MISSOURI RAC

March 06, 2023 Atchison, Kansas

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2019/21 PL84-99 EFFORTS



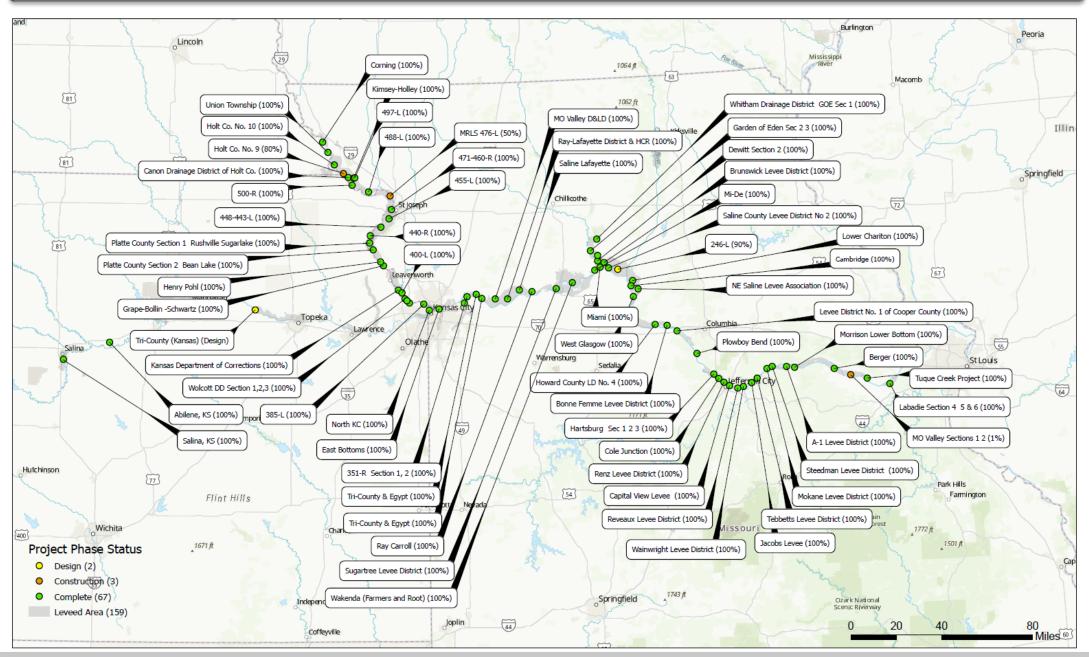
- Request for Assistance (RFAs)
 - 136
- 2. Project Information Report (PIRs)
 - 88
- 3. Construction Contracts
 - 59
- 4. Costs
 - Construction Contracts \$44.7M
 - PIR \$3.5M
 - E&D \$4.2M
 - S&A \$2.4M
- 5. Ongoing Efforts
 - Holt 9 Construction
 - MRLS L476 Construction
 - Mo Valley (Marthasville) Construction
 - Tri County (KS) E&D
 - MRLS L246 E&D



U.S.ARMY

2019/21 PL84-99 PROGRAM MAP







Spring Flood Outlook



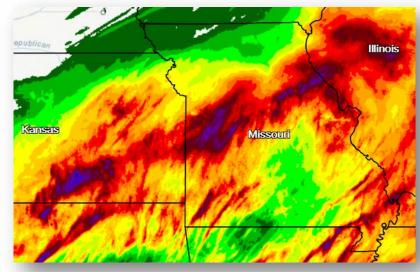
- Soil conditions are generally drier than average throughout the basin with 80% of Kansas in drought while only a few areas in Missouri are classified as "abnormally dry".
- NWK Reservoir Status ~99% flood control storage capacity available.
- A healthy plains snowpack exists in SD and ND but is not expected to cause flooding issues currently.
- Mountain Snowpack is trending about average for this time of year.
- National Weather Service calling for generally below normal chance of flooding this spring
- Long range forecasts do indicate minor to moderate flooding likely along the MO

River and tributaries east of Kansas City.

"Flood Season" is year-round:

Most likely driver for flooding in 2023 will be localized or widespread heavy rainfall events.

Flooding can, and does occur, any time of the year within the MO River basin.

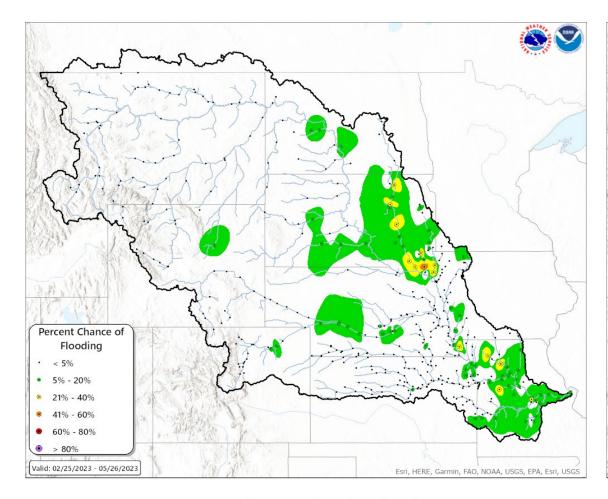


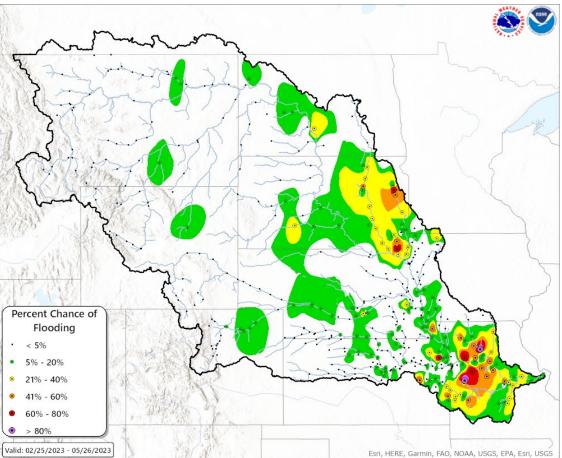
48hr Precip March, 18 2021



Spring Flood Outlook







Percent Chance of Major Flooding

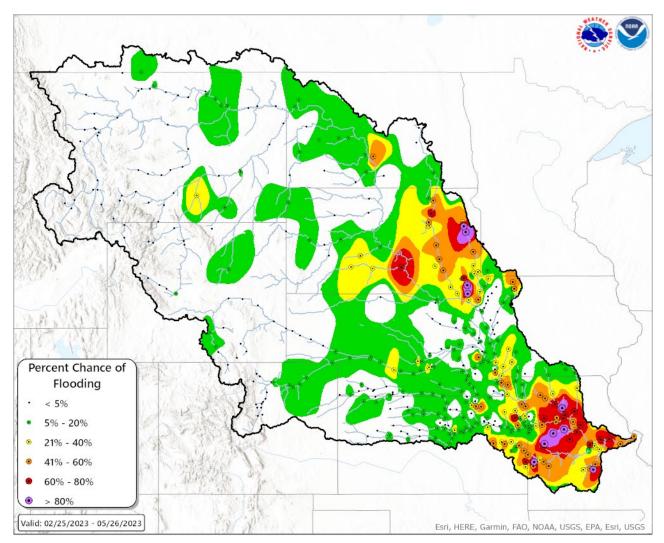
Percent Chance of Moderate Flooding

https://www.weather.gov/mbrfc/ensemble



Spring Flood Outlook





Percent Chance of Minor Flooding

Kansas:

Stranger Creek will experience moderate flooding, while the Marias des Cygnes and Little Osage River are likely to see minor flooding.

Missouri:

Moderate flooding is likely along the Grand, Crooked, Blackwater, and Tarkio Rivers, as well as along Wakenda and Big Creeks. Minor flooding is projected for the Chariton, Lamine, Moreau, Big Piney, Gasconade, Little Osage, Marmaton, Sac, South Grand, and Platte River. Minor flooding is also expected along the Moniteau and Petite Saline Creeks.

The Missouri River between Kansas City and the mouth could see minor flooding at a location or two during the next 90 days.



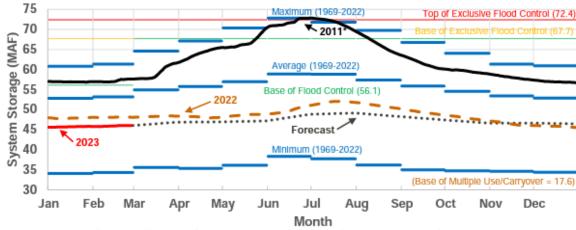
MISSOURI RIVER BASIN WEEKLY UPDATE 28 FEBRUARY 2023



Mainstem Reservoir Status

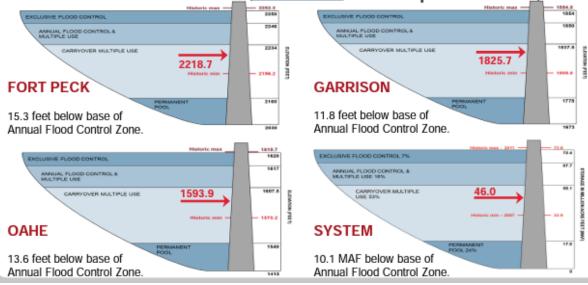
- System storage is 46.0 MAF, the same storage as last week (upper right). For the February
 monthly study with forecasted pool levels and releases for each mainstem project, <u>click</u>
 <u>here</u>.
- Gavins Point releases are at the winter release rate of 12,000 cfs. The release schedule for Gavins Point is provided in our daily forecast (click here).
- Mountain snowpack is near average for both the reaches above Fort Peck (104% of average) and from Fort Peck to Garrison (102% of average) as of February 27 (click here).
- Good plains snow coverage still exists across eastern South Dakota and much of North Dakota (lower right). Current snow water equivalent values in this area are above average to much above average for this time of year. No significant melt is expected in the upcoming week due to cooler temperatures moving into the Basin.
- Refer to the 3-Week Forecast (<u>click here</u>) for the most up-to-date System information pool levels, inflows, and releases.

System Storage Comparison

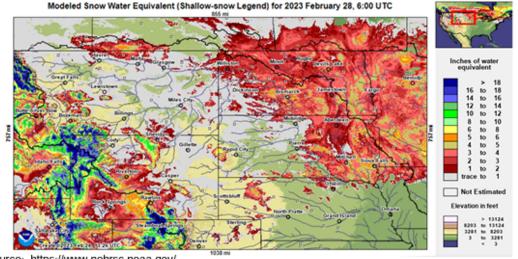


'In January 2011, the Base of Flood Control was 56.8 MAF, and the Top of Exclusive Flood Control was 73.1 MAF

Current Reservoir Levels (Click Here for Comparison Plots)



NOAA NOHRSC: Feb 28 Modeled Snow Water Equivalent



Source: https://www.nohrsc.noaa.gov/



Information and Data Sources



NWS Outlook Schedule:

- First published 23 FEB 2023
- Next update 09 MAR 2023

NWS Spring Flood Outlook Data Sources

- Spring Hydrologic Outlook
 - https://storymaps.arcgis.com/stories/f3adeb27d23e417a90c84b2987ae83cf
- MBRFC Ensemble Stream Flow Outlook
 - https://www.weather.gov/mbrfc/ensemble
- Spring Flood Outlook Narrative
 - https://www.weather.gov/mbrfc/springfloodoutlook2023 text

USACE Water Management

- NWD Water Management (Mainstern Reservoirs)
 - https://www.nwd.usace.army.mil/mrwm/
- NWK Water Management (Kansas City District Reservoirs)
 - https://www.nwk.usace.army.mil/Locations/Water-Management/