

The High Plains Drifter

NATIONAL WEATHER SERVICE
NORTH PLATTE, NE



KEEP AHEAD OF THE STORM by listening to **NOAA Weather Radio, commercial radio, television or the internet** for the latest winter storm warnings, watches and advisories.

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Winter Storms The Deceptive Killers

By Deb Blondin, WCM

Why should we talk about winter weather? Each year, dozens of Americans die due to exposure to cold. Add to that number, vehicle accidents and fatalities, fires due to dangerous use of heaters, carbon monoxide poisoning, and other winter weather fatalities and you have a significant threat.



What should you listen for? The National Weather Service issues outlooks, watches, warnings, and advisories for all winter weather hazards. Here's what they mean and what to do:

Outlook: Winter storm conditions are possible in the next 2-5 days. Stay tuned to local media for updates.

Watch: Winter storm conditions are possible within the next 36-48 hours. **Prepare now!**

Warning: Life-threatening severe winter conditions have begun or will begin within 24 hours. **Act now!**

Advisory: Winter weather conditions are expected to cause significant inconveniences and may be hazardous. If you are cautious, these situations should not be life-threatening.

Be prepared before the storm strikes!

At home or work have available:

- flashlights and extra batteries
- extra food and water
- extra medicine and baby items
- first-aid supplies
- heating fuel
- emergency heat source
- fire extinguisher and smoke alarm
- NOAA Weather radio



In vehicles:

Carry a winter storm survival kit:

- Mobile phone and charger
 - Blankets
 - Flashlight and extra batteries
 - First-aid kit
 - Knife
 - High-calorie, non-perishable food
 - Extra clothing to stay dry
 - Small can and waterproof matches to melt snow
 - Sand or cat litter for traction
 - Shovel
 - Tow rope
 - Battery booster cables
 - Water container
- Keep your gas tank near full
 - Avoid traveling alone
 - Let someone know your timetable and travel route



On the farm:

- Move animals to sheltered areas
- Haul extra feed to nearby feeding areas
- Have water available for the animals
- Make sure pets have food, water, and shelter

Dress for the season!

Wear loose, lightweight, warm clothes in layers. Trapped air insulates. Outer garments should be tightly woven, water-repellent, and hooded. Wear a hat. Half your body heat loss can be from the head. Cover your mouth to protect your lungs from extreme cold.

Mittens, snug at the wrist, are better than gloves. **Try to stay dry.**



WHAT IS A CLIMATOLOGICAL NORMAL?

By Christina Hannon and Jim Connolly, MIT

Climate is an important factor in agriculture, commerce, industry, and transportation. It affects many human activities such as farming, fuel consumption, structural design, building site location, trade, and the utilization of other natural resources. The influence of climate on our lives is endless.

The National Oceanic and Atmospheric Administration's (NOAA's) National Climatic Data Center (NCDC) has a responsibility to fulfill the mandate of Congress "... to establish and record the climatic conditions of the United States." This responsibility stems from a provision of the Organic Act of October 1, 1890, which established the Weather Bureau as a civilian agency .

The average value of a meteorological element over 30 years is defined as a climatological normal. The normal climate helps in describing the climate and is used as a base to which current conditions can be compared.

When you hear "...the normal temperature for tomorrow is..." do you ever wonder where the term "normal" came from? The term "normal" first appeared by Dove in 1840 in the meteorological literature. The context that has stood the test of time has been the average or mean of a long series of observations. The next question is, how long is long enough?

In 1872 the International Meteorological Committee (now the World Meteorological Organization or WMO) started to resolve the issue of the definition of a normal. They agreed that climate is nearly constant during intervals that are long compared to human experience. Eventually, a compromise was made that 30 years would be the interval for computing a normal value. In 1935, it was also agreed that 1901-1930 would be that interval. There was just one problem; many of the places in the world did not have observations that began in 1901. To solve this glitch, a sliding time scale was used. The WMO defines a normal as "period averages computed for a uniform and relatively long period comprising at least three consecutive 10-year periods" (WMO, 1984).

Every ten years, NCDC computes new thirty-year climate normals for selected temperature and precipitation elements for a large number of U.S. climate and weather stations. These normals are summarized in daily, monthly, divisional, and supplementary normals products. In the United States, normals have been computed for 1971-2000, 1961-1990, 1951-1980, 1941-1970, 1931-1960, and 1921-1950.

Source of data is from the National Climatic Data Center in Asheville, North Carolina.

CLIMATE QUESTIONS ANSWERED

There are some questions taken from the National Climatic Data Centers website about Climate in the United States. For more information go to <http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.htm>

- ***Is it appropriate to use normals for predictive purposes?***

Normals are best used as a base against which climate during the following decade can be measured. Comparison of normals from one 30-year period to normals from another 30-year period may lead to erroneous conclusions about climatic change. This is due to changes over the decades in station location, in the instrumentation used, in how weather observations were made, and in how the various normals were computed. The differences between normals due to these non-climatic changes may be larger than the differences due to a true change in climate.

- ***Is a "Normal" the Climate You Would "Expect"?***

Climate normals are a useful way to describe the average weather of a location. Over the decades the term "normal", to the lay person, has come to be most closely associated with the mean or average. In this context, a "climatic normal" is simply the arithmetic average of the values over a 30-year period (generally, three consecutive decades). A person unfamiliar with climate and climate normals may perceive the normal to be the climate that one should expect to happen.

It's important to note that the normal may, or may not, be what one would "expect" to happen. This is especially true with precipitation in dry climates, such as the desert southwestern region of the United States, and with temperature at continental locations which frequently experience large swings from cold air masses to warm air masses.

- ***If the measuring equipment changes at a site, does that change the normals?***

For normals, if the new equipment does not record weather elements in exactly the same way as the old, and causes a change in how weather is recorded relative to the previous instrumentation, then it does change the normals. If the equipment MOVES, this will also often cause apparent changes in climate. Location moves (anywhere from a few hundred feet to a few miles) can, in fact, cause greater changes than instrumental changes.

Since climate fluctuates constantly, there are real changes in "normals" due to climate variations, and there are fake changes in "normals" due to artificial things like sensor changes, equipment moves, methodological issues, and so on. The ONLY way to distinguish between fake and real variations is to have records from another piece of equipment at one site or the other that just keeps measuring the same way.

THE FIRST FROST

By Teresa Keck, JMET



As the calendar rolls forward, September may bring the first frost. If the cool readings during the months of July and August are any indicators, the winter of 2004-2005 may be a cold one. As autumn approaches September and October are earmarked as the time frame that the first frost occurs, and the approach to the end of the growing season. The first frost in general is the date when the temperature falls at or below 32 degrees Fahrenheit.

In 2003, the first frost occurred by mid September when arctic air surged south into the plains. The arctic surge either tied or broke previous record low temperatures in Western Nebraska, when the mercury dropped to 26 at Valentine on the 16th, tying a previous record low set in 1918. Three days later a record low of 26 occurred at North Platte.

However, in September there are record low temperatures that have stood for a decade or more. These include seven days in September at North Platte and two in Valentine. At North Platte the longest standing record low temperature dates back to September 16, 1878 when the temperature fell to 32.

In the last seven years, the first frost has occurred in September five out of seven times north of a line from Sidney to North Platte with an average date around the 22nd. Yet climate records show the first frost can occur as early as September 3rd over Western Nebraska. By the time you read this the first frost may have occurred, but if you prefer probabilities, most areas will have to wait until early October to feel a cool crisp air temperature of 32.

LOOKING FOR WEATHER PHOTOS

We are looking for weather photos taken during all times of the year for a 2005 COOP calendar. If you have any photos you would like to see included, please send them to our office.

We will return the photos promptly.

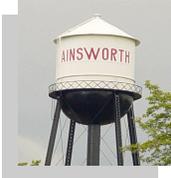


Preparing Fisher Porter Rain Gages for Winter

It is that time again to change the oil/anti-freeze in the Fisher Porter Rain Gages. For those who have these rain gages, we will begin this process the first of October.

AINSWORTH

By Christina Hannon, MIT

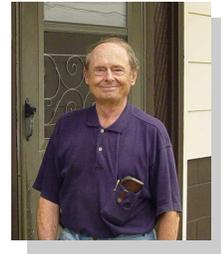


My first solo COOP trip to do any repairs was to Ainsworth. The day started as a cool, rainy day but once I arrived in Ainsworth the drizzle and light rain ended and I was able to replace the ends of the cable on the MMTS while staying dry. When I knocked at the door, I was greeted by Mr. Gerry Osborn who welcomed me and showed me around to where the instrumentation was. While walking to the MMTS he mentioned that he'd been "running around chasing a blonde" all morning. Taken back, I soon realized that he was talking about his dog Sandy, who was very friendly. The repairs went without a hitch. While working inside we had a pleasant talk. Gerry's "claim-to-fame" is that he has been to every state capitol in the United States. Not too many people can claim that.

When this retired Post-master and former Ainsworth mayor is out of town, friends come by to record the temperature and precipitation data for him. Gerry has always been into weather. His interest started when he was just a kid when his father used to take the records. He keeps all his old record books up on a shelf above the MMTS display. He checks what his instrument is reading and compares it to the

instruments at the Ainsworth Airport to see how well they agree. Not all sites can do this, but comparisons do allow observers to make sure there are not any problems with the sensors.

Recently, Gerry has received recognition from Doane College. The Alumni Council of the college presented him with the Paul Kersenbrock Humanitarian Award. "This Humanitarian Award is bestowed annually upon a Doane alumnus, who in the judgment of the Alumni Council distinguishes himself by extraordinary, unselfish dedication and service to others in his work and lifestyle" reports a local paper. We are grateful and appreciate the work Gerry and all the Cooperative Observers do. It is always a pleasure to meet the people the National Weather Service serves.



All Time Records	
High	113 on July 19 and 20, 1934
Low	-34 on January 17, 1918
Precipitation	4.95 inches on July 1, 1962
Snow	14.0 inches on October 24, 1906

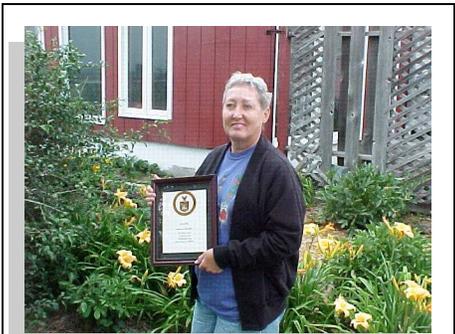
Monthly and Yearly Normals												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High	33.7	39.4	48.8	60.6	71.4	81.4	87.1	85.4	76.8	64.3	45.7	36.5
Low	12.8	18.1	25.9	35.9	47.3	56.7	62.2	60.7	50.8	39.2	25.5	16.0
Precip	0.42	0.58	1.42	2.28	3.39	3.29	3.57	2.61	2.50	1.52	1.01	0.40
		High		Low		Mean		Precip		Snow		
30 Year Normal		60.9		37.6		49.3		22.99		38.5		

COOPERATIVE WEATHER OBSERVER AWARDS

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☆☆
☆☆ These COOP Observers ☆☆☆
☆☆ have been presented their ☆☆☆
☆☆ length of service awards ☆☆☆
☆☆ during this quarter. ☆☆☆
☆☆ Thank you for all you do! ☆☆☆
☆☆ ☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆



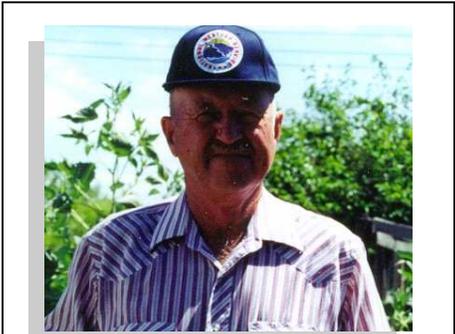
*Joan and Thomas Erxleben
4S of Bartlett, 10 years*



*Deanna Brummet
5W of Stapleton, 15 years*



*James Rempe
Oconto, 20 years*



*Ansel Ellis
Merriman, 25 years*



*Gilbert Koch
2NW of Eustis, 35 years*



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***Check out our website at
www.crh.noaa.gov/lbf***