

Flood Recovery Advisory Working Group
Interim Report for Governor Michael L. Parson
Dec. 31, 2019

Introduction and Background

Governor Michael L. Parson signed Executive Order 19-14 on July 18, 2019, in response to significant and ongoing flooding on the Missouri and Mississippi rivers. The order outlined the formation of an advisory working group that would provide input on the state's short-, medium- and long-term flood recovery priorities and feedback on the state's current levee system with suggested changes to benefit Missouri and its citizens. The group also was asked to identify areas where attention is needed and provide input on priorities for allocation of state funding for flood recovery. The following members were appointed to the working group by Governor Parson:

Chris Chinn, Co-chair, Missouri Department of Agriculture
Chris Klenklen, Missouri Department of Agriculture (alternate)
Carol Comer, Co-chair, Missouri Department of Natural Resources
Dru Buntin, Missouri Department of Natural Resources (alternate)
Ron Walker, State Emergency Management Agency
Ron Broxton, State Emergency Management Agency (alternate)
Chris Engelbrecht, Missouri Department of Transportation
Luke Holtschneider, Department of Economic Development
Bill Jackson, Missouri Levee and Drainage District Association
Tom Waters, Missouri Levee and Drainage District Association (alternate)
Lucy Fletcher, AgriServices of Brunswick
Blake Hurst, Missouri Farm Bureau Federation
Dan Cassidy, Missouri Farm Bureau Federation (alternate)
David Shorr, Coalition to Protect the Missouri River
Gary Marshall, Missouri Corn Growers Association
Samantha Davis, Missouri Corn Growers Association (alternate)
Casey Wasser, Missouri Soybean Association
David Combs, Missouri and Associated Rivers Coalition
Tom Poer, Missouri and Associated Rivers Coalition
Adam Jones, Mississippi River Farmer/CoBank Lending
Roger Hugenberg, Ursa Farmers Cooperative (Canton)
Henry Dienst, Clark County Commission
Randy Railsback, Green Hills Regional Planning Commission
Ryan Ottman, Atchison County Levee District 1

The working group is convened and led by the Departments of Natural Resources and Agriculture. The Governor's executive order requested an interim report with findings and suggestions by December 31, 2019, and a final report by May 31, 2020. This report serves as the interim report of the Flood Recovery Advisory Working Group.

Meetings and Discussion

The working group has held five meetings since the issuance of the executive order. Full agendas, video of proceedings and meeting notes can be found at dnr.mo.gov/floodrecovery. Following is a recap of topics presented and discussion from each of the meetings.



Aug. 27, 2019

Governor Parson welcomed and thanked group members during the first meeting. Group members received background information about ongoing flood recovery activities from several federal agencies, including:

- Four U.S. Army Corps of Engineers (Corps) districts – Kansas City, Omaha, St. Louis, and Rock Island
- The Federal Emergency Management Agency (FEMA)
- Three U.S. Department of Agriculture (USDA) agencies – Farm Service Agency (FSA), Natural Resources Conservation Service (NRCS), and Risk Management Agency

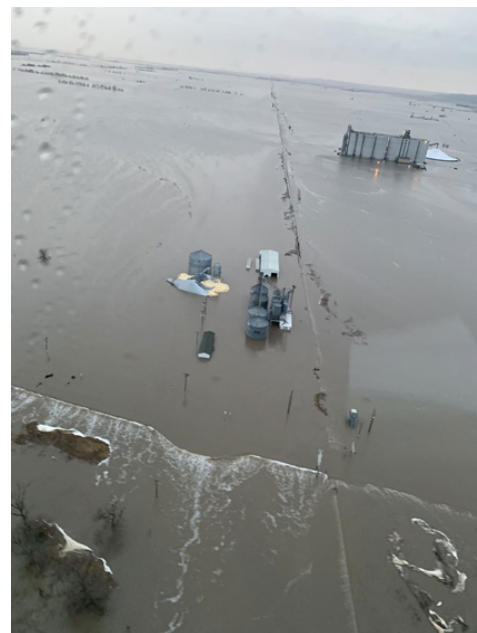
Group members additionally heard information about Missouri's Disaster Recovery Framework from the State Emergency Management Agency (SEMA) and the Department of Economic Development (DED). The Missouri Department of Transportation (MoDOT) gave a report on the status of damage to the state's transportation infrastructure, and the Department of Natural Resources (DNR) provided information about flood recovery collaboration with neighboring states – Iowa, Kansas, and Nebraska. The meeting concluded with members discussing their individual areas of interest and information that would be useful for future meetings.

Sept. 20, 2019

The Corps – Kansas City and St. Louis districts presented information to group members about the 2019 flood event and system operations for the Missouri and Mississippi rivers. Group members also heard public comment.

Oct. 17, 2019

Larry Weber, Ph.D., from the University of Iowa presented information regarding the Iowa Flood Information System, a statewide monitoring and flood prediction developed in response to the devastating 2008 flood on the Cedar River. MoDOT presented an initial economic analysis of



losses due to the closure of Interstate 29 in northwest Missouri. The presentation also included estimated losses from navigation, rail, and airport disruptions due to flooding. FEMA and SEMA provided updates on recovery assistance. Group members spent much of the final hour of the meeting discussing potential recommendations. The working group heard public comments before concluding the meeting.

Nov. 22, 2019

Group members heard presentations from USDA-NRCS, Corps – Omaha District, and the Atchison County Levee District 1 about two potential levee setbacks (federal levees L-550 and L-536) to mitigate future flood events. The group continued its discussion of potential recommendations, and public comment was accepted.

Dec. 9, 2019

Group members heard from Robert Jacobson, Ph.D., with the U.S. Geological Survey. Jacobson



discussed lessons learned from past great floods on the Missouri River. The group continued discussion of recommendations and discussed the interim draft report. The public was again invited to comment.

Findings and Recommendations

The following recommendations reflect the topics the working group has been able to explore during its first five meetings. Recommendations include considerations for state and federal entities.

- The state of Missouri should develop a resource guide for state and federal flood recovery assistance for flood protection infrastructure and agriculture.
- The state of Missouri should continue to support coordination with Iowa, Kansas, and Nebraska in order to establish a leading voice in the operation of the Missouri River system.
- The state of Missouri should continue to support ongoing coordination, led by the Upper Mississippi River Basin Association, to improve management of flooding, sediment, and drought in the upper Mississippi River basin.
- The state of Missouri should assess and more accurately characterize impacts to agriculture from the 2019 flood events that may extend into the coming years. The assessment should consider total acres of prevented planting, the crops impacted, and the impact of prevented access by farmers to crop land to conduct recovery activities and begin work for upcoming seasons.
- State and federal agencies should support levee district projects aimed at reducing the impact of pinch points and improving conveyance. In the short term, state and federal

agencies should provide any available support to the Atchison County Levee District 1's efforts to set back levees with the participation of willing landowners.

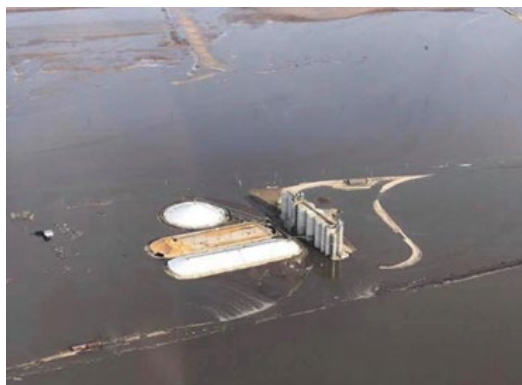
- The Governor and congressional delegations should reach out to their peers across the country, in states where there has been flooding over the past few years, and work to build congressional and Administration support for improved flood control infrastructure across the nation, including structural solutions.
- The Governor and congressional delegations should support the development of a systematic approach to levee design on the upper Mississippi River to ensure balanced protection.
- The Corps should consider alternative regulatory requirements during disaster response to relieve some regulatory burden during response and recovery activities that restore base levels of protection from further flood impacts.
- The Corps should consider streamlining district coverage in northern Missouri. (After current recovery activities conclude.)
 - Kansas City District should cover Atchison County (currently Omaha District).
 - St. Louis District should cover Clark, Lewis, Marion, Scotland, Knox, Shelby, Schuyler, and Adair (currently Rock Island District).
- Urban flood protection appears more successful than rural flood protection. Efforts should be made to increase flood control success in rural areas to an extent comparable to urban areas. Benefit-to-cost ratios should include repeated repair costs of frequently damaged levees.
- Recommend changes to the Corps' Emergency Readiness and Response Public Law 84-99 (PL 84-99) program, which is limited to the lowest-immediate-cost practicable repair option, to allow for longer-term view of costs, resulting in exploration of creative options for levee resilience and lowering the likelihood of complete levee failure and repeated repair costs.
- On a reach, segment, or mile basis, alternative flood control strategies should be considered including but not limited to: replacement, hardening, elevating, set back, lowering of structures; non-structural options; and buy out of willing sellers at pre-flood fair market values; Multiple options should be considered, versus one-size fits all dictates. The working group further recommends such flood control strategies be developed with the involvement and input of local landowners and affected communities.
- Ensure debris removal can move forward when flood water recedes without unnecessary regulatory delay.
- The working group recognizes both the Missouri River and Mississippi River have unique physical and hydraulic characteristics and encourages a broad analysis of flood control strategies versus a one-size fits all approach.
- The Corps should review management of acquired floodplain land to optimize vegetation for conveyance.
- The Corps should make every effort to, at minimum, conduct partial repairs on breached levees to assist in lessening the anticipated increased crop insurance premiums. Should this not be completed in a timely fashion, the Corps should grant approval for third party engineers, such as the NRCS or county engineers, to verify partial levee restoration.
- Congress should fund efforts by the Corps to take immediate appropriate action to address impacts to the Bank Stabilization and Navigation Project on the Missouri River resulting from past alterations to river training structures and from chutes or side

channels not performing as designed and capturing too much flow from the navigation channel.

- The Corps should take immediate and appropriate action to fix dike notches put in place that are causing bank erosion on private lands.
- The Corps should consider the impact on system storage from sediment build up in the upper basin reservoirs. In addition, a technical path forward needs to be identified to remove the sediment in the upper Missouri River reservoir systems to help restore storage levels in the river system.
- Missouri's congressional delegation should consider revisions to the Federal Crop Insurance Program, recognizing the unique nature of the 2019 flood events and the unprecedented length of time flood waters have prevented farmers' access to their land.
- The USDA Risk Management Agency should extend the dates of determining premium rates as far as possible for the 2020 growing season, given the circumstances of already burdened farmers.
- Congress should establish opportunities for states to lead an independent stakeholder review of the operation of the system, such as the previous Missouri River Commission or the current Mississippi River Commission.
- The Soil and Water Districts Commission should explore opportunities to target soil and water conservation practices in areas that would improve drought resiliency and decrease flood risk.
- The state of Missouri should develop an enhanced flood monitoring system comparable to the Iowa Flood Information System.

Conclusion

The Flood Recovery Advisory Working Group received a considerable amount of information



and has had very good initial discussions of recommendations. The Departments of Natural Resources and Agriculture anticipate that the next several months will provide the opportunity to further understand system operation, flood impacts, and potential areas of improvement to provide refined recommendations in the final report to be delivered by May 31, 2020. The Departments appreciate and have been impressed with the time commitment and level of attention the working group has dedicated to this important topic and look forward to productive discussions in the coming months.