Missouri River Basin Water Management Monthly Update

Participating Agencies

State of South Dakota
National Weather Service
National Oceanic and Atmospheric Administration
U.S. Army Corps of Engineers

May 7, 2015

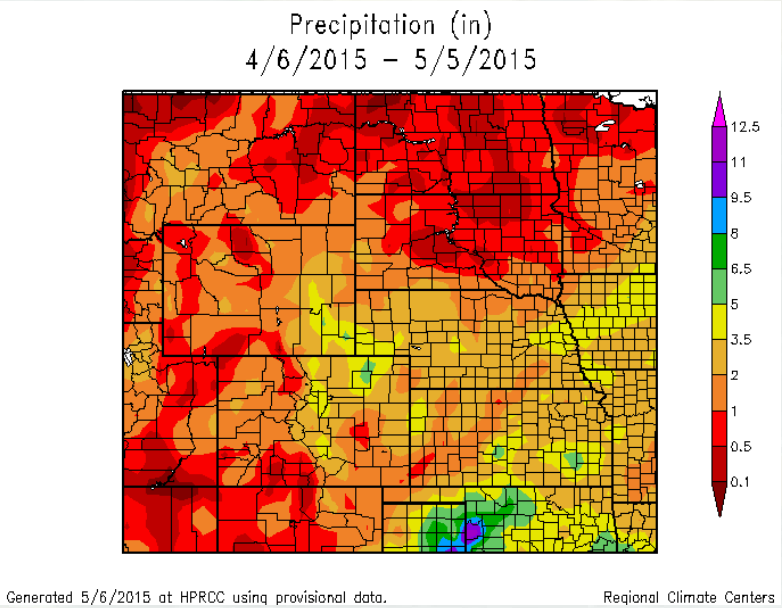
U.S.ARMY

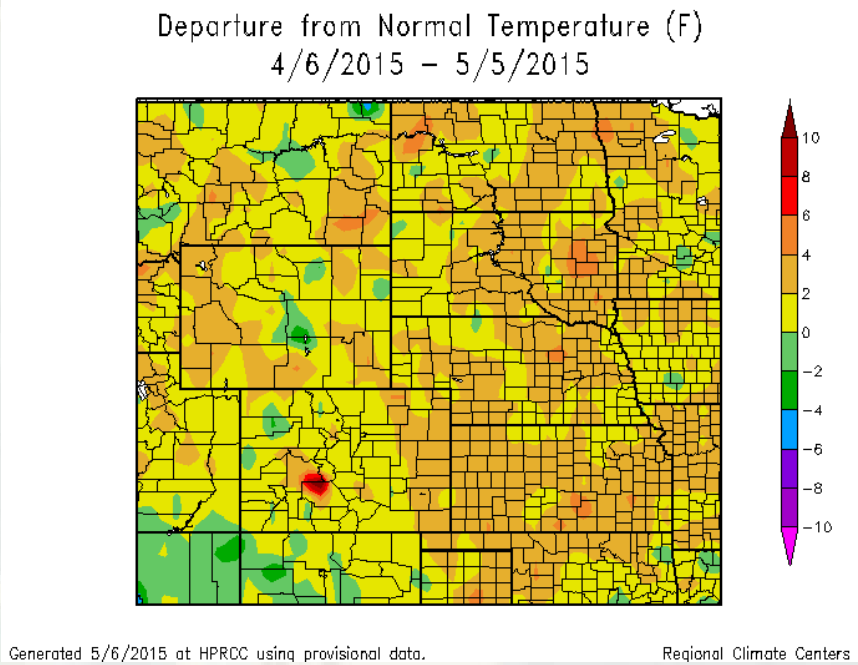
US Army Corps of Engineers
BUILDING STRONG®

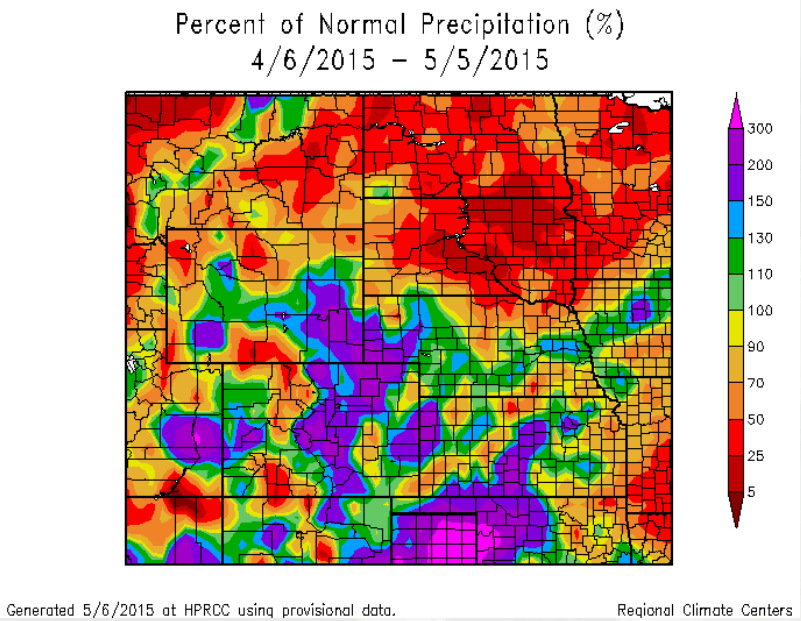
Weather / Climate

Dr. Dennis Todey
South Dakota State Climatologist

Conditions – Last 30 days



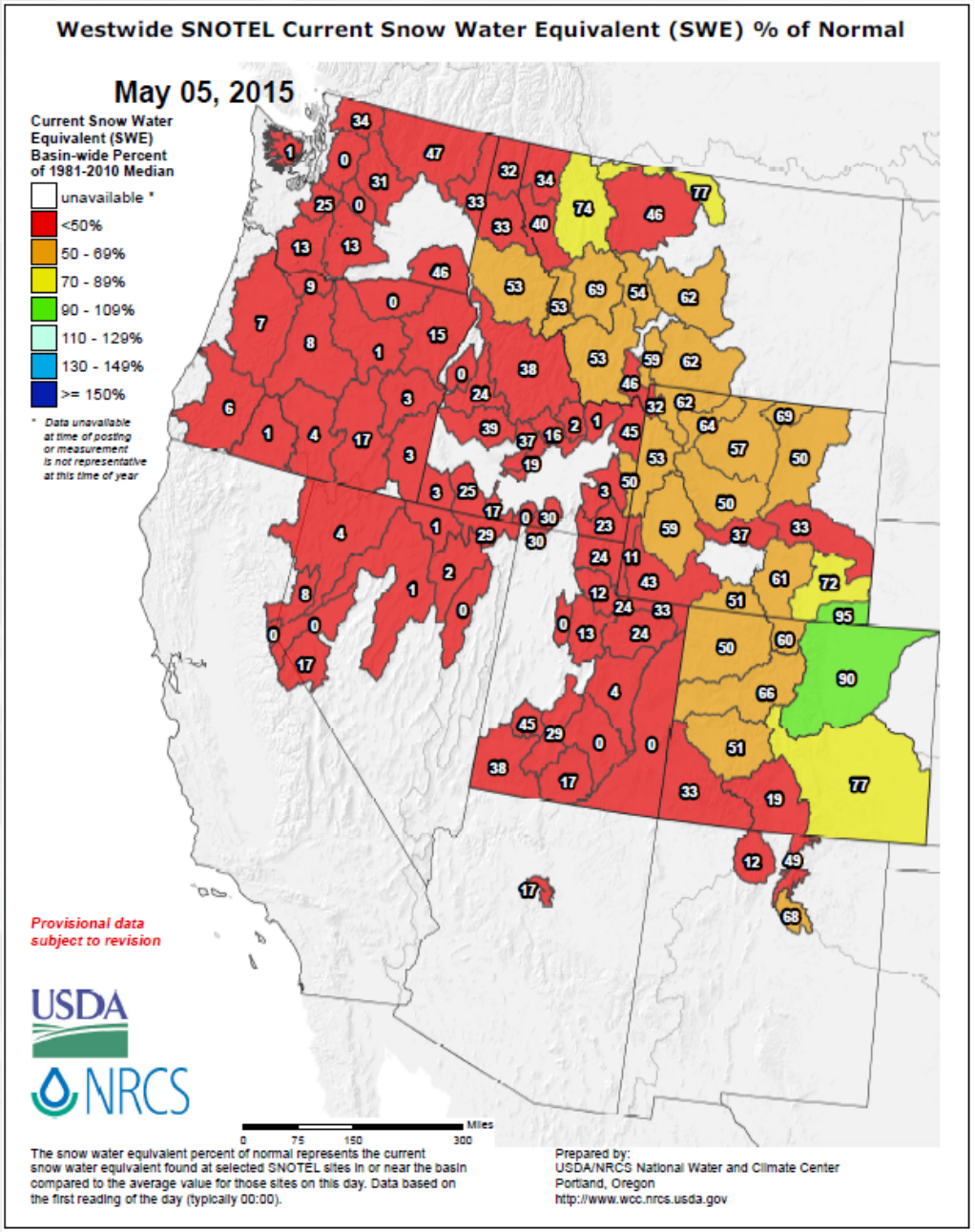


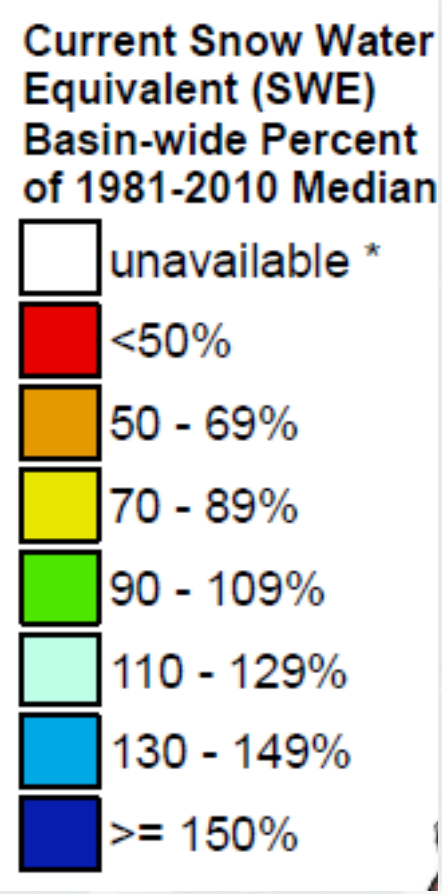


- Precipitation – drier north/wetter south
- Temperature – mostly warmer than ave

http://www.hprcc.unl.edu/maps/current/index.php

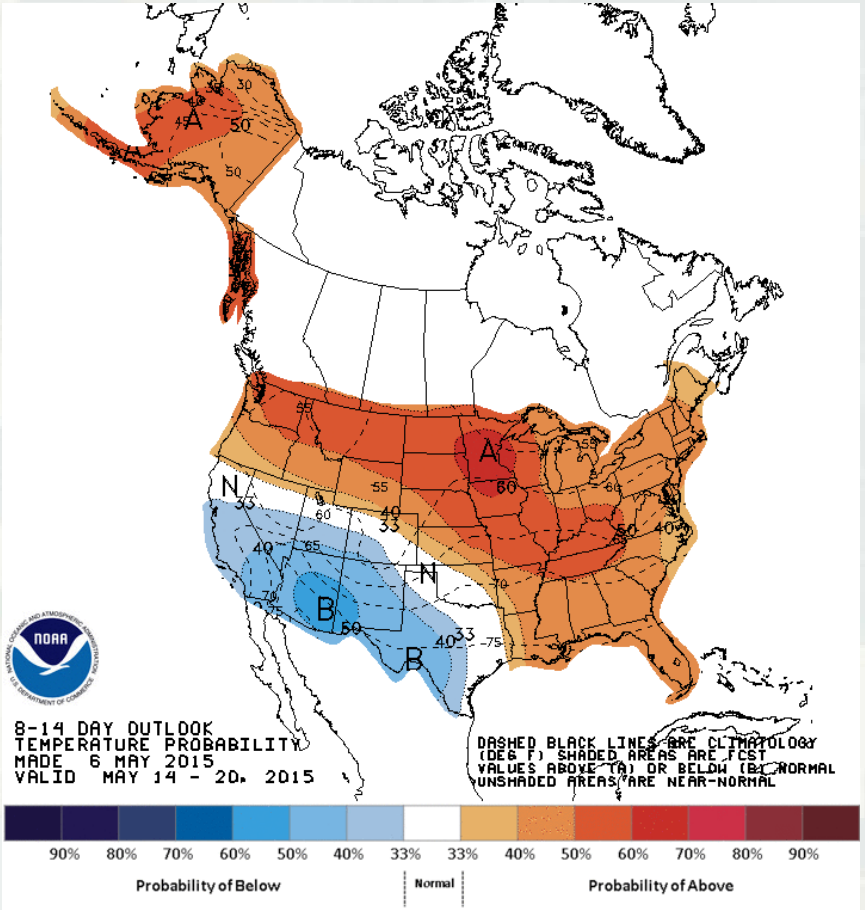
Mountain Snowpack

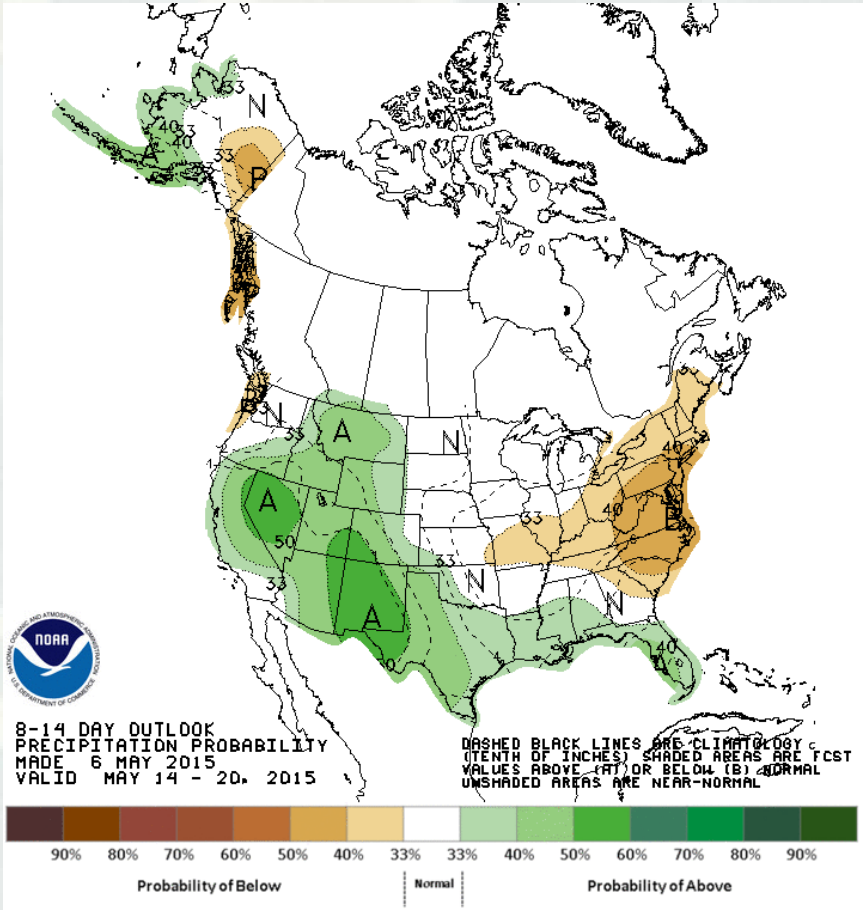




http://www.wcc.nrcs.usda.gov/gis/snow.html

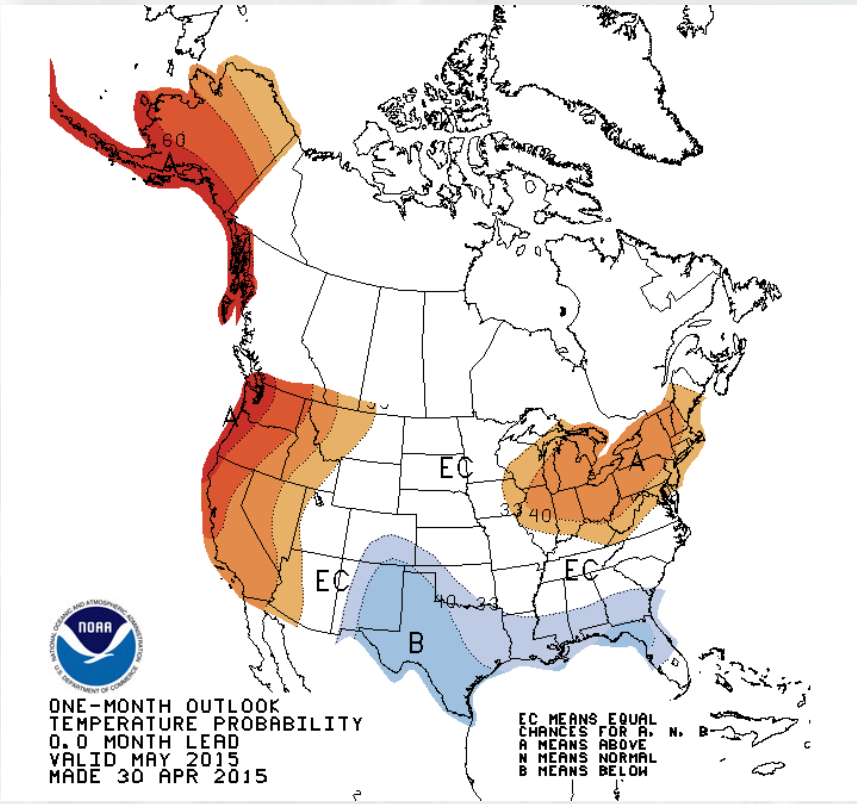
Temperature and Precipitation Probabilities (5/14-5/20)



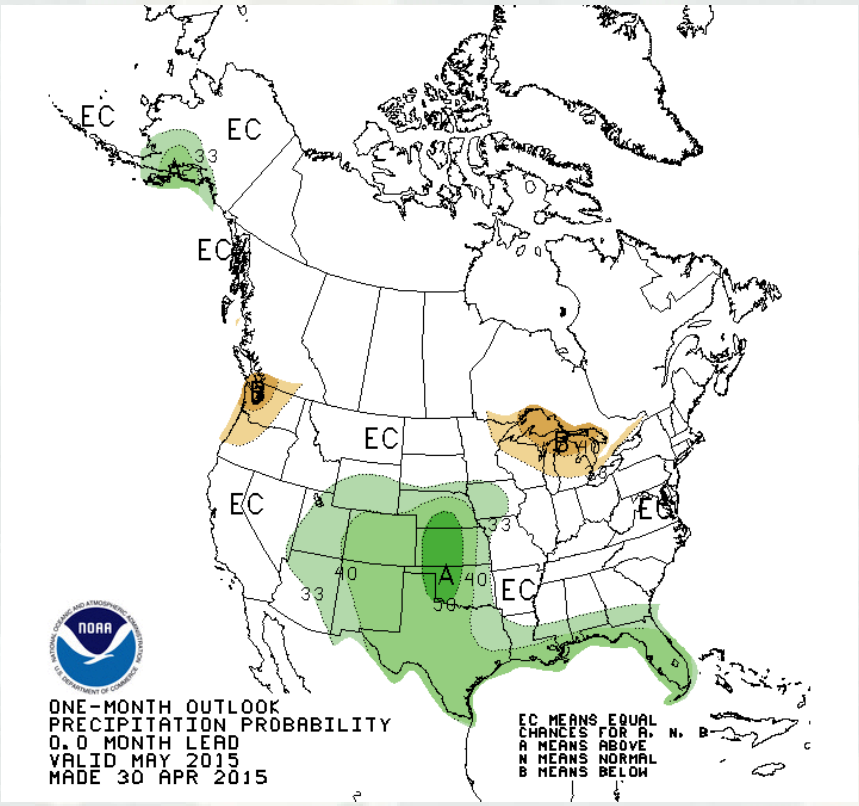


1 Month Temperature and Precipitation Probabilities

(May)



Temperature

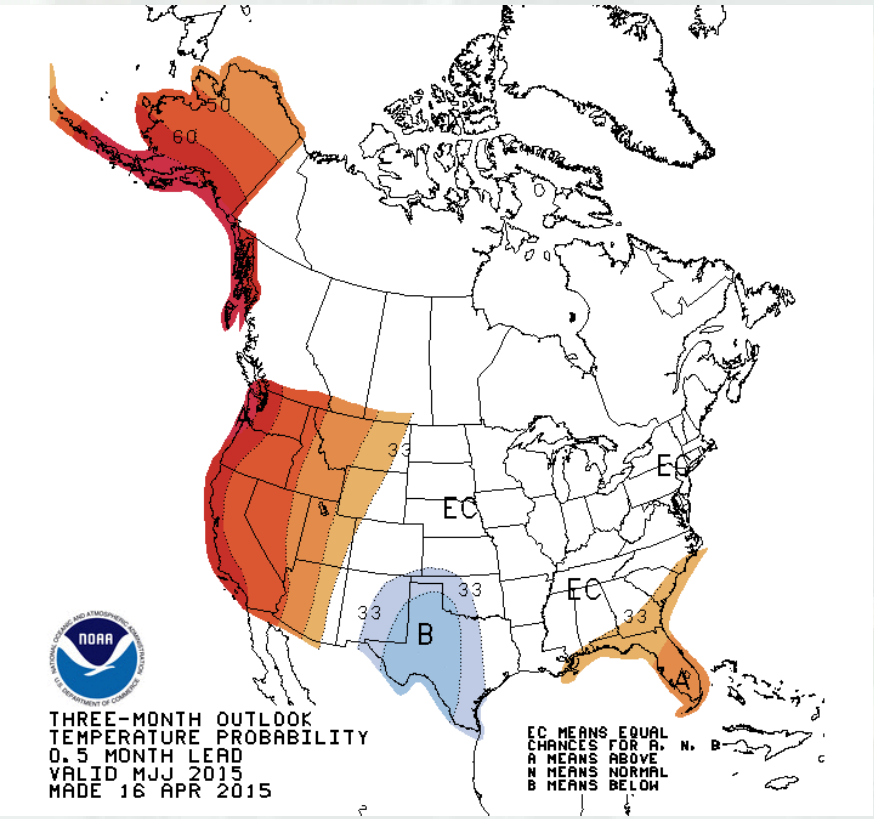


Precipitation

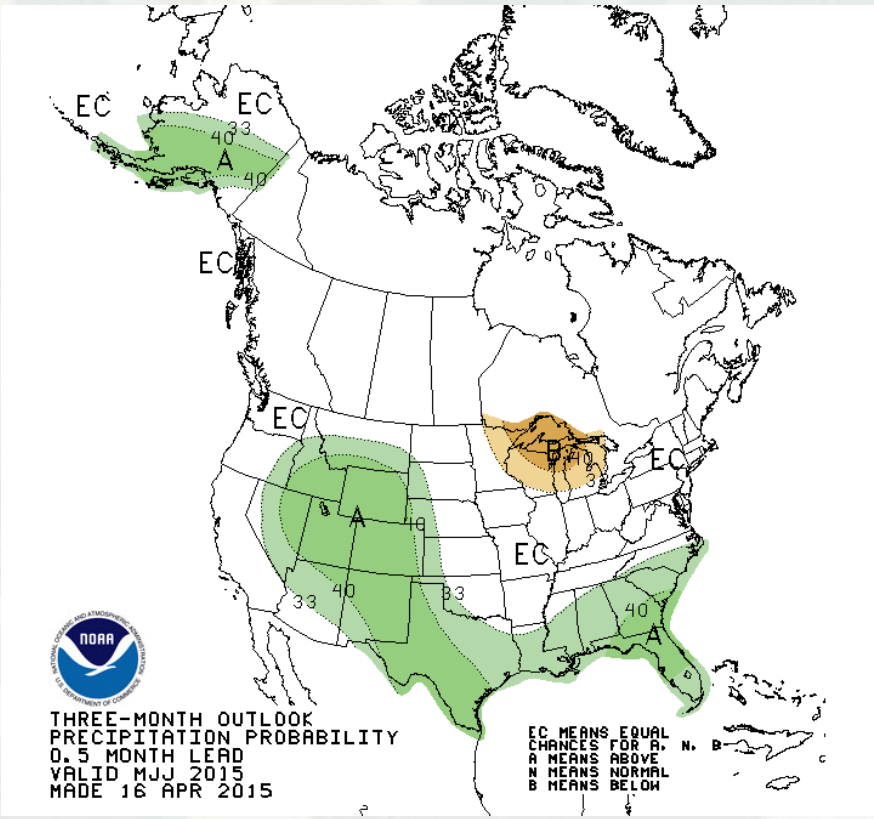
http://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=1

3 Month Temperature and Precipitation Probabilities

(May – June - July)



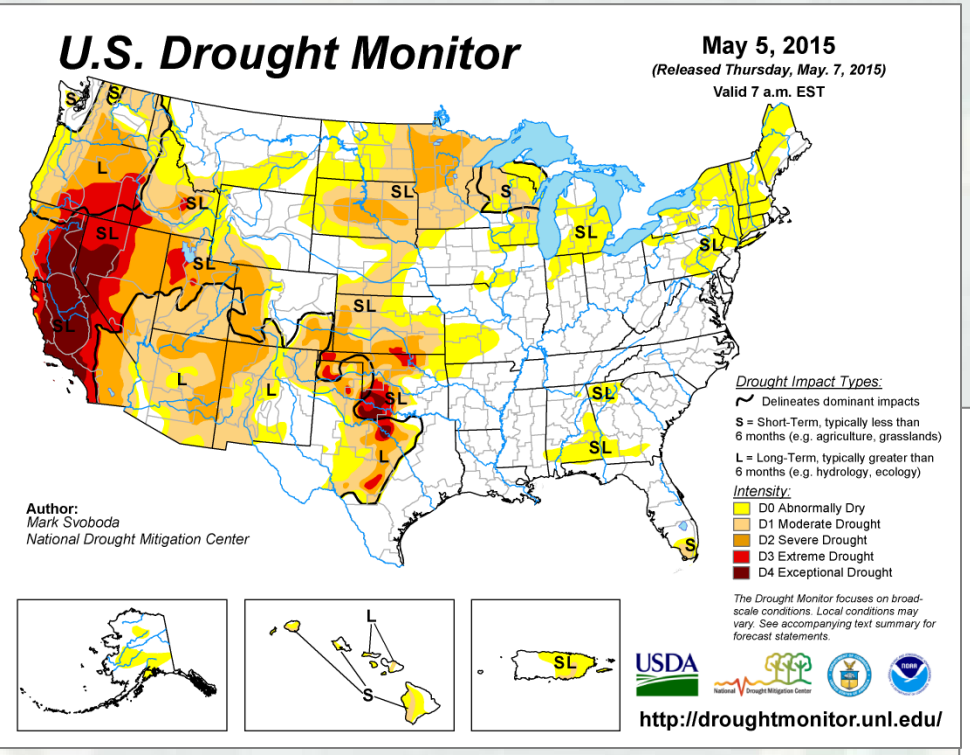
Temperature

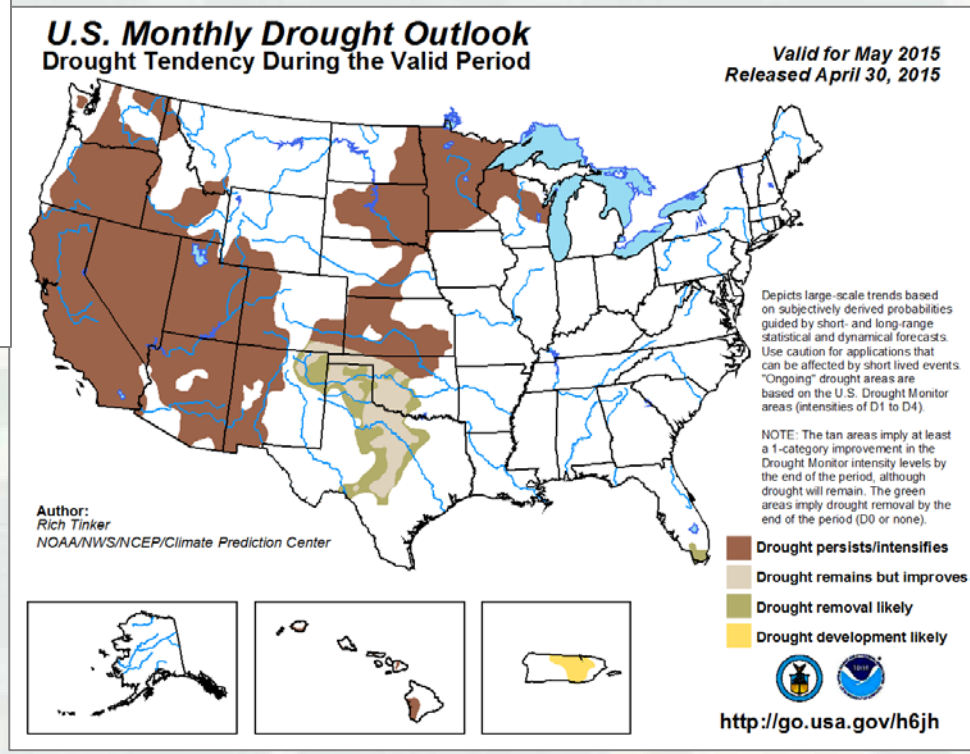


Precipitation

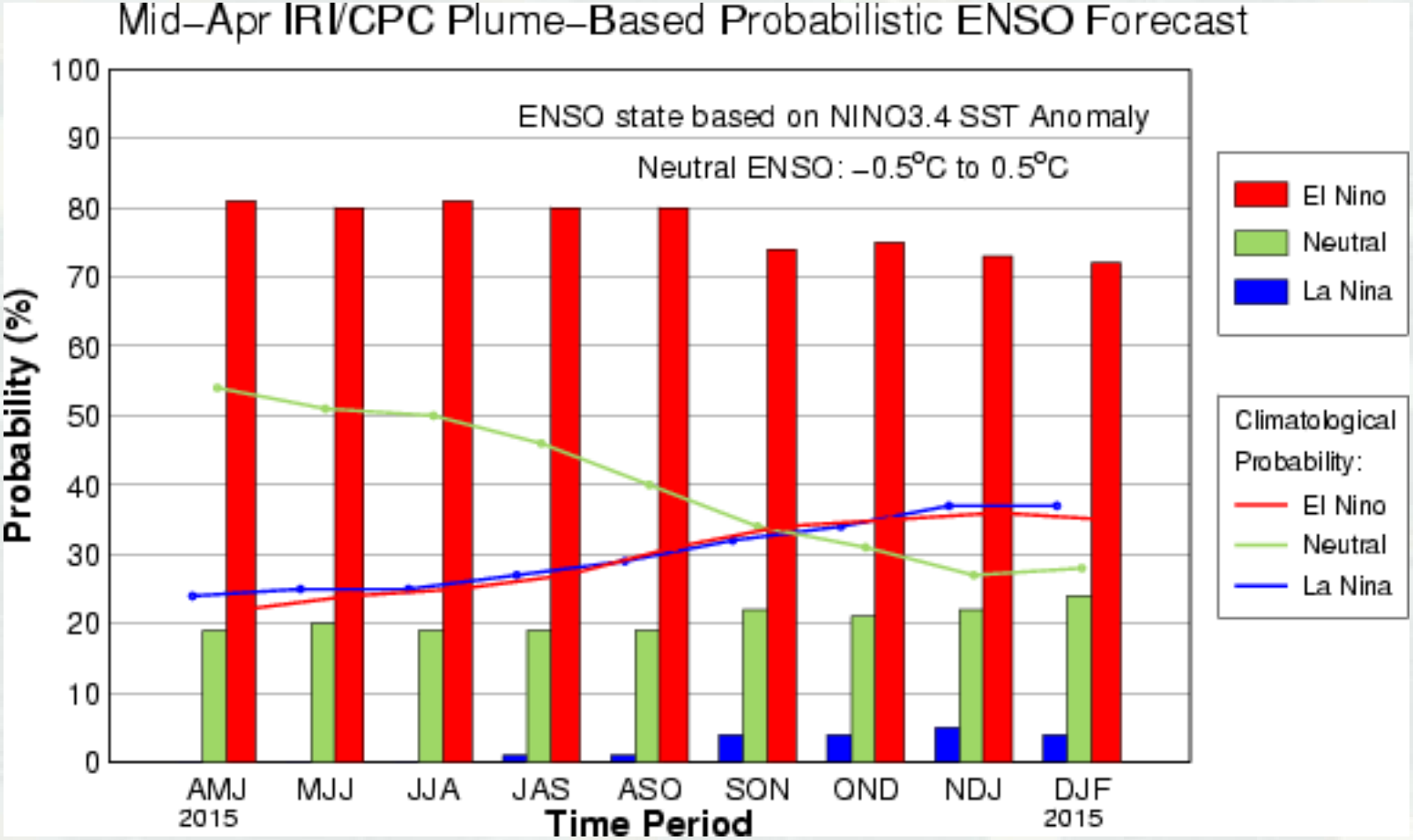
http://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=1

Drought Update





El Niño Update



http://iri.columbia.edu/our-expertise/climate/forecasts/enso/current/

Key Points

- **Current Conditions**
  - Current condition –El Niño Advisory
  - Mountain snow pack well below average
  - Precipitation last 30 days (drier north/wetter south)
  - 30 day temperatures (generally warm)
- **Predictions**
  - Warmer likely western basin – equal chances elsewhere
  - Precipitation chances increasing - more likely south/west
  - Drought outlook persisting for now
  - El Niño (strengthening) chances through summer

Basin Conditions / Flood Outlook

Kevin Low, Hydrologist

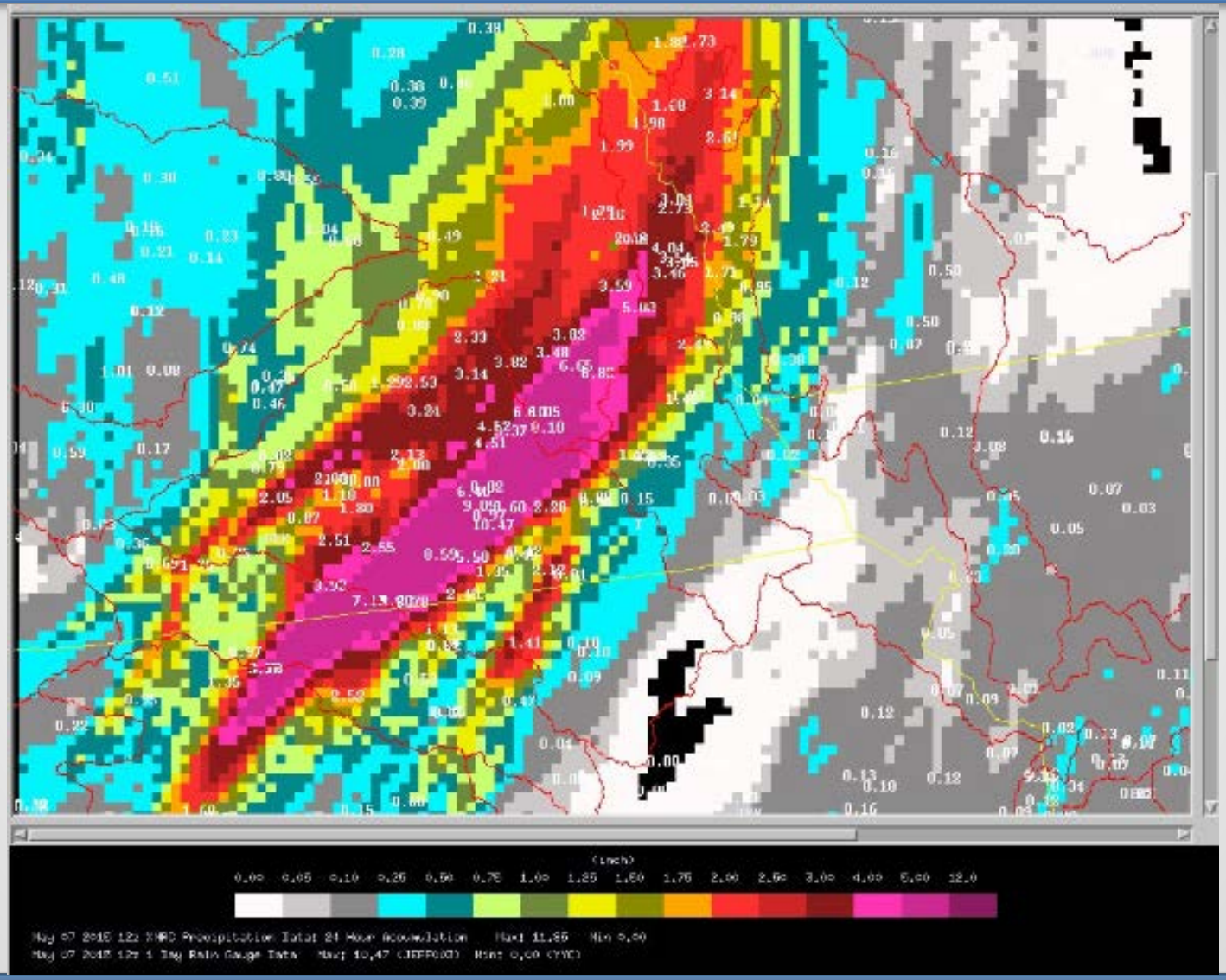
National Weather Service, Missouri Basin River Forecast Center

SPRING FLOOD OUTLOOK SUMMARY

- Below normal risk for flooding for most of the Missouri River basin.
- Mountain snowmelt runoff peak expected by end of May.
- Mountain runoff volume lower than normal.
- Minor-to-moderate flooding expected in lower third of basin (eastern NE, eastern KS, western IA, MO) due to convective activity. This is typical.

NWS MISSOURI BASIN RIVER FORECAST CENTER

SPRING FLOOD OUTLOOK SUMMARY



Building a Weather-Ready Nation

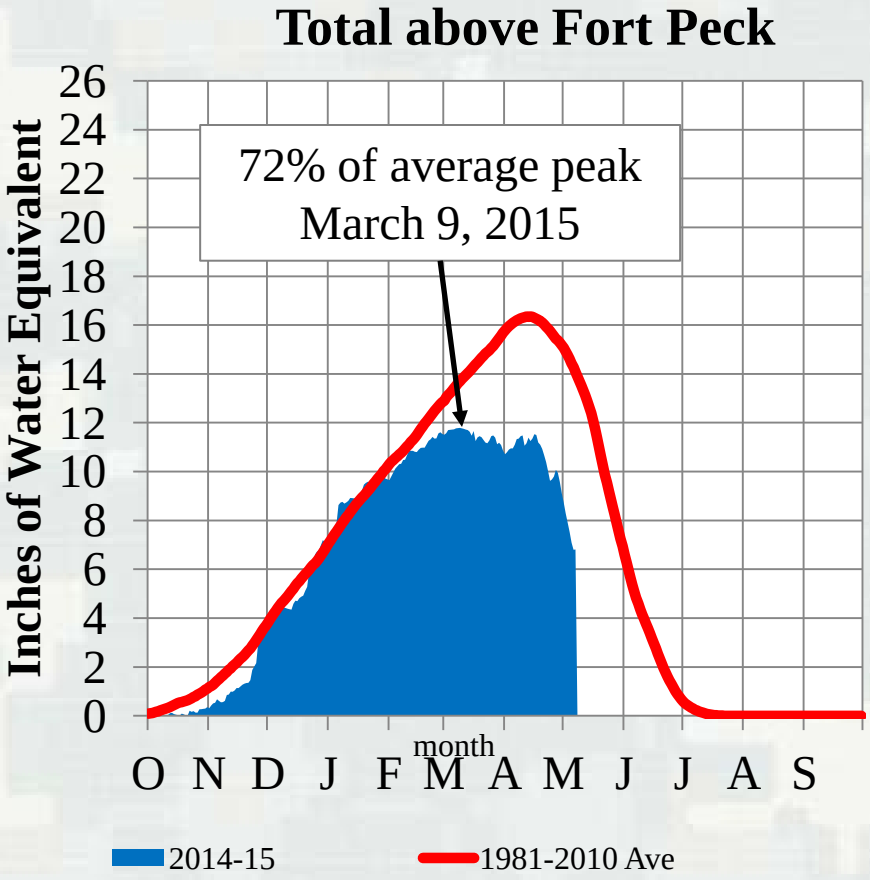
Upper Basin Runoff for 2015

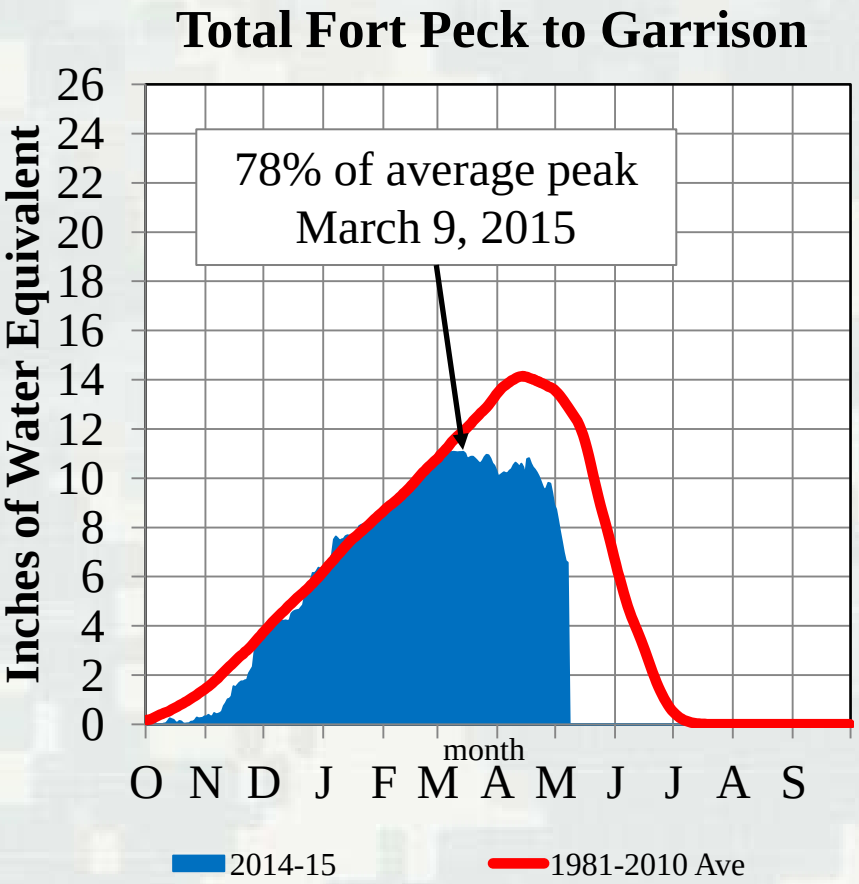
Kevin Stamm, P.E.

U.S. Army Corps of Engineers, Missouri River Basin Water Management

Missouri River Basin
2014-15 Mountain Snowpack Water Content

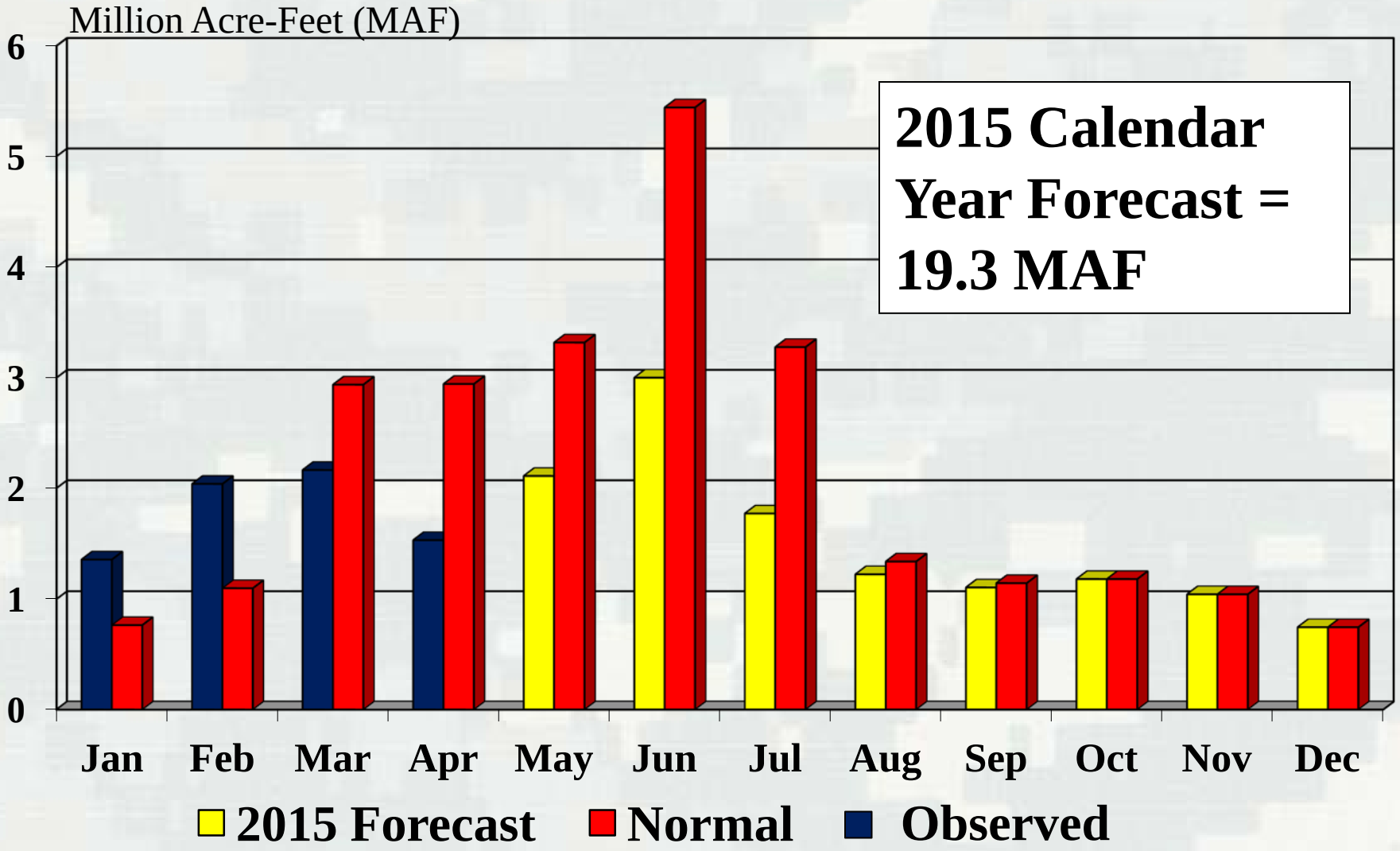
May 7, 2015





The peak snowpack accumulation usually occurs on April 15.

Missouri River Runoff above Sioux City, Iowa 2015 Forecast

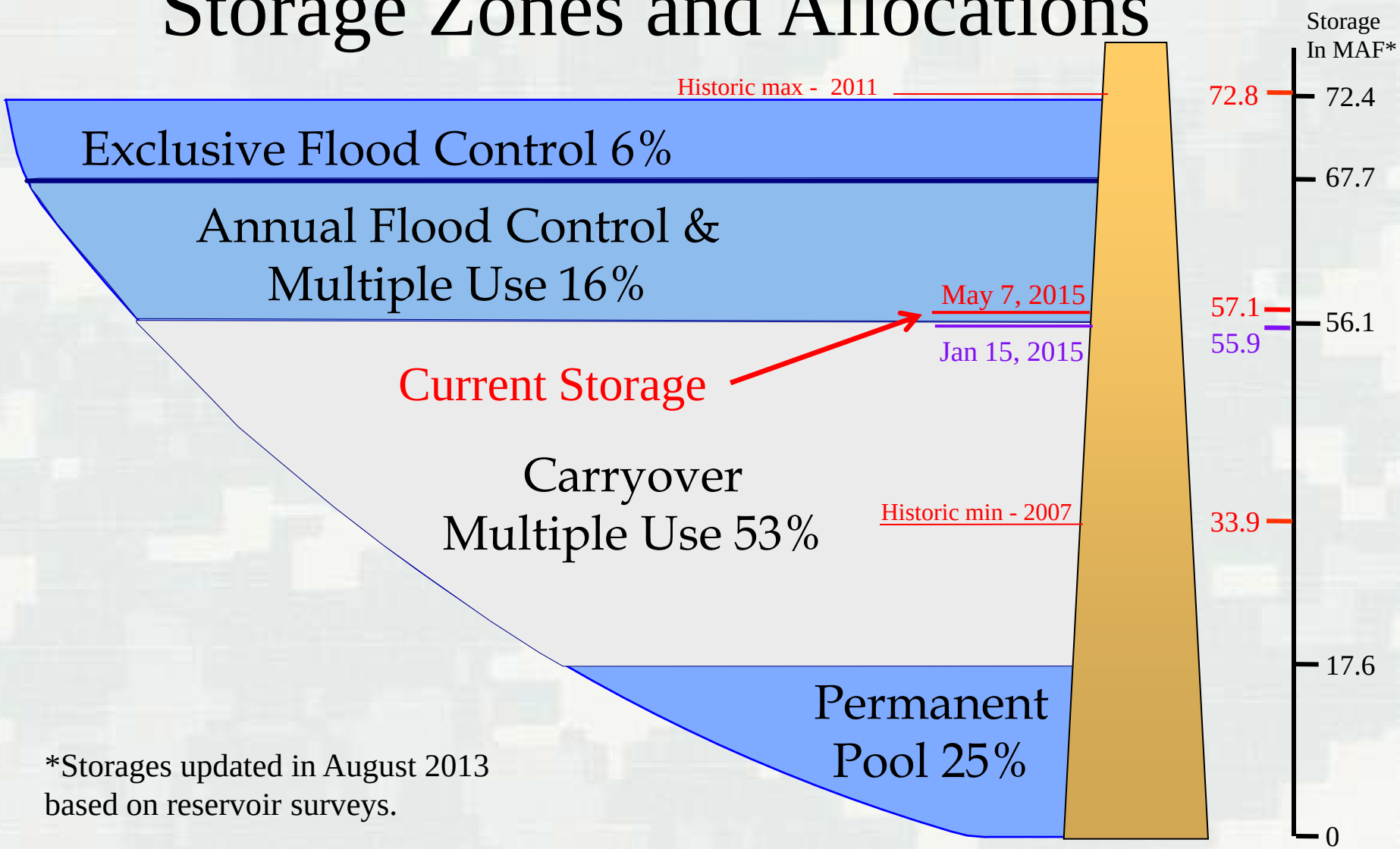


Reservoir System Regulation

Joel Knofczynski, P.E.

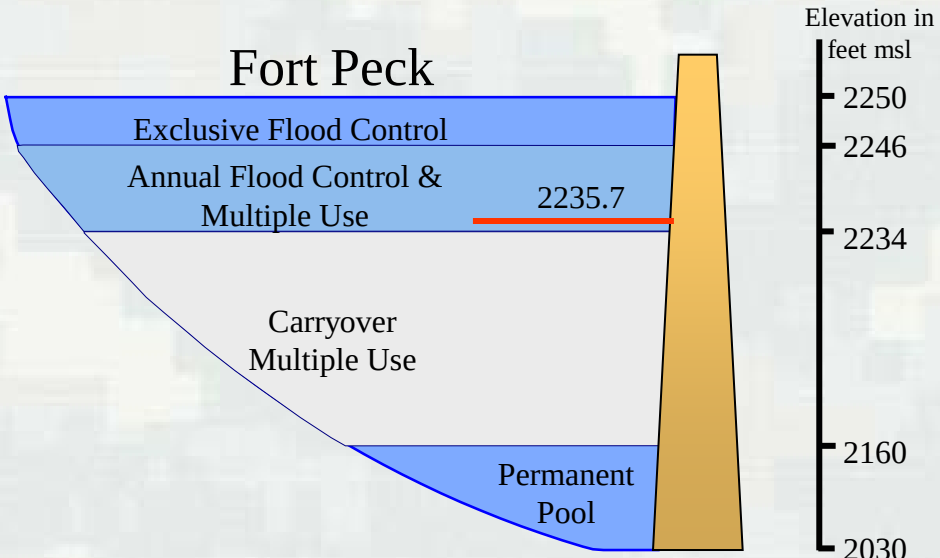
U.S. Army Corps of Engineers, Missouri River Basin Water Management

Missouri River Mainstem System Storage Zones and Allocations

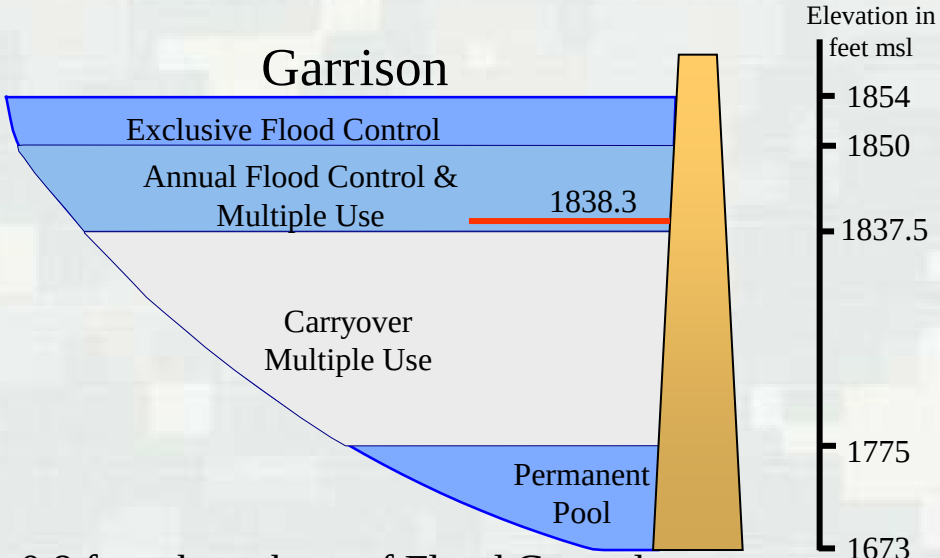


*Storages updated in August 2013 based on reservoir surveys.

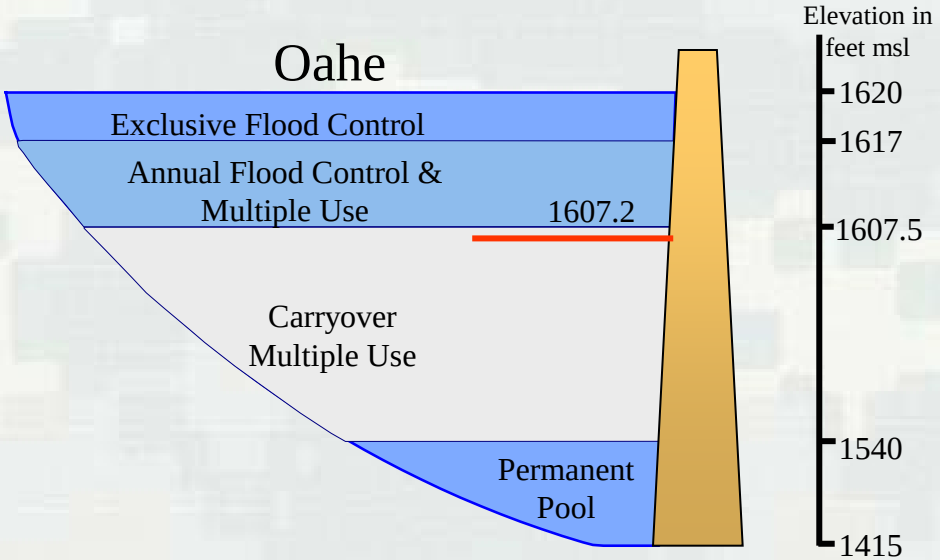
Current Reservoir Levels – May 7, 2015



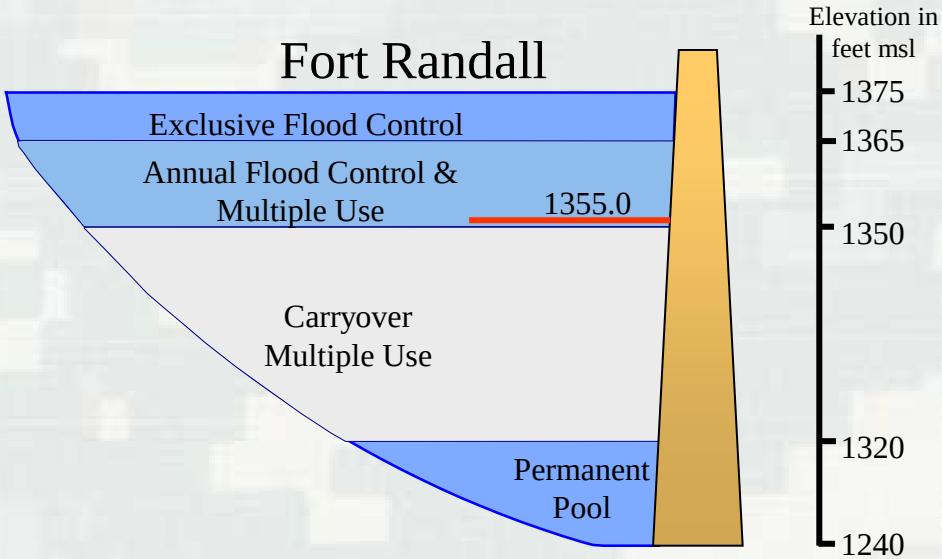
1.7 feet above base of Flood Control zone



0.8 feet above base of Flood Control zone



0.3 feet below base of Flood Control zone



5.0 feet above base of Flood Control zone

Key Points

- Currently, 15.3 MAF of 16.3 MAF of flood storage space is available
- Full navigation season length
- Full service flow support for first half of season. 0.5 kcfs below full service for second half (Basic)
- Annual power production of 9.2 billion kilowatt hours (BkWhrs)(10.0 BkWhrs Average)
- Good service to all authorized purposes in 2015; impacts likely beginning next winter unless basin conditions improve.

Contact Information

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