Winter Weather

Your Preparedness

Winter 2009/2010

Indiana Winter Weather Preparedness Week is November 15-21, 2009

Governor Mitch Daniels has proclaimed November 15-21, 2009 as Winter Weather Preparedness Week in Indiana.

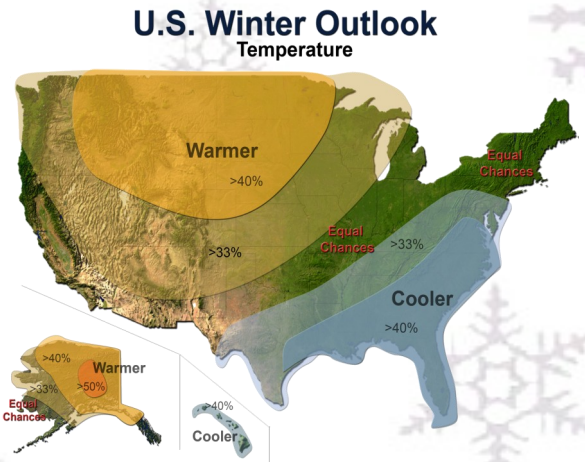
The National Weather Service (NWS) will conduct a winter weather preparedness campaign during the month of November. The purpose of the preparedness campaign is to remind Indiana citizens of winter's hazards, how to stay safe, and to educate everyone about preparedness.

The Warning Coordination Meteorologist (WCM) serving your area will be available for interviews and questions.

Winter Outlook

What will this upcoming winter season bring to the Hoosier state? The official outlook issued by the Climate Prediction Center (CPC) is calling for equal probabilities of below, near and above normal temperatures, with below normal probability for precipitation.

So what does this mean exactly? The CPC uses a combination of techniques to derive their forecasts, which includes looking at active states of the Earth's atmosphere and oceans as well as statistical analysis tools and trends in the historical data.



Temperature outlook, December to February, showing cooler conditions to the southeast and warmer likely northwest of Indiana.

The outlook maps provide a probability forecast based on the analysis. Equal chances (EC) indicate that an area has a 33.3 percent chance of experiencing above normal, near normal, or below normal temperatures or precipitation. The EC category is often used when there is no strong signal as to what may occur. When an area on the map is shaded as having a higher probability of above or below normal conditions, it does not necessarily mean those conditions will occur, but it means the prob-

(Continued on page 6)

A full color version of this publication is available on-line at: www.weather.gov/ind

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Winter Weather Your Needs

Winter 2009/2010

American Red Cross

Be Red Cross Ready

Get A Kit. Make A Plan. Be Informed.

Vehicle Disaster Supplies Kit

- Blanket, rain gear, extra mittens, hats, etc.
- Non-clumping kitty litter, sand for traction
- Small shovel, pocket knife, small tools
- Brightly colored cloth (red) for signal help
- Flashlight and extra batteries
- Bottles of water and high energy bars
- Candle and matches in a metal can or fire-proof container
- Small first aid kit
- Newspaper to insulate; plastic bags for sanitation

Make a Plan

- Discuss the disasters that might happen in winter and talk through how you should prepare and respond for each.
- Choose two places to meet after a disaster: one outside your home for a sudden emergency, another outside your neighborhood in case you can't return home.
- Find out the winter disaster plans for your workplace, schools and daycare centers.
- Make sure to include every member of your household, including your pets in your plan.

For more information on getting prepared, visit www.indyredcross.org

NOAA All Hazards Radio

Keep ahead of the storm by listening to NOAA Weather Radio for the latest winter storm watches, warnings, and advisories. In addition to routine broadcasts, the Specific Area Message Encoding (SAME) feature of NOAA Weather Radio activates the Emergency Alert System (EAS). EAS is used to provide notification of emergencies to the public. Blizzard warnings will always be distributed through the EAS, while other winter storm warnings may be if deemed life threatening or particularly urgent.

All Hazards NOAA Weather Radio
NOAA's National Weather Service™

Did You Know?

Special needs NOAA Weather Radios designed to meet the needs of the hearing impaired are available.

For more information, visit the NOAA Weather Radio Web Site at:
http://www.nws.noaa.gov/nwr.
For Special Needs NOAA Weather Radio information, visit:
http://www.nssl.noaa.gov/edu/safety/specialneeds.html

Winter Weather Your Plans

Winter 2009/2010

Winter Weather Preparedness For Schools

Gathering information

- *Know where to get weather information*: Utilize NOAA Weather Radio, local Media sources, Internet, and paging services.
- *Know how and where to get road information*: State Highway Departments or Law Enforcement are often your best sources for road conditions. City and county transportation or school officials, and drivers or security teams are also excellent sources.

Alerting students and staff

- *Alert students and staff to take action*: Use mobile communications for bus drivers, and a PA system for school staff and students.

Activating plan

- *Determine when to activate plan*: Gather information about the type of winter storm, expected impact, and time of impact on the school district. The primary decision will be whether to cancel, delay, or hold classes as usual. In Watch situations, immediate action will usually not be required. When a Warning or Advisory is issued, assess the weather situation by monitoring NWS forecasts, current weather conditions, and road conditions.

Canceling or Delaying Classes

- *Determine when to cancel or delay classes*: How much time do you have before the storm impacts the area? Not only must students be transported to school safely, but also back home via bus, car, or on foot. What kind of an impact will the storm make? Will roads be impassable, or will road conditions just have a minimal effect on transportation of students, causing only small delays?

School Bus Driver Actions

- *For heavy snow or blowing and drifting snow*: Be familiar with alternate routes, stay up to date on the latest forecast, and maintain communication with school officials.
- *For ice storms*: Remain alert for downed trees, utility lines, and other road hazards. Be familiar with alternate routes. Stay up to date on the forecast and maintain communication with school officials.
- *Extreme cold*: Learn to recognize and treat symptoms of hypothermia and frostbite.

Safety Instruction

- *Educate school staff and students*: Conduct drills and hold safety programs annually.
  - Participate in Winter Weather Preparedness Week campaigns.
  - Contact your local Emergency Manager or National Weather Service Office for a speaker to discuss winter weather safety.

Winter Deaths

Winter weather claims nearly 100 lives annually.

Related to ice and snow:

- About 70% occur in automobiles
- About 25% are people caught out in the storm
- Majority are males over 40 years old

Related to exposure to cold:

- 50% are people over 60 years old
- Over 75% are males
- About 20% occur inside the home

Winter Weather Your Health

Winter 2009/2010

With a wind chill temperature of minus 50°F, frostbite will occur within 10 minutes.

At minus 30°F, frostbite will occur within 30 minutes.

Frostbite

Frostbite is damage to body tissue caused by that tissue being frozen. Frostbite causes a loss of feeling and a white or pale appearance in extremities, such as fingers, toes, ear lobes, or the tip of the nose. If symptoms are detected, get medical help immediately! If you must wait for help, slowly re-warm the affected areas. However, if the person is also showing signs of hypothermia, warm the body core before the extremities.

Hypothermia: Low Body Temperature

Warning Signs - Uncontrollable shivering, memory loss, disorientation, incoherence, slurred speech, drowsiness, and apparent exhaustion.

Detection - Take the person's temperature. If below 95°F (35°C), seek medical care immediately! If medical care is not available, begin warming the person slowly. Do not warm extremities (arms and legs) first! This drives the cold blood toward the heart and can lead to heart failure. Instead, warm the body core first. If needed, use your own body heat to help. Get the person into dry clothing and wrap them in a warm blanket, covering the head and neck. **Do not give the person alcohol, drugs, coffee, or any hot beverage or food; warm broth is better.**

Wind Chill Chart

Temperature (°F)

Wind (mph) / Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98
FROSTBITE OCCURS IN:							30 minutes		10 minutes		5 minutes							

Winter Weather Your Actions

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When Caught in a Winter Storm

At Home or in a Building

Stay inside. When using alternative heat from a fireplace, wood stove, space heater, etc., use fire safeguards and ventilate properly.

If you have 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 with energy for producing its own heat. Keep the body replenished with fluids to prevent dehydration.

Wear layers of loose-fitting, light-weight, warm clothing. Remove layers to avoid overheating, perspiration, and subsequent chill.

In a Car or Truck

Stay in your vehicle. Disorientation occurs quickly in wind-driven snow and cold.

Run the motor about ten minutes each hour for heat:

- To avoid carbon monoxide poisoning, open the window a little for fresh air.
- Quickly make sure the exhaust pipe is not blocked.

Make yourself visible to rescuers:

- Turn on your dome light at night when running the engine.
- Tie a colored cloth (preferably red) to your antenna or door.
- Raise the hood to indicate trouble after the snow stops falling.

Exercise from time to time by vigorously moving arms, legs, fingers, and toes to keep blood circulating and to keep warm.

Outside

Find shelter:

- Try to stay dry.
- Cover all exposed parts of the body.

If no shelter:

- Prepare a lean-to, wind-break, or snow cave for protection from the wind.
- Build a fire for heat and to attract attention.
- Place rocks around the fire to absorb and reflect heat.

January 26-28, 2009

A major storm system dumped over a foot of snow in central and southern Indiana and upwards to one inch of ice along and south of the Ohio River. The ice brought down thousands of trees and power lines, leaving thousands of homes and businesses without power.

January 31, 2002

A major ice storm strikes northern Indiana, snapping trees and power lines. Ice accumulations of one and a half inches occurred and over 250,000 homes were without power during the storm.

October 19, 1989

An extremely unusual early season snowstorm dropped 8 to 11 inches of snow on northern and central Indiana.

Winter Weather Your Outlook

Winter 2009/2010

Winter Outlook *(Continued from page 1)*

abilities are higher for its occurrence. Indiana is in the 33 percent probability category or equal odds of below, near, or above normal temperatures. Precipitation forecasts for Indiana suggest odds favoring below normal precipitation.

Precipitation outlook, December to February, suggests drier than normal conditions are expected in Indiana.

This winter, a weak to moderate El Nino (a warming of the equatorial Pacific Ocean waters), is expected, and the atmosphere usually responds in an expected way, which leads CPC to forecast certain parameters with more confidence. An El Nino impact on Indiana varies considerably depending on its strength. A strong El Nino typically brings mild temperatures to Indiana while a weak El Nino typically brings colder than normal temperatures. Given the uncertainty of the eventual strength of this winters' El Nino creates some uncertainty in this winters' long range outlook for our region. In the case of a weak El Nino, some previous weak El Nino winters brought colder than normal conditions, and what precipitation fell was often in the form of snow. The winter of 2002-2003 was a recent winter with similar El Nino conditions and that was a rather cold and snowy winter. Regardless of a strong or weak El Nino, when one is occurring, the favored storm track for weather systems is across the Gulf States. As a result of this path for weather systems, the Great Lakes and Ohio Valley regions tend to be north of these weather systems, often missing their precipitation. If conditions in the Pacific Ocean unexpectedly change toward stronger El Nino conditions, then the outlooks for our area could change. Always check for the latest updates, which are issued near the beginning and middle of each month. CPC outlooks are available at http://www.cpc.noaa.gov .

WINTER WEATHER TERMS...WHAT TO LISTEN FOR

Hazardous Weather Outlook — will be issued to alert the public of the potential for hazardous winter weather. This outlook will be issued daily and will provide weather information through the next 7 days.

Winter Storm Watch — is issued to inform the public of the possibility of one or a combination of the following events: blizzard conditions, heavy snow, significant and damaging accumulations of freezing rain, or heavy sleet. A Watch usually gives 12 to 48 hours advance notice of the onset of winter weather conditions.

Winter Storm Warning — is issued when heavy snow, or a mixture of heavy snow, freezing rain, and/or sleet is expected.

Ice Storm Warning - An Ice Storm Warning is issued when significant and damaging ice accumulations (usually one quarter inch or more) are expected.

Advisories — issued for winter weather events that are hazardous, but not severe enough to warrant a warning. Advisories may be issued for: snow and/or blowing snow, lake effect snow, freezing rain, freezing drizzle, wind chill, wind, and dense fog.

Winter Weather

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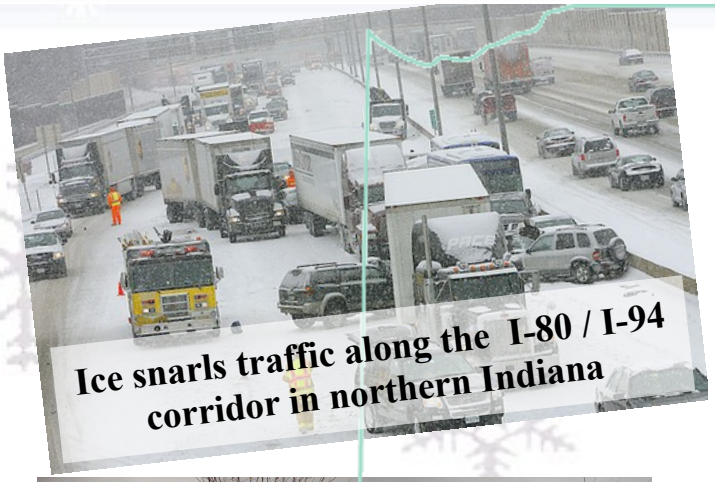
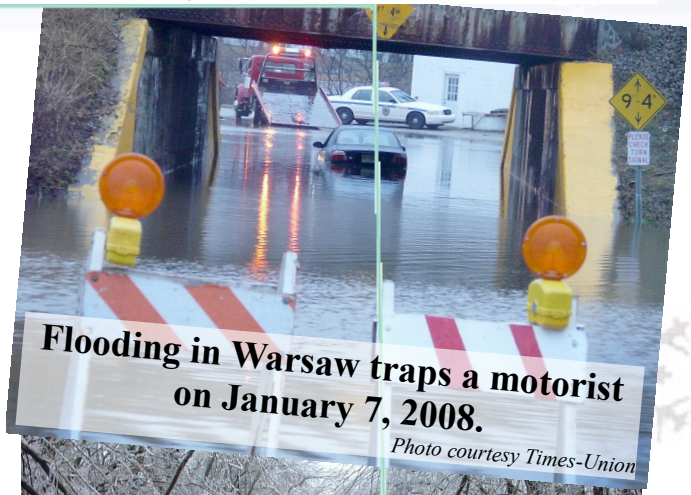
Severe Weather

Winter brings more than just snow. . .



Ice snarls traffic along the I-80 / I-94 corridor in northern Indiana



Flooding in Warsaw traps a motorist on January 7, 2008.

Photo courtesy Times-Union

Tornado damage in Daviess County occurred on November 15th, 2005.

Photo courtesy NWS Indianapolis

Ice storm in Muncie with widespread damage on January 5, 2005.

Photo courtesy Byran Smith

4 inches of sleet covers the ground in Fort Branch on February 16, 2003.

Photo courtesy Charlie Kiesel

Pre-Christmas snowstorm blanketed the Ohio River Valley. This impacted Southern Indiana with over 2 feet of snow.

Winter Weather Preparedness Week Material
OPEN IMMEDIATELY!

Internet Sites

National Oceanic and Atmospheric Administration (NOAA)
http://www.noaa.gov

National Weather Service
http://www.weather.gov

National Weather Service Indianapolis
http://www.weather.gov/ind

National Weather Service Northern Indiana
http://www.weather.gov/iwx

National Weather Service Louisville
http://www.weather.gov/lmk

National Weather Service Paducah
http://www.weather.gov/pah

National Weather Service Chicago
http://www.weather.gov/lot

National Weather Service Wilmington
http://www.weather.gov/iln

NWS Office of Meteorology Winter Weather Page
http://www.nws.noaa.gov/om/winter

NOAA Weather Radio
http://www.nws.noaa.gov/nwr

Climate Prediction Center
http://www.cpc.noaa.gov

Federal Emergency Management Agency
http://www.fema.gov

Ready America
http://www.ready.gov/

Be Red Cross Ready
http://www.indyredcross.org/BRCR

Indiana Department of Homeland Security
http://www.in.gov/dhs/

Indiana Department of Transportation
http://www.in.gov/indot/

Indiana State Police
http://www.in.gov/isp/

Indiana Department of Education
http://www.doe.in.gov/