

MONTH IN REVIEW FOR NORTHERN ARIZONA FOR AUGUST 2013

...TEMPERATURE AND PRECIPITATION OVERVIEW...

A favorable monsoon pattern continued through the month of August with many locations across northern Arizona reporting well above normal rainfall. The second half of the month experienced abundant tropical moisture thanks to tropical cyclone activity in the Eastern Pacific. As is typical with monsoon season rainfall, monthly precipitation amounts varied from location to location but were overall above normal. The wet conditions and abundance of moisture resulted in slightly below normal maximum temperatures and near to slightly above normal minimum temperatures.

AUGUST DATA AND DEPARTURES FROM NORMAL FOR SELECTED CITIES:

	Max Temp	Dep Norm	Min Temp	Dep Norm	Precip TOTAL	Dep Norm	% Norm
Flagstaff	76.5	-1.9	51.1	1.0	4.85	1.74	156%
Winslow	88.7	-2.5	61.9	1.1	2.58	1.38	215%
Prescott AP	86.0	-0.6	62.1	1.6	2.39	-0.23	91%
Prescott WTP	85.5	-0.6	59.1	0.2	1.46	-1.63	47%
St Johns AP	85.9	-1.1	59.2	0.0	1.32	-0.92	59%
Grand Canyon AP	80.6	-1.2	49.3	2.2	5.15	2.78	217%
Bellefont	75.8	-1.9	47.7	1.4	5.40	2.16	167%
Show Low AP	81.0	-2.0	57.7	0.6	5.06	1.71	151%
Cottonwood	95.9	-1.2	66.1	0.1	3.81	1.79	189%
Seligman	88.9	-1.1	56.8	1.0	2.61	0.43	120%
Page Airport	91.0	-1.5	69.4	1.3	2.87	1.70	245%
Window Rock AP	82.0	-1.2	51.8	-0.3	1.61	-0.31	84%

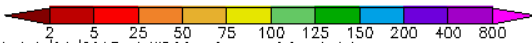
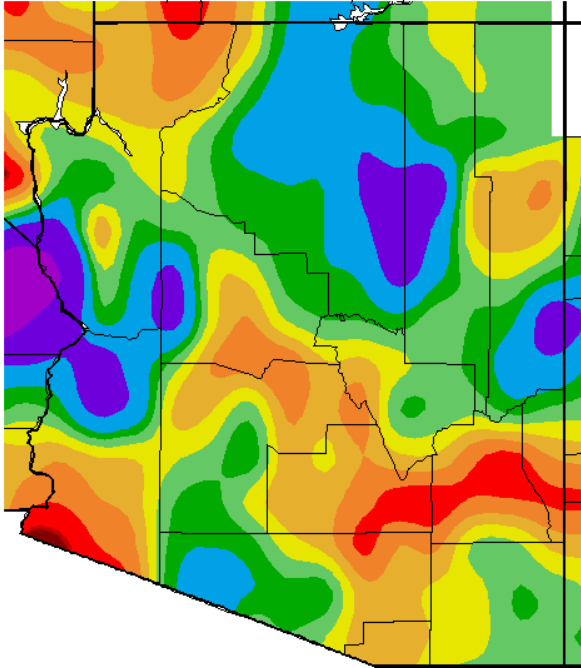
After near record breaking rainfall in July, August monthly precipitation totals for some areas also ranked amongst some of the wettest on record. Below is the ranking for August 2013 totals and their corresponding period of record.

Wettest August Ranking:

Walnut Canyon N.M.	2 nd wettest (1911-2013)
Cottonwood	4 th wettest (tied) (1912-2013)
Phantom Ranch	6 th wettest (1935-2013)
Show Low Airport	7 th wettest (1984-2013)
Winslow Airport	9 th wettest (1915-2013)
Flagstaff Airport	11 th wettest (1898-2013)

The graphic below clearly shows that the bulk of northern Arizona received near to much above average (150% - 200%+) precipitation through the month of August.

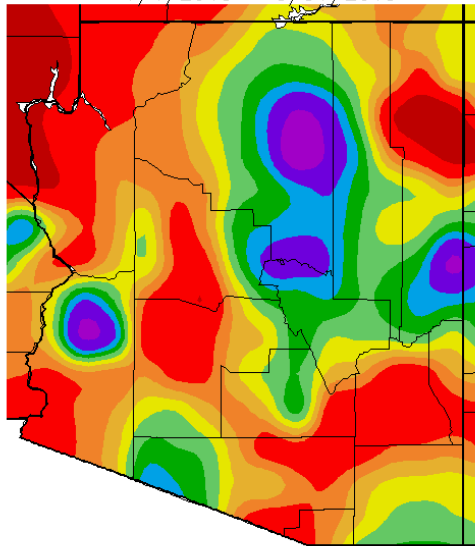
Percent of Average Precipitation (%)
8/1/2013 – 8/31/2013



Generated 9/01/2013 at WRCC using provisional data.
NOAA Regional Climate Centers

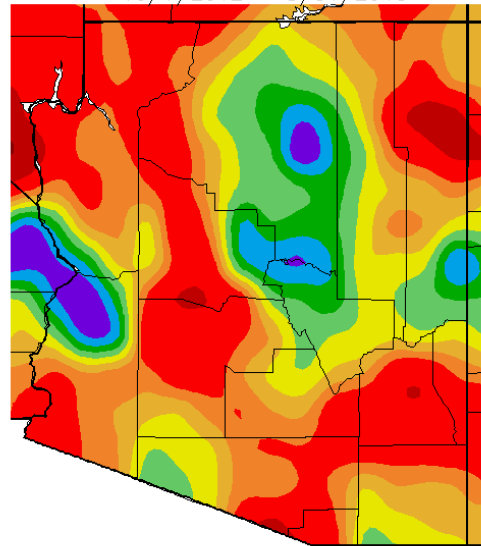
The 2013 monsoon season rainfall has so far proved very beneficial for a large portion of north central Arizona. The above normal rainfall during July and August has brought annual totals (bottom left graphic) and water-year totals (bottom right graphic) near to above average for much of Coconino, Gila and southern Navajo & Apache Counties. After a below average winter season, the monsoon rains have helped replenish moisture across the high country of Arizona.

Percent of Average Precipitation (%)
1/1/2013 – 8/31/2013



Generated 9/01/2013 at WRCC using provisional data.
NOAA Regional Climate Centers

Percent of Average Precipitation (%)
10/1/2012 – 8/31/2013



Generated 9/01/2013 at WRCC using provisional data.
NOAA Regional Climate Centers

...SIGNIFICANT WEATHER...

Aug. 1st:

Thunderstorms with heavy rainfall caused flooding of Antelope Canyon and the closure of Lower Antelope Canyon.

Aug. 2nd:

Heavy rain producing thunderstorms impacted Page and Antelope Canyon. Major flooding occurred in Antelope Canyon with water overtopping SR 98 near mile marker 299. Additional flooding occurred over Highway 89 south of Page. Heavy rain also caused a significant rise on Cibecue Creek.

Aug. 17th:

Thunderstorms developed east of Flagstaff and heavy rain caused flooding into a residence near Cosnino. Six to seven inches of water was also reported over Townsend-Winona Road. Heavy rain also impacted the Bagdad area where ADOT reported flooding near the junction of Highway 93 & Highway 97.

Aug. 22nd:

Heavy rain fell in Oak Creek Canyon north of Sedona during the evening hours causing a rock and mudslide along Hwy 89A near mile marker 378.

Aug. 23rd:

Large hail 1" in diameter was reported with a strong thunderstorm about 3 miles west of Two Guns along I-40.

Aug 24th:

Yavapai County during the early morning hours caused flooding near Wickenburg along Martinez Wash. Portions of Rincon Road were closed. Flooding was also reported in the evening along Highway 191 between mile markers 322 and 324.

Aug 26th:

Training storms developed over portions of Yavapai County and the Doce fire scar during the afternoon hours. Significant flows with runoff from the Doce fire scar were reported along Mint Wash with water primarily remaining within the creek banks. Heavy rain also caused minor flooding in east Flagstaff from near 4th St. to Townsend-Winona Rd. Elevated water levels also impacted the Schultz fire scar. During the evening hours, heavy rain producing storms moved into the Grand Canyon region and flash flooding was reported along Garden Creek at Indian Gardens with minor damage. Flash flooding also impacted Deer Creek north of the Colorado River where boulders were moved downstream and 15 rafters were unable to return to their camp. Lastly, flooding also impacted Supai Village. The nearby stream gage rose to a stage of 17 feet and Supai police reported minor flooding of foot bridges. A strong storm also impacted

portions of Navajo Nation near Kayenta between 7:30 to 8:00 pm MST and a storm spotter in the area reported seeing a funnel cloud.

Aug 27th:

A severe thunderstorm produced quarter size hail in Kachina Village around 12:45 pm.

Aug 29th:

Areas of heavy rain impacted mainly portions of Yavapai and Gila counties throughout the evening hours. Radar estimated 2 to 3 inches of rain fell south of Payson near Round Valley, and severe flash flooding was reported in Round Valley. One vehicle was stuck in a flooded wash and a road into Middle Round Valley became impassable. Later, strong storms with heavy rain impacted Yavapai County. Numerous trees up to 14" in diameter were blown down about 5 miles south of Congress, and Constellation Road was washed out north of Wickenburg.

Aug 31st:

Early morning thunderstorms produced heavy rain over portions of the Grand Canyon and Kaibab Plateau. Flash flooding was observed on Kanab Creek as the stream gage north of the Colorado River reported a 10 foot rise and peak flow of 9500 cfs. Thunderstorms over east Flagstaff around midday resulted in a foot of water flooding 4th St. & Cedar St.