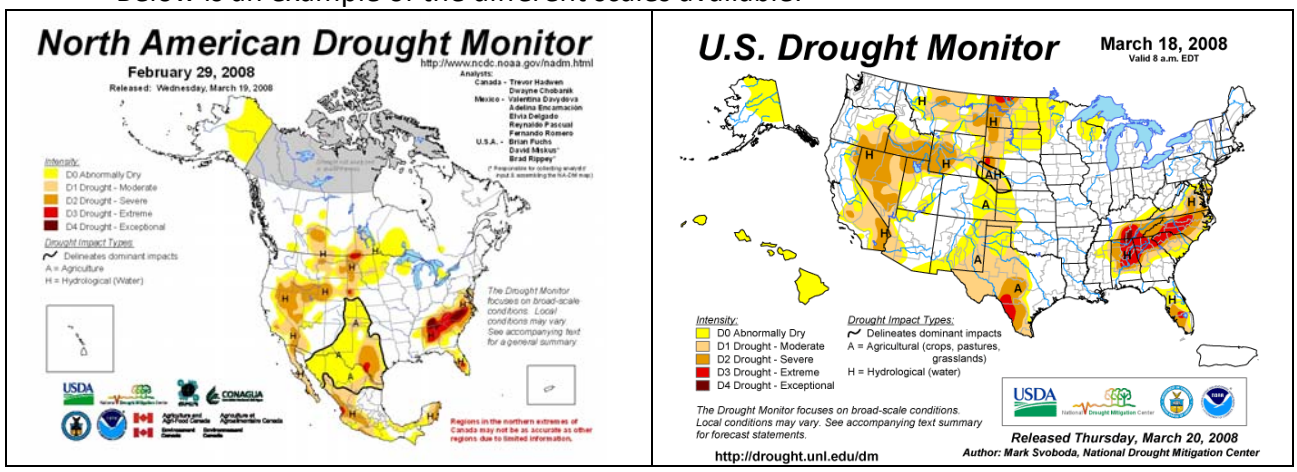
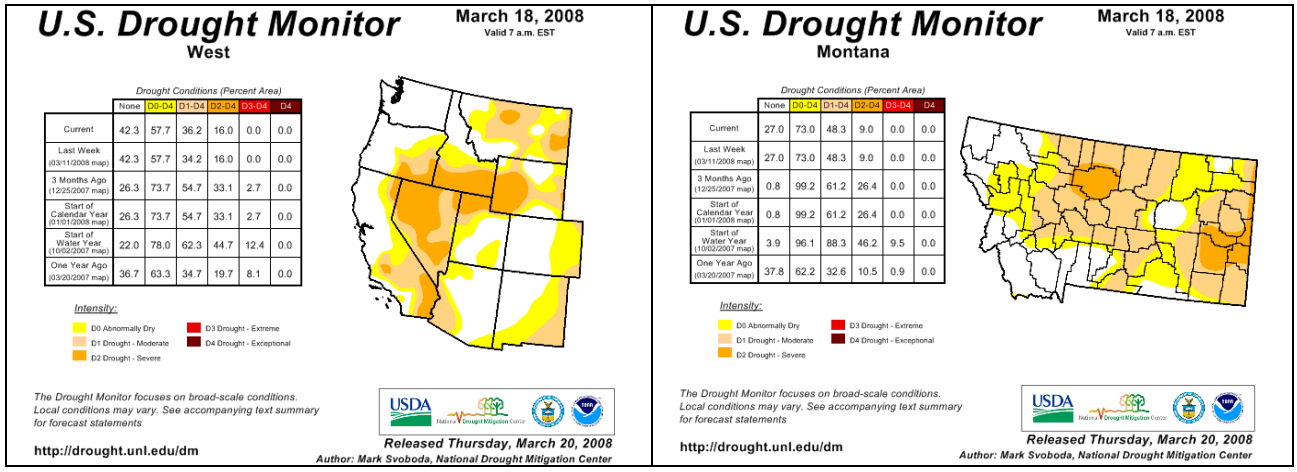
Under the Big Sky: Special Drought Edition

The above photo is from the UL Bend area of Fort Peck taken two years ago by Larry and Shane Hoyer of Fort Peck. The areas that are showing up green are usually underwater when Fort Peck Lake is at a normal elevation.

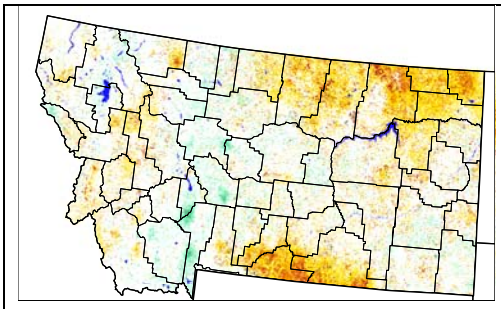
We had the incredible opportunity to partner with the National Drought Mitigation Center recently and host a workshop for those working in the agricultural industry on drought tools that the NDMC has developed. In this edition of Under the Big Sky, I'd like to highlight some of the things that that NDMC is involved with, and some of the things that the State of Montana Drought Advisory committee does.

1. **DroughtScape:** This newsletter is produced each quarter and highlights different activities that the NDMC is working on. You can subscribe to receive it in email from the website which is: http://www.drought.unl.edu/droughtscape/droughtscapecurrent.htm
2. **Drought Monitor:** The Drought Monitor began in 1998, and is the record of drought conditions aross the United States, and even North America. This product is updated every Thursday, with input from the NDMC, NOAA and NWS, the USDA and local agencies. The monitor is written by a different agency each week, but solicits input from all users. The drought monitor has an archive of each week of each year since 1998 for use as a historical reference. They have expanded it from a nationwide graphic and gotten more detailed by giving regional and state-level analyses, and a table that compares the data to the previous week, and the previous year. To access the drought monitor visit: http://www.drought.unl.edu/dm/monitor.html
   Below is an example of the different scales available:

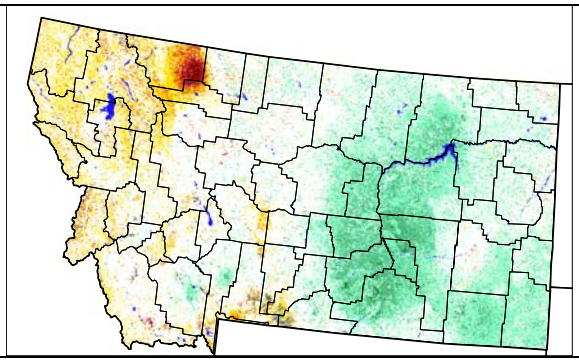




3. **Drought Reporter:** This is an online interactive tool where people who are being impacted by drought can report the problems they are having. They also have automated services that look for drought related impacts in online newspaper articles and automatically links to those articles. This site is going to be undergoing some upgrades in the near future, but you can still access the archived data or submit a new report at: http://droughtreporter.unl.edu/
4. **VegDRI:** The VegDRI (Vegetation Drought Response Index) tool uses satellite data to allow producers to monitor vegetation stress at a regional, state, county or sub-county level. It is run from May through October and is updated every two weeks. http://drought.unl.edu/vegdri/VegDRI_Main.htm

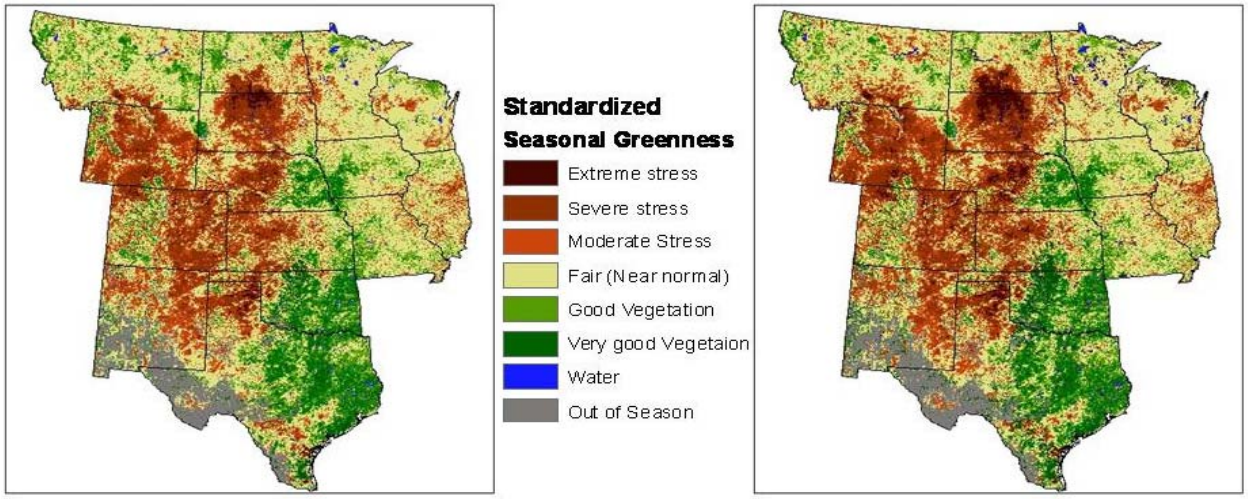


VegDRI map from 7/26/2006 showing the significant drought in northern and south central Montana



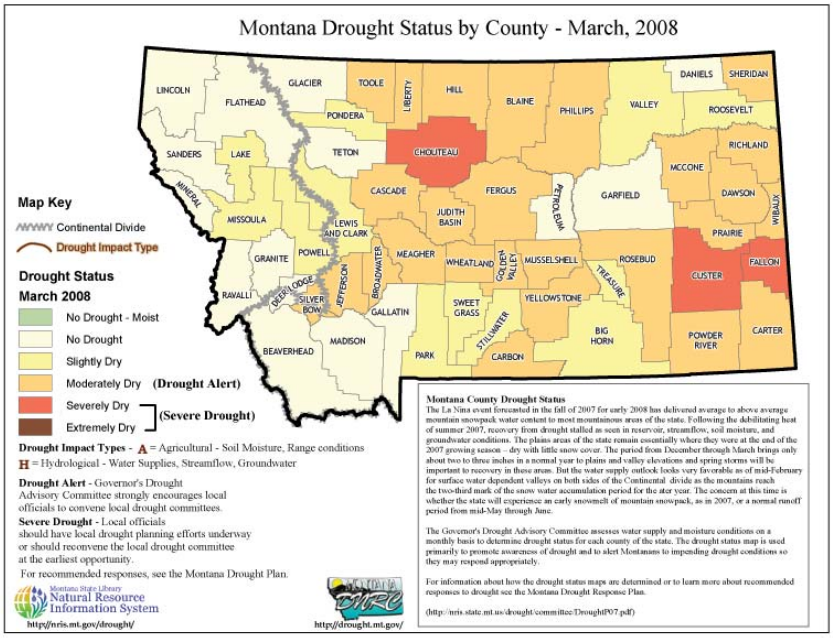
VegDRI map from 6/4/07 (developing drought east of Glacier NP, and very moist in eastern MT)

5. **VegOUT:** VegOUT (the Vegetation Outlook), is a highly experimental forecasting method that incorporates oceanic information, climate information and satellite data to provide predictions of the expected level of vegetation stress at 2, 4 and 6-week intervals. Below is a prediction from VegOUT (left) and the observed conditions (right).



(a) Two-week Vegetation outlook (VegOut) map that was **predicted** for the period ending July 25,2006

(b) Bi-weekly Standardized Seasonal Greenness (SSG) ***observed*** for the period ending July 25,2006

A fact sheet for both VegDRI and VegOUT is available at:
http://www.drought.unl.edu/RMA/factsheet/RMAfactsheet_VegDRI_Out.pdf

6. State of Montana Drought Advisory Committee: This committee meets once a month in Helena during the warm season and discusses the state of drought in Montana, and provides input to the Drought Monitor. They also do updates by email during the winter months, and if severe drought is occurring during that time, would meet in person as needed. They have an informational website at: http://www.drought.mt.gov/ They update the State of Montana drought map every month, and you can see it on their website. Here is the most recent one: