VOLUME XV, ISSUE 2

THE

OZARK OBSERVER

NATIONAL WEATHER SERVICE
SPRINGFIELD MO

INSIDE THIS ISSUE:

SEVERE WEATHER AWARENESS IN THE OZARKS

By Kelsey Angle

The tornado simulator was a big hit at the Mall.

From the mall, to the ballpark to area schools, the National Weather Service has been bringing severe weather awareness to the Ozarks.

The National Weather Service in partnership with Springfield-Greene County Emergency Management, the American Red Cross, local TV and radio stations and area weather related businesses held the 2nd Annual Severe Weather Awareness and Preparedness Day at Battlefield Mall in March. Interactive weather booths including a tornado simulator, weather jeopardy, weather safety presentations, informational booths and meteorologists were on hand to help shoppers plan and prepare for severe weather.

In May, the National Weather Service was on deck at Hammon's Field for Weather School with a local television station. Students from local schools were taught about the dangers of thunderstorms including lightning, hail, damaging winds, tornados. Students also learned about outdoor weather safety including when and where to seek shelter to mitigate the hazards when spending time outside during the busy spring and summer months. A weather balloon was launched to demonstrate data collection in the forecast process.

The NWS also hit the books at Study Middle School in June. Hydrologist Megan Terry discussed flash flooding, which is the number 1 weather killer in the Ozarks. Students learned about the water cycle and the Advanced Hydrologic Prediction Services (AHPS) which can be used to monitor local river levels and forecasts across the Ozarks.

OPL Larry Dooley helps 4 area students launch a weather balloon at Hammon's Field

CONTRIBUTING MEMBERS

- Christina Crowe * Editor

Contributing Authors:

- Kelsey Angle
- Andy Boxell
- Christina Crowe
- Larry Dooley
- Andy Foster
- Gene Hatch
- Megan Terry

- William Davis * Meteorologist In Charge

WHAT WERE THOSE CRAZY LOOKING CLOUDS?

By Gene Hatch

A storm system moving across the Ozarks on June 7th produced widespread interest for more than just the thunder and rainfall it produced. As the system moved across the region, the balance of instability aloft and a relatively stable low level airmass helped to produce what was likely a potentially new form of clouds now under review by the World Meteorological Society (WMO). The cloud type in question has been named 'undulatus asperatus'. Loosely translated from Latin, this means 'turbulent undulation' or roughened waves. Undulatus asperatus is a rare, newly recognized cloud formation that was proposed in 2009 as the first cloud formation to be added since cirrus intortus in 1951 to the International Cloud Atlas of the WMO.

The clouds are most closely related to undulatus clouds. Although they appear dark and storm-like, they tend to dissipate without storm formation. The ominous-looking clouds have been seen mostly in the Plains of the United States, often during the morning or mid-day hours, following thunderstorm activity. As of June 2009 the Royal Meteorological Society is gathering evidence of the type of weather patterns in which undulatus asperatus clouds appear in order to study how they form, and decide whether they are distinct form other undulatus clouds. *Photo courtesy of James Franco.*

NEW RIVER FORECAST POINT: JACKS FORK AT ALLEY SPRING

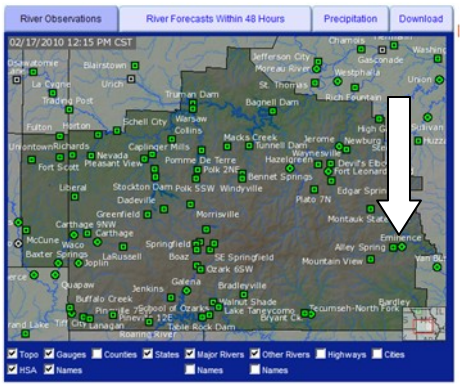
By Megan Terry

On April 26th, the National Weather Service in Springfield, in conjunction with the Lower Mississippi River Forecast Center, began providing river flood warning services for the Jacks Fork River at Alley Spring, MO.

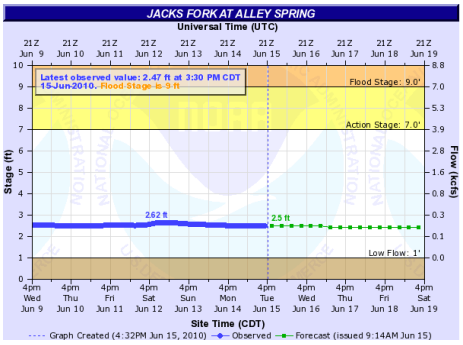
A view of the Jacks Fork from the new observation site at Alley Spring.

This effort will help alert campers and residents near the river when flooding is expected. The Alley Spring campground is a tourist destination that receives thousands of visitors each year. Heavy rainfall that occurs in the headwaters of the Jacks Fork River basin can produce rapid runoff across the steep and rocky terrain. Rapidly rising river levels can quickly inundate the campground when this occurs.

Remember to keep a NOAA Weather Radio with you when you go to area campgrounds, and be prepared to evacuate low lying areas when flood warnings are issued.



NWS Springfield Advanced Hydrologic Prediction Services (AHPS) Page

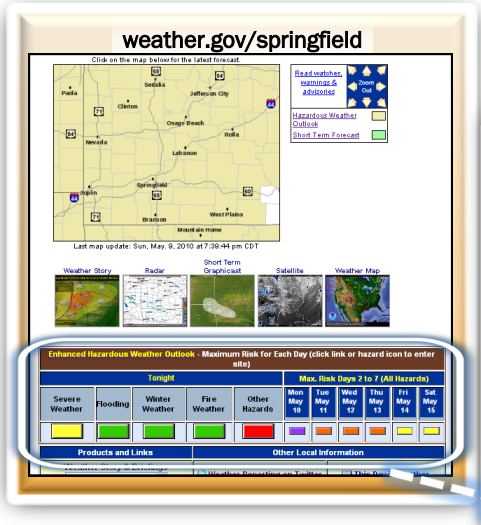


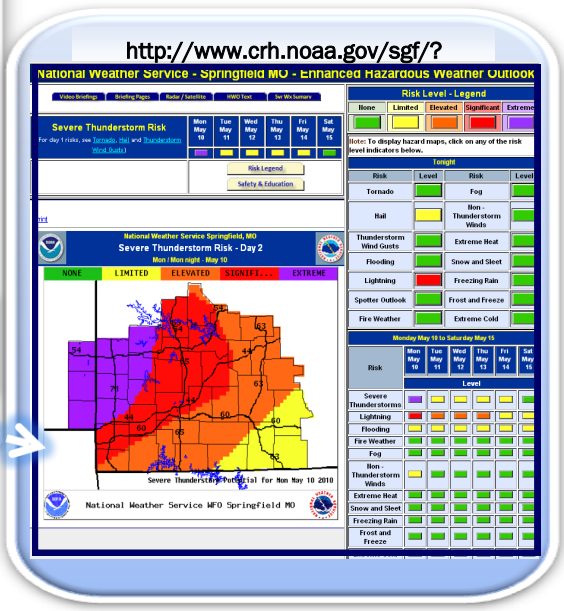
Past (blue) and Future (green) River Level Plot for the Jacks Fork at Alley Spring

TECHNOLOGY CORNER: ENHANCED HAZARDOUS WEATHER OUTLOOK

By Andy Foster

Understanding the anticipated risks associated with weather is important to making daily plans and carrying out preparedness activities prior to a hazardous weather event. The Enhanced Hazardous Weather Outlook (EHWO) depicts the risk or threat level of potential weather hazards through the next 7 days, utilizing text, alert buttons and graphics. The EHWO should be used as a preparedness tool prior to hazardous weather events and as a means of monitoring the severity and coverage of hazardous weather during an event.





The EHWO provides:

- Hazardous Weather Buttons conveying risk levels for a particular day,
- A visual representation of the specific types of hazards expected each day for the next 7 days,
- A link to video briefings prepared prior to significant weather events, and
- Links to briefing pages that provide more information for a given weather hazard

Visit our main page & click on the Enhanced Hazardous Weather Outlook or go directly to the EHWO using the link above.

COOPERATIVE OBSERVER RECEIVES 38 YEAR AWARD

By Larry Dooley

Mr. Russell L. Pierson was presented the National Oceanic and Atmospheric Administration (NOAA) Special Service award honoring 38 years as a cooperative observer for the National Weather Service. The award presentation occurred on April 1, 2010 at Lamar Missouri.

The weather station at Lamar, Missouri, which was established on December 1, 1877, is the longest continuous cooperative station in Missouri. Mr. Pierson began taking the daily weather observations in Lamar, Missouri on October 1, 1972. Over the course of almost 38 years he has taken and transmitted around 14,000 daily and event driven weather observations; only missing two daily observations - one was due to the death of his mother and the other because of a back-up observer not resetting equipment.

Mr. Pierson's devotion to accurate and timely weather observations has been recognized over the years. Russell was honored in 1997 when he was presented the John Campanius Holm Award, which is one of the highest awards given to Cooperative Weather Observers across the nation. He was also nominated twice for the Thomas Jefferson Award, a rare honor, as only five are presented among the 11,000 observers in the nation.

Pictured from left to right: Bob Bonack (Central Region Cooperative Observer Program Manager, Russel Pierson, and Bill Davis (Meteorologist-In-Charge at WFO SGF)

Russell's devotion to accurate and timely observations has been noted by customers outside of the Lamar community. Pat Guinan, Missouri State Climatologist, mentioned in his recommendation letter, "Two major ice storm events impacted southwestern Missouri in January and December 2007. These sleet and freezing rain events did not deter Mr. Pierson from his daily observation. In fact, he noted on his weather observation form that he was without power during the December ice storm."

Russell stayed on the edge of technology. He was one of the first Cooperative Observers to begin using WxCoder, which is an Internet based reporting program. He was also one of the first observers to switch to paperless reporting using the upgraded WxCoder III.

The Springfield WFO would also like to thank those COOP observers who received the following length-of-service awards this year:

50 Year Institutional Award: University of Missouri—Southwest Center, Richard Crawford & Carla Rathmann (Mt. Vernon, MO)
10 Year Awards: Rick McDaniel (Fort Scott, KS); Noel Connet (Fort Scott, KS); Judy Cook (Bunker, MO); & Frances Kaiser (Vienna, MO)
15 Year Awards: Gerald and Onie Pilcher (Horton, MO) & Mike Meier (Monett, MO)

NEW STAFF MEMBER JOINS NWS SPRINGFIELD

Andy Boxell transferred to the Springfield National Weather Service Office from the Chicago NWS office in May. Andy grew up in Newburgh, Indiana, and graduated in May, 2009 from Valparaiso University with a Bachelor of Science degree in Meteorology. While at Valparaiso, Andy was a student employee for the Weather Service at the Forecast Offices in Louisville, KY and North Webster, Indiana, before joining the Chicago office full-time in May 2009. Andy is excited to trade lake effect snow for more thunderstorms, and is looking forward to serving the citizens of southwestern Missouri and eastern Kansas!

TWEET YOUR WEATHER REPORTS

By Christina Crowe

Many media outlets, celebrities, politicians, local governments, and even that guy next door have been using something called Twitter to keep others posted about what is going on in our world. The National Weather Service is now using Twitter as a public weather reporting tool. During bad weather, reports of what is happening in your area can help forecasters make important decisions about warnings and Twitter provides us with an easier way of getting some of those reports. Weather Service offices will now be monitoring a specialized search page during significant weather events that will show weather reports posted on Twitter.

An advantage of searching Twitter for weather reports is the capability to utilize "geotagging" – geographical information that is associated with an individual Tweet. This allows the NWS to correlate each Tweet to the location from which it was sent.

Basic Formatting of Your Weather Report Using Twitter:
Begin your tweet with the '#wxreport' hashtag. This helps offices search for tweets designated as weather reports. For example.

#wxreport WW *your location* WW *your report*

If you have geotagging enabled on your smart phone app, you can omit the 'WW *your location* WW' information. For more details about twitter reporting, visit the 'Weather Reporting on Twitter' link on our homepage (just below the EHWO display).

JUNIOR OBSERVER PAGE

Summer Word Find!

Search for these weather words:

- Sun
- Heat
- Storm
- Rain
- Summer
- Clouds
- Wind
- Thunder
- Hail
- Lightning

D	I	H	U	U	U	D	I	R	I	U	L	
H	T	I	H	C	S	G	H	I	N	H	S	
L	H	A	I	L	R	R	O	E	R	D	N	
A	I	N	R	O	H	I	E	G	E	A	H	
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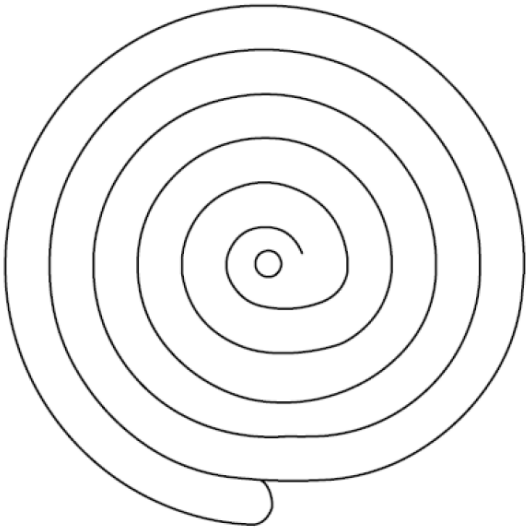
L	I	G	H	T	N	I	N	G	R	R	O	
A	N	H	N	O	D	N	S	A	H	T	R	
O	H	S	S	R	E	U	M	T	S	N	E	
I	E	U	S	M	R	N	I	O	A	N	T	
W	I	N	D	U	N	S	E	R	H	S	R	

See How Summer Storms Grow

What you will need:

- Spiral on white paper
- Scissors and a pencil
- String or sewing thread & needle
- Light bulb and a lamp



Steps:

1. Trace and cut out a copy of the spiral pattern below (don't cut out the center circle).
2. Thread the needle with a string. Bring the ends of the string together and make a knot.
3. Poke the needle through the circle in the center and pull the string through so the spiral hangs from the string.
4. Hold the spiral above the light (but DON'T place it ON the bulb) and turn on the lamp.

Results:

The air around the light bulb is heated, which causes molecules to expand and move about. Air that is heated is less dense and rises while cooler air sinks in its place. This rising air (or hot-air currents) causes the spiral to spin. This process is an example of convection, which can lead to strong thunderstorms on a larger scale. The more the sun heats the ground on a summer day, the more likely convection will make thunderstorms!

Did You Know???

The hottest air temperature ever recorded on earth was 136 degrees Fahrenheit at Al'Azizi-yah, Libya on September 13, 1922. In the United States, the hottest was 134 degrees Fahrenheit in Death Valley, California, on July 10, 1913.

The most days in a row that had temperatures above 100 degrees Fahrenheit happened in Marble Bar, Western Australia. The 160 day heat wave lasted from October 31, 1923 to April 7, 1923 (southern hemisphere summer).

A hailstone that fell in Aurora, Nebraska on June 22, 2003, measured 7 inches wide. Almost as large as a soccer ball, that was the largest ever recorded.

SUMMER WEATHER SAFETY GUIDE

Four major hazards crop up during the summer season and can impact your time spent outdoors: lightning, flooding, UV exposure, and heat. Below are some safety tips for each type of danger to you and your family.

Visit our Summer Safety Page for more information (www.crh.noaaa.gov/sgf/?n=summer_safety)

- Plan ahead! Check your local forecast before heading outside for your summer activities.
- When outdoors: know where the nearest safe building or vehicle is located (Golf carts, boats without cabins, and riding mowers are not safe places during a storm).
- Stay away from tall trees / objects that can attract lightning.
- When indoors: don't use electrical equipment or take a shower during a storm. The wiring and plumbing in your home are good conductors of electricity.
- Wait 30 minutes after the last rumble of thunder before resuming your regular activities.

- Plan ahead! Be aware of your local forecast and any active flood watches or warnings.
- Move to higher ground. f you live in a low lying area or are surrounded by roads that flood easily, plan ahead and move before flood waters strike.
- Do not attempt to cross flooded roadways, especially if water is flowing fast.

TURN AROUND, DON'T DROWN

- Don't camp or park your vehicle along streams, especially when thunderstorms are threatening your area.
- Take extra care when driving at night, flooding dangers may be harder to identify.

Visit the EPA for a UV forecast at www.epa.gov/sunwise/uvindex.html

- Avoid sunburn (use at least SPF 15 sunscreen generously and reapply every 2 hrs).
- Avoid tanning beds.
- Wear protective clothing, including sunglasses that block UV rays.
- Stay in the shade as much as possible.
- Use extra caution near water, snow and sand (these may reflect sun rays when you're not aware of your exposure).
- Monitor the UV Index.
- Get Vitamin D safely through your diet rather than sun exposure.

For more info on heat related illnesses, visit: www.dhss.mo.gov/Hyperthermia/HeatPrecautions.html

- Drink plenty of water, even if you don't feel thirsty.
- Ask a doctor before taking salt tablets.
- Spend more time in air-conditioned places.
- Don't get too much sun.
- Slow down and schedule physical activity for early morning or evening hours.
- Dress in lightweight, light-colored clothes.
- Don't eat heavy foods.
- Don't drink alcoholic beverages.
- Know the signs of heat illness.

NWS SPRINGFIELD SUMMER WEATHER PRODUCTS

Hazardous Weather Outlook: Issued daily at 6 AM and 1 PM to highlight the potential of any hazardous weather over the next few days, including severe weather, flooding, lightning and extreme heat conditions.

Severe Thunderstorm / Tornado Watch: Weather conditions are favorable for the development of severe thunderstorms (hail at least 1 inch in diameter or winds of at least 58 mph) or tornadoes. These are large boxes covering 100s of square miles. A PDS (Particularly Dangerous Situation) Watch may be issued if numerous large tornadoes are expected

Severe Thunderstorm / Tornado Warning: A severe thunderstorm or tornado is imminent or currently occurring. These are small, storm specific boxes.

Flood / Flash Flood Watch or Warning: Similar to a severe watch or warning except for flooding events. Flood products are for slow rises and fall of water usually during a long direction rain event. Flash flood means a rapid rise and fall of flooding waters usually within 6 hours of a heavy rainfall.

Heat Advisory: An expected heat Index of 105 degrees.

Excessive Heat Warning: Heat Index of 105 degrees for 4 or more consecutive days OR a 24 hour Heat Index of at least 110 degrees and a minimum Heat Index of 75 degrees.

VISIT WWW.WEATHER.GOV/SGF FOR ALL OF OUR SUMMER WEATHER PRODUCTS

Keep this page for your Summer Weather Reference!