



THE SOUTH TEXAS REGIONAL COCORAHS NEWSLETTER

NWS
Corpus
Christi



Fall 2014
Edition

Summer Rain Aides Drought

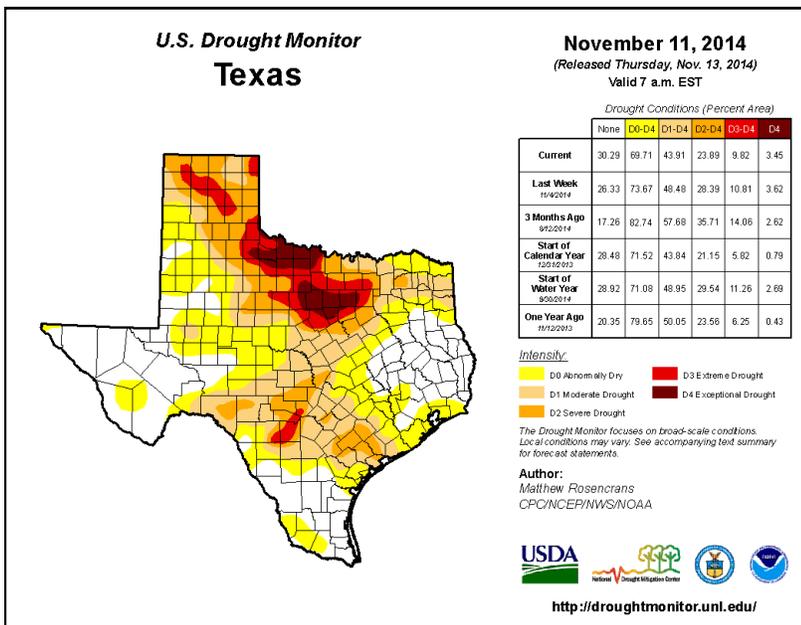
Christina Barron

Recent rains from multiple bouts of deep tropical moisture have helped out the drought across the U.S. greatly these past few months, more so in the month of September.

been made to the drought status which has plagued South Texas for the past few years. As of early November 2014, Webb, Duval, Jim Wells and *(continued on pg. 2)*

Being the normal wettest month, South Texas averaged 4 to 10 inches of rain in the month of September across much of the area, with the exception of the northern Brush Country and inland coastal plains which averaged 2 to 4 inches.

Along the Coastal Bend, rainfall amounts of 10 to 15 inches were experienced, leading to localized flooding at times. As a result of all the rain, improvements have



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El Nino Watch/Seasonal Forecast

Christina Barron

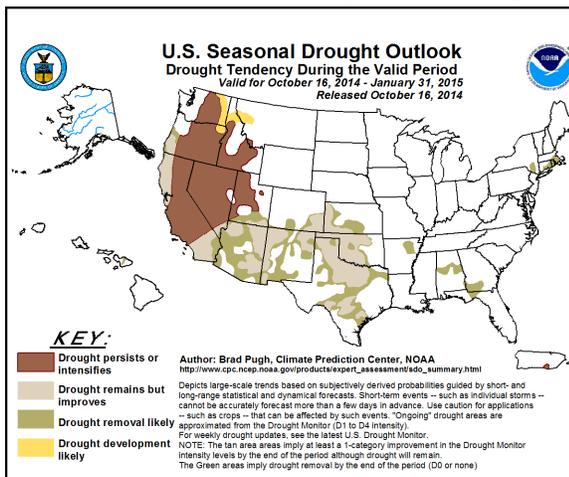
With an ongoing El Nino watch, the latest 3-month Precipitation and Temperature Outlook produced by the Climate Prediction Center (CPC) suggests greater chances for below normal temperatures and above normal rainfall for the November-December-January timeframe.

An El Nino Watch means that there is a greater chance for El Nino conditions to develop. During an El Nino, water temperatures across the eastern Pacific tend to become warmer than normal. This, in turn, lends to increased shower and thunderstorm activity across the central and eastern Pacific. The changes in weather patterns at the surface begin to change atmospheric patterns.

What that typically translates to is a cooler and rainy winter season for the Gulf coast of the United States.

But El Nino isn't the only natural phenomenon that affects the weather across

the U.S., especially across the south. Additional natural occurrences involve pressure systems across the Arctic, the Pacific-North American and the Atlantic that change from month-to-month. Any *(continued on pg. 2)*

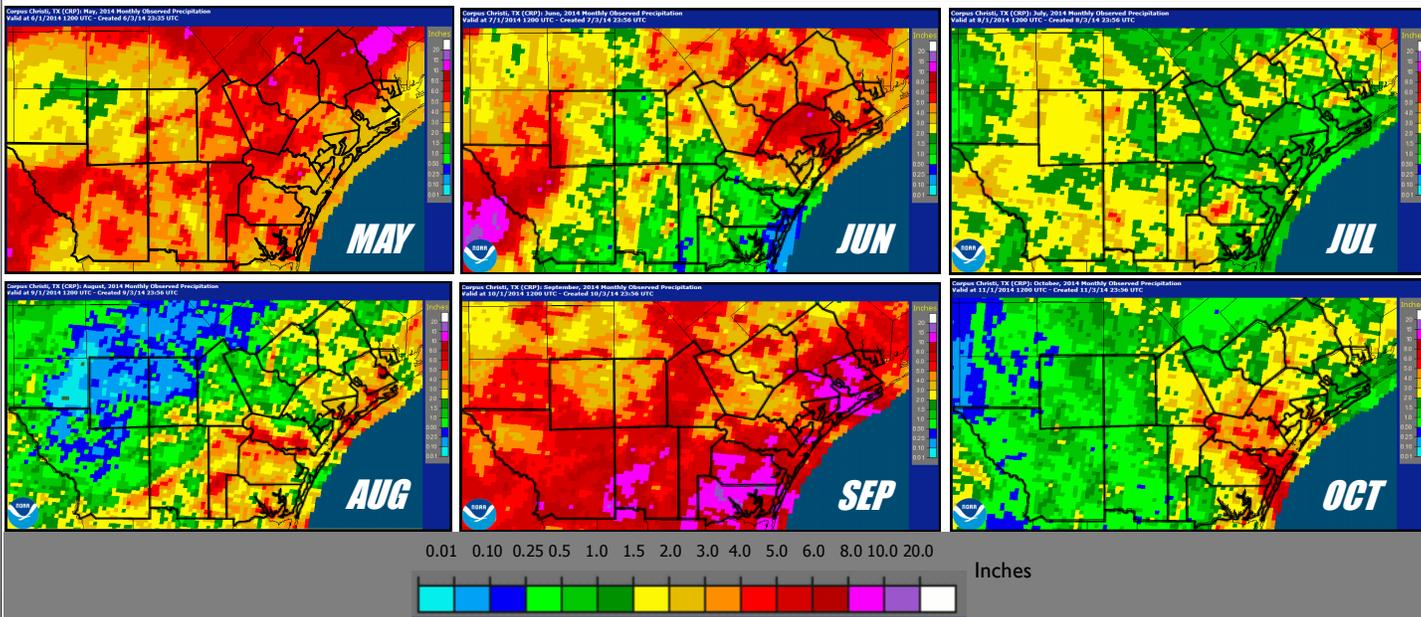




Summer Rain Aides Drought (cont.)

Kleberg counties are considered drought-free, while the rest of locations remain in either Abnormally, Moderate or Severe Drought the further northeast you go.

BELOW: Monthly rainfall graphics for South Texas from May to October.



El Nino Watch/Seasonal Forecast (cont.)

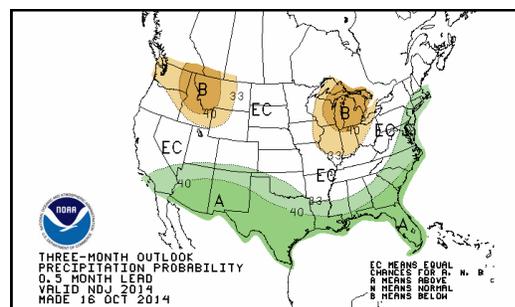
of these in addition to the El Nino could either enhance or reduce weather impacts. The Arctic Oscillation (AO) follows high pressure and low pressure systems across the Arctic. A negative anomaly means that high pressure resides over the arctic with lower pressure further south, creating more of an active season with cooler temperatures across the southern states.

In addition, the Pacific-North American Oscillation (PNA) relies upon the strength and position of pressure systems across the Aleutian Islands and across the Rockies. In a positive phase of the PNA, strong high pressure exists across the Rockies, with deepening low pressure troughs across the northern Pacific Ocean and the southeastern U.S. These troughs help bring colder air from the north farther south.

And the North Atlantic Oscillation (NAO) focus on the strengths of low pressure across Iceland and high pressure across the Azores. In a positive phase, stronger than normal low and high pressure reside across Iceland and the Azores, respectively. This creates strong westerly flow in the upper atmosphere, which quickly move weather systems east out of North America keeping much of the southeastern states warm.

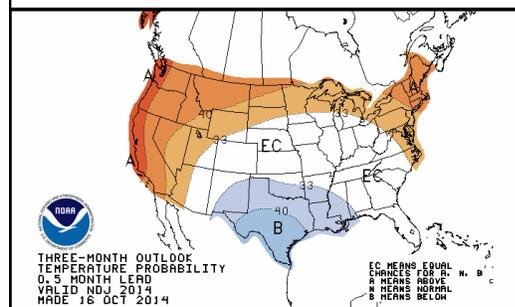
However, in a negative phase, weaker than normal low and high pressure reside over these locations creating a weaker westerly flow aloft. With this, cold air would be able to build up over Canada and move south with a deep trough, bringing colder air to the southeastern states.

So with an impending El Nino season, an influence from any of these other parameters could might as well bring an even cooler and wetter winter may just well be underway.



ABOVE: CPC temperature outlook for Nov –Dec-Jan. Current outlook shows a 40% chance of cooler than normal temperatures for South Texas.

BELOW: CPC outlook shows at least a 40% chance of drier conditions over south Texas region from Nov-Dec-Jan.





Who Uses CoCoRaHS Data?

Juan Alanis

This is a frequent question asked by CoCoRaHS observers: "Who actually looks at the data we submit online?" The number of organizations and agencies that use your CoCoRaHS data may surprise you. Below are just a couple of examples.

ously receives your "Significant Weather" and "Hail reports" to aid in severe weather prediction, warning and verification. This is why CoCoRaHS strongly encourages volunteers to make use of the "Significant Weather" and the "Hail" report forms whenever severe weather is occurring.

1) Meteorologists:

Forecasters here at the National Weather Service use your CoCoRaHS data to help their weather prediction and verification. Believe it or not, forecasters like to know how their forecasts work out. CoCoRaHS precipitation data allows us to see with great detail where it rained, where it didn't and how much. In Colorado where CoCoRaHS started in 1998, forecasters have learned from CoCoRaHS reports that there are some areas that often get more precipitation than others under certain weather conditions. They have been able to refine their forecasts thanks to these improved detailed local observations. The National Weather Service here in Corpus Christi instantane-



2) Hydrologists:

CoCoRaHS data is used in hydrologic prediction. Hydrologists whose job it is to predict stream flows, river levels, reservoir volumes, water supplies and flood potential use all the precipitation data they can get their hands on to try to improve their forecasts. Hydrologists all across the U.S. look at CoCoRaHS data on a regular basis.

Regular hydrologic users include National Weather Service River Forecast Centers, which use CoCoRaHS data every day in predicting river levels and potential flooding all across the country. A critical input to river stage and flow prediction models is "Mean Areal Precipitation" -- the precipitation averaged across a watershed. The more rain gauge reports we get, the more accurately NWS RFCs can assess "Mean Areal Precipitation" and that equates to better forecasts.

A Day in the Life of a Meteorologist at the NWS Christina Barron

Weather never stops, so neither do we. Rings true when you think about it. Weather is not defined as only rain or snow or tornadoes; it's the state of the atmosphere at any given time involving temperature, wind, humidity, pressure, etc.

So when it comes to working with weather, it's one of those songs that never end.

That said, we'll just jump to the early part of the day to begin the journey.

The best way to understand the weather is to take observations. At certain NWS offices, we continue to the tradition of launching weather balloons. Twice a day across the world, NWS offices and other weather organizations across different continents, launch weather balloons at the same time. These balloons are connected to instruments known as radiosondes that take measurements involving temperature, pressure, and



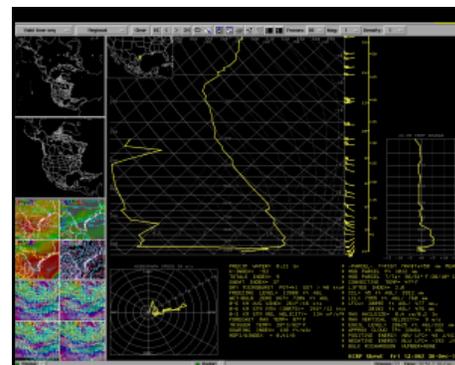
Preparing to launch a weather balloon. The instrument being held is known as a radiosonde. This instrument will collect data as it travels through the atmosphere.

relative humidity, as well as wind and wind speed using a small GPS inside the instrument.

These observations are recorded twice a day at 12Z and 00Z (Zulu time) which translates to 5AM and 5PM respectively in CST (6AM and 6PM in CDT). Rain or shine, these observations are taken, however exceptions are made especially during thunder-

storms due to safety concerns with lightning.

Collecting all of the data takes up to 2 hours to complete, but when all is said and done, all the data is sent to multiple large computers that plug the data into many equations resulting in modeled data an additional 3-4 hours later.



A vertical profile of the atmosphere taken by the radiosonde.

This is where (continued on pg. 4)



Skywarn Storm Spotter Classes

Christi is extending an invitation for all those interested in taking part in free Skywarn training courses. Courses are typically held during the late winter/early spring months before the peak of severe weather season.

NEW ONLINE Skywarn Training Course.

Do you have a full schedule already? Then take the new online Skywarn course. It will cover the basics of becoming a storm spotter. Click on the link to the main website (linked below), review the courses and then email your certificate to our warning coordination meteorologist, John Metz at (john.metz@noaa.gov). It's that easy! Check out the following link for upcoming courses in your area: <http://www.srh.noaa.gov/crp/?n=skywarn>

If there are currently no courses in your area and you would like to see what Skywarn is all about, please email John Metz and we will try to organize a course for your community.

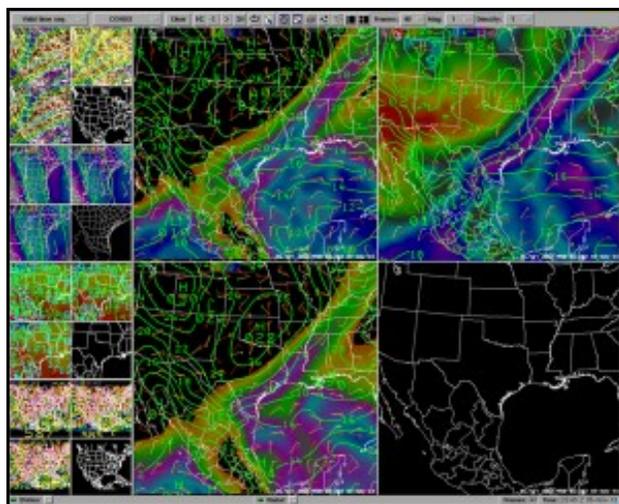


What is Skywarn? Skywarn is a volunteer program comprised of nearly 290,000 trained severe weather spotters. Skywarn spotters provide timely and accurate reports of severe weather to their local National Weather Service office. You'll learn what to look for when observing severe weather, as well as understand the development of severe thunderstorms, tornadoes and flash flooding.

How do I get involved?

Your local National Weather Service office in Corpus

A Day in the Life of a Meteorologist at the NWS (cont.)



An example of the computer model output.

or a strong heatwave. It's a lot of calculations that take time to create the multitude of solutions.

It's the forecaster's job to decipher what the computer models are wanting to do and up to the forecaster to believe or discard the model output.

Meanwhile, there will always be a forecaster on radar duty watching for any shower or storm formation, issuing warnings or advisories if necessary. If weather conditions worsen, additional forecasters will be called in to help.

The day-shift is relieved by the evening crew. The evening forecasters continue to monitor weather conditions while the next balloon is getting prepped for the 00Z launch that evening.

The entire process repeats itself as the new round of forecasters come in for the night.

the forecasters come in. The day-shift forecasters use this new 12Z data for their afternoon forecast package. They compare differences and similarities to previous model outputs including but not limited to the North American, the Canadian and the European models. Each of these models use calculations that introduce small scenarios that when given certain weather conditions could produce a large rain-maker



TEXAS COCORAHS



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National Weather Service Mission Statement:

The National Weather Service (NWS) provides weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community.

Brief National Weather Service History:

The National Weather Service has its beginnings in the early history of the United States. Weather has always been important to the citizenry of this country, and this was especially true during the 17th and 18th centuries.

The beginning of the National Weather Service we know today started on February 9th, 1870, when President Ulysses S. Grant signed a joint resolution of Congress authorizing the Secretary of War to establish a national weather service.

ON THE WEB!

<http://www.weather.gov/corpuschristi>

Stay connected...Be involved

CoCoRaHS on Social Media

National Facebook Page:
www.facebook.com/CoCoRaHS

Regional Facebook Page
www.facebook.com/cocorahsstx?ref=stream&hc_location=timeline

On Twitter:
Texas CoCoRaHS
https://twitter.com/Texas_CoCoRaHS

National CoCoRaHS
<https://twitter.com/CoCoRaHS>



AMS/NWA Local Chapter Membership

Are you a weather enthusiast and interested in meeting and chatting with other weather enthusiasts as well as with local TV and weather service meteorologists? If so, then become a member of the South Central Texas Chapter of the American Meteorological Society (AMS) and National Weather Association (NWA). Annual dues are \$25 (\$15 for students) with meetings held three times a year, in September, January and May. You do not have to be a member of the national AMS or NWA to join. For more information log onto <http://sctxamsnwa.org>

