

Missouri River Basin Water Management

Missouri River Navigators Meeting

Kansas City, Missouri
February 10, 2016

Kevin Grode, P.E.

Reservoir Regulation Team Lead
Missouri River Basin Water Management
Northwestern Division



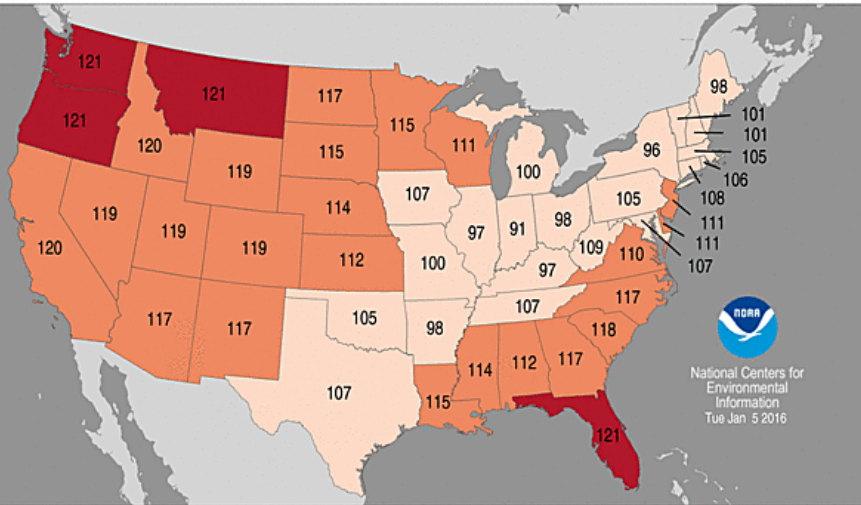
US Army Corps of Engineers
BUILDING STRONG



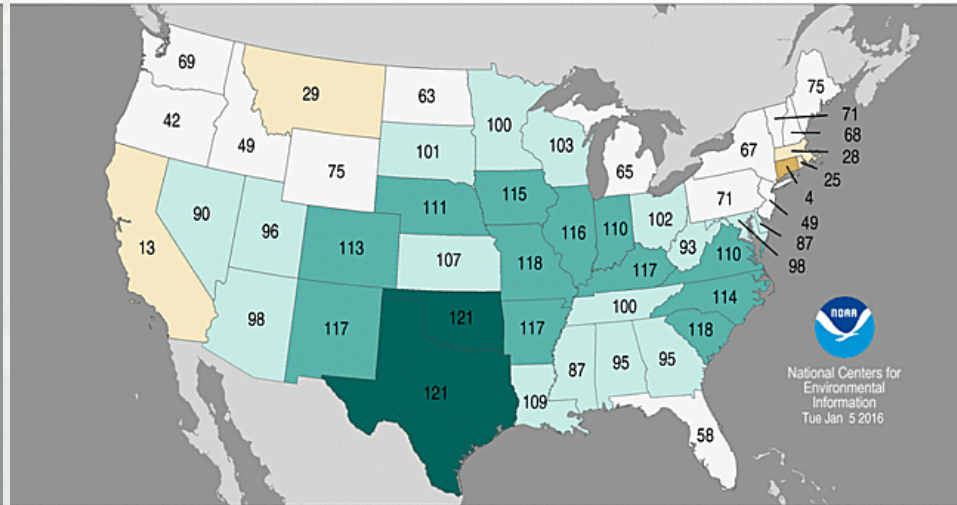
2015 – Climate Summary

Missouri River Basin

Statewide Average Temperature Ranks
January–December 2015
Period: 1895–2015



Statewide Precipitation Ranks
January–December 2015
Period: 1895–2015



Record Coldest (1) Much Below Average Below Average Near Average Above Average Much Above Average Record Warmest (121)

Record Driest (1) Much Below Average Below Average Near Average Above Average Much Above Average Record Wettest (121)

Very Warm

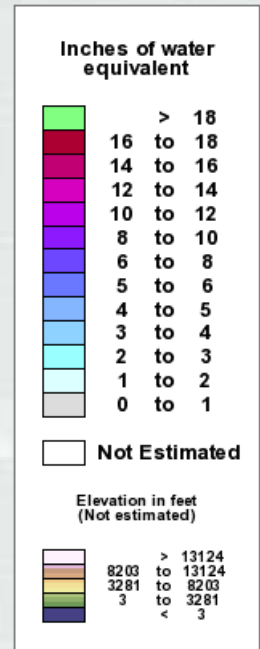
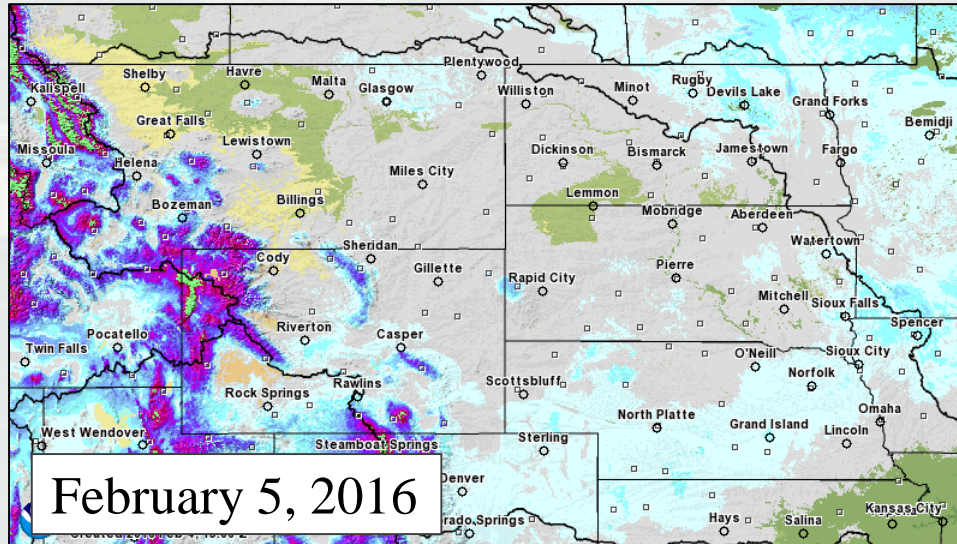
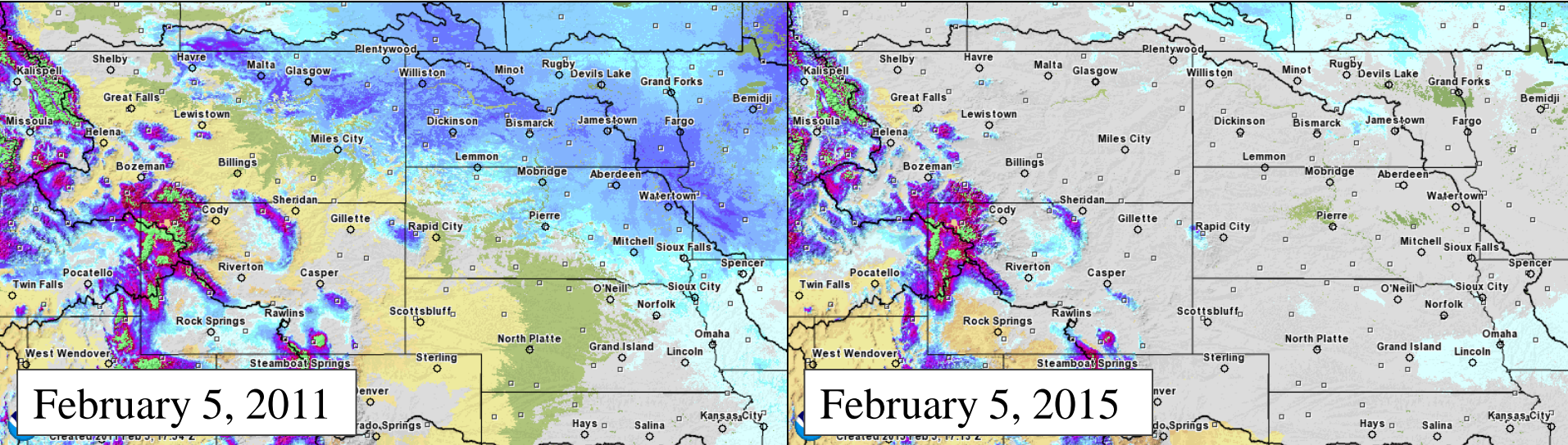
&

Mixed Precip

2015 upper basin* runoff = 25.8 MAF (102% of normal)

*above Sioux City, Iowa

Plains Snowpack

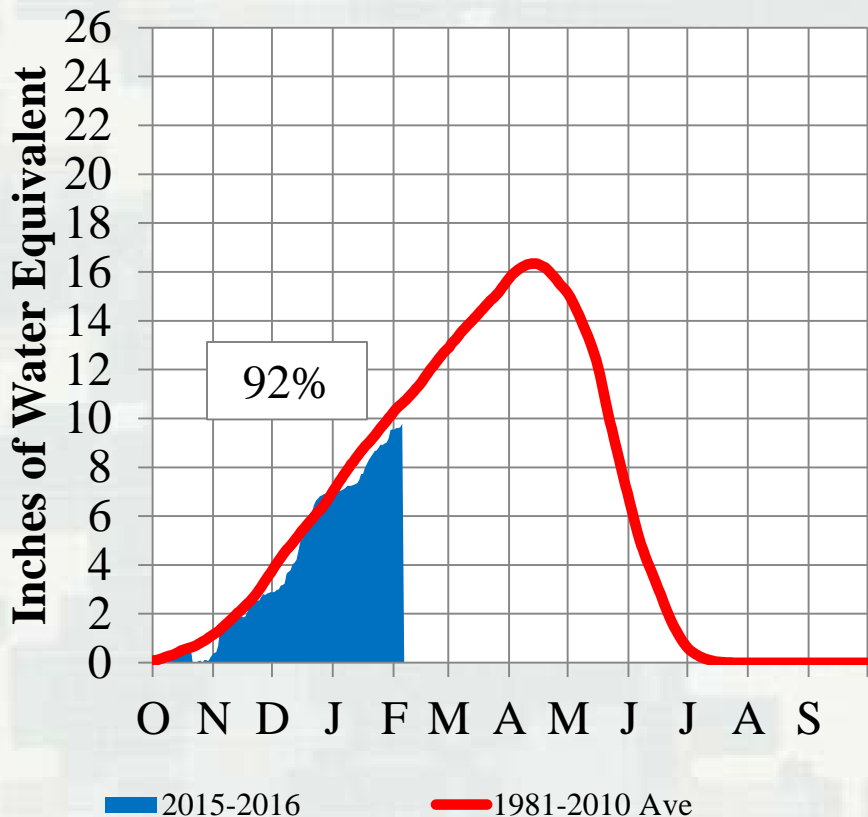


Missouri River Basin

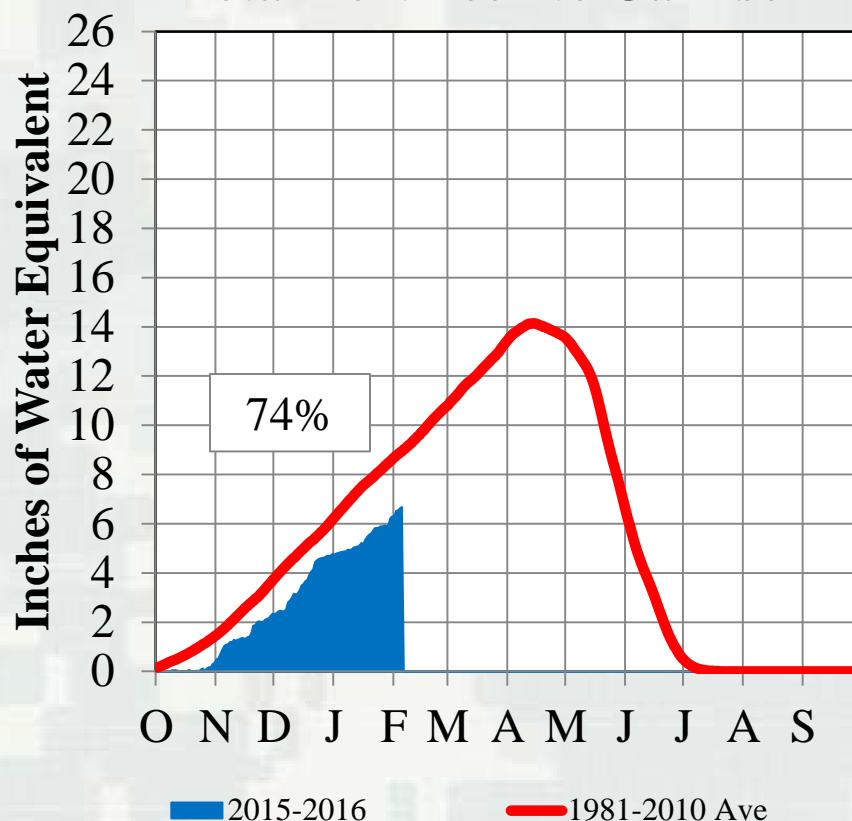
2015-16 Mountain Snowpack Water Content

February 5, 2016

Total above Fort Peck



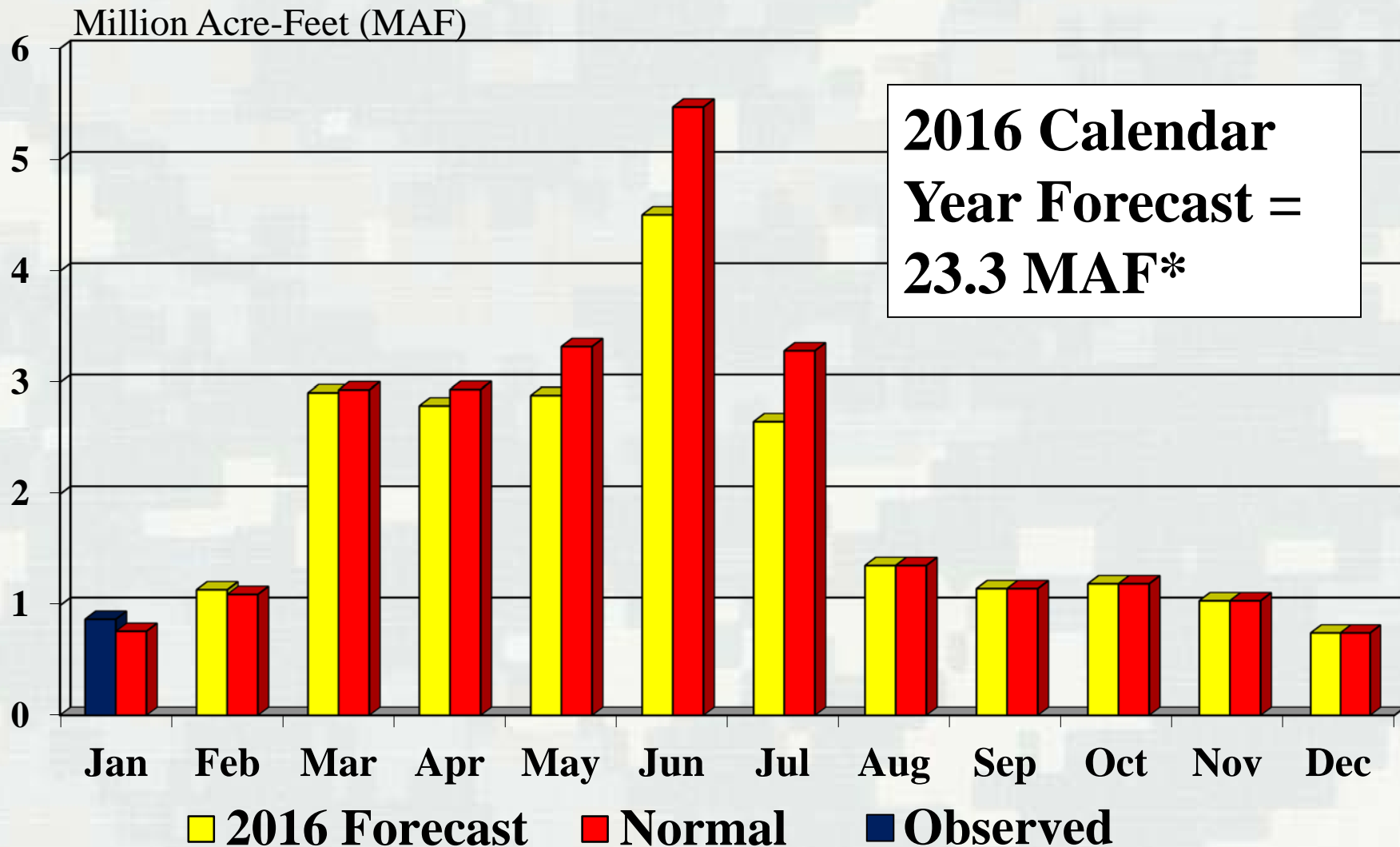
Total Fort Peck to Garrison



64% of normal peak accumulation has occurred by February 1.

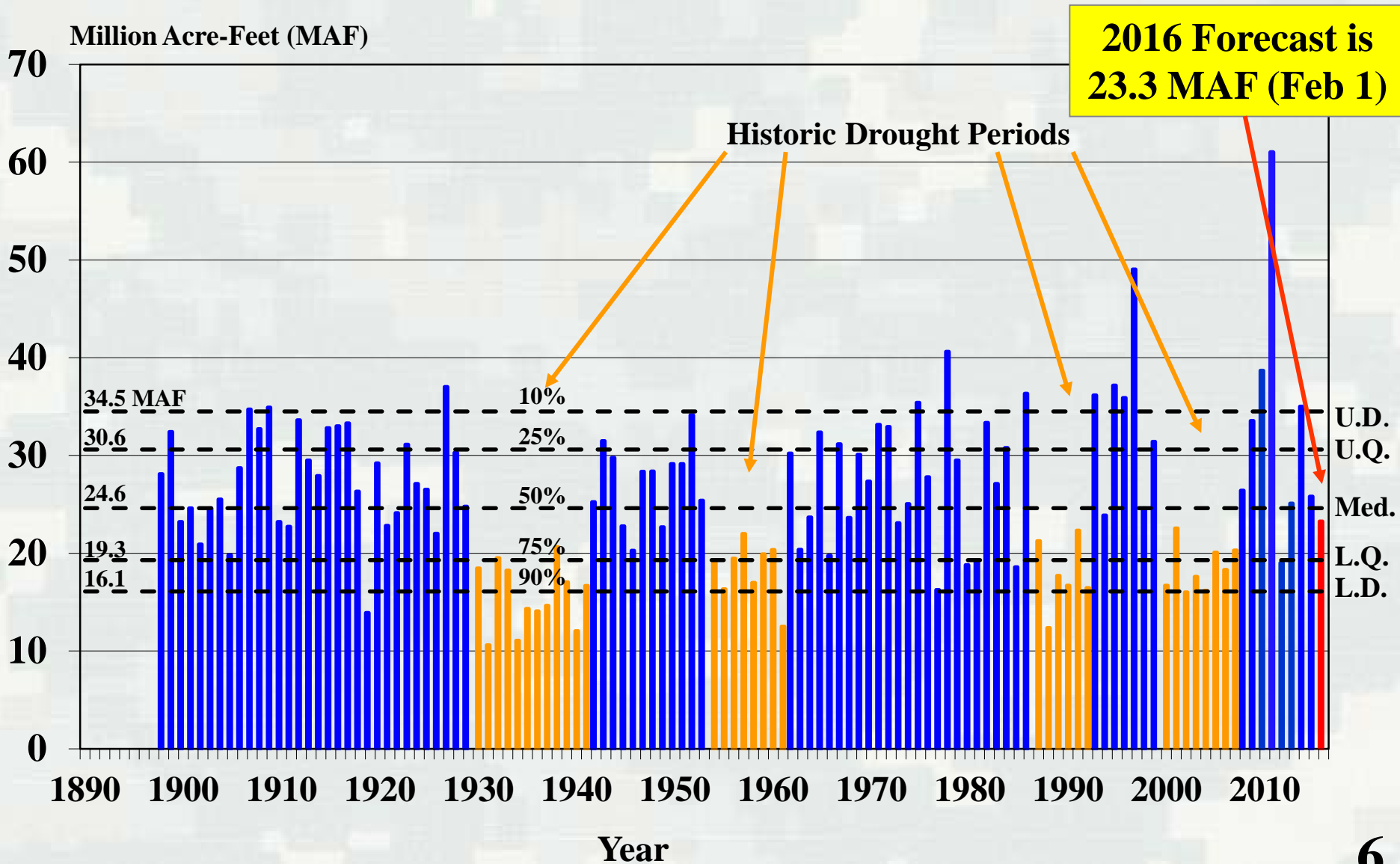
Missouri River Runoff above Sioux City, Iowa

2016 Forecast

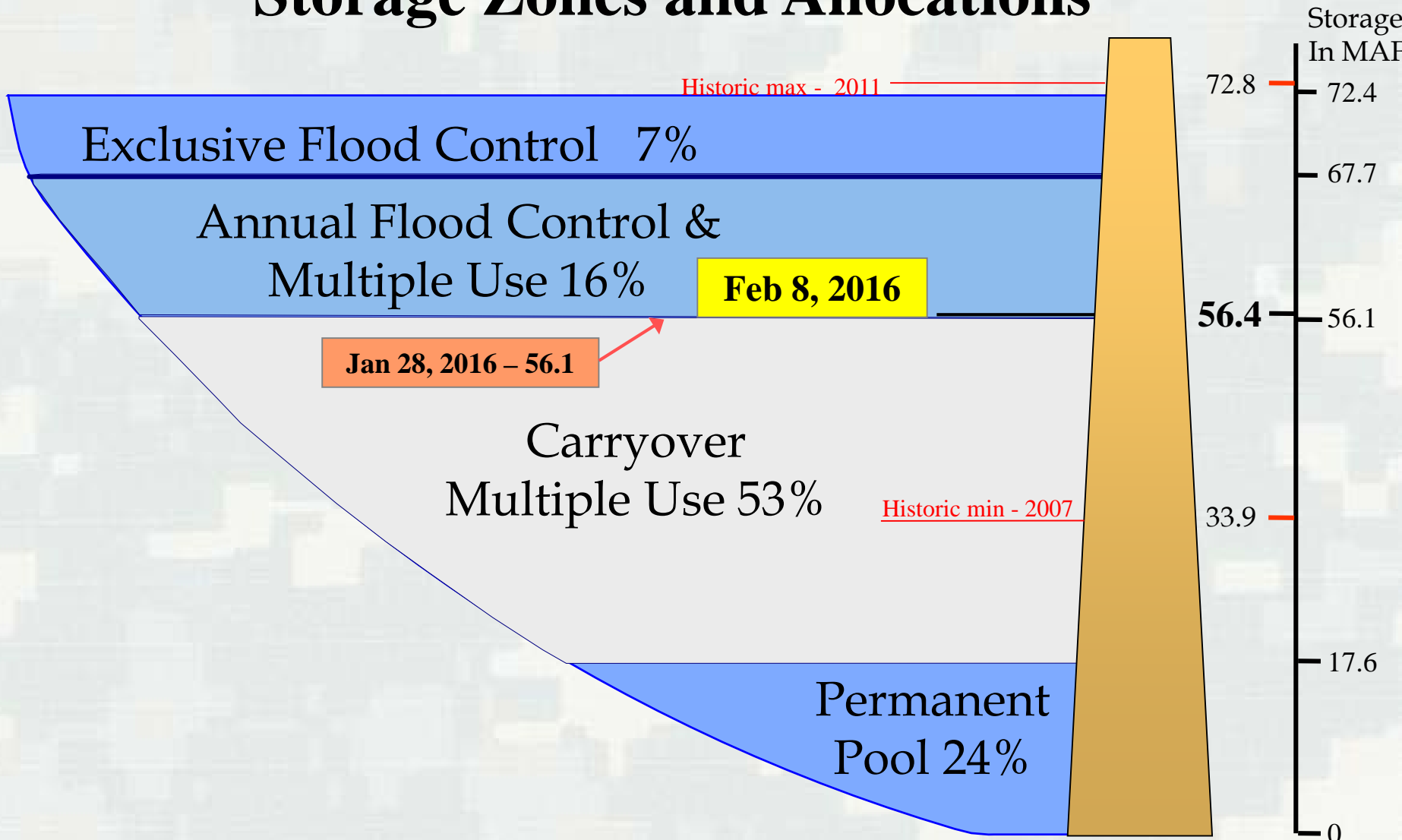


*Average runoff above Sioux City, IA = 25.4 MAF

Missouri River Mainstem System Annual Runoff above Sioux City, Iowa

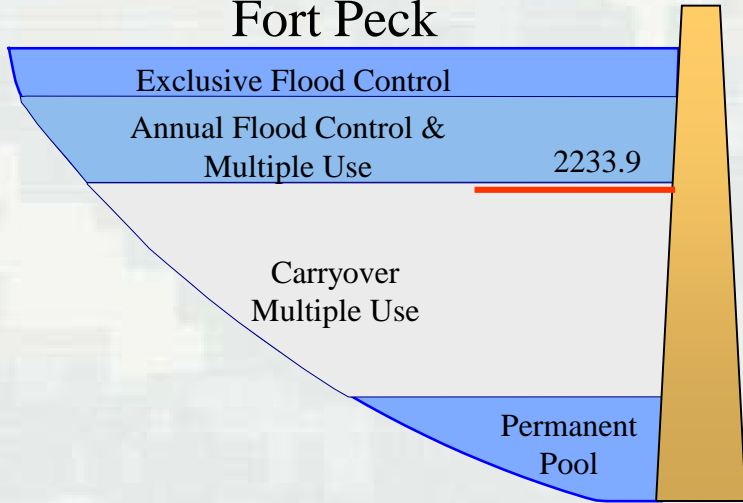


Missouri River Mainstem System Storage Zones and Allocations



Current Reservoir Levels – February 8, 2016

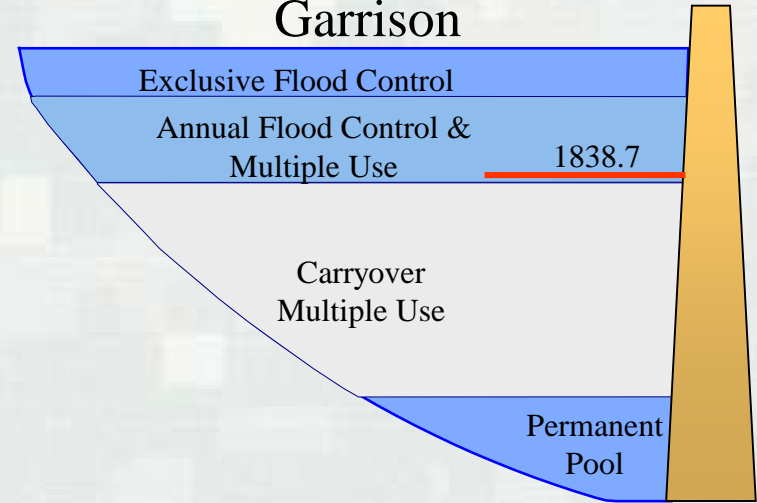
Fort Peck



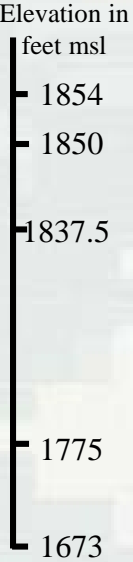
0.1 feet below base of Flood Control zone



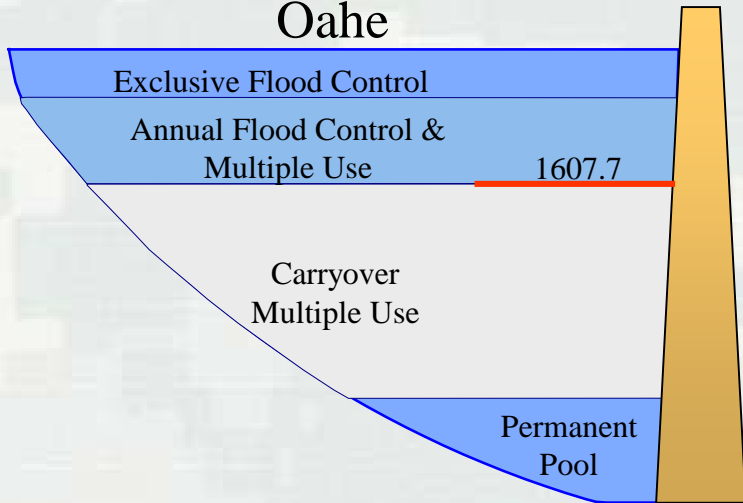
Garrison



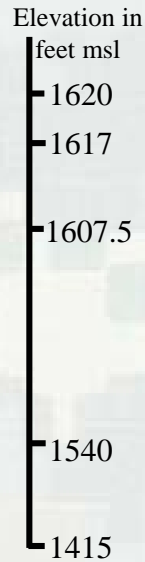
1.2 feet above base of Flood Control zone



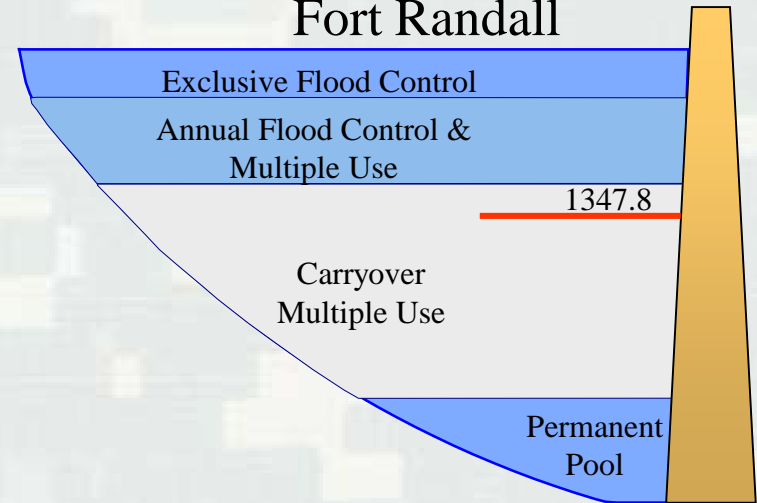
Oahe



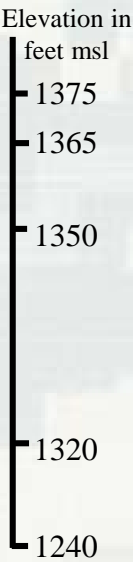
0.2 feet above base of Flood Control zone



Fort Randall

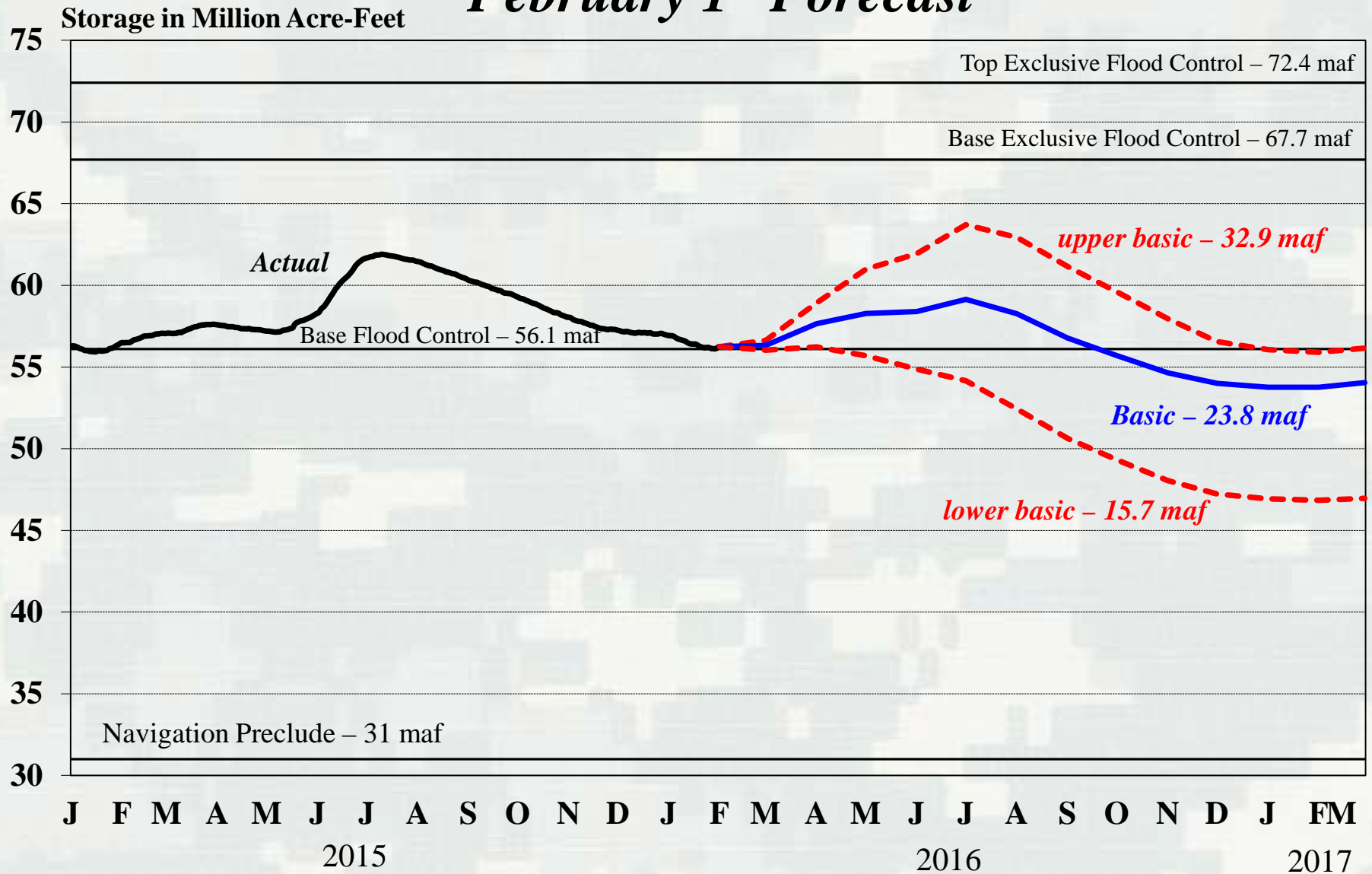


2.2 feet below base of Flood Control zone



System Storage

February 1st Forecast



Planned Operation for 2016

- 2016 Runoff Forecast (Feb 1) = 23.3 MAF (92% of average)
- All stored 2015 flood waters have been evacuated (Jan 28, 2016)
- Near the base of the Annual Flood Control zone at the start of the 2016 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 2016 (cont'd)

Based on our Feb 1 monthly studies

- **Navigation flow support**
 - ▶ Basic (most likely) – full service for the entire season
 - ▶ Lower Basic – full service for the 1st half; 2,300 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 2016 (cont'd)

- No Gavins Point bimodal spring pulse in 2016
- Favor Fort Peck and Garrison during the forage fish spawn if inflows are not sufficient to keep all three upper reservoirs rising
- Public meetings scheduled April 12-14, 2016
- Monthly calls with Congressional delegations, Tribes, states, local officials and media
 - ▶ Audio file available on our website or as podcast on iTunes
 - ▶ Next one is scheduled for Friday, March 4th

Thank You!

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

Or Google “Corps Missouri River”



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