The ArkLaMiss Observer

Spring 2006 Edition

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INSIDE THIS EDITION!

Welcome to Spring!

By: Ashley Wester
Editor/Journeyman Forecaster

There's just nothing like spring… Flowers, chirping birds, love in the air, sunshine, picnics in the park, showers, wind, hail, tornadoes… Okay, so the last few aren't so fun! But, here in the southeast we get a peak in our severe weather during the spring months of March and April. So far this spring we've had high winds, large hail, and tornadoes across much of the state.

On March 9, an intense squall line move across the ArkLaMiss region, bringing high winds to the majority of our warning area. The bulk of the damage reported was in the delta region, including the town of Indianola, which suffered damage to a school and 10 injuries.

On March 20, another intense system moved across the region. Fortunately, this system brought severe weather that was more isolated to our southeastern counties. There were at least 3 confirmed weak tornadoes reported with this system. One F0 tornado was reported in Covington County. Two F1 tornadoes were also reported. One of these occurred in Jones County, and the other occurred in Lamar County, which resulted in one injury. With this system, we also issued our first flash flood warning for the year.

April 7 was an event that mostly affected our northern counties above the Interstate 20 corridor. Supercells with hail ranging in size from golf balls to tennis balls, and tornadoes trained across the northern part of the warning area. Most of the damage associated with these storms included windows broken from large hail and downed trees. Associated with this system outside of our warning area, tornadoes tracked across Tennessee, resulting in at least 11 deaths and several injuries. Fortunately, our warning area was spared of fatalities.

With the possibility of severe weather occurring over our region throughout the year, we need to keep in mind how to stay safe. When severe weather is in the vicinity, remember to stay away from windows, go to center room on the lowest level of your house. Always have some type of protection for your head available. In the case of a flash flooding situation, seek high ground, and do not drive through flood waters. Only 2 feet water can sweep a car off the road!

Picture of a wall cloud near Greenwood, MS taken by Erik Perozo, Meteorology Student at the University of South Alabama

Killer Trees

By: Eric Carpenter
Senior Forecaster

On July, 15th 2000, a newlywed couple, heading for their honeymoon, drove down a tree-lined road in Columbus, Mississippi. They encountered a severe afternoon thunderstorm, and high winds from the storm blew down a large tree limb onto their car, killing the woman and seriously injuring the man. There are many tragic stories from around the nation such as this one involving weather-related tree casualties, and there is evidence that suggests the frequency of such events is increasing. From both metaphorical and statistical perspectives, being killed by a tree or tree limb during strong winds is comparable to being struck and killed by lightning. Since 1995, according to the NWS *Storm Data* publication, there have been more weather-related tree fatalities in Mississippi than lightning fatalities.

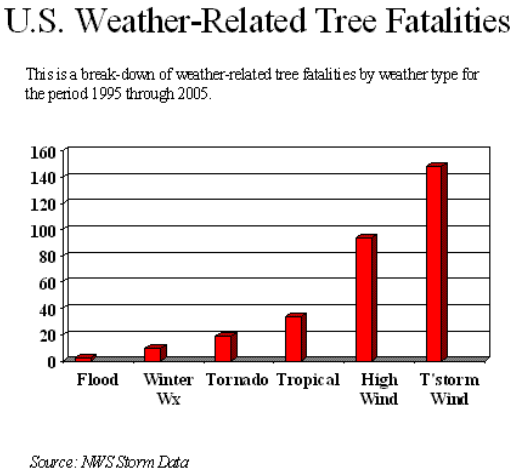
We at NWS Jackson, MS have started an awareness campaign in hopes of reducing weather-related tree casualties and property damage, and tree danger call-to-action statements are now included in all wind-related watches, advisories, and warnings. Presentations on tree danger awareness are being given at local meetings and conferences.

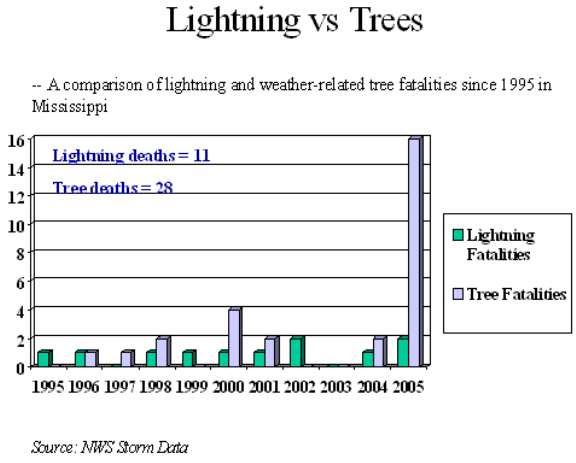
We are asking that people not venture out during thunderstorms containing severe wind gusts. Severe thunderstorms are accounting for most of the tree-related fatalities on the national scale. Moreover, people should be aware that it does not take severe winds to bring trees and large limbs down. In fact, the nation's second leading cause of weather-related tree fatalities is from wind un-related to storms. Wind gusts of 35 to 40 mph on clear days have brought down many trees and tree limbs resulting in casualties and property damage. Inland tropical storms and hurricanes are especially hazardous in terms of tree danger. Heavy rain associated with tropical cyclones will cause the ground to become very soggy, making trees more vulnerable to being knocked down by constant pounding of tropical winds. During Hurricane Katrina, 15 people in Central Mississippi lost their lives as trees fell on cars and

homes, and on those who risked venturing outside. To just avoid the outdoors is sometimes not enough in windy situations. Be cognizant of trees around your home that may be prone to failing in strong winds, and stay out of areas in your home that are threatened by such trees. While avoiding trees during hazardous weather is a key to reducing tree danger, other steps can be taken to mitigate tree danger risk. Individuals may consider contacting their local forester or arborist if unsure about the integrity of a tree on their property. Communities are urged to maintain a risk mitigation plan that includes the removal of defective trees. The USDA Forest Service has an excellent community guide available on the internet, *Urban Tree Risk Management*, located at:

http://www.na.fs.fed.us/Spfo/pubs/uf/utrmm/chptr1.pdf

Here are a couple of charts showing the statistics of Weather-Related Tree Fatalities





Changes of Staff at NWS Jackson

By: Alan Gerard, Meteorologist-In-Charge

Since our last edition, we've had many changes to the NWS Jackson staff. We've gained a few, lost a few, and moved around a few. After saying farewell to Hydrometeorological Technician Winston Lynn Gilmore, Forecaster John Gagan, and Forecaster Douglas Butts in the last edition, we opened the doors for a few new team members.

Alan Campbell, a Meteorologist Intern at the NWS Jackson was promoted to a Forecaster. Alan has been a member of the NWS Jackson staff since June of 2003. Alan is a graduate of the University of South Alabama in Mobile. He serves as our office's Dissemination Outreach Meteorologist, meaning that he oversees our important NOAA Weather Radio program and is active in our office's outreach efforts.

Jim Fairly is a new member of the staff. He is entering on station as a Meteorologist Intern. Jim is familiar with the NWS Jackson after much time devoted to student volunteer work throughout the previous years. Jim attended Mississippi State University, and then transferred to University of Louisiana-Monroe where he graduated with a B.S. in meteorology.

Also joining our staff as a new Meteorologist Intern is Ed Tarver. Ed graduated from Florida State University with a degree in meteorology. He has 14 years of experience in the private sector at Electronic Tele-Communications, Inc., located in Georgia.

Ashley Wester, a Meteorologist Intern at the NWS Jackson was also promoted to a Forecaster, effective in the middle of May. Ashley is a recent graduate of Mississippi State University. She has been a member of the NWS Jackson staff since January 2005. She serves as our office's Education Outreach Meteorologists, meaning that she is active in our office's outreach efforts and manages our student volunteer program.

Unfortunately, with all the welcomes, we do have one more farewell this season. Jeff Craven, our Science and Operations Officer (SOO), has accepted a SOO position at the Milwaukee/Sullivan, WI office, and is planning to relocate at the end of May. Jeff has contributed a tremendous amount to the success of this office. He has not only been ready and willing to put in all of his effort for severe weather, but has put a tremendous amount of effort into providing training and career development for the rest of the staff.

With all of these changes taking place in our office, please join us in congratulating Alan, Jim, Ed, Ashley, and Jeff!

Jeff Craven, Science and Operations Officer

National Weather Service IMETs

By: Dan Byrd
Journeyman Forecaster

The National Weather Service meteorologists play a vital role in support of efforts to control wildfires that rage across the United States each year. NWS meteorologists provide site-specific forecasting for wildfires of all sizes—from half an acre to many thousand acres.

Once a fire starts, up-to-date weather information becomes especially critical. Weather and fuels are the key ingredients in fire behavior. Accurate forecasts of wind direction and speed strongly influence fire strategy and help incident commanders make the best possible decisions to safely and efficiently control wildfires. The forecasters are specially trained in Mesoscale and micro scale meteorology and employ a variety of special tools to prepare the forecasts that contribute to the safety of all personnel involved in the management of the fires. Routine fire weather forecasts are issued a minimum of twice daily (morning and late afternoon) during the summer fire season and special forecasts are prepared on demand.

Since 1914, NWS meteorologists have worked closely with fire control specialists from the U.S. Department of Agriculture's Forest Service, the Department of Interior's Bureau of Land Management, and other federal, state and local fire control agencies who are responsible for suppressing fires. NWS forecasters monitor meteorological conditions continuously during the fire season. The meteorologists use their knowledge of weather as a critical element to fire control strategies, and in effective management of activities aimed at protecting people and valuable renewable resources.

At the fire the IMET (Incident Meteorologist) plays a key role in the support of wildfire operations. The NWS has a small group of experienced fire weather forecasters (approximately 60 nationwide) known as IMETs. The IMETs can be and are being sent to remote locations throughout the U.S. to support wildfire operations. IMETs are there for fire crew safety and tactical support to the fire management team. They provide weather forecasts to the Fire Behavior Analyst. The IMETs receive special training in microscale forecasting, fire behavior, and fire operations which make these fires weather forecasters a key member of the fire management team.

Incident Meteorologists use special equipment in preparing critical information used in wildfire suppression and prescribed burning projects. One of these tools is the Advanced Technology Meteorological Units (ATMUs) which enables forecasters to operate at the incident command post, providing close meteorological support to the suppression efforts. The components of this unit weigh approximately 250 pounds. The ATMU can be used throughout the country wherever wildfire threatens life, property, or other valuable resources.

These IMETS can deploy rapidly with portable forecast and communications equipment to provide critical fire weather forecasting support. The forecaster sets up the portable unit near the fire lines and provides critical information that helps managers decide where to move fire crews, learn about incoming weather, etc.

Forecasters use laptop computers to access information from local NWS field offices. They can receive the latest information about standard surface and upper air observations, as well as Doppler weather radar and weather satellite data to make specialized forecasts.

Every year, IMETS are deployed to support hundreds of fires nationwide. Forecasters help the on-scene fire management teams to obtain and interpret weather information, train fire personnel on how weather may affect their operations during critical fire situations, and ensure the safety of fire fighters. Your local NWS Jackson office has one IMET on station for Wildfire operations support anywhere in the United States.

Also playing key roles in Wildfire Operations are the local **National Weather Service Forecast Office** and the **Storm prediction center (SPC)**.

At the NWS forecast office forecasters issue site-specific, timely forecasts of weather which can be hazardous to the crews on

the line. Weather phenomena such as dry cold fronts can change the direction and speed of the wind; dry thunderstorms cause downbursts, erratic wind conditions and dangerous lightning. Marine-related weather affect the winds, humidity's and temperatures near the fire in coastal areas.

Briefings are given to the operational fire management team to plan where to place crews and how to fight the fire. Forecasters draw upon various sources of meteorological information such as computer-produced forecast chart, local weather observations, and more.

The local NWS office also provides specific meteorological information support to the Incident Meteorologists who may be deployed to a fire location.

During the early morning hours each day, SPC severe weather forecasters issue a national fire weather forecast. They predict where dry thunderstorms and fire weather conditions may occur over the next 48 hours throughout the contiguous 48 states. They also provide outlooks from days 3 through 8. Their forecast maps show areas where hot temperatures, low humidity and high winds combined with dry fuels will create critical fire weather conditions. They also highlight areas where dry thunderstorms are expected to produce significant lightning (more than 100 strikes), with the potential to ignite more fires in the dry vegetation.

Forecasters at local offices in each of the National Weather Service's regions have the Storm Prediction Center's "big picture" fire weather outlook for guidance as they predict fire weather in their specific areas of responsibility. The SPC forecasts can also help incident meteorologists dispatched to fire scenes more closely discern likely trouble spots in advance.

Picture link: http://www.keepidahogreen.org/downloads/pictures/wildfires/wildfires009.htm)

!!Fun Stuff For the Kids!!

Make a Tornado in a Bottle:

Ingredients:
2 2-Liter Clear Plastic Pop Bottles (empty and clear)
Water
1-inch Metal Washer
Duct Tape (or you can go to a science store and get a "tornado tube" that will connect the 2 2-Liter bottles together)

Procedure:

1. **Fill one of the bottles two-thirds full of water.**
2. **Place the metal washer or twist the "tornado tube" over the opening of the bottle.**
3. **Turn the second bottle upside down and place it on the washer or twist it on the "tornado tube".**
4. **Use duct tape to fasten the two containers and the metal washer together.**
5. **Make sure it is sealed tightly to make sure that water will not leak.**
6. **If you use the "tornado tube", just twist the connector tightly.**
7. **Turn the tornado maker so that the bottle with the water is on top.**
8. **Swirl the bottle in a circular motion.**
9. **A tornado will form in the top bottle as the water rushes into the bottom bottle.**

How to Stay Safe if A Tornado is Heading Your Way:

Think **LOW**, **CENTER**, and **HEAD**!

LOW - Get to the lowest level of the building. If you are caught outside and cannot get to a sturdy building, lay flat in a ditch and cover your head. If you are in a mobile home or trailer, get out and get to a sturdy building.
CENTER – Get to the center most part of the building. You will want to put as many walls between you and the outside to act as extra reinforcement from the tornado's winds.
HEAD – Cover your head!!! If you have a sport's helmet, use it! You can also use pillows, blankets, mattresses, or even a thick book if you are at school. If you have nothing with you, cover your head with your hands.

Reaching Out to You

By: Ashley Wester, Editor/Journeyman Forecaster 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 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 Alan Campbell speaking to a 5th grade class at the Farm Safety and Health Day in Collins, MS

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

-April 21, 2006: Meteorologists Alan Campbell and Ashley Wester attended the 2006 Covington County Farm Safety and Health Day in Collins, MS. There they talked to approximately 325 5th graders from around Covington County about severe weather safety and preparedness.

-April 11, 2006: Meteorologists Alan Campbell and Ashley Wester traveled to New Hope Baptist Church in Jackson, MS to talk with 30 senior adults about severe weather safety and preparedness.

-April 3-4, 2006: Meteorologist Alan Campbell and Hydrometeorological Technician Mark Wilson attended the 2006 Marion County Farm Safety Day in Columbia, MS. There they spoke with some 400 5th graders from around Marion County about severe weather safety and preparedness.

New Hope Baptist Church Senior Adult Group

Farm Safety and Health Day 5th grade students

Calendar of Events

June 1: Hurricane Season Begins

THANK YOU!

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