



The ArkLaMiss Observer



First Edition, Winter 2003

The official newsletter of the Jackson, MS Forecast Office

Welcome to the inaugural edition of *The ArkLaMiss Observer!*

We hope you enjoy this newsletter, which we want to use as a way to inform you of what we're working on at the National Weather Service in Jackson. As always, our goal is to serve you and meet your needs, and to do that effectively, we need your feedback. Our hope is that by our giving you a better idea of what we are working on here today, it will enable you to let us know what we should be working on tomorrow.

It has been an active fall for our region weatherwise. Our area was impacted by two tropical weather systems, Isidore and Lili, which helped make this one of the wettest fall seasons on record for the area. Then, of course, much of the eastern United States from the Great Lakes to the Gulf Coast was impacted by the tornado outbreak of November 9th and 10th, which was one of the worst outbreaks in recent years. Our area did not escape, with 10 tornadoes touching down in the Jackson service area, including an F3 tornado which did serious damage to the Columbus, MS area. More severe weather affected the area during the latter half of December, including an F2 tornado in Newton, MS on December 19th.

In this newsletter, you will read more about these weather events, as well as status reports on some of our programs such as the cooperative observer network. Again, we are always striving to improve our services, and it is only through input from you, our customers and partners, that we can accomplish this. Please feel free to let us know how we are doing, and what we can do to better meet your needs. I can be reached at (601) 936-2189, or via e-mail at Alan.E.Gerard@noaa.gov.

Alan Gerard, Meteorologist-in-Charge

The Return of El Nino

by Jennifer Colson

El Nino has returned with moderate strength and is expected to have an influence in this winter's weather pattern. El Nino occurs when the easterly trade winds over the tropical Pacific Ocean weaken. This allows warmer ocean waters, typically over the western half of the Pacific, to invade the central and eastern portions of the ocean. This shift has major impacts on the weather conditions across the United States, as shown on the following graphics.

For our area during the winter months, this will typically mean cooler than normal temperatures and above normal rainfall amounts. The first image shows that temperatures average around half a degree cooler than normal. The second image shows that precipitation totals average three to four centimeters above normal. Images were taken from

www.coaps.fsu.edu/research/matt/index.shtml.

The Jackson forecast area has already experienced some of the effects of El Nino. This fall was the second wettest fall on record for Jackson. 20.97 inches of rain fell over the three month period from September to November, missing the record amount of 22.31 set in 1906 by only 1.34 inches. The month of November also saw colder than normal temperatures. Jackson's average temperature for the month was 2.5 degrees below the normal average monthly temperature. With the forecast not showing any signs of a break from this pattern, it looks like El Nino is here to stay for a while.

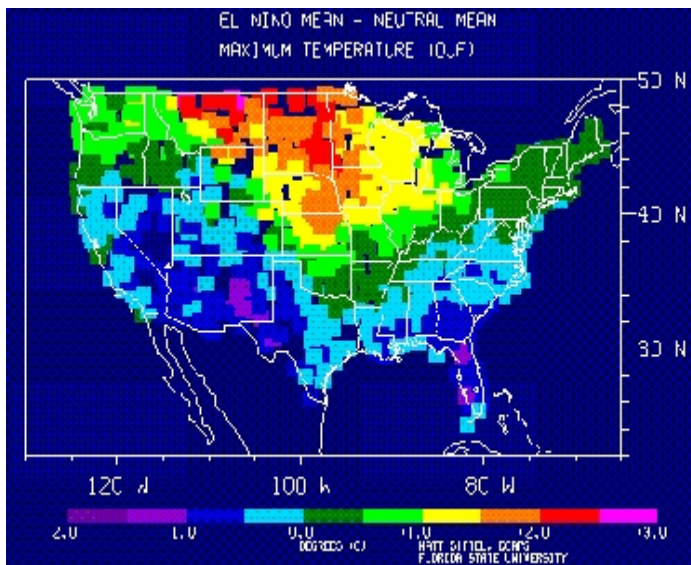


Image 1: Max Temperature departure from normal during El Nino.

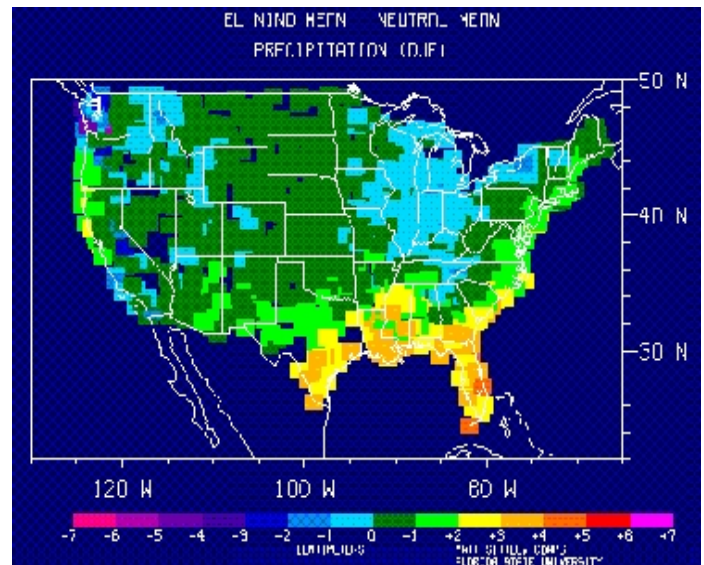


Image 2: Precipitation departure from normal during El Nino.

National Weather Service Breaks Ground at New Radar Site

Officials From NOAA's National Weather Service broke ground on October 28th for the installation of a Doppler radar in Brandon, MS, that will provide low-level detection of severe weather for residents across the state.

At a ceremony on the site where the radar will stand, keynote speaker, Third District Congressional Representative Charles "Chip" Pickering (R-Mississippi), was joined by retired Navy Vice Adm. Conrad C. Lautenbacher, Ph.D., Undersecretary of Commerce for Oceans and Atmosphere, and NOAA Administrator; Brig. Gen. David L. Johnson, Air Force Director of Weather; John Jones, National Weather Service, Deputy Director; Mac McLaughlin, National Weather Service Southern Region, Chief Program Officer; Alan Gerard, Jackson Weather Forecast Office Meteorologist in Charge, and Mayor Pro-tem of Brandon, Yvonne Bianchi.

The radar is being transferred to NOAA's National Weather Service from the Air Force weather training facility at Keesler Air Force Base. The radar is scheduled to be operational early next year. The enhanced coverage will further improve the level of weather service to our citizens in Mississippi.

With the support of Representative Pickering and Senators Thad Cochran and Trent Lott, last year a \$3.1 million appropriation was enacted by Congress and approved by President George W. Bush to facilitate the transfer and installation of the Keesler radar to the new site in Brandon. Located atop a 30 meter tower, the new Brandon radar will result in optimum coverage across the entire area.



From left to right, Alan Gerard, John Jones, Brig. Gen. David L. Johnson, Vice Adm. Conrad C. Lautenbacher, Yvonne Bianchi, Representative Charles "Chip" Pickering, and Mac McLaughlin.

Active Tropical Weather Season for Area by Alan Gerard and Doug Butts

For the first time in weather records, our region was struck by two significant tropical weather systems in about a week's time. First, Tropical Storm Isidore hit the area on September 26th, then Hurricane Lili affected the area on October 3rd and 4th.

Isidore started as a tropical depression over the Atlantic ocean in mid-September, and moved west across the Caribbean Sea, eventually strengthening into a major hurricane before striking the Yucatan Peninsula of Mexico on September 22nd. The storm weakened dramatically while over land, then moved north into the Gulf of Mexico where it restrengthened into a strong tropical storm before making landfall just west of Grand Isle, Louisiana early on September 26th.

Here in our region, Isidore produced torrential amounts of rain over much of the area, totaling between 5 and 10 inches for many locations. 9.68 inches fell near Grenada, with 9.27 inches at Brooklyn. Luckily, most of September up to that point had been quite dry, so no serious flooding problems occurred. Wind gusts of 35 to 45 mph were common, and when combined with the wet ground from the very heavy rain, numerous trees were downed across the region, causing a lot of problems on area roads and a large number of power outages. Damage to the United States from Isidore has been estimated by the National Hurricane Center to be around \$200 million.

Lili was a so-called "Cape Verde" storm, starting as a tropical depression in the tropical Atlantic Ocean 1000 miles east of the Lesser Antilles on September 21st. Lili moved through these islands as a tropical storm, but then weakened for a time before reintensifying and eventually becoming a hurricane. Lili struck Cuba as a category 2

hurricane on October 1st, and then moved into the Gulf of Mexico where it rapidly intensified to a major category 4 hurricane on October 2nd. Luckily, Lili weakened as rapidly as it intensified, and was only a borderline category 1 to category 2 hurricane when it made landfall just south of Intracoastal City, Louisiana on the morning of October 3rd.

For our area, Lili was not nearly as much of a rain producer as Isidore, with rainfall amounts only reaching 3 inches in some spots. Winds associated with Lili were a bit stronger, however, with a peak wind gust of 56 mph recorded at Greenwood-Leflore Regional Airport the morning of October 4th. This once again caused numerous trees to come down as well as power outages. Lili also produced five tornadoes, all of them occurring within one of the hurricane's rainbands which moved across Smith and Scott counties the afternoon of the 4th. All of the tornadoes were weak, however, and damage was generally limited to downed trees. Nationwide, damage from Hurricane Lili will likely approach \$1 billion.

Both of these systems were reminders that tropical weather systems can do plenty of damage well inland from the coast. Tornadoes, damaging winds, and flooding are all threats hundreds of miles from where a tropical system makes landfall. Preliminary long range forecasts would seem to indicate that 2003 may be another above normal tropical weather season for the Atlantic. While that does not of course necessarily mean that a tropical storm or hurricane will affect our area, everyone will need to be prepared for the possibility when the start of hurricane season rolls around on June 1st.

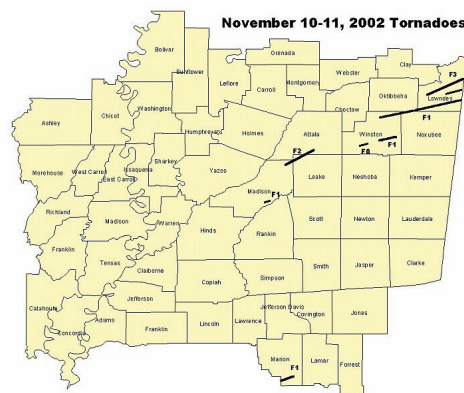
Veteran's Day Weekend Severe Weather Outbreak by Chad Entremont

On the evening of Nov 10th, 2002, a large portion of the central United States had a significant outbreak of tornadoes. Numerous tornadoes occurred across several states, ranging from Ohio to Tennessee to Alabama to Mississippi. Overall, 36 people lost their lives and hundreds of injuries resulted. This tornado outbreak was the worst fall outbreak since 1992 and may actually become the worst during the fall since records have been kept. In addition, this outbreak could possibly rank near the top for all time outbreaks. More analysis of the surveys will be completed over the next few months and then final statistics will be available. For the National Weather Service in Jackson's area of responsibility, 10 tornadoes occurred with 1 fatality on the evening of the 10th. Of the 10 tornadoes, we had 1 F3, 1 F2, 5 F1's and 3 F0's.

Several weather parameters or ingredients had to come perfectly together to produce such an outbreak over such a large area. To start, warm and very moist conditions were in place over the region. Locations across many of the southern states set record high temperatures that day, ranging between 80-85 degrees. Along with the record warmth, surface dew points ranged from the mid 60s to near 70 degrees. These warm temperatures and high dew points allowed for strong instability to exist over the region. Other ingredients that came together were associated with winds and wind shear. Earlier in the week, the west coast was hammered with damaging winds associated with an intense storm system in the Pacific. This storm system helped produce a very strong jet stream, 180-230 mph, that moved into the central plains. As this strong jet stream moved east, an area of low pressure and associated cold front developed. Strong wind shear, which is the change in wind speed and direction with height, also became present. This wind shear made the atmosphere favorable for rotating updrafts and the formation of Supercell thunderstorms. It was the presence of the cold front and upper level jet stream that moved into the warm unstable air that triggered the rapid development of thunderstorms. These storms quickly became Supercells and eventually were able to produce tornadoes.

For more details on each tornado, along with images from the local radars, please visit our website at http://www.srh.noaa.gov/jan/events/10_11nov02

Below is a graphic that shows the tornadoes that occurred and their associated tracks.



When Winter Weather Strikes

Winter has arrived and many parts of the U.S. are already shoveling snow. These storms are more frequent across the northern states, but tend to be more destructive in the southern states. This is because precipitation is typically snow in the north and ice in the south. The heavier ice coats tree limbs, power lines, and roads causing the limbs and lines to break and roads to be difficult to traverse. One of the most damaging ice storms on record, occurring in February 1994, practically paralyzed the northern third of Mississippi and caused over a billion dollars in damage.

We at the National Weather Service want you to stay safe during these winter storms. Here are some helpful things to remember:

- 1) Stay inside with the heat on
- 2) Eat and drink regularly to help your body produce its own heat and to prevent dehydration
- 3) Wear layers of loose-fitting, light-weight, warm clothing
- 4) You may be without power for several days so have supplies ready
- 5) Drive safely as roads will be very slick and traffic accidents will likely increase. About 70 percent of deaths related to ice and snow occur in automobiles.

Cooperative Observer Award Ceremonies by Mark R. Wilson

The Cooperative Observer Network is an integral part of our daily functions. The National Weather Service would like to thank the following dedicated individuals, along with all the Cooperative Observers, who have volunteered their time in providing us with valuable climatic data (precipitation, temperature, and river readings).

Here are the Length of Service Awards given this fall:

Collinsville 7 SE - Mr. Wilburt Easom of Meridian, Mississippi reached 20 years as a Cooperative Observer for the National Weather Service. Mr. Easom was presented with a letter of appreciation and a certificate in recognition of over 20 years of service as a Cooperative Observer. The award was presented by Dan Byrd and Mark R. Wilson, Hydrometeorological Technicians, WFO Jackson, Mississippi.

Crandall 8 N - This year marked the completion of 45 years that the Robinson family of Quitman, Mississippi has recorded weather observations for eastern Clarke county. Mrs. Opal Lee Robinson monitored the observations with her son Mr. Ted Robinson Jr. for over 45 years. Mr. Ted Robinson Jr. was presented with a letter or appreciation, a plaque, and the Richard H. Hagemeyer Award, for maintaining weather records for 45 years. The award was presented by Mark R. Wilson and Dan Byrd, Hydrometeorological Technicians, WFO Jackson, Mississippi.

D' Lo 2 SW - Mr. J. L. Blair of Mendenhall, Mississippi reached 20 years as a Cooperative Observer for the National Weather Service. Mr. Blair was presented with a letter of appreciation and a certificate in recognition of over 20 years of service as a Cooperative Observer.

Edinburg - Mr. Laston L. Webb of Edinburg, Mississippi, was presented with a 45-Year Length Of Service Award, a letter of appreciation, and an American flag, once flown over the National Weather Service office in Jackson, Mississippi, in recognition of his 45 years of service as a Cooperative Observer. The award was presented by Winston Gilmore, Hydrometeorological Technician, WFO Jackson, Mississippi.

Forest 3 S - Mrs. Alice N. Herron of Forest, Mississippi reached 30 years as a Cooperative Observer for the National Weather Service. Dan Byrd and Bradley Bryant presented Mrs. Herron with a 30 -Year Length Of Service Award and a letter of appreciation.

Gholson 8 W - Mrs. William P. McBrayer of Preston, Mississippi reached 15 years as a Cooperative Observer for the National Weather Service. Mrs. McBrayer was presented with a letter of appreciation and a certificate in recognition of over 15 years of service as a Cooperative Observer. The award was presented by Dan Byrd, Hydrometeorological Technician, WFO Jackson, Mississippi.

Meadville - Mrs. Betty Alexander of Meadville, Mississippi reached 20 years as a Cooperative Observer for the National Weather Service. Mrs. Melinda Bradford accepted the award on behalf of her mother. She was presented with a letter of appreciation and a plaque in recognition of over 20 years of service as a Cooperative Observer from Mark R. Wilson and Bradley Bryant.

Oak Grove 2 WSW - After 25 years of recording weather observations in Oak Grove, Louisiana the Petersons are retiring. Mr. and Mrs. Peterson monitored the weather conditions for over 25 years. Dan Byrd, Hydrometeorological Technician, presented Mrs. Jessee Peterson with a letter of appreciation and a certificate, for maintaining weather records for 25 years.

Portland - Mr. Floyd Kelly of Portland, Arkansas reached 20 years as a Cooperative Observer for the National Weather Service. Mark R. Wilson, Hydrometeorological Technician, presented Mr. Kelly with a letter of appreciation and a certificate in recognition of over 20 years of service as a Cooperative Observer.

Quitman 1 N - Mr. Alva L. Irby of Quitman, Mississippi, was presented with a 40-Year Length Of Service Award and a letter of appreciation, in recognition of his 40 years of service as a Cooperative Observer. The award was presented by Mark R. Wilson and Dan Byrd, Hydrometeorological Technicians, WFO Jackson, Mississippi.

Union Church - Mr. and Mrs. D. R. Varnado Jr. of Union Church, Mississippi reached 20 years as a Cooperative Observer for the National Weather Service. They were presented with a letter of appreciation and a plaque in recognition of over 20 years of service as a Cooperative Observer from Mark R. Wilson Hydrometeorological Technician, WFO Jackson, Mississippi.

Walnut Grove - Mr. Billy Mack Stubbs of Walnut Grove, Mississippi reached 20 years as a Cooperative Observer for the National Weather Service. Mark R. Wilson Hydrometeorological Technician, presented Mr. Stubbs with a 20 -Year Length Of Service Award and a letter of appreciation.

White Oak - Mrs. Elma Lee Butler of Morton, Mississippi reached 10 years as a Cooperative Observer for the National Weather Service. Mrs. Butler was presented with a letter of appreciation and a certificate in recognition of over 10 years of service as a Cooperative Observer. The award was presented by Mark R. Wilson and Dan Byrd, Hydrometeorological Technicians, WFO Jackson, Mississippi.