National Weather Service
Aberdeen, South Dakota

October 2015

Inside this issue:

Winter Weather Preparedness

South Dakota Winter Weather Awareness Day
October 28th
Minnesota Winter Hazard Awareness Week
November 9th-13th

Summer has come to an end and the leaves are falling off the trees. That can only mean one thing, winter is fast approaching. To assist in refocusing on the hazards that winter weather can bring, time has been set aside devoted to the hazards of winter weather. In South Dakota, Winter Weather Awareness Day is October 28th. In Minnesota, Winter Weather Hazard Awareness week will be November 9th-13th.

A little bit of attention paid to minor details during the pleasant days of fall will pay huge dividends during the long winter season. Do those drafty windows need a quick shot of caulking? Have you had your furnace checked to make sure it's operating correctly; especially it's a gas burning furnace? How are the belts, hoses and tires on the family vehicle? Are you afraid that the battery in the family vehicle won't make it another winter? Do you remember what the various winter weather advisories, watches and warnings mean? Below are some websites that you may find useful to help prepare for winter's arrival.

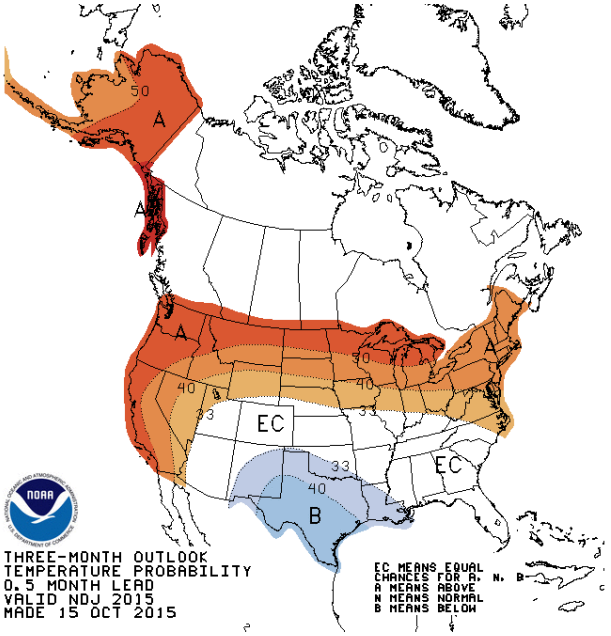
www.weather.gov/aberdeen www.weather.gov/minneapolis

www.winterweather.state.mn.us

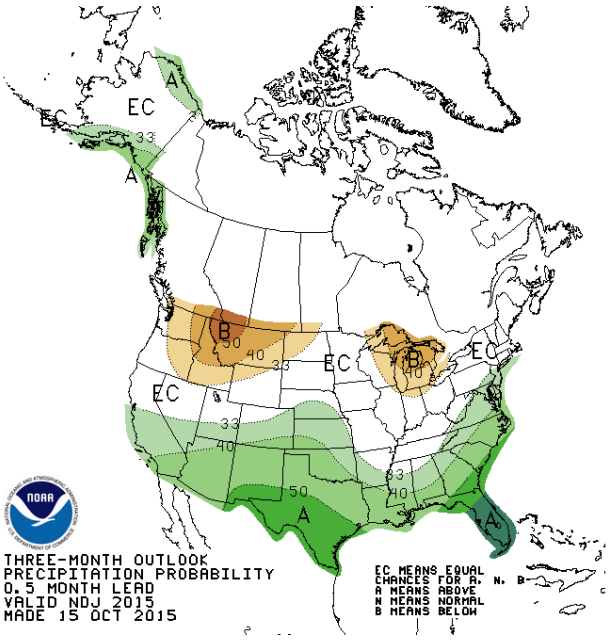
www.safetravelusa.com/sd http://www.511mn.org/

http://www.safetravelusa.com/nddot

November through January Outlook



Temperature Outlook—November through January



Precipitation Outlook—November through January

Don’t forget to “fall back” on November 1st.

Set clocks back one hour at 2:00 am.

Winter Weather Hazard Products

Winter Storm Watch

Issued 12-48 hours in advance of an event for a 50% or greater chance of conditions favorable for a significant winter storm (including heavy sleet, heavy snow, or ice storm). Winter storm conditions include 6 or more inches of snow, blowing snow, ice or sleet.

Wind Chill Watch

Issued when there is at least a 50 percent chance for wind chill values to drop to –35°F or lower within the next 12 to 48 hours.

Blizzard Watch

Issued when there is at least a 50 percent chance for blizzard conditions within the next 12 to 48 hours. Blizzard conditions consist of sustained wind speeds (or gusts) of at least 35 mph, **and** considerable falling or blowing snow causing a reduction of visibilities to less than 1/4 mile for at least 3 hours.

Winter Storm Warning

Issued up to 36 hours before an event for an 80% or greater chance of a winter weather event that meets at least one of these criteria: 6 or more inches of snow, heavy snow and blowing snow, ice, or sleet.

Ice Storm Warning

Issued up to 36 hours before an event for an 80% or greater chance of a 1/4 inch or more of freezing rain.

Blizzard Warning

Issued when there is at least an 80 percent chance that wind and snow will combine to produce blizzard conditions within the next 36 hours. Blizzard conditions consist of sustained wind speeds (or gusts) of at least 35 mph, **and** considerable falling or blowing snow causing a reduction of visibilities to less than 1/4 mile for at least 3 hours.

Wind Chill Warning

Issued when there is at least an 80 percent chance that wind chill values will drop to –35° F or lower within the next 36 hours.

Winter Weather Advisory

Issued when, within the next 36 hours, there is a high probability of enough snow, sleet, or ice to cause inconvenience, but not enough to warrant a warning.

Wind Chill Advisory

Issued when, within the next 36 hours, there is a high probability of wind chill readings below –25°F, but not low enough to warrant a warning.

Gearing up for Winter

Now that autumn has arrived…it's time to begin gearing up for the upcoming winter. The 30 below wind chills, snow drifts and short days are just around the corner. Taking the time now to prepare for the winter months will be easier and less stressful than trying to deal with any potential problems during the middle of winter.

In the Home:
-Check the windows and doors for drafts. Also check the insulation of the house in the attic. Were there any leaks during the summer rains? Insulation that gets wet doesn't insulate that well.
-Make sure that the heating system in the home is running at optimal performance. Are the furnace filters clean? If a wood burning stove or fireplace is in the home, has the chimney been cleaned?
-Is the carbon monoxide detector properly placed and operating correctly?
-Are rain gutters cleaned out to prevent the formation of ice building up?
-In the outside chance that you become stranded in your home during a winter storm, are there enough provisions on hand to make it through? Non-perishable food items, dry wood for burning if you have a fireplace or wood stove, and drinking water are a must to have on hand.
-Don't forget that on Sunday, November 4th, we "fall back" time wise. That is also a great time to replace the batteries in any smoke detectors, carbon monoxide detectors and NOAA weather radios.

In the Vehicle:
-Is the battery up to snuff? A battery can lose up to ½ of its starting power during the dead of winter.
-Does the anti-freeze test down to at least 30 below zero? This would also be a good time to check the entire heating system of the car. Do any belts look worn or have cracks in them? Are hoses soft and squishy? Now is the time to repair or replace them.
-Do the tires have ample tread left? If the tires are getting rather thin in the tread department, it might be time to have the tires replaced.
-Is the winter survival kit in the vehicle? Elsewhere in this issue is a sample list of what a winter survival kit should contain.
-Don't let the vehicle fall below a half tank of fuel. This helps to keep condensation from forming in the tank, and helps to keep the fuel line from freezing up. If you have a diesel powered vehicle, is the fuel blended properly to keep from gelling up?
This is just a small sampling. The following website offers additional items, ideas and suggestions to make it safely through the winter season:

http://www.redcross.org/www-files/Documents/pdf/Preparedness/WinterStorms.pdf

Now is the time to take a little time to check out these details. Doing so now will save you a lot of frustration during winter.



Winter Survival Kit

What follows is a sample winter survival kit to be place in your vehicle. Don't feel like the items on this list are the only things that should go into your survival kit. This is only a sample. Perhaps your personal experience or situation dictates that other items need to be added. What is important is that you have a kit in your vehicle.

Survival Kit sampler:

-blankets/sleeping bags/old coats
-high-calorie, non-perishable food...such as nuts, granola bars, trail mixes and jerky
-flashlight with extra batteries
-first aid kit
-knife
-extra clothing to keep dry
-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;
-an empty coffee can and candles
-a sack of sand (or cat litter)
-shovel
-windshield scraper and brush
-tool kit
-tow rope
-booster cables
-water container
-compass
-road maps

Also remember that if you become stranded in your vehicle during a winter storm, **NEVER** leave the safety of the vehicle. Your odds of survival greatly increase if you remain with the vehicle. Also travel with a fully charged cell phone, with a backup battery if possible.

Snowfall Reminders

With winter just around the corner, it's time once again to review the procedures for measuring and reporting winter precipitation.

Helpful reminders:

At the beginning of the snowfall/freezing season, remove the funnel and inner measuring tube of the rain gauge to expose the overflow can so that it can more accurately catch frozen precipitation.

Check your gauge to make sure there are no leaks

If you have a snow board, put it out and mark its location with a flag or some other indicator so it can be found after a new snowfall. Be sure to locate it in an open area (not under trees, buildings or other obstructions where snow can blow off of higher structures and contaminate your measurement).

What to report:

Measure and record the snowfall (snow, sleet, snow pellets) since the previous snowfall observation. Take this measurement once-a-day and be sure to reflect the maximum accumulation of new snow observed (in inches and tenths, for example, 3.9 inches) since the last snowfall observation.

For example: Snow begins to fall at 10:00 a.m., accumulates to 4.2" by 3:00 p.m. and then stops. Ideally, this is when you should measure the snow. The snow begins melting and settling such that by your observation the next morning you only have 2.6" of snow on your snow board. The correct number to report for your 24-hour snowfall is 4.2" - the accumulation prior to melting and settling. Due to work or other commitments you may not be available to measure snow when it ends or before your regular observation time. In these cases use your best estimate, based on a measurement of snowfall at the time of observation along with knowledge of what took place in the last 24 hours.

Determine the total depth of snow on the ground at the normal observation time. Take this observation once-a-day at the scheduled time of observation. Use a measuring stick to measure the total depth of snow on the ground. Report snow depth to the nearest whole inch, rounding up when one-half inch increments are reached (example 0.4 inches gets reports as a trace (T), 3.5 inches gets reported as 4 inches).

Measure and record the water equivalent of snowfall since the previous days observation.

Snowfall Reminders (cont.)

Measuring liquid precipitation equivalent:

Report the liquid water equivalent for any NEW snowfall to the nearest 0.01 inch.

Two methods for melting snow

Add warm water to the gauge in order to melt the snow. Remember to carefully measure the added warm water so you can subtract that figure from your final measurement.

Another method is to place the rain gauge in a bucket of warm water. Remember to dry the outside of the gauge off so none of the water from the bucket runs down the sides and into your measuring tube.

If too little snow has fallen to effectively measure, report it as a trace.

Reporting New Snowfall:

Take an average of 3-5 measurements in an open area. Try to avoid any drifts or bare spots.

Report to the nearest 0.1 of an inch.

Reporting Total Snow Depth:

Report snow depth whenever snow covers more than 50% of the ground. If total snow covers less than 50% of the ground, report the snow depth as a trace.

Report to the nearest whole inch. If less than ½ inch, report as a trace.

Note: Measuring total snow depth can be tricky. As you know, snow may melt quickly from south facing areas, but linger for days in shaded or north facing area. Use good judgment in choosing the location to measure and averaging the snow depth around your area.

We at the National Weather Service would like to take this opportunity to say THANKS! With the assistance of our COOP, precipitation, and CoCoRaHS reporters, we hope to have a successful winter season keeping the public informed and ready.

Wind Chill Chart

Wind (mph) \ Temperature (°F)	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	29	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

NATIONAL WEATHER SERVICE

824 Brown County 14 South
Aberdeen, SD
57401

Phone: 605-225-0519

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

Fall colors are funny. They're so bright and intense and beautiful. It's like nature is trying to fill you up with color, to saturate you so you can stockpile it before winter turns everything muted and dreary.

~Siobhan Vivian

www.weather.gov/aberdeen