



NATIONAL WEATHER SERVICE - BISMARCK, NORTH DAKOTA

DAKOTA SKIES

NWS Bismarck

Spring 2011

Welcome Message

by Tony Merriman

It is with great pleasure that we introduce the new look to the Dakota Skies newsletter! This publication will continue to be issued twice each year, one in the spring and one in the fall. The content is produced by a team of meteorologists at the National Weather Service in Bismarck.

This newsletter's purpose is to heighten safety awareness for the coming severe weather season, whether it be summer or winter. Furthermore, other educational and useful information will be provided.

If you have any comments or questions about this publication, please feel free to contact us at 701-223-4582. Enjoy!



Map of the Bismarck County Warning Area (CWA) of responsibility. We issue graphical and text weather products such as warnings and forecasts for 36 counties in western and central North Dakota. The office is staffed 24 hours a day, seven days a week.

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Test Tornado Drill - Wednesday, May 4

by Patrick Ayd

The statewide North Dakota test tornado drill will be held on Wednesday, May 4th, at 11:15am CDT. A test tornado warning will be sent by your National Weather Service Forecast offices in Bismarck and Grand Forks.

This test warning will alarm on NOAA Weather Radio. The drill is a test of emergency communication systems in the event of a tornado. Local officials will determine the level of participation for your community, including whether or not the siren will sound. Schools and private industry will also decide their level of participation for their facilities.

Your National Weather Service encourages you to use this drill to review your plans in the event of an actual tornado, whether at home, work or school.



Tornado over the plains. (Source: NOAA)



NOAA Weather Radio All Hazards acts as an alarm clock for severe weather. It alerts you immediately after a warning has been issued for your area.

“Floods and flash floods are the number one cause of weather-related deaths.”

Severe Weather Risk Definitions

Outlook - Issued at least once per day to highlight hazardous weather events that may occur in the next several days.

Watch - Issued when atmospheric conditions are right for severe weather development. Watches are typically valid for a long time (6 hours) and a large area (parts of North Dakota).

Warning - Issued when severe weather has been reported or is imminent. Warnings are typically valid for a short time (1 hour or less) and a small area (a county or smaller).

Severe Summer Weather Awareness Week: May 2-6

by Jimmy Taeger

The purpose of severe summer weather awareness week is to raise awareness about severe weather that could affect North Dakota during the summer months. It is important to understand the different impacts associated with various types of severe weather in order to make informed decisions to better protect your life and property.

The following is a breakdown of the specific type of severe weather highlighted each day during severe summer weather awareness week. Please take a moment to read the severe weather threats, definitions, and safety rules.

Monday, May 2: Severe Thunderstorms

A severe thunderstorm produces 58 MPH or greater wind and/or hail of one inch in diameter (size of a quarter) or greater. Threats associated with severe thunderstorms can be wind damage, lightning, hail, tornados, and flooding. The safest place to be when a thunderstorm is approaching is in a sturdy building, away from windows.



Severe Hail (Source: NOAA)

Tuesday, May 3: Tornadoes

A tornado is a violently rotating column of air extending from a thunderstorm and in contact with the ground. The way you can distinguish a tornado from a funnel cloud or a low cloud is by looking for a dust whirl on the ground.

Tornadoes are divided into six categories based on the damage they do. Damage done by a weak EF0 tornado corresponds to wind speeds of 65-85 MPH. Damage done by the most violent EF5 tornado corresponds to wind speeds over 200 MPH.

If a tornado is heading your way, go in a basement. If no basement is available, go to an interior room on the lowest floor of the building. Stay away from windows.

Wednesday, May 4: Test Tornado Warning

Notification of an approaching tornado can be received by a NOAA weather radio. NOAA weather radios relay weather information all day, every day from your local National Weather Service (NWS) Forecast Office. Tornado warnings are just one of the many weather hazards received by NOAA weather radios. A test tornado warning will be issued by the NWS around 11:15 am CDT on Wednesday, May 4th, 2011, to test communication systems.

Thursday, May 5: Lightning

Lightning is the number two thunderstorm-related killer in the U.S. If you can hear thunder, you are close enough to the storm to be struck by lightning. If lightning threatens your area, get indoors and away from windows as soon as possible. Remember, “When Thunder Roars, Go Indoors!”



Cloud-to-ground and cloud-to-cloud lightning (Source: NOAA)

Friday, May 6: Flooding

Floods and flash floods are the number one cause of weather-related deaths. It only takes six inches of fast-moving water to knock you off your feet, and only two feet of water can cause a vehicle to float. Avoid walking or driving through flooded areas. Remember, “Turn Around, Don’t Drown.”



SKYWarn Schedule

by JP Martin

SKYWarn is a program where the National Weather Service comes to your community and presents severe weather information. It is fun, educational, and best of all, it is **FREE!**

Sessions are typically an hour and a half long with lots of cool video and information.

The topics covered include, but are not limited to:

- Thunderstorm formation, structure, and strength
- Thunderstorm hazards like wind, hail, flash floods, tornadoes, and lightning
- Reporting severe weather to the NWS
- Severe weather safety

The following is an example of a tentative schedule of SKYWarn training sessions. An up-to-date training calendar can be found under the Top News of the Day headline at

www.weather.gov/bis



A SKYWarn storm spotter is an official volunteer for the National Weather Service who relays vital ground truth information to warning forecasters.

April, 2011 - Upcoming			
Day	City, State	Time	Location
26	Bismarck CDARC, ND (Burleigh County)	7:00pm CDT	* The general public session in Bismarck is May 10-see May 10 entry below. * The training on April 26 is advanced training for the Central Dakota Amateur Radio Club (HAMs), and those who are already spotters and interested in HAM radio. Training will be at the Sertoma Park Community Center, Riverside Park Rd, between Bowen and Sweet, Bismarck.
<i>Contact Information:</i> john.paul.martin@noaa.gov			

May, 2011 - Upcoming			
Day	City, State	Time	Location
02	Dickinson, ND (Stark County)	7:00pm MDT	Armory in Dickinson - 46 W Museum Dr - In collaboration with Theodore Roosevelt Amateur Radio Club
<i>Contact Information:</i> john.paul.martin@noaa.gov			
04	Powers Lake, ND (Burke County)	7:00pm CDT	Powers Lake Fire Hall 115 Railroad Ave
<i>Contact Information:</i> john.paul.martin@noaa.gov			
10	Bismarck, ND (Burleigh County)	1:00pm CDT	Bismarck Public Library - 515 N 5th St - lower level auditorium
<i>Contact Information:</i> john.paul.martin@noaa.gov			
11	Hettinger, ND (Adams County)	7:00pm MDT	Hettinger Research Extension Center - near the intersection of Airport Rd and 3rd Ave N
<i>Contact Information:</i> john.paul.martin@noaa.gov			
12	Ft. Yates, ND (Sioux County)	12:30pm CDT	BIA - Standing Rock Agency Building 194 - Proposal Ave in Ft. Yates.
<i>Contact Information:</i> john.paul.martin@noaa.gov			

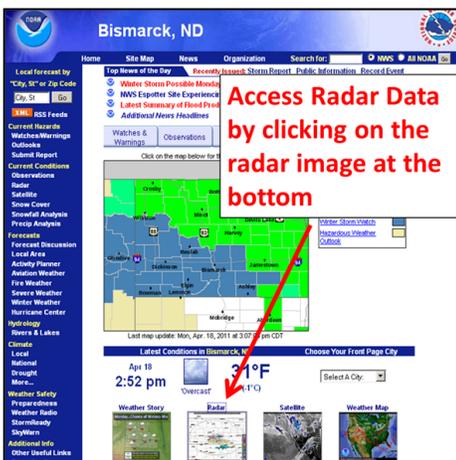
“SKYWarn is fun, educational, and FREE!”

Radar Tutorial

by Rich Kinney

The Bismarck NWS website has a wealth of Doppler Radar information available to keep you informed during the upcoming severe weather season. Access radar information from our home page (www.weather.gov/bis) by clicking on the radar image at the bottom of the website (see image at right).

(Continued on next page)



Access Radar Data by clicking on the radar image at the bottom





Doppler Radar
(Source: NOAA)

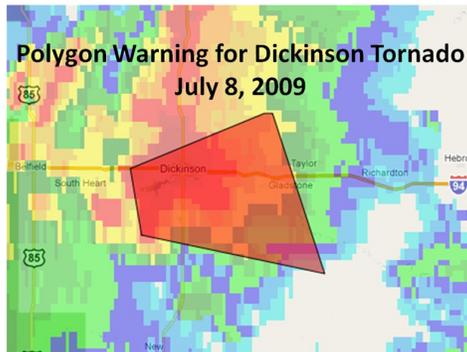
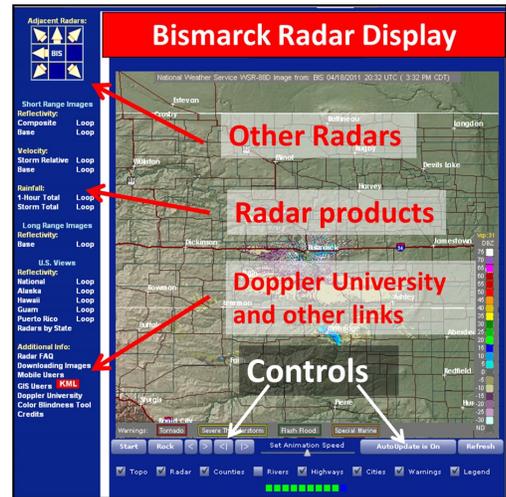
There are over 150 Doppler Radars across the United States and its territories.

Radar Tutorial (continued from Page 3)

by Rich Kinney

From our radar page (see image at the right), you can view several different types of information.

Reflectivity is energy reflected back to the radar after it strikes rain, hail, snow, clouds, birds, etc. Higher values of reflectivity can represent heavy rain, large hail, or heavy snow. **Velocity** data (Storm Relative and Base) provides information on wind flow in the atmosphere. **Rainfall** data (1-Hour Total and Storm Total) indicates a radar estimate of rainfall during the specified time period. These values can be over or underestimated due to hail or other factors. For a more detailed explanation, you can attend "Doppler University" via the link on our radar page.



During severe weather, warning areas are now defined by polygons, rather than counties (see image at the left). Once a warning is issued, a polygon will be displayed over the radar data (Red for Tornado Warning, Yellow for Severe Thunderstorm Warning, Green for Flash Flood Warning).

Summer 2011 Climate Outlook

by Tony Merriman

Bismarck Normals

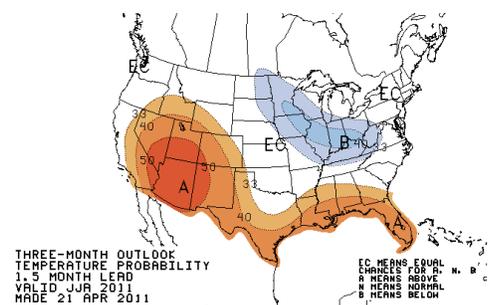
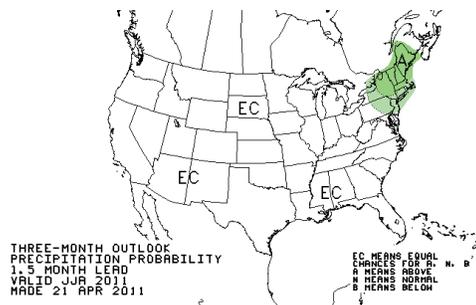
	Avg. Temps	Total Precip
June	64.7°F	2.59"
July	70.4°F	2.58"
August	69.0°F	2.15"

Williston Normals

	Avg. Temps	Total Precip
June	63.7°F	2.36"
July	69.3°F	2.28"
August	68.3°F	1.48"

As summer approaches, La Nina is expected to weaken to a near neutral ENSO status. Due to the weak climate signal and high uncertainty of the average storm tracks across North America, NOAA's Climate Prediction Center (CPC) forecasts equal chances (EC) for above, near, or below normal precipitation across western and central North Dakota (see image below).

The highly uncertain storm tracks will also impact the summer temperature forecasts. The only strong climate signal appears to occur in the four corners region of the U.S., where above normal temperatures are expected. For western and central North Dakota, the CPC forecasts equal chances (EC) for above, near, and below normal temperatures this summer (see image below).



Call for CoCoRaHS observers!

by Tony Merriman

The western and central North Dakota CoCoRaHS rainfall network has over 65 observers! The National Weather Service in Bismarck would like to thank everybody who has joined and report their rainfall and snowfall amounts. We really appreciate the time and effort you put into measuring and reporting your rainfall and snowfall amounts. The data you supply is very valuable not only to meteorologists, but also to researchers.

We would like to continue expanding the network. If you have any friends or relatives who would like to participate, please tell them about the program and have them sign up. Once your friends or

relatives fill out the application at the following website:

<http://www.cocorahs.org/Application.aspx>

they will receive a *free* rain gauge from the National Weather Service.

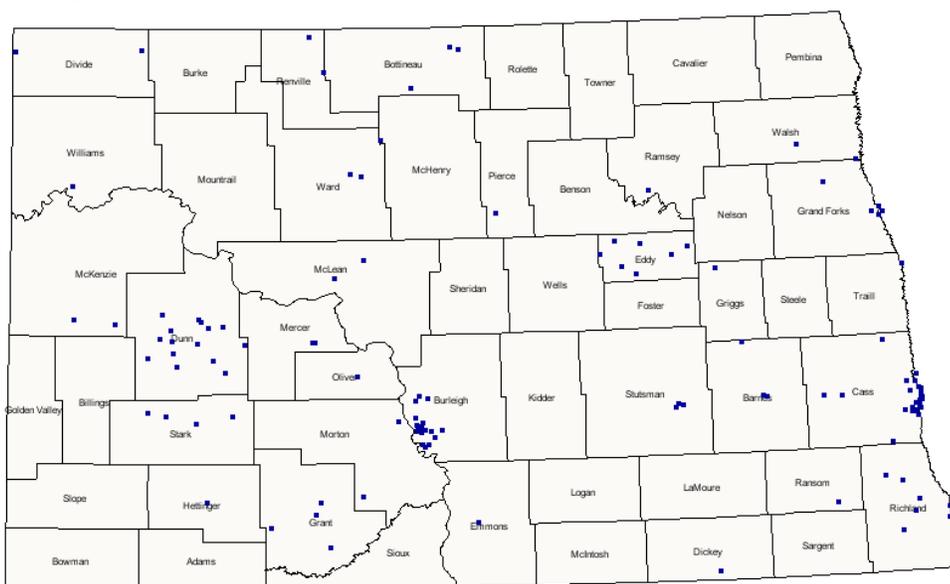
If you have any questions about the program, please email me at Tony.Merriman@noaa.gov

Thanks again for all your hard work and dedication! We at the National Weather Service really appreciate it!



Standard 4-inch rain gauge used in the CoCoRaHS network

Map of Current North Dakota CoCoRaHS observers



“Because every drop counts.”

Staff Spotlight

by Jimmy Taeger



Becky Selzler is the administrative support assistant (ASA) at the Bismarck NWS Forecast Office. She was born in Staples, MN, and raised on a farm west of Strasburg, ND. Becky graduated from Bismarck State College in 1987 with an Associate’s Secretarial degree. She began her federal career in 1988 with the Farm Service Agency in Valley City, ND. In September of 1994, Becky was selected for the ASA position at the Bismarck NWS Forecast Office, and has been here ever since. A new build-

ing for the Bismarck NWS Forecast Office was constructed in 1994, and Becky always jokes she came with the new building as the new office was occupied only two weeks prior to her arrival on staff. Her primary role in the office is as an office manager. She is responsible for numerous functions within the office, and has received the Regional Excellence award for her work with mentoring several new ASAs in the region. Becky enjoys camping, hunting, and playing bean bags.



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Building a weather ready nation

National Weather Service Mission Statement:

The National Weather Service (NWS) provides weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community.

Brief National Weather Service History:

The National Weather Service has its beginnings in the early history of the United States. Weather has always been important to the citizenry of this country, and this was especially true during the 17th and 18th centuries. The beginning of the National Weather Service we know today started on February 9th, 1870, when President Ulysses S. Grant signed a joint resolution of Congress authorizing the Secretary of War to establish a national weather service.

ON THE WEB!

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

Staff Spotlight

by Jimmy Taeger



Sam Walker is a Journeyman Forecaster at the Bismarck NWS Forecast Office. He was born in California and raised in Seattle, WA. Due to his father's

career with Boeing, he moved around many times and attended 11 high schools.

Sam graduated from The University of Washington (UW) in 1969 with a Bachelor's degree in Mathematics, and a minor in Physics. He taught math for four years, then returned to UW and graduated in 1975 with a second Bachelor's degree in Atmospheric Sciences. Post-graduation, Sam worked in a research lab for five years at UW with a primary focus on aerosol studies.

He began his career with the NWS in Bismarck in 1980 as a Journeyman Forecaster, and has been working here for over 30 years. Sam has visited all 50 states, and 6 Canadian Provinces. He has been biking to work for the past 6 years, and is set to retire this coming June.

