

Missouri River Basin Water Management

Missouri River Navigators Meeting

Kansas City, Missouri
February 10, 2015

Kevin Grode, P.E.

Reservoir Regulation Team Lead
Missouri River Basin Water Management
Northwestern Division

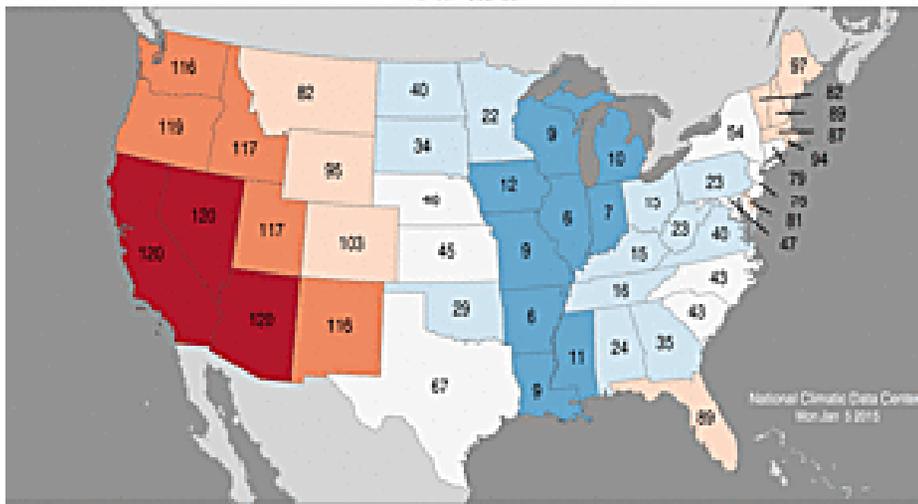


US Army Corps of Engineers
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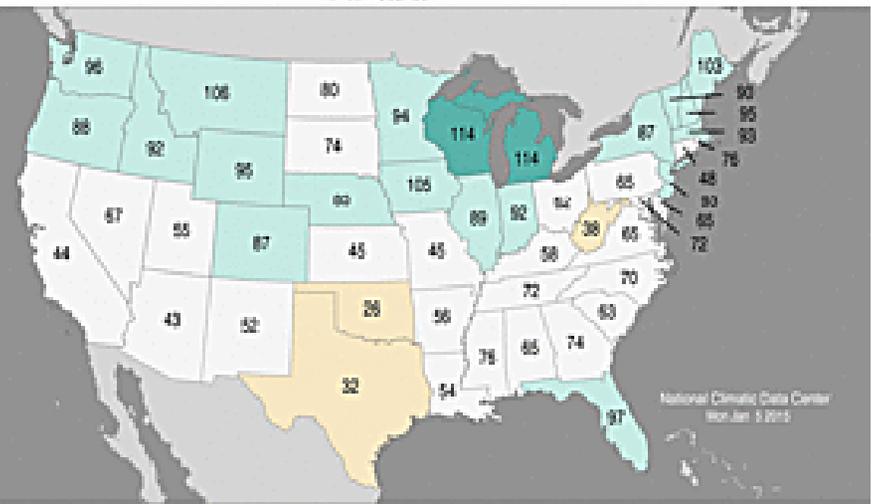


2014 – Climate Summary

Statewide Average Temperature Ranks
January–December 2014
Period: 1895–2014



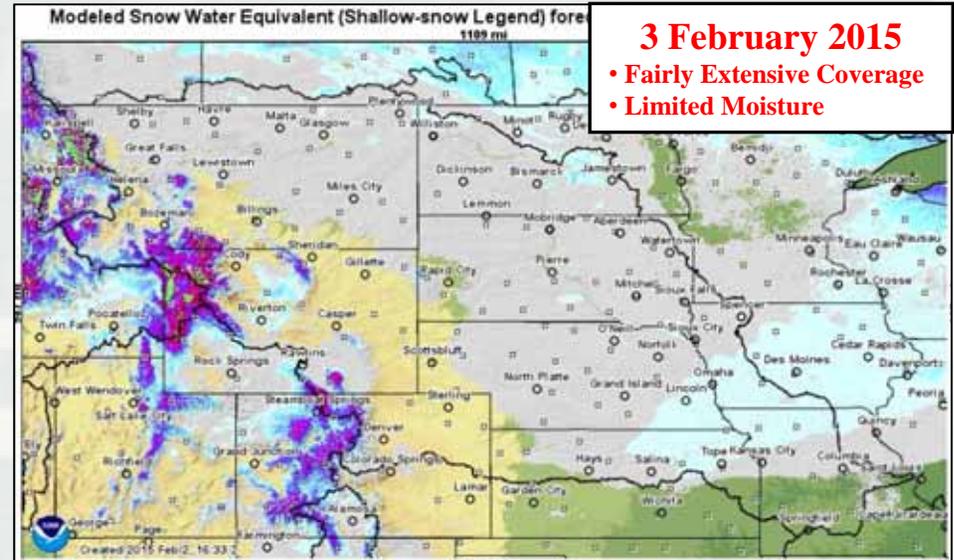
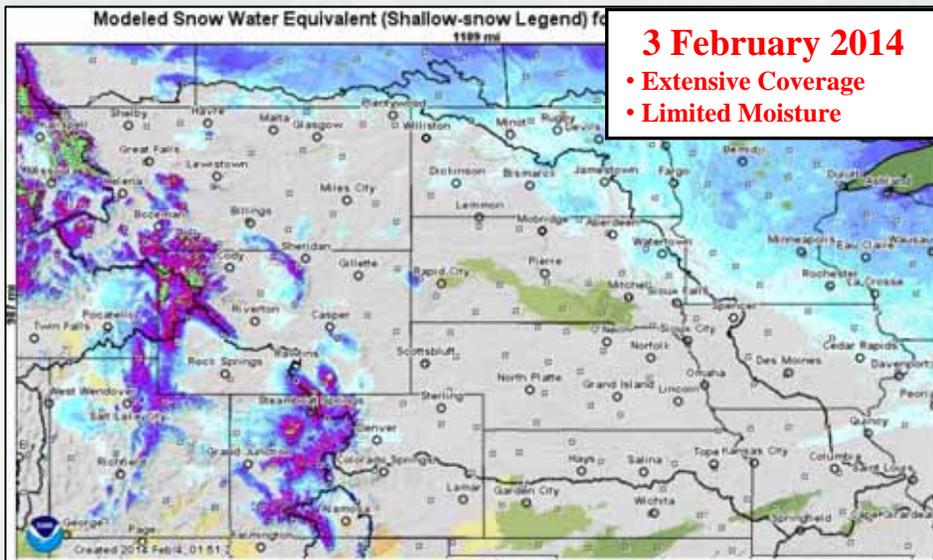
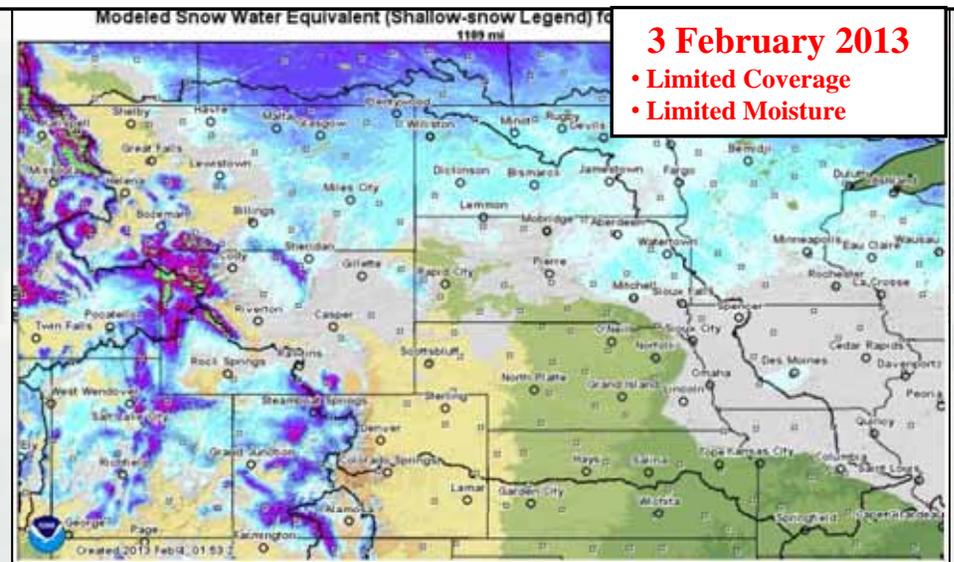
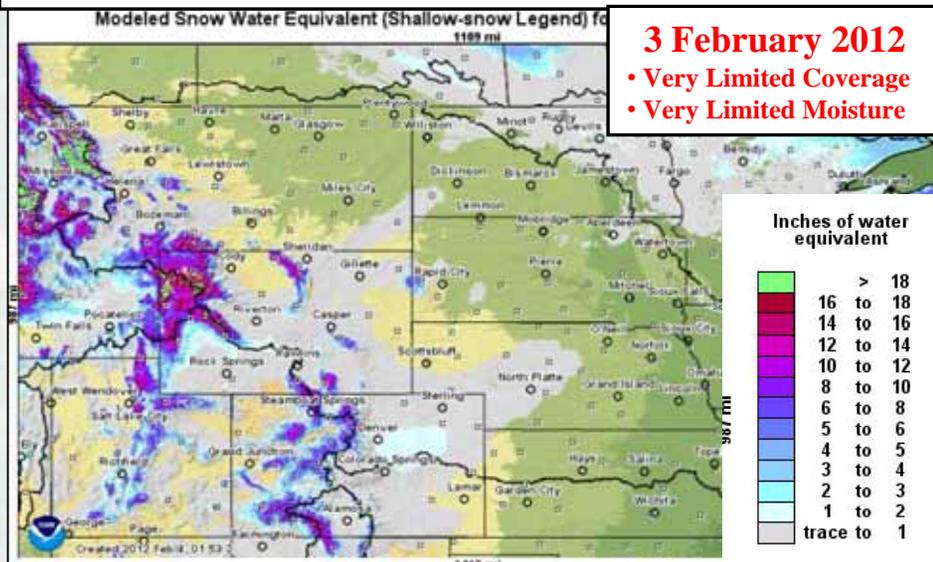
Statewide Precipitation Ranks
January–December 2014
Period: 1895–2014



NOAA Outlooks for 2015 Winter/Spring Missouri River Basin

- Climate Phase - El Niño chances dwindling with no apparent impacts on weather patterns ... El Niño Southern Oscillation (ENSO)-Neutral
- Soil moisture - generally wetter in the upper Missouri River Basin and drier in the lower Missouri River Basin (and eastern Dakotas).
- Drought Outlook - CPC seasonal drought outlook shows little change in the basin.
- Temperature - chances leaning towards above average in the upper basin; below average signal for Kansas, SW Nebraska and Eastern Colorado.
- Precipitation – above normal signal in Colorado, SE Wyoming, SW Nebraska and western KS; no signal elsewhere in Missouri River Basin.

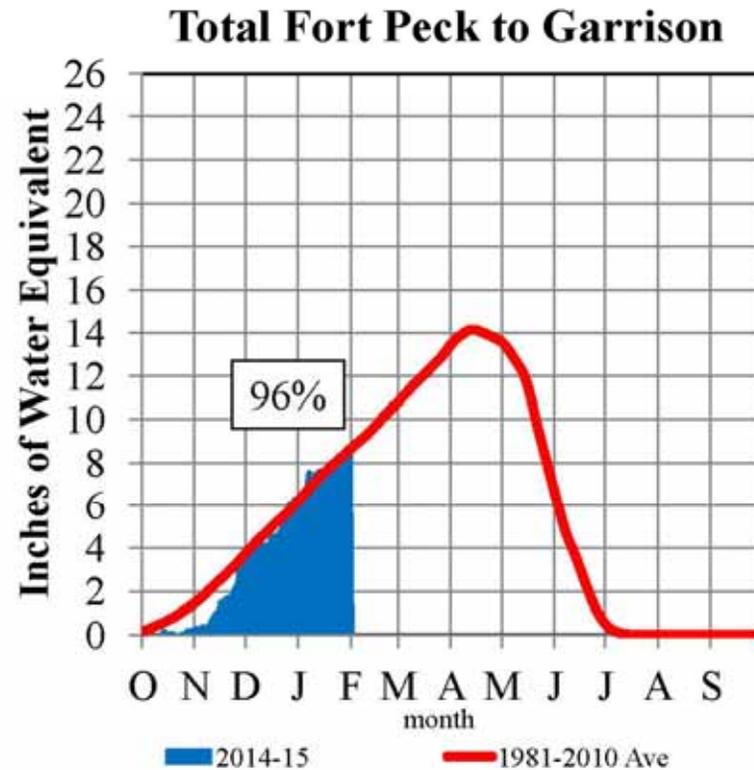
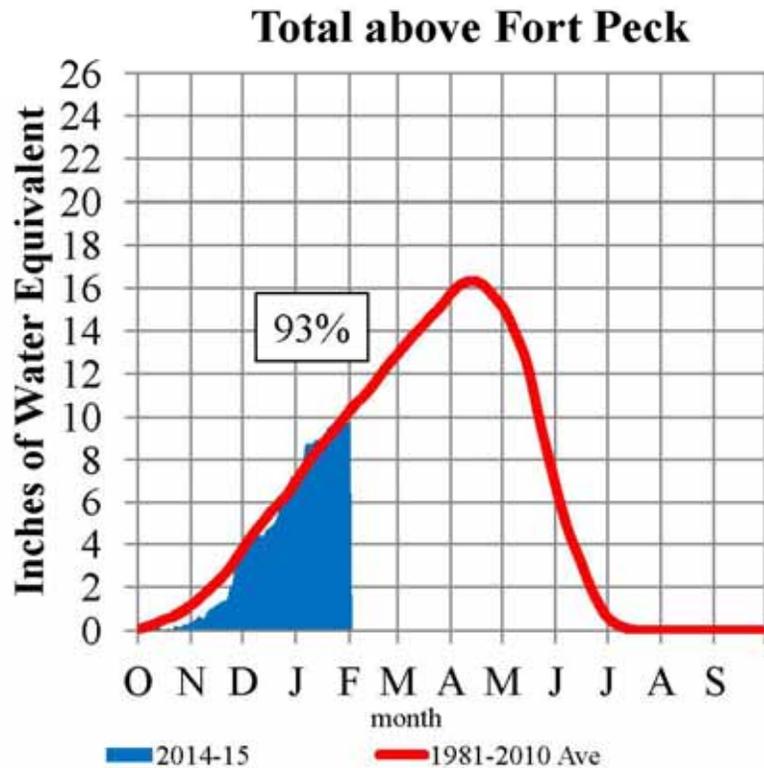
Plains Snowpack (comparison of last 4 years)



Source: National Weather Service NOHRSC
(National Operational Hydrologic Remote Sensing Center)

Missouri River Basin Mountain Snowpack Water Content

February 1, 2015

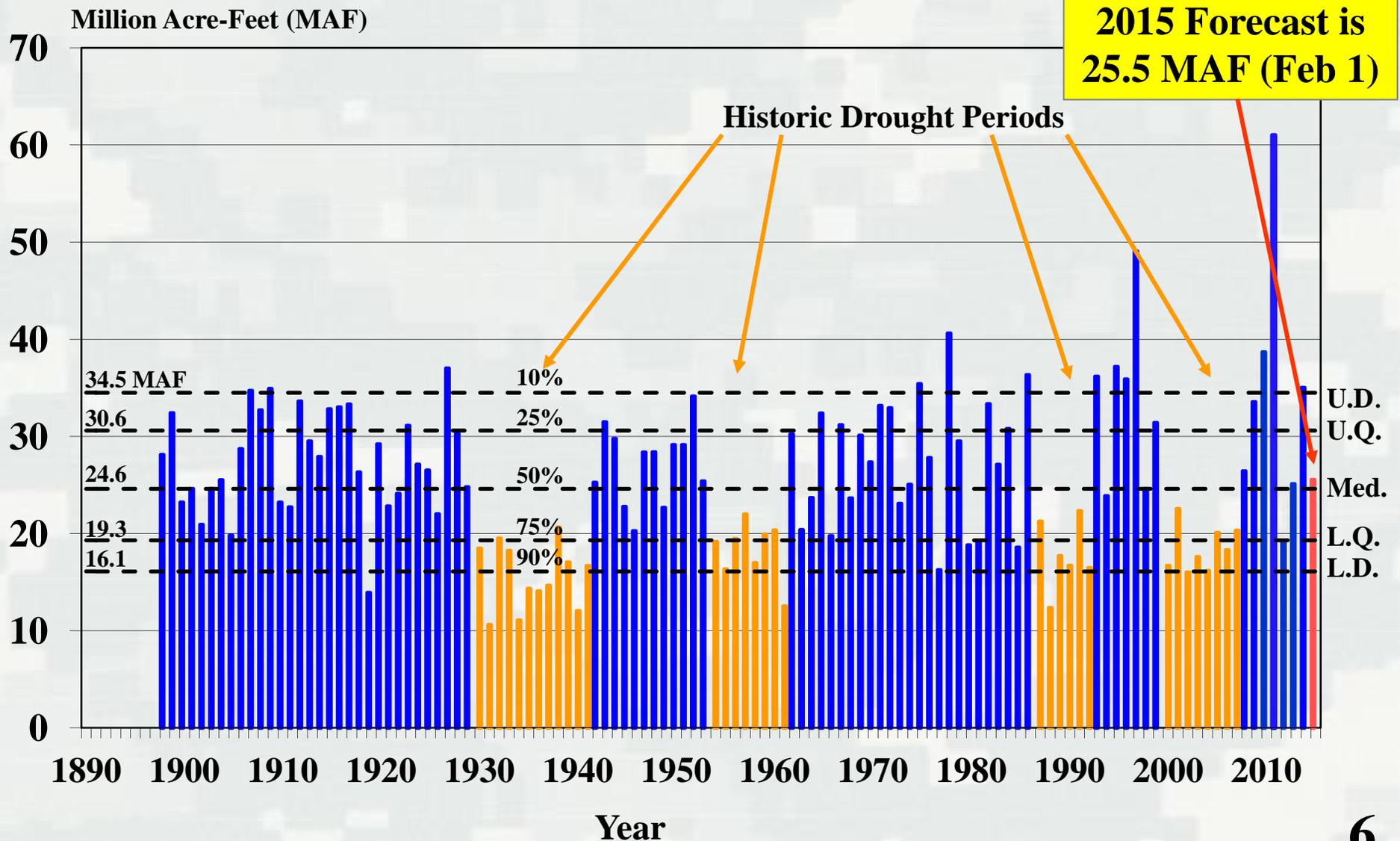


The Missouri River Basin mountain snowpack normally peaks near April 15.
By February 1, normally 64% of the peak has accumulated.

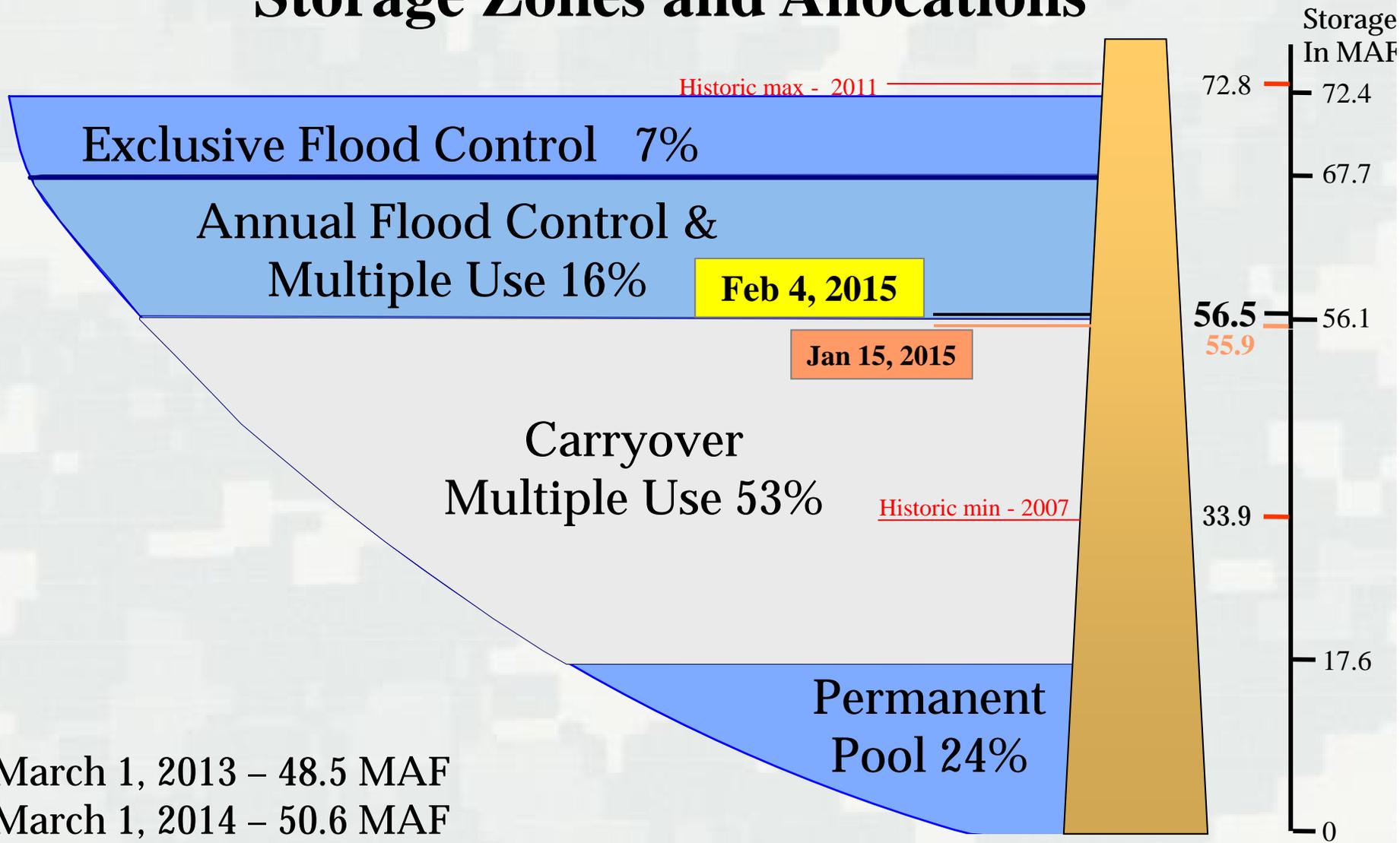
Source: USDA – Natural Resource Conservation Service

2014 Peaks – 132% and 140%

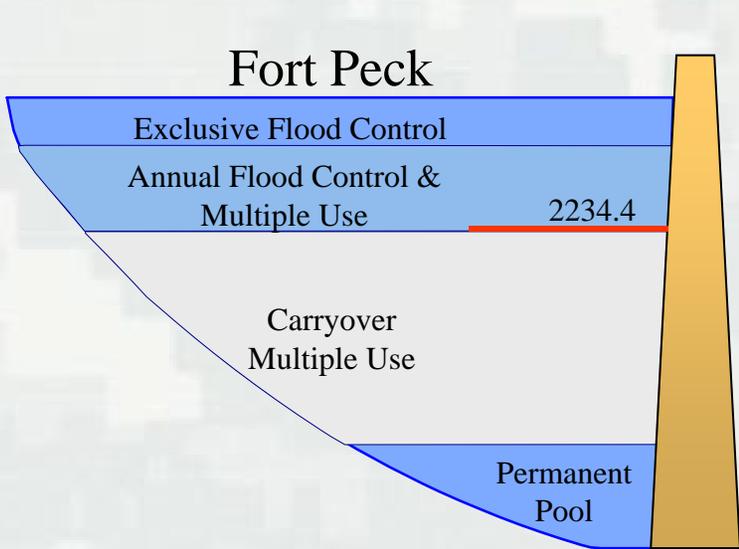
Missouri River Mainstem System Annual Runoff above Sioux City, Iowa



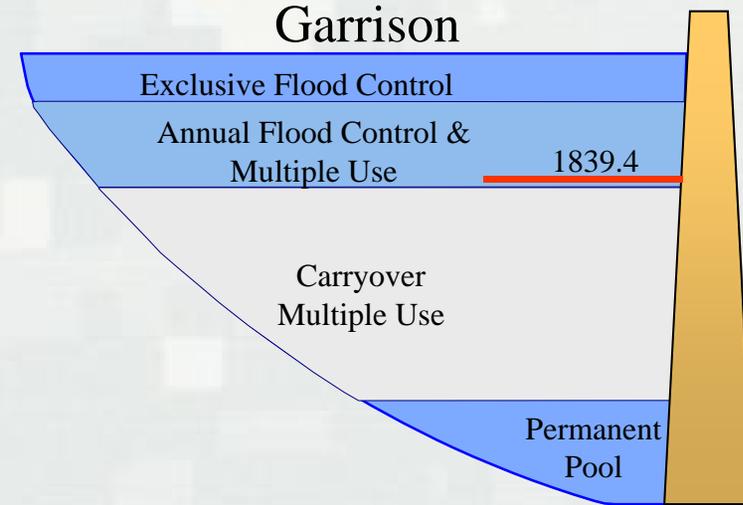
Missouri River Mainstem System Storage Zones and Allocations



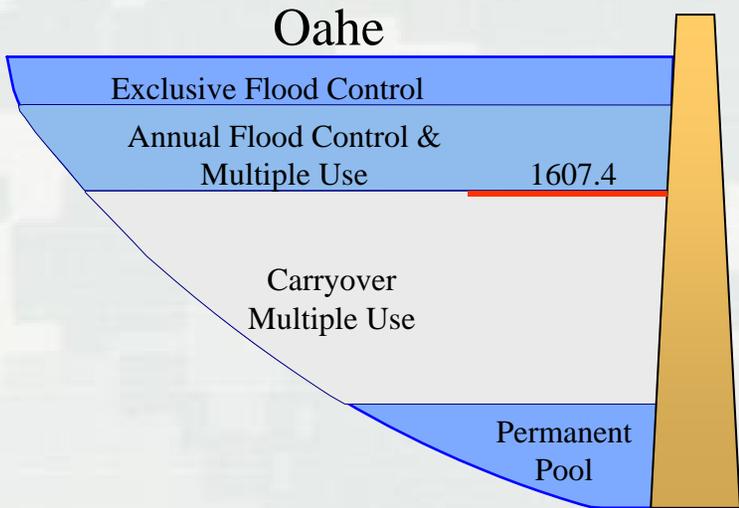
Current Reservoir Levels – February 4, 2015



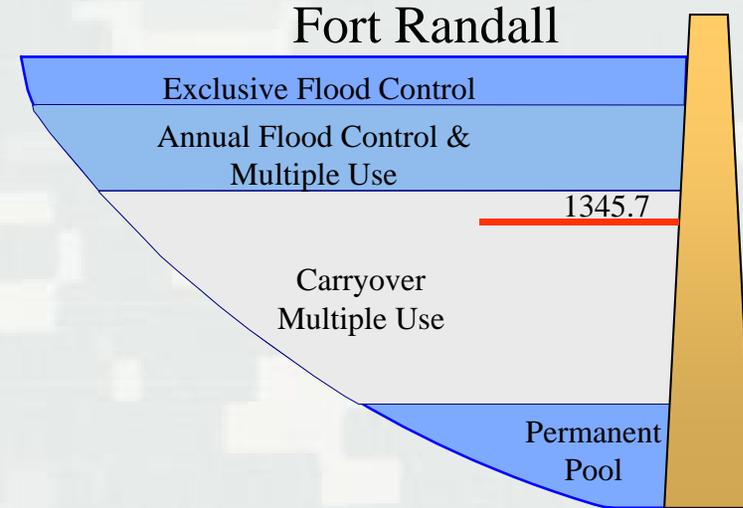
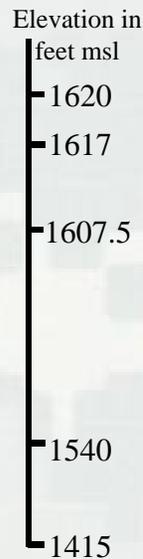
0.4 feet above base of Flood Control zone



1.9 feet above base of Flood Control zone



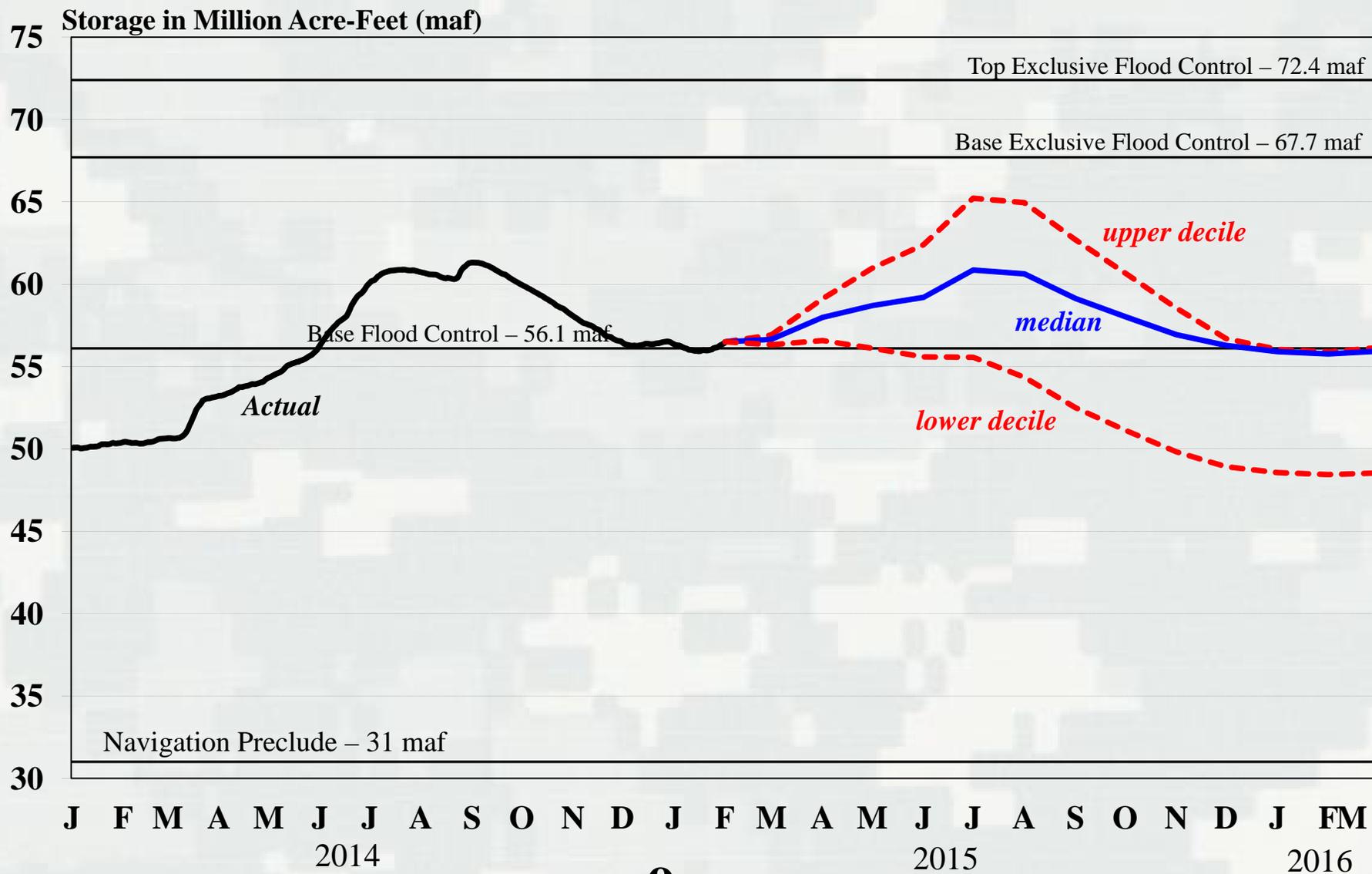
0.1 feet below base of Flood Control zone



4.3 feet below base of Flood Control zone



System Storage February 1st Forecast



Planned Operation for 2015

- 2015 Runoff Forecast (Feb 1) = 25.5 MAF (101% of normal)
- All stored 2014 flood waters have been evacuated
- Near the base of the Annual Flood Control zone at the start of the 2015 runoff season
- Navigation flow support (first half of season) based on March 15 system storage check
 - ▶ Full service flow support
 - 31,000 cfs at Sioux City and Omaha
 - 37,000 cfs at Nebraska City
 - 41,000 cfs at Kansas City
 - ▶ Season begins April 1 at mouth
- Navigation flow support and season length (second half of season) based on July 1 system storage check

Planned Operation for 2015 (cont'd)

Based on our Feb 1 monthly studies

▪ Flow support

- ▶ Basic (most likely) – full service for the entire season
- ▶ Lower Basic – full service for the 1st half; 1500 cfs below full service for 2nd half
- ▶ Upper Basic – full service for the 1st half; flood evacuation releases during 2nd half

▪ Season Length

- ▶ Basic (most likely) – full season (December 1 at mouth)
- ▶ Lower Basic – full season
- ▶ Upper Basic – 10-day extension

▪ Season Open Dates

- ▶ Sioux City, IA – March 23
- ▶ Omaha, NE – March 25
- ▶ Kansas City, MO – March 28
- ▶ Mouth of Missouri – April 1

Planned Operation for 2015 (cont'd)

- No Gavins Point bimodal spring pulse in 2015
- Favor Fort Peck and Oahe during the forage fish spawn if inflows are not sufficient to keep all three upper reservoirs rising
- Public meetings scheduled April 7-11, 2015
- Monthly calls with Congressional delegations, Tribes, states, local officials and media
 - ▶ Audio file available on our website or as podcast on iTunes

Thank You!

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<http://www.nwd-mr.usace.army.mil/rcc/>

Or Google “Corps Missouri River”



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