



National Weather Service  
Aberdeen, South Dakota



April 2011

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**Severe Weather Awareness Week**

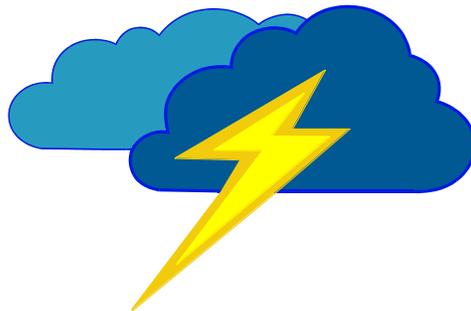
**South Dakota Severe Weather Awareness Week**

**April 25th-29th**

**Simulated Tornado Drill**

**April 27th**

**10:00 am**



## Winter 2010-2011

The 2010-2011 Winter has been long both in the amount of snowfall and cold temperatures across central and northeast South Dakota as well as west central Minnesota. Seasonal snowfall amounts for the region now rank in the top ten, with many locations in the top five snowiest of all-time. The seasonal snowfall amounts across the region now range from around 64 inches at Pierre to near 84 inches at Sisseton. In fact, the 83.8 inches of snowfall at Sisseton is now their snowiest season on record.

Not only have the seasonal snowfall amounts been extreme up to this time across the region, but the number of days when snowfall was recorded were also numerous. Looking back since November 15<sup>th</sup>, there were many days that locations across the region had a trace or more of snowfall. The number of days from November 15<sup>th</sup> through April 18<sup>th</sup> is 156. For most of the locations listed on the next page, 28% to 54% of the 156 days snow was reported. In the table, Mobridge recorded the most days throughout the season so far with snow occurring with 85 out of the 156 days or 54%. Wheaton and Aberdeen also reported many days with snowfall occurring. Wheaton had a total of 77 days out of 156 (49%) with Aberdeen experiencing 74 days out of 156 (47%). Watertown and Pierre also had a high percentage of their days since November 15<sup>th</sup> with snowfall occurring with 44% and 42%, respectively. Kennebec and Timber Lake still had many days with snowfall occurring but, had the lowest percentage of days with snowfall reported with 28% and 35%, respectively.

The individual months tell a different story for snowfall daily occurrences for many locations. December and January had some of the highest daily snowfall percentages. In December, Mobridge reported snow 20 out of 31 days or 65% of the month. Wheaton snowed 19 of the 31 days in December or 61%. In January, the percentages were the highest for all locations except for Kennebec. Aberdeen had 22 of the 31 days in January with snowfall or 71%. Mobridge had 23 of the 31 days in January with snowfall occurring or 74%. Wheaton had the highest monthly percentage of the season for days with snowfall occurring with 25 of the 31 days in January or 81% where a trace or more of snowfall was reported.



### Number of Snowfall Days by Month

Location	Days With Snow Beginning November 15 (%)	Days With Snow December (%)	Days With Snow January (%)	Days With Snow February (%)	Days With Snow March (%)	Days With Snow April 1-18 (%)	Days With Snow Season
Watertown	6 (38%)	16 (52%)	20 (65%)	9 (32%)	13 (42%)	5 (26%)	69 (44%)
Sisseton	7 (44%)	15 (48%)	17 (55%)	8 (29%)	6 (19%)	1 (5%)	54 (35%)
Wheaton, MN	8 (50%)	19 (61%)	25 (81%)	10 (36%)	11 (35%)	4 (21%)	77 (49%)
Aberdeen	8 (50%)	16 (52%)	22 (71%)	11 (39%)	13 (42%)	4 (21%)	74 (47%)
Mobridge	10 (63%)	20 (65%)	23 (74%)	13 (46%)	13 (42%)	6 (32%)	85 (54%)
Kennebec	5 (31%)	10 (32%)	9 (29%)	8 (29%)	10 (32%)	1 (5%)	43 (28%)
Pierre	5 (31%)	12 (39%)	19 (61%)	13 (46%)	10 (32%)	6 (32%)	65 (42%)
Timber Lake	5 (31%)	11 (35%)	17 (55%)	9 (32%)	8 (26%)	4 (21%)	54 (35%)

### Total Snowfall and Ranking

Location	Total Snowfall (thru 4/18)	Current Ranking	Record Snowfall
Watertown	79.4"	N/A (missing data)	N/A (missing data)
Sisseton	83.8"	Snowiest	83.8" (2010-2011)
Wheaton, MN	78.5"	3rd Snowiest	82.8" (1996-97)
Aberdeen	79.0"	3rd Snowiest	109.8" (1936-37)
Mobridge	72.8"	2nd Snowiest	75.9" (1996-97)
Kennebec	66.0"	3rd Snowiest	73.2" (2000-01)
Pierre	64.5"	3rd Snowiest	82.0" (1951-52)
Timber Lake	57.5"	13th Snowiest	92.9" (1949-50)

## Spotter Talks

### April, 2011 - Upcoming

Day	City, State	Time	Location
25	<b>Mound City, SD</b> (Campbell County) <i>Contact Information:</i> Lawrence Goehring 955-3598	<b>7:00pm CDT</b>	Mound City Community Center
26	<b>Ipswich, SD</b> (Edmunds County) <i>Contact Information:</i> Leland Treichel 605-287-4394	<b>9:00am CDT</b>	Courthouse
27	<b>Kennebec, SD</b> (Lyman County) <i>Contact Information:</i> Steve Manger 869-2266	<b>6:30pm CDT</b>	Kennebec Fire Hall
28	<b>Eagle Butte, SD</b> (Dewey County) <i>Contact Information:</i> Randolph Runs After 964-6190	<b>2:00pm MDT</b>	Tribal Wellness Clinic
28	<b>Eagle Butte, SD</b> (Dewey County) <i>Contact Information:</i> John Bachman 200-0264	<b>7:00pm MDT</b>	Eagle Butte VFD

### May, 2011 - Upcoming

Day	City, State	Time	Location
02	<b>Mobridge, SD</b> (Walworth County) <i>Contact Information:</i> Don Opie 845-2800	<b>7:00pm CDT</b>	Mobridge Firehall
16	<b>Roslyn, SD</b> (Day County) <i>Contact Information:</i> Danny Jensen 268-1572	<b>7:00pm CDT</b>	Roslyn Fire Hall



## National Weather Service Facebook Page Coming Soon!

The National Weather Service office in Aberdeen will be launching a new Facebook page in the very near future. Members of Emergency Management, media outlets, spotter networks, and the public will now be able to communicate important weather information and reports through Facebook.

## Citizen Weather Observer Program (CWOP)

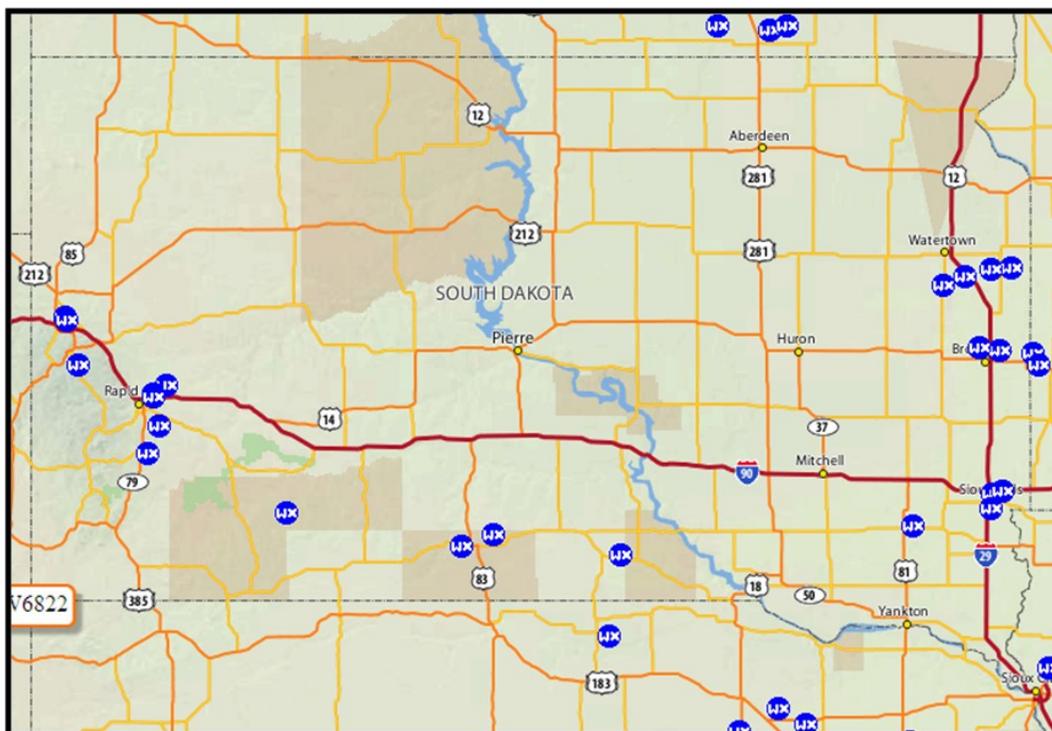
Do you have a personal weather station and an internet connection?

Would you like to see data from others who own personal weather stations in your area?

Would you like to share your data to aid in forecasting, education, and research?

If the answer is YES, then sign up for CWOP today!

CWOP is a public-private partnership with two main goals; the first is to collect weather data contributed by citizen and the second is to make these data available for weather services and homeland security. Below is a map of the current CWOP sites across South Dakota and eastern Minnesota. We need your help to fill in the gaps!



To learn more about the program and to sign up, go the following website <http://www.wxqa.com/>. Feel free to call Andy or Kelly at the National Weather Service in Aberdeen with any questions 605-225-0519.

Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has. – Margaret Mead

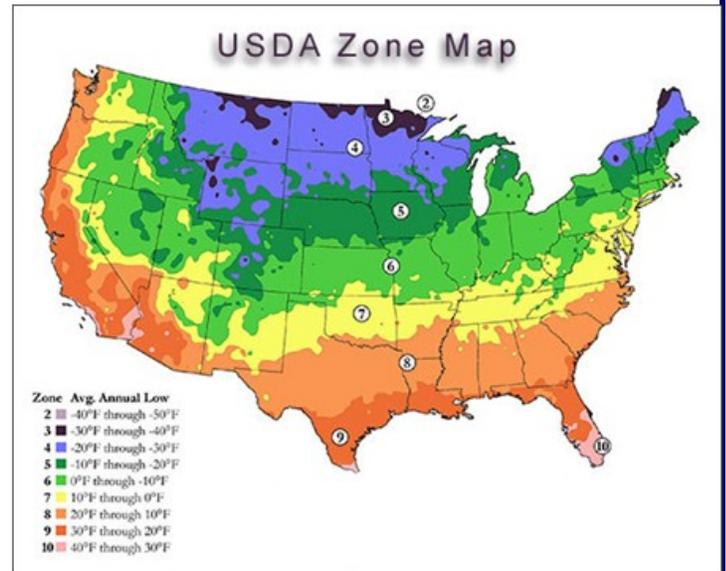
## Planning and Planting Around South Dakota Spring Weather

South Dakota is a land of extremes, from spring flooding to drought, snowy winters and blistering heat waves. This time of year, it's difficult to resist the temptation that comes when the first warmth of spring finally melts away the snows of winter. Be wary of those first tempting days because in this region, winter is quick to remind us that it's never far off.

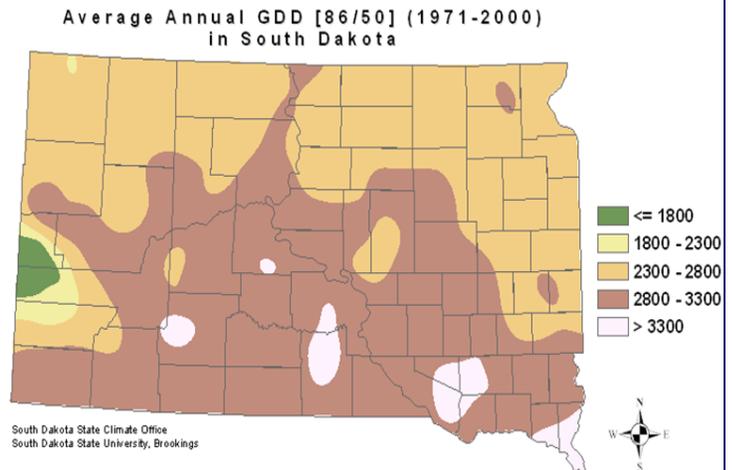
There are multiple ways to describe the climate for growers in South Dakota. We can plan what and when to plant based on:

- Hardiness Zone
- Growing Degree Days
- Average Length of Freeze Free Season & Average Last Spring Frost Date

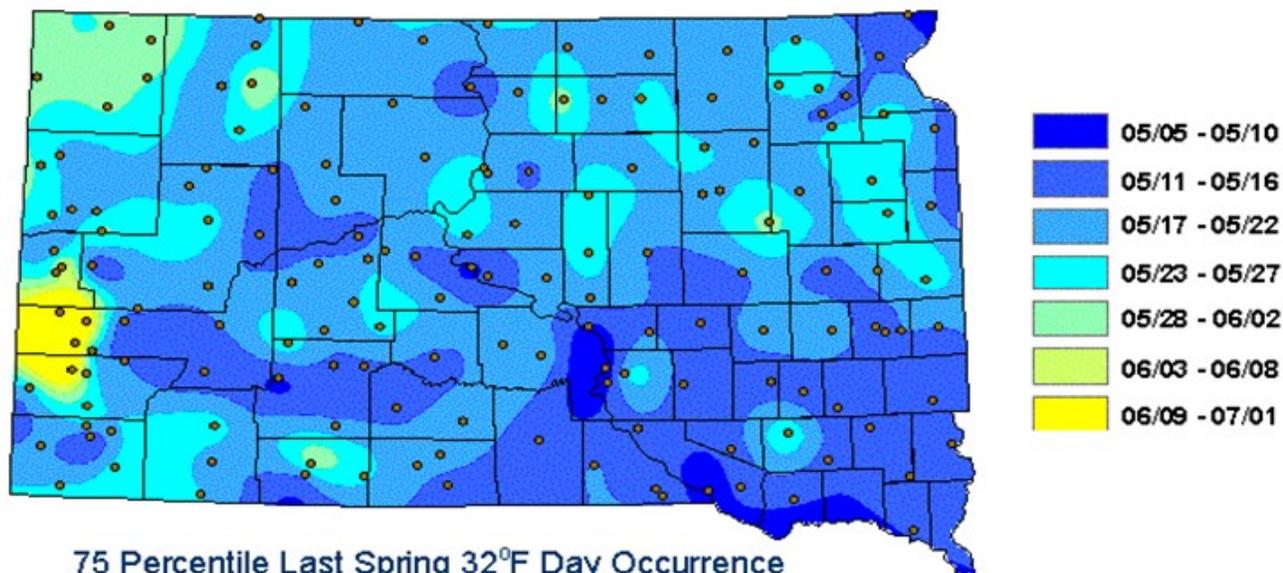
**Hardiness Zone.** Most of us will instantly recognize that map on the back of seed packets. The Hardiness Zone is a geographically defined area defined by climatic conditions, and is primarily designed around a plant's ability to withstand the minimum temperatures of the zone. This was developed by the USDA and for the most part, South Dakota is located in Zone 4. Zone 4 is defined by minimum temperatures in winter occasionally falling into the -20 to -30 degree Fahrenheit range. Perennials you purchased should be rated for this zone, and most seed companies will list the zones that the plants you purchased will survive in.



**Growing Degree Days (GDD)** is a means of defining heat accumulation, which can be used to rate the speed of plant development when compared to temperatures. The calculation takes the average high and low temperatures and compares that value to a baseline temperature of 50 degrees Fahrenheit. This provides a baseline to compare rates of growth for the season, a higher number of Growing Degree Days is required for slow maturing plants, while a low number means you should stick to plant that mature quickly.



75% probability that the last spring 32° F temperature will occur on or before this day (period of record)



75 Percentile Last Spring 32°F Day Occurrence

### Average Last Spring Frost Date

is based on Climatology, looking at the overall history of temperatures and calculating the average of when the spring frost occurred. Do the same for the first fall frost and you have the **Average Length of Freeze Free Season**. The Average last spring frost date is available from the South Dakota State Climatologists office website:

[http://climate.sdstate.edu/w\\_info/frost/frost.shtm](http://climate.sdstate.edu/w_info/frost/frost.shtm)

The issue with using Average Last Spring Frost Date is that half of all frosts occur before and half occur after that time. Additionally, some plants are more sensitive to temperatures. The best way to account for this is to identify the 75% or 90% percentiles. These give a later date, but are also safer as 75% to 90% percent of the time the last frost has already occurred

You can also adjust the temperature to 36 degrees for sensitive plants or 28 degrees for our cool season plants to determine the best time to sow your selection. These can be determined through the website. Sometimes the weather gets the better of us, and the warmer temperatures of late April and early May can turn south with little advanced warning. Stay attune to the weather conditions as your seedlings emerge. Most frosts can be expected when cloudy cool conditions give way during the late afternoon and evening hours to clear skies and light winds. The local forecast can be found from any number of sources, your local TV meteorologist or National Weather Service.

# 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**

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Aberdeen, SD  
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**OFFICIAL BUSINESS**

PENALTY FOR PRIVATE USE, \$300

Science has never  
drummed up quite as  
effective a tranquilizing  
agent as a sunny spring  
day.  
~ W. Earl Hall

[www.weather.gov/aberndeen](http://www.weather.gov/aberndeen)