

Winter Weather Preparedness Week

Winter 2006/2007

**Indiana Winter Weather Preparedness Week is
November 12-18, 2006**

Governor Mitch Daniels has proclaimed November 12-18, 2006 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 the citizens of Indiana about winter's hazards, how to stay safe, and to educate everyone about National Weather Service forecast terms and products.

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

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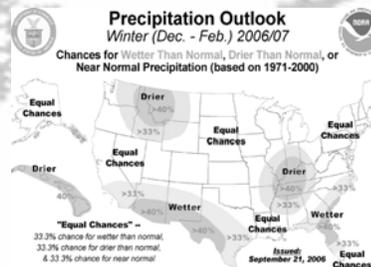
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2006-07 Winter Outlook



**El Nino
Returns!**



Most of the country will have a greater than average chance of winter temperatures above normal, according to the winter weather outlook announced by NOAA. Weak El Nino conditions have developed in the tropical Pacific and are expected to persist through the winter, possibly strengthening during the next few months to an event of moderate strength. However, this event is not expected to reach the magnitude of the very strong 1997-1998 El Niño event.

"The strengthening El Niño event will influence the position and strength of the jet stream over the Pacific Ocean, which in turn will affect winter precipitation and temperature patterns across the country," said Michael Halpert, lead forecaster at the NOAA Climate Prediction Center. "This event is likely to result in fewer cold air outbreaks in the country than would be expected to occur in a typical non-El Niño winter." A more complete winter weather outlook can be found at www.cpc.noaa.gov.

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



Winter Weather Preparedness 101 For Schools

Designing a Winter Weather Emergency Plan

Gathering information

- Know where to get weather information: Utilize NOAA All-Hazards Weather Radio, local Media sources, Internet, and paging services.
- Know how and where to get road information: Indiana State Police road conditions (visit <http://www.state.in.us/ai/travel> for additional information), city and county transportation officials, and drivers or security teams are excellent sources.

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 if possible.
- 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 Storms...Deceptive Killers

Winter storms are considered deceptive killers because most deaths are *indirectly* related to the storm. Fatalities occur:

- In traffic accidents on icy roads.
- From heart attacks while shoveling snow.
- From hypothermia due to prolonged exposure to cold.

Winter Deaths

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
claims nearly 100
lives annually.*



Winter Weather Terms...What To Listen For

Hazardous Weather Outlook - A Hazardous Weather Outlook will be issued to alert the public of the potential for hazardous winter weather. This outlook is issued daily and will provide weather information through the next 7 days. This is a good “planning” or “heads up” product.

Watches are issued when there is at least a 50 percent chance of an event occurring

Winter Storm Watch - A Winter Storm Watch is issued when there is at least a 50 percent chance that one or more of the following events may occur: blizzard conditions, heavy snow, significant and damaging accumulations of freezing rain, or heavy sleet. A **High Wind Watch** is issued to inform the public of the possibility of sustained winds (one hour or longer) of 40 mph or higher and/or wind gusts (any duration) of 58 mph or higher. Watches are usually issued 12 to 36 hours in advance of when the conditions are expected to develop.

Warnings are issued when an event is imminent or there is greater than 80 percent confidence

Blizzard Warning - A Blizzard Warning is issued when heavy snow and/or blowing snow (visibility less than 1/4 of a mile) and sustained winds or frequent wind gusts of 35 mph or more are expected for a period of three hours or more.

Lake Effect Snow Warning - A Lake Effect Snow Warning is issued when 6 inches or more of lake effect snow in 12 hours and/or 8 inches or more of snow in 24 hours 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.

Winter Storm Warning - A Winter Storm Warning is issued when heavy snow and blowing snow, or a mixture of heavy snow, freezing rain, and/or sleet is expected. Heavy Snow is defined as 6 inches or more of snow in 12 hours and/or 8 inches or more of snow in 24 hours in northern and central Indiana and 4 inches or more of snow in 12 hours and/or 6 inches or more of snow in 24 hours in southern Indiana.

Wind Chill Warning - A Wind Chill Warning is issued when wind chill values are expected to be -30°F or colder in northern Indiana, -25°F or colder in central Indiana, and -20°F or colder in southern Indiana, with a wind speed of 10 mph or greater.

High Wind Warning - A High Wind Warning is issued when sustained winds (one hour or longer) of 40 mph or higher and/or wind gusts (any duration) of 58 mph or higher are expected.

Advisories are issued for winter weather events that are hazardous, but not severe enough to warrant a warning. Advisories may be issued for the following: snow and/or blowing snow, lake effect snow, freezing rain, freezing drizzle, wind chill, wind, and dense fog. Advisory conditions may impact travel by causing delays or inconveniences.

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.

At a Wind Chill Temperature of minus 50°F, frostbite will occur within 10 minutes. At minus 30°F, frostbite will occur within 30 minutes.

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)																	
Calm		40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
Wind (mph)	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 Times 30 minutes 10 minutes 5 minutes

Wind Chill (°F) = 35.74 + .06215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})
 Where, T= Air Temperature (°F) V= Wind Speed (mph) Effective 11/01/01

Be Prepared...Before the Storm Strikes

At home and at work...

Have available:

- Flashlight and extra batteries.
- Battery-powered NOAA All-Hazards Weather Radio and portable radio.
- Extra food and water.
- Extra medicine and baby items.
- First-aid supplies.
- Heating fuel.
- Emergency heating source.
- Fire extinguisher and smoke detector.

In vehicles...

- ◆ Fully check and winterize your vehicle.
- ◆ Keep your gas tank near full.
- ◆ Try not to travel alone.
- ◆ Let someone know your itinerary.
- ◆ Carry a *WINTER STORM SURVIVAL KIT*

WINTER STORM SURVIVAL KIT

- ◇ blankets/sleeping bags
- ◇ flashlight
- ◇ first-aid kit
- ◇ knife
- ◇ non-perishable food
- ◇ extra clothing
- ◇ a large empty can and plastic cover with tissues and paper towels for sanitary purposes
- ◇ a smaller can and water-proof matches to melt snow for drinking water
- ◇ sand
- ◇ shovel
- ◇ windshield scraper
- ◇ tool kit
- ◇ tow rope
- ◇ booster cables
- ◇ water container
- ◇ road maps

While Driving During a Storm

Drive for the conditions:

- Slow down.
- Allow extra braking distance.
- Do not tailgate.
- If low on fuel and gas stations are closed, try using a credit card at pumps. Many remain on.
- **Allow snowplow operators to do their job:**
- Maintain a safe distance...if salt is hitting your vehicle when you follow a snowplow, you are too close.
- Avoid passing snowplows on a roadway that is only one lane in each direction.
- **Remain alert for sudden road condition changes:**
- Bridges and overpasses often become icy first.
- Snow and blowing snow can produce sudden restrictions in visibility.

January 25-27, 1978

Perhaps the greatest blizzard ever to strike the region deposited 24 inches of snow at South Bend, 16 inches at Indianapolis, and 10 inches at Fort Wayne. Thunder and lightning were observed with the snow. Wind gusts up to 70 miles per hour produced snow drifts as high as 30 feet. The weight of the snow caused roofs to collapse at factories, warehouses, and even a school near Muncie. A federal state of emergency was declared.

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.

March 19-20, 1996

A snow storm which extended into the first day of spring, deposited 12 inches of snow at Indianapolis and 10 inches at Evansville. The weight of the snow brought down thousands of trees and power lines, leaving over 200,000 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.

Flooding from snowmelt...Continued

Winter Flooding

During winter thaws or the normal late winter and early spring snowmelt the risk of general flooding and river flooding increases.

Flood Watches and Warnings

- A Flood Watch is issue when conditions are favorable for flooding to occur generally within 36 hours.
- A Flood Warning means widespread flooding or river flooding is imminent or occurring.

Safety

- On average flooding causes the most deaths and property damage each year.
- If you live in a flood prone area, before a flood strikes make sure all family members know how to respond in case of a flood, and plan and practice an evacuation route.
- When flooding is imminent or occurring immediately leave the area and seek shelter on higher ground
- Do not try to cross flood waters either on foot or in your car. **Turn Around, Don't Drown!**
- Contact your local Emergency Manager or National Weather Service Office for a speaker to discuss winter weather safety.

NOAA All-Hazards Weather Radio

Keep ahead of the storm by listening to NOAA All-Hazards Weather Radio for the latest winter storm watches, warnings, and advisories. In addition to routine broadcasts, the Specific Area Message Encoding (SAME) feature 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.

For more information, visit the NOAA All-Hazards Weather Radio Web Site at: <http://www.nws.noaa.gov/nwr>.

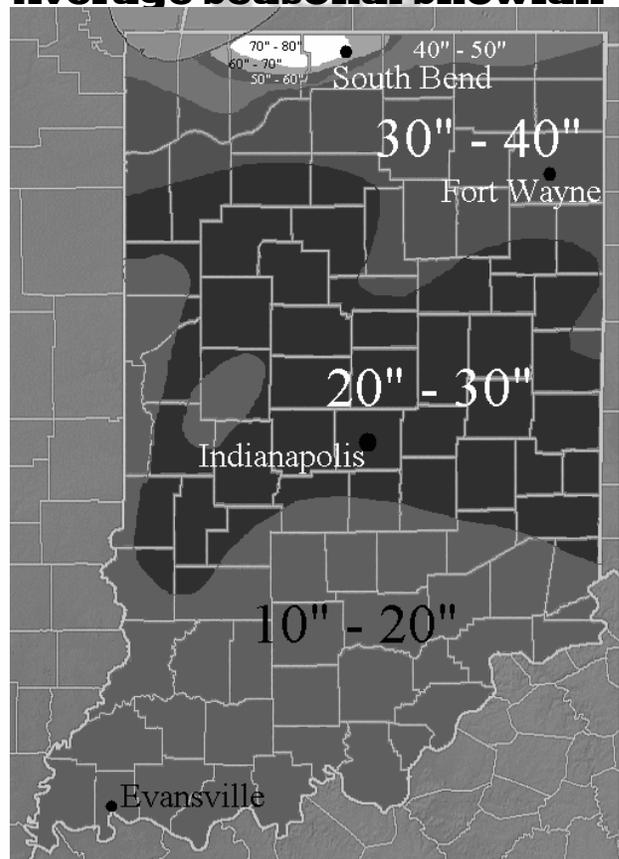
For Special Needs NOAA Weather Radio information, visit: <http://www.nssl.noaa.gov/~wood/NWR/spc-nds-nwr>.

Did You Know?

Special needs NOAA All-Hazards Weather Radios designed to meet the needs of the deaf and hard-of-hearing are available.



Average Seasonal Snowfall



National Weather Service

8250 Kentucky HWY 3520
West Paducah, KY 42086

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 Northern Paducah

<http://www.weather.gov/pah>

National Weather Service Indianapolis

<http://www.weather.gov/ind>

NWS Office of Meteorology Winter Weather Page

<http://www.weather.gov/om/winter>

Winter Outlooks from Climate Prediction Center

<http://www.cpc.noaa.gov>

Federal Emergency Management Agency

<http://www.fema.gov/fima>



American Red Cross

<http://www.redcross.org/services/disaster/keepsafe>

Indiana Department of Homeland Security

<http://www.in.gov/dhs>

Indiana State Police

<http://www.in.gov/isp>

Indiana Department of Education

<http://ideanet.doe.state.in.us/>

Indiana Department of Transportation

<http://www.ai.org/dot/>