Rio Rains

The CoCoRaHS Newsletter of the Rio Grande Valley

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NWS Brownsville

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TEXAS COCORAHS

Rain, Rain and more Rain

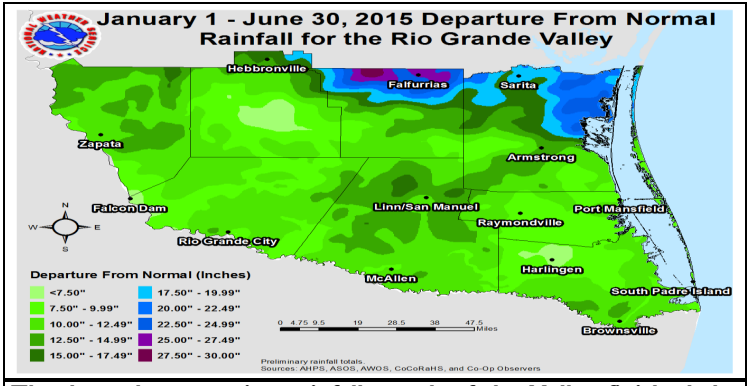
By Juan Alanis

El Niño has given the initials RGV a whole new meaning.....Really Green Valley.

The El Niño pattern allowed a persistent flow of deep tropical moisture to reach the Valley in the form of atmospheric disturbances. The result has been numerous heavy rain events across the Valley that have officially ended the drought that affected the region since autumn 2010.

The month of May had three separate episodes of heavy rains and flooding.

The first was May 11th and 12th across central areas of the Valley. An old cold front combined with ample moisture and jet stream energy that resulted in a deluge for parts of Starr and northern Hidalgo and eastern Brooks Counties. At least a dozen high water rescues occurred in CONTINUED PAGE 2 ——



Thanks to heavy spring rainfall, much of the Valley finished the first half of 2015 at least 7.50" above normal, with Northern Brooks and Kenedy Counties more than 20 inches above normal.

RGV Rainfall Totals (January through June)

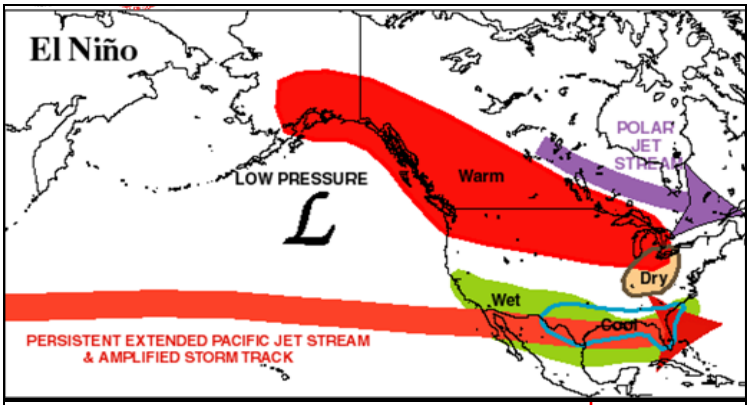
Station	Total Rain	Rank (prior record)
Rio Grande City	23.67"	1st (20.71")
Brownsville	21.27"	1st (20.17")
Harlingen COOP	15.90"	15th
McAllen Airport	17.97"	4th
Port Mansfield	16.09"	10th
La Joya/Mission	20.48"	1st (16.25")
McAllen Water Plant	22.23	2nd

Outlooks show shift in rainy pattern

By Juan Alanis

After record rains during the spring, will 2015 finish with all-time record rain totals for the Valley? The answer to that question remains to be seen. July has turned out very dry, with outlooks from the NWS Climate Prediction Center showing continued dryness through September.

While outlooks are not guaranteed, similar patterns from the past favor a hot and dry late summer. The current moderate El Nino in the tropical Pacific waters has caused a persistent westerly wind shear to become an— CONTINUED PAGE 2—



Map shows typical El Niño pattern for winter (January through March). El Niño will usually bring a persistent flow of moisture from the Pacific and an amplified storm track over southern Texas, resulting in very generous rainfall and cooler than normal temperatures.

CONTINUED FROM Page 1—>Rio Grande City area, plus US highway 83 was closed due to high water. Rio Grande City received nearly 5 inches with this system, while parts of northern Hidalgo got 7 to 9 inches. Over the next several days, northern Duval received 5 to 8 inches.

A second flood event occurred May 23rd-May 24th as a Quasi-linear convective system moved through the RGV. This system dumped 3 to 4 inches of rain in southern Cameron County as well as parts of Brooks and Kenedy Counties. Several areas of Brownsville had flooding issues a result.

Another flood event occurred the last days of May as a line of storms moved in from the north, dumping another 2 to 3 inches of rain in Brownsville and 3 to 4 inches in areas of Alamo and San Juan as well as in Rio Grande City, flooding Hwy 83 and several streets.

After a brief dry week, mid-June brought 6 to 8 inches of rain to areas just east of Edinburg, causing major flooding. Flood waters damaged homes and closed numerous streets, causing around $23 million in damage.

Scenes of flooding across the Valley as the Spring of 2015 brought record rains to the Valley and much of Texas, ending the 4 year long drought.

CONTINUED FROM PAGE 1—> -chored across the western Atlantic and Caribbean, meaning much fewer tropical systems in the Caribbean and the Main Development Region of the Atlantic. Based on past episodes of westerly wind shear patterns, conditions favor a hot and dry finish to the summer for the valley. September is the one "wild card", due to the uncertainty that a rare tropical system could form in the southwestern Gulf of Mexico and bring rains to the valley, or simply a change in the pattern that would allow for at least some chances of rain. September is historically the wettest month across the RGV. Current trends however are favoring a hot and dry September due to the increasing strength of El Niño.

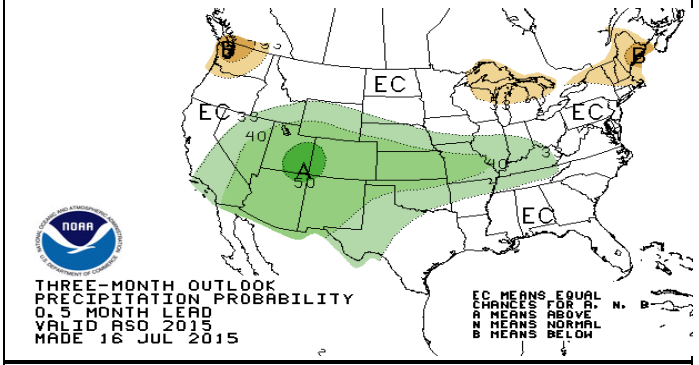
However, should the current strong El Nino persist into fall and winter, a shift back to a wet pattern may occur. Current CPC outlooks calling for a 40% chance of above normal rainfall from October through December for the RGV and much of Texas.

Of course, an El Niño pattern does not necessarily guarantee wet weather. While it favors wet weather, some El Niño years were actually dry. In the fall and winter of 1997, a strong El Niño was underway, yet from November through the end of January 1998, only 2.76 inches of rain fell in Brownsville. During the strong El Niño from November 1982 to January 1983, while Brownville received ample rain with 6.91 inches, McAllen received only 2.44 inches.

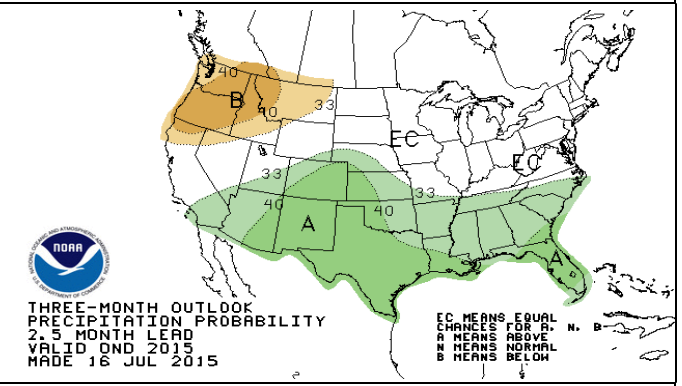
RGV All-Time Yearly Rainfall Records

Station	Rainfall	Year
Brownsville	47.51"	1958
Harlingen	35.76"	1958
McAllen	37.17"	1966
Rio Grande City	48.35"	1967
Falcon Dam	37.02"	1973
Hebbronville	42.75"	1995
Port Mansfield	32.10"	1958
Falfurrias	55.15"	1967

Dry finish to summer, then wet?



Precipitation outlook from the Climate Prediction Center for August through October shows an "equal" chance of below, normal, or above normal rainfall for the Rio Grande Valley. September is historically the RGV's wettest month.



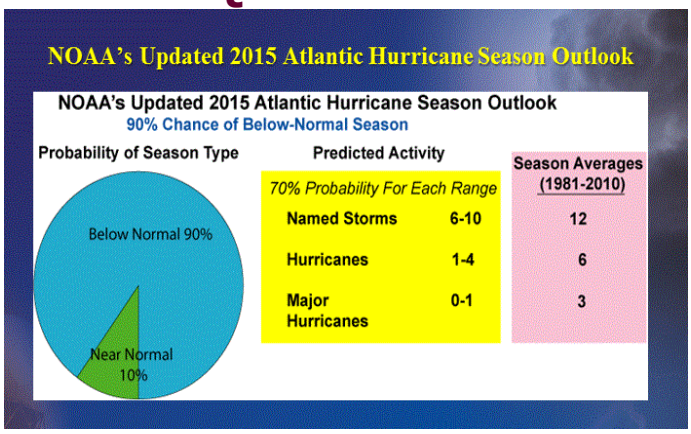
Meanwhile, the outlook for the last three months of 2015, October through December shows a shift toward wetter, with the RGV as well as much of Texas with a 40% chance of above normal rainfall.

2015 Atlantic Tropical Season: Quiet so far

The 2015 Atlantic Hurricane Season got off to an early start as Tropical Storm Ana formed off the Carolina coast in early May, bringing heavy rains and gusty winds to the region. Ana was the first May storm since Tropical Storm Alberto in 2012.

Despite the early start, the season has been very quiet thanks to the current El Niño pattern. The latest forecast update from the Climate Prediction Center, released at the end of July, predicts a very quiet season with 6 to 10 named storms, 1 to 4 hurricanes with 0 to 1 becoming major hurricanes (winds of at least 111mph). So far, there have been only 3 named storms, none of which have reached hurricane status, and none have lasted more than three days. Forecasters are citing the strength of the current El Niño, the higher than normal amount of wind shear and the cooler than normal water temperatures in the main development regions of the Atlantic Ocean.

Forecasters stress however that despite the lack of activity and prediction of continued below normal activity, coastal residents need to be prepared as, " it only takes one." One big damaging storm can make a "quiet" season devastating.



In 1992, only four hurricanes developed with only one of them making a landfall of any kind. This "one" storm was Hurricane Andrew, which devastated southern Florida as a category 5 hurricane. And this "A" storm did not form until the middle of August. It is always best to be prepared for a hurricane.

RGV CoCoRaHS Honors

The National Weather Service in Brownsville would like to give a big THANK YOU to all CoCoRaHS observers for their continued supported to the program. Also a big shout out to the following observers who have consistently reported rain data for many years.

BROOKS COUNTY

#2	Randy Fugate	5 years
#3	Presnall Cage	4 years

CAMERON COUNTY

#1	Geoffrey Bogorad	9 years
#6	Jason Straub	8 years
#8	Sabal Palm Sanct.	8 years
#12	Treasure Hills G. C.	8 years
#13	Gene Novo	8 years
#16	Juan Luis Bonnin	8 years
#21	Michael Sedlachek	8 years
#31	Resaca de la Palma SP	7years
#35	Neil Haman	7 years
#50	Rick Peterson	5 years
#51	A. Rentfro	5 years
#61	Lauren Heiy	3 years

STARR COUNTY

#1	Jimmy Cruz	3 years

HIDALGO COUNTY

#5	Susan Thompson	8 years
#6	Sharon & Rick Ramke	8 years
#9	Donald Egle	8 years
#16	Martin Cordina	6 years
#19	Javier de Leon	4 years
#21	Paul Gabriel	4 years

TEXAS COCORAHS

2015 CoCoRaHS March Madness Results

North Carolina wins this year's CoCoRaHS Cup. Every March, CoCoRaHS holds it's annual recruitment drive to see which state can recruit the most new observers.

This year's competition was a run away at the top, with North Carolina placing first with 151 new observers, followed by South Carolina in a distant second place with 57 and Texas with 56. North Carolina was also the top placer in 2014's March Madness. These results were in the "traditional" division.

As is the case each year, CoCoRaHS March Madness has two divisions: the "Traditional" and the Per Capita." In the "Per Capita" division, the state that recruits the most new observers per one million of it's total state population wins. The idea is to give the less populated states a chance at winning the CoCoRaHS cup. This year's "Per Capita" division winner was North Dakota, followed by North Carolina and New Mexico.

Overall, there were a total of 782 new volunteers nationwide. And eventhough March Madness is over, CoCoRaHS accepts new observers anytime of the year.

Just go to our homepage at www.cocorahs.org and click on "join".

At Right: The CoCoRaHS Cup: Trophy, given to the winner of March Madness recruitment drive.

CoCoRaHS Gardener Guide

Are you a green thumb or a gardener? If so, CoCoRaHS has the guide for you. The CoCoRaHS Climate Resources for Master Gardeners Guide introduces elements of climate important to gardeners. An overview of climate patterns and differences is shown, plus links to local climate information are provided.
Topics covered in the master gardener guide include: Climate and Gardening, Sunshine, Temperature, Humidity, Dewpoint, Precipitation, Evapotranspiration, climate resources and Climate Change.

National Weather Service
20 S. Vermillion Road
Brownsville, TX 78521

Phone: 956-504-1432
Www.srh.noaa.gov/bro

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 had 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 Grant signed a joint resolution of Congress authorizing the Secretary of War to establish a national weather service.