



**UNITED STATES DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL WEATHER SERVICE  
Fort Worth, Texas**

**December 2004**

## **SOUTHERN TOPICS**

*Working Together To Save Lives*

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*The end of another year provides an opportunity for pause and reflection. Although years may come to an end, the weather never does. And our National Weather Service offices **never** close. No hour goes by without dedicated individuals at those offices being ever watchful for our active weather, and it has been that way for well over 130 years. Few agencies – government or private – can claim such diligence and dedication to their mission. No events this year better drove home that point than the record-setting land impacting hurricanes which hit the southern USA. Indeed it is often demonstrated that our Nation's unique atmospheric nature gives the National Weather Service, government's highest responsibility and priority for the protection of its people. Many of our employees and their families were personally threatened or impacted, yet the quality of service provided by those local offices never wavered. Through such actions, year after year, our National Weather Service sets a standard for excellence in providing a vital government service, and in that we can all take pride!*

*On behalf of all of us here in Southern Region Headquarters, Thank You for your valued contributions to our Nation. We wish all of our fellow NOAA and National Weather Service employees, their families, and their friends a heartfelt Merry Christmas and Happy Holidays.*

*Bill Proenza*



**COMMERCE MEDAL HONORS.** I'm pleased to note the following Southern Region offices and employees who were recently honored with Department of Commerce Gold Medals, the highest honorary award given by the Department, in recognition of their outstanding contributions to the vital National Weather Service mission. They are:

**WFOs Memphis and Norman**, along with WFOs Paducah, Pleasant Hill and Springfield in Central Region, and the Storm Prediction Center, for providing life-saving warnings and forecasts during an unprecedented series of tornado outbreaks during May 4-10, 2003.

**Vincent Wood and James Purpura**, for instituting a program of disseminating NWS hazardous weather warnings to hearing impaired citizens of Oklahoma by means of alphanumeric pagers. Jim, formerly the WCM at Norman, is now MIC at WFO San Diego. Vincent is with NSSL.

## CLIMATE, WATER AND WEATHER DIVISION

### METEOROLOGICAL SERVICES BRANCH

#### MARINE

**Coastal flood workshop no washout.** WFO Corpus Christi hosted the second annual Coastal Flood Workshop on November 17 for the office staff and customers. The workshop was designed to educate forecasters on the latest coastal flood forecasting techniques, better define coastal flood thresholds, and ensure the office was meeting customer needs. Dr. Philippe Tissot from the Conrad Blucher Institute at Texas A&M University Corpus Christi demonstrated the Institute's coastal flood forecast model, which is available on the Internet in real time and is a great help to NWS forecasters. Very positive feedback was received from Corpus Christi area emergency management officials, the Nueces County Beach Patrol, Padre Island National Seashore representatives, and local law enforcement. Each agency relies on the NWS for critical tide information and is mobilized in advance of minor tidal overflow conditions. Padre Island officials expressed concern over the life threatening impact that even minor tidal overflow can pose. Only one access road exists to the 60 mile long island, which is visited by 600,000 people each year.

#### **WFO Tampa Bay recognizes dedicated marine observer.**

Tampa Bay SOO Charlie Paxton awarded a plaque to Rocky von Hahmann, owner of *Surfing World* surf shop in Cortez, Florida, in recognition of his many years of dedicated service to the National Weather Service. For years, Rocky has tirelessly provided timely and accurate surf reports and marine observations from Bradenton Beach. His reports have verified many high surf advisories along area beaches, as well as small craft advisories over the near shore waters. After receiving his award, Rocky stayed for a tour of the office and observed the NWS operations in action.



**Ocean Commotion 2004.** On November 4, ‘Ocean Commotion’ was held at Louisiana State University for the fifth year. Hosted by the Louisiana Sea Grant Program, Ocean Commotion offers students an educational field trip to LSU, and provides university researchers with a forum to display their research for the local community. Previous Ocean Commotion events were covered in *The Advocate*, *The Reveille*, *LSU Today*, and Louisiana Sea Grant's *Coast and Sea Magazine*. This event annually attracts more than 3,000 students to the campus, many of them for the first time. It is never too early to encourage children to think about what they want to be when they grow up and where they want to go to college. The primary purpose of the exhibits is to give students the chance to learn about and touch the products of the sea and coast - aquatic animals, plants and minerals that Louisiana's citizens are so dependent upon.

Paula Campbell, NWS Port Meteorological Officer for New Orleans, participated as an exhibitor in this year’s Commotion by displaying information on the NWS’s Voluntary Observing Ship (VOS) Program. The VOS Program sometimes goes unnoticed, yet forms a critical part of the NOAA/NWS observation program. Paula’s display dealing with the exciting world of ships piqued the interest of all, even her fellow exhibitors. Adults as well as students had no idea the NWS was involved with ocean-going ships, and as Paula noted, THAT is what outreach is all about! Students of all ages were interested in the methods by which clouds and sea state observations are taken, how they were communicated to shore, and other activities of the ships. Information about the National Data Buoy Center was provided as well. ‘Ocean Commotion’ is a great opportunity to introduce our country’s vast coastal and marine resources to children, and foster stewardship for generations to come.

## **PUBLIC**

**ZFP improvements.** There are several options we can use to improve our ZFP output from GFE. We would probably all agree the following formatter-generated text product should not have been sent out untouched:

SLIGHT CHANCE OF SHOWERS AND THUNDERSTORMS THEN THUNDERSTORMS  
LIKELY AND CHANCE OF SHOWERS IN THE LATE EVENING AND EARLY MORNING  
THEN CHANCE OF SHOWERS AND THUNDERSTORMS.

NORTH WINDS AROUND 5 MPH IN THE EVENING BECOMING LIGHT...THEN  
BECOMING EAST AROUND 5 MPH IN THE MORNING SHIFTING TO THE SOUTH.

What caused this? In this case, the Weather grids changed from *slight chance TRW* to *likely T* and *chance RW* to *chance TRW*. The ZFP formatter puts words to exactly what is in the grids. The wind forecast also replicates what is in the grids.

The common problem with these two examples is that the formatter was set to describe four time



frames within one 12-hour period. If the formatter had been set locally to two time frames, the detail would be less and the product would look (and sound) better. The default in the baseline software is two frames. To change these parameters the IFPS focal point can go to the ZFP\_local file. In the sections under Component Product Definitions, for each period, change any “3” to a “6” in these lines:

```
("Wx", self.dominantWx, [6]),  
("Wind", self.vectorMedium Range, [6]),  
("Wind", self.vectorMinMax, [6]),
```

On occasion, combining fewer counties might solve some wording problems as well. The good news is that IFPS 16 has a more elaborate and robust scheme for assembling phrases, which should lead to clearer text products.

We hope this example and the proposed solutions have been helpful.

**AFD hotlinks.** The Area Forecast Discussion is one of our most read products. By using some creativity, Lance Bucklew (WFO Fort Worth) has made the AFD even more informative. He created a script which highlights certain terms in the AFD and converts them into links which can be clicked to obtain the definition or explanation. For an example, see the following URL.

<http://www.srh.noaa.gov/fwd/productview.php?pil=FWDAFDFWD&version=0>

## AVIATION

**Aviation awards to WFO Little Rock.** The WFO Little Rock aviation team earned both the Southern Region 3<sup>rd</sup> Quarter Aviation Team Award and the NWS Aviation Services Branch 3<sup>rd</sup> Quarter Team Award. Team members include senior forecaster Newton Skiles, SOO Christopher Buonanno and meteorologist intern Paul Iñiguez. The team partnered with the Arkansas Aerospace Education Center to host an Aviation Workshop/Seminar at the center for 55 pilots, covering topics such as icing, thunderstorms, climatological support tools for aviation forecasting and NWS aviation services. The three-hour seminar was rated as the best of its kind in recent years, based on many positive comments from attendees. The feedback will foster enhanced partnership between Arkansas pilots and the WFO, with future workshops being planned. Additionally, Newton Skiles was invited by the FAA Flight Standards District Office in Little Rock to make a special presentation at the Annual Arkansas Aviation Safety Counselors Meeting. Great job, team, and the WFO Little Rock staff, in enhancing the National Weather Service aviation mission!

## FIRE WEATHER



**Fire team meets in Tunica.** Fire weather and land management experts from across the southern U.S. gathered in Tunica, Mississippi, in early December for the semi-annual meeting of the Southern Area Fire Danger Working Team. The mission of the group is to seek continued improvement in measuring fire weather and fire danger parameters, thereby leading to a more effective National Fire Danger Rating System. The team includes representatives from national and state land management agencies and the National Weather Service. The NWS continues to increase the number of fire danger forecasts produced each day under the AWIPS PIL: FWM. In the last three years Southern Region's FWMs have expanded from 69 to 170 forecast sites. This has come in concert with the rapid expansion of land management observing sites or RAWS stations.

## **SEVERE WEATHER PREPAREDNESS AND OUTREACH**

**WFO Lubbock reaches out for safety and awareness.** In late October, WFO Lubbock staffed a booth in Jayton and Tahoka, Texas, promoting safety and awareness information to customers and partners. Nearly 400 contacts were made throughout the two-day outreach effort, including local law enforcement officials, middle school children, teachers, and interested individuals from the general public. NWS safety booklets were distributed and the WFO promoted the life saving benefits of NOAA All Hazards Weather Radio. WCM Ed Calianese, senior forecasters Mark Fox and Ron McQueen, forecaster Ken Widelski and HMT Roberto Robledo all contributed to the success of these outreach events. Great job, guys.

**WFO Lubbock promotes NWS careers.** A recent career expo at the Lubbock Civic Center afforded WFO staff members the opportunity to educate approximately 200 high school students and teachers on career paths in the NWS. In addition to educational information on NWS employment, expo attendees learned about satellite imagery interpretation and the NWS Southern Region Web pages. WCM Ed Calianese, senior forecasters Mark Fox and Ron McQueen, forecaster Ken Widelski and intern Gary Skwira led the effort, teaming with a local ABC affiliate meteorologist to enhance exposure of NWS services.

**WFO San Juan prepares for the next hurricane.** WFO San Juan WCM Rafael Mojica participated in the initial planning conference for the Fort Buchanan 2005 Hurricane Exercise (Hurrex05). Support was provided in developing a scenario for a Category 1 hurricane crossing the northeast section of Puerto Rico. Rafael Mojica also conducted a Storm Ready program presentation for 15 San Juan city emergency managers. They have expressed interest in the program, and already comply with most of the requirements.

**Boy Scouts earn weather merit badges.** About 30 Louisiana area Boy Scouts who attended a winter 2004 Boy Scout Jamboree recently earned their Weather Merit Badges. WFO Lake Charles staff, led by forecaster Kent Kuyper and DAPM Rick Gravitt, worked with the group at their camp and provided a tour of WFO Lake Charles - a requirement for the badge.

**Excellence in Weather Forecasting.** WFO Lake Charles was recently presented a Special Award



by the East Texas Mutual Aid Association. The award stated: "In Grateful Appreciation for Your Outstanding Service to ETMA and Excellence in Weather Forecasting for East Texas." Local media and the association president made special mention of outstanding forecasts and warning lead times during a recent tornado outbreak in the Lake Charles CWA. Congratulations to the WFO staff for this significant honor from your customers.

**Fall Severe Weather Awareness Day is held.** October 27 marked the second annual Fall Severe Weather Awareness Day across the Tennessee Valley. WFO Huntsville MIC John Gordon and WCM Tim Troutman conducted several media interviews and participated in live radio shows to highlight the fall severe weather season. In addition, the WFO Huntsville local BLAST team organized three separate media workshops during November. The events were designed to improve customer feedback and promote new technology that is rapidly becoming available to the WFO Huntsville.

**Winter Weather Awareness Week in Alabama.** WFO Huntsville WCM Tim Troutman and senior forecaster Matt Zika participated in a series of winter weather awareness presentations for emergency managers across north Alabama. The Alabama Winter Weather Awareness Week ran from November 29 to December 3.

### **WFO Brownsville Activities**

**Office tours.** WFO Brownsville DAPM Jim Campbell gave an office tour for 35 physical science students from the University of Texas at Brownsville. He provided a presentation on the history of the NWS in Brownsville, NWS operations, and weather that affects the Rio Grande Valley, with special emphasis on the 2004 hurricane season in Florida. Forecaster Joe Tomaselli gave a weather briefing and discussed his career and recent hiring by the NWS in Brownsville. Jim completed the visit with a tour of the WFO inflation building and an overview of upper air observations.

Jim also provided a morning presentation to 90 students in grades 6-8 at Dr. Juliet V. Garcia Middle School in Brownsville. He followed up in the afternoon with an office tour for 12 students and four teachers from a home school in McAllen. The group was provided with a history of the National Weather Service, followed by a weather briefing by Matt Lorentson and a tour of the upper air facility by Sam Martinez.

**Zoo visit.** The WFO participated once again in the annual Halloween "Boo at the Zoo" outreach event hosted by the Gladys Porter Zoo in Brownsville. The event provides numerous private and public sector groups an opportunity to promote their organizations while interacting with children. Approximately 12,000 people participated in the two night event. WFO volunteers for the events included MIC Andy Patrick, DAPM Jim Campbell, ASA Rachel Gutierrez, ITO James Raley, senior forecaster Brian Miller, and forecasters Mike Castillo and Joe Tomaselli.

**Computing and the NWS.** SOO Kurt Vanspeybroeck spoke to 35 computer science students at South Texas College in Weslaco. Kurt's presentation focused on the topic of "Computing and the



NWS.” The one-hour talk served as the precursor for an office tour. DAPM Jim Campbell led the tour and demonstrated to the students how integral computers are to the daily operations of the NWS. Jim also provided them with a presentation depicting the history of the NWS in Deep South Texas. WCM Jesus Haro provided the students with a weather briefing and HMT Sam Martinez gave them a tour of the upper air facilities.

**Forecasters get into Brainsville.** Senior forecasters Matt Lorentson and Tim Speece served as judges for the Brownsville Integrated School District’s “Brainsville Inventions Competition.” The science fair featured innovative work from some of the district’s brightest students. Tim and Matt thoroughly enjoyed the science fair and were impressed by how clever some of the entries were. They also spoke with interested students about careers in meteorology.

### **HYDROLOGIC SERVICES BRANCH**

**ALERT system meeting in Puerto Rico.** On December 1 representatives from WFO San Juan participated in the Puerto Rico ALERT (Automated Local Evaluation in Real Time) System meeting held at the PREMA operations center in Santurce. Recent developments prompting this meeting include the following.

- 1) The ALERT data stopped flowing to AWIPS (via the RR5) last September, due to the removal of the Hydromet ALERT computer from the San Juan network. This was done at the request of Southern Region HQ.
- 2) Recent checks of the data flowing into the Hydromet computer have shown an extremely uneven ingest of data. Some sites rarely if ever report and there are lots of spurious data. It is not clear if this is related to faulty radio receivers or line-of-sight radio blockages between the NWS and ALERT or repeater sites.
- 3) Hydromet is legacy software that is not supported by the NWS and dates from the early 1990s. WFO San Juan is attempting to implement a program called “ALERT to LDAD” which will obviate the need for data to flow through the Hydromet computer.
- 4) The NWS is required by 2005 to have the radio frequencies of all ALERT sites “narrow-banded” to comply with FCC regulations. A contract to accomplish this between PREMA and High Sierra Electronics has been working its way through PREMA for several months. High Sierra is also contracted to provide training to users of the system and a network evaluation. The exact status of these contracts is unclear.

The USGS has indicated that the original ALERT users group consisted of NWS, USGS, PREMA (then Civil Defense), PREPA (PR Electric Power Authority), and PRASA (PR Aqueduct and Sewer Authority). This group met frequently, as often as bi-monthly. According to the USGS the original decision to go with direct line-of-sight radio communications was made primarily because the NWS wanted real-time rainfall data versus using satellite communications which are “near real-time.”



Newer technologies are now being used at the USGS, including INET, which is a combination of radio/satellite transmission capability now being installed by the GS and PREPA at 29 lake locations in Puerto Rico.

WFO San Juan ESA Burt Gordon, and senior service hydrologist Peter Corrigan, also visited the dispatch center and spoke with the head of PREMA communications about the system, viewing the functional Hydromet computer which also seemed to have newer radio receivers than the NWS equipment. PREMA uses the data during times of heavy rainfall. The meeting concluded with an inspection of the roof mounted ALERT rain gauge, which also has a wind and temperature sensor. The group agreed to try and arrange a meeting after the New Year.

**Jackson State University Mesonet Steering Committee meeting.** On November 4, senior service hydrologists Patricia Brown, WFO New Orleans Area, and Marty Pope, WFO Jackson, visited Jackson State University in Jackson to meet with the Mississippi Mesonet Steering Committee. The group manages the technical and administrative functions of the Mississippi Mesonet. Attendees were solicited from a group known to have demonstrated expertise and interest in the formation and operation of a mesonet for the state. The Mississippi Mesonet Project originally operated through a NOAA Center for Atmospheric Sciences (NCAS) grant for a consortium of universities led by Howard University in Washington, D.C. The JSU campus was designated as a site of the Cooperative Network for Renewable Resource Measurement (CONFRRM), managed by the National Renewable Energy Lab (NREL). One Mesonet station is operational in central Mississippi at Newton County, and another station will soon be online. At the meeting the committee decided that organizational documents would be developed. Technical topics and procedural issues were discussed as well. Dr. Elizabeth Matlack was selected as the chairperson for the Mesonet Advisory Steering Committee and Patricia Brown as the vice-chairperson.

**Comite River Diversion Canal Project.** On October 21, WFO New Orleans Area senior service hydrologist Patricia Brown attended the ribbon-cutting ceremony for the second phase of the Comite River Diversion Canal Project. The Lilly Bayou Control Structure in East Baton Rouge Parish is part of the largest current civil project being conducted in the country. The project is a joint effort of the United States Army Corp of Engineers, the state of Louisiana, and local governments. Upon completion of the entire 13-mile canal project, several thousands of area residents and businesses will be protected against catastrophic property damage by lowering water levels during floods on the Comite and Amite Rivers. Those flood waters will be rerouted into the Mississippi River, relieving flooding in Baton Rouge and surrounding municipalities.

The ceremony was attended by the Congressman Richard Baker, State Senator Jay Dardenne, and Col. Peter J. Rowan of the U.S. Army Corp of Engineers, among other dignitaries. The ceremony culminated with a field trip to the Lilly Bayou Control Structure, which would appear to most observers to be a big ditch.

**LMRFC implements new rating curve GUI.** LMRFC installed and began testing North Central RFC procedures and a GUI which allows a forecaster to make quasi-interactive changes to the





NWSRFS Operational Forecast System rating curves. LMRFC participated in a conference call with NCRFC to discuss procedural enhancements for automated processing of rating curves obtained from the USGS's National Water Information System web site. LMRFC will begin use of these procedures in the near future. LMRFC will provide NCRFC feedback on its use. NCRFC will be modifying this program to automatically retrieve the most current USGS rating from the USGS website and display it on the same graph as the rating curve currently in NWSRFS. The forecaster will be able to make changes to the NWSRFS rating curve using the GUI and associated table. This will significantly improve LMRFC's ability to update ratings in NWSRFS from the USGS. No timetable has been set for the implementation of the software to perform all the tasks. This program would be transferrable to any RFC for processing of USGS ratings.

**RFC web presence team updates.** NWS Central and Eastern Regions have expressed interest in expanding the SR precipitation analysis graphics to include their regional service areas. Discussions are underway to see how to best to share resources and efficiently implement this project across regions. Staff from all three regions are conducting conference calls on a routine basis. An implementation strategy has been drafted to address the expansion of these graphics to both CR and ER.

The SR RFC web presence team held a conference call on October 5. The group is working on the conversion of the Flood Outlook Product (FOP) generation, from ArcView 3.1 using the Avenue programming language to ARCGIS 8.2/Visual Basic programming language. This new program will be available for all RFCs to use when completed. It will eliminate the need for running ArcView to create the FOP. Additional display functions will also be available.

**WFO New Orleans Area and LMRFC visit Harrison County Civil Defense.** On December 16, WFO New Orleans Area WCM Frank Revitte, senior service hydrologist Patricia Brown, and LMRFC hydrologist Angelo Dalessandro, visited the Harrison County CD Office at Gulfport, Mississippi, to discuss a new coordination product produced for the WFO and subsequently for the LMRFC. The computer program provides near real-time river, wind and rainfall information from the gauge network owned and operated by Harrison County. Patricia and Frank discussed an upcoming workshop for emergency managers on severe weather awareness, the Advanced Hydrologic Prediction Service (AHPS) program, and other hydrology topics. Patricia also discussed the upcoming National Flood Awareness Week campaign to be conducted in March 2005. The CD director and her technical staff were briefed on the WFO New Orleans AHPS webpage as well as products on the LMRFC Web site.

**NWS/TVA meeting.** Representatives from the NWS and the TVA met on November 16 to finalize plans on new procedures for sharing main stem Tennessee River flood forecast information with the NWS. The meeting was hosted by WFO Huntsville. In attendance from the NWS were Brian Boyd and Mike Murphy, senior service hydrologists from WFO Morristown and Nashville, respectively; John Gordon and Jason Elliot, MIC and hydrology focal point from WFO Huntsville; LMRFC DOH Bob Stucky; and Ben Weiger, chief of the Hydrologic Services Branch. The new procedures will help WFOs Morristown, Nashville and Huntsville with their dissemination of river flood



warning information for the main stem Tennessee River.

**SERFC represents U.S. at International Hydrology Meeting.** Reggina Cabrera Garza, senior hydrologic forecaster from the Southeast River Forecast Center in Atlanta, was part of a U.S. delegation attending the Twelfth Session of the Commission for Hydrology (Chy-XII) in Geneva, Switzerland. The session focused on international hydrology program goals for the future. The international delegates agreed that future work should focus in five theme areas, including Hydrometry and Hydraulics, Water Resources, Hydrologic Forecasting and Prediction, Disaster Mitigation - Floods and Droughts, and Analysis of Hydroclimatological Data for Variability and Trends. Numerous U.S. scientists are being recruited to serve on the open panels to provide support for the five themes of emphasis. Reggina was asked to participate in the work of the Commission as one of three U.S. experts in Hydrological Forecasting and Prediction.

### CLIMATE BRANCH

**Climate outreach activities.** WFO Tallahassee climate service focal point Tim Barry was the guest lecturer on December 3 for a climatology class at Florida State University, taught by Prof. Paul Ruscher. Tim's presentation was titled "The NWS Climate Program." Twenty six students attended the presentation which included an overview of what is climate and climate prediction, the NWS Climate Services Mission Statement, the role of the WFO climate focal point, NWS WFO and CPC climate products, and climatological applications to operational weather forecasting.

**XM-ACIS training.** Two training sessions were conducted via conference call from SRH on the new WFO XM-ACIS climate database which is now available to WFOs. The XM-ACIS contains historical climate data for max and min temperatures, average temperature, cooling and heating degree days, precipitation, snowfall, and snow depth for all first-order stations and WFO selected co-op stations. In the training sessions, WFOs were given a review on how the XM-ACIS database is populated, and how to perform the various queries using the search engine. The sessions also served as a discussion point for potential future improvements. Approximately half of the SR WFOs and RFCs were able to attend the sessions. More sessions will be conducted to provide all offices with this opportunity to learn how to get the most from this nationally supported WFO climate database and search engine.

**New climate product start-up.** WFO Tampa Bay, under the stewardship of their climate service focal point Paul Close, has begun issuing a Daily Climate Summary (CLI) product for Sarasota, Florida (MIACLISRQ) to meet the climate needs of residents in Sarasota and Manatee Counties. Paul worked with NCDC to compile 30-year averages as well as daily record values for Sarasota. Monthly Climate Summaries (CLM) and Record Report (RER) products will also be issued for the site. This has proven to be a great way for WFOs to customize their NWR programming to target listeners in selected service areas.

**Innovative thinking foils frogs and improves AWPAG.** Southern Region WFOs along the northeast Gulf Coast and the Panhandle and northern peninsula of Florida were having a tough time



trying to keep up with rainfall amounts at locations where the new All-Weather Precipitation Accumulation Gauge (AWPAG) was installed. Erroneous amounts were continually being reported. The problem, it turned out, was frogs! Small tree frogs had found a way to climb down the orifice of the container onto the weighing gauge, and thus cause false precipitation reports.

Gerard (Roddy) Stevenson, the ESA at WFO Mobile, designed a screen that could be installed over the orifice of the AWPAG to not only keep out the tree frogs, but also improve collection efficiency without losing precipitation amounts due to splatter or accumulation of hail. Roddy's design was sent to NWSH Engineering Branch which has since approved his concept and sent out about a half-dozen of the screens for testing at the affected sites. Early results are encouraging. Great innovative thinking, Roddy.

**Wettest summer and fall on record in the Southern Region.** The latest analysis from NCDC shows June through November was the wettest on record from Texas and Oklahoma eastward. The period of record extends back to 1895, or a total of 110 years.

[http://www.ncdc.noaa.gov/img/climate/research/2004/nov/06-11Regionalprank\\_pg.gif](http://www.ncdc.noaa.gov/img/climate/research/2004/nov/06-11Regionalprank_pg.gif)

Breaking this down by state reveals that each state in SR was in the top 10% for wettest June through November in the 110 years of modern record. "Driest" was New Mexico, which had its 11<sup>th</sup> wettest June through November, while Texas had its second wettest June through November. All other SR states experienced one of their top 10 wettest summer and fall periods on record.

[http://www.ncdc.noaa.gov/img/climate/research/2004/nov/06-11Regionalprank\\_pg.gif](http://www.ncdc.noaa.gov/img/climate/research/2004/nov/06-11Regionalprank_pg.gif)

On the heels of June and November being the wettest on record in Texas, the state is currently on a pace to have one of its top three wettest *years* ever. This is documented in the archives of the Southern Region news at:

[http://www.ncdc.noaa.gov/img/climate/research/2004/nov/06-11Regionalprank\\_pg.gif](http://www.ncdc.noaa.gov/img/climate/research/2004/nov/06-11Regionalprank_pg.gif)

The story was also picked up by *NOAA News* and the *Houston Chronicle*.

**National Integrated Surface Observing System.** Representatives of WFOs New Orleans Area, Lake Charles and Jackson, led by New Orleans MIC Paul Trotter, attended the initial orientation meeting at the Southern Region Climate Center in Baton Rouge for the development of a joint Louisiana and Mississippi mesonet in conjunction with the proposed NWS Integrated Surface Observing System (ISOS). Other participants included John Duxbury and Mike Asmus of SOD/OFB, and representatives from the NWSH Office of Science and Technology. Also participating were Kevin Robbins, Director of the Southern Region Climate Center and Louisiana State Climatologist, and representatives from the USDA, Jackson State University, Mississippi State University, the Louisiana State Police, and the Louisiana Department of Transportation.



The goal of the meeting was to secure partnerships between the various federal, state, and academic entities to seize upon opportunities in this region that can be utilized to expedite Louisiana and Mississippi becoming early participants in the upcoming NWS ISOS.

### **DISSEMINATION ENHANCEMENT TEAM**

The Southern Region DET was busy last month with network and Web improvement projects.

**Radar Archive II update.** The WSR-88D Radar Archive II data program continues to add additional sites. The DOD radars at Laughlin AFB, Texas (Del Rio) and Canon AFB, New Mexico have been added to the network. To check the current status of the network as viewed from one of our top tier receiving sites, the University of Oklahoma, go to the following URL:

<https://www.radarservices.org/members/imap.php>

Performance parameters of the WSR-88D Radar Archive II project are as follows:

1. Delivery of all data is to be within 60 seconds of generation, a term commonly referred to as delivery latency
2. A goal of 95% has been established for system-wide delivery of data. At this time, we are operating on a next-business day model of operations. If a data delivery problem occurs after normal administrative duty hours or on a weekend, and the problem cannot be resolved by operator interaction, then the problem will be addressed on the next business day. Special cases such as regional outages, significant weather events, and other determinations by the local staff may override this policy and call for immediate restoration of data flow. If you have any specific questions, please contact Eric Howieson, Martin Garcia, or Bruce Marshak for further clarification and problem resolution support as required.

**Network connectivity update.** The network connectivity (NWSNet) to the NWS Headquarters / NOAA complex in Silver Spring and the other NWS regions has changed. In the past, if we wanted to pass data between a SR office and say, an Eastern Region office, those data would flow from Fort Worth to Silver Spring and then to Eastern Region. Our new MPLS (Multi Protocol Label Switching) connection enables the data to flow directly from Fort Worth to Eastern Region. This new connectivity has been in use for about three weeks and we are closely watching its operation. We are excited with the additional bandwidth (6 MB connectivity vs. 3 MB previously) and connectivity options. This same type of service is envisioned as a potential replacement for our present frame-relay network service. That model still has all regional traffic bound for another region or the Internet route through Fort Worth. Office-to-office connectivity within the region would be direct. Our term for this type of connectivity is “Hub and Cloud.”

This new NWSNet connectivity is a pilot program. It is our understanding the NOAA Administrative Service Centers may join this effort. If the pilot program phases prove successful, it



is possible the NWSNet backbone could eventually become the backbone of a NOAA-wide network. The goal for this NOAA network is to function like any other utility, such as electricity or water service. If you need network connectivity, then you utilize the network we have in place for your network needs.

**Web updates.** The NWS Southern Region Web presence continues to lead the nation. During November we served 71.2% of all NWS visitors to the Internet. The SR field office staffs have aggressively advertised our Web site to emergency managers, state and local offices, RACES, our television and radio partners, federal government agencies including FEMA, USGS, and the Forest Service, and the public.

Our dedicated Dissemination Enhancement Team continues to fine tune and closely monitor our Web equipment to ensure the highest possible availability to customers. We also continue to look for enhancements for our pages, such as setting the 80 pixel area prior to the WWA map on each office's homepage, standardizing our left-hand menu, and developing an innovative new way to deliver radar reflectivity to our customers.

## SCIENTIFIC SERVICES DIVISION

**WINTER WEATHER THE FOCUS IN LUBBOCK.** WFO Lubbock SOO Steve Cobb and MIC Justin Weaver planned and coordinated a one-day workshop on winter weather on December 12. Dr. Greg Mann, SOO at White Lake, Michigan, was invited to present a review for forecasters on the topics of quasi-geostrophy and elevated convection. The talks, which were part of Greg's lectures at the SOO COMAP course, were modified to fit the West Texas weather regime and focus on operational application. WFO Lubbock senior forecasters Mark Fox and Jody James also presented information on precipitation type analysis using Bufkit and the top-down approach to forecasting winter precipitation type. In all, 37 people attended including staff from neighboring WFOs Amarillo and Midland, faculty and graduate students from the Atmospheric Science Department at Texas Tech University, and research associates from the West Texas MesoNet. The workshop was part of an ongoing effort among neighboring offices to foster information sharing and increased scientific input into the forecast process, and a local effort to increase collaboration with Texas Tech.

**TECHNICAL ATTACHMENTS.** Last month we called attention to a cross-cutting team which has been assembled by NWS Headquarters to examine issues related to potentially increasing our response to safety hazards associated with lightning. Not surprisingly, given the high incidence of lightning in Southern Region, several of our offices and university collaborators are providing input to the team's work. We also highlighted as tech attachments a number of papers those individuals will be presenting at next month's *AMS Conference on Meteorological Applications of Lightning Data* in San Diego. Focusing on the team, we inadvertently slighted many others in our region who are also involved in significant studies involving operational applications of lightning data, and who also will be involved in the conference, which is part of the *AMS 85<sup>th</sup> Annual Meeting*. Their



papers, along with those of others from Southern Region who will be involved other conferences as part of the Annual Meeting, are listed in this month's tech attachment at:

*85th American Meteorological Society Annual Meeting - Papers and Posters Authored or Co-authored by NWS Southern Region Participants.* SR/SSD 2004-15.

<http://www.srh.noaa.gov/topics/attach/pdf/ssd04-15.pdf>

Also included as a tech attachment this month is a summary of last month's research collaboration among the staff of WFO Midland, NOAA's Aeronomy Laboratory in Boulder, and the NASA High Altitude Research Program at Johnson Space Center in Houston:

*Interagency Teamwork for Upper Atmosphere Research*, by Jeff Cupo (WFO Midland). SR/SSD 2004-16.

<http://www.srh.noaa.gov/topics/attach/pdf/ssd04-16.pdf>

## **SYSTEMS OPERATIONS DIVISION**

### **OBSERVATIONS AND FACILITIES BRANCH**

**Georgia coop modernization meeting.** Members of the Georgia Coop Modernization Site Selection Team met at WFO Atlanta earlier this month to begin the process of site selection. The team members included representatives from SRH, WFOs Atlanta and Charleston, South Carolina, Georgia's Department of Transportation, Bureau of Investigation, and Environmental Protection Division, the University of Georgia, Georgia Forestry Commission, USGS, and the Georgia State Climatologist. Participants were asked to identify data collection sites owned and operated by each organization throughout the state. All sites were plotted on a map to show current locations relative to the 20 x 20 mile suggested Coop Modernization coverage grid.

Two significant action items surfaced during the meeting. First, before site selection/modification activities can begin, the group needs well-defined national mesonet instrument performance and exposure standards. These standards must clearly define instrument range, accuracy, resolution, and repeatability performance criteria. The group suggested a five tier prioritized performance and siting requirements system. The top tier would be comparable to the Climate Reference Network instrumentation and exposure criteria. The group then identified the need for a centralized metadata database. The centralized metadata database is required to compare existing instrumentation and siting standards from multiple agencies and categorize the current sites into the performance and exposure tiers. SOD Observation and Facilities Branch Chief John Duxbury will investigate both action items and report back to the team before the January 21, 2005 meeting.

**Houston/Galveston WFO construction status.** Construction of the new WFO facility is in the final stages of completion and the building is scheduled to be turned over to Galveston County in January. At that time NWS will begin activities in preparation for a March 2005 office relocation.



The NWS will start by working around several architectural inconsistencies including routing of the LAN cables to the NWS telecommunication terminal board. A meeting with Galveston County took place December 1 to finalize the terms and conditions of the lease. Both parties are working diligently to finish and sign the lease before the first of the calendar year.

**WFO Key West construction progress.** Steel for the main building is being erected now and the steel for the four-story upper air launch platform and inflation room will be complete next month. A fir tree “topping out” ceremony will be held in January when that steel construction is complete. The 9,000 gallon concrete cistern and sand filter underneath the building are complete, and the concrete footers for the precast, block, and poured walls are in progress now. The office systems furniture design is 90% complete and the lobby/outreach audio/visual equipment specifications are in progress. The general contractor plans to turn over five rooms to NWS on June 1 for pre-move activities, provided there are no abnormal construction delays.

**New Norman WFO.** On November 18, CIOs from NOAA, NWS and NSSL met with SR staff in Norman to discuss establishing a Network Operations Center (NOC) to support the NOAA presence in the new National Weather Center (NWC) on the University of Oklahoma campus. Carl Staton, NOAA CIO, would like to expand on the success of the Boulder, Colorado NOC. Unresolved issues regarding the Norman NOC include who will have ultimate authority over the NOAA network and who will provide the government resources to support this newly created organization.

### **SYSTEMS INTEGRATION BRANCH**

**IT security.** Eighty Southern Region employees have completed the mandatory SANS IT security training this year. This represented a substantial cost since under current requirements everyone with operating system root access is required to complete the security training every two years. At a recent CIO meeting in Kansas City progress was made in modifying these requirements for the NWS. Under the new requirements adopted at the meeting only system administrators will be required to take the SANS training, and they will need to retake the course only every four (not two) years. Those requiring root access but not doing systems administration work will need to take a much less rigorous IT security training module.

Southern Region Headquarters representatives participated in a CIO-called meeting in Kansas City last month. We appreciate the initiative and energy displayed by NWS CIO Paul Chan. He and his staff are making very good progress in several critical areas, especially in setting policy for NWS software patch management and overall security procedures. Paul is a team builder and is working to get consensus with the regions, NCEP and NWSH to improve the overall IT posture of the NWS.

Southern Region ITSOs will be attending training in January at NWSH to deploy the new Redhat Linux patch server for the NWS. This will give NWSH and the regions the ability to monitor patch updates of all the Redhat Linux installations throughout the NWS and for each region. This



capability will allow us to deploy the new Redhat Enterprise Operating System software which we've purchased but have had on hold pending the patch server deployment. Once deployed the new software should improve the overall IT security posture in the region.

The SR has now virtually completed the migration to the new Microsoft 2003 Server and Active Directory LAN systems. We want to thank all who participated in this major project, which began last spring. The new servers and active directory are expected to provide more cost effective and efficient IT performance for the region, and by standardizing, IT security will be improved, and it will make response to frequent data calls from NWSH much easier to assemble.

**AWIPS.** Southern Region sent two representatives to NWS Headquarters recently to participate in a two-day Graphical Hazard Generator (GHG) Tiger Team meeting. The meeting resulted in a list of high priority implementation issues as well as a well formulated implementation timeline. A decision will be made shortly on whether or not to go ahead with GHG or stay with the current WWA application.

Southern Region has been participating in the latest round of AWIPS SREC prioritization activities. Several SR staff provided input in addition to attending conference calls to discuss the appropriate priorities of items on the list. This is a complex process because of the large number of items to be prioritized, the wide ranging content of the items, and the need to take into account the resource needs of each item. We must find a way to simplify the process in the future.

## **ADMINISTRATIVE MANAGEMENT DIVISION**

### **DIVERSITY/EEO AND COMMUNITY OUTREACH ACTIVITIES**

**WFO Miami hosts Summerbridge tour.** A group of 75 to 100 middle school students from the Miami Summerbridge Program recently spent two hours touring WFO Miami and the Tropical Prediction Center. The visit concluded with a demonstration of the preparations for an upper air launch. Summerbridge was founded in 1978 as a national educational enrichment program which annually prepares thousands of motivated, low-income middle school students for success in rigorous college preparatory programs. Drawn from the public school system, 89% of students are students of color and 65% qualify for free or reduced-price lunch programs. English is a second language for 27% of the students, and most would be the first in their family to attend college.

**Career Day events in Deep South Texas.** WFO Brownsville DAPM Jim Campbell, HMT Alfredo Vega, and ASA Rachel Gutierrez participated in a Career Day at the Brownsville Events Center for approximately 2500 5<sup>th</sup> grade students from Cromack, Del Castillo, Garden Park, Garza, Longoria, Ortiz, Perez, Putegnath, Sharp and Victoria Heights Elementary Schools. The event was sponsored by the Guidance and Counseling Department of the Brownsville Independent School District. The





WFO staff discussed careers paths in meteorology and handed out weather brochures. Alfredo and Rachel conducted interviews in Spanish for around 200 Spanish-speaking students.

Senior forecaster Tim Speece also represented WFO Brownsville at a Career Day at the Brownsville Event Center. Six elementary schools participated, with approximately 750 students in attendance. Tim taught the students about the mission of the National Weather Service in Deep South Texas, and provided the students with weather safety literature.

SOO Kurt Vanspeybroeck and DAPM Jim Campbell hosted a day-long seminar for Laredo Community College of Science and Technology Interns regarding the NWS and careers. Jim provided a tour and presentation on the NWS and its mission. Kurt presented a lunchtime discussion on careers, science, and mentoring. The afternoon presentation consisted of a weather discussion and demonstration of AWIPS, GFE and the Internet and how they fit into operational science. The students also received an impromptu briefing on marine meteorology from forecaster Joe Tomaselli. A total of 17 students/interns traveled to Brownsville from Laredo.

Senior forecaster Brian Miller, HMT Alfredo Vega and DAPM Jim Campbell represented the WFO at the Brownsville "Teen Learning Center" Career Fair. The center gives students who have been expelled from school a second chance to succeed in school, but in a military boot camp environment. Seventy-five students from 6<sup>th</sup> through 12<sup>th</sup> grade attended. The WFO staff discussed career paths for meteorologists and handed out weather brochures.

WFO Brownsville WCM Jesus Haro and SOO Kurt Vanspeybroeck provided a presentation to 80 primarily Hispanic students at Wilson Elementary school in McAllen. This interactive presentation lasted about 30 minutes and was presented in both English and Spanish. Kurt and Jesse demonstrated several weather instruments to the children such as weather balloons, thermometers, and anemometers. The students were also given tips regarding severe weather and hurricane safety.

MIC Andy Patrick participated in National Children's Reading Week at Incarnate Word Academy in Brownsville. Andy read the story "Roses on my Carpet," by Rukhsana Khan, to the 7<sup>th</sup> grade class. In addition to the story, Andy gave brief presentations about WFO Brownsville to the class in both English and Spanish. Twenty-five students and teachers participated. Approximately 90 percent were Hispanic and most were female.

**WFO Midland reaches out to elementary students.** Todd Lindley and Doug Cain, members of the WFO Midland Outreach Team, have initiated a tutoring program for local elementary school kids. Members of the Midland staff are tutoring 5<sup>th</sup> and 6<sup>th</sup> grade students at Scharbauer Elementary School on math and science during after school hours. After just a few weeks of effort, teachers have noted an improved understanding of these subjects by the students. There are future plans to expand this after-school tutoring to other schools in the area.

The WFO also hit the local science fair circuit this fall. Members of the staff are served as judges at several local elementary schools in the Midland School District. Doug Cain, Jeff Cupo, Cody



Lindsey, Beverly Martin, Seth Nagle, Wayne Patterson, Eric Platt, Pat Vesper and Mike Young were among the WFO volunteers who participated in fairs during November.

By engaging Midland's youth, the WFO Outreach Team hopes to instill a positive attitude toward the NWS that will be carried into the students' adult lives. Kudos to the staff of WFO Midland for your willingness to enrich the community in which you live and work. Great job, folks.

<b>SOUTHERN REGION WORKFORCE TRANSACTIONS</b> <b><u>NOVEMBER 1 - 30, 2004</u></b>			
<b><u>Southern Region Losses</u></b>			
<u>Name</u>	<u>From (Office)</u>	<u>Action/Transfer</u>	<u>From Title/Grade</u>
Gerald Miles	WFO MRX	Retirement	HMT, GS-11

<b><u>Southern Region Gains</u></b>			
<u>Name</u>	<u>To (Office)</u>	<u>Action/Transfer</u>	<u>To Title/Grade</u>
Rosalina Vazquez-Torres	WFO SJU	New Hire	HMT, GS-9
Allen S. Adkins	WFO LZK	New Hire	Electronic Tech, GS-10

<b><u>Within Region Transfers/Actions</u></b>			
<u>Name</u>	<u>To (Office)</u>	<u>Action/Transfer</u>	<u>To Title/Grade</u>
Jennifer McNatt	WFO TAE	Reassignment	Meteorologist, GS-12
Brian LeMarre	WFO LUB	Transfer from NWSH	WCM, GS-13
Matthew W. Foster	WFO OUN	Reassignment	ITO, GS-13
Forrest W. Mitchell	WFO OUN	Promotion on Station	OPL, GS-12
Lawrence E. Maifeld	WFO CRP	Promotion on Station	OPL, GS-12
Lary Burgett	WFO HUN	Promotion on Station	OPL, GS-12
Benjamin Aponte	WFO SJU	Promotion on Station	OPL, GS-12

