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The Coastal Breeze

Official Newsletter of
National Weather Service in Brownsville, Texas



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An Unusual Spring Across Deep South Texas and the Rio Grande Valley by Justin Gibbs, General Forecaster

Severe weather has been no stranger to Deep South Texas and the Rio Grande Valley this spring. Severe thunderstorms producing extremely large hail, damaging winds and flash flooding occurred during several weather events. Deciding which event was the most significant would probably depend on where you were at the time and whether or not your car was dented or if windows were broken! Three of the bigger events are highlighted below.



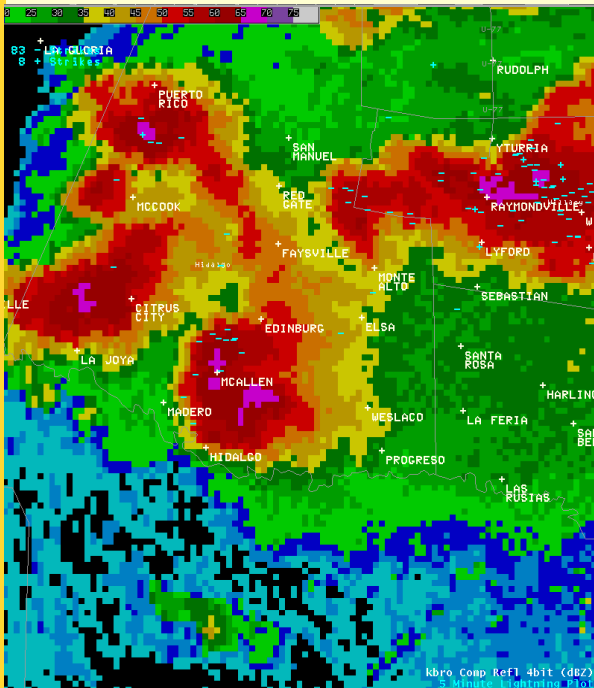
The McAllen area hailstorm of 29 March may qualify as the most damaging storm of the year so far. That slow moving storm produced extremely large hail with many stones up to baseball size. The stones were driven by destructive downburst winds of up to 70 mph and many cars, businesses and homes were significantly damaged. The storm also dumped more than four inches of rain, which led to flash flooding in much of urban Hidalgo County. Fortunately, there were no serious injuries.

Left: Extremely large hail in McAllen, TX on March 29, 2012.

Right: Hail damage to the Starbucks on 10th Street in McAllen, TX on March 29th.



AN UNUAL SPRING ACROSS DEEP SOUTH TEXAS AND THE RIO GRANDE VALLEY (continued)



Above: Radar image showing composite reflectivity at the time that golfball size hail over Raymondville and baseball size hail in McAllen and Mission area between 525 and 555 PM on April 20th.

On 20 April another round of severe thunderstorms developed ahead of a cold front and produced baseball to softball sized hail in parts of Hidalgo County. However, this very large hail was slightly less damaging than that of 29 March, since it was not wind driven, and due to a drier upper level environment, which likely reduced the overall weight of the hailstone. The storms later tracked east into Cameron County where they produced more reports of large hail, and a couple of reports of brief tornadoes.

From 8 to 10 May the focus shifted to damaging winds. Two destructive microbursts occurred on back-to-back nights in central Hidalgo County, damaging outbuildings and overturning and destroying mobile homes. Hail larger than golfball size knocked out at least a few windows in the area and damaged vehicles. Two EF0 tornadoes were confirmed. One

touched down in San Benito the morning of 11 May, with the other tornado near Randado during the evening of 9 May .

All in all it was a wild spring, but luckily one without serious injuries. Thanks must go in part to the efforts of SKYWARN spotters, who diligently reported severe weather as it occurred. This allowed the NWS in Brownsville to issue timely warnings and updates so those in potential danger could seek shelter.

Right: A tornado containing 80 mph winds damaged property and portions of a large single family home early on May 11th, 2012 in San Benito , TX.



HURRICANE WORKSHOP A GREAT SUCCESS!

By Kirk Caceres, General Forecaster

The Brownsville/RGV National Weather Service (NWS) conducted its annual Hurricane Partners Workshop on 23 May 2012. The workshop was hosted by the Texas Department of Public Safety (DPS) Region 3 Headquarters in Weslaco, Texas and sponsored by HEB Supermarkets.

The workshop was a huge success with more than 100 NWS partners from both the public and private sector attending. "This is by far the biggest turnout we have ever seen", said Meteorologist in Charge Steve Drillette. "It demonstrates the commitment our local officials and partners have in protecting the

residents of the Rio Grande Valley and Deep South Texas." Partners represented included members of virtually every emergency support function in the region, various media outlets from across the Rio Grande Valley and our neighbors in Mexico, several educational institutions, and several officials from U.S. Consulate in Matamoros, Mexico.

Meteorologist in Charge Steve Drillette, Warning Coordination Meteorologist Barry Goldsmith, and Tropical Program Leader Justin Gibbs each made presentations at the half day workshop. The topics presented included the importance of building partnerships for a "hurricane ready" Rio Grande Valley, NWS products and services for 2012, challenges and strategies in pre-season hurricane forecasting in the Atlantic, and how the phases of the El Nino/Southern Oscillation (ENSO) impact tropical cyclones in the Gulf of Mexico. The information provided during this event will assist NWS partners in making important decisions before, during, and after a tropical cyclone affects the area. A special thanks to our DPS partners, Mr. Joe Rodriguez and Mr. Tony Pena, for hosting the workshop and to HEB who provided breakfast to all those attending.



Above: View from the front of the Conference Room at the Texas DPS Region 3 headquarters.



The NWS in Brownsville presented a "Special Service Award" to HEB for their partnership in providing breakfast at the annual Hurricane Partners Workshop on May 23, 2012.

Left: Ms Virginia Perez and Ms Linda Tovar accepted the award from NWS Brownsville MIC Steve Drillette.

Photo taken by Jim Campbell.

NOAA EXPECTS A NEAR NORMAL HURRICANE SEASON

By Kirk Caceres, General Forecaster

The National Oceanic and Atmospheric Administration (NOAA) recently released their 2012 Atlantic hurricane season prediction. The Atlantic hurricane season officially runs from 1 June through 30 November, though storms can occasionally occur outside those dates. The prediction, which calls for a near-normal hurricane season, means a less active season than in previous years.

NOAA expects from 9 to 15 named storms (with maximum winds of 39 mph or higher) to develop across the Atlantic basin this year. The outlook predicts that from four to eight of those storms will strengthen to a hurricane (with max winds of 74 mph or higher), and of those from one to three will become major hurricanes (with top winds of 111 mph or higher, or category 3, 4 or 5). An average hurricane season produces 12 named storms with six hurricanes, including three major hurricanes.

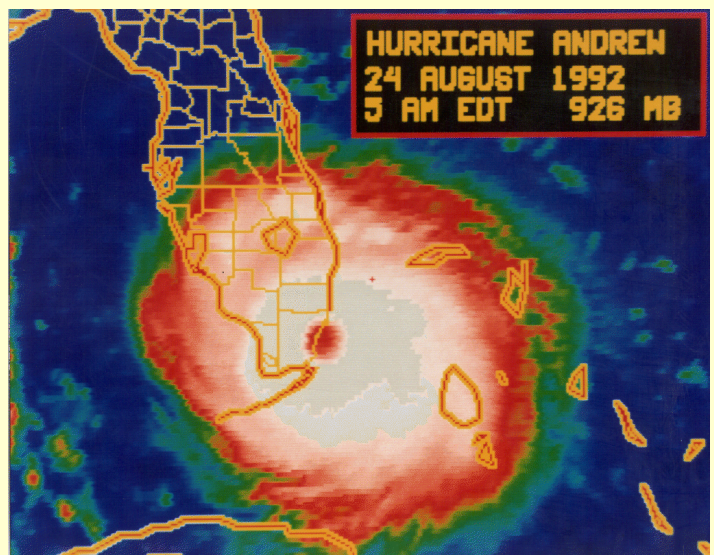
Storm development is favored this year by the continuation of the Atlantic high-activity era that began in mid-1990s and near-average sea surface temperatures across much of the tropical Atlantic basin. Limiting factors this year may include strong wind shear, cooler sea surface temperatures over the East Atlantic, and the possibility of El Niño developing later this summer or fall.

A less active hurricane season does not mean that we should let our guard down. This is the 20 year anniversary of Hurricane Andrew which devastated South Florida and impacted South Louisiana back in August of 1992. Hurricane Andrew occurred in a year that only produced six named storms. It doesn't really matter if it is going to be an active hurricane season or not, because it only takes one storm to make a major impact! One of the most important things for South Texans to do this hurricane season is to prepare. See the article by Barry Goldsmith in this newsletter for more information on making preparations for the hurricane season.

2012 Atlantic storm names

Alberto	Leslie
Beryl	Michael
Chris	Nadine
Debby	Oscar
Ernesto	Patty
Florence	Rafael
Gordon	Sandy
Helene	Tony
Isaac	Valerie
Joyce	William
Kirk	

Below: Hurricane Andrew at landfall over south Florida on August 24th, 1992. This year is the 20 year anniversary of Hurricane Andrew.



NWS BROWNSVILLE/ RGV WELCOMES NEW FORECASTER

By Steve Drillette, Meteorologist-in-Charge



Blair Scholl
New General Forecaster

The Brownsville / RGV National Weather Service (NWS) Forecast Office is extremely pleased to announce the arrival of the newest member of our office team! Mr. Blair Scholl, a meteorology intern at the NWS Forecast Office in Goodland, Kansas, will join our staff as a general forecaster this month!

Blair is a native of Memphis, Tennessee, and majored in Atmospheric Science at the University of Louisiana at Monroe. Blair joined the NWS in February 2011, but has already accomplished a great deal during his short time at Goodland. Besides being avidly devoted to weather forecasting, Blair is highly involved in office outreach, local research, and servicing NOAA Weather Radio.

Blair has a diverse background, and prior to his NWS career he served in the US Air Force as a Staff Meteorologist/Forecaster, Weather Flight Commander, Wing Weather Officer and Combat Weather Officer. Furthermore, Blair continues to serve his country in the Air Force Reserves. Blair is married and has two young children. His first day in the office is set for June 22, 2012. Please join me in welcoming Blair and his family to Deep South Texas and Rio Grande Valley!

NWS BROWNSVILLE PARTICIPATES IN TEACH THE CHILDREN BENEFIT

By Kirk Caceres, General Forecaster

What better way to start your Sunday than with a pancake breakfast where the proceeds go toward a local charity? That's exactly what meteorologists Barry Goldsmith, Joseph Tomaselli, Maria Torres and Kirk Caceres did on 19 February 2012 when they ate breakfast at Whataburger on FM 802 and South Padre Blvd. The annual event, sponsored by Whataburger, benefits the Teach the Children charity, an organization that raises money to provide clothes and school supplies to needy Rio Grande Valley children. For more information about the Teach the Children charity point your web browser to:

<http://www.krgv.com/teach-the-children>.



Above: Barry Goldsmith, WCM; Joseph Tomaselli, Senior Forecaster; General Forecasters Kirk Caceres, and Maria Torres along with Omar and Daniel.

NWS BROWNSVILLE / RGV PROVIDES DECISION SUPPORT FOR AIR FIESTA

By Geoffrey Bogorad, Senior Forecaster

The Brownsville / Rio Grande Valley National Weather Service (NWS) office recently renewed their partnership with the Brownsville / South Padre Island (BRO) International Airport by providing decision support for the 2012 Air Fiesta. Now in its fifth year, the annual partnership supports the Air Fiesta sponsored by the Commemorative Air Force (CAF). The two day event, held 24 and 25 March this year, attracted pilots and air show performers from around the world, as well as thousands of spectators. Decision support included a range of forecast products tailored to help event organizers successfully plan and execute the Air Fiesta. Here are a couple of examples:

Aviation Program leader and Senior Forecaster Geoffrey Bogorad, along with Senior Forecaster Robert Ricks from the New Orleans/Baton Rouge NWS office, provided outlooks as early as 2 February, or 52 days before the event, using special tools like the Hovmoller diagram. The Hovmoller diagram looks at atmospheric wave patterns, and suggested a possible storm moving into the area around the time of the Air Show. By 8 March, 16 days prior to opening day, forecast confidence had increased, and predicted a cold front would move through the region during the week of the Fiesta followed by high pressure dominating deep South Texas and the Rio Grande Valley with fair weather on 24 and 25 March.

Another example of decision support was for burning high grass on the airfield to prepare for the pyro show. The airport fire department called the NWS on 15 March to give a briefing on expected weather for the next seven days, which NWS personnel provided at a CAF tech meeting that afternoon. Careful analysis of wind speed and direction indicated that Thursday, 22 March, would be optimal for the burn. Wind conditions were important so that smoke from the burn would not obscure a main runway and cause flight delays.



The NWS Brownsville/RGV booth at Air Fiesta.

The expected cold front passed through on Tuesday, 21 March, and brought some badly needed rain on the parched airfield, and eased concerns about the prescribed burn scheduled for 22 March. High pressure built in, providing excellent weekend weather conditions for participants and spectators alike. Geoff provided last minute weather updates to pilots, Fiesta organizers, first responders, and airport managers during the 10 a.m. pilot briefings both days of the Fiesta. Back at the office, NWS meteorologists monitored the weather for any significant changes that could impact the Fiesta. In addition, an information booth set up inside the CAF museum allowed meteorologists to meet and brief spectators,

exhibit the popular “Tornado Tube,” and hand out 2012 hurricane season information and tsunami posters. In summary, the Air Fiesta partnership was a great success and provided a blueprint for future NWS decision support.

WHAT IS A RIP CURRENT?

By Kirk Caceres, General Forecaster

Many South Texans will be heading to local beaches over the next several months to enjoy the summer weather. However, one danger that beach goers must be aware of is the rip current. A rip current is a channelized current of water flowing away from the shore. Rip currents are dangerous because they can pull unprepared swimmers away from shore and into deeper waters. Rip currents do NOT pull a swimmer under the water, but do become dangerous when swimmers panic and struggle against the current while being pulled farther and farther away from the beach. Rip current speeds are typically 1-2 feet per second, however, speeds as high as 8 feet per second have been measured. That is faster than an Olympic swimmer can sprint! Thus, rip currents can sweep even the strongest swimmer out to sea.



Most rip currents typically form along beaches at breaks in the offshore sandbar, but they also form near structures such as jetties and piers. Rip currents form when water piles against the shore and begins to return to deeper water. Typically, onshore winds and waves push water over the offshore sandbar, allowing excess water to collect between the bar and the beach. Eventually, this excess water starts to return seaward through low spots in the sandbar, “ripping” an opening. Near the beach, rip currents are usually narrow, increasing in width as they extend farther offshore. Some rip currents last only a few minutes to a few hours, while others may last for days. Weather or ocean conditions can cause rip currents to be stronger and more frequent on some days than on others.

Signs of rip currents include a visible channel of churning, choppy water; a narrow channel where there is a difference in water color; a line of seaward moving foam; an offshore area of murky water; or a break in the incoming wave pattern.

When you take a trip to the beach, there are a few things that you can do to protect yourself from the dangers of rip currents. Never swim alone. You should swim at beaches with lifeguards, if possible. Also note any flag warning system that may be present. If you find yourself caught in a rip current, DON'T panic and DON'T swim against the outgoing current. Since most rip currents are relatively narrow, you should swim in a direction parallel to the shoreline to escape the outgoing current.

Before you leave for a trip to the beach, check the latest National Weather Service forecast for local beach conditions. The National Weather Service in Brownsville issues a Surf Zone forecast each morning which is updated as necessary. More rip current information can be found at www.ripcurrents.noaa.gov.

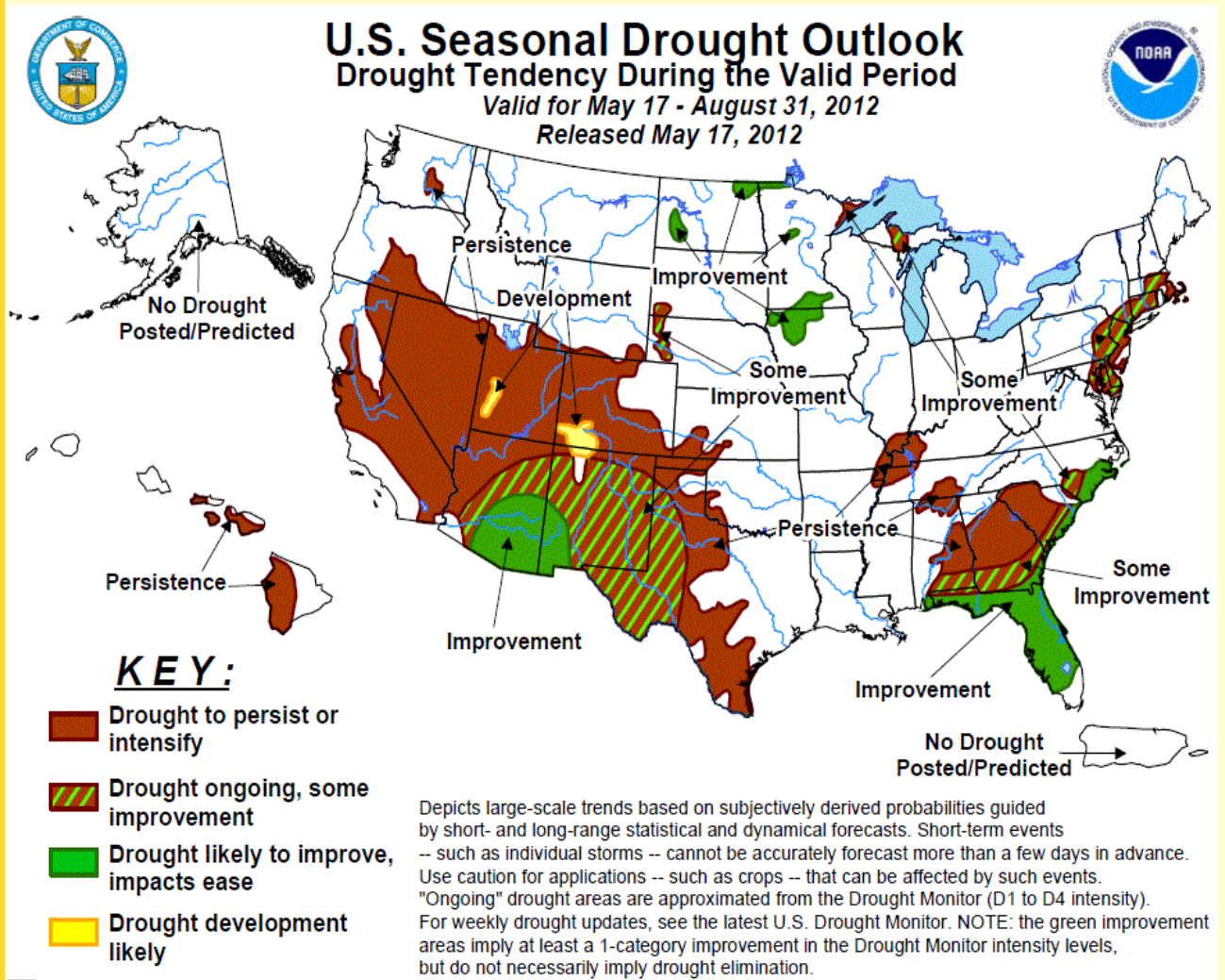
INTRODUCING THE QUALITY CONTROL TEAM

By Brian Miller, Senior Forecaster

The Quality Control (QC) team recently formed at the National Weather Service Weather Forecast Office (WFO) in Brownsville, serving Deep South Texas and the Rio Grande Valley. Team members currently include Senior Meteorologists Brian Miller and Timothy Speece, along with Data Acquisition Program Manager Jim Campbell.

Here is the initial charter for the team: Promote high product quality at WFO Brownsville. Define and communicate high quality to the staff using a variety of methods, including customer feedback, product content review, and best practices. Establish and maintain high standards of product quality through individual or team recognition and enhanced impact awareness.

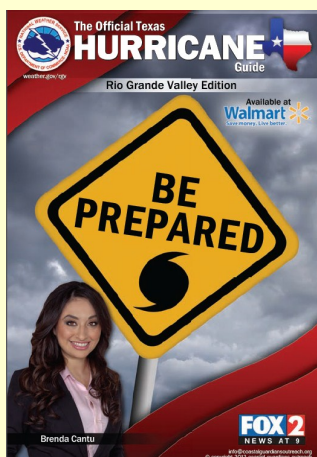
The QC team objectives are related to the work of other teams at the office, suggesting synergistic opportunities. For example, the Service Enhancement Team also has the objective of improving products, though via a slightly different focus. The QC team will have its inaugural meeting soon, and looks forward to contributing to the already outstanding work of WFO Brownsville.



THE 2012 HURRICANE SEASON IS HERE. BE AWARE, GET PREPARED!

By Barry Goldsmith, Warning Coordination Meteorologist

Are you ready for a hurricane? Regardless of the forecast for the Atlantic basin, it only takes one hurricane making landfall to make the season memorable. The definition of memorable can range from devastating to fortunate. How devastating, or how fortunate, may depend on you. Actions taken before a hurricane threatens can make the difference between devastation and fortune. Prepare today, and be ready for whatever tomorrow brings. Here's how:



Make a Plan. If you choose to evacuate, know where your family, including pets, can be housed safely for several days to several weeks. Make copies of vital information such as medical records, prescriptions, insurance policies, titles and deeds, etc., and store them in a light-weight, waterproof container. Prepare enough clothing and food for the trip. Fuel up your transport vehicle before an evacuation order is given.

Build a Kit. If you shelter in place, prepare to survive for 7 to 10 days without power or safe water. Your kit should include an ample supply of non-perishable food to eat, bottled water to drink and bathe in, batteries, flashlights, first aid kit, and a portable, battery operated radio.

Protect your House. Ensure that your roof and foundation are adequately bolted down and check for leaks or soft spots. Ensure that plywood or hurricane shutters completely cover windows, and brace doors and garage doors.

Tune In. When a storm forms in the Gulf of Mexico or Caribbean Sea, join us at weather.gov/rgv and on Facebook for potential impact information if the storm is forecast to approach the Rio Grande Valley.

For more information, check our [Preparedness Page](#) or download the 2012 Texas Hurricane Guide, Rio Grande Valley Edition, in [English](#) or [en Español](#).



A Beautiful Sight!

Left: Double rainbow appears in the skies above South Padre Island, TX on afternoon of April 16th. Photo Courtesy of Chief Ch. Garza, South Padre Island EM.

FAM FLOAT!

By Joseph Tomaselli, Senior Forecaster

One of the perks of working at the National Weather Service (NWS) office in Brownsville, serving Deep South Texas and the Rio Grande Valley, is being invited to get a first-hand look at the terrain and ecology of the Laguna Madre via a boat trip, also known as a familiarization float, or “fam float.”

On 19 March 2012, NWS office personnel and immediate family members toured the lower Laguna Madre as guests of Joseph Hilliard from the Texas General Land Office (TGLO), who served as host and guide for the excursion. TGLO frequently monitors the Laguna Madre and other areas for oil spills which might pollute the environment. Therefore, NWS personnel are able to tag along on fam floats about two or three times a year, taking the opportunity to sharpen their marine forecasting skills while also experiencing what it’s like to be a mariner who is boating along the Lower Texas coast. The floats are especially beneficial to those who have not had much experience or exposure to marine weather.

The TGLO boat departed Port Isabel in the morning and headed north to Arroyo City under partly cloudy skies and strong south-southeast winds. Along the way, Mr. Hilliard shared his unique perspective on wind and bay conditions learned from many years of boating on the lower Laguna Madre. Despite bay waters, which became rougher on the return into the wind, no

one became seasick! After returning to Port Isabel, everyone enjoyed a hearty lunch of fried fish and shrimp at The Lost Galleon restaurant.

A big thank you goes to Joseph Hilliard of the Brownsville TGLO office for being a valuable partner by offering the complimentary floats, and we look forward to many more in the future!



Left: (From left to right) General Forecaster Justin Gibbs and wife Cindy, Intern Erin Billings, General Forecaster Maria Torres and husband Omar, Martha Drillette, and Senior Forecaster Joseph Tomaselli.

A Scary Sight!

Right: Amazing Shelf Cloud in Zapata County, Texas on May 8th. Photo Courtesy of Alfonso “Poncho” Lopez.





The Coastal Breeze



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Rio Grande City	162.425	WNG-60I
Riviera	162.525	WNG-609
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