



**Under the Big Sky e-letter
July 13, 2009**

Storms and more storms: Wow, June brought a lot of our area into significant drought and July has come in with quite a punch of weather! Thank you so much to the many spotters who have taken photos and sent them to us, some of them in near real-time! They are helping us tremendously with our reports and to see the amazing structure. The photo above was the massive shelf cloud that hit Glasgow on July 6th, taken by Sean Heavey. Here are a few more for you:



Hail 17 miles north-northwest of Circle on 7/8/09 taken by Mistica Hisdahl.



Wind Damage in Malta from the 7-6-09 Squall line. Photo from Phillips County News.



Beautiful Supercell west of Wibaux on 7-5-09 taken by DES Coordinator/Wibaux Gazette Editor Frank Datta



Supercell with scud clouds below north of Glendive on 7-5-09. Photo by Tom Temple



Carlyle Tornado by storm chaser Bill Reid with Tempest Tours on 6-30-09 (it's on the right side wrapped in rain)

www.stormbruiser.com



Carlyle Tornado by storm chaser Rob Pettitt with Tempest Tours on 6-30-09 (you can see the skinny rope looking tornado)



DES Coordinator Butch Renders with one of the massive evergreen trees in front of the Richland County Courthouse. 67 mph winds created a lot of damage in Sidney.



Damage just north of Sidney to a storage building that was blown apart. Photo by DES Coordinator Butch Renders.

July is UV Safety Awareness Month: Over 1,000,000 cases of skin cancer diagnosed each year, with 90% of non-melanoma skin cancers caused by UV radiation exposure from the sun. The NWS and the EPA have partnered together to create a UV Index Forecast that helps you determine what level of exposure is expected each day. You can even get an email alert each day for your zip code. To look at the UV Index Forecast, go to: <http://www.epa.gov/sunwise/uvindex.html>

Missouri River Basin Decadal Climate Variability Workshop: You all know that we've had different climates in Montana with significant periods of drought and even well above average precipitation. Our Science and Operations Office Bill Martin recently attended a workshop in Helena hosted by NOAA's Climate Program Office. Below is his summary of the workshop, as well as a weblink if you are interested in more about the research that is being done:

The Decadal Climate Variability Workshop was held in Helena, Montana (June 24-25). This workshop was part of work done by Vikram Mehta and his Center for Research on the Changing Earth System, funded by NOAA's Climate Program Office.

This workshop had nothing to do with global climate change and carbon dioxide, rather, it focused on decadal-scale variability in the Missouri River Basin linked to such things as the Pacific Decadal Oscillation (PDO) and the Tropical Atlantic Gradient (TAG).

There were about 30 attendees include 3 NWS employees, but mostly agricultural services people, water management people, and fish and wildlife services people. The core of the workshop was two presentations by Vikram Mehta: the first on the connection between proposed decadal forcing mechanisms (the PDO, and the TAG) and decadal scale fluctuations in rain fall and temperature climatology. The effects of ENSO were also discussed, but the time scale of ENSO is sub-decadal (termed "inter-annual"). General speaking, TAG and PDO phases could be connected statistically to modest (I would say minor) shifts in temperature climatologies on the order less than a degree C over the entire Missouri basin. The connection of these oscillations to rainfall was stronger and more significant, with changes up to 10%. A warm phase of the PDO, for example, might imply an increase in rainfall of .3" per month in some areas.

The second presentation by Mehta focused on the prospects and issues of hoped for future climate decadal outlooks. Agricultural interests in attendance who were hoping for some insight into the climate for the next few years were disappointed when Mehta suggested it would be 10 years or so before accurate decadal outlooks could be produced.

The rest of the workshop focused on discussions and getting feedback from participants on how they might use decadal outlooks.

A website for the project is at:

http://www.decvar.org/MRB_project.php

Down the middle of this page are links to the Missouri Basin Climateer Newsletter (now in its second issue). You can sign up to receive the newsletter via email if you are interested in more information.

Weather Lesson: What is a Haboob? The photos below show what meteorologists refer to as a "Haboob," or a large wall of dust, sand and dirt lofted into the air, usually by thunderstorms, but sometimes by cold fronts. These photos were taken near Lubbock, TX by Matt Ziebell, one of our former forecasters here in Glasgow. They were fairly common during the dust bowl years, and the nickname "Dirty 30's" originated because of them. In the United States, they are more common in the desert southwest. <http://en.wikipedia.org/wiki/Haboob> Recent news reports show our troops in Iraq have been experiencing quite a few of these in the past week as well.

http://www.usatoday.com/weather/news/2009-07-09-iraqweather_N.htm?csp=34



Photo by Matt Ziebell June 18, 2009



Photo by Matt Ziebell June 18, 2009

NOAA News:

June Temps/Precip near normal for US: While northeastern Montana was slightly cooler and much drier than normal for June, the rest of the county came out near normal. It was one of the slowest fire seasons on record as well. http://www.noaanews.noaa.gov/stories2009/20090710_junstats.html or more details at: <http://www.ncdc.noaa.gov/oa/climate/research/2009/jun/jun09.html>

New NOAA Satellite: A new weather satellite was launched into space recently. GOES-14, a geostationary satellite, was launched from Cape Canaveral on June 27th.
http://www.noaanews.noaa.gov/stories2009/20090626_goes14.html

Weather Around the Globe:

EF-3 hits Dickinson, ND: Last week we had a moderate risk of severe weather in Wibaux, Dawson and Prairie Counties. Thankfully, the storms didn't occur there, but they did cause a tornado on the south side of Dickinson, ND. There is video online of the aftermath, as well as many photos:

http://www.kfyrtv.com/News_Stories.asp?news=31963

<http://www.kxmb.com/news/404536.asp>

<http://www.thedickinsonpress.com/event/article/id/25191/>

Flooding in India leaves 500,000 homeless: Northeast India has had some significant flooding in recent weeks, with many people evacuated or homeless. There have been very few deaths though, showing that India has plenty of experience with flooding and has done good with preparations to get people out of harms way. http://www.msnbc.msn.com/id/31762287/ns/world_news-south_and_central_asia/

Drought in Texas intensifies: Farmers are hoping for a hurricane, anything to break the drought and triple digit temperatures that they have been having in Texas. The impacts are pretty significant for the agricultural industry there. http://www.msnbc.msn.com/id/31762287/ns/world_news-south_and_central_asia/

Weather Humor:

