

The ArkLaMiss Observer



Spring 2008 Edition

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Community Hero Awards Given for Caledonia Tornado Response

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*By: Steve Wilkinson, Warning
Coordination Meteorologist*

On Thursday afternoon January 10, 2008, an EF3 tornado, with estimated maximum winds around 155 mph, struck the town of Caledonia, MS. The tornado damaged numerous homes, three churches, four businesses, and a school complex, consisting of a high, middle, and elementary school (See Winter 2007/2008 Edition for meteorological details). Approximately 2,500 people were at imminent risk of injury or death from this tornado including 2,140 students and employees at the school complex. No one was killed, only 15 people were injured, of which only three were hospitalized. No one was injured at the school complex.

The National Weather Service in Jackson issued a Tornado Warning, which provided 41 minutes of lead time at the school, while Lowndes County Emergency Management effectively

disseminated the warning. In addition, an important part of this incredible StormReady success story was due to the actions of the high school principal, Mike Putman.

As a requirement for achieving StormReady "Recognition", Lowndes County Emergency Manager, Cindy Lawrence, recently provided severe weather safety presentations to students at each of the three schools in the county. After each presentation, she toured the school with administration officials and identified appropriate safe tornado shelters. The locker rooms of the gym, which had interior walls, including an interior room of the Vocational Tech building, were determined to be safe locations for a tornado impacting the school with nominal lead time. Although not ideal, the rooms were good locations for a shelter of last resort. Also, all three schools participated in a statewide tornado drill held October 17, 2007.

The schools received notification of the Tornado Warning on January 10, 2008 through NOAA Weather Radio All-Hazards, a siren located at a fire station very close to the school, and local television. These practices were consistent with the weather monitoring requirements associated with the county's StormReady "Recognition" designation. Children were immediately placed in the hallways and interior rooms throughout the school, including the locker rooms near the gym and an interior room in the Vocational Tech building.

However, at approximately 1:35 PM CST, just a few minutes after the principal invoked the school's tornado safety plan, the Lowndes county Emergency Manager called to inform the principal that WFO Jackson's Tornado Warning had projected the tornado to impact the community of Caledonia by 2:05 PM CST.

About ten minutes later, a second call from the Emergency Manager reaffirmed that Caledonia, including the high school, remained in the cross hairs of the tornado which was now projected to impact the community by 2:10 PM CST, based on a warning update (Severe Weather Statement) from WFO Jackson.

Based on the specific "path-cast" information provided by the NWS Tornado Warning and follow-up Severe Weather Statement, (relayed by the local emergency manager) a critical life saving

decision was strategically invoked by the Caledonia High School principal.

Due to the exceptionally long warning lead time provided by the National Weather Service, Principal Mike Putman had time to re-evaluate the school's tornado plan and, without hesitation, took the proactive initiative to move 85 students from the gym locker rooms and 30 students from the Vocational Tech building into the "safer" hallways of the main school building.

Twenty-eight minutes later, the tornado ripped through and destroyed the Caledonia High School gym and Vocational Tech building. However, the remainder of the school complex received only minor or zero damage. All the students relocated to the safest areas of the school escaped bodily injury.

Clearly, Principal Mike Putman's crucial decision to move the students to a safer location within the school grounds was based on timely, accurate and specific information from WFO Jackson, relayed and reinforced by Emergency Manager Cindy Lawrence. Actions by both Putman and Lawrence went "above and beyond" normal protocol and prevented numerous injuries and fatalities.

Awards:

Based on their actions during the Caledonia tornado event, both Emergency Manager Cindy Lawrence and Principal Mike Putman have been awarded the National Weather Service Community Hero Award.

Also, Lawrence and Putman have been given Mark Trail Awards, which recognizes individuals that have utilized NOAA Weather



The image above shows an aerial view of the tornado damage. The building closest to the bottom is what remains of the Vocational Tech building. The damaged building in the middle of the picture is what remains of the gym. The remainder of the school complex had very little damage. The damage at this location was rated EF3 with estimated maximum winds of 155 mph.

Radio to save lives. In addition, the Mark Trail Award has been awarded posthumously to former Jackson Warning Coordination Meteorologist Jim Butch for his contribution to upgrading NOAA Weather Radio All-Hazards in Mississippi. Since the mid 90s, at

least four schools in Mississippi have been hit by tornadoes while school was in session. Two of these school complexes suffered severe damage from strong tornadoes, the most recent being in Caledonia, MS on January 10, 2008. No fatalities or significant

injuries occurred in any of the schools struck by tornadoes. In each case, school officials received initial notification of a tornado warning via NOAA Weather Radio All-Hazards, enabling them to take life saving actions.

Mrs. Louise E. Swinney, NWS Cooperative Observer

By: Carolyn Bryant, Observing Program Leader

The National Weather Service in Jackson lost a dear member of its family in January. Mrs. Louise E. Swinney of Lexington, MS passed away Tuesday, January 29, 2008.

Mrs. Swinney began her career as a National Weather Service Cooperative Observer on May 1, 1949, while she was working for the Mississippi Cooperative Extension Service. After retirement, Mrs. Swinney worked part-time at the Holmes County newspaper, and continued to take her daily weather observations. At the newspaper office, Mrs. Swinney included her weather reports in her articles and utilized her position to educate people regarding weather conditions. Mrs. Swinney was a highly respected person in her community and the person most people in Holmes County depended on for weather information. Mrs. Swinney was held in such high regard that in 1993 Mary Ann Stevens and Speaker Pro Tempore Robert Clark presented a

resolution to the Mississippi House of Representatives commending and congratulating Mrs. Louise E. Swinney on her outstanding accomplishments as a weather observer.

Mrs. Swinney's daily weather observations were extremely important in the area of agriculture, forestry, local water systems, and forecasting. Over the past fifty years, numerous acres of cotton, soybeans, rice, wheat, corn, and other crops have been planted in Holmes County based on the data collected by Mrs. Swinney. During periods of severe weather, Mrs. Swinney was often crucial in providing severe weather

occurrences across Holmes County. She enjoyed writing many articles, giving presentations, speeches, and conducting tours of her weather equipment in order to educate people on the value of weather data and weather safety. Mrs. Swinney was to the National Weather Service at Jackson, MS, as the Magnolia tree is to Mississippi – well rooted.

Throughout her years as a NWS Cooperative Observer, Mrs. Swinney received several prestigious awards, including the John Campanius Holm Award (1978), the Thomas Jefferson Award (1992), and the Benjamin Franklin Award (2004).



Mrs. Swinney receives the Benjamin Franklin Award in 2004, surrounded by her NWS family

Mississippi River Flood of 2008

By: Marty Pope, Service Hydrologist

The Mississippi River flood of 2008 had its origin in the first few days of March when 2 to 3 inches of rainfall fell over the Ohio River Valley and 1 ½ to 4 inches of rainfall fell over Arkansas. The Mississippi River in WFO Jackson Hydrologic Service Area (HAS) from Arkansas City, AR to Natchez, MS began rising immediately due to increased river flow from the Arkansas River. The Ohio River at Cairo, Illinois, which is at the confluence of the Ohio River and the Upper Mississippi River, crested at a little over 44 feet (4 feet above flood stage) on the 14th of March.

The crest of 44 feet at Cairo was just the beginning. The river fell very little from this initial crest until March 18th, when an extremely heavy rainfall event once again struck Arkansas, South Missouri, much of the Lower Ohio Valley. Rainfall amounts from 8 to 15 inches sent many local rivers to record or near record stages. A rising Arkansas River, Upper Mississippi River, and Lower Ohio River necessitated raising crests on the Lower Mississippi River below the confluence of the Arkansas River. The Lower Ohio River at Cairo finally crested higher around 54 feet on March 25th.

Additional rainfall from 3 to 6 inches fell over the Arkansas, Lower Ohio, and lower portions of

the Upper Mississippi River Valleys from March 30th until April 1st. This rainfall did not push the crest up higher than it was previously at Cairo; however, rainfall strategically fell over the Arkansas River System and the Mississippi River tributaries in West Tennessee. River crests on the Mississippi below the Arkansas River were raised from a half foot to a foot and a half.

Arkansas City (Flood Stage – 37 feet)	Crested 45.4 feet 4/16
Greenville (Flood Stage – 48 feet)	Crested 57.4 feet 4/16-17
Vicksburg (Flood Stage – 43 feet)	Crested 51.0 feet 4/20
Natchez (Flood Stage – 48 feet)	Crested 57.0 feet 4/23

It was not long before yet another heavy rainfall event hit Arkansas and the Lower Ohio River on April 3rd and 4th. Rainfall amounts from 2 to 5 inches fell across an already high Arkansas River and a swollen Lower Mississippi River. The Ohio River did rise up to 52 feet with this event. It only rose as high as 53 feet around April 16th; however, the Mississippi above the West Tennessee Mississippi River tributaries never played a prominent role in raising the river crests from Arkansas City to Natchez in this event. It was once again the heavy rainfall that fell in Arkansas and over the West Tennessee Mississippi tributaries on the 3rd and 4th that pushed crest forecasts up another foot to a foot and a half below the confluence of the Arkansas River.

The final punch that pushed the flooding from moderate flooding

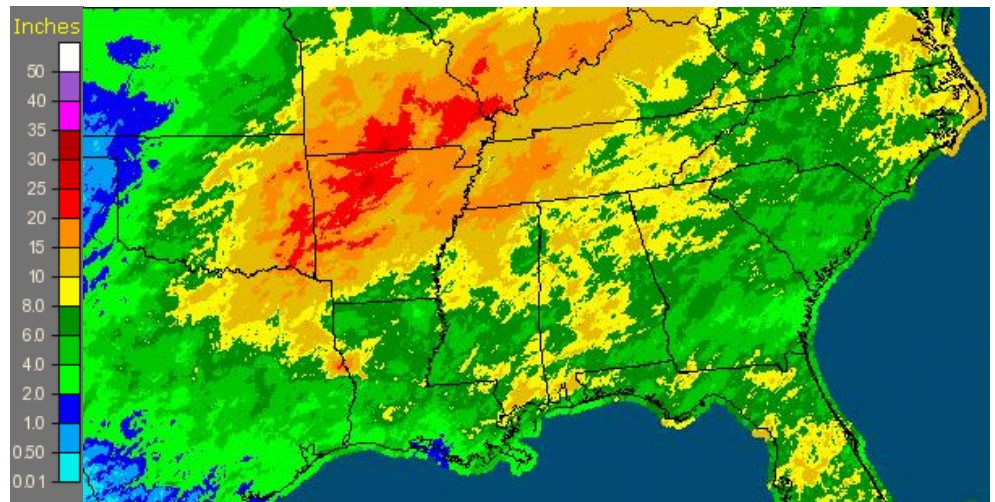
to major flooding was another massive rainfall event from April 9th into the 10th over Arkansas where rainfall amounts ranged from 3 to over 7 inches. Flows from the Arkansas River increased around 100,000 cubic feet per second from their already high levels. After a period of time with little or no rainfall, the Lower Mississippi River from Arkansas City to Natchez finally crested:

The river crested just below the Mississippi River flood of 1973 from Arkansas City to Vicksburg and just slightly above the 1973 flood level at Natchez.

The flooding left many along the river homeless either due to the streets to their homes being cutoff or their homes flooding. The worst hit areas were in the Vicksburg area and the Yazoo Backwater Region north of Vicksburg. Agricultural land, homes, and roads flooded in the low areas of North Vicksburg. Many businesses and homes were cutoff by floodwaters in South Vicksburg. Water surrounded many structures and flooded other in the Yazoo Backwater Region north of the Yazoo River. Homes in Lake Mary and Ft. Adams were flooded in Wilkinson County, which is south of Natchez. Many with homes and camps inside the

Mississippi River levee system from Arkansas City to Natchez were either flooded or cutoff from their homes by high water. Wildlife was displaced from its natural habitat inside the levee system as well.

The Flood of 2008 has already gone down in history as the second high since the 1937 flood and hopefully will slowly recede to normal stages over the next three weeks to a month.



60 day rainfall totals ending April 23rd

A Winter and Spring to Remember or Forget?

By: Eric Carpenter, Senior Forecaster

Most folks in the ArkLaMiss region will likely remember the January to April 2008 period for a long time. While some memories of making snowmen and throwing snowballs will be fond, many other memories associated with widespread wind and hail damage, strong tornadoes, and flooding rain will be forgettable.

To summarize this period is to say that it was one of the most active three month weather stretches in the long history of the National Weather Service at Jackson. Consider that we received some sort of severe weather on the following dates:

January:	8, 10, 29
February:	5, 12, 16, 17, 21, 26
March:	3, 6, 14, 19, 31
April:	1, 3, 4, 11

And we received significant winter weather on the following dates:

January:	19, 25
March:	7-8

Here are a few highlights, or lowlights, as you might have. On January 10th, 2008, several EF3 rated tornadoes struck north central portions of Mississippi, bringing much destruction to the Goodman, Weir, and Caledonia areas. Incredibly, very few casualties occurred in association with these tornadoes, despite a large school in Caledonia, MS being struck. Great warning lead time combined with heroic actions by officials at Lowndes County and the school no doubt saved lives. On January 19th, one of the heavier snowfalls to affect the ArkLaMiss in recent years affected areas along and south of Interstate 20, where up to

five inches of snow fell. On January 25th and 26th, a major ice storm struck areas along the Highway 82 corridor causing numerous accidents. On February 5th, softball size hail brought much destruction to the Dermott, AR area. On February 12th, widespread wind damage occurred in the Vicksburg to Jackson to Meridian area as an intense squall line developed and swept across the area. On February 25th, thunderstorms with very heavy rain brought flash-flooding to northeast Louisiana, and central and south Mississippi. On March 7th and 8th, another snowstorm struck northern portions of the ArkLaMiss Delta region, bringing up to 6 inches of heavy wet snow. And not long after the snow had melted, on March 14th, baseball size hail pounded the Delta region. April 4th will long stick in the minds of Jackson area residents.

On that date, an EF2 tornado moved through north Jackson and tracked into northern Rankin County where EF1 rated damage occurred. Many Jackson area residents are still cleaning up from that event which brought widespread tree and home damage. Many other areas across northeast Louisiana and central Mississippi

suffered some sort of tree damage on April 4th. Another tornado outbreak occurred on April 11th when seven EF1 rated tornadoes struck central Mississippi. The cities of Terry, MS and Louisville, MS were hit hardest by this event.

For a more comprehensive review

of higher-end severe weather and winter weather events affecting the ArkLaMiss region, see our weather events web page at www.srh.noaa.gov/jan/events where you will find events listed by year. Hopefully residents of the ArkLaMiss will enjoy a quieter winter and spring in 2009!

!Fun Stuff for the Kids!

Lightning Quiz:

die	fire	electricity	explode	shortest
water	tree	tallest	thunder	telephone

1. About 100 people _____ each year from lightning and the fires it causes.
2. Don't use a _____ unless there is an emergency.
3. _____ and lightning occur together.
4. Lightning can make a tree _____ by heating the sap in the tree.
5. Lightning hits the _____ objects.
6. Lightning takes the _____ path.
7. When lightning forms, clouds become charged with _____.
8. If you are outside when there is lightning, don't go under a _____.
9. When lightning strikes, it can start a _____ that kills people and animals.
10. If you are in _____ get out. Stay away from the beach.

True or False:

- | | | |
|-----|-----|--|
| T F | 1. | When there is lightning, crouch under a tree. |
| T F | 2. | When there is lightning, stay away from anything made of metal. |
| T F | 3. | Stay by the window and watch for streaks of lightning. |
| T F | 4. | In a storm, you usually see the lightning before you hear the thunder. |
| T F | 5. | When the sky lights up, but you can't see the streaks of lightning, it means the storm is over. |
| T F | 6. | When there is lightning, go to the highest spot on a hill and get out your umbrella for protection from the storm. |
| T F | 7. | Every day someone is struck by lightning. |
| T F | 8. | Lightning never strikes twice in the same place. |
| T F | 9. | If there is lightning, call all your friends to make sure they are safe. |
| T F | 10. | Lightning storms may occur in the winter but are most common in spring and summer. |

Answers: 1. die, 2. telephone, 3. thunder, 4. explode, 5. tallest, 6. shortest, 7. electricity, 8. tree, 9. fire, 10. Water

Answers: 1. F, 2. T, 3. F, 4. T, 5. F, 6. F, 7. T, 8. F, 9. F, 10. T

Reaching Out to You!

By: Ashley Wester, Journeyman Forecaster/Editor, and Alan Campbell, Journeyman 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 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 Steve Wilkinson, Alan Campbell, or Ashley Wester. If you would like to schedule an office tour, please contact Marty Pope or Karen White. All can be reached at the National Weather Service in Jackson, MS at (601) 936-2189.



Cream: Jackson, MS service area
Blue: Memphis, TN service area
Purple: New Orleans, LA service area
Green: Mobile, AL service area

Events in which we have recently participated:

March 7, 2008: Meteorologist Alan Campbell went to Murrah High School in Jackson, MS to speak with approximately 20 seniors about weather preparedness and careers in meteorology.

March 18, 2008: Meteorologist Alan Campbell went to Margaret Green Junior High School in Cleveland, MS to speak with approximately 75 8th graders on weather preparedness and careers in meteorology.

March 25, 2008: Meteorologist Alan Campbell went to Richland Upper Elementary School to speak with approximately 50 6th graders about severe weather safety and preparedness.

April 4, 2008: Meteorologists Latrice Maxie and Joanne Culin attended the annual Covington County Farm Safety Day in Collins, MS to speak with Covington County 5th graders on severe weather safety and preparedness.

April 14-18, 2008: Meteorologists Alan Campbell, Eric Carpenter, David Hamrick and Johnny Baxter, as well as Service Hydrologist Marty Pope, went to Quitman Junior High School to speak with 6th, 7th, and 8th graders on severe weather preparedness and careers in meteorology.

Thank You!

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