The Sunshower

The Official Newsletter for Kansas CoCoRaHS Observers Issue 1 — Summer 2023

Hello from the Kansas Climate Office in Manhattan! Welcome to the first issue of our CoCoRaHS newsletter. We hope you'll enjoy reading out premiere issue and will find the content interesting. We plan on publishing a new issue once per quarter.

We recently finished March Madness, CoCoRaHS' annual, friendly competition amongst states to see who can add the most new observers during March. We did great here in Kansas; we added 83 new reporters, which ranked us in 6th place on the list of most new observers. Minnesota crushed the competition again this year, but I am pleased with our results; it was more than double our best previous showing (37, set last year). We have continued to add new observers in the past two months, and as a result we have added more new observers so far in 2023 than in any other calendar year! Our previous record was 157, and as of this writing we are over 190. Welcome to all of our new observers! We are thrilled to have you join us.

I recently returned from a conference in Colorado where the topic of conversation was CoCoRaHS. I met the fine folks who run the national program and work tirelessly to keep the project going and growing. I learned some interesting things while there, one of which was the importance of having a newsletter to communicate with your state's observers, hence this document! There were some important items mentioned there that I want to bring to your attention.

The Importance of Reporting Zeroes

In April, Kansas had the lowest rate of reporting zero precipitation in the country. We do great when there's rain, but when it's dry, we aren't doing so well. We need your precipitation reports **every day**, zero or not. The problem with a missed report is we don't know if it was because there was no rain, or that there was rain and you were unavailable to report that day. When you report zero, there's no question as to what happened. I recently learned that PRISM, a project based at Oregon State University, generates maps of normal precipitation but only uses stations with complete data records. That is, stations with no missing reports during a month. Kansas' data gets used less often than other states because we have so many sites with incomplete monthly records.

Reports of no precipitation are critical to the Kansas Climate Office as well. Our office makes weekly recommendations to the US Drought Monitor, and CoCoRaHS is the main source of precipitation data. When we receive a zero report, we can be sure that it didn't rain, which helps make the state map issued every Thursday morning as accurate as possible. The map is only as good as the data we receive from each of you.

A Few More Words About Zeroes

Did you know that if you forget to report a zero you can go back and fill it in? There's an option on the Co-CoRaHS web page to enter multiple days with zero precipitation all at once ("Monthly Zeros"). Until you get into the habit of making daily reports, you can add zeroes to all the days in between precipitation days. Please note that a timely report of zero is preferred for the Drought Monitor process just mentioned.

A Comment about Comments

Not many folks in Kansas add comments to their daily reports, but they are of great value to the project. I'm guilty of not adding comments to my reports, but I'm going to start adding them each day. I took a look, and we are getting around two dozen comments a day from our hundreds of reporters. Any added details you have about the weather you observe each day are invaluable. It doesn't have to be limited to just the precipitation amount. Precipitation type, temperatures, cloud cover, soil moisture, frost, dew, floods, drought… it's all worth mentioning. Look for the "Observation Notes:" box on the CoCoRaHS webpage or in the app. Let everyone know what's going on where you are!

Hail Reporting

A recent addition to CoCoRaHS is the ability to include pictures of hail that you observe. When you make a hail report in CoCoRaHS (these are incredibly valuable to the program also; even if it's small hail it's worth mentioning), you will have the option to attach a photo of hail. Make sure when you take a picture you include something as a reference, such as a ruler, a coin, sports ball, or something that gives perspective to the hailstone. A picture of hail in the palm of your hand, while easy to take, is a challenge to interpret; no one knows how big someone's hand is in a picture, so it's impossible to tell how big your hailstones are!

Replacement Parts

If you ever find that part of your rain gauge has been damaged or gone missing, please contact us here at the Kansas Climate Office. We can send you a replacement part free of charge. If something unusual happened to the rain gauge such as large hail which damaged it, please let us know that too. We'd love to see a picture of what happened.

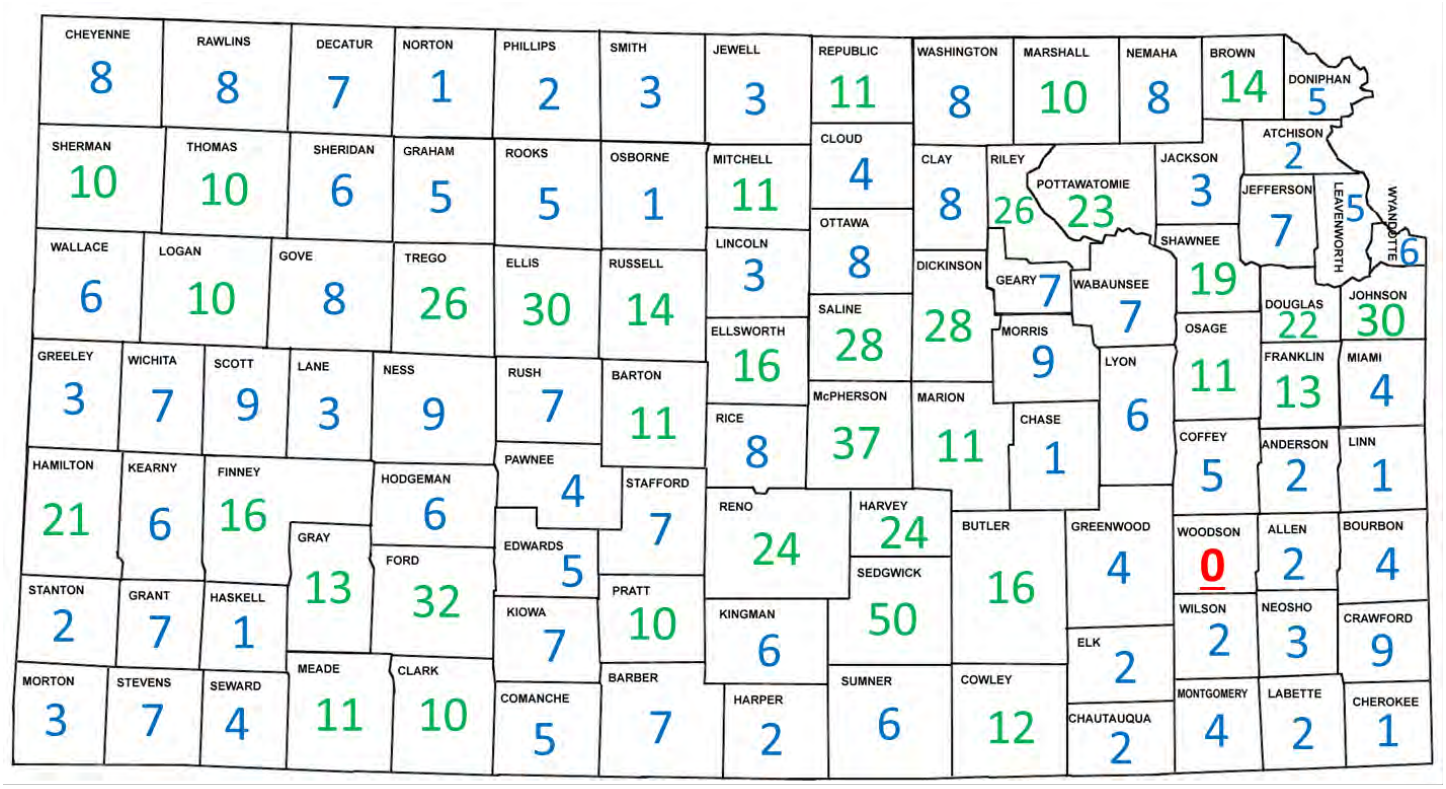
Speaking of Pictures…

One feature we plan to have each issue are photos of your rain gauges. We're looking for images of where you have mounted your rain gauge. It's also great when we can see what the surrounding area looks like, be it just your yard or the fields surrounding your property. Also, if you ever see anything unusual in or on your gauge, such as a bird, bug or beast, we'd love to see a picture of it. Send all pictures in electronic form (e.g., .jpg, .gif, .pdf, etc.) to the e-mail address shown on the bottom of the last page of the newsletter. Make sure to include your station ID (e.g., KS-RL-1) so we can properly credit your picture in the newsletter.

KS-RL-64

Number of Active CoCoRaHS Observers by County

Counts current as of May 31, 2023



The above map includes all active observers who have reported at least once since January 1, 2023. We have just one county without a report this year: Woodson. We have six counties with just one active observer. We would like to increase our counts statewide and have at least 5 observers in every one of Kansas' 105 counties. We have over 30 counties with less than 5 observers, so we have some work still to do. If you know someone in Kansas who would be interested in joining us, especially in a county with few observers, please let them know. By spreading the word about CoCoRaHS you can help increase these totals!

Did You Know?

June 17, 2023 marks the 25th anniversary of CoCoRaHS! It began in the state of Colorado in 1998. Kansas was the third state to join back in 2004. Next year we will be celebrating the 20th anniversary of our state participating in CoCoRaHS.

Participation is not limited to the 50 States. Canada joined in 2012. Puerto Rico joined in 2013, followed by the US Virgin Islands in 2015, the Bahamas in 2016 and Guam in October, 2022.

There are currently over 26,000 active observers!

Kansas CoCoRaHS Observers by the Numbers

(Numbers are current as of May 31, 2023)

Number of active CoCoRaHS observers	1094
Number of active observers who made at least one report in 2023	1003
Number of active observers who made a report in May, 2023	971
Number of new CoCoRaHS applicants in 2023	182
Number of new applicants in 2023 who have yet to report	53
Number of new CoCoRaHS applicants for March Madness 2023	83
Number of March Madness 2023 applicants who have yet to report	28
Number of observers active in 2022 who have not reported in 2023	161
Number of hail reports made by Kansas observers in 2023	31

Most daily observations at an active CoCoRaHS observing site

Rank	Count	Site
1	6662	KS-DC-1
2	6652	KS-DC-2
3	6584	KS-RL-1
4	6573	KS-PR-2
5	6545	KS-SH-16
6	6471	KS-FO-3
7	6450	KS-NS-6
8	6408	KS-EL-6
9	6342	KS-JO-6
10	6335	KS-EL-1

Number of active observers who have made at least X number of observations

Count	# Observers
6000	22
5000	85
4000	139
3000	202
2000	272
1000	418
500	563
250	727
100	849
50	925
10	1039

Highest CoCoRaHS Precipitation Totals

March 2023

Rank	Total	Site	Location
1	3.73″	KS-DG-13	Lawrence 1.6 ESE
2	3.52″	KS-DG-74	Lawrence 2.5 W
3	3.42″	KS-DG-10	Lawrence 2.2 W
4	3.37″	KS-WY-11	Kansas City 4.9 WNW
5	3.34″	KS-JO-42	Olathe 4.9 NW
6	3.32″	KS-DG-57	Baldwin City 4.6 NNE
7	3.14″	KS-DG-75	Lawrence 1.4 NW
8	3.12″	KS-DG-71	Lawrence 2.1 NW
T9	3.06″	KS-JO-80	Lake Quivira 0.6 W
T9	3.06″	KS-WY-13	Kansas City 3.3 E

April 2023

Rank	Total	Site	Location
1	5.23″	KS-FR-21	Ottawa 5.6 SW
2	4.28″	KS-MS-17	Waterville 0.2 ENE
3	4.16″	KS-MS-15	Summerfield 0.3 NW
4	4.03″	KS-MS-5	Blue Rapids 0.2 WSW
5	3.95″	KS-SN-9	Topeka 5.5 SE
6	3.71″	KS-BR-5	Hiawatha 5.7 W
7	3.54″	KS-LV-9	Leavenworth 3.8 SSW
8	3.38″	KS-LV-10	McLouth 4.7 NE
9	3.34″	KS-BR-4	Hiawatha 6.6 WNW
10	3.15″	KS-WB-10	Maple Hill 11.1 S

May 2023

Rank	Total	Site	Location
1	9.07″	KS-RA-27	Ludell 5.4 NNE
2	8.54″	KS-SH-16	Goodland 10.3 WNW
3	8.53″	KS-FR-3	Princeton 2.0 NE
4	8.38″	KS-FR-22	Ottawa 1.1 SSE
5	8.12″	KS-SN-43	Topeka 9.7 W
6	7.90″	KS-OS-13	Scranton 6.7 SE
7	7.84″	KS-RA-24	McDonald 0.2 N
8	7.79″	KS-WL-18	Fredonia 0.4 SE
9	7.72″	KS-SH-21	Goodland 12.1 NW
10	7.55″	KS-DC-8	Oberlin 7.9 N

Note: Inclusion of stations in this table is limited only to those stations with at least 90% data completeness for any given month or 3-month period.

March 1 — May 31. 2023

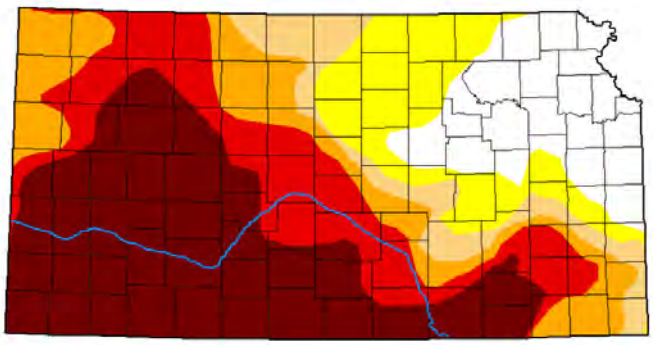
Rank	Total	Site	Location
1	14.08″	KS-FR-28	Ottawa 6.3 SSW
2	12.31″	KS-OS-13	Scranton 6.7 SE
3	12.29″	KS-FR-22	Ottawa 1.1 SSE
4	12.09″	KS-DG-10	Lawrence 2.2 W
5	12.00″	KS-SN-9	Topeka 5.5 SE
6	11.99″	KS-DG-71	Lawrence 2.1 NW
T7	11.97″	KS-DG-61	Baldwin City 0.6 W
T7	11.97″	KS-DG-74	Lawrence 2.5 W
9	11.95″	KS-DG-3	Lawrence 2.9 NW
10	11.83″	KS-DG-13	Lawrence 1.6 ESE
11	11.82″	KS-SN-43	Topeka 9.7 W
12	11.80″	KS-DG-73	Lawrence 3.8 W
13	11.65″	KS-FR-10	Pomona 3.0 NW
14	11.56″	KS-FR-3	Princeton 2.0 NE
15	11.36″	KS-DG-75	Lawrence 1.4 NW

Kansas Precipitation by Climate Division

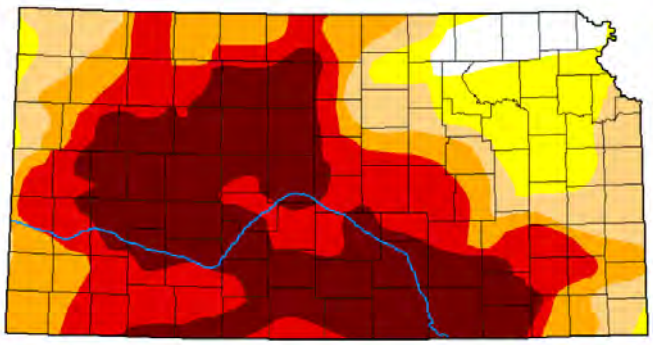
	MARCH 2023		APRIL 2023		MAY 2023	
Division	Avg. Precip. (Departure)	Rank	Avg. Precip. (Departure)	Rank	Avg. Precip. (Departure)	Rank
Northwest	0.48″ (-0.56″)	35th Driest	0.42″ (-1.56″)	7th Driest	5.07″ (+1.98″)	18th Wettest
North Central	0.36″ (-1.16″)	17th Driest	0.91″ (-1.55″)	13th Driest	2.81″ (-1.50″)	44th Driest
Northeast	1.09″ (-1.04″)	36th Driest	2.51″ (-0.97″)	54th Driest	4.13″ (-0.89″)	61st Driest
West Central	0.22″ (-0.89″)	19th Driest	0.85″ (-0.91″)	32nd Driest	3.57″ (+0.68″)	37th Wettest
Central	0.30″ (-1.48″)	12th Driest	0.99″ (-1.48″)	14th Driest	2.84″ (-1.72″)	40th Driest
East Central	1.44″ (-0.95″)	36th Driest	1.60″ (-2.15″)	12th Driest	3.96″ (-1.43″)	46th Driest
Southwest	0.10″ (-1.11″)	6th Driest	1.92″ (+0.25″)	46th Wettest	3.30″ (+0.74″)	41st Wettest
South Central	0.14″ (-1.93″)	5th Driest	1.38″ (-1.24″)	3rd Driest	2.82″ (-1.53″)	42nd Driest
Southeast	1.04″ (-1.71″)	14th Driest	1.26″ (-2.88″)	7th Driest	4.22″ (-1.74″)	50th Driest
STATE	0.54″ (-1.25″)	14th Driest	1.32″ (-1.36″)	17th Driest	3.58″ (-0.63″)	65th Driest

Monthly data are averaged for each of Kansas' nine climate divisions, and aggregated to determine the statewide total. Rankings are with respect to the 129-year period of record from 1895 to 2023. Data are courtesy the National Centers for Environmental Information.

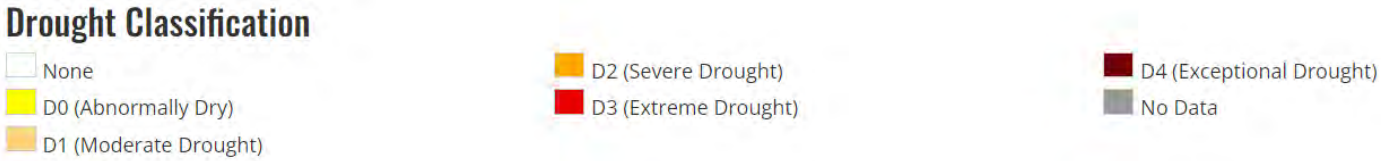
Kansas Drought Status



February 28, 2023



May 30, 2023



Date	Drought-Free	D0	D1	D2	D3	D4	DSCI
2/28/23	15 %	12 %	7 %	13 %	17 %	35 %	311
5/30/23	4 %	11 %	14 %	15 %	25 %	32 %	343

The above table contains the percentages of the state in each of the drought categories at the start and end date of the 3-month period. DSCI refers to the Drought Severity Coverage Index, a composite value that takes the percent of the state in each category and assigns a weight to each. The DSCI ranges from 0 to 500, with higher values indicating worse drought conditions. The maps and tables are courtesy the US Drought Monitor (https://droughtmonitor.unl.edu).

Kansas continues to experience the worst drought in over a decade. Kansas also has the unpleasant distinction of having the worst drought conditions of any US state, in terms of both percentage of D4, the most severe drought category, and highest DSCI. While southwest Kansas has seen some improvement thanks to heavy rain in late April, conditions have deteriorated further east. The DSCI has been over 300 for 37 consecutive weeks, which is the 2nd longest run on record. The DSCI was over 300 for 48 weeks in 2012-2013. DSCI and drought category data only dates back to 2000, so no comparison to previous eras such as the Dust Bowl can be made from US Drought Monitor data.

KS-RL-1

Kansas CoCoRaHS Honor Roll

Between January 1 and May 31, 2023, the following observers surpassed the specified number of daily reports. We are grateful for your dedication and for supporting CoCoRaHS!

6,000	KS-BA-6 KS-SH-4	KS-CA-7	KS-CD-1	KS-NS-5	KS-OS-4	KS-SN-5
5,000	KS-BB-17	KS-BU-14	KS-OS-8	KS-SG-10		
4,000	KS-CF-3 KS-JA-1	KS-CL-12 KS-NM-5	KS-CL-18 KS-PR-14	KS-EL-74	KS-HV-2	KS-HG-5
3,000	KS-EL-77	KS-JO-42	KS-RL-36	KS-SA-13	KS-SG-85	KS-SU-15
2,500	KS-ED-15 KS-WS-2	KS-EL-2 KS-WS-13	KS-GY-16	KS-JO-53	KS-PT-11	KS-SG-114
2,000	KS-BT-29 KS-SG-133	KS-JO-58	KS-MP-36	KS-NO-9	KS-RN-62	KS-SG-130
1,500	KS-BR-9 KS-DP-5 KS-RA-24	KS-CN-10 KS-ED-19 KS-SN-34	KS-CA-5 KS-FR-21	KS-CM-10 KS-FR-23	KS-CL-6 KS-MP-30	KS-DK-53 KS-OS-23
1,000	KS-CD-6 KS-HV-47 KS-RP-10 KS-SN-43	KS-DC-8 KS-JA-3 KS-RP-12 KS-WA-4	KS-DK-42 KS-JO-74 KS-RS-39	KS-EK-5 KS-KW-18 KS-SA-47	KS-FI-38 KS-MP-64 KS-SA-49	KS-GE-9 KS-PT-44 KS-SG-159
500	KS-BU-39 KS-HV-23 KS-RN-72 KS-TR-31	KS-DK-45 KS-HV-27 KS-SA-17 KS-WB-10	KS-DG-71 KS-JW-7 KS-SA-57	KS-FO-71 KS-MP-67 KS-SA-60	KS-FR-28 KS-OT-13 KS-SA-61	KS-GY-40 KS-PR-12 KS-SM-12

The Sunshower is a publication of the Kansas State Climate Office.
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