# Breakout Group 3 Flood Inundation Mapping

Pat Burke, Michael Lowry, David Maidment, Joe Nimmich, Ahmad Tavakoly, Tom Graziano, Ed Clark, Steve Kopp, Fernando Aristazabal, Clint Dawson

## Flood Inundation Mapping at NWC

- Provide interagency coordination
- Provide guidance to state/local on how to contribute/collaborate
- Result data product is polygons of inundated area with forecast time stamp
- High value of potential follow on products
  - Population impacted, evacuation and rescue planning
  - Roads to close, evacuation rerouting
  - Number/type/cost of impacted structures
  - Time until flooded

### Leverage existing Cross sections

- Improve rating curves
- Supplement inundation mapping
- Finding "bank full"
  - Develop method for turning surveyed cross sections into "bank full" levels to improve high flow modeling and inundation mapping

#### Inundation Mapping Improvements at NWC

 Validation against FEMA's estimated Based Flood Elevation (estBFE) 100yr and 500yr provided maps. Other validation sources and methods discussed





### Multiple Modeling Approaches

- RAS and related engineering approaches
- HAND and similar approaches
- Recommend to provide guidance on appropriate use
- If / how to combine from multiple inundation mapping approaches (eg Texas)

Recommendations and Requests for Mapping Data Structure from the National Water Center

# National Water Center is mission central for real-time inundation mapping

Can you *please, please, please* publish the data structure you are using for FIM 2.0?

Do you use polygons alone or have depth grids as well?

Can the NWC share with us the rules for stream generalization?