# Notes for Flood Risk Review (FRR) Meeting
# Mercer County, WV
# West Virginia

**June 3, 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 Flood Insurance Rate Map (FIRM), and work collaboratively to ensure that the needs of the community and its partners are met.

- Timeline for Studies
  - Current Effective Maps – March 2005
  - Discovery Meeting – August 2019
  - Risk MAP Study Notification – August 2021
  - Flood Risk Review (FRR) Meeting – June 3, 2025
  - Preliminary Maps and Community Coordination and Outreach (CCO) Meeting – Early 2026
  - Appeal Period start– Summer 2026
  - Appeal Period end – 90 days after Appeal Period start
  - 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 Base Flood Elevations (BFEs).
  - Several reaches of effective Zone A were upgraded to Zone AE with floodways and BFEs. All other 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 Brush Creek watershed downstream of the SCS dams through the City of Princeton and Tributary 1 to New River, which were 2D.
  - Vertical datum update from National Geodetic Vertical Datum of 1929 (NGVD29) to North American Vertical Datum of 1988 (NAVD88), which is a difference of approximately 0.4 foot. Vertical datum is a relative measure of elevation to a common reference point.
  - As part of the process, effective Letters of Map Change (LOMCs) are evaluated. The only effective Letter of Map Revision (LOMR) is a violation on Christians Creek, which is being superseded by the new study. Letters of Map Amendment (LOMAs) are evaluated when issuing preliminary maps to see if they should get revalidated.
  - Produced flood risk datasets for advisory use.

- Study Areas
  - See slides 15-17 for study area maps.
  - Mercer County is entirely within Middle New Watershed with East River and Blue River as major flooding sources.
  - Streams tie in to updated studies at the border with Virginia (ongoing Preliminary map updates) and Summers County, West Virginia (recently updated effective map issued October 2024).
  - Utilized high-resolution LiDAR topographic data from 2017.

- Hydrology
  - Primarily USGS regression equations with Bulletin 17C used for gage analysis.
  - Some areas where flow was regulated by dams for Brush Creek Watershed.
  - Rainfall-runoff modeling for Brush Fork (western side of the county) and Brush Creek watershed (through City of Princeton).
  - 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 A is all model-backed, with water surface elevations available on the WV Flood Tool.
  - “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.

- 1D vs 2D modeling: 1D modeling calculates BFEs across the floodplain at representative cross sections. 2D modeling calculates water surface elevations to allow lateral movement of flow, with evaluation lines to show BFEs instead of traditional cross sections.

## Study Impacts

- Compared to effective FIRMs, there is widening and narrowing of floodplain, which depends on the stream.
- There are many stream reaches where the floodplain was extended upstream beyond the effective floodplain to go to the 1 square mile drainage area.
- 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 houses and businesses being affected.
  - The building counts in the slides are not exact calculated numbers and may include out buildings or dilapidated structures.
    - The WV Tech Center will provide more refined numbers later as they look at the imagery and tax records to do a more detailed validation, then results will be republished on the WV Flood Tool.
    - After the new maps go effective, lenders notify property owners added to the floodplain and let them know if they are required to purchase flood insurance, so it is helpful for communities to notify people before then.
    - For those being newly mapped out of the floodplain, it is still encouraged to keep Flood Insurance.

- Flood Risk Dashboards
  - Summary of information; have one for the county and one for each community. Shows key data for each community, such as percentage of households in new floodplain and structures being mapped in or out or the updated floodplain (compared to effective floodplain mapping).
  - Immediate next steps – review Changes since last FIRM (CSLF); it is important to look at the new mapping now. Then later on, 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. This shows where the updated floodplain mapping is increasing, decreasing, or remaining the same as the effective floodplain mapping.
  - There are streams of only increase, which are tributaries not previously mapped.

## Using Flood Risk Data to Identify and Reduce Risk

- FEMA Flood Risk GIS Datasets are non-regulatory products and good tools
  - Flood depth analysis grids – click around and see how deep water is.

- Water surface elevation grids – click around and get the water surface elevation.
- CSLF – shows changes from old to new floodplains.

- Flood risk data can be access by the following platforms:
  - WV Flood Tool: https://www.mapwv.gov/flood/map/
    - Kurt walked through some of the features and layers in the WV Flood Tool.
    - Risk MAP view – Kurt's team is working on updating all the structures and can give a list later on so communities have information to communicate with local stakeholders.
    - The updated flood data is available on the WV Flood Tool as advisory. It should be referenced moving forward to identify if advisory flood elevations are higher than on the effective floodplain mapping.
  - 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

- Flood Hazard Mitigation Planning
  - State Flood Hazard Mitigation Plan (HMP) was approved in August 2022. We are in year 3. Everyone has adopted the current plan.
  - Matt Townsend (matthew.townsend@fema.dhs.gov) can be contacted with any questions regarding the HMP.

- Using Flood Data to Manage Development
  - Can see what structures are in or out of floodplain, flooding depth, areas of growth, properties with insurance policies.

## Floodplain Management

- Kevin Sneed: 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 lower cost.
- Communities can help by regulating standards and making sure permitting correctly.
- Everyone on call has 2' freeboard ordinance; some WV counties are starting to go up to 3'. freeboard. Costs more at building but saves money over time.
- Set back requirement - try to build as far away from stream as possible.
- June 2016 flood caused a lot of houses to get flooded badly; some people had been mapped outside of the floodplain and dropped their flood insurance.
- 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. Kevin is happy to teach anyone how to use the WV Flood Tool, just let him know.
  - After the LFD letters, it is time to adopt new ordinance, and Kevin can help you write the ordinance for your community to be FEMA compliant and work for your community.

- 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 the floodplain where possible or at least as far back as possible.
- Make sure to build it right; it will save property owners more down the road.

## 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 Mike Seering (mike.seering@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 |
| Frank Shockey | FEMA Region 3 | Risk Analysis Branch Chief |
| Betsy Ranson | FEMA Region 3 | Floodplain Management Specialist |
| 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 |
| Sara Lusher | WV GIS Tech Center | WV GIS Tech Center |
| Shannon Maynard | WV GIS Tech Center | WV GIS Tech Center |
| Keith Gunnoe | Mercer County | FPA |
| Curtis French | City of Bluefield | FPA |
| Grant Bennett | Town of Bramwell | Mayor |
| Mike Seering | Compass | Mapping Partner |
| Chris Ott | Compass | Mapping Partner |
| Tommaso Allen | Compass | Mapping Partner |
| Brian Edmondson | ARC | Mapping Partner |