

CoCoRaHS Activities at the Kansas Climate Office

Matthew C. Sittel
Assistant State Climatologist
State CoCoRaHS Coordinator
Kansas State University
Manhattan, KS





March Madness/Precipitation Absurdity

- 80 new observers in March
 - 2nd place in per capita
 - Our 2nd highest total (83 in 2023)
- 83 new since April 1st
- 170 new observers in 2024 (as of June 6th)
- How did we do it?

It Was a Piece of KAKE!



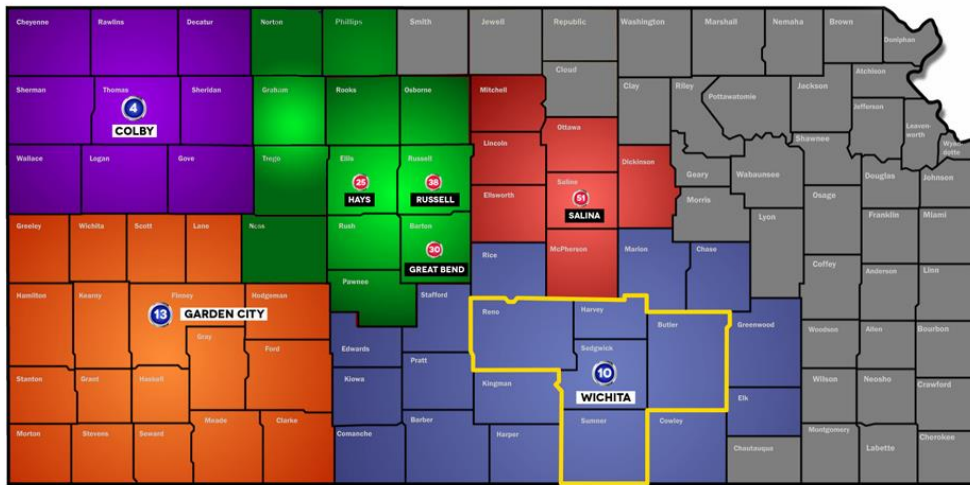
WEATHER TEAM



It Was a Piece of KAKE!

- Promotion on-air and on social media on March 21st
- 31 new observers in the next 24 hours!

KAKE is Good for You!



KAKE **10** WICHITA

KUPK **13** GARDEN CITY

KLBY **4** COLBY

KHDS-LD **51** SALINA

K25CV-D **25** HAYS

KGBD-LD **30** GREAT BEND

K38GH-D **38** RUSSELL

1500 N. West St. Wichita, KS 67203

316.943.4221-Phone 316.943.5493-Fax

www.kake.com

Spreading the Word



Above:

League of Women Voters meeting,
Manhattan, May 2, 2024

Left:

From Farm to You event,
Topeka, Apr. 23, 2024
(with Kris Craven, NWS/Topeka)



The Great Gauge Giveaway

- We supply Stratus gauges to all new observers who request them (“Need Gauge” option)
- We also send free replacement gauges and parts!
- Over 100 gauges mailed in ‘24 this year
- Things were going great until...



The END of the Great Gauge Giveaway

- The budget got tight at the end of FY24
- No Money = No Gauges
- NOW WHAT???



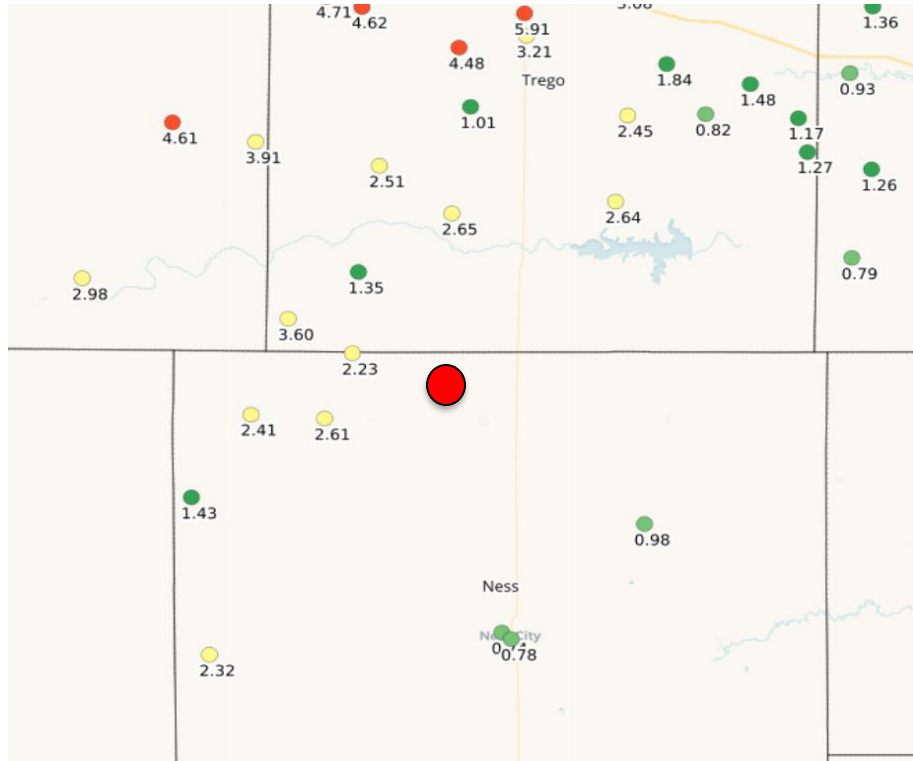
The New, Not as Great Gauge Giveaway

- Limited supply, limited distribution
- Focus on data-sparse areas
- Asked KAKE to not promise everyone a gauge (about 1 in 3 never report even after we send it)

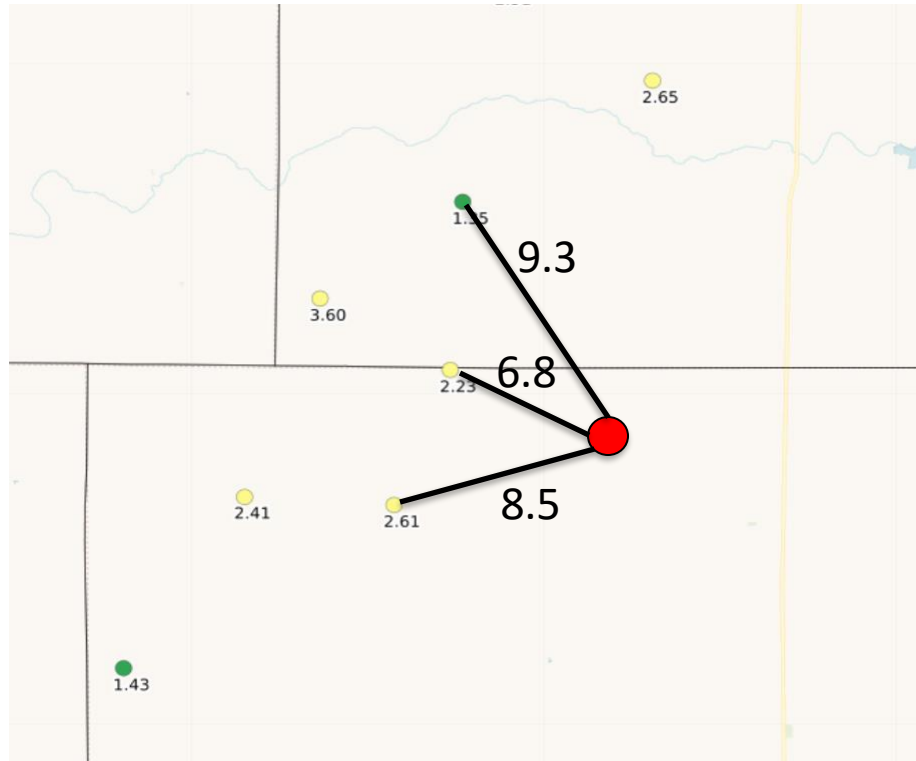
Who Gets a Gauge?

- For each new applicant:
 - Plot their location on map
 - Look around the new observer's location
 - How many other active observers are there?
 - How close are they?

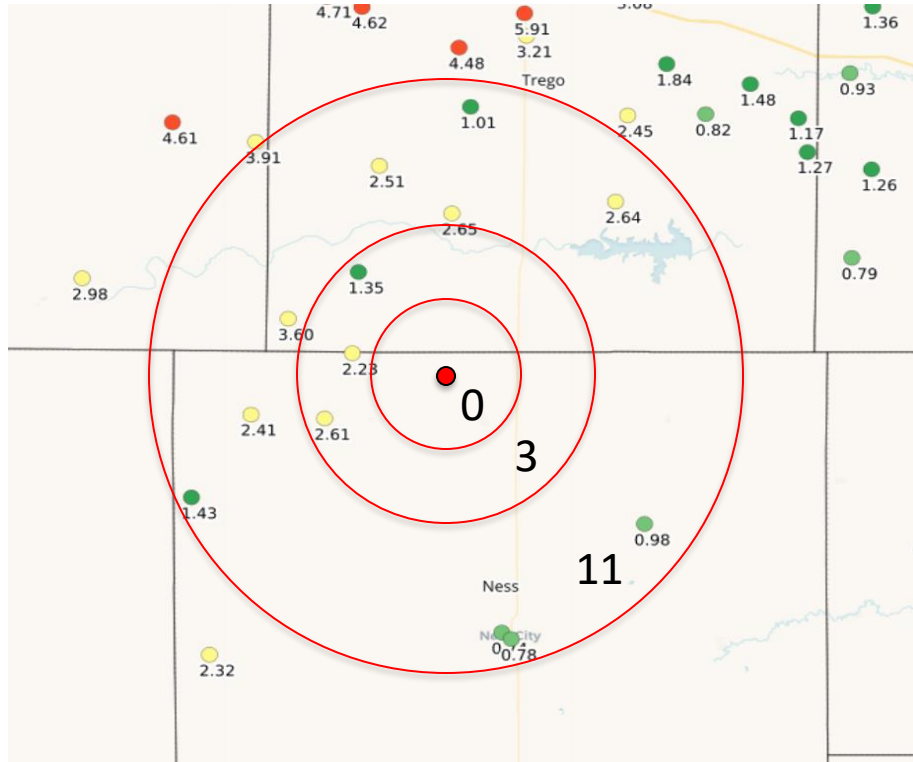
Ransom 2.8 NW



Ransom 2.8 NW



Ransom 2.8 NW



Weighting Formula

$$W = \sum (2W_d + W_r)$$

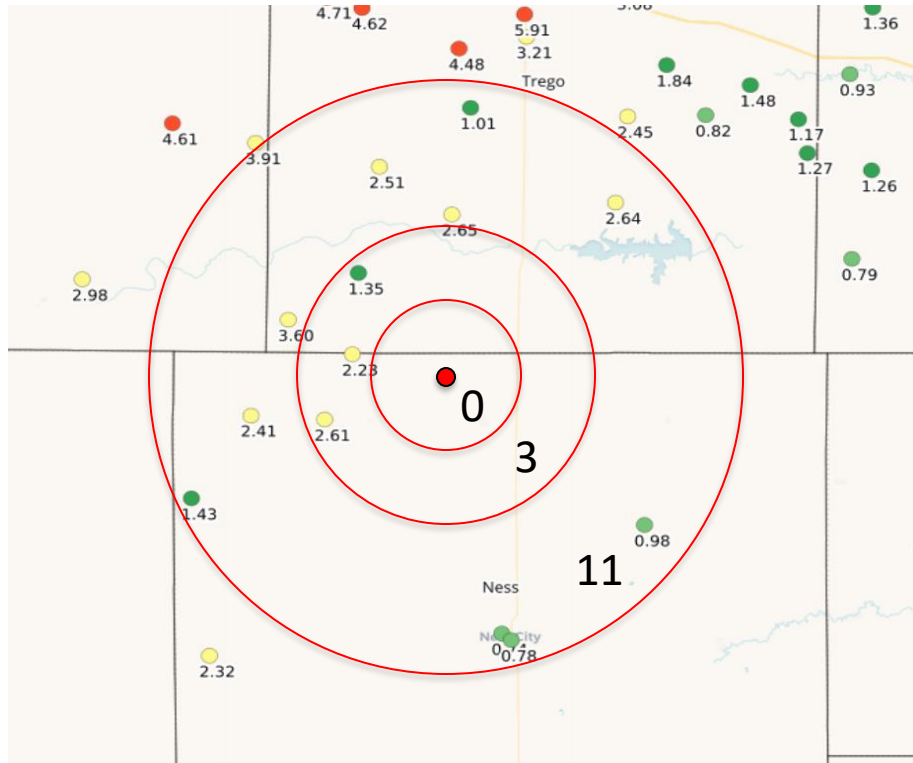
where

$$W_d = \frac{1}{3} \sum_{i=1}^3 \frac{R_1}{D_i}$$

$$W_r = \sum_{i=1}^3 \frac{n_i}{\left(\frac{R_i}{R_1}\right)^2}$$

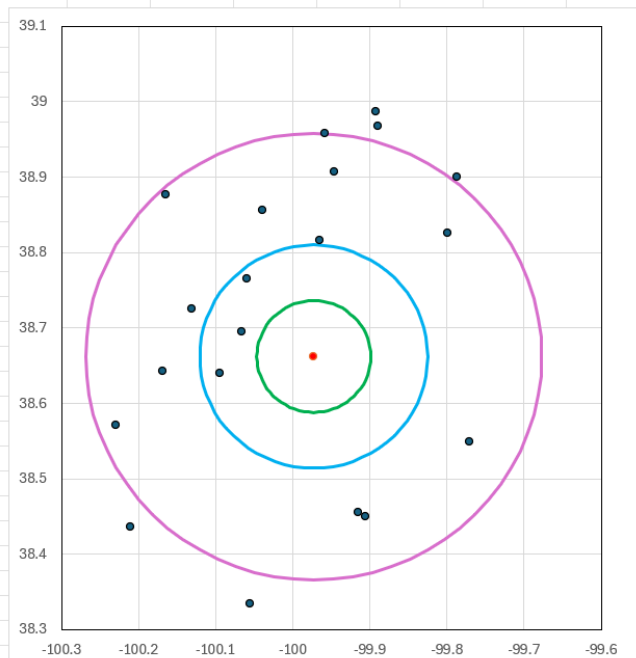
If $W \leq 10$, send gauge.

$W = 2.67$. Send gauge!



Excel Calculations

5	10	20			
0	3	11	WEIGHT	SEND?	
0	0.75	0.688	2.67	YES	
near	near2	near3		Latitude	38.6621
0.73	0.59	0.54		Longitude	-99.973
rank	dist	location	lat	lon	bearing
1	6.85	Arnold 4.8 NNW	38.6956	-100.066	295
2	8.52	Utica 4.1 E	38.63947	-100.094	257
3	9.32	Utica 10.3 NE	38.76537	-100.06	327
4	10.61	Trego Center 5.7 SW	38.81569	-99.9655	2
5	11.76	Utica 6.1 NNE	38.72523	-100.131	297
6	13.59	Utica 0.0 E	38.6428	-100.169	263
7	14.17	Collyer 13.2 SSE	38.85653	-100.039	345
8	14.83	Ness City 0.5 WNW	38.45511	-99.9149	168
9	15.39	Ness City 0.3 S	38.44948	-99.9054	166
10	16.02	Brownell 6.5 SSW	38.54867	-99.7704	126
11	16.45	Cedar Bluff 4.9 NW	38.82578	-99.7997	40
12	17.00	WaKeeney 8.8 SSW	38.90709	-99.9466	5
13	18.76	Utica 5.9 SSW	38.57158	-100.229	246
14	19.85	Quinter 13.6 SSE	38.87699	-100.164	325
15	20.42	WaKeeney 6.1 SW	38.95779	-99.9583	2
16	20.80	Wakeeney 9.9 SSE	38.8997	-99.7875	31
17	21.86	Wakeeney 3.9 S	38.96781	-99.8898	12
18	22.65	Beeler 0.7 SW	38.43598	-100.211	220
19	23.11	Wakeeney 2.6 SSW	38.98716	-99.8919	11
20	23.35	Ness City 11.6 SW	38.33392	-100.056	191

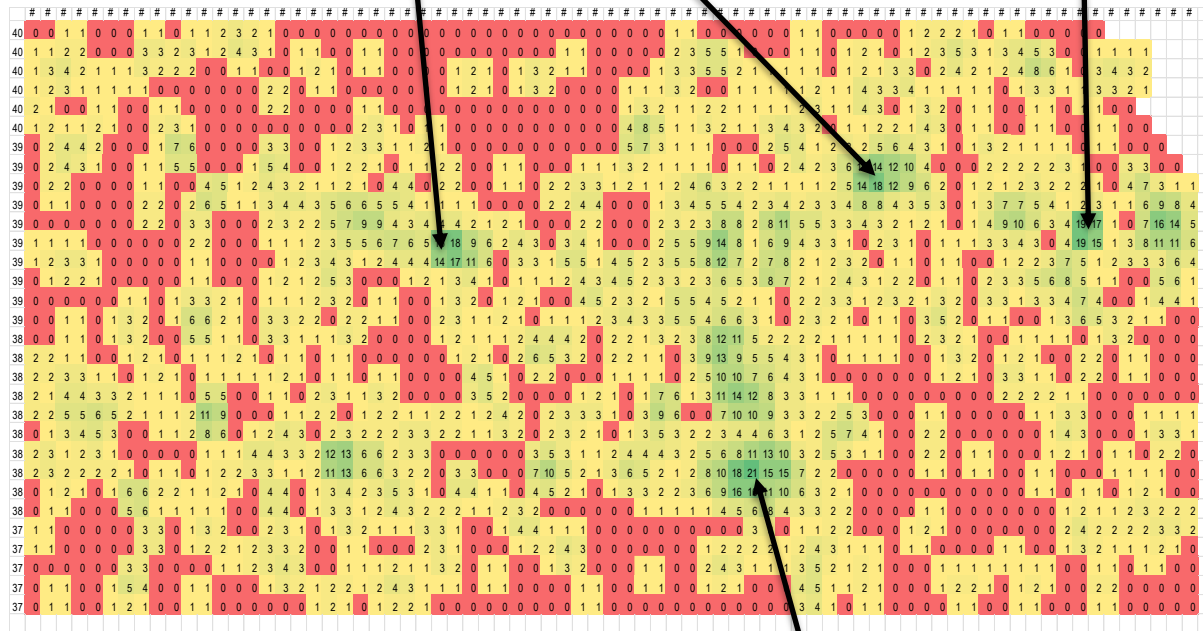


Kansas "Heat Map"

Hays

Manhattan

Lawrence



Wichita

Comments/Questions?

msittel@ksu.edu

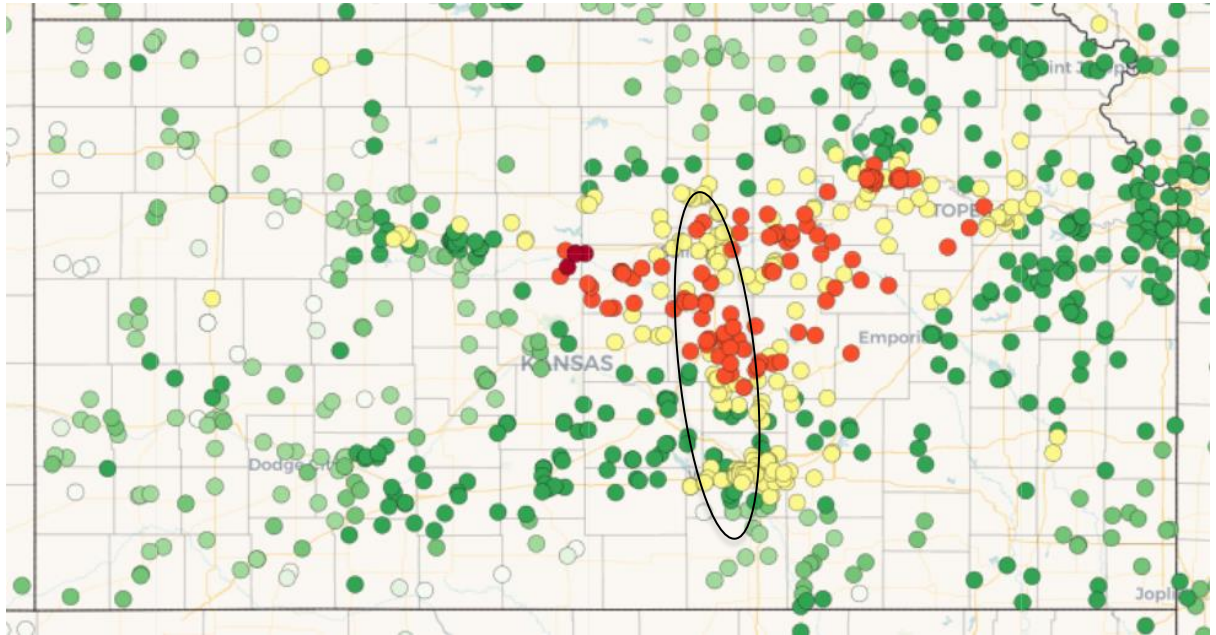


kansamesonet



ksmesonet

Kansas Reporters, May 20, 2024



Kansas Reporters, May 20, 2024

I-135 Corridor

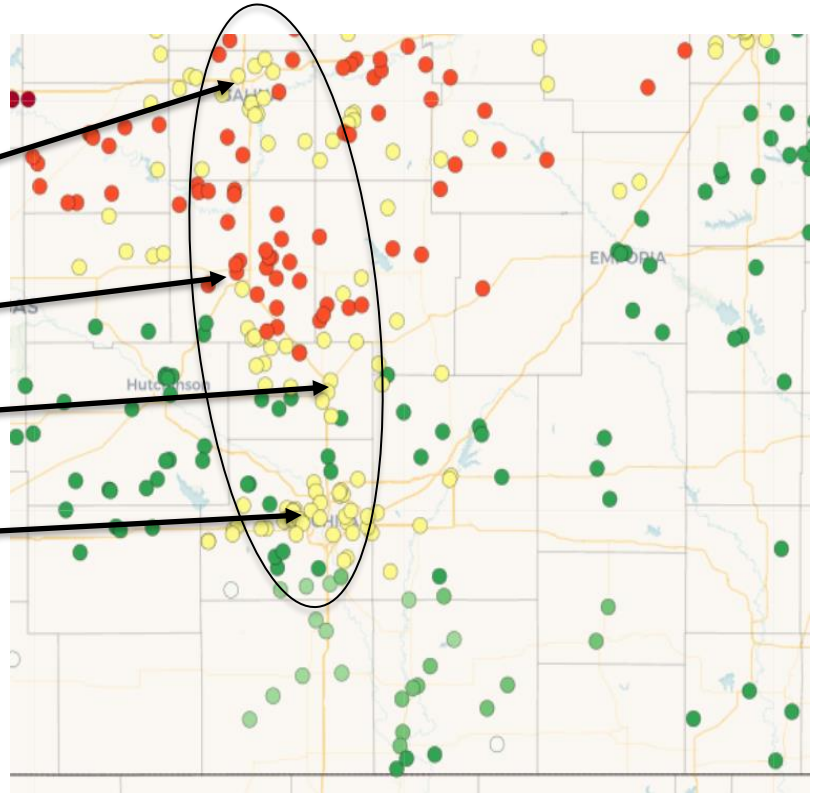
Salina: 46,000

McPherson: 14,000

Newton: 18,000

Wichita: 396,000

Good coverage
in these areas!



Kansas Reporters, May 20, 2024

No observers:

Harper County
Chautauqua County
Woodson County

One observer:

Chase County
Wilson County

Poor coverage
in these areas.

