



Under the Big Sky e-Letter September 17, 2009

Airshows: The photo above is from my early days in the National Weather Service. The USAF Thunderbirds flew at an air show in Cheyenne, WY, and our office had a front door seat to the show. I was lucky enough to capture them flying with the weather radar in the image. Speaking of air shows, the Richland County Airport in Sidney is hosting a big one on Sept 26 and 27, and the Canadian Snowbirds will be performing! We'll have two NWS meteorologists at the event on Saturday, so stop by and talk a little aviation weather with them!

How Long Have People Been Tracking Precipitation? (From our CoCoRaHS Program HQ)

In his book *Meteorologica*, Aristotle (340BC) mentioned topics such as clouds, mist, rain, snow, etc, but not the measurement of precipitation. Measuring rain and keeping records of it was apparently still far off in the future.

The earliest quantitative device for measuring rainfall seems to be credited to a king in Korea called King Sejong who lived from 1397 to 1450. One of his goals as king was to make his people literate, so not only did he invent a rain gauge, but more importantly, he invented a language and movable type for that language.

He decided that instead of digging into the soil to check for moisture, it would be better to have a standardized container about 30cm in depth and 14cm in diameter that stood on a pillar to measure the rainfall. These containers were to help villagers determine their potential harvest and to give King Sejong a better idea of how much the farmers should be taxed! So, these standard containers were distributed to each village. The rain gauge was invented in the fourth month of 1441, according to records.

The tipping bucket rain gauge was invented by Christopher Wren in Europe around 1661 and used the standard of weight, or sometimes volume, of the liquid precipitation. This tipping bucket idea is still used in many of the automated electronic gauges today.

In 1887, Mr. Cleveland Abbe wrote a manual on "Meteorological Apparatus and Methods" for the U.S. Army Signal Corps (agency responsible for U.S. weather observations at the time). In this booklet, Mr. Abbe described the standards for the weather gauges to be used by the U.S. Army Signal Corps. This standard 8 inch diameter gauge is still in use by many National Weather Service offices and cooperative weather observers across the United States and abroad.

Mark your calendars: Fall arrives on Tuesday, September 22 at 3:18 pm MDT. With a cold front coming this weekend though, it may feel like it's here a bit sooner than that!

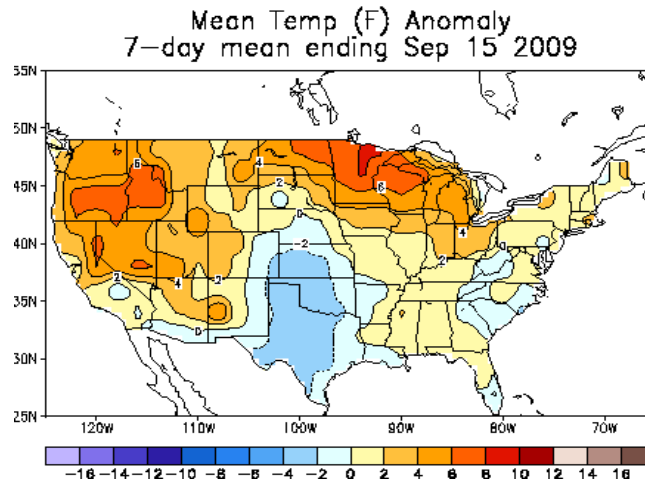
Morning glory clouds: The photo below has been making the rounds recently after being featured on a scientific website. **Explanation:** What causes these long, strange clouds? No one is sure. A rare type of cloud known as a Morning Glory cloud can stretch 1,000 kilometers long and occur at altitudes up to two kilometers high. Although similar roll clouds have been seen at specific places across the world, the ones over Queensland Australia occur predictably every spring. Long, horizontal, circulating tubes of air might form when flowing, moist, cooling air encounters an inversion layer, an atmospheric layer where air temperature atypically increases with height. These tubes and surrounding air could cause dangerous turbulence for airplanes when clear. Morning Glory clouds can reportedly achieve an airspeed of 60 kilometers per hour over a surface with little discernible wind. Pictured above, photographer Mick Petroff photographed some Morning Glory clouds from his airplane near the Gulf of Carpentaria, Australia. For more details, and more photos, go to:

<http://www.dropbears.com/brough/index.html>



Temperature Records about this month! There has been quite a change with September's weather this year, as we've been well above normal! Currently, Glasgow is having the 6th warmest September on record, and the first 16 days of the month averaged warmer than all of our summer months of June, July and August averaged together! We have broken some warmest low temperature records around the region on Sept 7th, and tied the highest record temperature at Glasgow on Sept 15th at 91 degrees. We may see some more records through Saturday. A cold front will move through over the weekend, and highs on Sunday will be 15-20 degrees cooler than those on Saturday, but still a few degrees higher than what our temperatures normally are this time of year. The new one month and three month climate outlooks will also be released this afternoon, and you can see all this information and more at:

<http://www.cpc.ncep.noaa.gov/>



This above graphic shows the past 7 days departure from normal mean daily temperature.

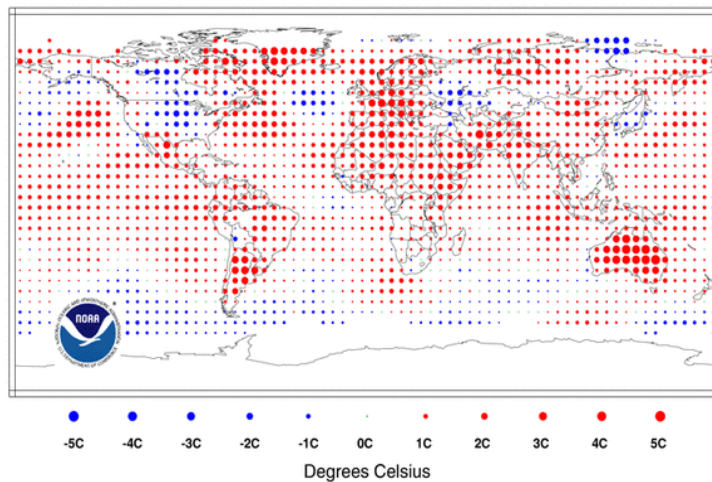
NOAA News:

Entire Summer and Month of August are Warmest on Record for Oceans: While we're slowly coming out of the below normal temperatures we've had the past 9 months in NE Montana, the ocean has seen its warmest summer on record, and the month of August was also the warmest on record. If you combined the land and ocean temperatures, it would be the third warmest on record. http://www.noaanews.noaa.gov/stories2009/20090916_globalstats.html

Temperature Anomalies August 2009

(with respect to a 1961-1990 base period)

National Climatic Data Center/NESDIS/NOAA



There is an excellent animation of temperatures across the globe for August at:

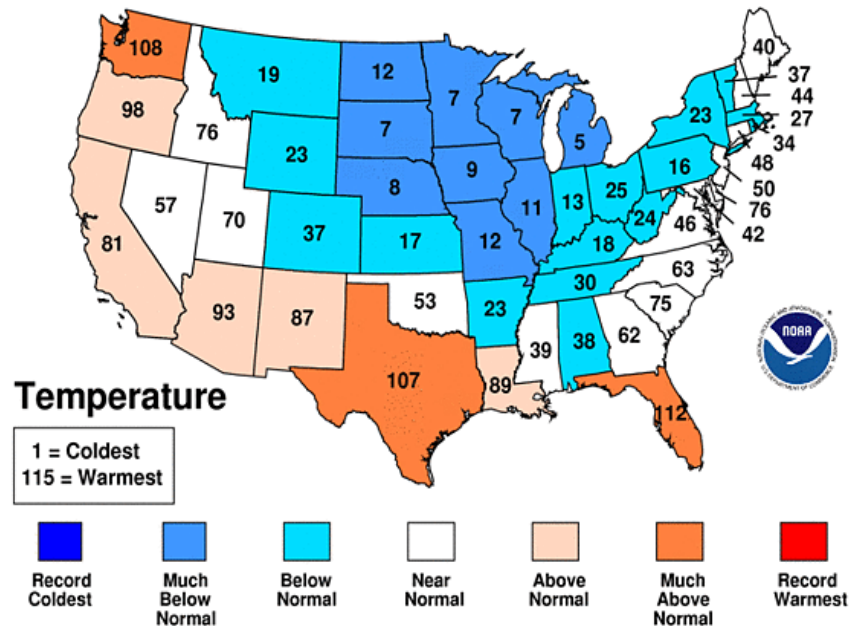
<http://www.nnvl.noaa.gov/MediaDetail.php?MediaID=301&MediaTypeID=2>

Summer cooler than average across the US! That's not a surprise to those of us in eastern Montana, but it is interesting to see how much of the county was also below normal:

http://www.noanews.noaa.gov/stories2009/20090910_summerstats.html

June-August 2009 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA



NOAA Ship finds a sunken WWII US Navy Ship: For those history buffs, you may find this interesting. This ship was attacked by a German submarine about 20 miles off of Cape Hatteras, and killed 6 sailors. Using modern technologies, they have been able to find it about 300 feet below the ocean surface.

http://www.noanews.noaa.gov/stories2009/20090909_battleofatlantic.html

Weather and Climate in the Headlines:

Lightning Struck Wind Turbine in MT Replaced: http://billingsgazette.com/news/state-and-regional/montana/article_7e057340-a016-11de-b7b4-001cc4c002e0.html

600,000 impacted by three months of heavy rain/flood in West Africa:

<http://www.msnbc.msn.com/id/32839899/ns/weather/>

Greenland Ice Sheet: http://www.usatoday.com/tech/science/environment/2009-09-10-greenland-melt_N.htm?csp=34

Pacific Geese wintering in Alaska, not heading south:

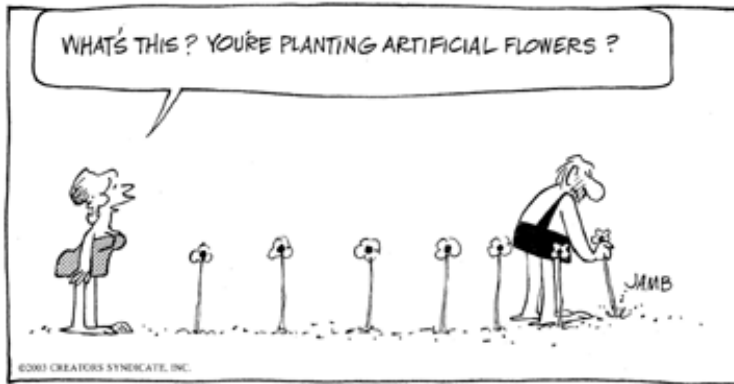
<http://www.ens-newswire.com/ens/sep2009/2009-09-10-095.asp>

There is a great NASA video of lighting occurring in the recent Baja Mexico Hurricane Jemina:
<http://www.youtube.com/watch?v=CgKvW5BWLY>

Nations Plan to Undertake Global Climate Forecasting:
<http://www.ens-newswire.com/ens/sep2009/2009-09-01-01.asp>

Ban on Ice, or Maybe Not: The Arctic is Melting:
<http://www.ens-newswire.com/ens/sep2009/2009-09-01-02.asp>

Humor for the Week, from one extreme to the next:



Copyright © 2003 Creators Syndicate, Inc.

