



The Coastal Breeze

Official Newsletter of
National Weather Service - Brownsville/RGV, TX



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The 2013 Atlantic Hurricane Season Forecast: Another Active Season Expected

By Barry Goldsmith, Warning Coordination Meteorologist

Is this a prophetic number, or just a coincidence? In [2010](#), [2011](#), and [2012](#), the number of named storms in the Atlantic basin, which covers much of the North Atlantic Ocean, Caribbean Sea, and Gulf of Mexico (and all adjacent coastlines) was nineteen. With the 2013 season now underway, the [NOAA season forecast](#) is the following:

<i>Named Storms</i>	<i>Hurricanes</i>	<i>Major Hurricanes (Winds ≥111 MPH)</i>
13-20	7-11	3-6

Basic statistics imply the higher the number of expected storms, the better the odds of an impact on any coastline. But is that strictly true? Consider 2011 and 2012 for the Texas coast. Each year, high pressure blocked just about every cyclone or potential cyclone from making impact in the Northwest Gulf of Mexico. Tropical Storm Don (2011) aside, not one tropical cyclone has come close to making landfall in Texas since 2010.

The setup for any hurricane season is a collection of atmospheric “puzzle pieces” (so -to-speak). These “pieces,” which have noted climatological trends, range in size from global to regional. The interaction of these features determines whether tropical cyclones can be created, sustained, or destroyed. Predictability of some of these contributing factors is accurate only out to a few weeks at best.

The final answer of any hurricane season, busy or quiet, is unknown early in the season. By the numbers, 1992 was a “quiet season.” However for the residents of Miami-Dade County in South Florida, Hurricane Andrew will be forever etched in their minds. By contrast, the recent “active” 2010 season resulted in no direct U.S. hurricane landfalls. In short, the memory of whether a season is busy or quiet is always in the mind of those impacted.

For the RGV, you should keep a watchful eye on the potential for the next Beulah, Allen, or Dolly to affect our area. What’s the bottom line? Regardless of the forecast, you need to have a plan when the next “big one” affects the RGV. Be sure to check out our preparedness tips on our [webpage](#).

NWS Drought Forecasts Key in Developing Local Water Management Strategies

By Barry Goldsmith, Warning Coordination Meteorologist

Drought conditions were initially forecast to begin in 2011 after a [record wet water year](#) from October 2009 to September 2010. Regional action was delayed since each reservoir retained more than 100% of capacity during the 2011 spring irrigation season. Record low rainfall in the basin through 2011 began a steady downward trend in water levels. The trend accelerated during the summer and fall of 2012.

[The record-shattering drought of 2010-2013](#) sharply reduced the amount of available water in the Rio Grande River basin and the river's vital reservoirs. By late April 2013, the water level at Amistad International Reservoir near Del Rio dropped to an [all-time record since the dam was built](#). The level downstream at Falcon International Reservoir, the primary water source for the Rio Grande Valley (RGV), fell below 20% of conservation capacity. Periodic rainfall from late April through early May temporarily slowed the reservoir depletion, but the long term trend remained ominous. Levels at Amistad in early June 2013 (36.8%) were ½ those of early June 2012 (73.9%).

By December 2012, our office started to mention the word “crisis” with critical agriculture and water management partners, based on the expectation of another warm, windy, and rain-free late winter and spring. Heading into 2013, requests for seasonal and long-term weather and climate information increased dramatically. These requests involved higher level decision-makers and elected officials from the RGV to the halls of Congress. Why is this important? The population on both sides of the border is projected to more than double, reaching more than 6 million people by 2050.

Communicating potential impacts in an effort to aid decision-makers is the key to building a Weather Ready Nation. For the RGV, weather readiness stretches well beyond tornadoes, floods, wildfires, and hurricanes. Extreme to exceptional drought could threaten the viability of the region in the future. In 2013, NWS Brownsville/RGV was instrumental in influencing key partners and decision-makers to start thinking about comprehensive water management strategies. Our office participated in numerous meetings across the region, bringing the idea of the four “-ations” to the conversation:

Conservation: Educating a growing population to use less water on a daily basis.

Desalination: Finding ways to extract and retain water from underground aquifers and saltwater sources, including the Laguna Madre and the Gulf of Mexico.

Reclamation: Recycling wastewater for non-potable uses (lawn, garden, and some agriculture).

Innovation: Developing water-saving techniques for irrigation and using better methods to manage the distribution of water from the river for agricultural and municipal use.



The long term weather and climate trends, combined with expected population growth and expansion of agribusiness in the RGV caught the eyes of state lawmakers. They are currently investing in the development of a comprehensive, long term water management strategy. We look forward in continuing our work with key partners across our area to mitigate the effects of the ongoing drought to maximize water resources.

Left: Barry Goldsmith speaks to the Board of the Lower RGV Development Council on April 24, 2013. Photo courtesy of Jesse Mendoza– Valley Morning Star.

Congressional Representatives Visit NWS Brownsville/RGV

By Barry Goldsmith , Warning Coordination Meteorologist

For the second time in a year, NWS Brownsville/RGV welcomed a sitting U.S. Congressman to the office for a visit. In June 2012, Congressman Blake Farenthold (R-TX, 27th District) and staff toured the office. In November, elections were held to fill the position for the newly-created 34th Congressional District. U.S. Congressman Filemon Vela and his staff visited the National Weather Service in Brownsville during the morning of March 25, 2013.

Each Representative and their staff was provided with presentations by Meteorologist-in-Charge Steve Drillette and Warning Coordination Meteorologist Barry Goldsmith on the National Weather Service. This included an agency overview, the Weather Ready Nation initiative, and the many ways NWS Brownsville/RGV serves more than 1 million people across the southernmost portion of Texas. Both Congressmen asked a number of questions on topics ranging from tornado and hurricane forecasting to the ongoing drought.

Following the presentation and discussion, Science and Operations Officer Doug Butts gave the Representatives a tour of the operations area. The tour included a discussion of the remodeled operations area which serves as the “hub” of forecasting, decision support, and collaboration amongst staff and partners to improve weather readiness. The tour was followed by a description of how data and computer model information are processed into weather forecasts by the forecast staff.

The congressmen were impressed with the office and staff. Representative Vela stated, “We appreciate the services you provide for our community. Please let me know how I can help, and be sure to include us in any communications when a significant weather event is forecast to affect the area.”

Meteorologist-in-Charge Drillette was equally impressed by the interest and depth of questions posed by both representatives. “We were honored to have Representatives Vela and Farenthold take time to visit our office. They posed many excellent questions in regards to our services and partnerships, and were most supportive of our mission in working to save lives.”



Left: U.S. Rep. Vela (D-TX, 34th District) visiting with Meteorologist-in-Charge Steve Drillette and Science Operations Officer Doug Butts.



Right: Science Operations Officer Doug Butts explains how a radiosonde works to U.S. Rep. Farenthold (R-TX, 27th District).

April Storms Bring Heavy Rains and Damaging Winds to the RGV

By Kirk Caceres, General Meteorologist

Damaging winds and torrential rainfall moved across the RGV during the weekend of April 28, providing the first significant rainfall event for the region since early January.

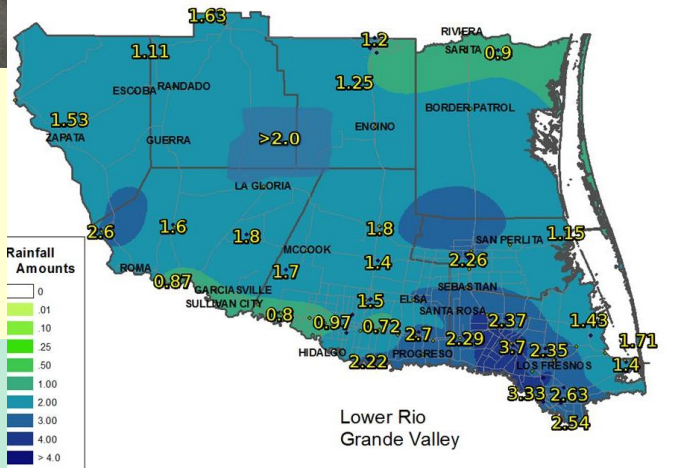
Rainfall amounts averaged from 1 to 3 inches across Deep South Texas, with heavier amounts over portions of the Middle and Lower Valley. The heavy rainfall also broke daily local rainfall records in Brownsville and Harlingen, as shown in the table below. Even though this was much-needed rainfall across the RGV, drought conditions continue. It will take many more events to remove the extreme to exceptional drought conditions that have built up over more than 2.5 years.

Very strong winds accompanied the line of storms as it moved through Hidalgo, Cameron, and Willacy Counties. A microburst developed north of Los Fresnos, causing significant damage to two poorly-built mobile homes and leaving nine people displaced. Wind damage also occurred in Olmito, Rancho Viejo, and northern parts of Brownsville. Most of the damage consisted of dozens of snapped mesquite limbs, several uprooted trees, and at least one leaning power pole. A storm survey indicated estimated peak winds between 60 and 65 MPH.

Location	April 28 Rainfall	Old Daily Record	Highest Single Total Since...
Brownsville/SPI Intl. Airport	2.65 in.	2.43 in. (1989)	August 6, 2012 (3.08 in.)
Harlingen/Valley Intl. Airport	2.37 in.	1.13 in. (1957)	September 19, 2010 (3.04 in.)
McAllen/Miller Intl. Airport	1.12 in.	Not a New Record	October 18, 2012 (1.37 in.)



Left: Storm damage north of Los Fresnos on the afternoon of April 28, 2013.



Right: Rainfall amounts across Deep South Texas from April 27-28, 2013.

Weather Festival 2013 - A Big Hit!!

By Maria Torres, General Meteorologist

The National Weather Service opened their doors on March 16, 2013 to the RGV community for the first time since 1996. Nearly 1,000 people spent part of their day learning about the NWS' core mission to protect life and property from the dangers of hurricanes, hail, flooding, and more. As guests arrived, our staff showed the facilities to adults and children and answered dozens of questions from rapt audiences for nearly six hours. During the event, two mock weather balloon releases were done by Jim Campbell, Data Acquisition Program Manager. He described the process of conducting atmospheric soundings, including the weather balloon and the attached GPS-enabled box of sensors that measure wind, temperature, pressure, and humidity. Most of the audience was thrilled to watch the balloon launches, despite the gusty winds.

Several of our partners demonstrated some of their equipment used during emergency operations, including hazardous weather. The City of Brownsville's Office of Emergency Management brought a Mobile Command Center, a Lenco Bearcat[®] vehicle for Special Weapons and Tactics (SWAT) teams, and a fire truck. The South Texas Division of the American Red Cross explained their important role during and after hazardous weather strikes. The Cameron County Health Department described how they help local residents in poor health find safe haven from dangerous weather. The Texas General Land Office showed how accurate weather information is critical to their surveillance operations on the Laguna Madre. Each of these displays added tremendously to our Weather Festival, since it is vital for our mission to have good communication, collaboration, and cooperation with our partners to provide the best service to our community.

Children were able to learn about the weather by participating in several educational activities. Forecasters Blair Scholl, Mike Castillo, and Texas A&M meteorology student Bianca Villanueva taught kids how to make a cloud, discover how rain is collected, and play "tornado in a tube". Forecasters Kirk Caceres and Geoff Bogorad hosted the Community Collaborative Rain, Hail, and Snow (CoCoRaHS) "fill up the rain gauge" game. Throughout the Festival, there dozens of items were won by visitors during frequent raffles. Meteorologists Forecaster Maria Torres and Barry Goldsmith provided bags of coloring books, cloud charts, hurricane tracking charts, pencils, and magnets to visitors entering the building, and giving away nearly \$1,000 in prizes. Prizes included several NOAA Weather Radios, rain gauges, safety lights, a marine radio, a home tool kit, and more than a dozen food coupons from Brownsville area restaurants.

Meteorologist-in-Charge Steve Drillette led visitors into the Conference Room, where Senior Forecaster Joseph Tomaselli introduced people to the office through a virtual tour. Science and Operations Officer

Doug Butts, Forecaster Justin Gibbs, and Hydrometeorological Technician Fred Vega then showed off our redesigned operations area and answered dozens of questions from visitors for nearly six hours.

It was a very rewarding to see many children inspired to learn more about NWS Brownsville/RGV, from who we are and how we work to protect life and livelihoods. We're planning to host more in the future!



Left: Weather balloon release at NWS Brownsville during the Weather Festival.

CoCoRaHS Volunteer Profile: Eugene Novogrodsky

By Geoffrey Bogorad, Senior Meteorologist/South Texas CoCoRaHS Coordinator

The national Weather Service recognizes Eugene (Gene) Novogrodsky for 15 years of dedicated service to CoCoRaHS. CoCoRaHS is a grassroots volunteer network of backyard weather observers of all ages and backgrounds, who work together to measure and map precipitation (rain, hail, and snow) in their local communities. By using low-cost measurement tools, stressing training and education, and utilizing an interactive website, CoCoRaHS aims to provide the highest quality data for natural resource, education, and research opportunities.

Gene and his wife, Ruth, became aware of the CoCoRaHS volunteer rainfall network 15 years ago during a casual lunch with me. Since then, Gene has never missed a daily rainfall observation. In fact, he is one of the program's most enthusiastic and dedicated volunteers.

In addition to volunteering for CoCoRaHS, Gene is an English Professor at the University of Texas-Brownsville, a local farmers' market vendor, and a RGV amateur poet.

On behalf of the National Weather Service Brownsville/RGV I was honored to present Gene with a Certificate of Appreciation for his dedication to the CoCoRaHS program. I then sat down with him to reflect on his many years of service.

Geoff: "Have you ever done anything like CoCoRaHS?"

Gene: "No, but I love it. Everyone should do this to appreciate the weather."

Geoff: "What have you learned?"

Gene: "The importance and details of the data, and how it relates to local, national, and global climate trends."

Geoff: "What do you like best about being a CoCoRaHS volunteer observer?"

Gene: "The excitement of reporting rain and comparing my rainfall with other volunteers across the Valley. Also, reading the rainfall maps across the United States. The weather has always fascinated me and now that I observe rainfall in my backyard, I love it even more."

The only requirements to join CoCoRaHS is an enthusiasm for watching and reporting weather conditions and a desire to learn more about how weather can affect and impact our lives. If you are interested in becoming a CoCoRaHS observer, or for more information, email me at Geoff.Bogorad@noaa.gov, or visit www.cocorahs.org.



Left: Geoff Bogorad (left) of the National Weather Service recognizes Gene Novogrodsky for 15 years of dedicated service to CoCoRaHS.

The Great Fallout of 2013

By Jim Campbell, Data Acquisition Program Manager

Late season cold fronts are always a welcomed sight to residents of the Rio Grande Valley and Deep South Texas. The strong front which moved through in the morning hours of Wednesday, April 24th was no exception. Not only did it bring record low temperatures to the region, it provided us with much needed rainfall. But to local naturalists, it will be remembered for something far more epic.



Above: Oranges on the bench, April 27, South Padre Island Convention Center.

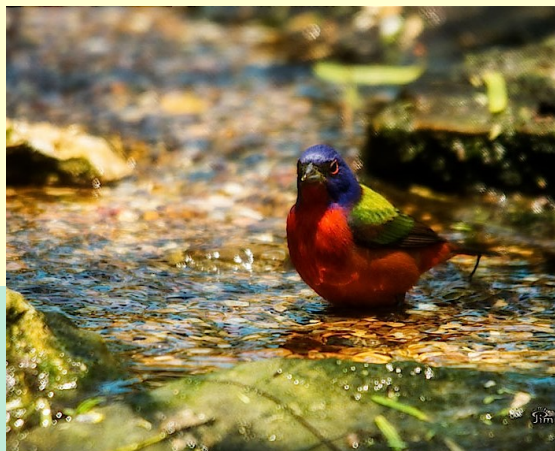
Photo courtesy of Jim Campbell

By definition, “fallout” occurs when harsh weather forces migrating birds to land in an area they would not normally inhabit. The cold front of the 24th set such an event in motion. Neotropical birds had started the arduous journey north from destinations as far away as South America on their annual spring migration. Their route would take them across the Yucatan before the long flight over the Gulf. That’s where they collided with the front. Literally forced from the sky by the strong north winds, thousands sought refuge on the first land area they could find; South Padre Island and the Lower Valley. Sadly, many perished over the Gulf and would wash ashore late in the week. But the number of birds that made it to shore went beyond extraordinary, described by locals as the largest fallout in 26 years.

By Thursday, there were so many weak and debilitated birds on the ground on South Padre Island that people had to watch where they walked. The cold rain that day only

added to the misery. People here, though, have huge hearts. Residents heard about the plight of our feathered friends and quickly came to their rescue. Bags upon bags of bird seed and oranges were rushed to the Convention Center. The walls and benches surrounding the building quickly disappeared under mounds of sliced oranges and seed. I did the same in my back yard where numbers of Baltimore Orioles, Rose-breasted Grosbeaks and Indigo Buntings suddenly appeared. As conditions improved, the winds turned from north to south, and their energy restored, many birds resumed their migration Friday. However, an incredible diversity remained on the Island through the weekend. I was fortunate enough to photograph species I had never even seen.

To the non-nature loving person, all that will be remembered about late April is the cooler temperatures and welcomed rainfall. To some local business owners, they’ll remember the mini-financial boom when hundreds of strange people with cameras and binoculars descended into their slice of Paradise. After witnessing my first “fallout,” I’ll remember just how fragile life really is. You can be sure I’ll have plenty of oranges and seed on hand the next time we forecast a strong cold front during the spring migration.



Right: Male Indigo Bunting, April 27, South Padre Island Convention Center.

Photo courtesy of Jim Campbell.



The Coastal Breeze



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Location	Frequency	Station
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Pharr	162.400	KHB-33
Rio Grande City	162.425	WNG-601
Riviera	162.525	WNG-609
Laredo	162.550	WXK-26

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