Williams)	-38F	
Bellemont	-30F	
Grand Canyon Airport	-29F	
Fort Valley	-28F	Record
Window Rock	-25F	
Springerville	-25F	Record
St. Johns	-22F	
Munds Park	-21F	
Flagstaff	-19F	
Show Low	-13F	
Cottonwood	-3F	Record
Payson	1F	Record
Prescott	0F	



Arctic Cold Returns Feb. 2nd

An extremely cold Arctic air mass returned to northern Arizona on February 2nd. The most notable part of this event were the cold daytime temperatures, with many records set for the lowest daytime highs. The following are the record lowest high temperatures set:

- 4th Coldest high temperature ever at Prescott
- 7th Coldest high temperature ever recorded for Flagstaff

Location	High Temperature
Fort Valley	8F
Flagstaff	12F
Williams	12F
Fort Valley	16F
Winslow	20F
Alpine	20F
Prescott	22F
Page	24F



Snowstorm Feb 19-20

An energetic Pacific storm swept across Arizona on February 19th and 20th, spreading heavy rain and mountain snow across the state. A warm start to this storm allowed many locations to pick up heavy rainfall on the 19th before changing over to snow on the 20th. Snow was observed down to elevations around 4000 Feet with the heaviest accumulations reported over the Western Mogollon Rim and Kaibab Plateau regions.

BELOW IS A LIST OF STORM TOTAL SNOWFALL REPORTS (in inches):

ARIZONA SNOWBOWL	44.0
JACOB LAKE	24.0
FLAGSTAFF AIRPORT	17.9
BELLEMONT	15.3
MUNDS PARK	8 TO 13
WILLIAMS	13.0
KACHINA VILLAGE	13.0
PARKS	12.0
PRESCOTT 3 MI SSW	10.0
GRAND CANYON S RIM	8.8
DONEY PARK	8.3
NAVAJO NTNL MON	5.1
PRESCOTT CITY	4.5
SELIGMAN	4.0
PINETOP	4.0
SANDERS	3.5
PINE	4.5

- Numerous weather-related traffic accidents

- Major roadways including highway 89 and Interstate 17 closed at times



May 29th Windstorm

An unseasonably strong Pacific low pressure system moved across the Southwest on Sunday, May 29th. Strong winds were observed with gusts at many locations exceeding 60 mph.

...PEAK WIND GUSTS MAY 29TH...

TWO GUNS	68 MPH
CHINLE	65 MPH
FLAGSTAFF	64 MPH
SHOW LOW	64 MPH
WINSLOW	63 MPH
PETRIFIED FOREST	62 MPH
DONEY PARK	60 MPH
KYKOTSMOVI	60 MPH
LUPTON	60 MPH
WINDOW ROCK	60 MPH
LINDEN	59 MPH
GRAND CANYON	58 MPH
CHINO VALLEY	56 MPH
SAINT JOHNS	53 MPH
SEDONA	51 MPH
PRESCOTT	47 MPH
PAGE	41 MPH

- Tree blown down in Pine Del neighborhood damaging a vehicle
- Trees also down in Mountainaire damaging two homes
- High Wind Warnings issued for most of northern Arizona



Very Windy June

A persistent trough across the Western U.S. led to breezy conditions nearly every day of the month. Several of the days were particularly windy, with the National Weather Service issuing Wind Advisories on June 1st-2nd, 6th, 16th, 18th-19th, 26th, and 29th. Wind Advisories are issued when sustained winds are expected to reach 30 MPH or greater, and/or gusts to 40 MPH or greater.

The average wind speed for the entire month (including overnight hours) at Flagstaff was 9.4 MPH, well above the normal of 6.7 MPH. Winslow's average speed was 11.5 MPH with 9.8 MPH being normal.





Wallow Wildfire



- **Largest Wildfire in Arizona History**
 - **Started May 29th**
 - **Burned 538,049 Acres**
 - **Destroyed 32 Residences**
- **Major Contributing factors included windy weather and drought conditions that developed over the winter, due partially to ongoing La Niña.**



Wallow Fire east of Greer, AZ



Very Warm August

Strong high pressure persisted over the region during August 2011. While no extremely hot temperatures were recorded on any particular day, the consistency of the above normal temperatures throughout the month was unusual. As a result, many sites set new records for the warmest August ever, and many others came in with the 2nd warmest August.



<u>Location</u>	<u>Ranking</u>
Winslow	1st Hottest
Ganado	1st Hottest
Oak Creek	1st Hottest
Flagstaff	2nd Hottest
Prescott (Co-op)	2nd Hottest
Heber	2nd Hottest
Show Low	2nd Hottest
Payson	3rd Hottest
Canyon De Chelly	3rd Hottest



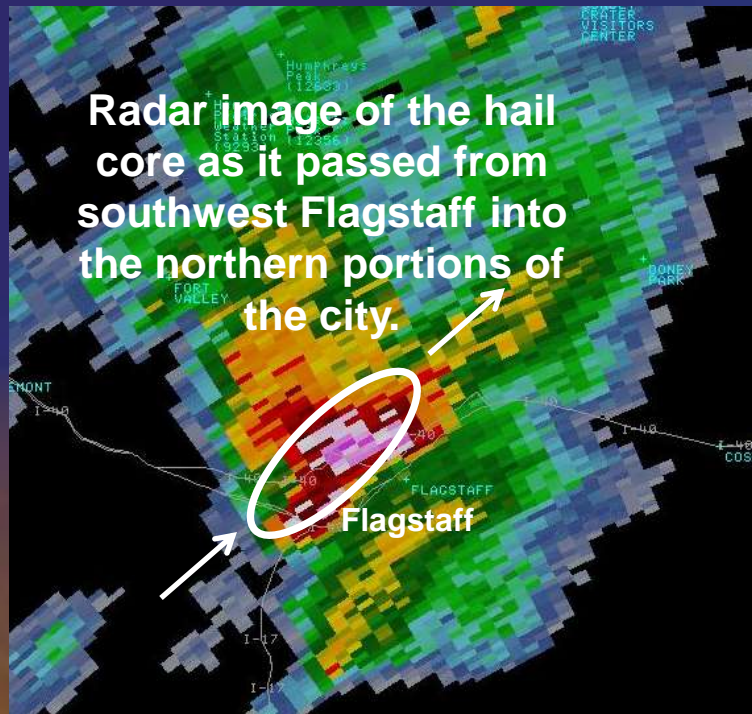
Wallow Fire Area Flooding August 5th

The Wallow Fire left portions of the White Mountain region vulnerable to flash flooding from Monsoon rains. The Highway 180 corridor near Nutrioso has experienced flooding from even small amounts of rain over short periods, due to severely burned steep slopes near the road. This was the case on August 5th when a thunderstorm produced rainfall that would have been considered minor before the fire decreased the ability of the land to absorb rain.

- Flash Flooding along Highway 180 near Nutrioso
- Several motorcycles swept off the road, no injuries
- One home was destroyed in the flooding



Severe Hail Strikes Flagstaff



On September 12th around 7 AM, a severe thunderstorm moved through the Flagstaff metro area, producing numerous reports of 1 inch or larger diameter hail. One report of Ping-Pong ball sized hail was received. There were numerous reports of damage to vehicles as well as some roof damage.

This strong “Supercell” thunderstorm was unusual for the Southwest because it requires strong wind shear to develop, in addition to the instability which is required for thunderstorms. However, conditions were just right to produce this unusual weather event with significant hail accumulating to a few inches depth in some places.



Photo Courtesy of Jeff Walther



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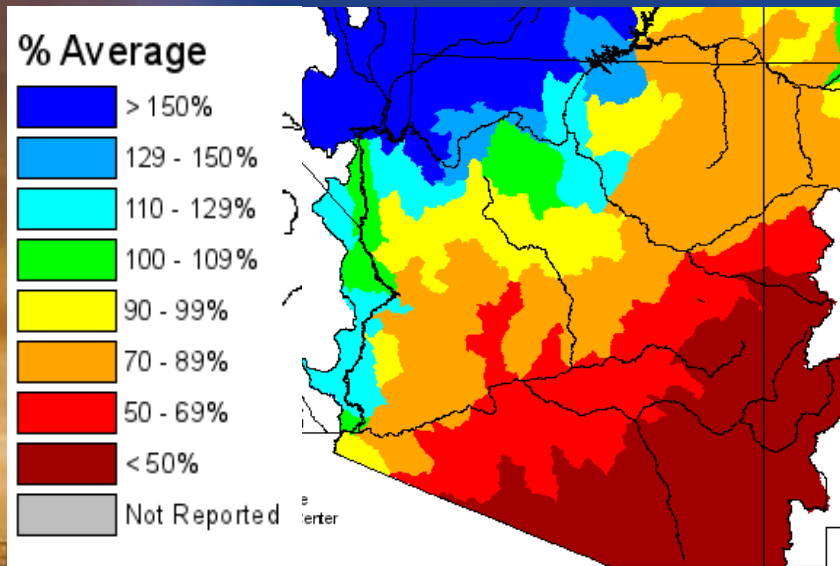


Photo Courtesy of Jeannette Olsson

Eastern Arizona Drought

A moderate La Nina was present from the Fall of 2010 into the Spring of 2011. This contributed to much drier than normal conditions across the southeastern half of Arizona, where most locations received well under 50 percent of normal precipitation during this time period. The extremely dry conditions played a major role in several wildfires across the region, including the Wallow Fire that affected the White Mountains.

Precipitation Oct 2010 – June 2011



U.S. Drought Monitor from June 28th

