

# CoCoRaHS Spring 2024

**Peter Goble – Colorado Climate Center – Colorado CoCoRaHS Coordinator**

Hello, Colorado CoCoRaHS observers. I hope you all are doing well, and enjoying this slow Colorado transition from a mild winter to what has been a more typical spring so far. My name is Peter, and I am the CoCoRaHS state coordinator. The following musings are meant to tell you a little more about our annual recruiting drive, “Precipitation Absurdity,” relay some stats from this last winter, introduce you to some of our website’s tools, and have a little fun.



*Our old German Shepherd, Midnight after a few minutes outside 3/24/2024. Do you have pictures of your dogs in the weather? I want to see them!*

## **Precipitation Absurdity!**

March is the month of Colorado's annual CoCoRaHS recruiting drive. It used to be called "March Madness," but due to copyright infringement concerns over the NCAA's 64-team basketball tournament, we have rebranded as "Precipitation Absurdity." It's a fine name, but I liked "March Madness."

"Precipitation Absurdity" is a competition between all fifty states to sign up the most new volunteers (both in raw number, and per capita count). Minnesota is running away with the title for the fourth straight year. They have signed up over 500 new CoCoRaHS observers! I guess it's true that Minnesotans like to talk about the weather.

We have signed up 42 new volunteers in Colorado so far. That performance probably sounds abysmal next to the numbers Minnesota is putting up, but it does put us in a tie for 11<sup>th</sup> place with California; that is respectable. I do think we could do a bit better. I am calling on you folks to spread the word about CoCoRaHS with the couple days we have left and see if we can get to 50+ signups. We may not be able to beat Minnesota, but I think we can beat California! If you have any questions, or need any help convincing your skeptical friend or family member, here are some talking points that might help:

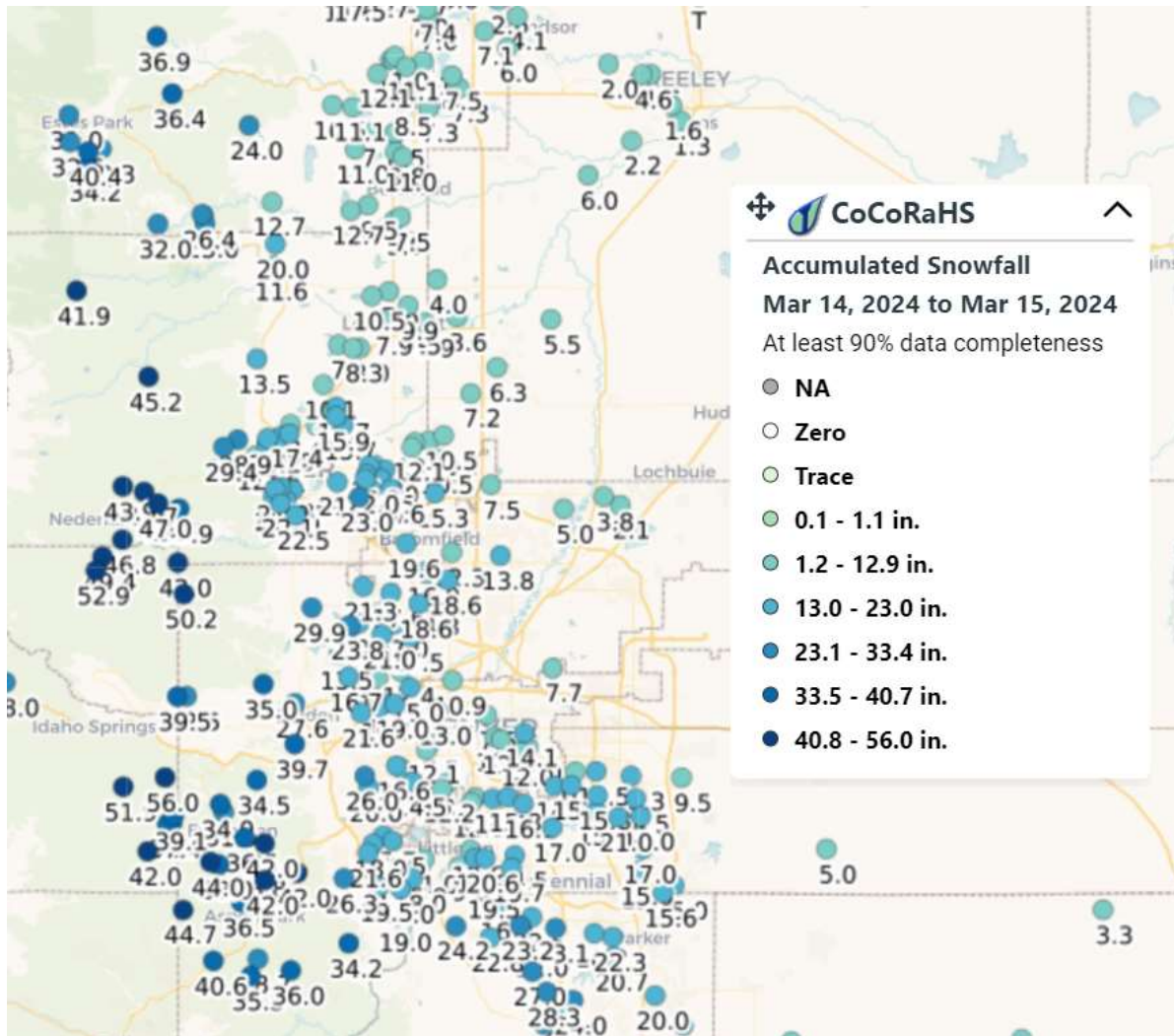
1. CoCoRaHS is a very affordable way to be a part of a larger community. You will be one of over 20,000 volunteers sharing your precipitation data.
2. These data are useful. Our data users include the National Weather Service, emergency managers, climatologists, insurance adjusters, drought scientists, satellite/radar meteorologists, the media and more. You may even see your reports on the local news!
3. It's fun. It's already interesting to watch rain/snow fall and wonder how much will pile up, but CoCoRaHS allows you to dig further into the numbers. Is this storm unusual for this time of year? Is this moisture going to make up for the last month? Is this my largest total ever? Stick with CoCoRaHS, you will be answering these questions for yourself.

## **Winter Recap:**

For those on the Front Range, this has been a fun winter/spring to be a part of CoCoRaHS. We have experienced a wide variety of storms: big snowstorms, snowbands in unexpected locations, freezing drizzle, rain instead of snow. Here is a quick recap of a couple of my favorites:

February 3<sup>rd</sup>: Fort Collins experienced a record wet February with one single event was responsible for most of the accumulation. Was it a huge snowstorm? That's what you would expect in February, but it was a rainstorm with some sloppy, wet snow mixed in.

March 15<sup>th</sup>: Sometimes our Colorado mountains get to measure snow by the foot. This was one such occasion. Areas west of Denver and Boulder near Evergreen and Nederland measured over four feet of snow in just 48 hours. The map below shows some of these impressive totals.



*Two-day snowfall totals March 14-15<sup>th</sup>, 2024.*

March 25<sup>th</sup>: The most recent storm dropped 5-10" of fresh snow on west Denver, but it became even more potent as it moved southward, dropping a foot of snow on Cañon City, an area not known for heavy snowfall. Some of the snowfall totals in the wet mountains and the Sangre de Cristos were even higher, with one observer near Fort Garland reporting 19.2" of fresh powder.

We are not Done: Weather the first two weeks of April is looking unsettled right now. This weekend through Monday, April 1<sup>st</sup> could be snowy west of the Continental Divide (no fooling)! It looks like eastern Colorado will get a cooldown with some wind, but as of now, precipitation is looking marginal. Things can change if the stormtrack goes further south. Early indications are that we could see more snowy weather the first fill weekend of April and early on that week. Tell your friends that if they sign up for CoCoRaHS they will get some hands-on experience quickly.

## Is Winter Precipitation Changing?

For some of us, snowfall is well below average this season despite being above average for moisture. Is this a sign of climate change? Most climate models do indeed predict that average winter precipitation will increase for most, if not all, of Colorado. The main basis for this prediction is that a warmer atmosphere can hold more water vapor, and therefore the individual precipitation events we receive will be capable of dumping greater volumes of precipitation. Warmer temperatures could also mean less snow since there is a very real, physical limit to how warm the atmosphere can be, and still produce snow. Climate change plays some role in every individual storm. Our oceans are already warmer, and our ice caps thinner than they were in the 20<sup>th</sup> century. This winter did feature some events we would expect to become more prevalent with warmer winters: winter rain, rain/snow mixes, perhaps even freezing drizzle. That said, I would continue to expect each winter and individual storm to be its own beast. To learn more about this, please check out our Colorado Climate Center blog. I published a more in-depth piece on what climate change means for our winter storms on our blog last [month](#).

A changing climate makes CoCoRaHS observations more important. If we genuinely want to understand how the climate is changing, we need to take as many measurements in as many places as possible, so we have the best data in place to make sense of our changing environment.

### The Data Explorer:

Since I opened my current station in 2019, I have made 1686 observations. 1575 of those were daily precipitation reports, 37 were multi-day reports, and the rest were covered by a combination of hail reports and conditions monitoring reports. I have received 5.57" of precipitation so far this calendar year, 3.33" of which fell this month. Those are big numbers for my location! My month-to-date precipitation is 295% of normal, my calendar year-to-date precipitation is 253% of normal, and my water year-to-date precipitation is 155% of normal. Did I do all those computations myself? Goodness, no! I mean, I would. Actually, that sounds like fun! But thanks to the new CoCoRaHS data explorer I can be a statistics nerd through very little of my own effort.

*Screenshot of my data explorer.*



You can do this too. Follow these simple instructions:

1. Login to the CoCoRaHS
2. Click on "My Account"
3. Navigate to "My stations" from the top menu
4. Under "My Stations" click on the icon listed below "DEX"
5. Explore!

## How Many Seasons Does Colorado Have?

This section does not tie into CoCoRaHS as nicely as the others, but CoCoRaHS HQ wanted me to write a newsletter, so I get at least one paragraph at the end to rant like a lunatic, and I think some of you might appreciate it. I have heard it said that in New England there are six seasons: winter, mud, spring, summer, fall, and sticks. Mud season describes the season between the melting of the winter's snow and the green up of the beautiful New England forests. Stick season describes the time of year between the leaves falling, and a cold, snowpacked surface developing. I wonder in Colorado if we have five seasons: winter, something, spring, summer, and fall. I do not know what to call that "something," but we are in it now. Any suggestions? The description of "mud season" works for the high country. I am not sure it works for the foothills or the plains though. I do not know what to call it other than "wind season" because March and April are the windiest months of the year for much of Colorado. I do know it does not truly feel like spring until the trees and bushes bud and flower. Here is my unofficial calendar for the low elevations of northern Colorado:

Winter: Monday after Thanksgiving – Second Friday of March

Wind: Second Saturday of March – Third Friday of April

Spring: Third Saturday of April – Second Friday of June

Summer: Second Saturday of June – Labor Day

Fall: Day after Labor Day – Sunday after Thanksgiving

What is clear is that between about the second week of March and the third week of April we do not seem to be in winter or spring. The temperatures warm and the weather changes, but it takes time for the grass to green and the trees to bud. All the while, we play this game of tug-of-war between nice weather and the return of snow. Only three years ago we had snow all the way into the fourth week of May! This year we appeared to be on track for an early spring, but with snow this week and next, maybe not so much.