The ArkLaMiss Observer

Summer 2006 Edition

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INSIDE THIS EDITION!

Another "Hail" of a Spring

By: Chad Entremont
Senior Forecaster/Storm Data Focal Point

This past spring offered an interesting combination of severe weather events with large hail being the predominate type of severe weather. In a general sense, this past spring was about average for the number of severe weather episodes with high end events occurring in each month from Feb-May.

As the title alludes, it was another "hail" of a spring. You may be wondering, why do we say this? Well, the past two spring severe weather seasons have been the most prolific for large hail of golf ball size or larger. These two years '05 and '06 have had 82 and 75 reports of golf ball size hail or larger, respectively. This far surpasses the previous years, back to 1950, where the next most active year only had about 43 reports. There are several factors that come into play which likely account for some of the low reporting numbers in the past. However, even with those factors limiting some reports, there would have likely only been 10 years that would even have come close or possibly exceeded the number of large hail reports we have seen over the past two years. In addition to the hail of at least golf ball size, the JAN forecast area had 9 reports of tennis ball size hail or larger. The largest hail reported this past spring was baseball size with occurred on 3 occasions – once in early April and twice in May. Comparing the tennis ball size hail or larger with this year and last, we find that the spring of '05 had 14 reports with 2 of these being softball size hail. Unlike '05, when Vicksburg was hit by the tennis ball size hail storm, the severe storms which produced the very large hail this spring missed large population centers which resulted in much less damage. There were just a few "main" days which produced the majority of the large hail: Feb 3, Apr 7, and the 3 very active days of May 8-10.

Hail damage to an Automated Surface Observing System (ASOS) from the Mississippidelta region

Let's now take a look at the thunderstorm wind events. As is usually the case, wind events are typically scattered about throughout the spring, and this year was no different with the exception being March 9th. March 9th was one of the largest and most widespread wind events this area has seen in many years aside from a hurricane. Nearly every county in the JAN forecast area received some kind of wind damage with numerous locations getting significant wind gusts that were >65kts (75mph). There was a total of 25 events where winds gusts were >65kts with 15 of these occurring on March 9th.

When we look at the tornado activity, we find that there were a decent amount of tornadoes, 18, but the spring months surely did not feel like it was an active tornado period. Why then are these numbers deceiving? Mainly because the majority of these tornadoes were brief/short lived F0's or weak F1's that were on the ground for <3 miles. These types of tornadoes do minimal damage and largely become forgotten if they do not impact a large population area. Of the 18 total tornadoes, 15 were the short lived weak variety with just one F1 that was on the ground for 8 miles across Jones County. The most significant tornadoes of the season occurred on May 10th from a cyclic supercell that moved east across the southwest portion of the forecast area. The first tornado to occur developed near the Tensas River in eastern Catahoula Parish. The tornado then moved east, crossed the river, and then continued for a few more miles into Concordia Parish for a total path length of 8 miles. This tornado was rated an F2 after heavily damaging a farm and turning over a dozen tractors. This tornado also caused some significant damage to corn fields, which is shown in the picture below. The parent storm continued to move to the east and produced another tornado that was witnessed crossing the Mississippi River into Adams County. The 3rd and final tornado occurred in southern Jefferson County and was also rated F2. Fortunately, this tornado remained over a rural area and only damaged thousands of trees along its 7 mile path.

Picture taken by Concordia Parish law enforcement

Damage to corn field in Frogmore, LA in Concordia Parish

Tornado damage in Jefferson County

Lastly, a portion of the area experienced a rare, damaging "wake low" wind event during the evening of Apr 29. This occurs when surface pressures remain relatively high across a particular region while a large area of steady rain continues to fall. Just as the rain ends, the atmosphere is able to respond and allow surface pressures to fall. In this case, the air pressure fell some 4 to 6 millibars in about 10-20 minutes. This rapid pressure fall caused a strong pressure gradient between the areas that were seeing the steady rain and areas where the rain had stopped. This pressure gradient caused winds to become sustained around 40 mph with gusts to 60 mph. These types of winds caused a large portion of the region to get downed trees and power lines. The "wake low" event is not a real uncommon event, but what makes this one rare is that it was so strong and caused a great deal of damage.

Jackson NWS Staff Speak at Career Day

By: Davyon Hill
Student Volunteer/ULM
Meteorology Student

On April 3, 2006, two former University of Louisiana –Monroe (Northeast Louisiana) graduates and current NWS Jackson forecasters, Chris Bannan and Eric Carpenter, came and spoke at the ULM Atmospheric Science Career Day and Luncheon. This was a first ever event held on the seventh floor of the University Library. The purpose of this event was for current Atmospheric Science students to learn about the career opportunities in the weather industry from past ULM alumni through a panel discussion. Many different sectors of meteorology were represented such as the National Weather Service, National Hurricane Center, NASA, US Air Force, Media, and Education.

Journeyman Forecaster Chris Bannan and Senior Forecaster Eric Carpenter were two of many former alumni and current NWS meteorologists on hand to discuss a career in meteorology at the National Weather Service. They were each given 6 minutes to discuss topics in the career ranging from how to apply for their job, job description, salary, vacation, market outlook, job security, and qualifications needed for their job. "Both Eric and Chris offered great advice and very informative details about the NWS", said Charley Kelly, ULM senior. And at the conclusion of all the discussions, lunch was served and each student was allowed to move from alumni to alumni asking further questions.

Changes in Staff at NWS Jackson

By: Ashley Wester
General Forecaster/Editor

Since our last edition, we have yet again had a couple changes to the NWS Jackson staff. With previous changes in the staff, we have still had two positions to be filled. Therefore, we have recently hired a new Meteorologist Intern and a new Science and Operations Officer.

David Hamrick is our newest member of the NWS Jackson staff, as he is hired as our new Meteorologist Intern. David earned both his Bachelors and Masters in Science from North Carolina State University. David also served as a student volunteer at both the Raleigh, NC and Wakefield, VA NWS offices.

Greg Garrett, previously our Information Technology Officer, has accepted a position as our new Science and Operations Officer. Greg has been a part of the Jackson NWS office for many years. He first served as a General Forecaster before becoming a Senior Forecaster in late 1995. Greg then left the Jackson office for a couple years to serve as the Information Technology Officer at the NWS office in Memphis, TN. He then returned to Jackson as our Information Technology Officer in 2004.

Please join us in congratulating both David and Greg for their new positions!

Greg Garrett
Science and Operations Officer

2006 Hurricane Season

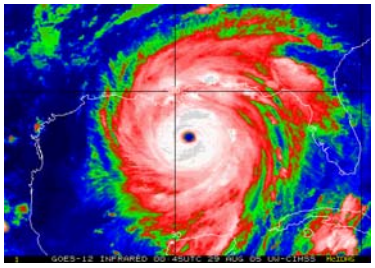
By: Brad Bryant
General Forecaster

Residents of the Gulf and Atlantic Coastline deserve a break after enduring the most active hurricane season on record last year. Unfortunately, a decided lull in activity does not appear to be on tap for the 2006 season according to the official NOAA forecast. With that said, the current hurricane season has already been upon us for two months (it started June 1) and only two tropical storms have been recorded thus far (Alberto and Beryl). In comparison, 7 storms had already formed by August 10 of last year's record season, with 3 hurricanes included in the mix.

The grand total of storms (both tropical storms and hurricanes) last year came to 28 with 15 being hurricanes and 7 powerful major hurricanes (category 3 or higher). The average recorded number for each category per season (using the last 50 years) is 10, 6, and 2, respectively. Comparing the two sets of statistics reveals just how unprecedented last year's season was, with only the 1950 season still holding the record for the number of major hurricanes with 8. The official forecast from the National Oceanic and Atmospheric Administration (NOAA) for the 2006 season calls for 13-16 total named storms (both tropical storms and hurricanes), 8-10 hurricanes, and 4-6 major hurricanes. Forecasters making those latter predications have an 80% confidence of an above average hurricane season, 15% confidence of a normal season, and only a 5% confidence in the occurrence of a below average hurricane season.

There are three major factors that NOAA forecasters took into account while compiling their aggressive forecast. The first is that the Atlantic basin is the midst of a multi-decadal cycle of increased hurricane activity that began roughly back in the 1995 hurricane season. This multi-decadal cycle involves a few complicated meteorological and hydrological factors, but it is strongly linked to ocean salinity values and their correlation to ocean heat content. The second factor is the presence of above average Atlantic Ocean temperatures going into the 2006 season. Hurricanes rely on ocean heat for their main source of fuel, thus the connection between increased ocean heat and an aggressive hurricane forecast can be easily understood. The third factor of relevance is that the El Nino Southern Oscillation (ENSO) signal is weak or neutral for this coming season. A strong ENSO pattern generally produces excessive wind shear across the breeding grounds for Atlantic Basin hurricanes, so the expected lack of ENSO conditions removes a possible limiting factor for hurricane growth.

After the catastrophic hurricane season of 2005, few residents in the vicinity of the Gulf Coast want to endure another season ripe with tropical activity. As of June of this year, human casualty totals from last year's season are greater than 2,200 with estimated losses over 100 billion dollars. The main contributor to the bleak 2005 hurricane season for residents of the Arklamiss was hurricane Katrina. This major system remained quite potent as it moved inland into southern Mississippi, with it's 70 to 100+ mph wind gusts directly responsible for scores of inland fatalities, incredible property damage, and prolonged periods of road closures and power outages. The forecast for an above average hurricane season this year suggests at least some potential for similar weather for the region again. However, the science of long term hurricane prediction is not exact and even if the forecast of another above-normal season comes to pass it does not necessarily mean the western Gulf Coast and/or Arklamiss region will receive a major negative impact. It is wise to let good preparation be your best defense. Now is the time to refine your plan of action in preparation for another worst-case scenario.



Hurricane Katrina: 7:45 pm August 28, 2005

!!Fun Stuff For the Kids!!

Make a Cloud in a Jar
(Get Mom or Dad to help you)

Materials:
Gallon Jar
Black construction paper
Tape
Warm water
Small plastic bag
Ice
Matches

Procedure:

1. **Tape the black construction paper on the outside of the jar. This will make the cloud easier to see.**
2. **Put enough ice into a plastic bag so that the bag won't fall through the neck of the jar, and set this aside.**
3. **Have Mom or Dad pour warm water into the jar. Pour enough so that the water covers 1 to 2 inches in the bottom of the jar.**
4. **Have Mom or Dad light a match and hold it just inside the top of the jar for a few seconds before dropping it into the water.**
5. **Immediately, place the bag of ice on top of the jar.**

The cloud forms between the water and the ice. A cloud happens when tiny invisible water drops in the air (this is called water vapor) become visible water drops. The water vapor becomes visible when it is cooled. That is what happens on a cold day when you can see your breath. Water vapor in the warm air leaving your mouth cools and makes small visible drops that hang in the air. The same thing happens when water is boiling on a stove. Water vapor in the warm air rising above boiling water cools to form drops called steam.

Know the Difference Between a Watch and a Warning:

Watch:

This means that conditions are favorable for severe weather to occur. It hasn't actually been spotted yet, but severe weather is possible.

Warning:

Severe weather is already occurring. This means that it is time to take cover IMMEDIATELY!!

Reaching Out to You!

By: Ashley Wester, General Forecaster/Editor and Alan Campbell, General Forecaster

Our goal here at the National Weather Service in Jackson, MS is to protect life and property. In an attempt to do this, we issue various types of watches, warnings, and advisories to alert you, the public, of impending hazardous weather that is either occurring or could possibly occur in your area. Knowing that hazardous weather is possible in your area is one thing, but what should you do if hazardous weather is threatening you and/or your family?

When hazardous weather occurs, seconds can literally mean the difference between life and death. Staying calm and knowing the correct instructions to follow could save your life. This is why the National Weather Service in Jackson, MS believes it is important to educate people about severe weather safety and preparedness. In our efforts to accomplish this task, we offer various forms of outreach, such as talks and setting up booths at area events, just to name a few. We provide these services for any community, school, public/private group, or business that is interested in learning about severe weather safety and how to prepare for it. We also offer office tours that allow you to see what the National Weather Service is and what we do.

If you would like to schedule to have someone come and talk to your community, school, group, business, or if you would like for us to set up a booth at your next event, please contact Alan Campbell or Ashley Wester. If you would like to schedule an office tour, please contact Patsy Peden. All can be reached at the National Weather Service in Jackson, MS at (601) 936-2189.

Meteorologist giving a presentation to students at Camp Noah

Here are a few outreach events we have participated in recently:

-May 16, 2006: Meteorologists Ashley Wester, Chris Bannan, and Eric Carpenter set up a booth at the Chick-Fil-A in Flowood, MS for their Family Fun Night.
-June 19, 2006: Meteorologists Ashley Wester and Marc McCallister gave a severe weather safety presentation to Cub Scouts at Hinds County Community College.
-June 20, 2006: Warning Coordinator Meteorologist Jim Butch and Meteorologist Ashley Wester set up a booth at the Chick-Fil-A in Hattiesburg.
July 19, 2006: Meteorologists Alan Campbell and Ashley Wester spoke to a group of teachers at Jackson State University about general meteorology, the National Weather Service, and the products and services offered.
-July 19, 2006: Meteorologists Alan Campbell and Ashley Wester spoke to a group of 5th -7th graders at Camp Noah, a camp designed for disaster victims, focusing mainly on Hurricane Katrina victims. Severe weather safety and tropical cyclones were covered in the presentation.

Note to Teachers and Parents:

With school starting shortly, we just wanted to inform you of the products and services we offer, here at the National Weather Service in Jackson, MS. Please visit our website at www.srh.noaa.gov/jan to see our products. On this website, you can find a 7-day forecast, current hazards including watches and warnings, and you can get up-to-date radar data. We also have sections of our website that are geared toward education, and even some teaching tools for young children. If you have any questions about our website or any other products offered, please feel free to call our office at (601) 936-2189.

Calendar of Events

- August 1-30: School season starts for most schools
- September 4: Labor Day
- November 30: Hurricane Season Ends

Thank You!!

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Alan Campbell, General Forecaster
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