Ozark Observer

National Weather Service Forecast Office
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Winter Edition

MISSOURI WINTER WEATHER AWARENESS DAY IS NOVEMBER 15, 2006

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Winter Weather Websites

NWS Springfield Winter Awareness Page

NWS Springfield Winter Weather Briefing Page

American Red Cross
www.redcross.org

Dept. of Homeland Security
www.ready.gov

Keep page 5 as your source of winter weather information!

Preparing for Winter

The National Weather Service in Springfield, the Missouri State Emergency Management Agency, the Missouri State Department of Elementary and Secondary Education, the Missouri Highway Patrol, and the Dept. of Health and Senior Services have designated November 15, 2006 as Missouri Winter Weather Awareness Day.

Are you prepared for winter storms? Winter weather can change drastically across the Ozarks. Mild temperatures and thunderstorms can be replaced with bitter cold and snow within hours.

Before the next winter storm arrives, be prepared with a winter storm plan and disaster kit. Keep extra blankets, warm clothing, a first aid kit, and canned food and bottled water available.

Extreme cold is one of the leading weather related causes of death in Missouri. Since 1990, over 130 lives have been lost due to extreme cold. When strong winds combine with cold temperatures, the wind chill factor becomes one of the most serious winter hazards. Hypothermia and frost-bite are potentially life-threatening conditions that can develop from exposure to extreme cold.

See page 5 for more information on winter weather safety and preparations.

- Jessica Schultz & Andy Foster

Forecaster Focus

Jason Schaumann, Forecaster

In August, a new forecaster joined the NWS Springfield Team. Jason Schaumann, a graduate of the University of Oklahoma, transferred from NWS Great Falls, MT. His forecasting experience includes 5 years of work for a private meteorology company in Oklahoma, and 3 years with the National Weather Service. Jason and his family are happy to be in the Ozarks, and look forward to many years of serving the customers of NWS Springfield. Welcome Aboard, Jason!

Farewell!

NWS Springfield said goodbye to forecaster Scott Watson in October. Scott was an influential part of our office's hydrology program, and developed critical low water crossing maps and diagrams using Geographic Information Systems (GIS). His work assists our forecasters in issuing life-saving flash flood warnings. Scott accepted a position with NWS Kansas City/Pleasant Hill, MO. We wish him the best of luck in KC!

FORECASTS, WARNINGS, AND MORE 24 HOURS A DAY, 7 DAYS A WEEK!

WWW.WEATHER.GOV/SGF

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NOAA on the Farm

Over the past 5 years, the National Weather Service has transitioned into a digital era in forecast development. This new method of creating forecasts can be analyzed by users in various ways. These forecasts can be interactively graphed and viewed in hourly increments with several different types of elements, such as probability of precipitation or wind speed and direction.

Agriculture has always been a primary industry across extreme southeast Kansas and the Missouri Ozarks. With the ongoing drought and low water supply that the region has experienced over the past 3 years, these new digital methods of analyzing NWS forecasts have been useful to the agricultural community.

NWS Springfield began an important outreach initiative in an attempt to inform agricultural communities across the area of these new products and services. This outreach project not only focuses on forecast products, but also illustrates how to access official climate information for numerous rural locations across the region.

Bill Davis, Gene Hatch, and Doug Cramer will complete this initiative by visiting 37 county Agriculture Extension offices, and presenting this material in an hour long session. Local farmers, government agencies, and those interested in National Weather Service operations are welcome to attend this training.

- Doug Cramer

Tornado Hits St. James, Missouri

Tornadoes in the fall? The clash of air masses in the spring also occurs in the fall, leading to a secondary tornado season that lasts into early December.

On the afternoon of September 22nd, a powerful upper level storm system and surface dryline triggered thunderstorms across a large portion of the Missouri Ozarks. Low level moisture, surging northward from the Gulf of Mexico, and very strong winds aloft provided an atmosphere conducive for severe thunderstorms capable of producing large hail and tornadoes.

A National Weather Service storm survey concluded that a tornado, rated F1 on the Fujita Scale, touched down in St. James, Missouri. The F1 rating indicates wind speeds estimated at 73 to 112 mph. The tornado damaged numerous homes and businesses.

Other severe thunderstorms moved across portions of Howell and Douglas counties, dropping hail up to the size of softballs.

Numerous automobiles near Ava sustained hail damage, and sky lights at a local Wal-Mart store were destroyed.

Additional severe thunderstorms developed during the early morning hours of September 23rd, producing straight-line wind damage in Ozark, Howell, and Shannon counties.

Flash flooding also occurred in southern Howell, southern Ozark, and southern Oregon counties as a result of several rounds of heavy rainfall. Over 10 inches of rain fell in southeast Oregon County, near Myrtle, leading to flash flooding along the Eleven Point River.

- Jessica Schultz & Megan Terry

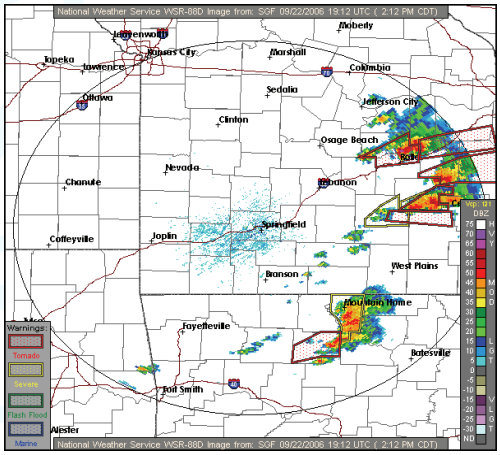
Wacky Facts!

Here's A Real Cold Front!

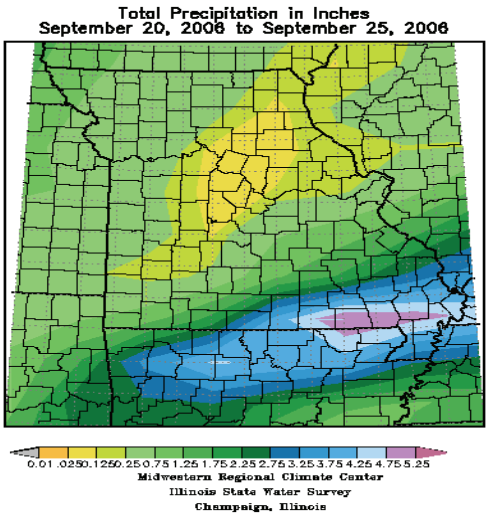
On November 11, 1911 the temperature reached 80 degrees at 2pm in Springfield. By 7pm, the temperature had dropped to 20 degrees, and the thermometer continued to fall to 13 degrees just before midnight.

The combination of strong, southerly winds ahead of the approaching cold front, and bitterly cold temperatures behind the front resulted in the record high and low taking place on the same day!

What Wacky Weather!



NWS Springfield radar image from the early afternoon of Sept 22nd. Note the red Tornado warning polygon in Phelps County, near the time of the St. James, MO tor-



Total Precipitation Image, showing rainfall amounts from 8-10 inches across south central and southeast Missouri.

Weather Rumors

Is it true that no two snowflakes are alike?

Snowflakes are simply ice crystals bound together by a unique molecular structure. They form when water collects on tiny particles in the atmosphere. Given the right environment, these water-covered particles will collide with others, creating a chain-reaction and developing larger flakes.

Snowflakes are divided into six different classifications of crystals: columns, plates, columns with plates, dendrites, needles, and stars. The type of snowflake that falls to the ground is determined by temperature, humidity, and wind in the atmosphere. The picture to the right shows the types of snow crystals that form within various cloud temperature ranges.

Many factors affect the structure of a snowflake, and there are many changes that occur to the flake as it falls through the atmosphere. As a result, the likelihood of two identical snowflakes is next to zero.

This weather rumor is true!

- Jessica Schultz

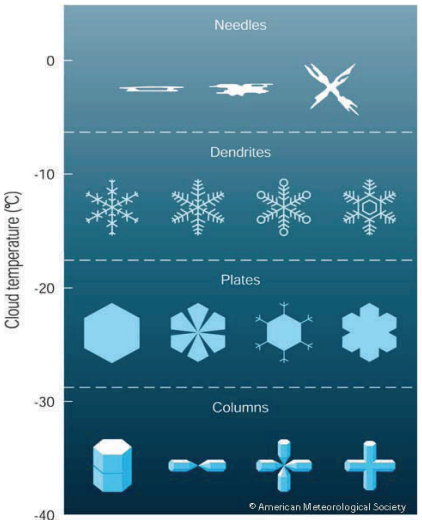


Image compliments of American Meteorological Society

What Happened to the Snow Last Year?

If you don't remember seeing too much snow last year across southeast Kansas and the Missouri Ozarks...you're right! The 2005-2006 Winter Season went down in the record books as the least snowiest season in Springfield.

Here are the Top 10 Least Snowiest Seasons for Springfield:

	Season	Snowfall
1	2005-2006	1.7
2	1931-1932	2.8
3	1922-1923	4.4
4	1935-1936	4.6
5	1991-1992	4.7
6	1949-1950	4.8
7	1982-1983	5.6
8	1971-1972	6.1
9	1910-1911	6.1
10	2004-2005	6.3

Here are the Top 10 Snowiest Seasons for Springfield:

	Season	Snowfall
1	1911-1912	54.5
2	1969-1970	43.6
3	1917-1918	39.3
4	2002-2003	38.6
5	1959-1960	33.6
6	1918-1919	33.2
7	1974-1975	32.9
8	1939-1940	32.1
9	1983-1984	31.6
10	1913-1914	30.0

Reaching Out to the Community

As we approach the Holiday Season, it is important to remember those less fortunate in our community.

Staff from the National Weather Service in Springfield participated in the Halloween Trick-or-Treat Canned Food Drive. The staff went door-to-door across Springfield area neighborhoods on October 31st to collect non-perishable items to support the Ozarks Food Harvest.

Thanks to everyone who helped support our community!

Junior Observer

Word Find!

Search for these winter words:

Snow
Ski
Sled
Frost
Winter
Ice
Mitten
Scarf
Freeze

T	W	A	H	I	S	E	W
R	S	L	R	Z	C	Z	I
B	L	N	U	W	A	E	N
F	E	D	O	N	R	E	T
H	D	P	G	W	F	R	E
M	I	T	T	E	N	F	R
C	S	K	N	I	K	S	P
V	M	O	F	R	O	S	T

Try This Weather Experiment!

Make Fog in a Jar!

What you will need:

Black Paper

Glass Jar

Colored Warm Water

Plastic Bag with Ice

Matches

Kids, be sure to have an adult help you with the matches.

Steps:

1. Tape the black paper on the back of the jar.
2. Fill one third of the jar with colored warm water.
3. Light a match and hold it over the jar opening for a few seconds.
4. Drop the match into the jar and cover the top of the jar with the bag of ice.
5. Watch the fog form!

The match warms the water, which warms the layer of air just above it. Some of the water evaporates into this warmed air. The water vapor rises and comes in contact with the air cooled by the ice.

Smoke from the matches act as nuclei for water vapor to collect on and condense.

The final result is a cloud!

For this experiment and others, visit: http://eo.ucar.edu/webweather.

Keep this page as your Winter Weather Reference!

Snow Way!

That's A Lot of Snow!

The record snowfall over a 24-hour period was set on February 21-22, 1912! During that time, 20.0 inches of snow fell in Springfield!

On a calendar day, the most snow to fall in Springfield was 15.7 inches on March 16, 1970!

Winter Outlook

Overall, expect a mild winter for the Missouri Ozarks and extreme southeast Kansas. Temperatures are expected to be slightly above normal, with near normal to slightly less than normal precipitation. More outlooks and climate information can be found on the Climate Prediction Center website at www.cpc.noaa.gov.

VISIT WWW.WEATHER.GOV/SGF LOOK FOR OUR WINTER WEATHER AWARENESS LINK!

NWS Springfield Winter Products

Your National Weather Service in Springfield issues numerous winter weather warnings and advisories to keep you updated with the latest hazardous weather. Here are some of the winter products we issue:

Winter Weather Advisory for snow accumulations less than 6 inches, ice accumulations less than 1/4 inch, or a combination of light accumulations of ice and snow.

Winter Storm Warning for a combination of significant accumulations of snow and ice that create dangerous and life-threatening conditions.

Heavy Snow Warning for snow accumulations of 6 inches or greater in a 24-hour period.

Ice Storm Warning for ice accumulations of 1/4 inch or greater.

Blizzard Warning for sustained or frequent wind gusts of 35 kts or greater and 1/4 mile visibility or less in falling and/or blowing snow.

Wind Chill Advisory for wind chills of –10 to –24 degrees.

Wind Chill Warning for wind chills of –25 degrees or colder.

And more! For a complete listing of winter weather products, visit our Winter Weather Awareness website!

Avoid Overexertion this Winter!

Strenuous activities such as shoveling heavy snow, pushing a car, or even walking in deep snow in combination with strain from the cold could cause a heart attack. Sweating could also lead to a chill and hypothermia.

Stay safe this winter!

Winter Weather Safety

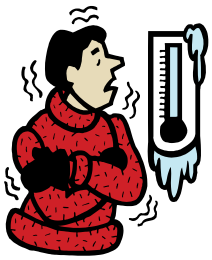
In Vehicles:

Fully check and winterize your vehicle before the first winter storm arrives.

Carry a Winter Storm Survival Kit including:

- Mobile phone
- Blankets and extra clothing
- Flashlight with extra batteries
- First-aid kit
- Non-perishable food and bottled water
- Windshield scraper and brush

If caught in your vehicle or outside when a winter storm strikes:



Stay in your vehicle. You will quickly become disoriented in wind-driven snow and cold. Run the motor for about 10 minutes each hour for heat, but open the window for a little fresh air. Be sure the exhaust pipe is not blocked in order to avoid carbon monoxide poisoning.

If outside, try to stay dry and cover all exposed body parts. Build a fire and melt snow for drinking water.

If possible, stay inside during inclement winter weather:

When using alternate heat sources such as a fireplace, wood stove, or space heater, be sure to observe fire safeguards and properly ventilate.

If you find yourself with no heat:

- Close off unneeded rooms
- Stuff towels or rags in cracks under doors
- Cover windows at night
- Eat and drink; food provides the body energy.
- Wear layers of loose-fitting, lightweight, warm clothing.