Suncoast Weather Observer

Winter 2007 Issue 1, Volume 10

Inside This Issue...

Welcome Our New Leader

Brian LaMarre is the new Meteorologist-in-Charge of the Tampa Bay Area Weather Forecast Office (WFO) of the National Weather Service (NWS) in Ruskin, FL. He replaces Shawn Bennett, who was selected as the Meteorologist-in-Charge of the Albuquerque, NM NWS office.

Brian began his career as a student volunteer at the NWS office in Hartford, CT in 1992 while still earning his Bachelor's degree in Meteorology from Western Connecticut State University. After graduating in 1994, he became a *Meteorologist Intern* at the NWS office in Corpus Christi, TX. He worked in all of the operational forecasting positions while in Corpus Christi, ranging from a

General Forecaster from 1996 to 1998 to a *Senior Forecaster* from 1998 to 2002. In these positions, Brian received a National Isaac Cline Award for warning services leading up to an unprecedented river flood in 1998, and a Department of Commerce Silver Medal Team Award for warning services during the impacts of Hurricane Brett in 1999.

From 2002 to 2004, Brian served as the *National Marine Program Manager* at NWS Headquarters in Silver Spring, MD. In this role, he worked closely with multi-agency partners and a wide range of NWS customers impacted by coastal storms. During the devastating hurricane impacts of 2004 across Florida, he served on the NWS Service Assessment for Hurricane Charley.

Brian returned to the field in 2004 as the *Warning Coordination Meteorologist* at the NWS office in Lubbock, TX. In 2005, he served as the NWS liaison with emergency management and media partners at the NWS Southern Region Operations Center in Fort Worth, TX during the landfall of Hurricane Rita. In 2006, he completed FEMA course requirements to serve as an Incident Command System *Technical Specialist* with local emergency management in Texas. Brian has been an active member of the American Meteorological Society (AMS) and the National Weather Association (NWA) since 1990, and has served on AMS Boards and NWA Committees to help promote weather education and training activities.

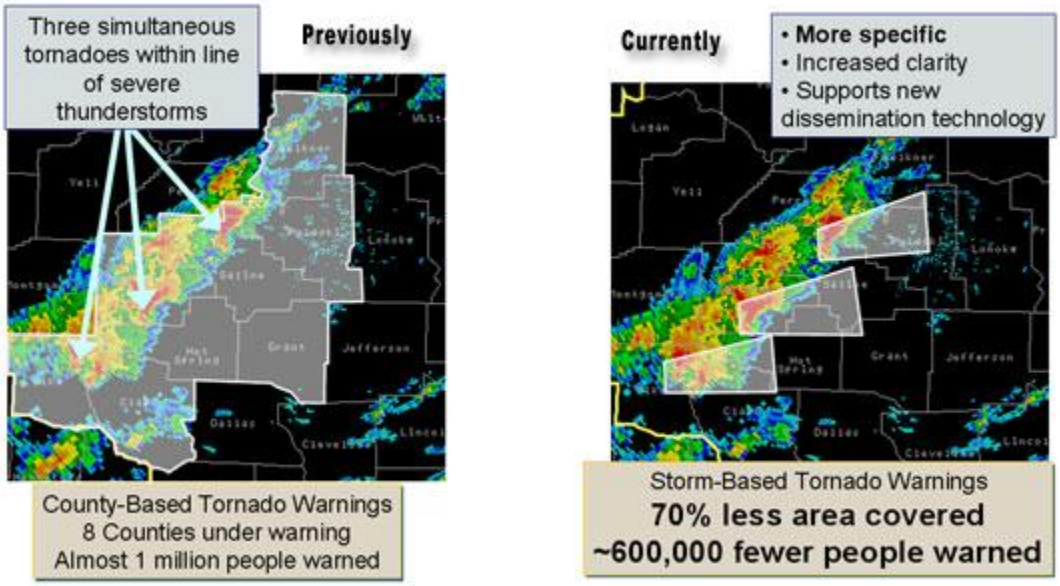
Warnings Become Storm-Based

By: Jennifer Colson

For decades, the National Weather Service has issued severe weather warnings based on county borderlines. As radar and satellite technology has improved through the years, so has the ability to more accurately pinpoint the location and anticipated movement of severe storms, allowing for portions of counties to be identified in the warnings. With a continued need to improve the specificity and accuracy of warnings, the NWS began issuing Storm-Based Warnings as of October 1, 2007.

Storm-Based Warnings are also known as Threat-Based Polygon Warnings. In the past, warnings were issued for an entire county, with the threat area only mentioned in the text of the warning. Now, warnings will only be valid for areas within a specified polygon or boxed area that encompasses the severe storm and the projected movement of the storm. These polygons can cross multiple county lines while still considered only one warning, whereas in the past, each county warned would be considered a new warning, even if it was just for one storm. This too means that more than one warning may be issued for a single county at the same time if there are multiple severe storms in place. For example, one summer afternoon as sea breeze thunderstorms start to develop, a small storm in place over Tampa in northern

Hillsborough County may become severe with a warning issued. Five minutes later over Ruskin in southern Hillsborough County, another small storm becomes severe. Before, a severe thunderstorm statement would have been issued outlining both storms but no new warning would have been issued since the county was already under alert. Now, the warning in place across the northern portion of the county would continue with a new warning issued for the southern portion of the county. By focusing on the true threat areas, warning polygons will increase the accuracy and quality of warnings. County emergency managers and first-responders will be better able to focus on the impacted areas expected. Storm-Based Warnings will also promote improved graphical warning displays, which in partnership with the private sector, will support a wider warning distribution through television and internet graphics, cell phone alerts, pagers, web-enabled Personal Data Assistants (PDA), and other electronic devices. NOAA Weather Radios will continue to work as before, alerting the entire county for each warning with the text describing the specific threat area.



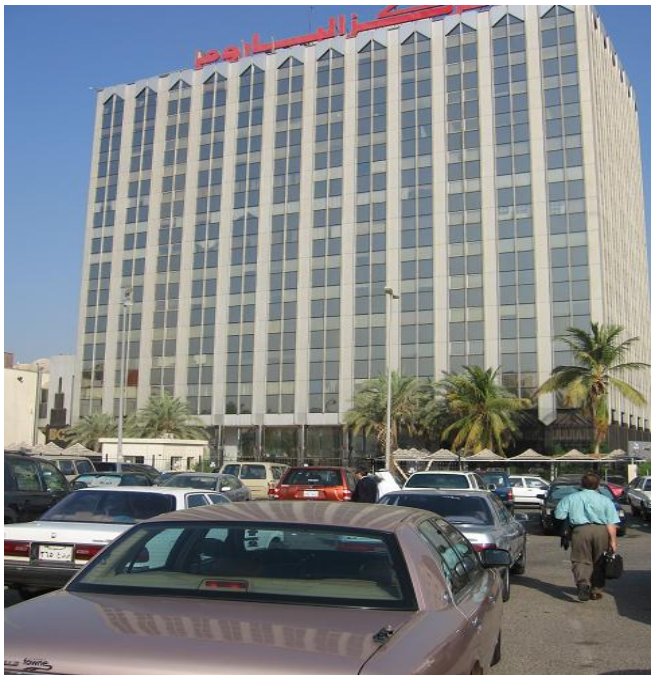
Model Training in Saudi Arabia

By: Charlie Paxton

During early November, Charlie Paxton, the Science and Operations Officer at WFO Tampa Bay, traveled to Jeddah, Saudi Arabia with Jeffrey Stuart from the NWS International Office, and Dr. Richard Crouthamel, a contractor and employee of the International Environmental Data Rescue Organization. We stayed at the Intercontinental Hotel close to the Presidency for Meteorology and Environment (PME) building and along the waterfront across from the world's tallest (1024 feet) King Fahd's Fountain.

The world's tallest (1024 feet) King Fahd's Fountain.

On Saturday, November 3, 2007 (their Monday) we met with Dr. Sameer Bukhari (Deputy to the President for Meteorological Affairs). Others attending the meeting were Jamal Azdi Bantan, and Mohammed Al Siami who had visited the Tampa Bay NWS office in 2005 for instruction on Workstation Eta installation. The group discussed installation of the modeling computer that had been at the Tampa Bay office for over a year. The high-end computer workstation had a working version of the Weather Research and Forecasting (WRF) model and Nawips/GEMPAK software installed. They installed the computer in their Central Forecast Office (CFO) and the WRF model version that I had pre-installed with a 20 km grid spacing ran well.



Jeffrey Stuart and Dr. Richard Crouthamel walking toward the PME building.

On Sunday, I began the classroom training with a general session that explained the NWS structure and forecasts available, and then a session on introductory Numerical Weather Prediction. I then provided

sessions explaining particular topics, including basic computer requirements, model installation, domain selection with “sigui”, configuration of files associated with each domain, and the fundamentals of NWP and configuration files for dynamic and physical parameterizations.

After each segment of instruction, I reviewed the instruction with hands-on training. With a limited amount of time, the bulk of the training was focused on setting up the model and making operational runs. The Saudi’s experimented with different domain configurations and gained a greater understanding of the tradeoffs between domains and resolutions.

Charlie Paxton providing instruction to Faisal, Iman, Mohammed, Noor, and Jamal.

The week went well as very eager CFO meteorologists continued to practice domain and model configuration, and I felt a sense of accomplishment leaving with the model installed and running.

Charlie Paxton, Jeff Stuart, Richard Crouthamel and Saudi PME staff.

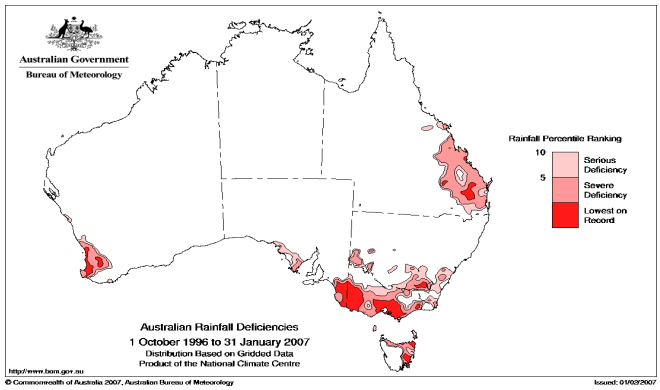
Active Fire Weather Year

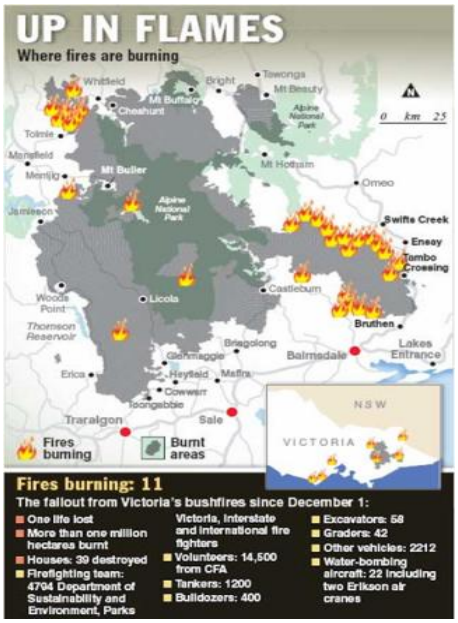
By: Rick Davis

2007 was a very active Fire Weather year both regionally and internationally for NWS TBW IMET Rick Davis. I traveled "down under" to Australia in February to provide weather support to the country of Australia working at the Bureau of Meteorology in Melbourne, Victoria, during that country's record "bushfire" season. I was also dispatched to the large wildfires in Southeast Georgia and Northeast Florida around the Okefenokee Swamp in late April and again in early June. During the month of May, I helped train a member of the Australia Bureau of Meteorology at the TBW office as part of the new international fire weather cross collaboration program.

Australia

A record long term drought, combined with an El Niño event, produced extreme fire danger in several coastal regions around the country. Hundreds of lightning strike and human caused fires burned many millions of acres in their summer, from December 2006 through March 2007.

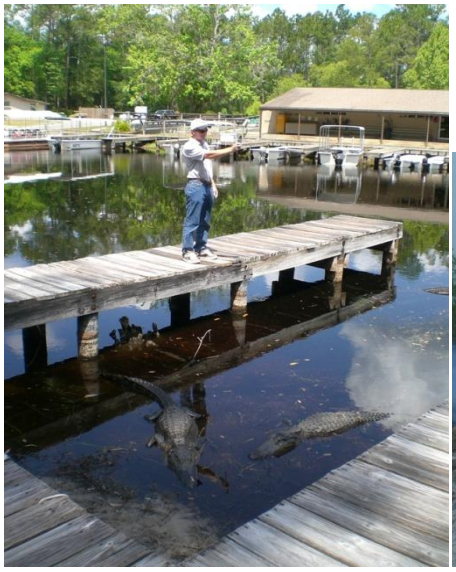


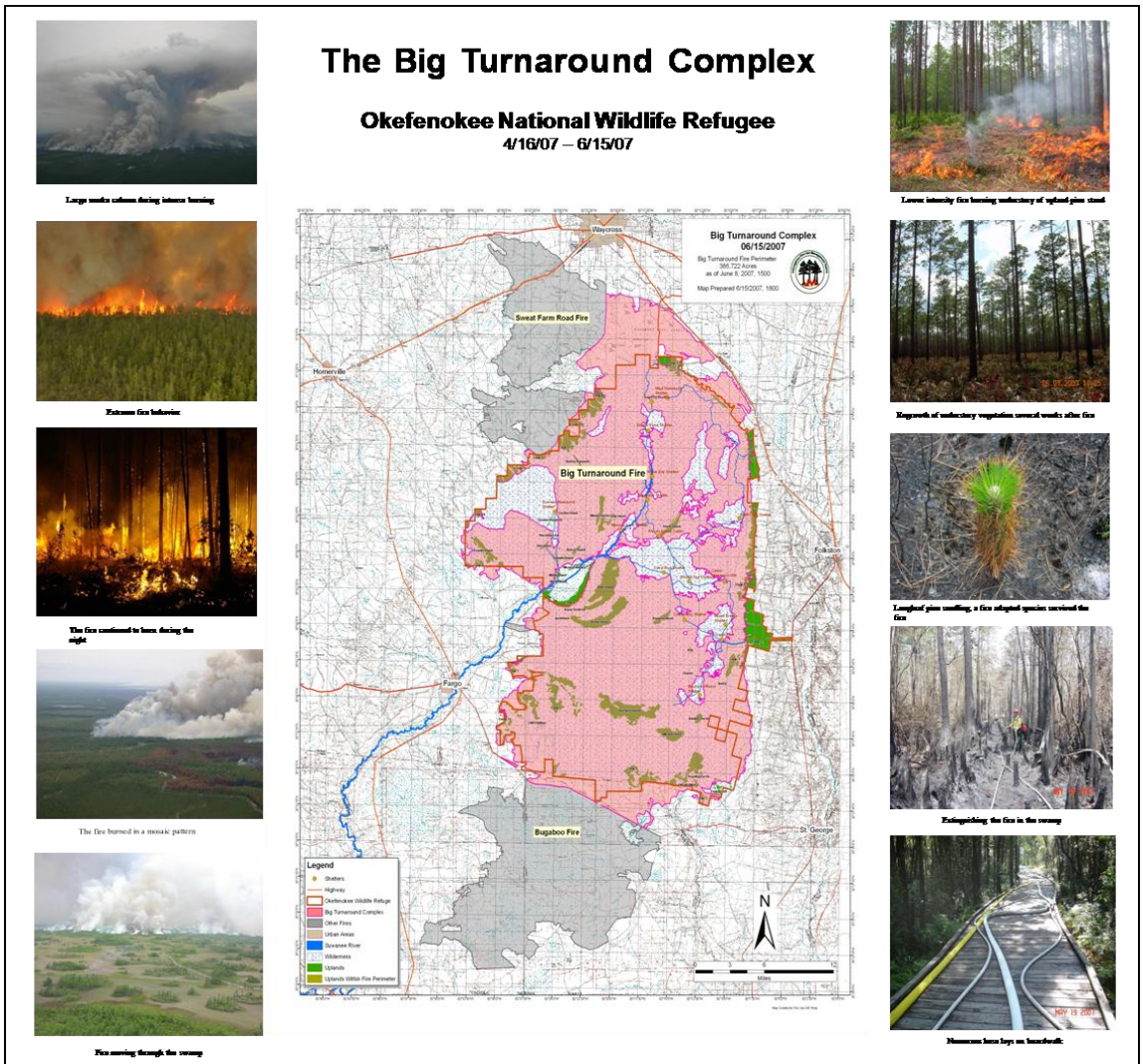



Australia requested fire weather forecasting help from the U.S. National Weather Service. I was one of a handful of meteorologists to provide assistance in February 2007, as wildfires and new starts continued into their fall. I worked along side the Australian severe weather forecasters at the office and in the field, producing daily fire weather forecasts as well as specific spot and wind change forecasts.

Wildfires in the Okefenokee Swamp

Long term drought conditions also produced high fire danger closer to home, in Florida and Georgia, this past spring with numerous large wildfires burning many hundreds of thousands of acres region wide. The largest wildfire complex, consisting of several fires, burned in and around the Okefenokee Swamp area from April through June 2007.



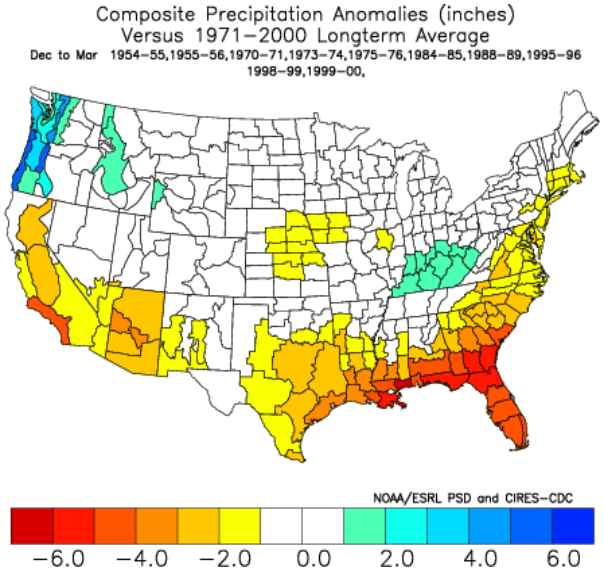



I was dispatched two times to the huge complex providing onsite site specific weather forecasts and briefings, using the NWS IMET All-hazards Meteorological Response Systems (AMRS), for hundreds of fire and incident personnel to battle the fires in the safest and most effective manner possible. This was a busy, educational, and rewarding fire weather year for me and the staff here at NWS Tampa Bay.

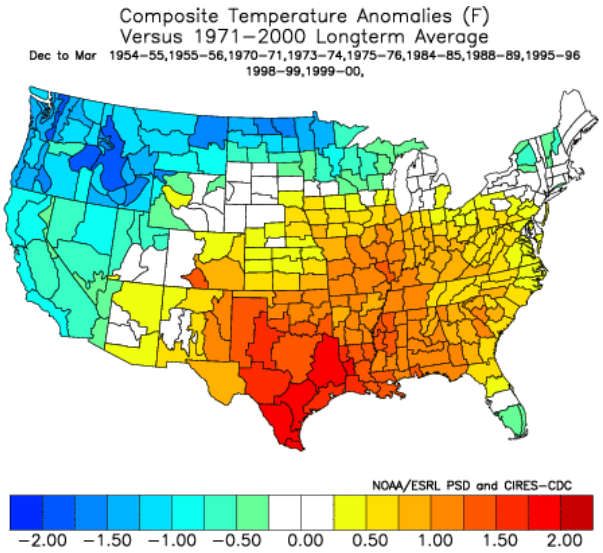
Winter Climate Outlook: La Niña Expected to Continue

By: Paul Close

The outlook from the Climate Prediction Center for the upcoming winter of 2007-2008 is calling for a continuation of weak to moderate La Niña conditions over the Pacific Ocean. La Niña is characterized by a cooling of equatorial Pacific waters which affects large scale weather systems around the globe. Over the United States this usually means that the jet stream is farther north but more variable in strength and position. This leads to less stormy conditions across the Florida peninsula. Cold fronts will move across the region, but since the mid/upper level energy usually remains well north of the area, rainfall is limited and will likely be below normal.



The link between La Niña and wintertime temperatures is a little bit weaker. With the average storm track farther north during La Niña, we usually see drier air over the state with more fair weather days. The drier air leads to warmer daytime and slightly cooler nighttime temperatures that result in slightly above average temperatures across the area. During La Niña, freezes are possible into Central and South Florida. However, the impact of the North Atlantic Oscillation (NAO) and Arctic Oscillation (AO) play a large role in controlling temperatures across Florida during the winter and early spring. These oscillations shift on a monthly and sometimes weekly basis and typically are not included in long term forecasts.



The last La Niña to affect the region was during the winter of 2005-2006. Although this La Niña was rather weak, rainfall during this winter was generally below normal. Before this, the last La Niña was a prolonged episode that lasted from the fall of 1998 to the spring of 2001. During these three winters, rainfall across much of the area was below normal with most areas receiving only about 50 percent of the normal rainfall. The current La Niña is not expected to approach

the magnitude of the 1998-2001 event, but after a rather dry winter earlier this year followed by near to below average rainfall this past spring and summer, the outlook of below normal rainfall for the upcoming winter will likely lead to continued water restrictions across portions of West Central and Southwest Florida.

For more information on La Niña, including additional graphics, please visit the following websites:
National Weather Service Tampa Bay page:
www.weather.gov/tampabay
Climate Prediction Center:
www.cpc.noaa.gov

Drought and Fire Weather Safety Tips

- Always check with local fire authorities or public land management officials to obtain current fire restriction information and regulations before burning anything.
- Never leave a fire unattended.
- Homes near forested areas should have a defensible space of at least 30 feet, more if the home is on a slope. Trees should be thinned 100 feet from buildings. Remove lower tree branches, especially those that may overhang the roof. Rake and clear surface fuels, such as leaves, limbs, and pine needles. Regularly clean roofs and gutters.
- Every home should have smoke detectors and portable fire extinguishers.
- Never park your vehicle on dry grass.
- For campfires, clear the site down to bare soil, encircle the pit with rocks, and build the campfire away from overhanging branches, dry grass, pine needles, logs and steep slopes. When putting out the fire, drown the fire until the site is cool enough to touch.
- Teach children about fire safety and always keep matches out of their reach.

2007 Hurricane Season Summary

By: Ryan Sharp

This hurricane season was active in only one way, the number of tropical cyclones that developed. That number, 13, is above the average of the last 30 years (~11 storms) and is on the low end of the official NOAA forecast of 13-16 tropical storms. However, of these 13 storms, only 6 became hurricanes and 2 became major hurricanes, both just below their respective averages (6.3 and 2.5) and the official NOAA forecast (7-9 and 3-5). The table below provides the names for each storm this season as well as the dates each occurred and their maximum sustained wind speed.

So what happened? A persistent belt of westerly winds aloft across the northern Caribbean sheared off most developing systems. The warm waters of the Eastern equatorial Pacific Ocean were barely in the El Niño range at the end of 2006 and were moving towards the present La

Niña. The few times this belt of shear weakened enough, two storms took advantage of the break to set records for fastest development. Felix developed from a depression to a category 5 in 51 hours. Humberto developed from a depression to a hurricane in 14 hours, and this occurred as Humberto was making landfall in southeast Texas.

Five tropical systems affected the U.S., with only Hurricane Humberto causing significant monetary damage, $50 million. Tropical Storm Erin also made landfall in Texas, not causing significant property damage but killing 3 people, mainly because of flooding rains. In addition to the tropical systems, one subtropical system, Andrea, developed in May off the East Florida coast. It proved a nuisance to West Central Florida, as the wind flow around this system pulled smoke from a large forest fire in Southeast Georgia down across the Tampa Bay area (see satellite picture).

The only tropical system to directly impact West Central Florida was Tropical Storm Barry, which formed in early June. The system had developed quickly into a storm off the western tip of Cuba, but got caught up in westerly winds aloft. These winds steered the storm towards our area and helped to weaken it, barely making landfall as a Tropical Storm. The main effect from Barry was beneficial rainfall for the region, especially the coastal counties where typical rainfall amounts were anywhere between 2 and 5 inches.

Storm Name	Dates	Max Wind (1 min., mph)
STS Andrea	5/9-11	60
TS Barry	6/1-2	60
TS Chantal	7/31-8/1	50
Dean (Cat. 5)*	8/13-23	165
TS Erin*	8/15-19	40
Felix (Cat. 5)*	8/31-9/5	165
TS Gabrielle	9/8-11	60
Humberto (Cat. 1)	9/12-14	90
TS Ingrid	9/12-17	45
TD 10	9/21-22	30
TS Jerry	9/23-24	40
Karen (Cat. 1)	9/25-29	75
Lorenzo (Cat. 1)	9/25-28	80
TS Melissa	9/28-30	40
TD 15	10/11-12	35
Noel (Cat 1)*	10/28-11/2	80

Source: National Hurricane Center Official Cyclone Reports
* Official report not received as of 12/3.

CoCoRaHS Comes To Florida

By: Colleen Rhea

Weather affects all of us and can vary greatly even over short distances. In an effort to increase the density of rainfall observations over the United States, a fast-growing, volunteer program needs weather observers in Florida.

The Community Collaborative Rain, Hail and Snow (CoCoRaHS) network already has more than 400 observers in the state of Florida alone, with well over 3500 in 25 states across the nation. The program originally began in Colorado, and program coordinators for Florida include the National Weather Service, and the Florida State Climate Office. This project will benefit the entire state by providing a more accurate picture of rainfall amounts across the state. Organizations and individuals such as the National Weather Service, climatologists, hydrologists, agricultural interests, forestry officials, and water management employees use the data to monitor drought, heavy rainfall, and precipitation patterns.

CoCoRaHS volunteers are backyard weather observers, working together to measure and map local precipitation as rain, hail, and snow. Anyone can help, regardless of age or education. The only requirements for observers are an enthusiasm for watching and reporting weather conditions, a CoCoRaHS-approved rain gauge, and a desire to learn more about how weather impacts our lives. Participation takes just a few minutes a day.

Volunteers use low-cost measurement tools and an interactive Web site to provide the highest quality data for natural resource, education, and research applications. Training is required, and the CoCoRaHS Web site has the information available on-line. Training sessions teach new CoCoRaHS observers how to install their instruments and measure precipitation.

On the Web:
Florida CoCoRaHS ... http://www.cocorahs.org/state.aspx?state=fl
National Weather Service Tampa Bay Area ... http://www.weather.gov/tampabay

There is also a link to CoCoRaHS on the Tampa Bay website. Once you're at the CoCoRaHS website, you can easily link to the state, regional, and local county coordinators for Florida. Your enthusiasm for the program will be greatly appreciated in making sure that "Every drop counts!"

New Marine Weather Warnings

By: Ernie Jillson

In August 2007, the Tampa Bay Area National Weather Service Office (WFO TBW) began issuing experimental Marine Weather Warning (MWW) bulletins. The MWW is intended to better inform mariners of adverse marine weather hazards and serve as a dedicated long duration marine Watch, Warning and Advisory product.

The official source for long duration marine warnings and advisories will continue to be the Coastal Waters Forecast (CWF) until the MWW becomes an official product. Full implementation is scheduled for the fall of 2008.

The MWW bulletin will provide the marine community with more specificity and vital marine hazard information, patterned after the winter weather watch/warning/advisory (WSW) bulletin and the non-precipitation watch/warning/advisory (NPW) bulletin. WFO TBW will issue the experimental product for the following suite of marine watch, warning and advisory events:

Marine Watches
- Hurricane Watch
- Tropical Storm Watch
- Hurricane Force Wind Watch
- Storm Watch
- Gale Watch
- Hazardous Seas Watch

Marine Warnings
- Hurricane Warning
- Tropical Storm Warning
- Hurricane Force Wind Warning
- Storm Warning
- Gale Warning
- Hazardous Seas Warning

Marine Advisories
- Dense Fog Advisory
- Dense Smoke Advisory
- Small Craft Advisory
- Small Craft Advisory for Hazardous Seas
- Small Craft Advisory for Winds

Our experimental products can be viewed on the web at the following address:
http://www.weather.gov/view/validProds.php?prod=mww
Users looking for our products via WMO Headers will find them under WHUS72 KTBW.

What do you think of our new product?
Users of the product are encouraged to provide feedback by completing the brief survey and comment form available online at:
http://www.weather.gov/survey/nws-survey.php?code=mww

Generosity Abounds at WFO Tampa Bay

By: Thomas Dougherty

The Combined Federal Campaign (CFC) is the annual fund-raising drive by Federal employees in the workplace each fall. It remains the largest and most successful employee workplace giving campaign in the world. The theme of the 2007 Tampa Bay Area Suncoast CFC was "From The Heart" and the heroes of the Tampa Bay Area Weather Forecast Office (WFO) contributed to this campaign wholeheartedly.

23 staff members donated a record-breaking $18,076.00 this year. As such, the staff members of the Tampa Bay Area WFO have become a cornerstone of philanthropy for more than 2,500 charities around the world and 218 local agencies close to home. Five employees donated over $1,000 each and were recognized with "Gold Eagle Awards". The giving nature of the staff at the Tampa Bay Area WFO remains stronger than ever as they help others help themselves. It is remarkable that such a small number of dedicated employees donated so much.

It truly is a pleasure to work with such caring and generous people.

NOAA Weather Radio Troubleshooting

By: Jennifer Colson

With the addition of a new NOAA weather radio transmitter to the area and a sharp increase in the use of weather radios in homes and schools, we have listed several troubleshooting ideas below to ensure your radio is working and tuned to the correct transmitter for your location.

Transmitter Location	Channel Number	Frequency	Counties Covered
Morriston	7	162.550	Levy, Citrus and Dixie
Inverness	1	162.400	Levy, Citrus, Hernando, Sumter and Marion
Sumterville	5	162.500	Sumter, Hernando, Citrus, Marion and Lake
Riverview	7	162.550	Pasco, Pinellas, Hillsborough, Manatee, Polk and Hardee
Largo (Marine only)	3	162.450	Pinellas, Hillsborough, Manatee and local coastal waters
Sebring	5	162.500	Polk, Hardee and Highlands
Venice	1	162.400	Manatee, Sarasota, Hardee, Desoto and Charlotte
Fort Myers	4	162.475	Desoto, Charlotte, Lee, Collier, Glades and Hendry

County	SAME Code
Levy	012075
Citrus	012017
Hernando	012053
Sumter	012119
Pasco	012101
Pinellas	012103
Hillsborough	012057
Polk	012105
Manatee	012081
Hardee	012049
Highlands	012055
Sarasota	012115
Desoto	012027
Charlotte	012015
Lee	012071

- Make sure your radio is tuned to the correct transmitter for your location
- Make sure you have the correct SAME code entered for your county
- In the Tampa Bay area, make sure you are **NOT** tuned into the Largo marine only transmitter
- Tests are sent every Wednesday between 11AM and 12PM, and again between 6PM and 8PM, weather permitting
- If everything is programmed correctly and you're still having problems, check the batteries and refer to your owners manual
- There is a recall of some Oregon Scientific Weather Radios, model numbers WR103NX, WR108, WRB308, and WRB308J. For information, call the company at 1-800-203-4921 during business hours or visit their website at www2.oregonscientific.com

---

Thank You to all!

Editor: Jennifer Colson – Journeyman Forecaster
Contributors: Brian LaMarre – Meteorologist-In-Charge
Charlie Paxton – Science and Operations Officer
Rick Davis – Senior Forecaster
Paul Close – Senior Forecaster
Ryan Sharp – Journeyman Forecaster
Ernie Jillson – Journeyman Forecaster
Colleen Rhea – Data Acquisition Program Manager
Thomas Dougherty – Hydrometeorological Technician