



National Weather Service Aberdeen, South Dakota



April 2014

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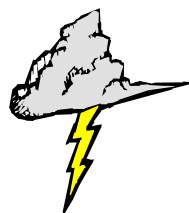
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Severe Weather Awareness Week—April 21st-25th

Severe Weather Weeks are a time to refocus one's attention from the cold and snow of winter, to the heat and severe weather experienced during the spring and summer. Now is the time to review severe weather plans and see if any changes need to be made. For example, if your family gets separated during an emergency or disaster, has a "check in" point of contact been established, preferably out of state?

NOAA's National Weather Service, in partnership with state and local emergency management agencies, will hold drills during the awareness weeks. For South Dakota, the practice tornado watch will be issued at 10 am CDT/9 am MDT for all of South Dakota on Wednesday April 23. The test tornado warning will be issued at 10:15 am CDT/9:15 am MDT with the warning cancelled at 10:30 am CDT/9:30 am MDT. In Minnesota, a practice tornado watch will be issued for the entire state on 1pm CDT on Thursday April 24. A test tornado warning will be issued at 1:45 pm and again at 6:55 pm. It is usually during these test warnings that some towns will test their tornado sirens with schools and businesses and practicing their tornado drill procedures.



America's PreparAthon!

America's PrepareAthon! is a nationwide, community-based campaign for action to increase emergency preparedness and resilience. Each spring and fall, America's PrepareAthon! will provide a national focus for individuals, organizations and communities to participate through drills, group discussions and exercises to practice for local hazards.

The first National Day of Action is scheduled for April 30, 2014 and will revolve around taking the actions to prepare for these four specific hazards:

- Tornadoes
- Wildfires
- Floods
- Hurricanes

Being prepared for disasters is a shared responsibility. It takes the whole community working together to effectively prepare for, respond to, and recover from the destructive forces of nature and other emergencies and disasters. When Americans prepare and practice for an emergency in advance of the event, it makes a real difference in their ability to take immediate and informed action, which, in turn, enables them to recover more quickly. Participation in drills, exercises, and trainings help to establish brain patterns that support quick and effective action during an emergency.

For further information about the PrepareAthon, visit the website at ready.gov/prepare.

We Are On Social Media

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New Weather Model Aids In Forecasting Severe Weather

When it comes to weather, the more you know and the sooner you know it, the safer and better prepared you can be.

Later this year, NOAA's National Weather Service will usher into daily operations a sophisticated model called the High-Resolution Rapid Refresh, or HRRR, that will update forecasts hourly over the entire lower 48 United States at extremely sharp resolution using the latest observations from a network of ground and satellite-based sensors, radars and aircraft.

The HRRR provides forecast information at a resolution four times finer than what is currently used in hourly updated NOAA models. This improvement in resolution from 13 to three kilometers is like giving forecasters an aerial photograph in which each pixel represents a neighborhood instead of a city.

“When a typical thunderstorm is about 10 to 20 kilometers across, contains both upward and downward air currents as well as other features that give clues to its potential to create dangerous weather, it's important to be able to see what's happening inside the storm,” said Stan Benjamin, a research meteorologist at NOAA's Earth System Research Lab in Boulder, Colo., who leads the team that developed the HRRR. “It's a game-changer to go from 13 to three kilometers for model resolution.”

HRRR can differentiate between rotating storms, which are more likely to produce large tornadoes, and non-rotating thunderstorms that are often less dangerous. The HRRR can also predict damaging straight-line windstorms called “dereches” and provide key timing information about when storm severity is increasing and when it's decreasing. It can provide a wealth of information to forecasters about other weather hazards such as narrow heavy snow bands found in winter storms and areas of low ceiling and visibility. This information is vital to safer and more economic planning for transportation, including decisions by pilots and air traffic managers trying to maneuver planes around hazardous conditions.

Tested and refined across the country for the past two years, including on a number of severe weather events, the HRRR has demonstrated its effectiveness. On June 29, 2012, the HRRR helped identify a major “derecho” severe wind event as it was forming in Illinois and forecast its rapid sweep through Indiana and Ohio during the day and into the Washington D.C. area that evening. It was also instrumental in providing the public with early forecasts of the May 31, 2013 tornadoes in Oklahoma and flash flooding that day.



50 Years Later—The Great Alaska Earthquake

The most powerful earthquake ever recorded in North America occurred 50 years ago, on March 27, 1964. With a magnitude of 9.2, “[The Great Alaska Earthquake](#)” caused massive tsunamis that devastated the Alaska coastal communities of Valdez, Seward, Kodiak and Whittier, and caused widespread destruction along the U.S. and Canadian west coasts. The tsunamis caused an estimated \$1 billion in damage and killed 124 people in Alaska, California and Oregon. Tsunami waves reached as far away as Hawaii. Scientists even measured a wave height of 219 feet in Valdez Inlet! The quake lasted approximately four minutes and powerful aftershocks continued for three weeks.



In the picture above one can see the chaotic condition of the commercial section of the city of Kodiak following inundation by seismic sea waves. The small-boat harbor, which was in left background, contained an estimated 160 crab and salmon fishing boats when the waves struck. Tsunamis washed many vessels into the heart of Kodiak. Photo by U.S. Navy, March 30, 1964.

Earthquakes and tsunamis can happen anywhere, any time of the year, but Alaska is particularly prone to them because it sits on the convergence of two tectonic plates – the Pacific Plate and the North American Plate. At this boundary, the Pacific Plate is sliding beneath the North American Plate, causing the majority of Alaska’s earthquakes. Alaska can experience up to 24,000 earthquakes in a single year.

Fire Weather Season Is Upon Us

The onset of warmer temperatures in April also brings an increasing fire threat. With grasses and vegetation yet to green up, the warming temperatures and periodic dry air masses often bring elevated fire danger. The National Weather Service in Aberdeen issues products to make emergency managers, the public, and other pertinent agencies aware of any threats of fire danger.

Fire Weather Watch: These are issued when there is a possibility that a combination of dry fuels and critical weather conditions will lead to extreme fire behavior in the next 12 to 72 hours.

Red Flag Warning: This is the warning product the National Weather Service issues when extreme fire behavior is imminent or already occurring. A very high confidence exists for dry fuels and critical weather conditions combining to bring extreme fire danger for a particular area.

So what are the conditions that need to be met in order for Fire Weather Watches or Red Flag Warnings to be issued? First, fuels such as grasses and vegetation have to be supportive to producing large fires. This occurs mostly during pre and post green-up season and during moderate to severe droughts when vegetation is dried out. Secondly, weather conditions also need to be supportive to large fire potential. Fire management agencies generally agree that relative humidity less than 20 to 25 percent, along with frequent winds gusts of 25 mph or greater, typically support large fire potential with erratic fire behavior.

Remember that the National Weather Service in Aberdeen will display these watches and warnings at www.weather.gov/abr, or they can be heard on NOAA



Spotter Training

Skywarn Spotter Training 2014

Here are the remaining Skywarn Talks for 2014.

April

22: 6pm CDT: Brown County – Basement of county courthouse - Aberdeen

29: 7pm CDT: Deuel County - Clear Lake fire hall

May

1: 630pm CDT: McPherson County - Eureka fire hall

5: 7pm CDT: Jones County – Location to be determined

6: 2pm MDT: Dewey County - CRST Bingo Hall - Eagle Butte

6: 630pm MDT: Dewey County - Eagle Butte VFD

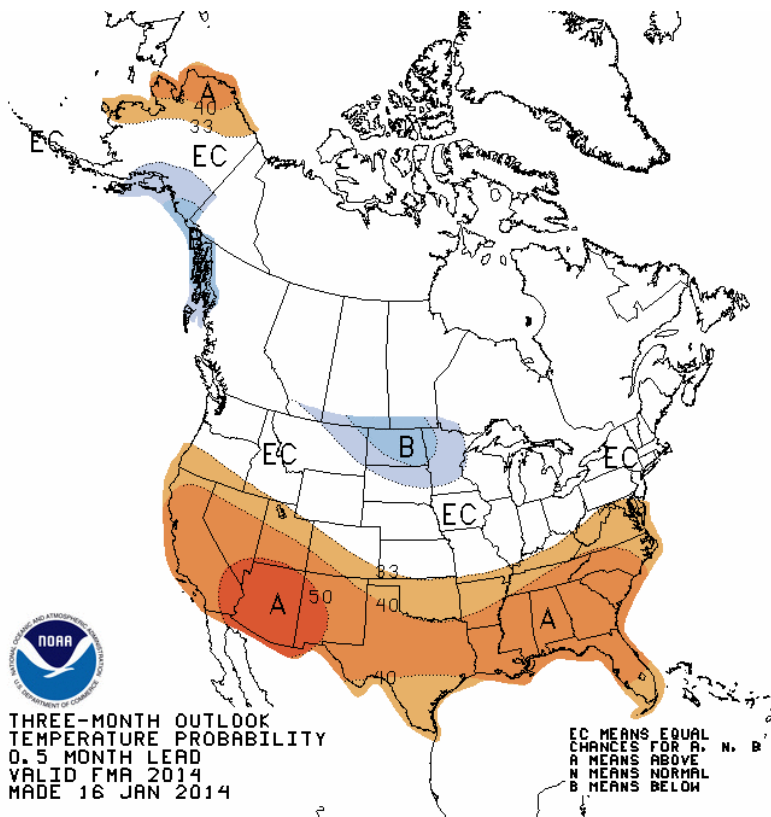
There are no requirements needed to take class, other than a general interest in severe weather and the willingness to pass your weather report onto the authorities. Classes are still being scheduled, so please check the following page for any additions to this list.

<http://www.crh.noaa.gov/abr/?n=skywarnschedule.php>

If you have any questions or for more information, you can contact [Dave Hintz, Warning Coordination Meteorologist](#).

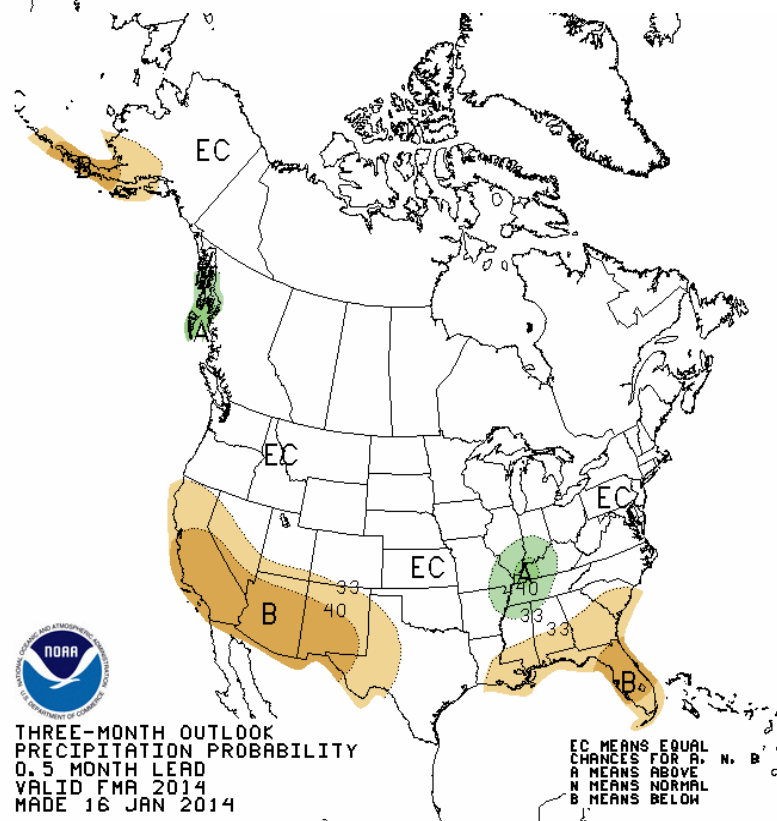


Seasonal Outlook - May through July



Temperature outlook for the months of May through July

Precipitation outlook for the months of May through July



Heat Index Chart

Temperature (°F)

	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

■ Caution
 ■ Extreme Caution
 ■ Danger
 ■ Extreme Danger

NATIONAL WEATHER SERVICE

824 Brown County 14 South
Aberdeen, SD
57401

Phone: 605-225-0519

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE, \$300

Oh, sweet cherry tree -
 how lovely your blossoms
 are. Spring brings joy to
 life.
 ~ AK White

www.weather.gov/aberndeen