



# A NEW GENERATION OF DECISION SUPPORT VISUALIZATIONS FOR WATER PREDICTION SERVICES

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**OWP** | OFFICE OF WATER PREDICTION

## MOTIVATION

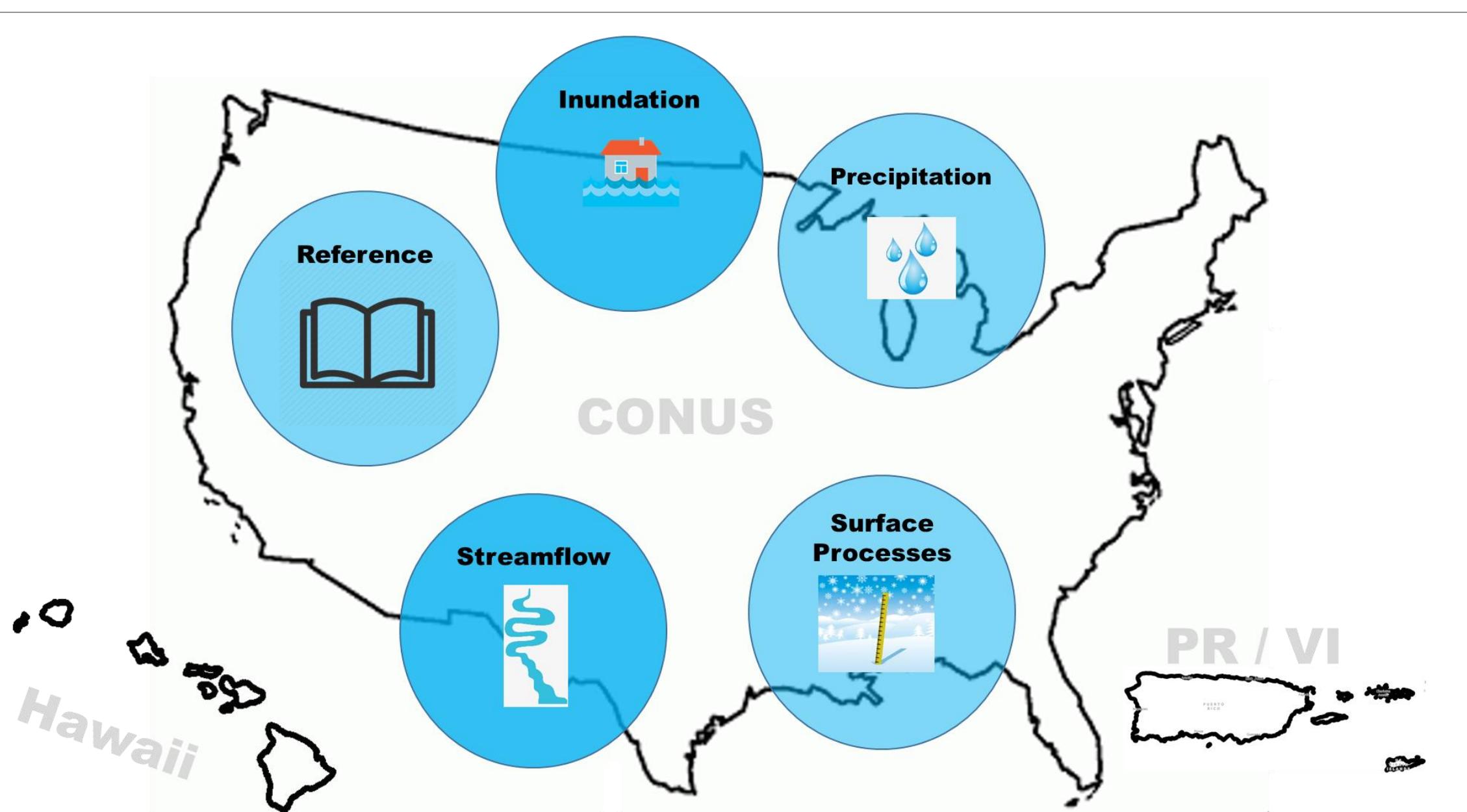
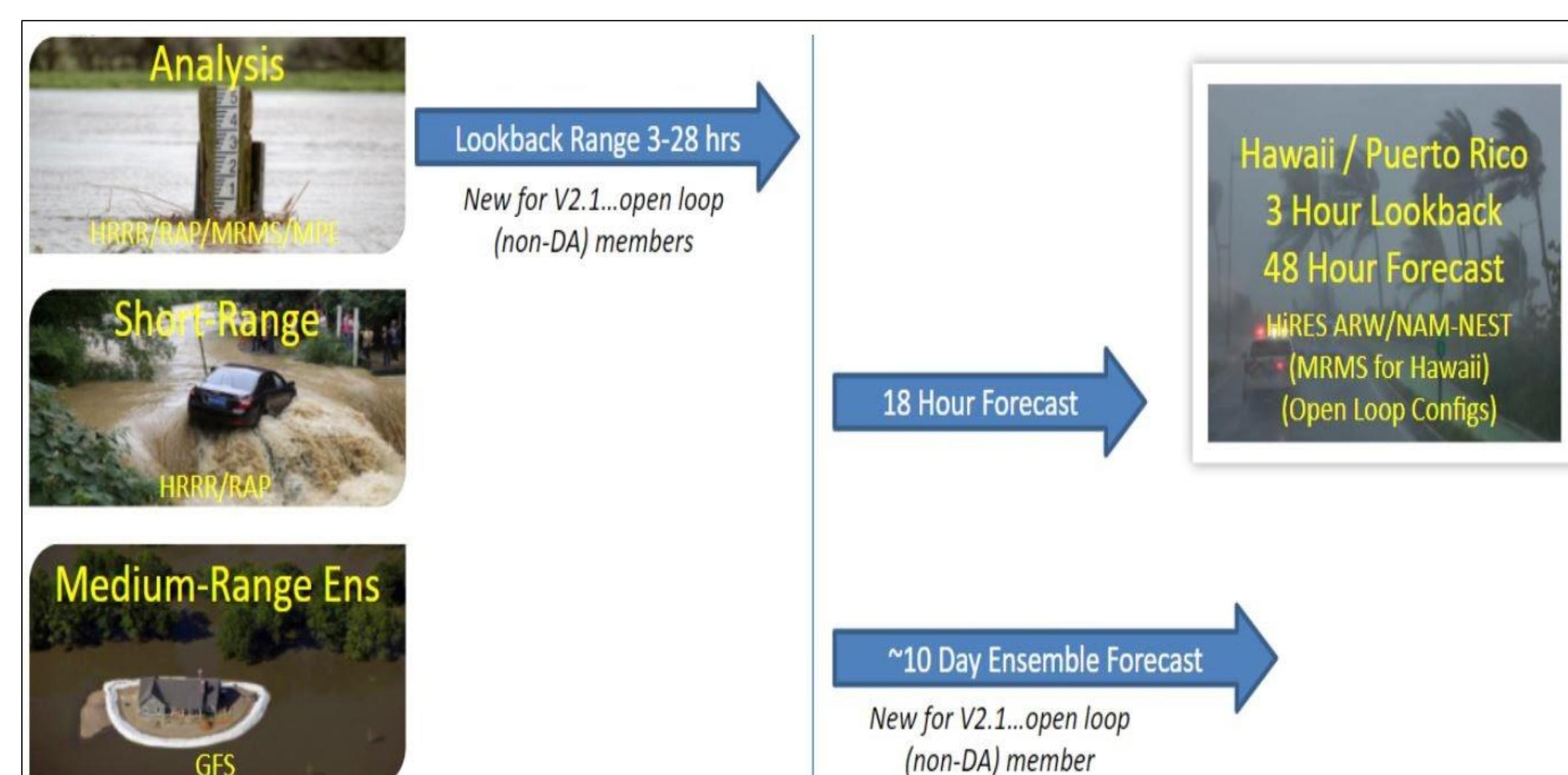
The choices made before and during extreme weather events with a significant hydrologic response are likely to be highly consequential as events may result in lost lives and significant economic impacts - a single flood or drought event can exceed \$1 billion in losses.



Water running over roads in Dickson County, TN on March 28, 2021  
(Tennessee City Volunteer Fire Department photo)

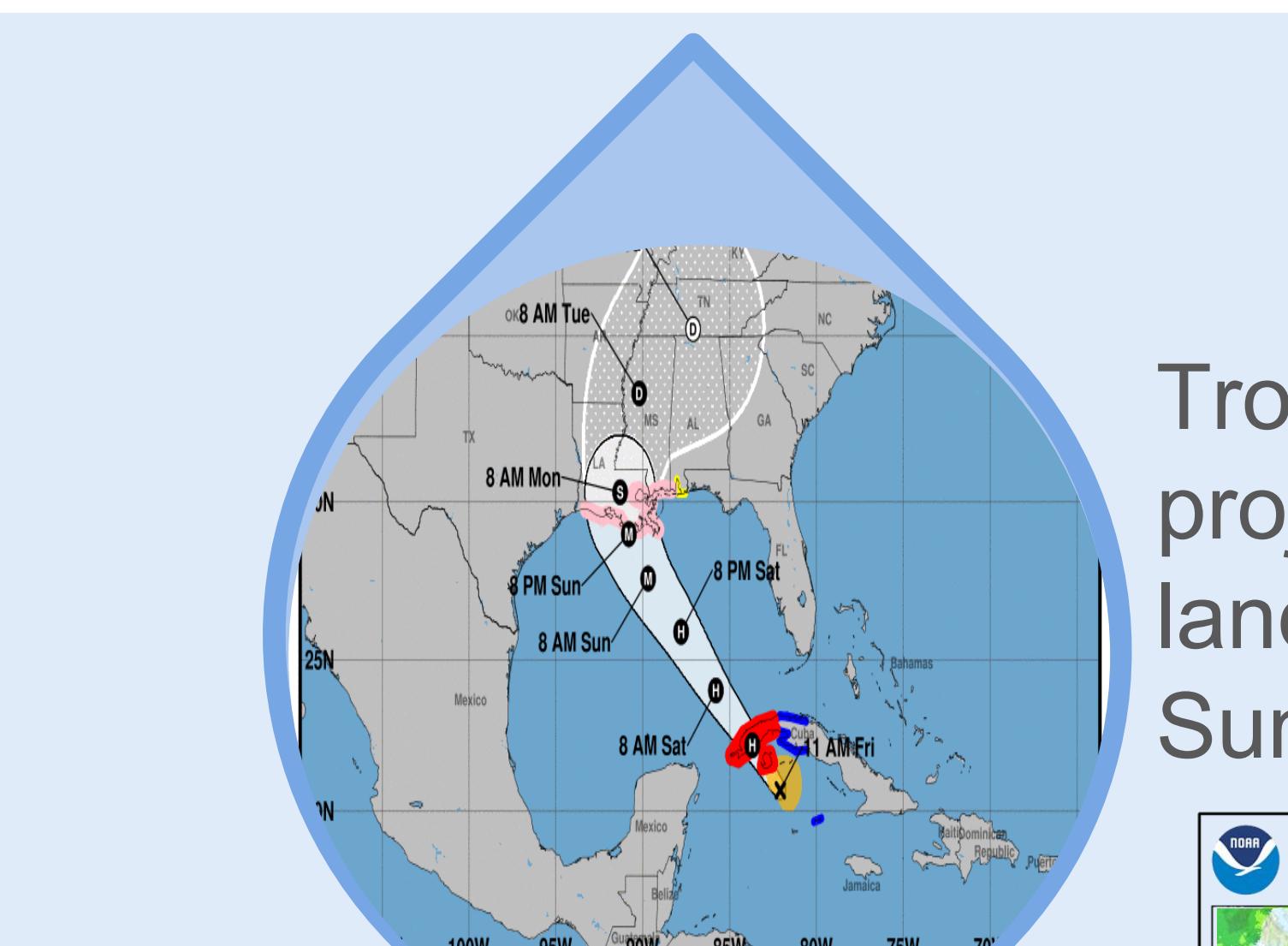
## VISUALIZATION SOLUTIONS

The suite of over 60 visualizations being developed at the National Water Center addresses this need for actionable information. Output from the National Water Model (NWM) is transformed into water prediction services, supporting decisions taken by state and local officials.



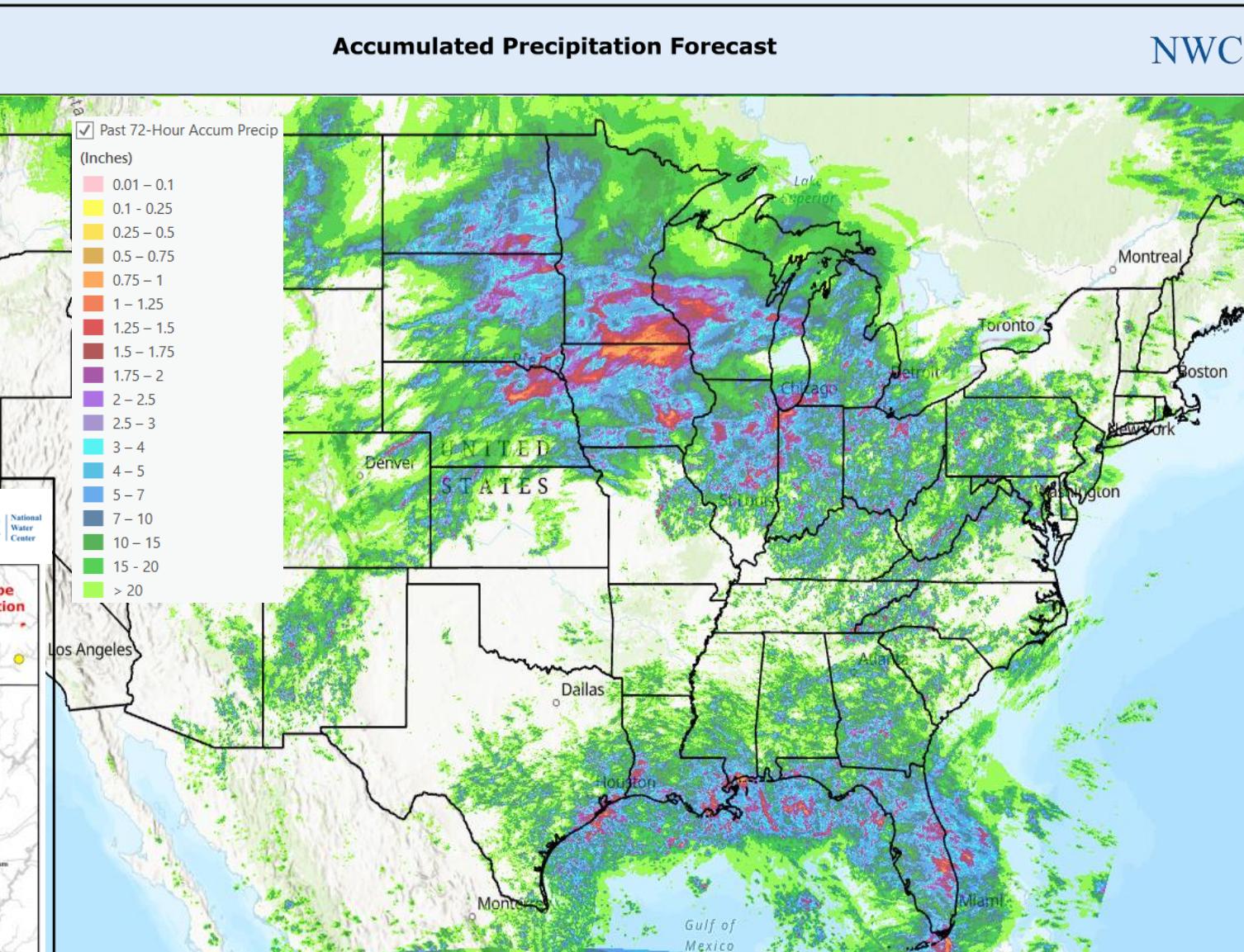
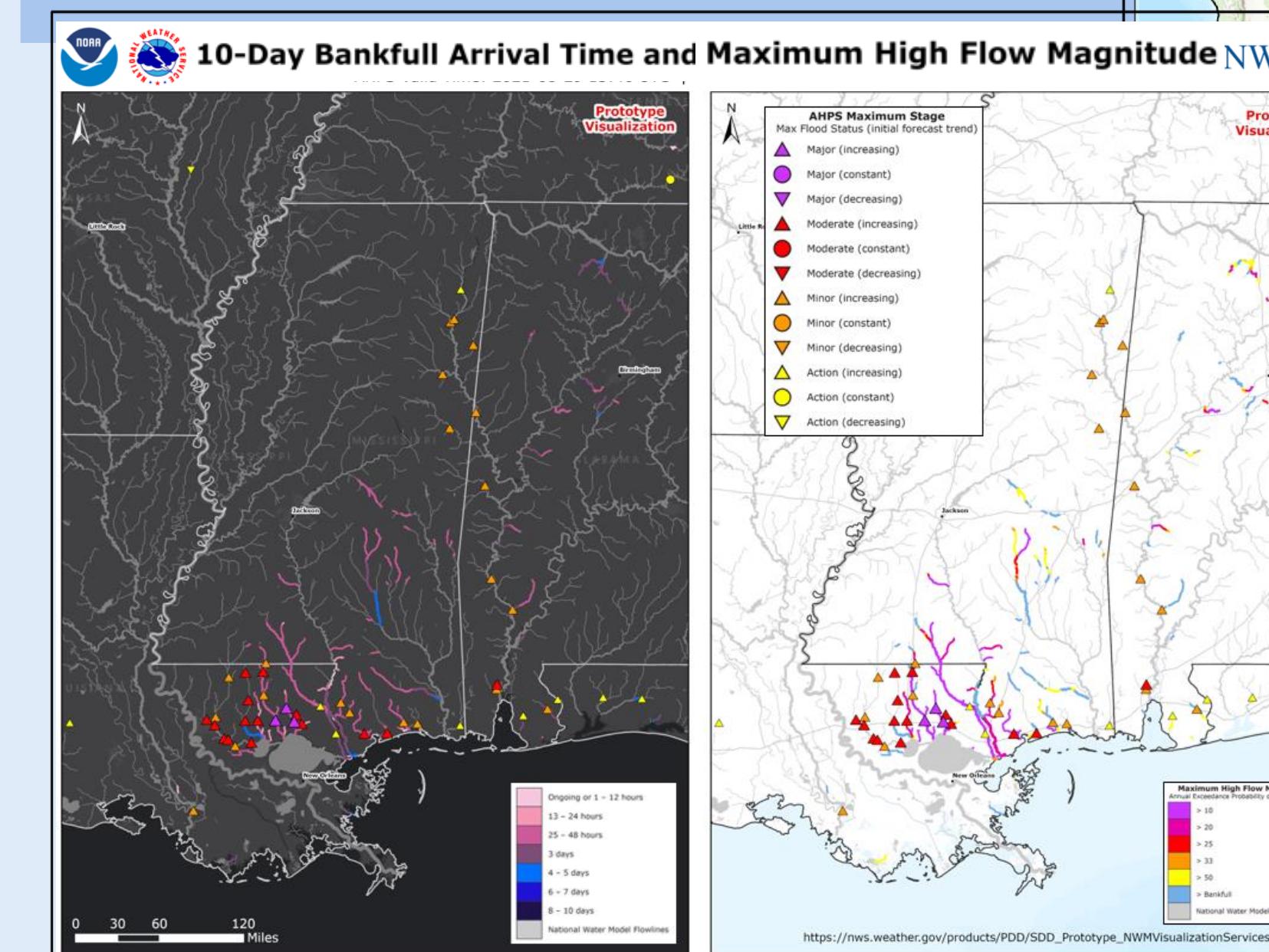
## ACKNOWLEDGEMENTS:

Thanks to all of our colleagues at the Office of Water Prediction that contributed to the development of this presentation, including Tom Graziano, Ed Clark, Mark Glaudermans, Trey Flowers, Jocelyn Burston, Darone Jones, Troy Wilds, Fred Ogden, Russ Barton, Jason Regina, Lauren Stewart, Kiana Brisco, and Liliana Hernandez, and for additional support from Graeme Aggett and Lynker



Tropical storm Ida projected to make landfall in LA Sunday night

AUG 27, 2021



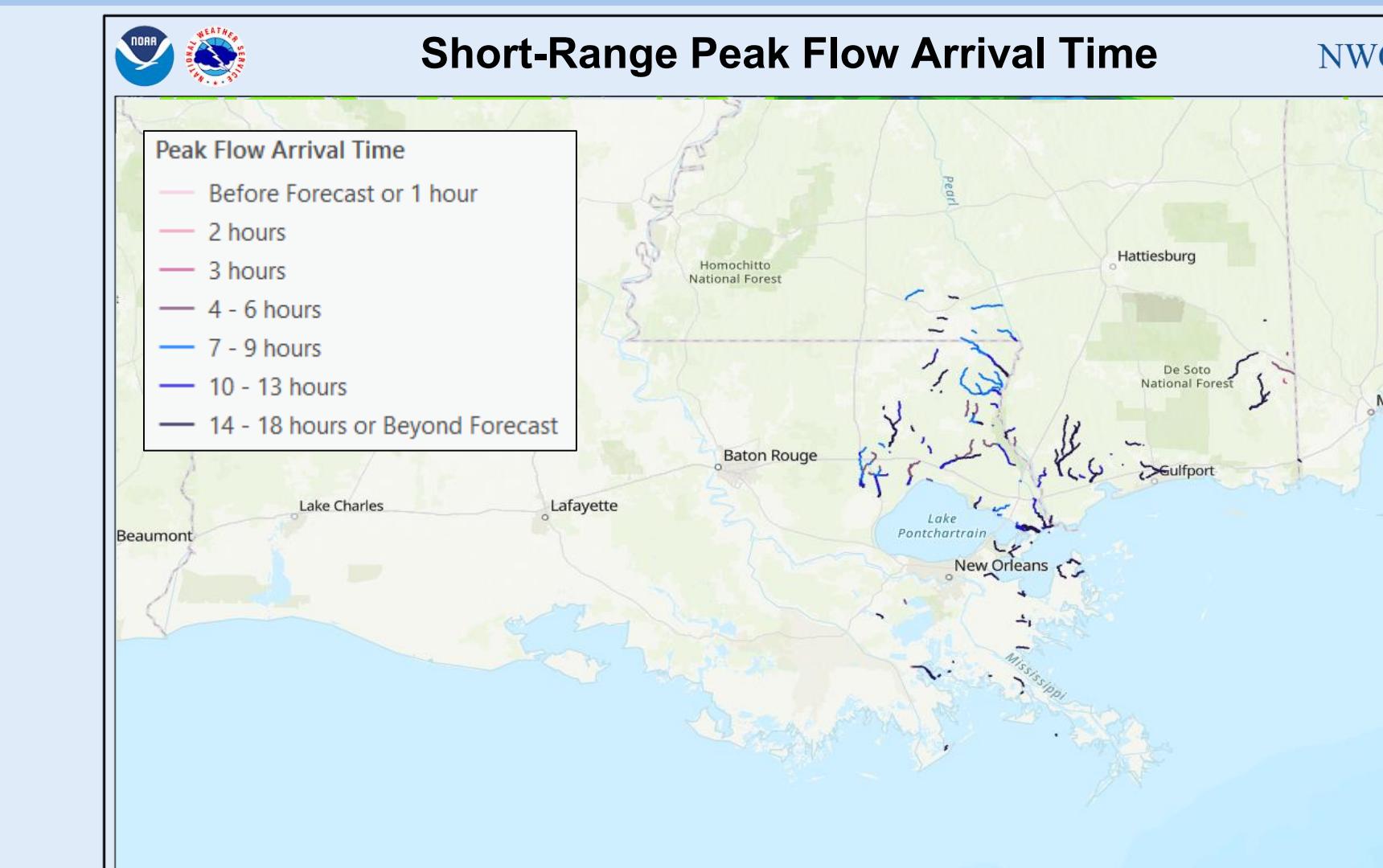
Services that answer WHEN and HOW MUCH questions at this point in the event timeline

## HURRICANE IDA EXAMPLE

Prototype visualizations – for general guidance ONLY



AUG 29, 2021



Hurricane Ida is a Category 4 as it makes landfall on the LA Coast

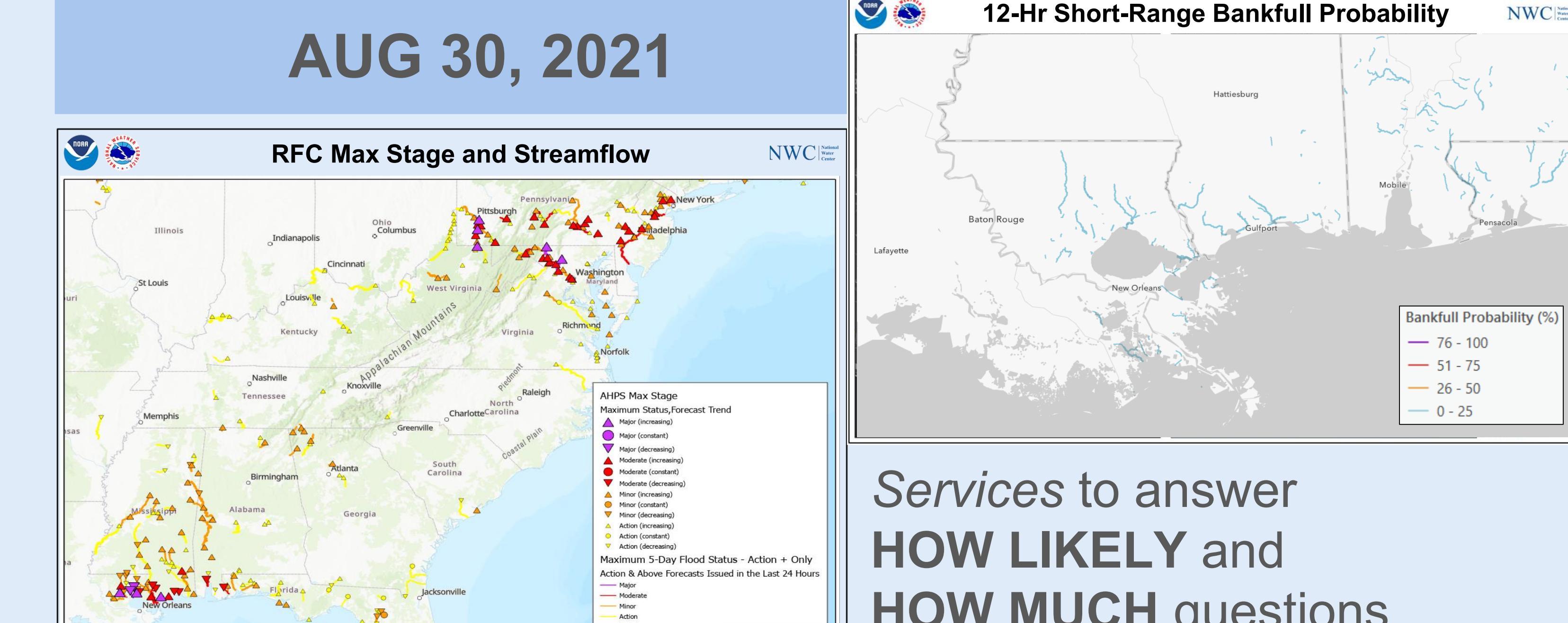
Services that answer WHERE and HOW MUCH questions

*Evolving water resource decision support through innovative visualizations*



Continuing inland, the storm blows through New Orleans

AUG 30, 2021

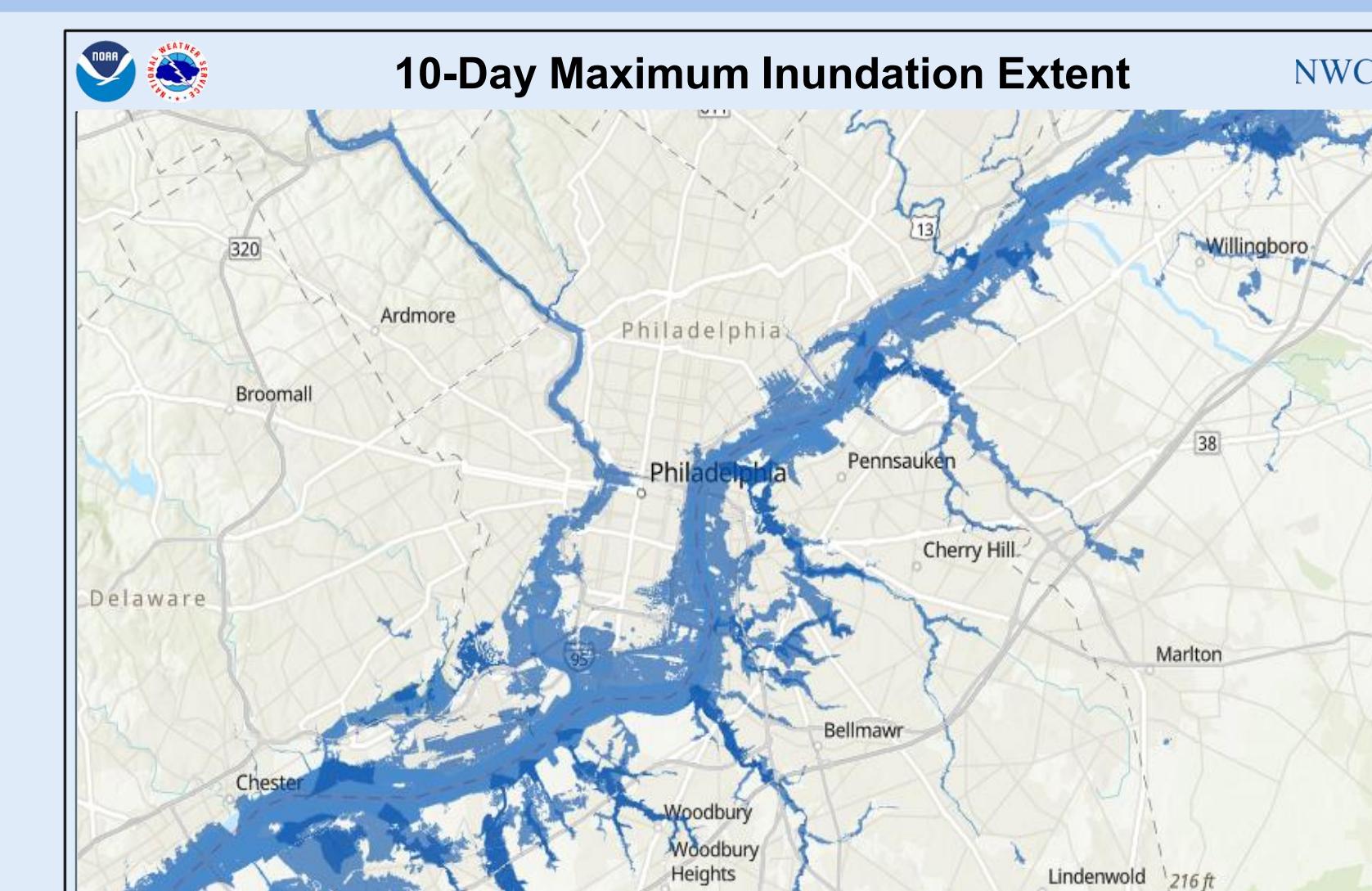


Services to answer HOW LIKELY and HOW MUCH questions



Now a tropical depression, the storm moves off to the northeast causing flooding in PA, NY, and NJ

AUG 31 – SEPT 4, 2021



Services that answer HOW LONG and HOW MUCH questions

