MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Missouri Water Resources Center

Small Rivers and Streams Flood Conditions Report
June 5, 2019

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Small Rivers and Streams Forecast for Moderate to Major Flood Levels in Missouri

- Precipitation in the state through Saturday morning may range from 0.01 to 0.25 inches in far-northern Missouri, 0.5 to 1.25 inches in the middle latitudes of the state may receive 0. 5 to 1.5 inches, and southern Missouri may receive one to 2.5 inches. For the next seven days, northern Missouri precipitation may range from approximately 0.25 to 1.25 inches increasing southeastward to 2.5 to three inches in southeast Missouri.

- River forecasts for the small rivers include past precipitation and only precipitation forecast to occur in the next 24 hours. The National Oceanic and Atmospheric Administration is forecasting runoff amounts from that precipitation to create moderate flooding in a few small rivers and streams in the northern and central portions of the state (in addition to the Missouri and Mississippi rivers).

- Daily river forecasts released during the next several days may continue to present forecasts that change from day to day with the variable amounts of notable precipitation sometimes occurring daily.

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Tributary Backwater Increasing

- When water surface elevations on the Missouri and Mississippi rivers increase, their influence near or at the mouths of tributaries also increases by way of creating more substantial backwater when the tributary runoff drains out, while the larger river remains at higher elevations allowing it to move water farther into the tributary.

- Typically, smaller drainage basins of tributary waterways remove generated runoff much faster than the larger drainage basins. As a result, they may create a noticeable difference in river elevations between the tributaries and the receiving waters; in this case the Missouri and Mississippi rivers. An indicator of this is the slope of hydrographs for gages upstream, on tributaries and near their basin outlet. Under the influence of the much larger rivers, slopes (feet per day) of those tributary hydrographs will be essentially the same as that of the larger receiving water instead of rising and falling at faster rates than those larger rivers.

- We have not been emphasizing flooding at river gages on a couple of tributaries obviously influenced by the sustained higher stages on the Mississippi River. Those locations include: Cuivre River at Old Monroe and three gages on the Meramec River near Arnold, at Fenton and at Valley Park. Both of those tributaries have a gage upstream of those listed here, making the difference in slopes revealing of backwater effects.

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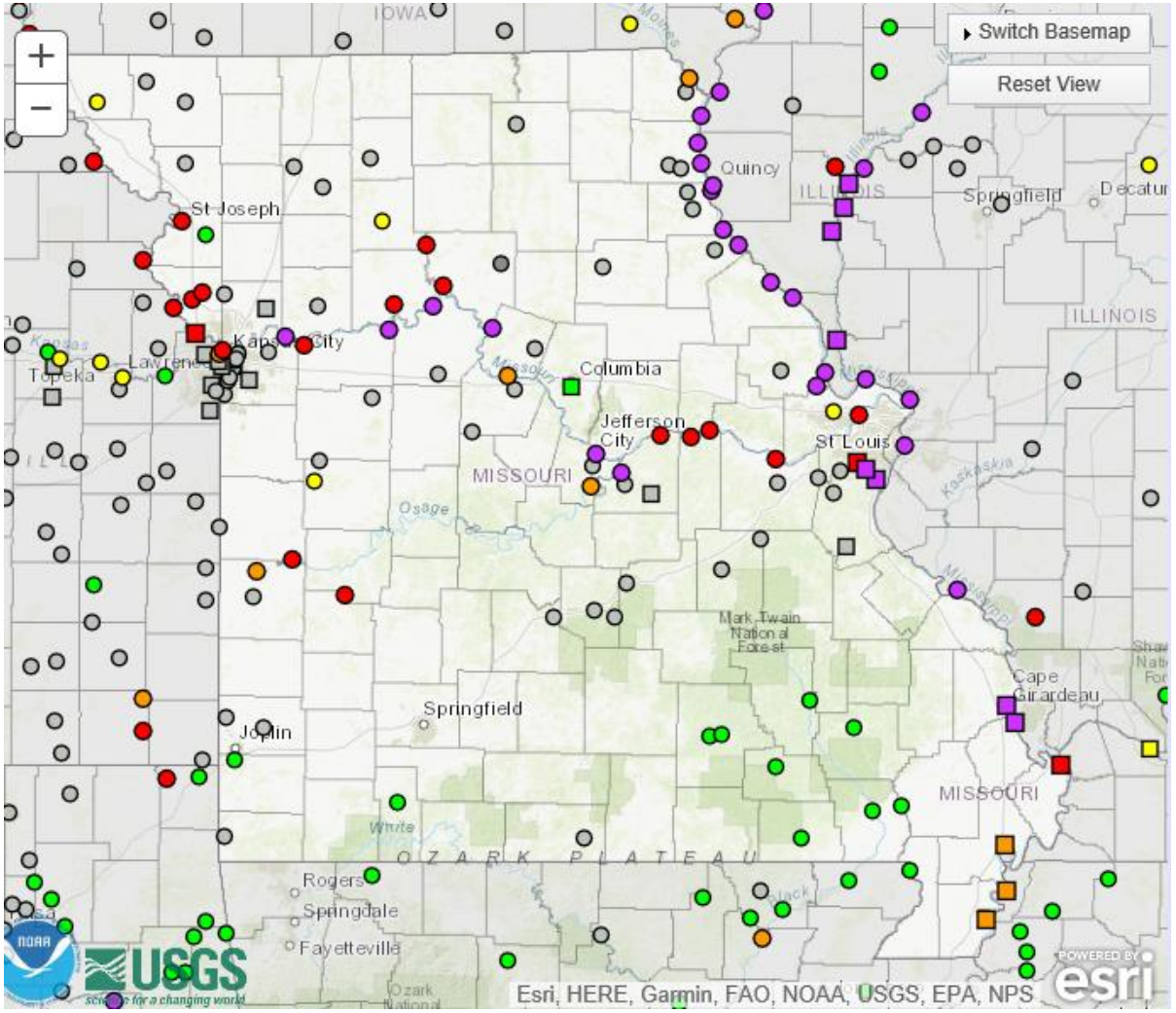
River Conditions Forecast



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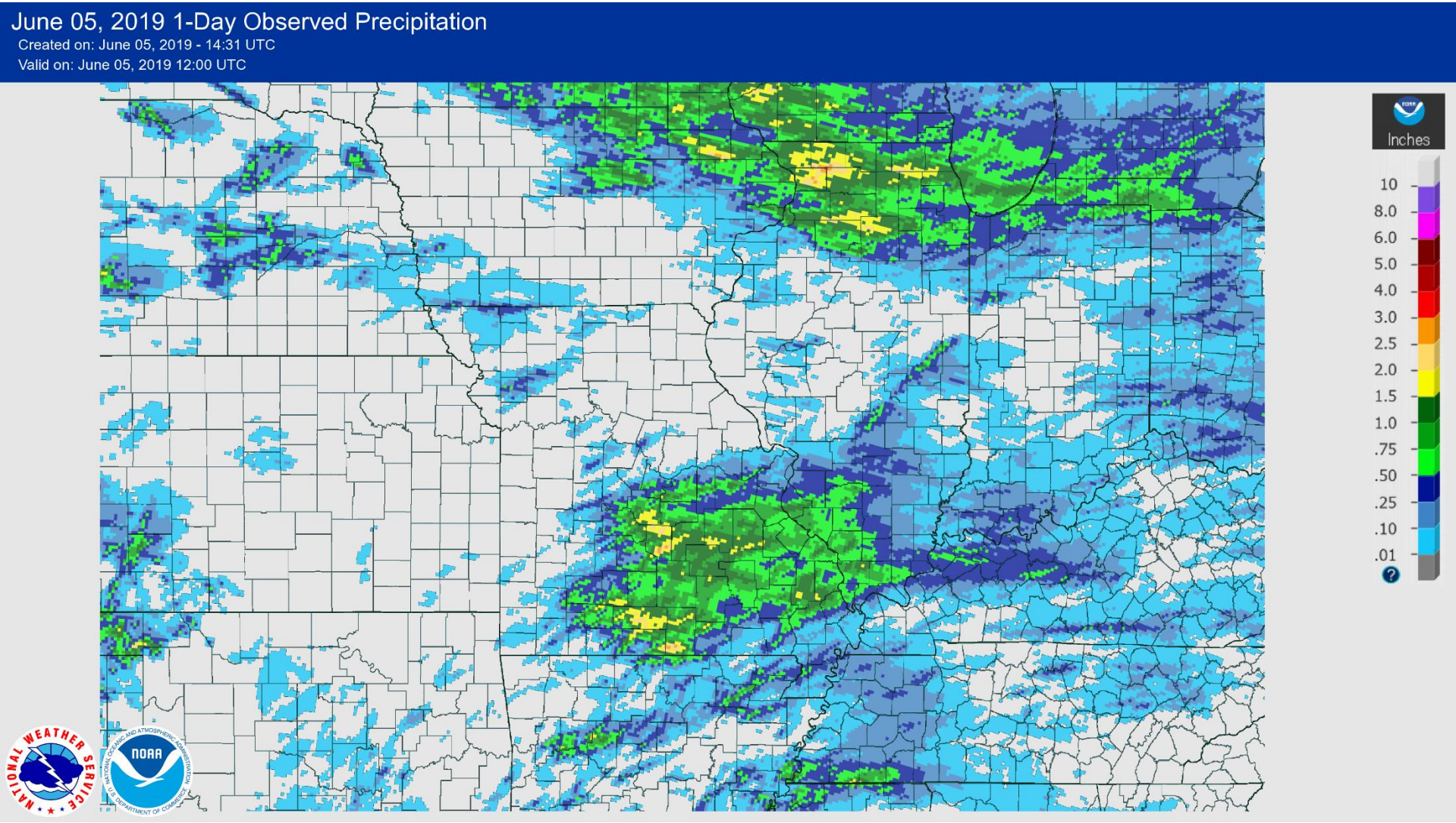
24-hour Observed Precipitation



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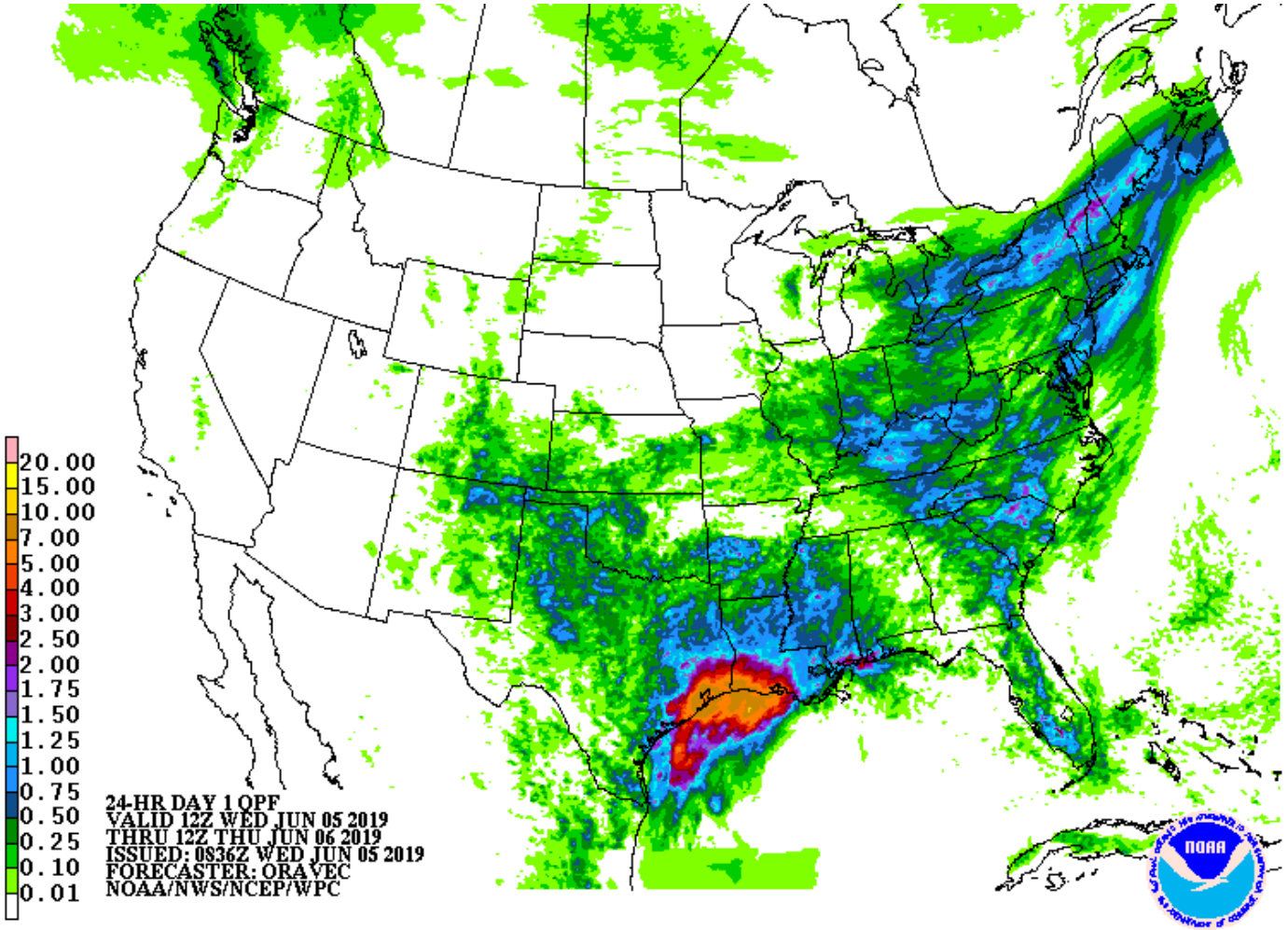
One-day Total Quantitative Precipitation Forecast (QPF)



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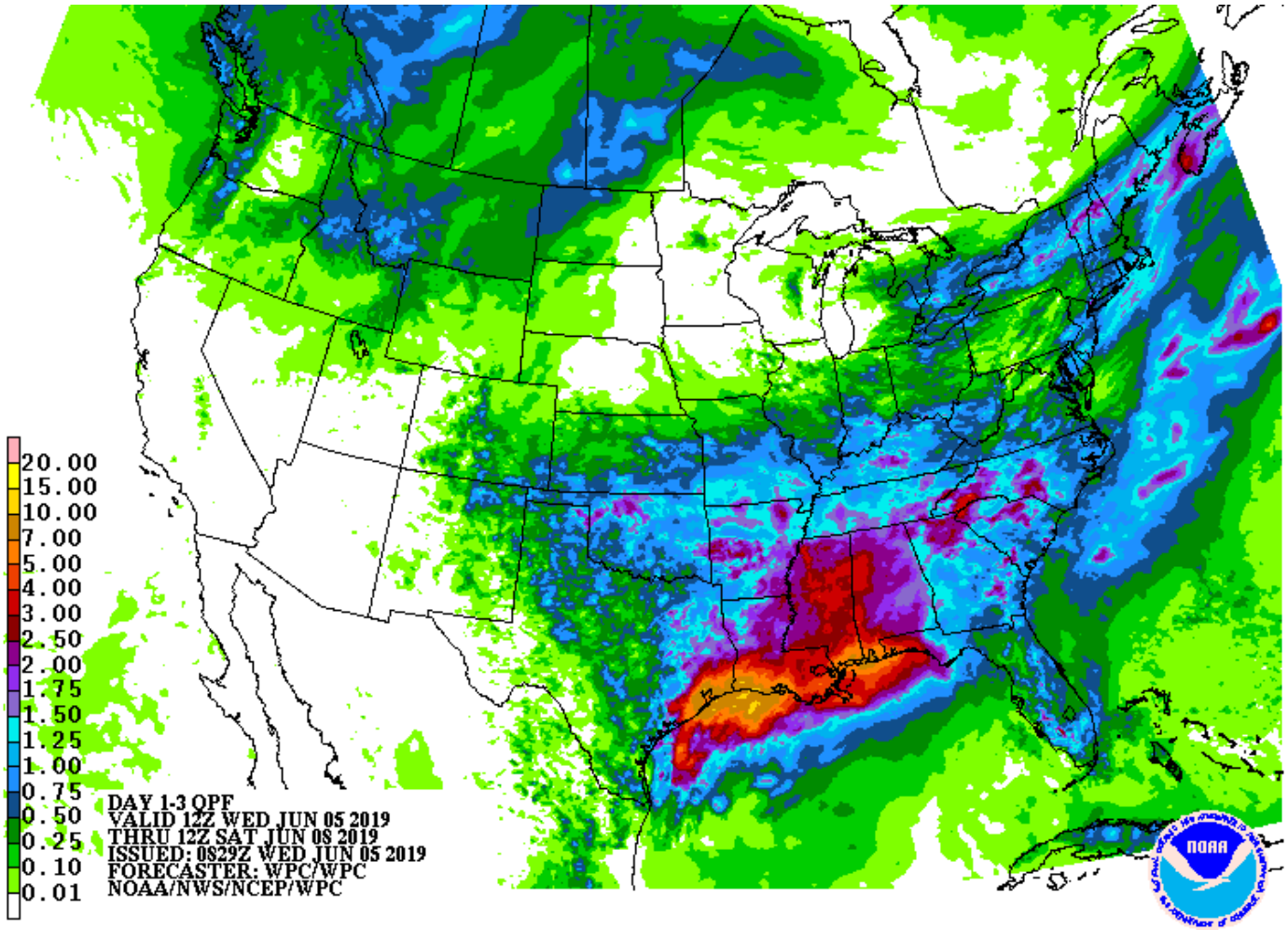
Three-day Total Quantitative Precipitation Forecast (QPF)



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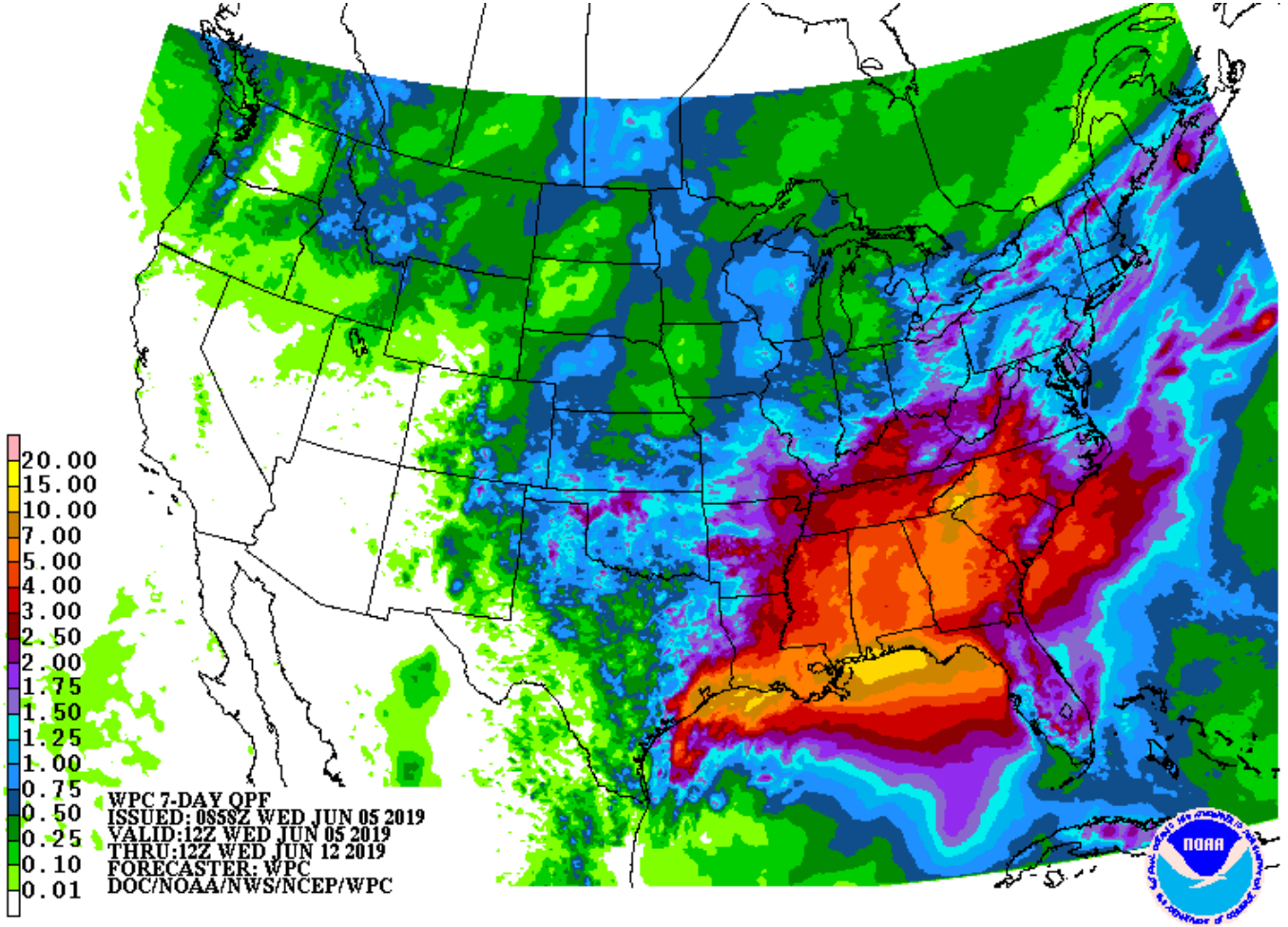
Seven-day Total Quantitative Precipitation Forecast (QPF)



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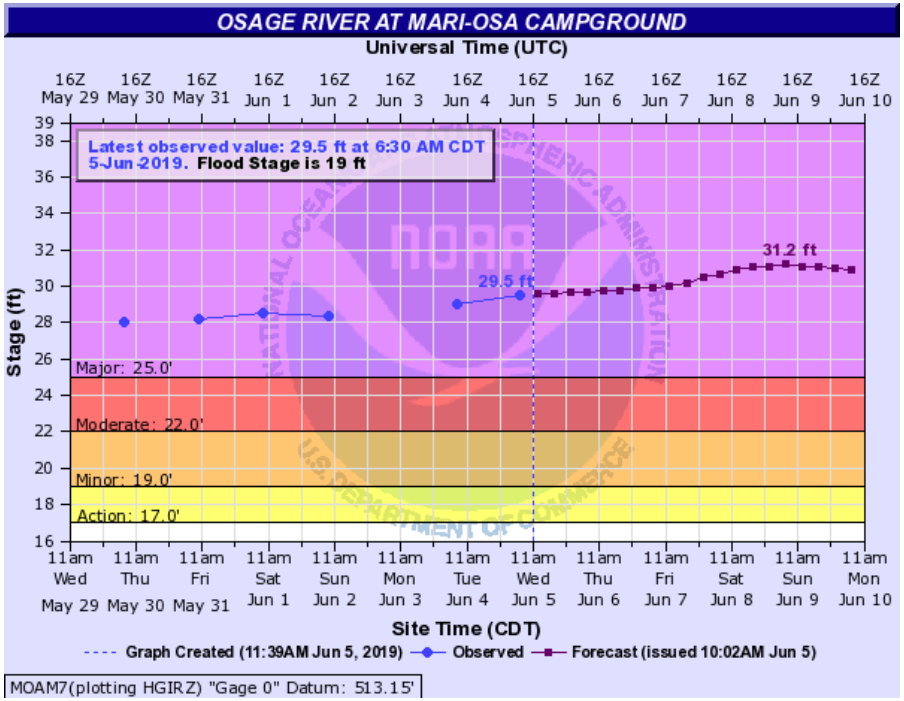
Small Rivers and Streams Forecast for Major Flood Levels in Missouri



- The Osage River at Mari-Osa Campground is at 29.5 feet in major flood stage and is forecast to slowly rise until Tuesday, crest at 31.2 feet Sunday, then begin slowly falling. Controlled releases from Truman Reservoir are having a noticeable impact on stages on the Osage River downstream of the reservoir.
- Major flooding begins at 25 feet.

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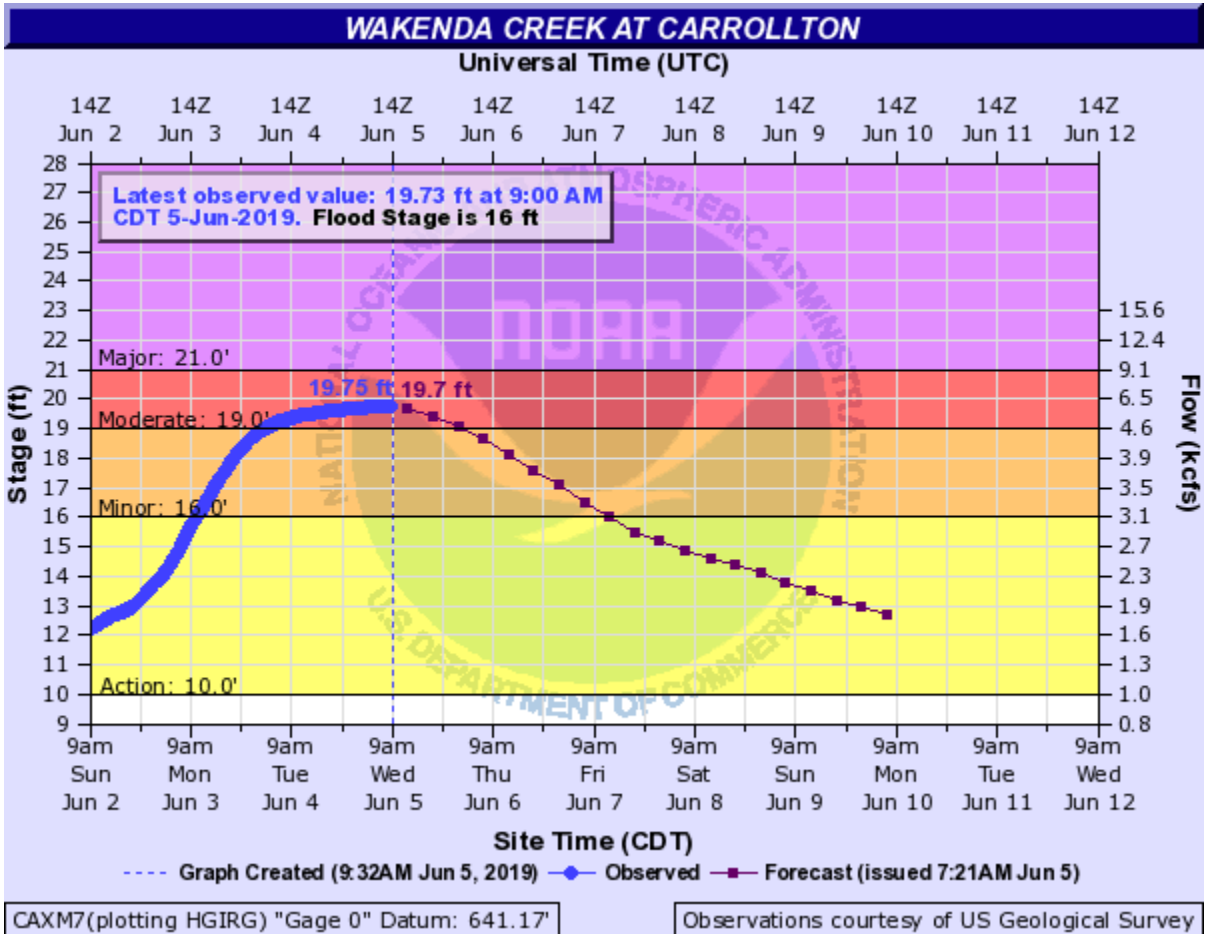

- Wakenda Creek at Carrollton is at 19.73 feet in moderate flood stage and appears to be cresting now and is forecast to fall below flood stage Friday.
- Moderate flooding begins at 19 feet.

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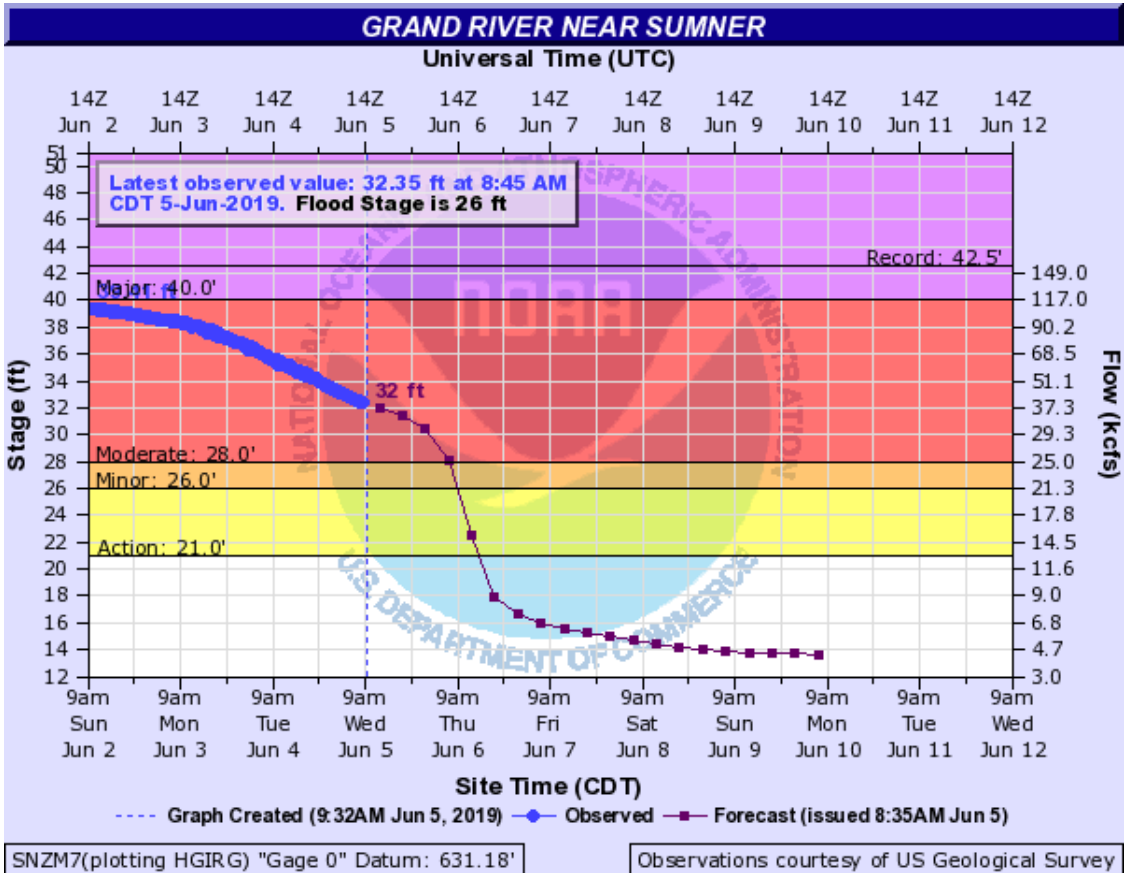

- The Grand near Sumner is at 32.3 feet in moderate flood stage and is forecast to fall below flood stage Thursday morning.
- Moderate flooding begins at 28 feet.

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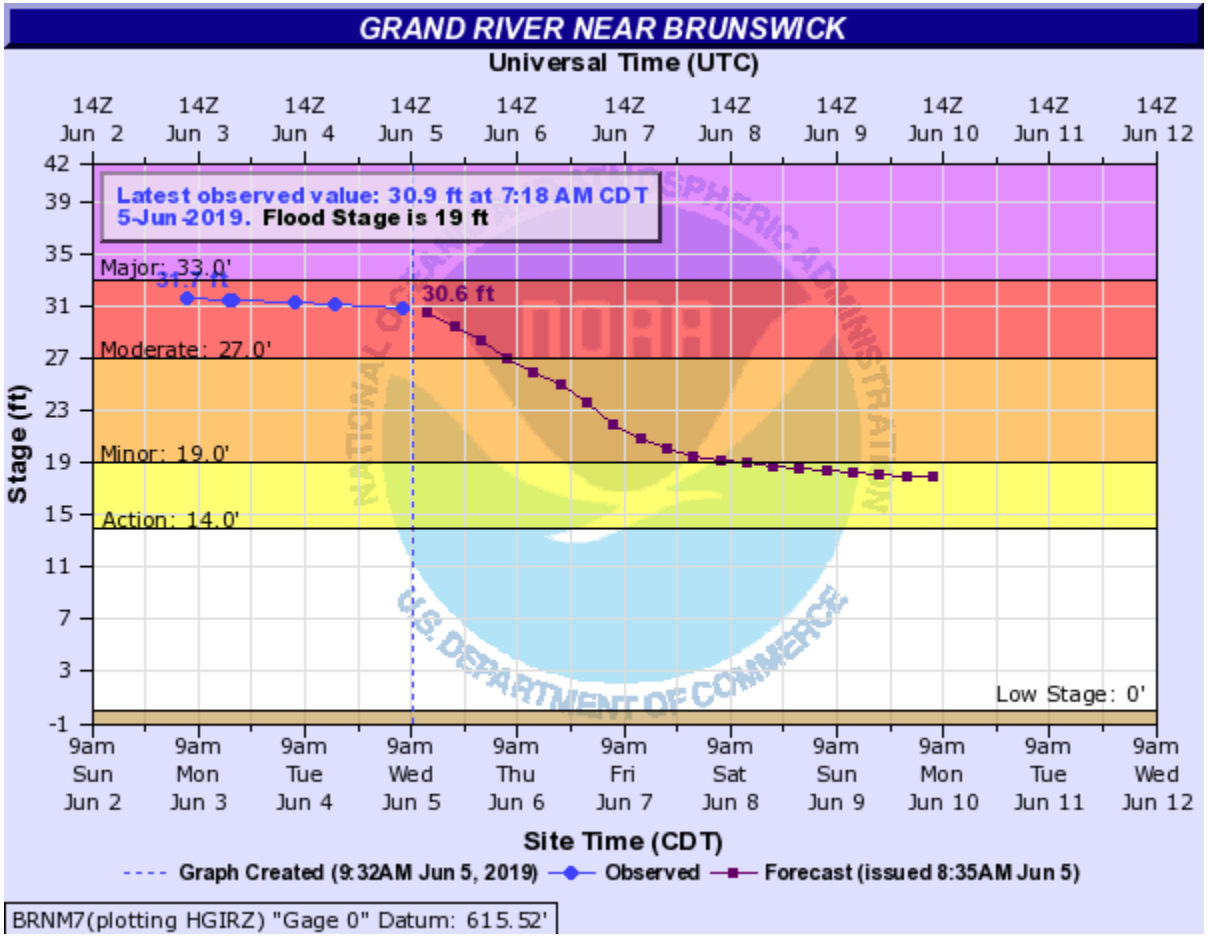

- The Grand River at Brunswick is at 30.9 feet in moderate flood stage and is forecast to fall below flood stage Saturday.
- Moderate flooding begins at 27 feet.

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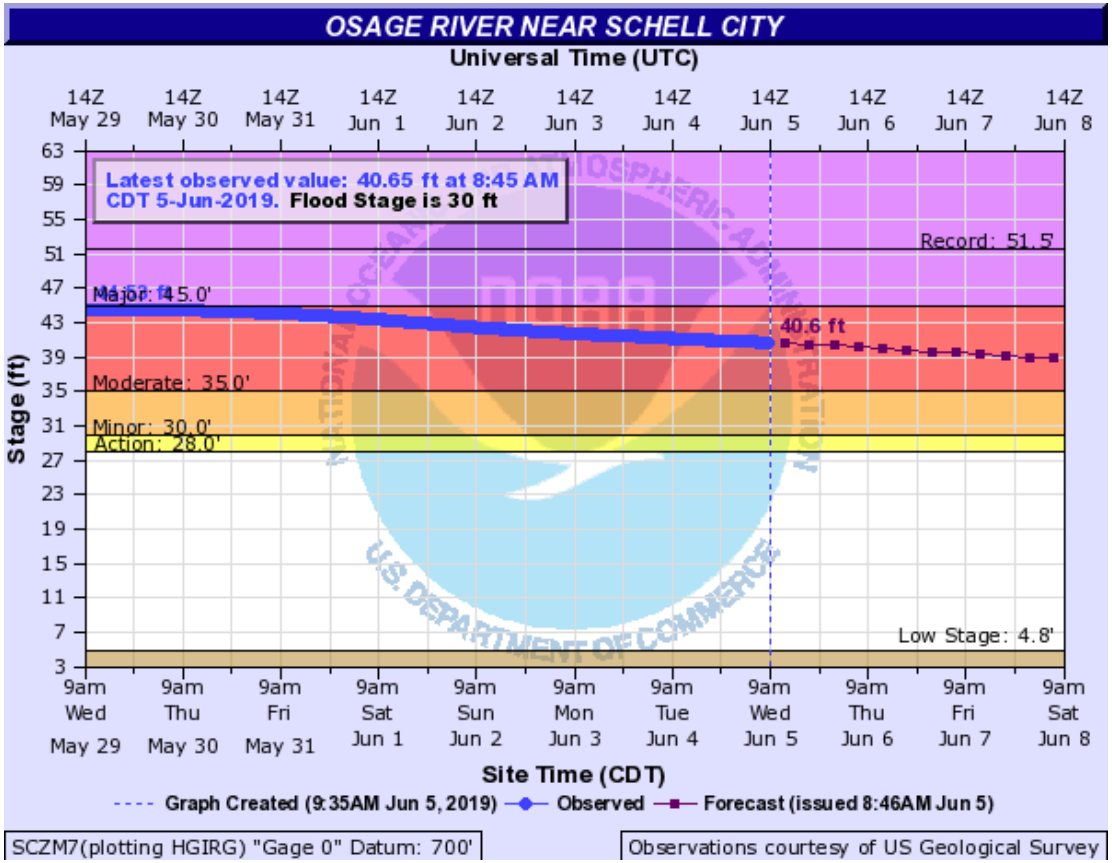

- The Osage River near Schell City is at 40.6 feet in moderate flood stage and is forecast to fall only 1.7 feet through Saturday morning, remaining in moderate flood stage during that time.
- Moderate flooding begins at 35 feet.

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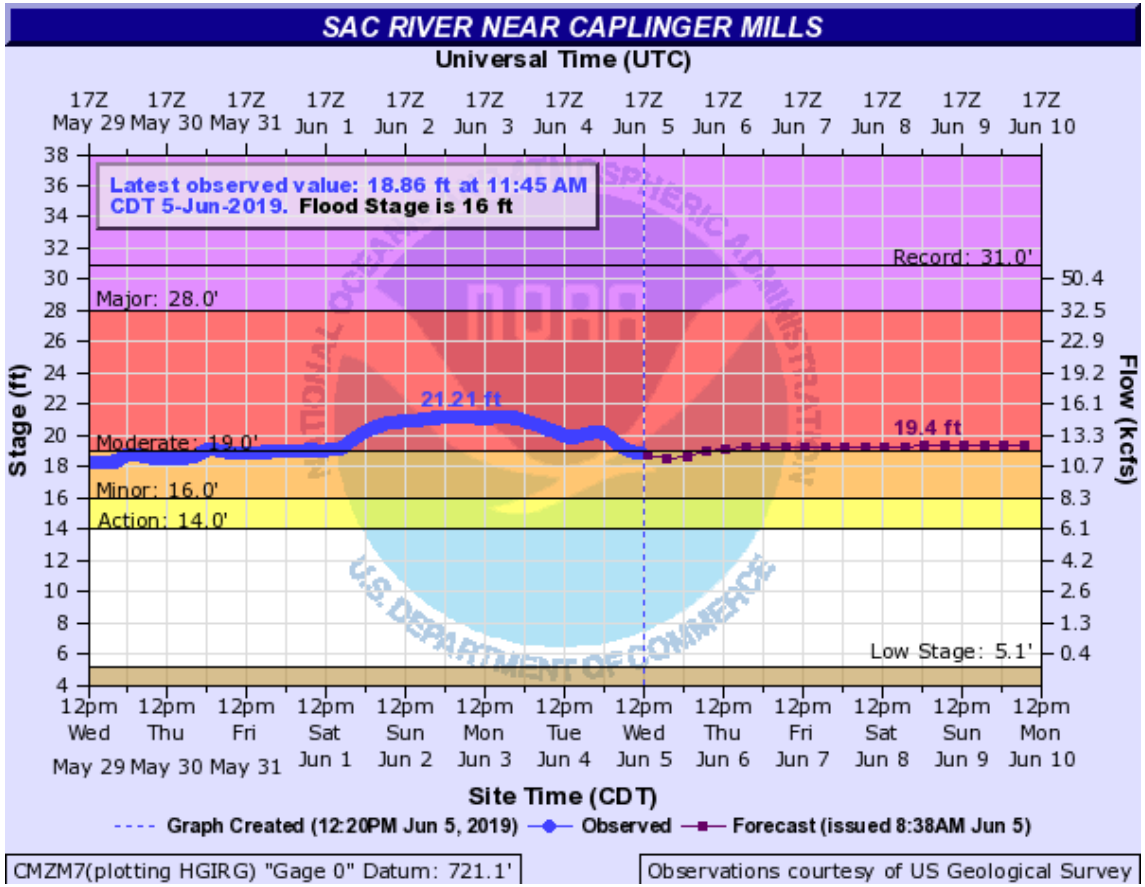

- The Sac River near Caplinger Mills is at 18.9 feet in moderate flood stage and is forecast to remain at that approximate stage at least until Monday.
- Moderate flooding begins at 19 feet.

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Resources for Further Information

- Department of Natural Resources Flood Page: https://dnr.mo.gov/flood
- National Weather Service – Missouri River Flooding: https://www.weather.gov/oax/missouririverflooding
- National Weather Service – River Forecasts, Missouri Basin: https://water.weather.gov/ahps2/forecasts.php?wfo=EAX
- Missouri Water Resources Center – Missouri River Informational Page: https://dnr.mo.gov/geology/wrc/interstate-waters/missouri_river.htm