



ARKANSAS CoCoRaHS



Annual Report 2014

Arkansas Natural Resources Commission
101 E. Capitol, Suite 350, Little Rock, Arkansas, 72201, Phone: (501) 682-3960

ARKANSAS COCORAHS COORDINATORS

Michael J. Borengasser, CFM
State Climatologist
Arkansas Natural Resources
Commission
State CoCoRaHS Co-Coordinator
(501) 682-3969
michael.borengasser@arkansas.gov

Chris Buonanno
National Weather Service State
CoCoRaHS Co-Coordinator
Central Arkansas Regional
Coordinator
(501) 834-9102 x 224
christopher.buonanno@noaa.gov

Zwemer Ingram
National Weather Service
Northeastern Arkansas Regional
Coordinator
(901) 544-0399
zwemer.ingram@noaa.gov

Marty Pope
National Weather Service
Southeastern Arkansas Regional
Coordinator
(601) 936-2189
marty.pope@noaa.gov

Aaron Stevens
Jason Hansford
National Weather Service
Southwestern Arkansas Regional
Coordinators
(318) 631-3669
aaron.stevens@noaa.gov
jason.hansford@noaa.gov

Nicole McGavock
National Weather Service
Northwestern Arkansas Regional
Coordinator
(918) 832-4116
Nicole.mcgavock@noaa.gov



Before the annual report of CoCoRaHS in Arkansas, remember to promote CoCoRaHS to your friends and in your community. This is time of the annual "March Madness" competition with other states. Last year, Arkansas ranked 21st in numbers of new volunteer observers and 12th on a per capita basis. In 2013, Arkansas ranked in the "top 5" in both categories.

With spring just around the corner, there should be many days to collect rainfall amounts, submit them on line, and see what is happening in the surrounding areas of the county and the State. If you "mothballed" your rain gauge during the winter, it will soon be time to reinstall it.

There's a lot of interesting information on the CoCoRaHS website and a number of videos and slide presentations on "Youtube".

You can follow the competition on the webpage:
<http://www.cocorahs.org/Content.aspx?page=marchmadness15>.

It's time to go

Cuckoo for CoCoRaHS!!

Star Observers

What is a "Star Observer". Basically, this is an individual who faithfully report measurements in his/her rain gauge on a daily basis. For purposes of this report, a "Star Observer" is one who has made at least 360 daily reports in 2014. Thirty-eight (38) stations met this standard.

Station Number ▲	Station Name	Daily Precip Sum in.	Multi-Day Precip in.	Total Precip in.	Daily Snow Sum in.	# of Reports
AR-NW-4	Western Grove 0.1 SSE	39.22	9.72	48.94	0.0	368
AR-BT-3	Bella Vista 2.0 E	38.57		38.57	17.0	365
AR-CR-11	Green Forest 4.4 NE	39.75		39.75	19.7	365
AR-FK-17	Greenbrier 2.4 NNW	47.44		47.44	4.6	365
AR-HM-5	Hope 0.9 SSW	44.39		44.39	2.0	365
AR-LK-1	Austin 2.5 SSE	50.38		50.38	3.0	365
AR-PS-61	Sherwood 1.9 NW	49.65		49.65	5.5	365
AR-RN-11	Pocahontas 5.2 NNE	45.75		45.75	0.0	365
AR-AS-1	Crossett 2.5 NNE	54.24		54.24	1.0	364
AR-BT-12	Decatur 2.6 ESE	43.59	0.14	43.73	12.6	364
AR-FK-11	Conway 2.8 SSE	48.90		48.90	1.0	364
AR-JH-2	Lamar 5.7 NNE	45.93		45.93	1.8	364
AR-LW-2	Smithville 4.4 SSE	43.26		43.26	13.0	364
AR-PS-52	North Little Rock 2.6 NNE	49.48		49.48	2.8	364
AR-PS-58	North Little Rock 2.5 N	43.74		43.74	5.4	364
AR-RN-8	Pocahontas 2.2 NW	40.67		40.67	0.0	364
AR-SB-4	Greenwood 1.4 W	47.90		47.90	7.7	364
AR-SH-11	Hardy 8.0 SSW	44.17		44.17	6.8	364
AR-GL-11	Hot Springs 5.3 SE	44.57		44.57	1.1	363
AR-LE-1	Marianna 3.1 WNW	54.05		54.05	0.0	363
AR-ML-3	Texarkana 5.3 SSW	40.05		40.05	1.0	363
AR-PK-3	Delight 2.2 WNW	57.85		57.85	0.0	363
AR-PS-4	Little Rock 2.0 SE	48.74		48.74	1.0	363
AR-PS-7	Sherwood 1.8 NNW	50.84		50.84	2.5	363
AR-PS-26	Sherwood 4.6 NNW	51.87		51.87	5.6	363
AR-VB-11	Bee Branch 5.4 ENE	45.09	0.44	45.53	3.0	363
AR-WS-24	Prairie Grove 0.5 NE	36.57	0.87	37.44	6.5	363
AR-BN-2	Harrison 5.4 SW	43.89		43.89	23.1	362
AR-HW-1	Nashville 1.0 NE	57.19		57.19	0.0	362
AR-PY-4	Perryville 2.3 SSW	42.30	1.47	43.77	0.0	362
AR-PP-13	Dover 6.9 E	52.03		52.03	4.5	362
AR-PS-16	North Little Rock 1.2 E	50.54		50.54	3.3	362
AR-SC-3	Parks 6.2 ENE	51.21		51.21	0.0	362
AR-ST-3	Mountain View 4.7 SSW	46.43		46.43	15.2	362
AR-FK-16	Greenbrier 2.8 W	43.58		43.58	2.0	360
AR-IZ-1	Horseshoe Bend 2.1 SSW	36.59	3.78	40.37	18.8	360
AR-PL-1	Mena 3.2 WNW	61.67	2.40	64.07	2.3	360
AR-SR-3	Marshall 1.1 W	21.88	4.06	25.94	0.0	360

Special Award

For the past several years, Gerald Hook of Russellville has been submitting, sometimes weekly, monthly reports to the State CoCoRaHS Coordinator. Here is a sample from Mr. Hook's February 24, 2015 report.

TUESDAY - 24 FEBRUARY - 10:10 hours

I ended up with about 3" of snow on the backyard deck. Will need to wait for temps to rise above freezing in order to determine the amount of moisture.

	Historic Average	Last 4 yrs Avg.	2015	2014	2013	2012	2011
February	3.19 in	2.86 in	0.82 in	1.36 in	3.74 in	1.87 in	4.45 in
Year to date	6.34 in	6.21 in	4.25 in	3.09 in	11.67 in	5.06 in	5.00 in
Annual Total	48.59 in	43.94 in		43.72 in	43.60 in	33.13 in	55.31 in

Gerald Hook - Russellville

Annual Precipitation Totals

The average annual precipitation for Arkansas was 47.92 inches in 2014. This is 1.76 inches below normal. Eighty-eight (88) CoCoRaHS stations exceeded that total. Here are the top 5.

Station Number ^	Station Name	Daily Precip Sum in.	Multi-Day Precip in.	Total Precip in.	Daily Snow Sum in.	# of Reports
AR-PL-1	Mena 3.2 WNW	61.67	2.40	64.07	2.3	360
AR-MT-4	Norman 13.4 W	58.89		58.89	0.0	334
AR-SV-2	Lockesburg 9.6 NNE	58.25		58.25	1.2	352
AR-PK-3	Delight 2.2 WNW	57.85		57.85	0.0	363
AR-HW-1	Nashville 1.0 NE	57.19		57.19	0.0	362

The highest one day rainfall total was 11 inches at Batesville station 2.3 NE, in Independence County for the day ending on April 28.

Drought Reports

Other than “moderate drought” in the northeast part of the State in the fall, the year 2014 was spared the drought from previous years, especially 2011 and 2012. Only nine (9) reports were submitted to the U.S. Drought Monitor through CoCoRaHS.

Here are some of the messages sent from Arkansas:

“We are in the beginning of drought one stage as we are short -19.09 inches of rainfall from the years 2011 to 2014, and for 2014 we are already short -4.48 inches. This year we was short -1.56 inches in Jan. 1.69 inches in Feb. and 1.42 inches in March. The cool temp has kept green up from beginning, but with warmer temp. forecast the trees are starting to bulb and the grass is beginning to green which will use most of the top soil moisture we have at this time.”

Lawrence County, 4/1/2014

“Grass and herbaceous shrubbery are drying where not watered. Some trees, such as birches are dropping their leaves. Two deer who visited our garden were lean and were showing ribs.”

Pulaski County, 8/12-31/2014

“The Ponds, creeks and river are the lowest I have seen this time of the year. We had heavy flooding in April, but the rest of the month was mostly dry with the year 2014 about 7.03 inches short of rainfall. The year 2011 - 2014 is about 20.15 inches short. Most cattle farmer will have to watch the hay barn close if we have a bad winter; because pasture is gone. The 2015 spring crops will be hurting for rain if we keep in the pattern that we are in now going into a second stage drought.”

Lawrence County, 12/31/2014

Significant Weather and Daily Comments

Over 70,000 daily reports were logged by Arkansas CoCoRaHS observers in 2014. While observers entered only 31 “significant weather” reports, they entered an astounding number of 7,968 “daily comments”.

“Significant weather” mentioned 12 instances of “minor” or “unusual” flooding. Precipitation amounts converted to “inches per hour” indicated 6 cases where rainfall intensity exceeded 2 inches per hour. In one case in Howard County, an observer reported 2.08 inches in 32 minutes, or *3.9 inches per hour*.

Here are examples of some of the “daily comments”:

12/31/2014 “19 degrees, gusting wind, beautiful sunrise. Monday was a nice day with sunshine all day and the high reached 42 degrees. Wrap up and enjoy New Year's Eve.” Lafa, Greene County

12/31/2014 "Another year gone with the month of December about 1.23 inches short of rainfall. This made the year of 2014 about 7.03 inches short of rain fall and the years 2011 - 2014 about 20.15 inches short of rainfall. See enclosed drought report that will be made later today. Last 24 hour temperature max. 38 and min. 22 degrees F." Smithville, Lawrence County

10/28/2014 "T'storms moved in around 6 a.m. Continued thunder and rainfall until slight cessation @7:45. Still threatening. Much-needed after a warm, dry period of 2 weeks' duration." Conway, Faulkner County

8/10/2014 "Rain and thunderstorms began at 3:20pm Sat, heavy rain and strong winds cause damage and power outage; 24hr Hi 92.9F, Lo 69.5F" Knoxville, Johnson County

7/3/2014 "strong winds preceeded heavy rainfall about 4 pm. wind gust over 50 mph possible, no damage other than some large tree limbs down." Austin, Lonoke County

4/28/2014 "Tornado wiped out my neighbors boat house but left my pier and boat house - and I checked rain gauge is still level - this is my first rain since tornado 4/27" Mayflower, Faulkner County

Hail Reports

Seventeen (17) hail reports were recorded in 2014. One inch (quarter size) hail was reported in Sharp County (6/23/2014) and Izard County (4/3/2014).

The CoCoRaHS website contains instructions on how to construct a hail pad and record hail measurements. Hail pads are also available at the Arkansas Natural Resources Commission address listed on the first page header. Since these pads are fragile, they cannot be shipped to observers.

Snowfall

Three hundred seventy five (375) daily reports of new snowfall were recorded in 2014. The highest one day total was 7.5 inches at Harrison 5.4 SW in Boone County and Horseshoe Bend 2.1 SSW in Sharp County.

The five (5) highest annual snowfall totals are listed below:

<u>Station Number</u>	<u>Station Name</u>	<u>Daily Snow Sum in.</u> ▼
AR-BN-2	Harrison 5.4 SW	23.1
AR-CR-8	Holiday Island 1.3 SSW	21.2
AR-CR-11	Green Forest 4.4 NE	19.7
AR-IZ-1	Horseshoe Bend 2.1 SSW	18.8
AR-BT-4	Pea Ridge 0.2 WSW	17.9

Other Climate Information

The Little Rock National Weather Service (NWS) has a wealth of information regarding all phases of weather and climate. The NWS issues an annual report summarizing the past year's weather. Here is the webpage link: <http://www.srh.noaa.gov/lzk/?n=2014.htm>.

If you want to see what the historic precipitation and temperature records and trends are for Arkansas, as well as other states and the nation, NOAA's webpage "Climate at a Glance" is fun to play with. Its web address is <http://www.ncdc.noaa.gov/cag/>.

Later this summer, it may be interesting to see how drought has progressed (or regressed). The U.S. Drought Monitor provides maps and explanations of drought conditions across the Nation. (<http://droughtmonitor.unl.edu/>)

The Office of the Arkansas State Climatologist has a website - <http://www.climate.ar.gov>. Comments are welcomed.
