

# The Catch

## **COCORAHS – HAPPY NEW YEAR – WATER YEAR 2009 BEGINS**

FORT COLLINS, CO — Wednesday, October 1, 2008

Happy New Year!!

This is an important day for CoCoRaHS as well as for climatologists and hydrologists across the Western states (and other parts of the country as well). Today (October 1) is the first day of the 2009 Water Year!

Many (thousands) of new volunteers have joined CoCoRaHS in the past 12 years is a very important calendar for tracking climate and water. The Water Year happens to be the same as the federal fiscal year – most likely a coincidence.

### **What is the water year?**

The water year is the best approximation of the consecutive 12 months that span the "water storage/water usage" hydrological cycle. The water year cycle is particularly obvious in the Rocky Mountains and western U.S. where snow begins to accumulate at high elevations in October and doesn't melt until the next spring and summer.

Another way to think of the "Water Year" is the resting/replenishing season followed by the growing, harvesting and water-consuming season. As October begins, the summer growing season comes to an end. With the coming of colder weather, evapotranspiration shuts down. In the mountains and the northern states, snows begin to fall. For much of the country and especially the northern states, the months of October through March are months where precipitation from the sky exceeds evaporation from the ground. This means that soil moisture and ground water can recharge. Runoff that reaches the rivers and streams may increase (except in cold areas where the water remains frozen). Then, when next spring comes the temperatures rise again, plants come back to life, snow melts, rivers surge. Then evapotranspiration increases as plants begin to grow. By the summer months, evapotranspiration will once again exceed precipitation for most of the country. This means that soils dry out, river flow may decrease, and little or no water recharges aquifers. Drought becomes especially problematic when precipitation falls short of expectations during the spring and

summer months. By next September, crops will be harvested, temperatures will again cool, and yet another water year will come to an end.

### **Water Year Reports!**

A tradition that we have developed in CoCoRaHS (especially among our Colorado volunteers) is to start off the New Year by taking stock of what we have observed in the year just ended. This is a time when we review our reports for the past year (the 2008 Water Year). Using CoCoRaHS data analysis tools under "View Data" such as the "Station Precipitation Summary Report" or the "Station Snow Summary Report" we can look at all of our reports from the past year. Check for any missing days that we forgot to type in and check to make sure our entries were correct. This is a good time to use the "Monthly zeros" report to fill in zeros for the dry days when you never got around to reporting.

Then it's time to compile our "Water Year Report". This is a summary that we may choose to prepare that shows: 1) precipitation totals for each month, Oct 2007 through September 2008, 2) the number of days with measureable precipitation (0.01" or more) for each month, 3) the total new snowfall for each month, 4) the total number of days each month with measurable snowfall (0.1" or more) and 5) Water Year totals for each category. If you compile a Water Year Summary for your station, please remember to label it with your station name, number and the year.

Some of you have this down to a science because starting at 7 AM Sept 30th, e-mails began pouring in with "Water Year Reports" from all across our region. So far, the least precipitation I have seen from stations with 12 complete months of data was around 10 inches and the most was up around 70 inches. Now that's real rain.

Of course our computer could generate these reports automatically for everyone. Maybe some day we'll get the programs written to do that. But it's easy and very informative to do it yourself. It's a great way to double check the accuracy of your data and put the year in perspective. I've noticed that some of you have been comparing 2008 to previous years to see how much wetter or drier it was for you. Good job!

### **Warning -- Don't clobber our database :-)**

We are overdue for a database upgrade. You may notice that it's taking longer to chug out some of the data reports. We now have tens of thousands of maps and millions of precipitation reports in our database. Until we make some changes,

it's going to take more time to crunch numbers. So as you review your data, it may be best to review only a month or a few months at a time rather than doing the whole year at once.

## **New Year's Resolutions**

In the tradition of New Year's Day, this is also a good time to look ahead and consider ways to improve. Here are some of my CoCoRaHS "resolutions".

Make better maps where we can view and compare rainfall totals for selected weeks and months (as well as the daily maps).

Create graphs that show precipitation accumulations and comparisons to average for any and all stations.

Have the rest of the country join CoCoRaHS so we can track rainfall and snow patterns across the entire country.

Get more CoCoRaHS reports from sparsely monitored areas.

Surpass 10,000 precipitation reports every day.

Meet more of you in person and participate in more CoCoRaHS social and educational programs.

Achieve stable funding so that our small staff that makes CoCoRaHS tick can continue working with enthusiasm and confidence.

We still have unfinished "resolutions" from past years and you probably have some good suggestions to add to this list. But we'll keep plugging.

## **The trip to Upper Michigan was great**

My wife and I had a wonderful and relaxing time in Upper Michigan last week. The weather was great, the Great Lakes were gorgeous, the leaves were just starting to change color, and there was peace and quiet. It is the first time since our first child was born that we waited until autumn to take our vacation and it was worth it. But since our kids are on their own now (except for those college tuition bills), I reckon we can leave whenever we feel like it -- provided we can find someone to do the chores here at our little "farm".

For most of my life I've spent more time writing than reading, but this year I made

up my mind to take some vacation time to sit down and read. The book I chose was not exactly uplifting, especially in light of our current economic challenges. "The Worst Hard Times" described the life and times of the southern Great Plains settlers as they contributed to and then tried to survive the Great Depression and the Dust Bowl. The story is real to our family since my wife's mother's family were Great Plains homesteaders and my recently deceased mother-in-law had to leave her family and the homestead at age 14 in 1936 to try to make a better life in Denver. Her descriptions of the great, ominous rolling billows of dust will always stay with me. All nine of the kids in her family survived, but most ended up leaving the "prairie".

I also read another book about life on the Plains. This was equally depressing. "The Children's Blizzard" described the northern plains blizzard of January 1888 and the incredible hardship it brought to those early settlers – especially the many children who were caught at or on the way home from their prairie schools. One of our CoCoRaHS volunteers sent me that book as required reading since it contained a lot of history on the early days of weather observing and forecasting in our country. Thanks so much for the book.

### **The right number of animals**

We arrived home from Michigan to find the right number of animals in the yard, the chicken coop and the barn -- no shortages and no unanticipated additions (and both have happened in the past). Our farm sitter did mention a llama to my wife -- I hope nothing comes of that :-)

Our young chickens are now starting to pop out eggs each day -- small, but plentiful. If I rig up a light and timer in the chicken coop soon, we should have plenty of eggs to eat and share all winter.

### **Too many tomatoes and can't remember who we loaned our food drier to**

We planted too many tomatoes. Right now about 50 tomatoes are coming ripe each day. I'm sick of tomatoes and getting sores in my mouth, but they just keep coming. We like drying the small ones in our food drier to eat during the winter, but the drier disappeared and we couldn't remember who we loaned it to. Fortunately, I suddenly recalled that our son was planning on making some venison and goose jerky last winter. Sure enough, he had the food drier at his place. We're back in "sun dried tomato" mode.

## **Getting along**

Thanks, again, for all the kind words so many of you sent as we deal with the death of our co-worker here at the Colorado Climate Center, Odie. We're getting along as we must but we still aren't too productive. Odie, we miss you and we're grateful for the 30 years of working together that we enjoyed.

## **California!!**

On a brighter note, the applications from new volunteers are now rolling in from California. October 1 marks the official start of the California CoCoRaHS network. I am pleased to report that several of the new recruits are friends or family members of CoCoRaHS volunteers from other parts of the country. So continue to spread the word and see how quickly we can find our first 1000 volunteers in CA.

## **A pleasant autumn**

Fall can be the absolute most lovely time of year in most of the country. Savor these days, as the cold, and dreary days of winter lie surprisingly close at hand.

Best wishes to all,

Nolan