



# Flood Risk Review (FRR) Meeting

Upper Monongahela Watershed



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# Why are we here today?

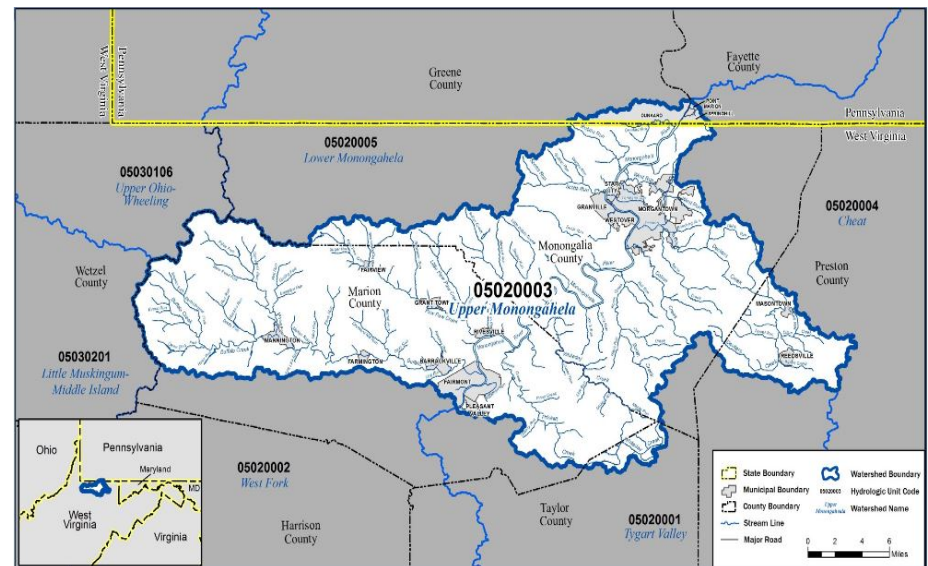
- ▶ The **Flood Insurance Study (FIS)** and **Flood Insurance Rate Maps (FIRMs)** are in the process of being updated for parts of the Upper Monongahela Watershed.
- ▶ New **Flood Risk Products** are being developed to help communities understand and plan for future flood events for the entire Watershed.
- ▶ A **FRR meeting** is an opportunity to **examine** the new study areas, **discuss** how the analysis and mapping has changed since previous FIRMs, and **work collaboratively** to ensure the needs of the community and its partners are met.



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# Agenda

- ▶ Risk MAP Overview
- ▶ Project Extents
- ▶ Flood Study Methodology
- ▶ Where to Get Products
- ▶ WV Flood Tool
- ▶ Work Session
  - ▶ Review Maps
  - ▶ Q&A



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# What is Risk MAP?

- ▶ Provides communities with accurate **flood maps**, and **flood information and tools** to:
  - Reduce risk
  - Enhance their mitigation plans
  - Better protect their citizens
- ▶ Increases **public awareness** and **action** that reduces risk to life and property.

**M**apping      **A**ssessment      **P**lanning



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# Risk MAP Program



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# Project Timeline and Schedule

Discovery Meeting

June 2014

Flood Risk Review Meeting

April 2016

Preliminary Date

CCO Meeting

Appeal Period  
90 Days

LFD

Effective Maps

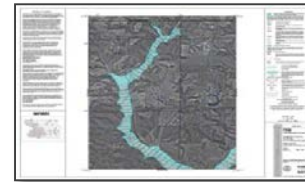


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# Risk MAP Products

**Regulatory Products:** Products used for floodplain management and insurance purposes, as part of the National Flood Insurance Program (NFIP).

Flood Insurance Rate Maps  
(FIRM's)



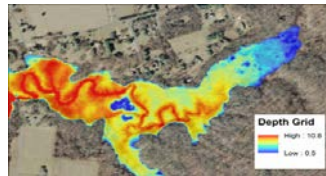
Flood Insurance Study  
(FIS)



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# Risk MAP Products

**Flood Risk Products:** Non-regulatory resources that supplement the regulatory products to view and understand local flood risk.



Flood Depth and Analysis Grids

Changes Since Last FIRM



Risk Assessments



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# Flood Risk Products

- ▶ **Flood Risk Map**
  - Illustrate an overall picture of flood risk
- ▶ **Flood Risk Report**
  - Explains the concept of flood risk
  - Identifies useful tools and reference materials
- ▶ **Flood Risk Database**
  - Data for the community to incorporate into local GIS layers to visually communicate flood risk



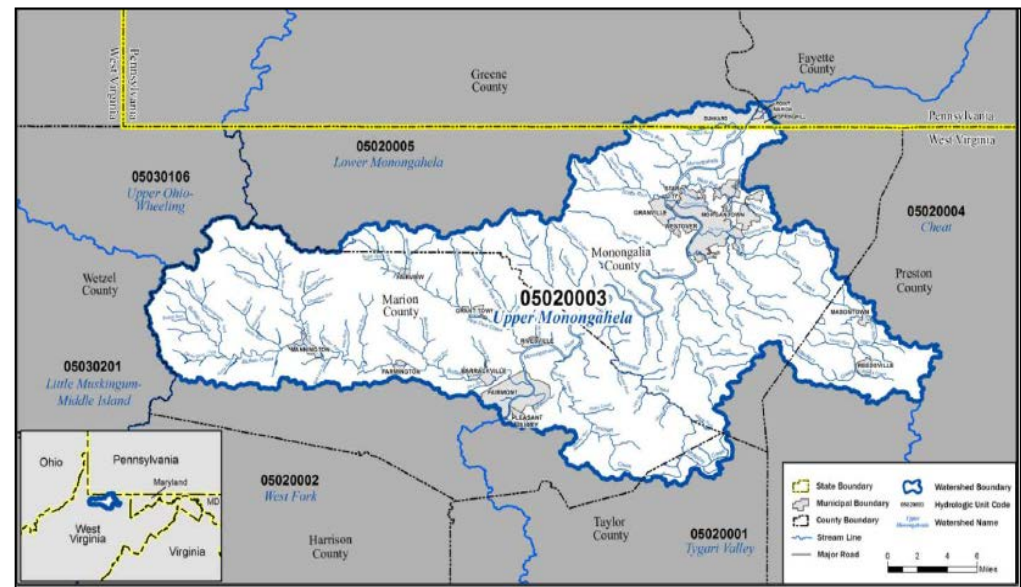
# Project Extents

## ▶ Upper Monongahela Watershed

- NW portion of West Virginia
- Small area of Southern Pennsylvania

## ▶ Detailed Restudy Area within

- Monongalia County
- Marion County



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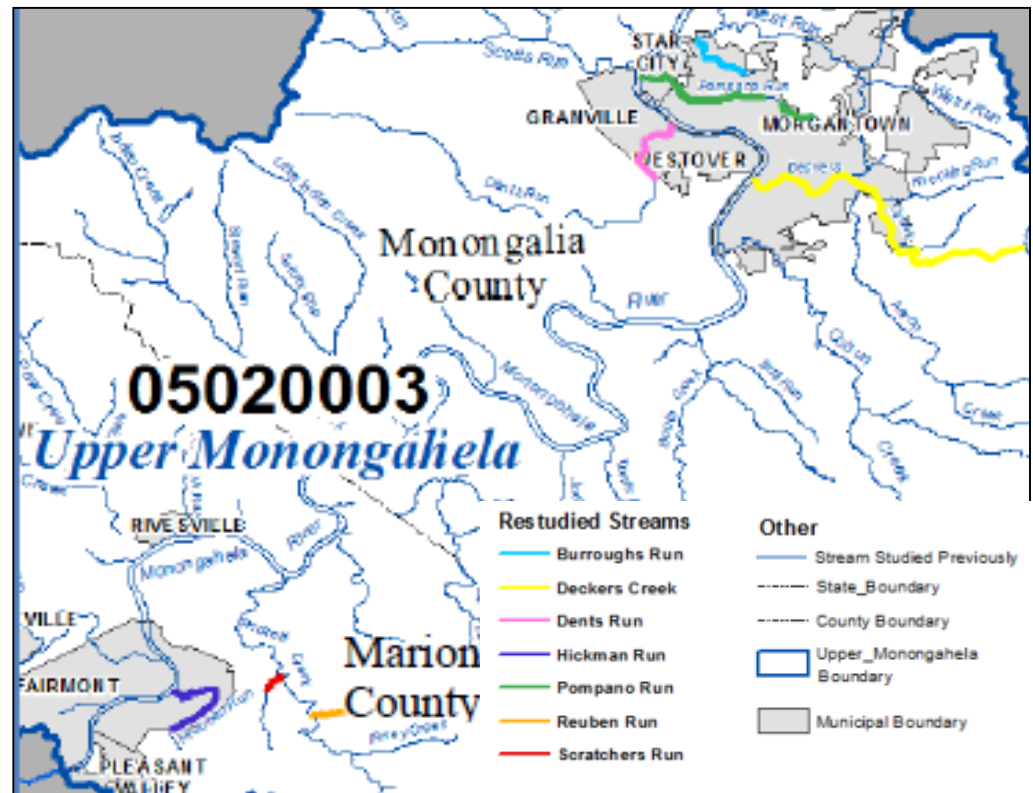
# Project Extents: Detailed Restudy

## ▶ Upper Monongahela Watershed

- 15 miles of restudy streams

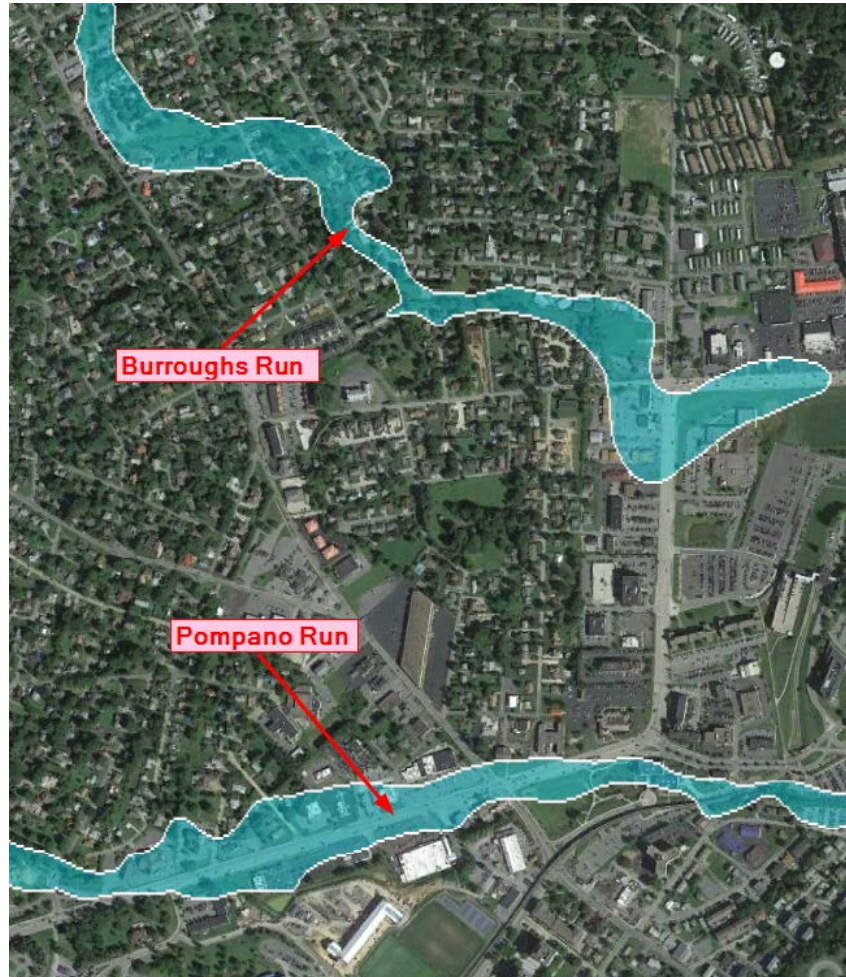
## ▶ Detailed Study Streams

- Deckers Creek
- Pompano Run
- Dents Run
- Hickman Run
- Reuben Run
- Scratchers Run
- Burroughs Run



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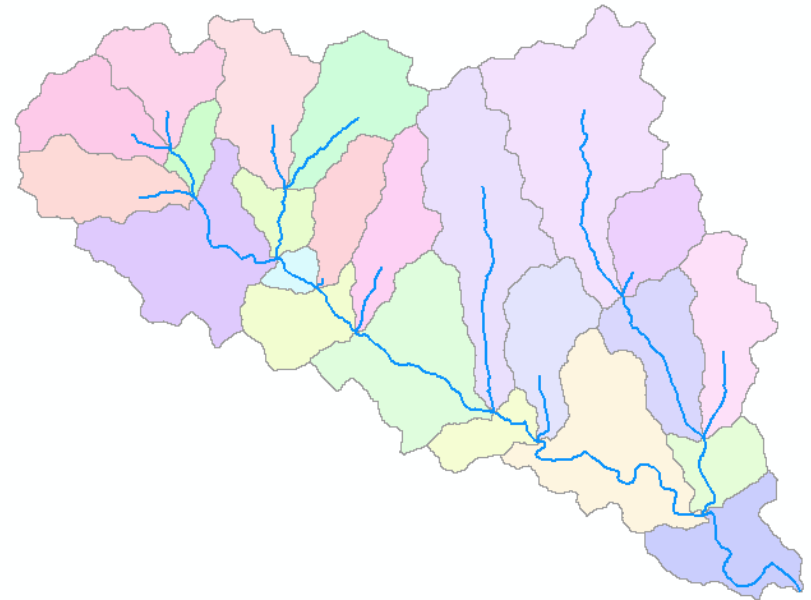
# Burroughs and Pompano Runs



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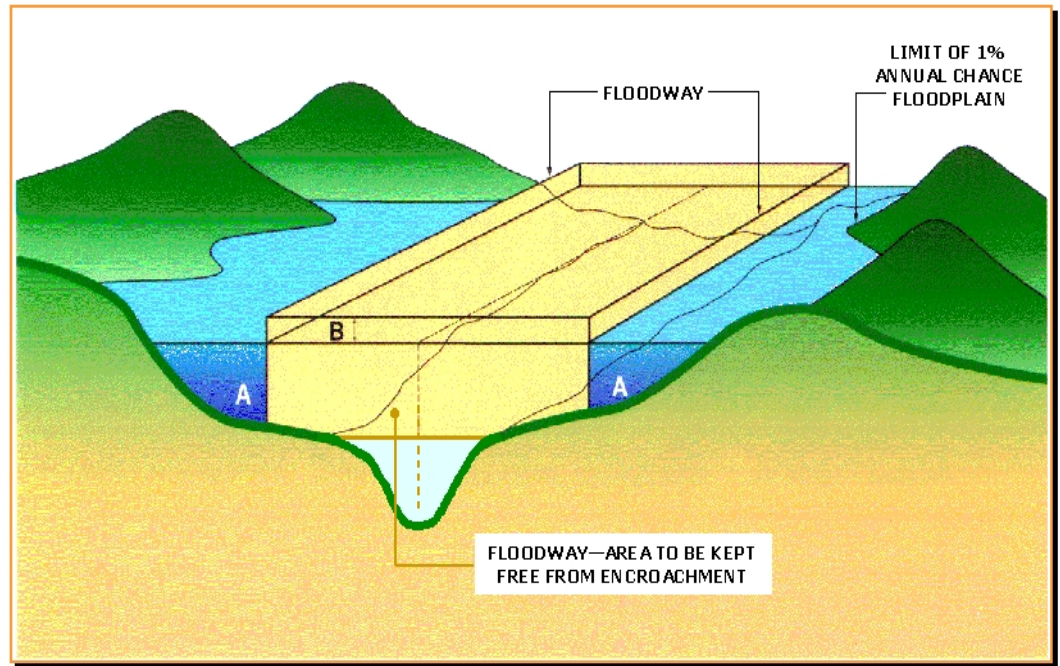
# Method of Restudy: Hydrology

- ▶ **USGS Regression Equations**
- ▶ **National Urban Equations**
  - For areas that contained more than 10% impervious area
- ▶ **Gage Analysis**
  - Log Pearson Type III analysis
- ▶ **HMS modeling**
  - Updated existing HEC-1 models developed by City of Morgantown



# Method of Restudy: Hydraulics

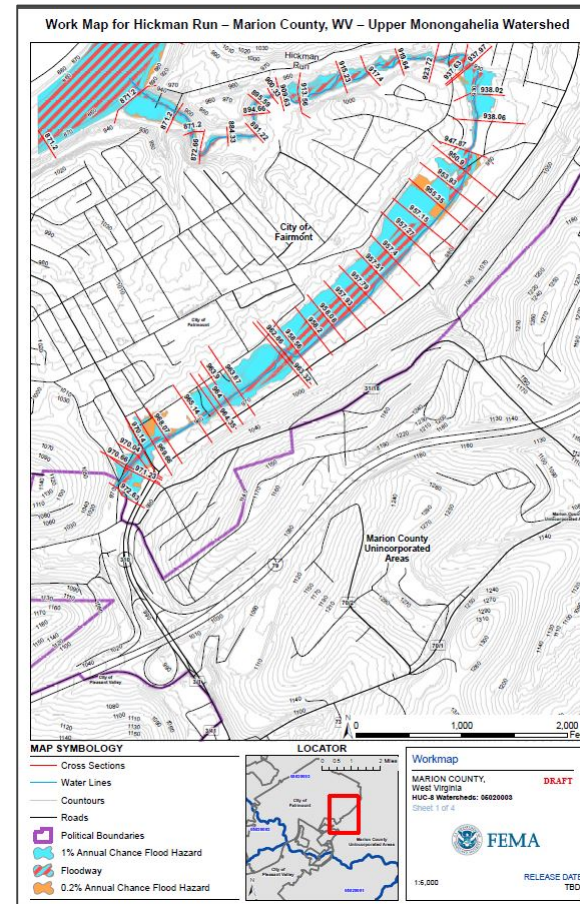
- ▶ **HEC-RAS**
- ▶ **Channel and Field Measurements**
- ▶ **LiDAR**
  - Used for overbank areas
- ▶ **Floodways**
  - If applicable
- ▶ **Mapping**
  - Zone AE with Base Flood Elevations



# Workmap: Hickman Run

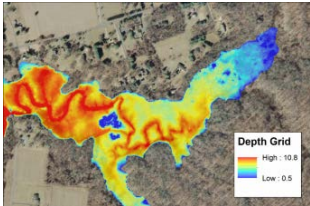


## Hickman Working Map

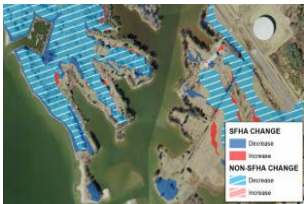


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# Flood Risk Datasets



Flood Depth Grids → Whole Watershed  
Flood Analysis Grids → Detailed Study Area



Changes Since Last FIRM → Detailed Study Area



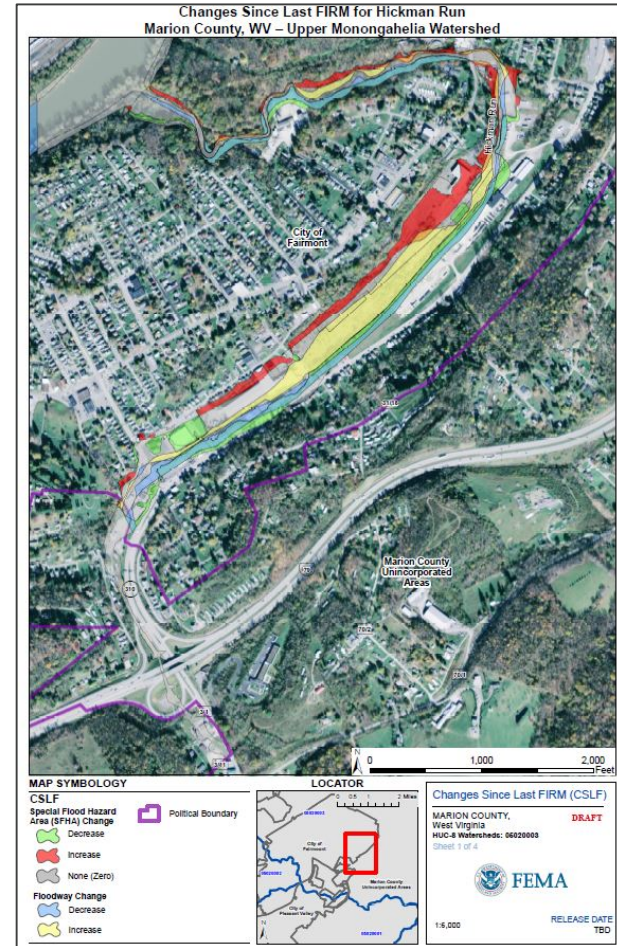
Flood Risk Assessment → Whole Watershed



# Changes Since Last FIRM: Hickman Run



Hickman CSLF



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# Map Service Center

## FEMA Flood Map Service Center : Welcome!

Looking for a Flood Map? [?](#)

**Enter an address, a place, or longitude/latitude coordinates:**

Search

Looking for more than just a current flood map?

Visit [Search All Products](#) to access the full range of flood risk products for your community.



## About Flood Map Service Center

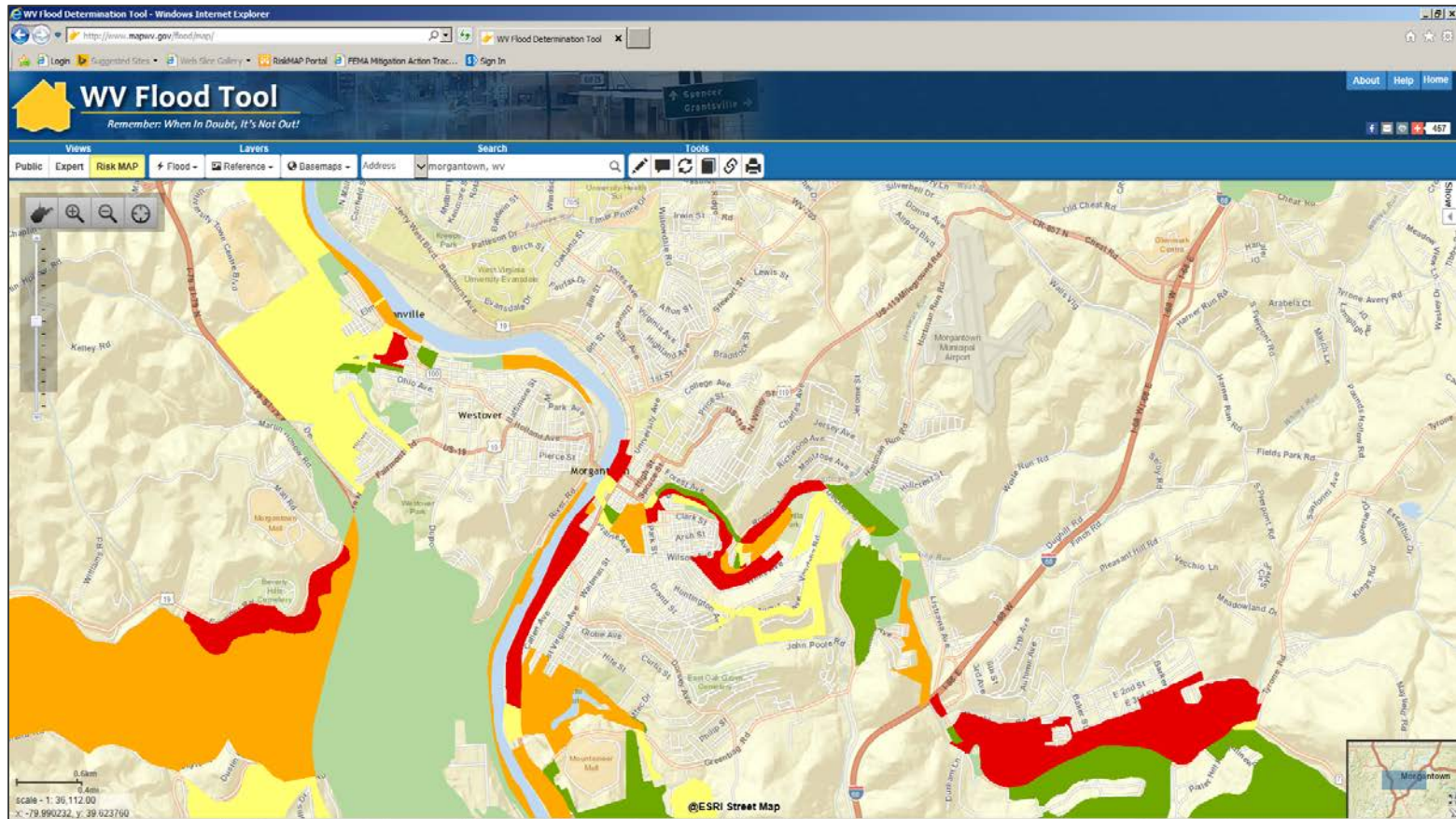
The FEMA Flood Map Service Center (MSC) is the official public source for flood hazard information produced in support of the National Flood Insurance Program (NFIP). Use the MSC to find your official flood map, access a range of other flood hazard products, and take advantage of tools for better understanding flood risk.

[www.msc.fema.gov](http://www.msc.fema.gov)



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# West Virginia Flood Tool



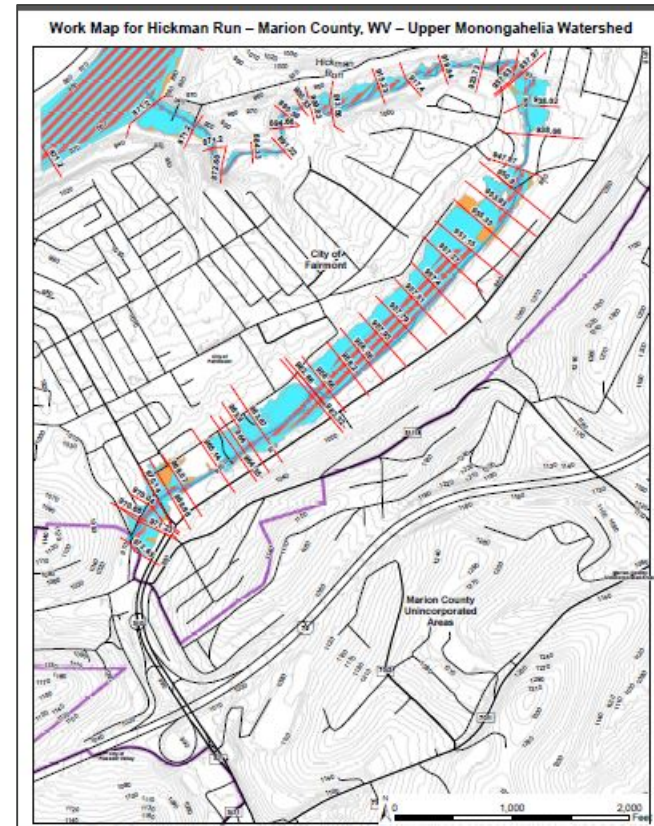
[www.mapwv.gov/flood/map](http://www.mapwv.gov/flood/map)



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# Work Session

- ▶ **Review** floodplain mapping and flood risk products for **validity**.
  - Computer and printed map stations available.
- ▶ **Ask questions!**
- ▶ Send any **feedback** to
  - Ben Kaiser at [benjamin.kaiser@aecom.com](mailto:benjamin.kaiser@aecom.com)
  - Bob Pierson at [robert.pierson@fema.dhs.gov](mailto:robert.pierson@fema.dhs.gov)



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