FEMA

# Notes for Flood Risk Review (FRR) Meeting
# Cabell County
# West Virginia

June 5, 2025, 1:00 pm
Virtual

## Welcome and Introductions

- Meeting attendees introduced themselves; please refer to the attendee list at the end of this document.

- The agenda for the meeting was reviewed:
  - Welcome & Introductions
  - Where We Are – Draft Maps
  - Flood Study Update
  - Using Flood Risk Data to Reduce Risk
  - Floodplain Management
  - Discussion

## Where We Are - Draft Maps

- The Flood Risk Review (FRR) meeting gives local officials an opportunity to examine draft study results (including new study reaches), discuss how the analysis and mapping have changed since the previous FIRM, and work collaboratively to ensure that the needs of the community and its partners are met.

- Timeline for Studies
  - Current Effective Maps –February 2014); however, the engineering analysis and data behind the studies is older as not much was updated as part of the current countywide effective studies.
  - Discovery Meeting – August 2017
  - Risk MAP Study Notification – August 2021
  - Flood Risk Review (FRR) Meeting – June 5, 2025
  - Preliminary Maps – Early 2026 (by calendar year)
  - Community Coordination and Outreach (CCO) Meeting - ~30 days following Preliminary Maps
  - Appeal Period – Summer 2026
  - FEMA issues Letter of Final Determination (LFD) – Early 2027
  - Final Maps Become Effective – 6 Months after LFD

## Flood Study Update

- The forthcoming Preliminary FIRMs, FIS, and associated products will follow a new format. Discussed primary FIRM features and symbology, such as definition of the regulatory 1% annual chance flood hazard and different zone designations, such as Zone AE and Zone A.

- Study Overview
  - Projects results in updated modeling and mapping, including GIS-based regulatory products (updated FIRMs, GIS database, FIS report).
  - All effective Zone AE streams were restudied in detail as Zone AE and have new floodways and BFEs.
  - All effective Zone A streams were restudied as well, and numerous reaches were extended or added to the 1-square mile drainage area.
  - All streams were studied as 1D, except for Fourpole Creek and Krouts Creek, which were 2D, as well as the 2D LOMR for Mud River.
  - Floodplains for Ohio River were not updated as part of this study.
  - As part of the process, effective Letters of Map Change (LOMCs) are evaluated.
    - If new LOMRs are issued between now and when the maps go preliminary, those would have to be evaluated for potential incorporation.

- Study Areas in Cabell County
  - Primarily Lower Guyandotte Watershed with the Guyandotte River and Mud River.
  - Parts of Raccoon-Symmes Watershed along the Ohio border with Fourpole Creek.
  - Small part of Twelvepole Watershed in the south / south-west part of the county where there are a few tributaries to Beech Fork.
  - Utilized high-resolution LiDAR topographic data from 2017-2020.

- Hydrology
  - Primarily USGS regression equations with Bulletin 17C used for gage analysis.
  - Rainfall Runoff model for Mud River at Dam 2A.
  - Rainfall Runoff with rain-on-grid in HECRAS for 2D analysis for Krouts Creek and Fourpole Creek
  - Hydrology report details study methods & results.

- Hydraulics
  - “Zone A” or “base level” or “approximate” study is typically performed for areas of less development or less potential development.
  - “Zone AE” or “detailed” study is typically performed for areas of more development or more potential development.
  - For both, there are 6 flood frequencies that are analyzed in the model – the 10-, 4-, 2-, 1-, 0.2- and 1% plus events. The 1% plus is the 1% with 1 standard deviation.
  - All other streams were studied as 1D except Fourpole Creek Krouts Creek, which were studied as 2D.

- Mud River LOMR (Milton)
  - LOMR for levee development for Mud River. Coordinated to tie-in to new FEMA study.
  - Comparison of effective to new flows; flows are increasing. A lot more recent and larger storms included in gage analysis.
  - Hydraulic analysis as 2D HEC-RAS unsteady flow to allow flow northward and westward simultaneously. Analysis will help determine if flooding near properties, if buyouts are necessary, etc.

## Study Impacts

- Compared to effective FIRMs, there is widening and narrowing of floodplain, which depends on the stream.
- There are a lot of areas where the floodplain was extended upstream beyond the effective floodplain to go to the 1 square mile drainage area.
- Roughly 6,294 buildings remaining in floodplain, 1,760 newly mapped in, and 728 being mapped out. The building counts in the slides are not exact calculated numbers and may include out buildings or dilapidated structures. The WV GIS Tech Center will provide refined numbers later.
- On a county-level, there are many changes to the number of buildings being newly mapped in or out of the SFHA.
  - *Bob emphasized that it is important for county and community officials to let people know if they are going in or out of the floodplains. There are thousands of bulidings being affected.*
  - *Chad (Cabell) asked if the structures being mapped out are in relation to the levee development.*
    - *Bob explained that the structures being mapped out in Milton are not in relation to the levee development; the Milton levee modeling will be incorporated later since the levee has not been built yet.*
    - *Bob clarified that there are changes landward of the Huntington levees as a result of the new study though and that officials should make sure to take a look at the changes.*

- Flood Risk Dashboards
  - Summary of information; have one for each county and one for each community.
  - Immediate next steps – review CSLF; it is important to look at the new mapping now. Then later, review preliminary FIRMs and FIS.
  - What's on the horizon – Community Coordination and Outreach (CCO) Meeting; 90-day appeal-period; Letter of Final Determination.

- FEMA Region 3 CSLF Viewer: https://arcg.is/1GS0T80
  - Zoom into desired area to see CSLF mapping. Blue is where the floodplain remains the same, purple is where the floodplain is decreasing and will no longer have SFHA, and yellow is where the floodplain is increasing and will now have SFHA.
  - There are streams of only increase, which are tributaries not previously mapped. This is where a lot of the increases to buildings in the floodplain are coming from.
  - CSLF is also available in the WV Flood Tool.
    - *Looked at and discussed changes in Huntington around the area north of Ritter Park.*

- CSLF for the Mud River LOMR were discussed.
- Discussed that some of the increase and decrease is a result of having better terrain data available.

## Using Flood Risk Data to Identify and Reduce Risk

- FEMA Flood Risk GIS Datasets, such as depth grids, water surface elevation grids, and Changes Since Last FIRM, are non-regulatory products and good tools

- Flood risk data can be accessed by the following platforms:
  - FEMA Map Service Center (MSC): https://msc.fema.gov/portal/home
    - This has the effective maps and will have the preliminary maps. Preliminary data part is currently grayed out but will turn black once preliminary maps are out.
  - FEMA National Flood Hazard Layer: https://www.fema.gov/national-flood-hazard-layer-nfhl
  - WV Flood Tool: https://www.mapwv.gov/flood/map/
    - Kurt walked through some of the features and layers in the WV Flood Tool, using Fourpole Creek as an example.
    - Risk MAP view – Kurt's team is working on updating all the structures and can give a list later on so communities have info to send out letters.
    - Please contact WV Tech Center (Kurt.Donaldson@mail.wvu.edu)with any questions about the WV Flood Tool.
  - *Sherry (Huntington) asked about land cover modeling and if the 2D modeling includes the area upstream of Fourpole Creek.*
    - *Becka (Compass) - the 2D model includes the basins upstream of the study area. The hydrology is computed using rainfall distribution, land cover, and soil data for the entire basin draining to Fourpole Creek.*
    - *Mike (Compass) suggested looking at land cover changes layers, which would provide a good overview of how the development may have changed in area of interest, and how that would directly affect flooding (NLCD): https://www.mrlc.gov/data/land-cover-change-index-conus and https://www.usgs.gov/centers/eros/science/annual-nlcd-land-cover-change*
  - *Sherry (Huntington) asked about the modeling and mapping for Fourpole landward of the levee.*
    - *Becka (Compass) – the draft mapping for the downstream part of Fourpole, landward of the levee, is the levee ponding elevation and area from the Mead & Hunt levee interior drainage analysis. Then the modeled elevations for Fourpole are used when they exceed the ponding elevations.*
    - *Mike (Compass) briefly discussed the scenarios the Mead & Hunt study used and noted that the Compass study modeled the structures for Fourpole and Krouts as gravity flow.*

- Flood Hazard Mitigation Planning
  - Cabell County is in Year 1, part of Region 2. There is one community (Barboursville) that still needs to adopt by August 14th of this year.
  - Matt Townsend (matthew.townsend@fema.dhs.gov) can be contacted with any questions regarding the HMPs.

## Floodplain Management

- Flood risk doesn't stop at a line; flood risks go above and beyond what the maps show. Most claims are outside of the SFHA. If outside of the SFHA, rate is going to be a lot cheaper.
- Communities can help by regulating standards and making sure permitting correctly.
- Freeboard - costs more at building but saves money over time.
- Emphasize to people going out of the floodplain that they should still consider keeping flood insurance because it can happen to anyone in WV as one of the most flood prone states.

- Floodplain Management at Flood Risk Review
  - Take the time to look at the maps now in the WV Flood Tool.
  - When permitting, make sure if people are by a stream, make them aware that new maps are coming out. Encourage them to build higher and further away. Trying to keep development outside of SHA where possible or at least as far back as possible.

- Big Picture
  - Make sure to build it right; it will save property owners more down the road.
  - Communities have robust support – Kevin, Julie, Kurt, and FEMA are all here to help as needed.
    - Kurt's team can provide a list of properties going in or out of the floodplain.
    - When it's time to notify property owners of changes, there are templates available.
    - When it's time to update ordinances, Kevin can help you write your ordinance in a way that works for your community.

- *Question about average premium shown on the dashboard for Cabell County.*
  - *Bill (FEMA) – value represents the yearly premium; it includes both commercial and residential; only numbers we have access to are FEMA numbers. FEMA promotes any and all insurance but any numbers we report are only from NFIP.*
- *Sherry (Huntington) - question about Krouts Creek and if the levee structure was included in the model. Noted that there were 6 homes flooded recently when the sluice gate was down despite it not being the elevation where it would go up.*
    - *Becka (Compass) - ponding area shown in the draft mapping for Krouts Creek is also from the Mead & Hunt levee interior drainage analysis until the Krouts Creek water surface elevations supersede the ponding elevation. The Mead & Hunt levee interior drainage analysis did include analysis of the structure and pumps. Compass study included the culvert structure as gravity flow.*
- *Bob noted that the Milton area is changing now and will change later on as well with the new levee study.*
- *Bob also noted that streams landward of the Huntington levees are changing now but there will be changes later when USACE completes the Ohio River study. The levee certification package will have to be updated for the new Ohio River study.*

## Next Steps

- 30-day review and comment period to go through and look at new floodplains – use CSLF and WV Flood Tool.
- Transmit any comments or concerns to FEMA, State, and Compass.
- Please feel free to contact us with any questions.

- Questions, comments, or concerns about the following may be sent to:
  - Draft Flood Hazard Data: Bob Pierson (Robert.Pierson@fema.dhs.gov) and Rebecca Starosta (Rebecca.Starosta@aecom.com)
  - WV Floodplain Management, Ordinance Updates, etc.: Kevin Sneed (Kevin.L.Sneed@wv.gov) and Julie Sears (Julia.R.Sears@wv.gov)
  - WV Flood Tool: Kurt Donaldson (Kurt.Donaldson@mail.wvu.edu)
  - Hazard Mitigation Plans: Matt Townsend (Matthew.Townsend@fema.dhs.gov)
  - Flood Insurance: Bill Bradfield (William.B.Bradfield@fema.dhs.gov)

## Attendee List

| Name | Community / Agency | Title |
|---|---|---|
| Bob Pierson | FEMA Region 3 | Project Officer |
| William Bradfield | FEMA Region 3 | Flood Insurance Specialist |
| Frank Shockey | FEMA Region 3 | Risk Analysis Branch Chief |
| Matthew Townsend | FEMA Region 3 | Community Planner |
| Julie Sears | WVEMD | NFIP CTP Coordinator |
| Kevin Sneed | WVEMD | CTP Project Officer |
| Kurt Donaldson | WV GIS Tech Center | WV GIS Tech Center |
| Shannon Maynard | WV GIS Tech Center | WV GIS Tech Center |
| Bidadian Behrang | WV GIS Tech Center | WV GIS Tech Center |
| Ed Stowasser | USACE | USACE |
| Joshua Dow | USACE | USACE |
| Jason Freeman | USACE | USACE |
| Mike Seering | Compass | Mapping Partner |
| Doug Moulton | Compass | Mapping Partner |
| Alejandra Vargo | Compass | Mapping Partner |
| Rebecca Starosta | Compass | Mapping Partner |
| Kevin Deep | Stantec | Milton LOMR |
| Carrie Sigrist | ARC | Mapping Partner |
| Chad Nelson | Cabell County | FPA |
| Liza Caldwell | Cabell County | County Commissioner |
| Sherry Wilkins | City of Huntington | Director, Stormwater Utility |
| Stephanie Petruso | City of Huntington | FPA |
| Mike Ramsey | City of Milton | FPA |