National Weather Service
500 Weather Station Road
Old Hickory, TN 37138

TENNESSEE WINTER WEATHER AWARENESS WEEK

November 14 – November 16, 2006

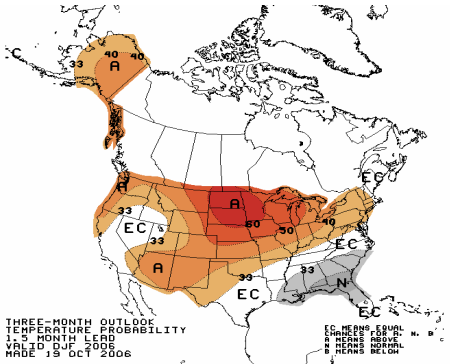
The National Weather Service Forecast Office in Nashville and the Tennessee Emergency Management Agency will highlight November 14 - November 16, 2006 as Winter Weather Awareness Week, in order to bring these hazards to the attention of the public. We will be sending information through our communications network including the National Weather Service's NOAA Weather Radio-All Hazards during this period.

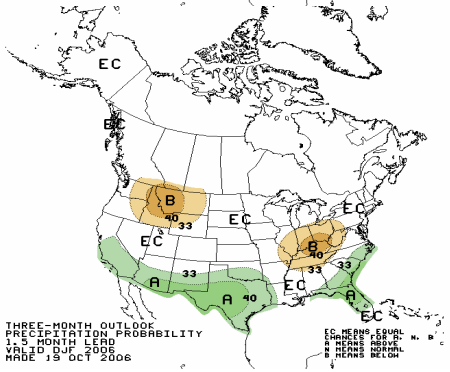
We would like our customers and partners to be familiar with our winter weather terms and criteria. Review our winter weather safety tips and be prepared!

Winter Outlook

The 2006-2007 U.S. Winter Outlook calls for warmer-than-normal temperatures across much of the plains states. Temperatures for the state of Tennessee is under the equal chance category, which means there is a 33.3% chance for temperatures to be above normal, 33.3% chance for temperatures to be below normal, and a 33.3% chance for temperatures to be around normal.

The precipitation outlook calls for drier than normal conditions across the Tennessee and Ohio Valleys.





What Could Drive This Winter?

Above normal sea-surface temperatures in the central-equatorial Pacific Ocean are expected to continue for the next three to six months. Therefore, a weak to moderate El Niño is expected.

Also, one key climate feature that could have a particularly large impact in U.S. winter weather, especially along the East Coast, is the North Atlantic Oscillation or NAO.

The North Atlantic Oscillation (NAO) often changes its phase from week-to-week. During the positive phase the jet stream shifts to the north of its usual position and the winter weather features relatively warm days over much of the contiguous U.S. In contrast, during the negative phase the jet stream shifts to the south of its usual position. The negative phase of the NAO features more Nor'easters and more frequent cold air outbreaks and snowstorms, especially along the East Coast. Currently, the phase of the NAO is difficult to anticipate more than one to two weeks in advance.

Recognizing the demand to have more precision with seasonal outlooks, NOAA's Climate Prediction Center has formed a Climate Test Bed. The Climate Test Bed is a collaborative scientific effort among the operational, academic and research communities. The mission of the Climate Test Bed is to accelerate the transfer of atmospheric and oceanic research and development into operational climate forecasts, products and applications. At present the Climate Test Bed is focused on maximizing the use of NOAA's Climate Forecast System model in combination with other climate forecast tools to improve U.S. seasonal precipitation and temperature outlooks.

NOAA will publish updates to the 2006-2007 U.S. Winter Outlook via the web on Nov. 16.

Meteorological winter begins Dec. 1 while astronomical winter begins Dec. 21.

The National Oceanic and Atmospheric Administration, an agency of the U.S. Commerce Department, is dedicated to enhancing economic security and national safety through the prediction and research of weather and climate-related events and providing environmental stewardship of our nation's coastal and marine resources.

On the Web:
National Weather Service:
http://www.nws.noaa.gov

Flooding

Flooding can occur year round, but Middle Tennessee has had its worse flooding during the winter months.

Flooding is the number one weather killer in the United States annually. Whether or not you live in a flood prone location, you will likely still be affected by flooded roads, or power outages or water contamination from flooding during the next year. Most people killed in flooding die in their vehicles.

NEVER drive onto flooded roads.

TURN AROUND...DON'T DROWN!

Two feet of running water is enough to sweep away most cars. If flooding begins to affect you in your car, abandon it immediately and head for higher ground. You should keep at least three days' worth of clothes, non-perishable foods and medications, and personal supplies on hand for each person in your family, in case flooding affects your home. Store these supplies in a sturdy waterproof container.

Follow these safety rules:

- Monitor the NOAA Weather Radio, or your favorite news source for vital weather related information.
- If flooding occurs, get to higher ground. Get out of areas subject to flooding. This includes dips, low spots, canyons, washes etc.
- Avoid areas already flooded, especially if the water is flowing fast. Do not attempt to cross flowing streams. **Turn Around Don't Drown**
- Road beds may be washed out under flood waters. NEVER drive through flooded roadways. Turn Around Don't Drown If your vehicle is suddenly caught in rising water, leave it immediately and seek higher ground.
- Do not camp or park your vehicle along streams and washes, particularly during threatening conditions.
- Be especially cautious at night when it is harder to recognize flood dangers.

National Weather Service Nashville, TN Website:

www.srh.noaa.gov/ohx

NOAA Weather Radio

NOAA Weather Radio, the "Voice of the National Weather Service", broadcasts National Weather Service warnings, watches and local forecasts 24 hours a day. It is the fastest way to get warnings and watches from the National Weather Service. Routine weather information is updated every one to three hours and NOAA Weather Radio broadcasts are repeated every five minutes or so.

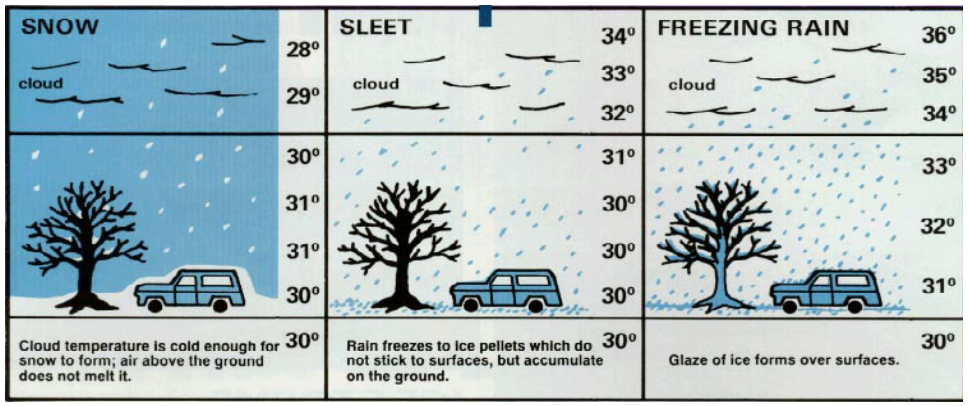
New programmable NOAA Weather Radio receivers now on the market have a special feature that allows consumers to choose only the official watches and warnings that affect their county area and screen out any warnings issued for other counties within the typical 40-mile broadcast range of the transmitter.

Using digital technology known as Specific Area Message Encoding (SAME), all official watches and warnings issued by the NWS over NOAA Weather Radio are preceded by unique audio codes that describe the type of warning and identify the county or counties being warned. People who own this new SAME-capable receiver can pre-select their local codes to ensure they hear the specific warning information they need to make potentially life-saving decisions.

Older NOAA Weather Radio receivers are not affected by the technology change, but these older receivers do not allow listeners to take advantage of the SAME capability to screen out Weather Service alerts for individual counties.

The broadcast range from most NOAA Weather Radio transmitters is approximately 40 miles. The effective range depends on terrain, quality of the receiver, and indoor/outdoor antennas.

There are 12 transmitters that cover Middle Tennessee. These transmitters are located at: Waverly and Cookeville on 162.400 MHz, Lawrenceburg on 162.425 MHz, Centerville and Spencer on 162.450 MHz, Shelbyville on 162.475 MHz, and Clarksville and Carthage-Smithville on 162.500 MHz, Lobelville, Winchester and Lafayette on 162.525 MHZ, and Nashville on 162.550MHz.



Winter Storm Safety Rules

BEFORE:
Keep ahead of a winter storm by listening to the latest weather warnings and bulletins on NOAA Weather Radio, local radio and TV stations, or cable TV. Be alert to changing weather conditions and avoid unnecessary travel.

Check battery powered equipment. You may have to depend on a portable radio or TV for weather information. Also, check emergency cooking facilities and flashlights.

Check your supply of heating fuel. Don't forget to have candles and matches.

Check your food and stock an extra supply. Your supplies should include food that requires no cooking or refrigeration in case of power failures. Consider high energy foods such as dried fruit or candy. Don't forget prescription medicines, first aid supplies, and other specialty items.

Winterize your home by caulking around openings, installing storm windows, and adding insulation.

Get your car winterized before the storm season begins. Maintain a checklist of the preparation required. Keep water out of your fuel by keeping your gas tank full.

Carry a winter storm car kit, especially if you plan cross country travel or anticipate travel in northern states. Items to consider include a mobile phone and charger, blankets or sleeping bags, flashlights and batteries, first aid kit, non-perishable foods, extra clothing, window scraper, water, road maps, small shovel, and kitty litter or sand for traction.

Don't forget your pets or livestock. Move animals to sheltered areas. For pets, bring them indoors or provide some form of heat. Provide fresh water since many pets die from dehydration in winter storms.

DURING:
Prevent fire hazards due to overheated coal or oil burning stoves, fireplaces, heaters, or furnaces. Remember, in winter storms, emergency equipment can be hampered by extreme weather conditions, too, and often can't respond as quickly.

Stay indoors during storms and cold snaps , especially the elderly, small children, and others in bad health. Avoid overexertion, especially when shoveling snow.

Make necessary trips for supplies before the storm develops. Arrange for emergency heat in case of power failure, which could last for several days.

Dress to fit the season. Wear layered, loose fitting clothing. Wear a hat, scarf, and mittens.

If the storm exceeds or even tests your limitations, seek available shelter immediately. Plan your travel and select primary and alternate routes.

Check the latest weather information before departing, and drive carefully and defensively. Avoid traveling alone, and be sure someone knows your travel plans and route of travel.

Winter Weather Terminology

Winter Storm Warning: Means that severe winter weather conditions are expected within the next 24 hours such as 3 inches or more of snow is expected in 12 hours or less or 5 inches or more of snow is expected in 24 hours or less.

Winter Storm Watch: means that severe winter weather is possible within the next day or two.

Blizzard Warning: means that winds of 35 mph or more are expected and visibility is reduced to less than 1/4 mile in snow for at least 3 hours.

Winter Weather Advisory: is issued when ice or snow is expected to hinder travel, but conditions are not serious enough to require warnings. This is more of a nuisance type of winter storm.

All Time Coldest Temperatures

City	Temp	Date
Memphis	-13	Dec 24, 1963
Nashville	-17	Jan. 21, 1985
Chattanooga	-10	Feb 13, 1899, Jan 31, '66, Jan 21,'85
Knoxville	-24	Jan. 21, 1985
Tri-Cities	-21	Jan. 21, 1985
Alldart	-27	Jan. 21, 1985
Kingston Springs	-30	Jan 24, 1963

Maximum Seasonal Snowfall

City	Amount	Year
Memphis	25.1 in.	1917-18
Nashville	38.5 in.	1959-60
Chattanooga	22.7 in.	1992-93
Knoxville	56.7 in.	1959-60
Tri-Cities	51.0 in.	1959-60

Snow Advisory: Snow accumulating one inch, but under 3 inches in a 12 hour period or less.

Ice Storm Warning: Ice accumulations of 1/4 inch or more on all surfaces within a 12 hour period.

Freezing Rain Advisory: Light Ice accumulations of .01 inch to less than 1/4 inch. Freezing rain/and or drizzle is forecast when expected rain is likely to freeze as soon as it strikes the ground, potentially creating a coat of ice on roads and walkways. There is no Freezing Drizzle Advisory. Sleet consists of small particles of ice. Sleet can accumulate on roads and cause them to become slippery.

Sleet Warning: Sleet accumulating ½ inch or more. If less than ½ inch then it is a sleet advisory.

Blowing Snow Advisory: Visibility 1/4 mile or less in blowing snow.

Wind Chill Advisory: Wind chills of -10 degrees to -24 degrees.

Wind Chill Warning: Wind chills of -25 degrees or colder. This can lead to life-threatening hypothermia or frostbite.

Sure Doesn't Snow Like It Used To In Nashville!

Decade	Amount	Years
1960s	147.0 in.	1961-1970
1970s	116.0 in.	1971-1980
1890s	115.7 in.	1891-1900
1950s	98.6 in.	1951-1960
1940s	96.4 in.	1941-1950
1910s	91.7 in.	1911-1920
1900s	73.3 in.	1901-1910
1920s	69.4 in.	1921-1930
1980s	67.6 in.	1981-1990
1990s	61.1 in.	1991-2000
1930s	54.4 in.	1931-1940

Remember, if the average snowfall in one year is about 9 inches, then 90 inches would be an average in a decade.

Nashville Snowfall Records

Most snowfall, 24 hours: 17.0", March 17, 1892
Most snowfall, Christmas Day: 2.7", 1969
Most snowfall, 1 month: 21.5", March, 1892
Most snowfall, 1 season: 38.5", 1959-60
Least snowfall, 1 season: Trace, (1949-50 & 1907-08)
Earliest measurable snowfall: 1.0 inch, October 30, 1925
Earliest snowfall, 4" or more: 7.2", November 2, 1966
Latest measurable snowfall: 1.5", April 25, 1910
Latest snowfall, 4" or more: 4.5", March 24, 1940

Normal Winter Conditions for Nashville

	December	January	February
Average High Temp	49.4	45.6	51.4
Average Low Temp	31.5	27.9	31.2
Average Temps	40.5	36.8	41.3
Average Precip	4.61	3.97	3.69
Average Snowfall	0.5	3.9	3.4 (Total 9.1 Inches Annually)

Wind Chill: The wind chill table provided here shows this cooling power for various combinations of wind and temperature. The chart is intended to help gauge how much protection you really need from the cold. To determine the wind chill using the chart below, find the actual outside air temperature on the top line, then read down the left side to the row corresponding to the wind speed. Where the row and columns intersect, read the wind chill factor. Colors indicate how quickly frostbite can occur.

Wind (mph) / Temperature (°F)	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
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 Times: 30 minutes, 10 minutes, 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph) Effective 11/01/01

Hypothermia

Hypothermia is the loss of body heat that results in a life threatening situation.

Warning Signs

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

Detection

Take the person's temperature. If the temperature is below 95 degrees F, immediately seek medical care. This is a life threatening situation. If care is not immediately available, begin warming the person slowly. Warm the core first. Get the person into warm clothing and wrap them in a warm blanket covering the head and neck. Do not give the person alcohol, drugs, coffee, or any very hot beverage or food, warm broth is better. Do not warm the extremities first, this drives cold blood toward the heart and may cause heart failure.

Frostbite

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