



# Community Coordination & Outreach (CCO) Meeting

Pocahontas County, West Virginia  
April 18, 2024



**FEMA**

# Agenda

- Welcome and Introductions
- Where We Are - Preliminary Maps
- Impacts
- Floodplain Management
- Public Outreach
- What You Should Do

# Welcome and Introductions



A photograph of a wooden boardwalk leading through a coastal area. The boardwalk is made of weathered wooden planks and is flanked by wooden railings. In the background, there are several houses with light-colored roofs, some of which appear to be partially obscured by tall, dry grasses or reeds. The sky is overcast and grey. The overall scene suggests a coastal or marshy environment.

# Where We Are - Preliminary Maps



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Increasing Resilience Together

# Timeline – Looking Back

**Effective FIRM**

(Redelineation)

November 2010

**Flood Risk Review Meeting**

December 9, 2022

**Risk MAP Study Notification**

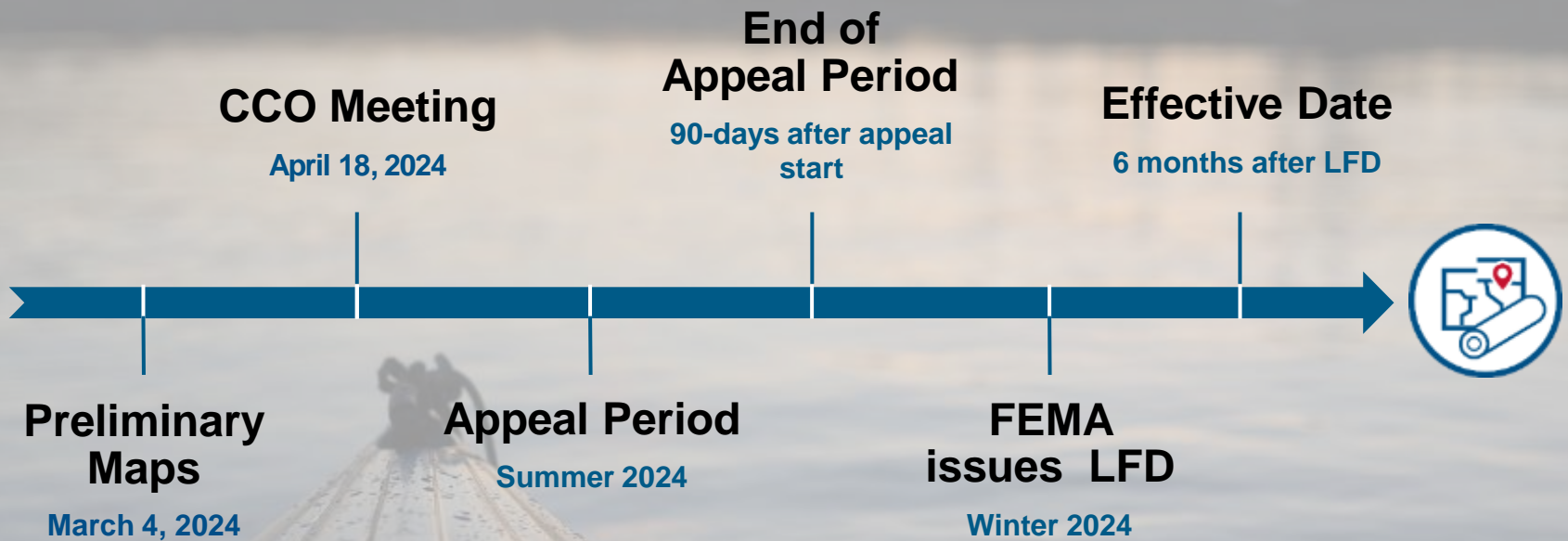
May 2021

**Risk MAP Kickoff Meeting**

June 2021



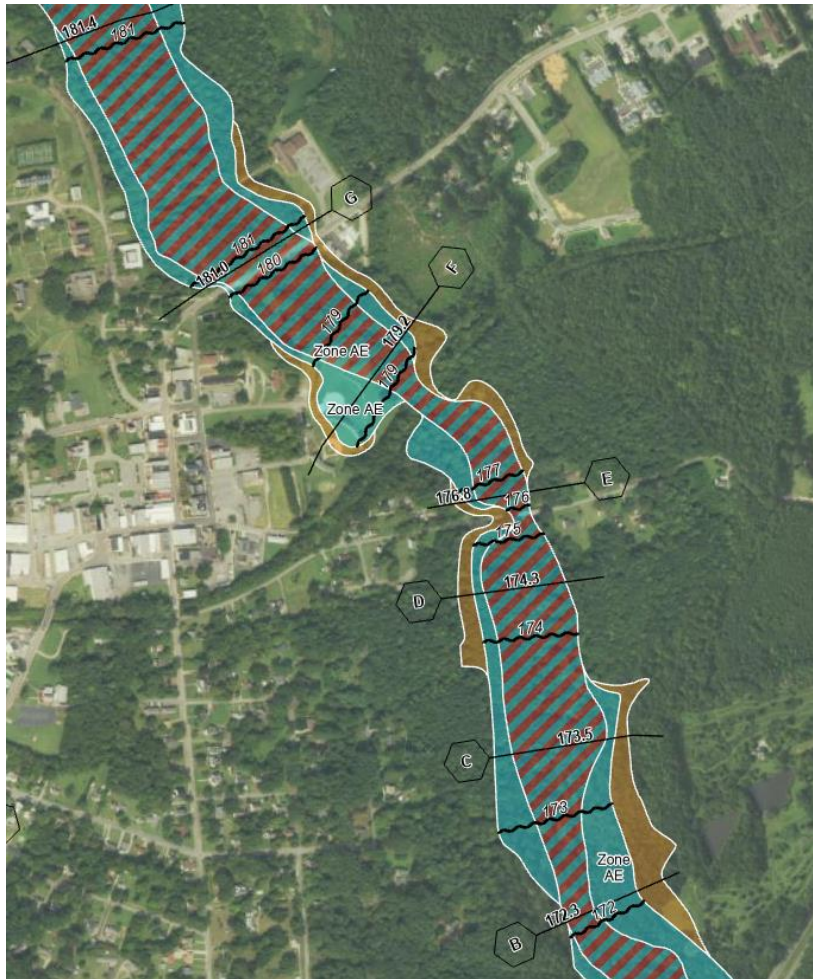
# Timeline – Looking Forward








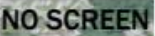














**CCO:** Community Coordination and Outreach

**LFD:** Letter of Final Determination

# Floodplain Map Overview

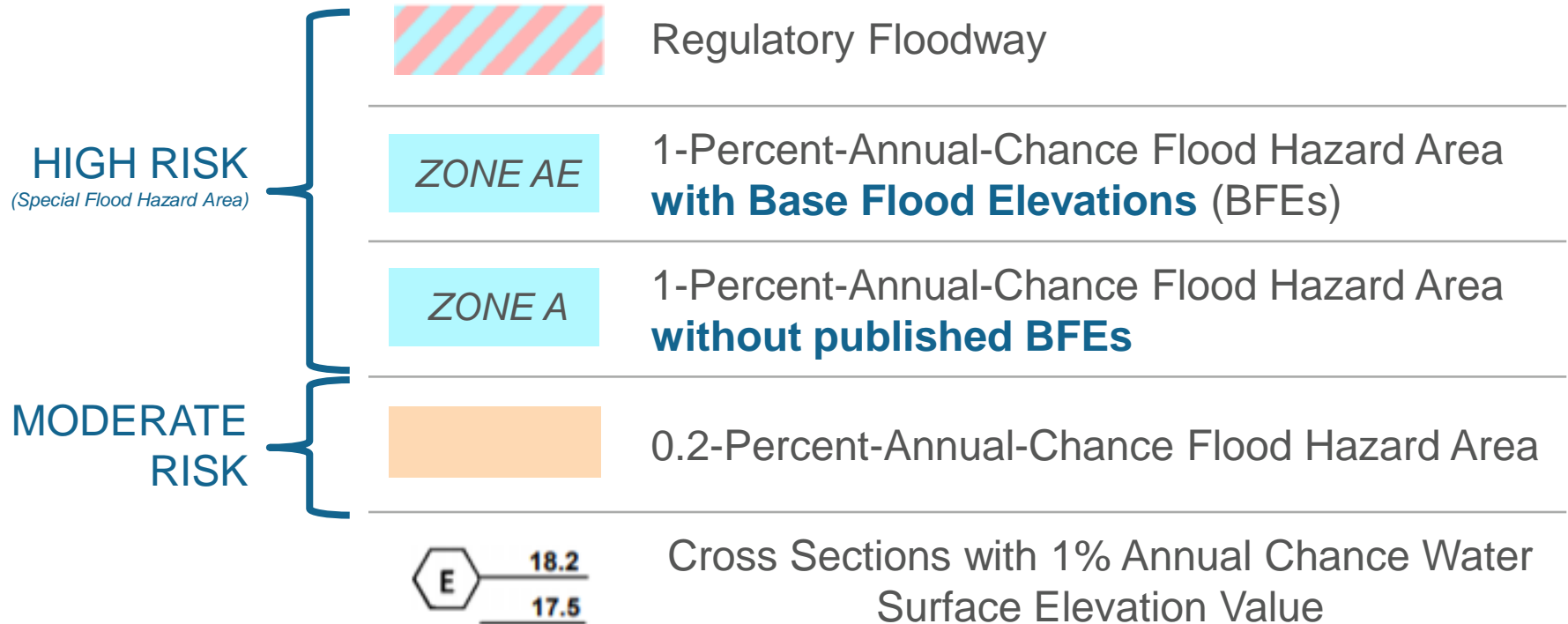


<b>SPECIAL FLOOD HAZARD AREAS</b>		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
<b>OTHER AREAS OF FLOOD HAZARD</b>		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee See Notes Zone X
		Area with Flood Risk due to Levee Zone D
<b>OTHER AREAS</b>		NO SCREEN Area of Minimal Flood Hazard Zone X
		Area of Undetermined Flood Hazard Zone D
<b>GENERAL STRUCTURES</b>		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
<b>OTHER FEATURES</b>		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		8 Coastal Transect
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		513 Base Flood Elevation Line (BFE)
	Limit of Study	
	Jurisdiction Boundary	



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# Floodplain Map Overview



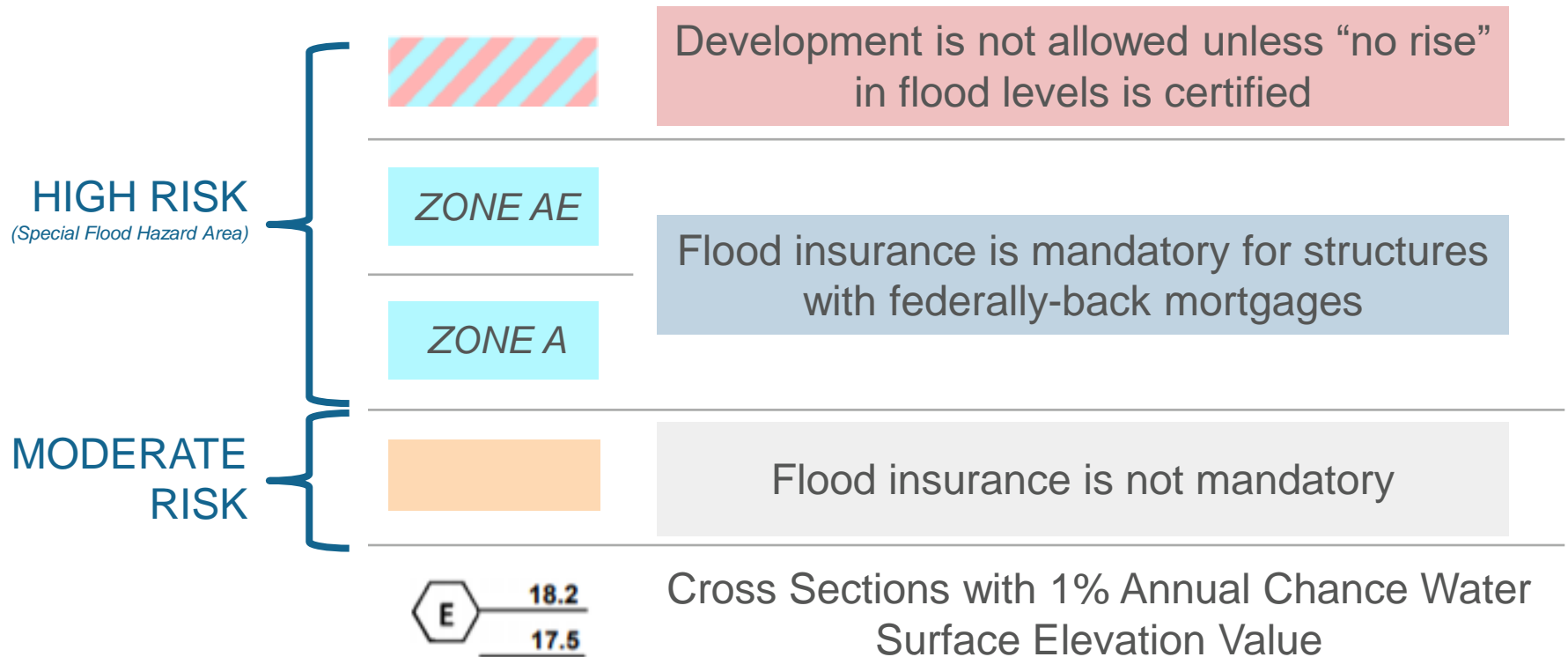
["The 100-Year Flood Zone Explained"](#)



FEMA



# Floodplain Map Overview



[“The 100-Year Flood Zone Explained”](#)



FEMA

# Where Can I Find My Flood Maps?

The FEMA Map Service Center (MSC) is the official public source for flood hazard information: <https://msc.fema.gov/portal/home>

The screenshot displays the FEMA Flood Map Service Center interface. At the top, it says "FEMA Flood Map Service Center". Below that is a search bar with the text "Looking for a Flood Map?". A red callout box with the text "Enter an address for location search" points to the search input field. Below the search bar is a section titled "Enter an address, a place, or longitude/latitude coordinates:" with a text input field and a "Search" button. Below this is a link "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." A red callout box with the text "Menu Search" points to the "Search All Products" link. To the right, a search results panel is shown for "POCAHONTAS COUNTY ALL JURISDICTIONS". It includes a "Please Note" section, an "Expand All" button, and a list of product categories: Effective Products (130), Preliminary Products (127), Pending Product (0), Historic Products (110), and Flood Risk Products (3).



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# National Flood Hazard Layer

Visit <https://www.fema.gov/national-flood-hazard-layer-nfh> for multiple options to view and download NFHL data.

## Accessing the National Flood Hazard Layer

### Map Service Center

Access localized National Flood Hazard Layer data by searching FEMA's Map Service Center.

[FEMA's Map Service Center](#)

### NFHL ArcGIS Viewer

Or you may view, download, and print current local digital effective flood hazard data in an ArcGIS map.

[NFHL Viewer](#)

In the [NFHL Viewer](#), you can use the address search or map navigation to locate an area of interest and the NFHL Print Tool to download and print a full Flood Insurance Rate Map (FIRM) or FIRMette (a smaller, printable version of a FIRM) where modernized data exists. Technical GIS users can also utilize a series of dedicated GIS web services that allow the NFHL database to be incorporated into websites and GIS applications. For more information on available services, go to the [NFHL GIS Services User Guide](#).

You can also use the address search on the [FEMA Flood Map Service Center \(MSC\)](#) to view the NFHL data or download a FIRMette. Using the "Search All Products" on the MSC, you can download the NFHL data for a County or State in a GIS file format. This data can be used in most GIS applications to perform spatial analyses and for integration into custom maps and reports. To do so, you will need GIS or mapping software that can read data in shapefile format.

FEMA also offers a download of a KMZ (keyhole markup file zipped) file, which overlays the data in Google Earth™. For more information on using the data in Google Earth™, please see [Using the National Flood Hazard Layer Web Map Service \(WMS\) in Google Earth™](#).

### Draft National Flood Hazard Layer

The [Draft National Flood Hazard Layer](#) is for early awareness of possible changes to regulatory flood map information. Until the data becomes effective and it appears in the National Flood Hazard Layer, the data cannot be used to rate flood insurance policies or enforce the federal mandatory purchase requirement.

### Preliminary Flood Hazard Data

Preliminary flood hazard data provides the public an early look at their home or community's projected risk to flood hazards. Preliminary data may include new or revised Flood Insurance Rate Maps (FIRM), Flood Insurance Study (FIS) Reports and FIRM Databases. [View your community's preliminary flood hazard data.](#)

### Pending Flood Hazard Data

Pending flood hazard data provides the public an early look at their home or community's projected risk to flood hazards. Pending data may include new or revised Flood Insurance Rate Maps (FIRM), Flood Insurance Study (FIS) Reports and FIRM Databases. [View your community's preliminary flood hazard data.](#)



# How Did the Floodplain Map Change?

- FEMA R3 Changes Since Last FIRM (CSLF) Viewer:

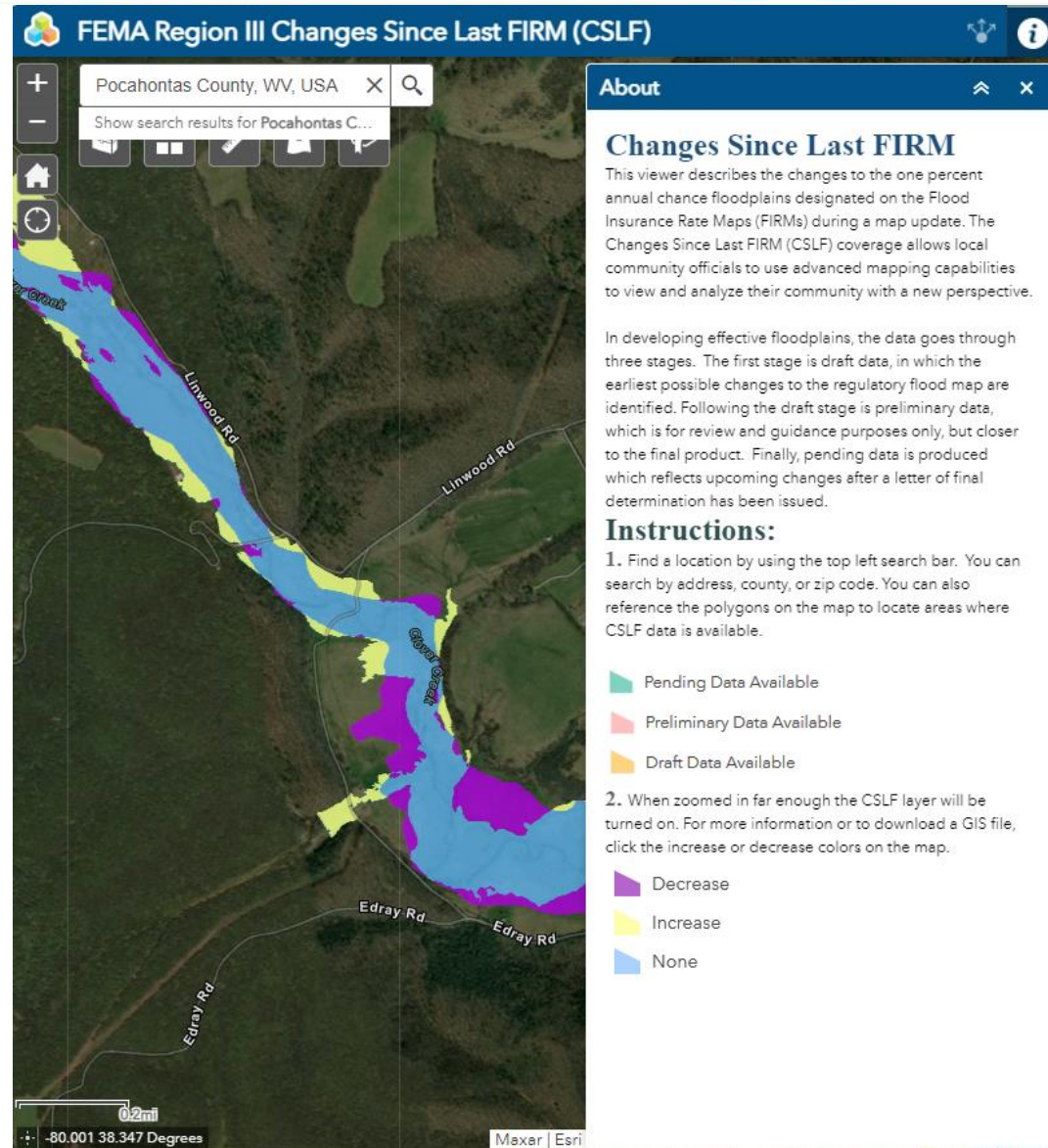
<https://arcg.is/bz8SC0>

- Change in Floodplain Extents:

- *Purple* – Decrease
- *Blue* – Still Floodplain
- *Yellow* – Increase

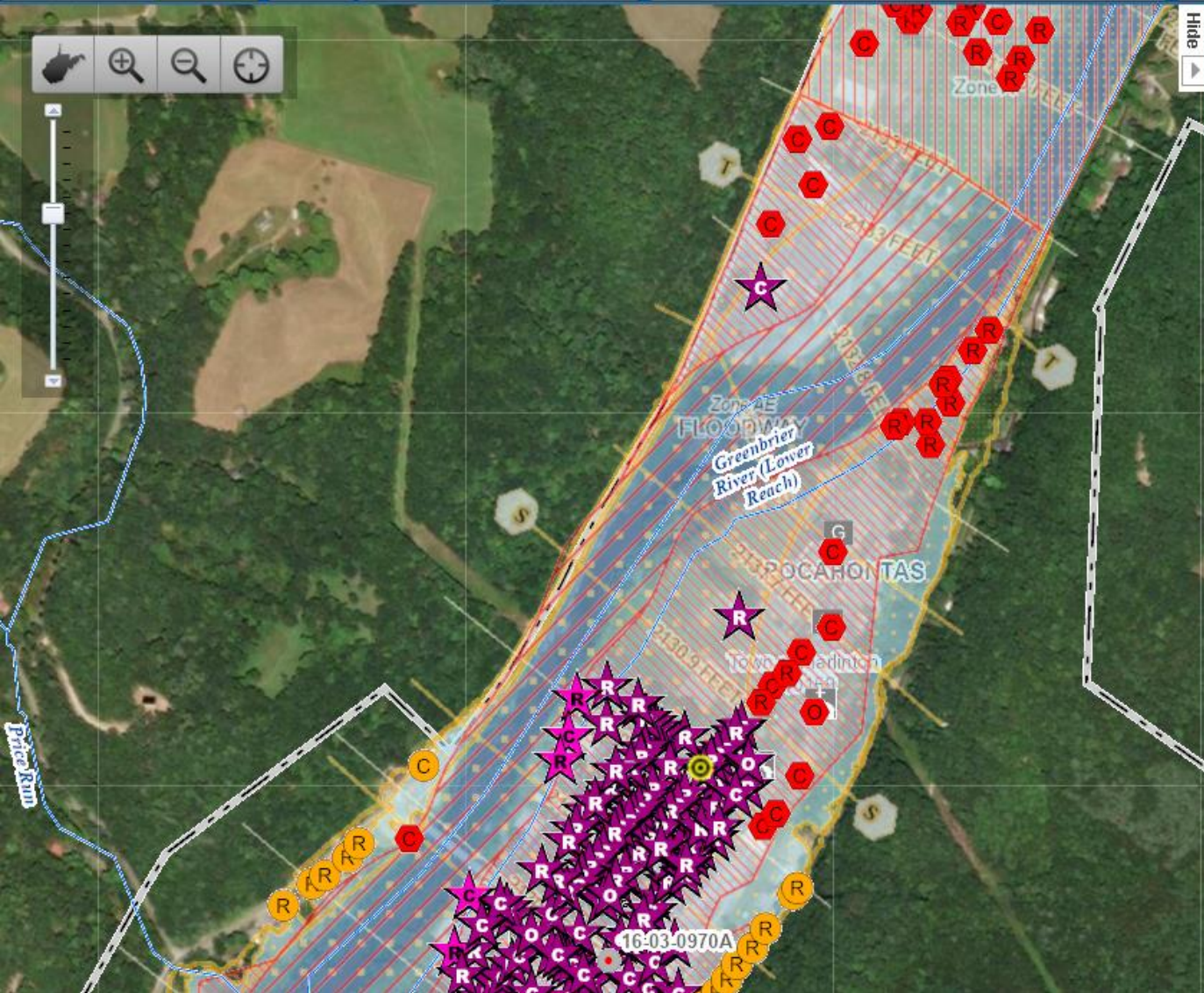
- FEMA Flood Map Changes Viewer:

<https://msc.fema.gov/fmcv>



FEMA

Views: Public | Expert | **Risk MAP** | Layers: Risk | Reference | Basemaps | Search: Address: Pocahontas County, WV | Tools: [Icons]



**Flood Hazard Area:** Location is **WITHIN** the FEMA 100-year floodplain.

**Flood Zone:** AE

**Stream:** Greenbrier River

**Watershed (HUC8):** Greenbrier (5050003)

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**FEMA's Flood Map:** 54075C0527D [Download](#) [Share](#) [NFHL](#)

**Map Effective Date:** 11/4/2010

**Contacts:** Pocahontas

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**Flood Height:** Refer to FIS report for BFE NAVD88

**Water Depth:** About 4.1 ft (Source: HEC-RAS)

**HEC-RAS Model:** N/A [All Models](#)

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**Flood Profile:** 54075\_046

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**Community:** Town of Marlinton

Freeboard: 2 ft    CRS Class: 10    CID: 540159

**Location (lat, long):** (38.225442, -80.092295) WGS84

**Location (UTM 17N):** (4231217, 579451) WGS84

**External Viewers:** [Map](#) [Share](#) [Print](#) [Download](#)

**Elevation:** 2126.4 ft (Source: FEMA 2016) NAVD88

**Address:**  multiple addresses

**Parcel:**  38-08-0001-0085-0000 | Assessment Warning

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**Flood Risk Information** [Related Resources](#)

[Flood Risk Assessment](#)

[3D Flood Visualization](#)



# Impacts



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# Study Recap: Pocahontas County

## Hydrologic and Hydraulic Modeling and Mapping, including:

- Updated Detailed '**ZONE AE**' Studies (80 miles), including Floodways and Field Survey
  - Culvert/Bridge dimensions were measured, and supplemented with sketches & photographs
  - Surveyed cross-sections at selected locations, measured underwater channel morphology
- Model-backed Approximate '**ZONE A**' Studies (442 miles)
  - USGS Regression equations used for the hydrology
  - Cross-sections generated from LiDAR used for hydraulics
  - Automated processes
  - Does not include information below normal water surface
  - No structures are modeled
- Utilization of high-res topographic data (for modeling and mapping)
  - West Virginia USGS QL2 LiDAR Project 2016
  - Light Detection and Ranging Data (LiDAR), 2020 West Virginia FEMA HQ Project Area
  - West Virginia – FEMA R3 Northeast LiDAR – 2016
  - West Virginia FEMA R3 South Central LiDAR Project

# Significant Impacts Overview: Pocahontas County

## *Comparing the PRELIMINARY and EFFECTIVE flood data:*

- The study led to moderate changes in Special Flood Hazard Area (SFHA) extent. Changes are mostly related to Zone A hazards extending upstream of the previous study limits.
- **There are more buildings expected to be mapped into the SFHA than mapped out.** About 380 structures are expected to be newly mapped into the regulatory floodplain, and 295 are expected to be mapped out.
  - Mapped In: Along the East Fork of the Greenbrier River near Barlow
  - Mapped Out: Along Route 219 near Buckeye
- **Most properties in the effective SFHA are not insured.** Within the effective SFHA, there are about 907 structures and 118 National Flood Insurance Program policies. Countywide, there are 173 NFIP policies in force.



# Significant Impacts Overview

- Compared to effective NFHL, **widening and narrowing of the 1-percent-annual-chance floodplain (SFHA) extent** was observed throughout the county.
- **Extended study reaches** (with drainage areas of 2 square mile and greater, and not on current effective FIRM) result in new properties within the SFHA.
- Most streams experienced both **increases and decreases** when comparing the computed model WSELs to the current regulatory base flood elevations.



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# Risk MAP (Pocahontas Co. Preliminary Flood Maps)

## Risk **M**apping (New Preliminary Flood Maps)

Understand Flood Map Changes  
(BFEs, Floodplains/Floodways)

Floodplain Building Counts

SFHA Building Changes and  
Outreach Letters

LOMAs (SFHA mapped out)

## Risk **A**nalysis (Risk Identification)

Large Floodplain Area (acres) and  
Length (miles)

Highest number of floodway  
structures

Higher Number of Critical  
Infrastructure/Essential Facilities  
and Community Assets

High Building Damage Losses

High Repetitive Loss Structures and  
Paid Claims

High Population Exposure

## Risk **P**lanning (Flood resiliency)

Swift Grant Funding for RL Structures

Preload Structures into FEMA SDE  
Software

Validate floodplain building inventory

Plan for Inundated Roads

Verify Buyout Properties

Apply for CRS status

Use stream gauge stages and ground  
elevation for emergency planning

Publish Elevation Certificates on WV  
Flood Tool

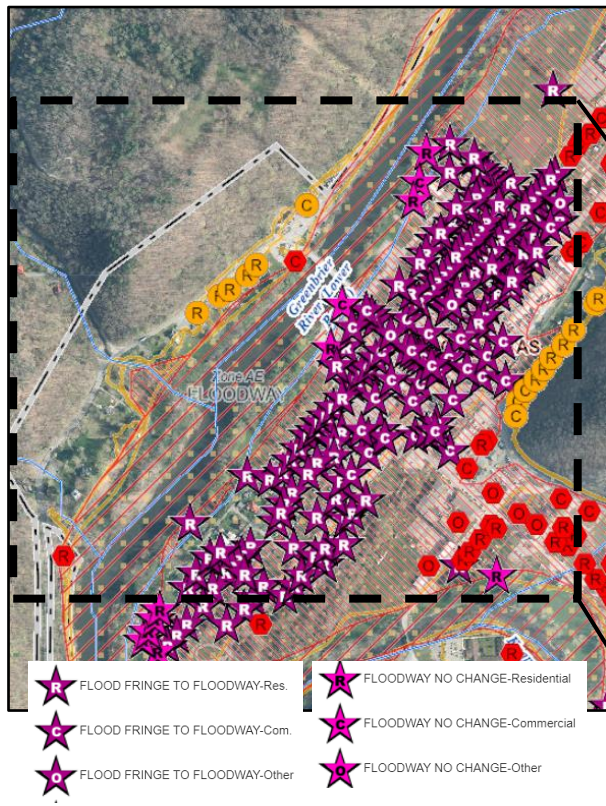


# Buildings in Preliminary Floodway

## Floodway Increase in Marlinton

Buildings in the floodway channel of a stream or close to the flood source, will be subject to the greatest flood depths, highest velocities, and greatest debris potential.

Community	Buildings in Preliminary Floodway	Buildings in Effective Floodway	Net Change in Floodway
Marlinton	190	14	+ 176

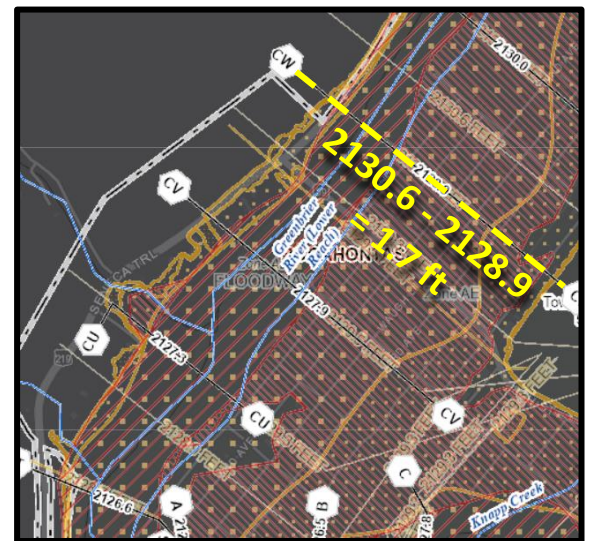


- FLOOD FRINGE TO FLOODWAY-Res.
- FLOOD FRINGE TO FLOODWAY-Com.
- FLOOD FRINGE TO FLOODWAY-Other
- FLOODWAY NO CHANGE-Residential
- FLOODWAY NO CHANGE-Commercial
- FLOODWAY NO CHANGE-Other

Floodway width expanded significantly up to 300 yards (900 ft)



Base Flood Elevation increased to about 2 feet



[Flood Tool Link](#)

# Preliminary Floodplain Building Counts

COMMUNITY IDENTIFICATION					
Community Name	Community Type	Estimated structures in the Community	Estimated structures in the preliminary flood high hazard area	Estimated structures newly mapped in	Estimated structures newly mapped out
Pocahontas County*	Incorporated	6,218	399	154	169
Durbin	Incorporated	187	14	9	2
Hillsboro	Incorporated	179	0		0
Marlinton**	Incorporated	673	371	43	29
	<b>County</b>	<b>7,257</b>	<b>784</b>	<b>206</b>	<b>200</b>

\* Unincorporated

\*\* Marlinton has a total of 190 floodway structures, of which 176 were moved from floodplain fringe to floodway

**County Net Change in structures: + 6**

**County Net Change in floodway structures: + 192**

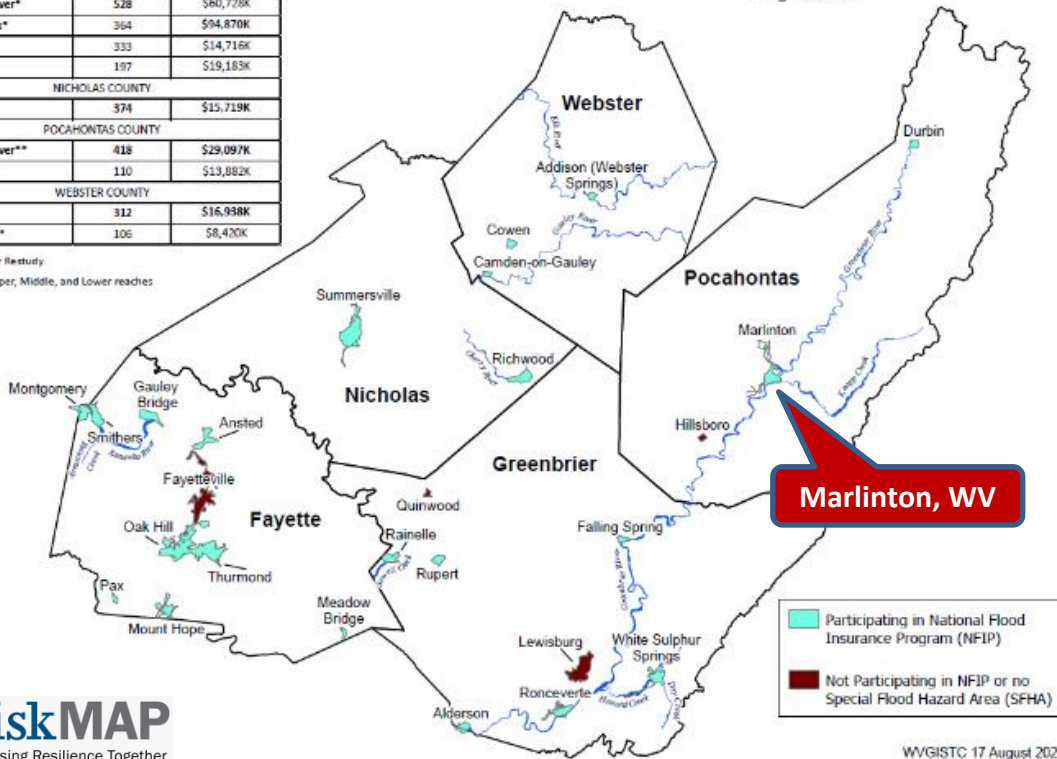
# Building Counts & Values by Rivers (2021)

Flood Source	Building Count	Dollar Exposure (\$)
FAYETTE COUNTY		
Armstrong Creek	275	\$11,354K
Kanawha River	242	\$46,459K
GREENBRIER COUNTY		
Greenbrier River*	528	\$60,728K
Howard Creek*	364	\$94,870K
Sewell Creek*	333	\$14,716K
Dry Creek	197	\$19,183K
NICHOLAS COUNTY		
Cherry River*	574	\$15,719K
POCAHONTAS COUNTY		
Greenbrier River**	418	\$29,097K
Knapp Creek	110	\$13,882K
WEBSTER COUNTY		
Elk River	312	\$16,938K
Gauley River**	106	\$8,420K

\* 2016 Disaster Reentry  
 \*\* Includes Upper, Middle, and Lower reaches

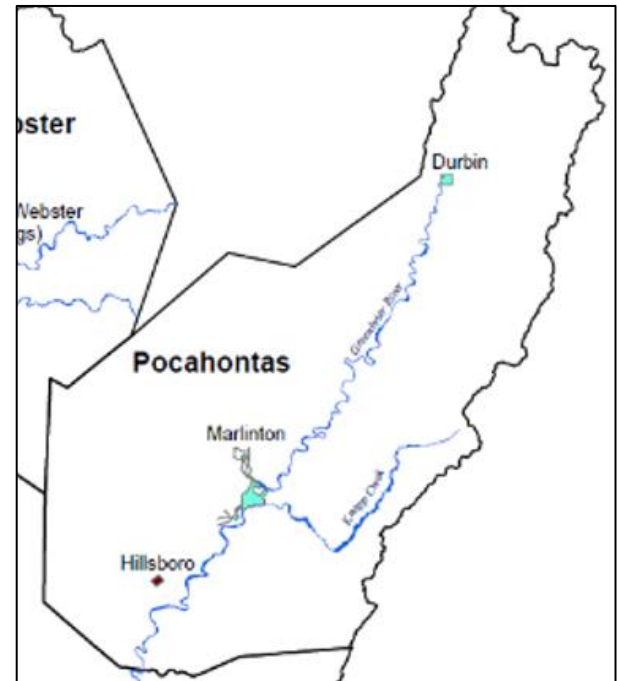
## Region 4 Communities

August 2021



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 Increasing Resilience Together

WVGISTC 17 August 2021



Top Rivers with highest building counts are **Greenbrier River** (418) and **Knapp Creek** (110).

# SFHA Map Change Letters

Incorporate 1% Floodplain Building Risk Assessment Inventory into **Mitigation** and **NFIP/CRS Management** Activities



[FEMA Region 3 Toolkit for New Flood Studies](#)

**City of White Sulphur Springs** *White Sulphur Springs has 68 buildings being mapped into the SFHA*

Date: 10/14/2021

Dear **SMITH JOHN**:

This letter is a test to show the use of mail merge and copied the first two paragraphs from the Local Officials Toolkit template and added the last two paragraphs for demonstration purposes.

A multi-year project to re-examine **City of White Sulphur Springs's** flood zones and develop detailed digital flood hazard maps has been completed. The new maps, also known as Flood Insurance Rate Maps (FIRMs), were just released for public view. The new maps reflect current flood risk based on the latest data and a more accurate understanding of our area's topography. As a result, you and other property owners throughout **GREENBRIER COUNTY** will have up-to-date, Internet-accessible information about flood risk to your property.

**How will these changes affect you?**

Based on the new maps, your property is being mapped into a higher risk flood zone, known as the Special Flood Hazard Area (SFHA). If you have a mortgage from a federally regulated lender and your property is in the SFHA, you are required by Federal law to carry flood insurance when these flood maps are put into effect. We recommend that you use this time to contact your insurance agent to get the most favorable rate and learn about options offered by the National Flood Insurance Program (NFIP) for properties being mapped into higher risk areas for the first time.

You can find your property on the WV Flood tool in one of two ways: first, you can go to the following link in a web browser: <https://mapwv.gov/flood/map/?wkid=102100&x=-8939196.678447664&y=-4550352.316266677&l=13&v=2>. Or, you can go to <https://mapwv.gov/> map and enter your address, **177 PATTERSON ST, WHITE SULPHUR SPRINGS, WV, 24986**, in the search bar.

Your property is within the **Howard Creek** flood zone and has a flood depth of **1.0 feet**. Its FIRM status is **Pre-FIRM**.

[Mail Merge Template for SFHA Mapped-in Structures](#)

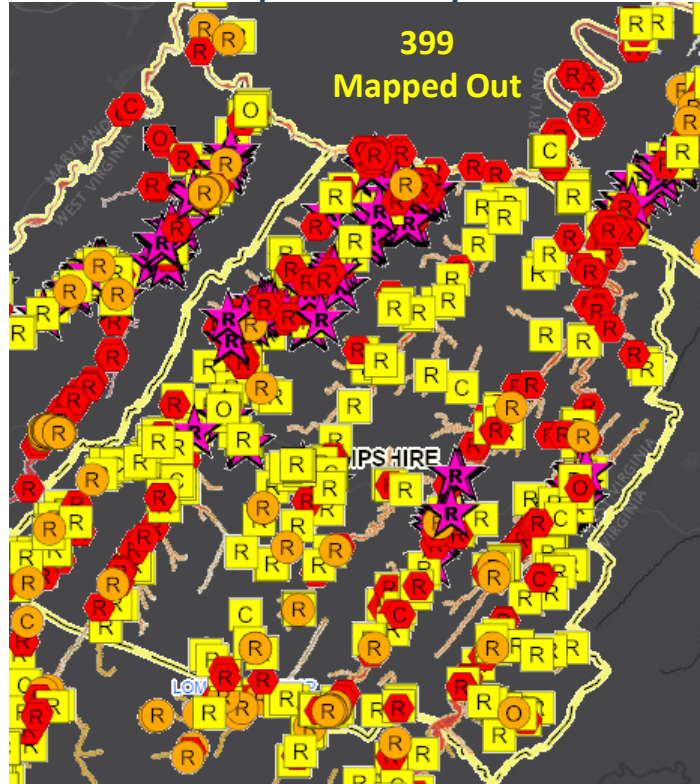
Counties which recently sent outreach letters to homeowners:

- Hardy County Risk MAP
- Kanawha County - Elk River PMR
- Greenbrier County Risk MAP

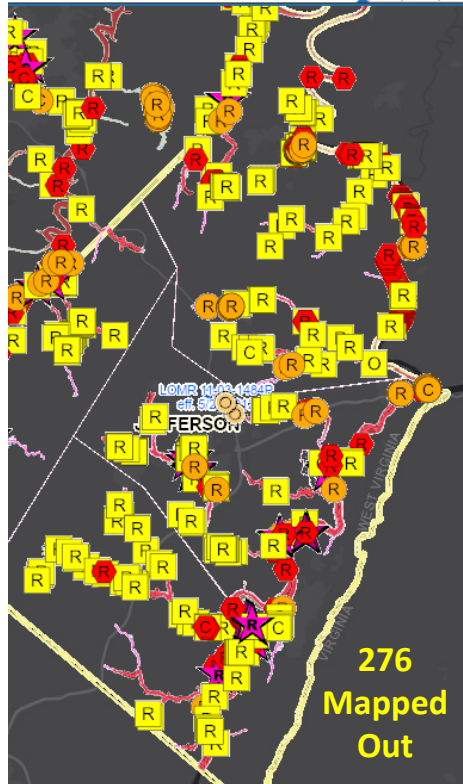


# Building SFHA Change (LiDAR LOMAs)

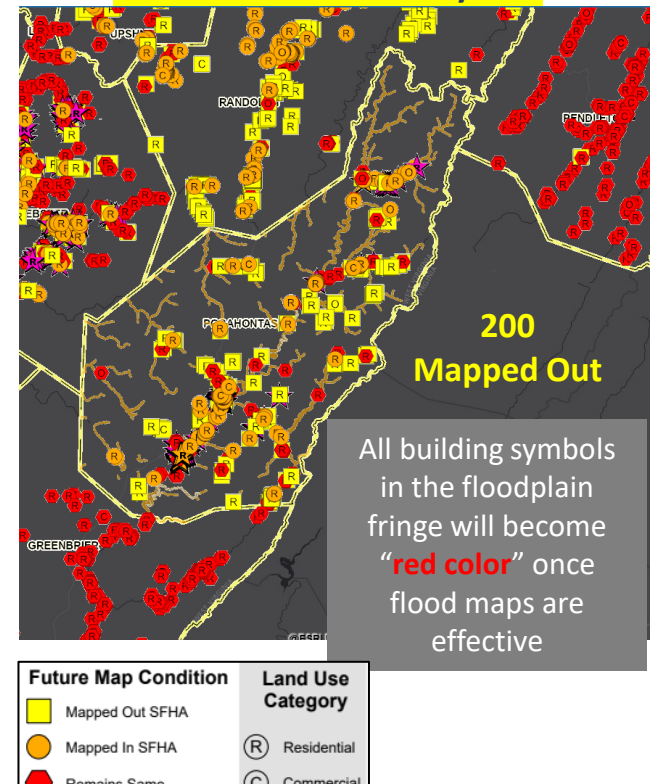
### Hampshire County



### Jefferson County



### Pocahontas County



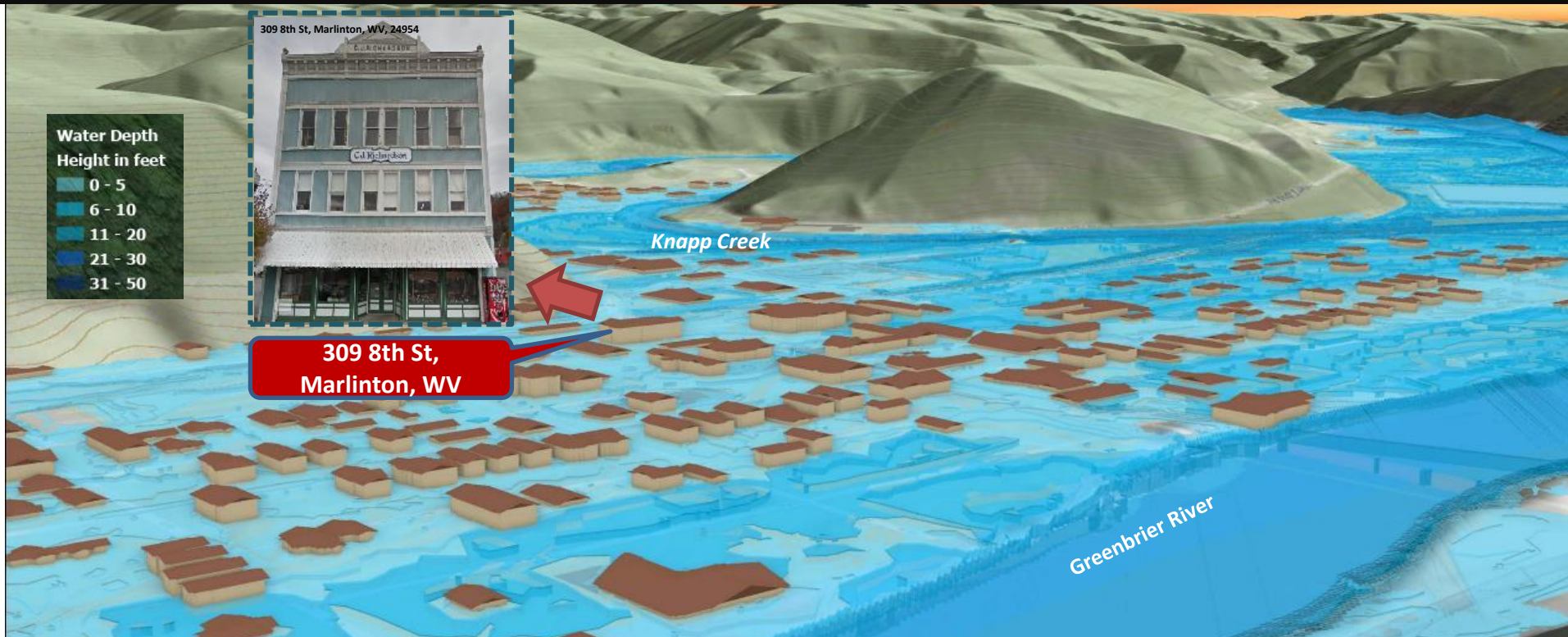
All building symbols in the floodplain fringe will become "red color" once flood maps are effective

Future Map Condition	Land Use Category
Mapped Out SFHA	Residential
Mapped In SFHA	Commercial
Remains Same	Other
Floodway	





# Site Hazard Study (Marlinton)

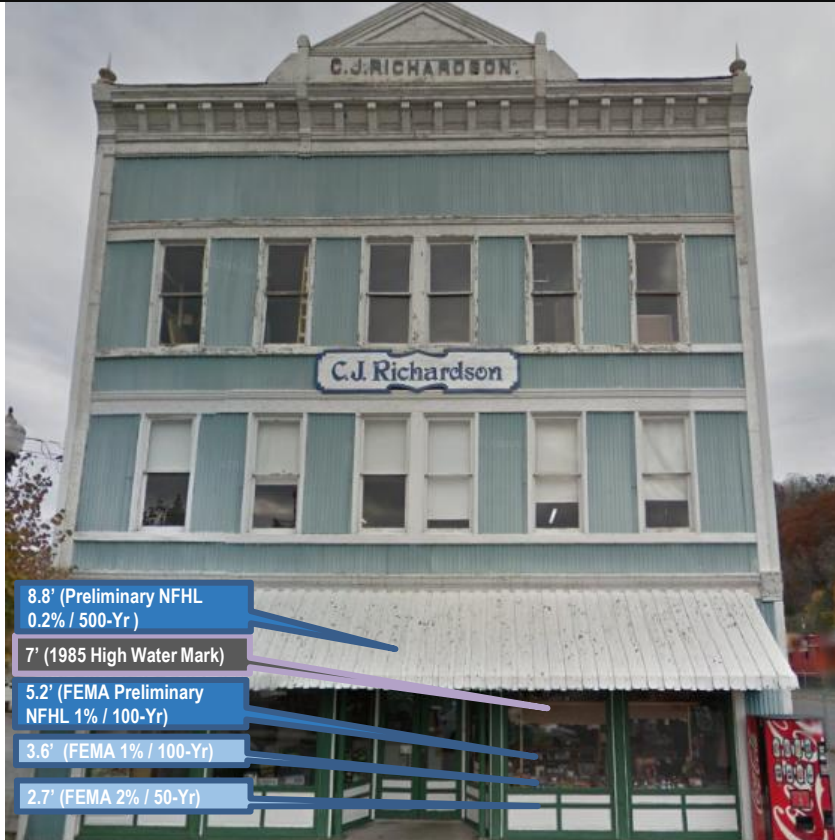


FEMA 1% Annual Chance (100-year)

26% probability of flooding at least once over 30 years

## Community Scale Flood Visualization

# Site Hazard Study (Marlinton)



309 8th St, Marlinton, WV,

Building: [38-08-0003-0023-](#)

[0000](#)

Commercial Structure built in 1900

## Building Scale Visualization

# Supplemental Risk Assessment

## Pocahontas County

Among Top 10%

Among Top 20%

First Rank **1**

Rankings done separately for counties, unincorporated areas, and 229 incorporated places

Indicators	Pocahontas County	Pocahontas Unincorporated Area	Marlinton	Durbin	State
<b>Floodplain Characteristics</b>					
Floodplain Area (Acres)	10,641	10,089	494	58	528,635
Floodplain Area Ratio	1.8%	1.7%	31.5%	15.8%	3.4%
Floodplain Length (Miles)	513	503	N/A	N/A	16,059
Maximum Flood Depth (Feet)	9.2	9.2	9.0	6.7	38.7
Median Flood Depth (Feet)	3.4	2.1	4.0	1.4	2.0
<b>Building Counts</b>					
Total Community/County Structures	7,257	6,218	673	187	1,118,761
Buildings in High-Risk Floodplains	984	568	400	16	98,119
Building Ratio in Floodplain	13.6%	9.1%	59.4%	8.6%	8.8%
Building Density in Floodplain (Buildings/Acres)	0.09	0.05	0.81	0.28	0.19
Buildings "Mapped In" SFHA	206	154	43	9	13,267
Buildings "Mapped Out" SFHA	200	169	29	2	15,509
Net Change in SFHA	+ 6	- 15	+ 14	+ 7	- 2,242
Buildings in Preliminary Floodway	208	112	100	2	8,627
Net Change in Floodway	+ 235	+ 58	+ 176	+ 1	+ 338

**Notes:**

**Modified Floodplain Area:** Total Special Flood Hazard Area (aSFHA) – [Open water lakes > 10 acres] – [Large rivers bank-to-bank > 500 ft.] – [Federal lands > 10 acres]

**Floodplain Length Breakdown:** Pocahontas County → Detailed: 17.2%, Approximate: 57.2%, Advisory: 25.7%      Pocahontas Unincorporated Area → Detailed: 16.2%, Approximate: 57.7%, Advisory: 26.1%

Marlinton → Detailed: 68.6%, Approximate: 28.4%, Advisory: 3.0%      Durbin → Detailed: 100%, Approximate: 0%, Advisory: 0%

# Supplemental Risk Assessment...

## Pocahontas County

Among Top  
10%

Among Top  
20%

Rankings done separately for counties, unincorporated areas, and 229 incorporated places

Indicators	Pocahontas County	Pocahontas Unincorporated Area	Marlinton	Durbin	State
<b>Building Characteristics</b>					
Median Building Value in Floodplain	\$32,550	\$33,400	\$32,300	\$21,600	\$38,200
Residential Count Ratio in Floodplain	84.1%	91.0%	74.8%	75.0%	88.5%
Mobile Homes Ratio of Single-Family Dwellings in Floodplain	15.1%	18.8%	8.1%	25.0%	27.5%
One-Story Ratio in Floodplain	72.3%	84.5%	55.0%	70.6%	83.9%
Buildings with Basement Ratio in Floodplain	14.8%	9.2%	23.3%	5.9%	24.8%
Pre-FIRM Ratio in Floodplain	77.2%	69.6%	88.1%	75.0%	70.1%
<b>Critical Infrastructure</b>					
Essential Facilities	6	0	5	1	489
Roads Inundated (Miles)	113.3	97.5	14.5	1.3	6,503
Inundated Roads Ratio	4.9%	4.4%	22.8%	13.1%	6.0%
<b>Community Assets</b>					
Historical Community Assets	10	6	4	0	2,758
Non-Historical Community Assets	24	9	13	2	2,093

### Notes:

**Essential Facilities** identifies critical facilities in the county. **State** values and ratios are based on the **Buildings in High-Risk Floodplains** report for Pocahontas County → in

Marlinton → in Effective: 357, in Advisory: 43

Durbin → in Effective: 7, in Advisory: 9

**Pre-FIRM Ratio in Floodplain** also includes Post-FIRM regulated to Pre-FIRM (Mapped into SFHA).

# Supplemental Risk Assessment...

## Pocahontas County

Among Top  
10%

Among Top  
20%

Rankings done separately for counties, unincorporated areas, and 229 incorporated places

Indicators	Pocahontas County	Pocahontas Unincorporated Area	Marlinton	Durbin	State
<b>People / Social</b>					
Population Residing in Floodplain Ratio	26.7%	14.9%	85.6%	11.3%	11.1%
Displaced Population Ratio	21.2%	10.4%	76.0%	4.1%	6.6%
Population in Need of Short-Term Shelter	340	137	201	2	22,930
WV SVI	70.4%	74.1%	60.4%	40.5%	N/A
<b>Estimated / Previous Damage</b>					
Building Flood Loss Ratio	8.5%	10.1%	7.6%	8.1%	8.6%
Substantial Damage Count	53	34	16	3	6,493
Substantial Damage Count Ratio	5.4%	6.0%	4.0%	18.8%	6.6%
Minus Rated (>1ft) Post-FIRM Count Ratio	7.3%	8.6%	5.8%	0.0%	4.8%
Median Building Damage Value (>= \$1K)	\$7,756	\$8,759	\$7,109	\$5,600	\$7,657
Total Number of Claims since 1978	745	155	585	5	27,880
Total Paid Claims since 1978	\$15,696K	\$2,209K	\$13,448K	\$39K	\$368,292K
Number of Repetitive Losses	280	28	252	0	9,716

### Notes:

WV SVI, between 0 to 10

High School Diploma Ratio, Population Change, Median Housing Value, and Mobile Homes as percentage of housing units

Population estimation models based on the building inventory in 1%-annual-chance (100-year) floodplain and Census Bureau's 2021 American Community Survey, 5-year estimates.

Substantial Damage: Estimated damage of equal to or greater than 50% of building value before the event

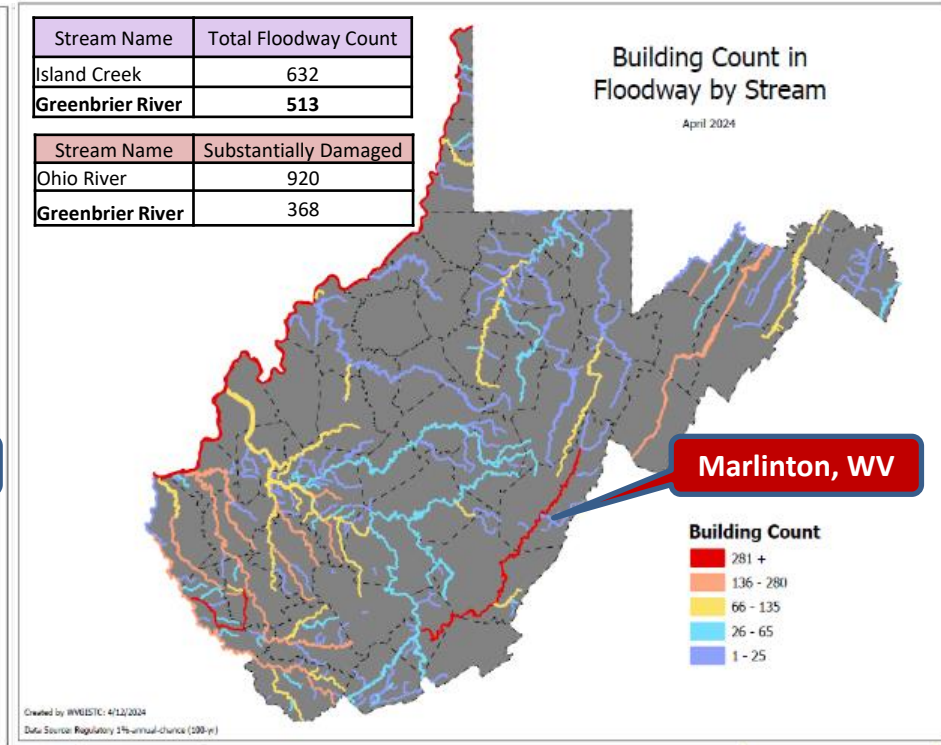
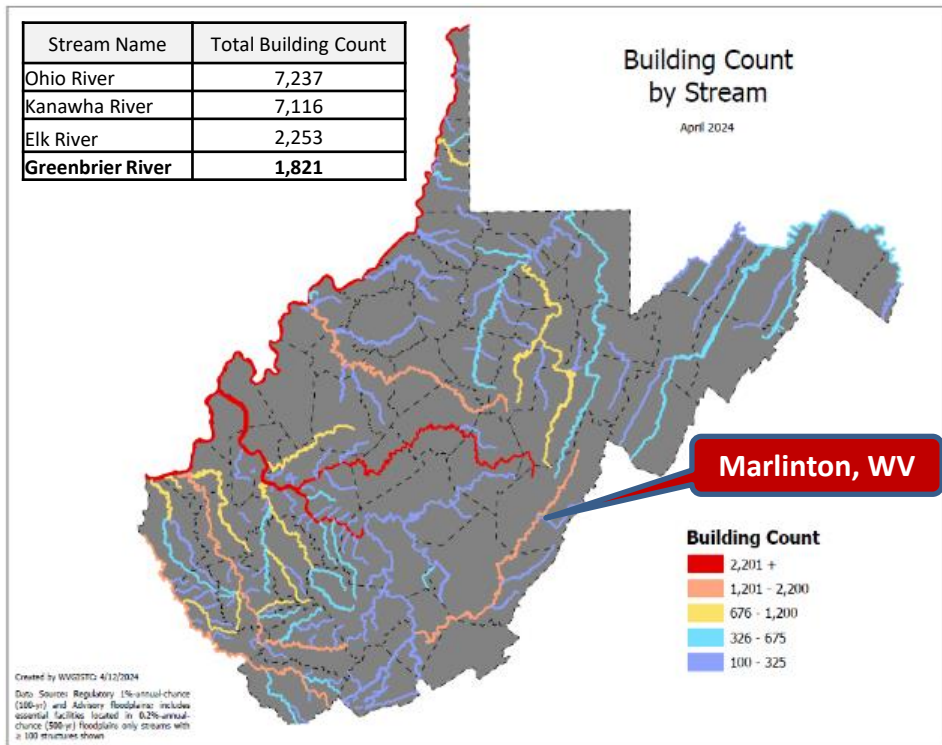
Minus Rated (>1ft): The first flood level more than 1 ft below the base flood elevation (BFE)

Post-FIRM: Constructed after community's initial Flood Insurance Rate Map (FIRM) date

Repetitive Loss: NFIP-insured structure that has had at least 2 paid flood losses of more than \$1,000 each, in any 10-year period since 1978

out a

# Greenbrier River (Building Counts)



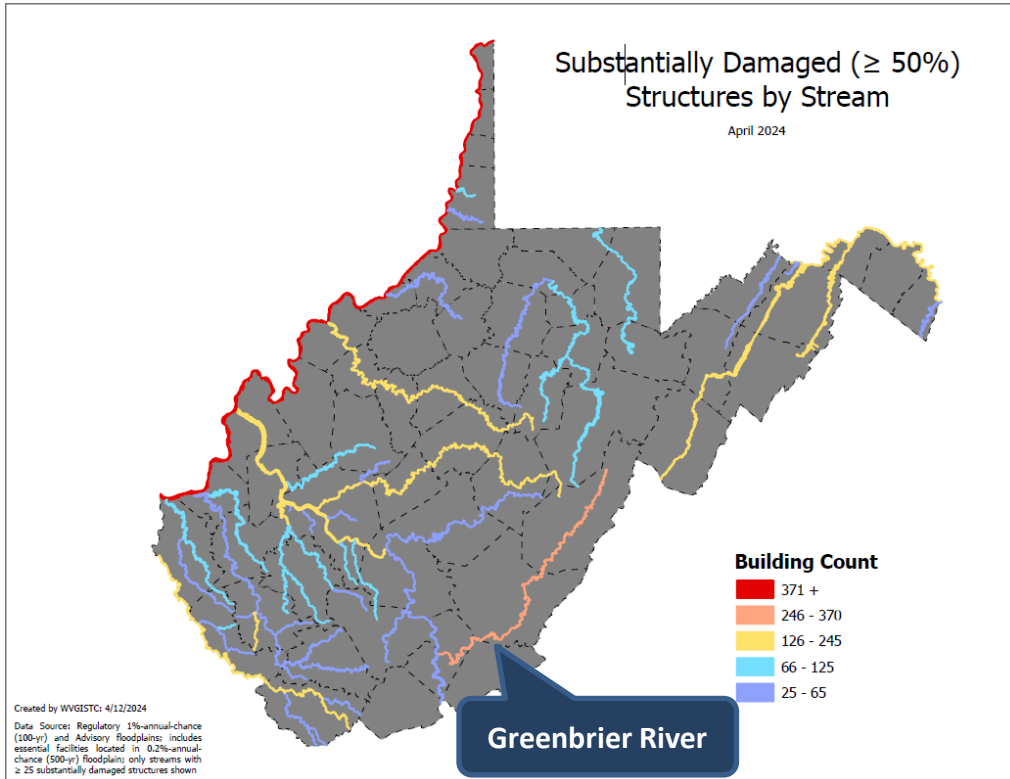
Buildings in SFHA

Flood Risk Indicators

Buildings in Floodway

**Statewide Stream Scale**

# Greenbrier River (Substantial Damage Loss Estimates)



Stream Name	Substantially Damaged Building Count
Ohio River	920
<b>Greenbrier River</b>	368
Kanawha River	243
Potomac River	206
South Branch Potomac River	171
Island Creek	168
Coal River	163
Cacapon River	158
Elk River	158
Tug Fork	136
Little Kanawha River	126
Pond Fork	119
Pocatalico River	110
Cheat River	104
Buckhannon River	100

Flood Risk Indicator: **Substantial Damage**

## Statewide Stream Scale

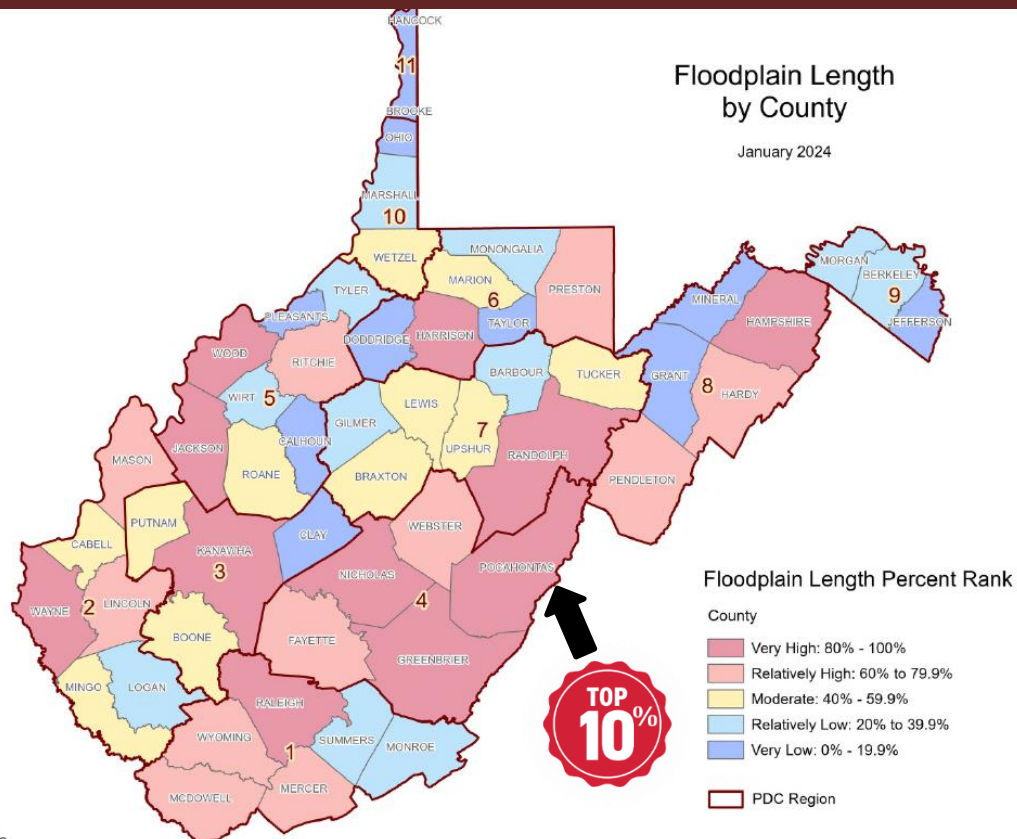
# Risk Indicator: High Amount of Floodplain Miles

## Floodplain Miles

Total Length in Miles of Flood Zones

Flood Risk

WVGISTC 2024-1-22



## Pocahontas County

Larger jurisdictions and unincorporated areas of the county must be vigilant in monitoring and permitting new development for an expansive geographic area that includes a large amount floodplain area/miles.

# County Scale

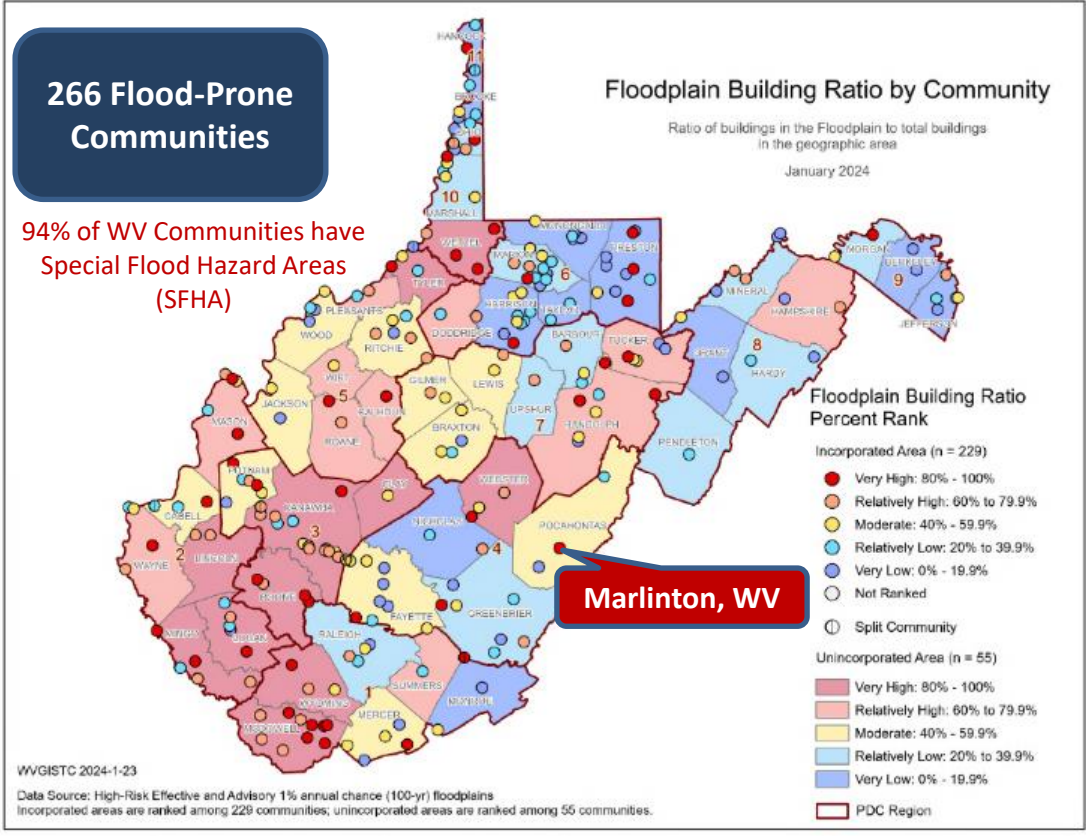


# Risk Indicator: Floodplain Building Ratio (Marlinton)

## Floodplain Building Ratio

Ratio of building in floodplain to total buildings in Marlinton

Flood Risk



# Community Scale

# Risk Indicators: (Marlinton)

**TOP 10%**

Top 10% rankings among 229 incorporated places  
**Floodplain Characteristics**

High percentage of community in flood zone

**Building Counts**

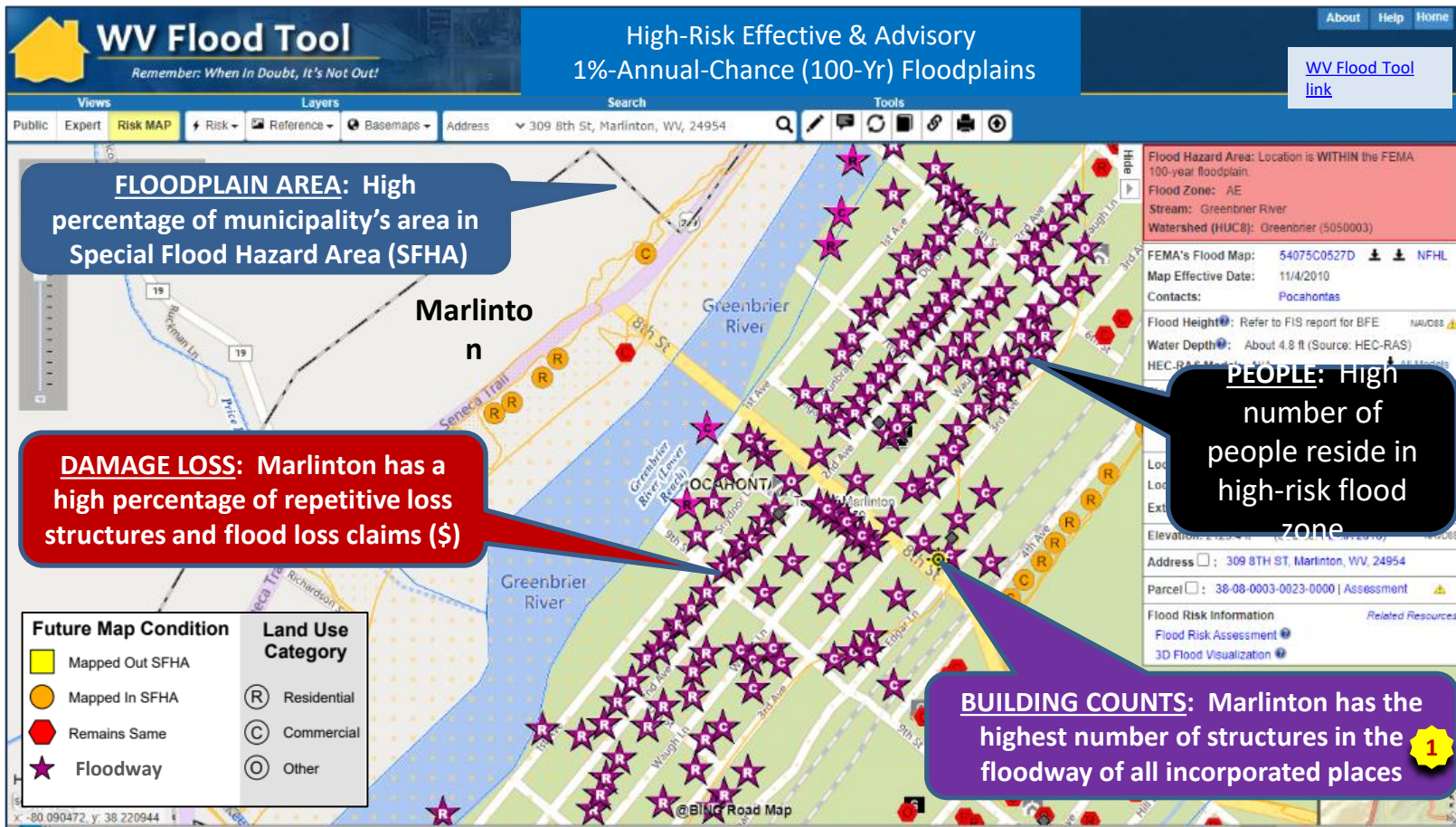
High building counts in SFHA and floodway

**Damage Loss \$**

High percentage of previous losses

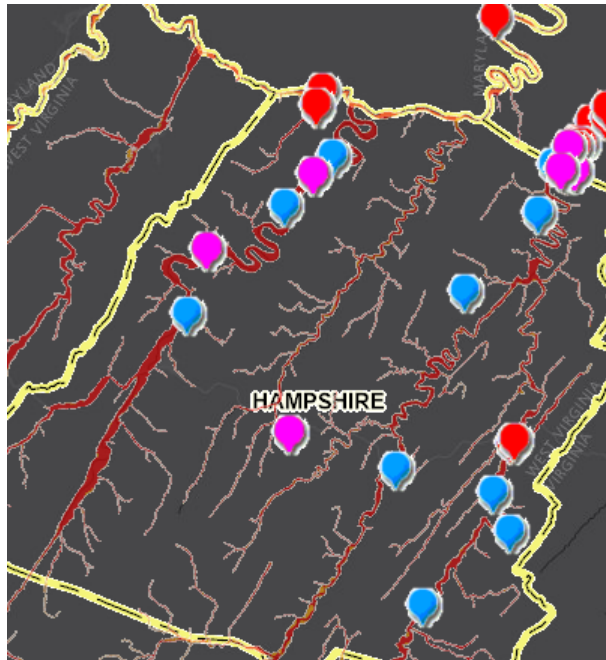
**People**

Many residents displaced from major flood event



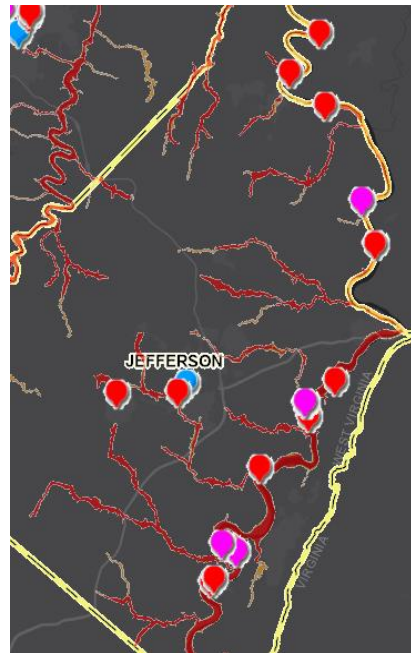
# Risk Indicator: Repetitive Loss Structures (Mapped)

Hampshire County



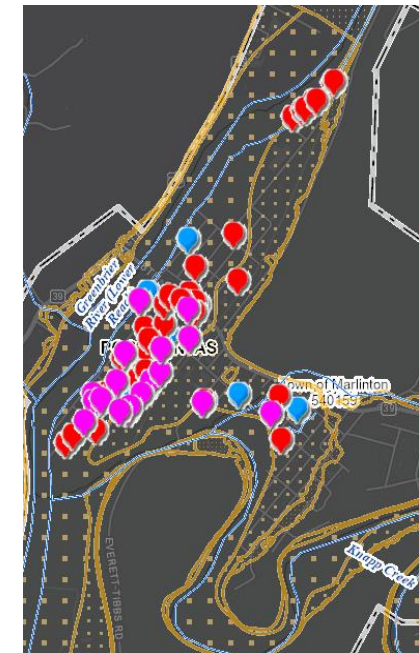
 **Severe Repetitive Loss**  
(Site Address Matched)

Jefferson County



 **Repetitive Loss**  
(Site Address Matched)

Marlinton (Pocahontas County)



 **Repetitive Loss**  
(Street Address Matched)

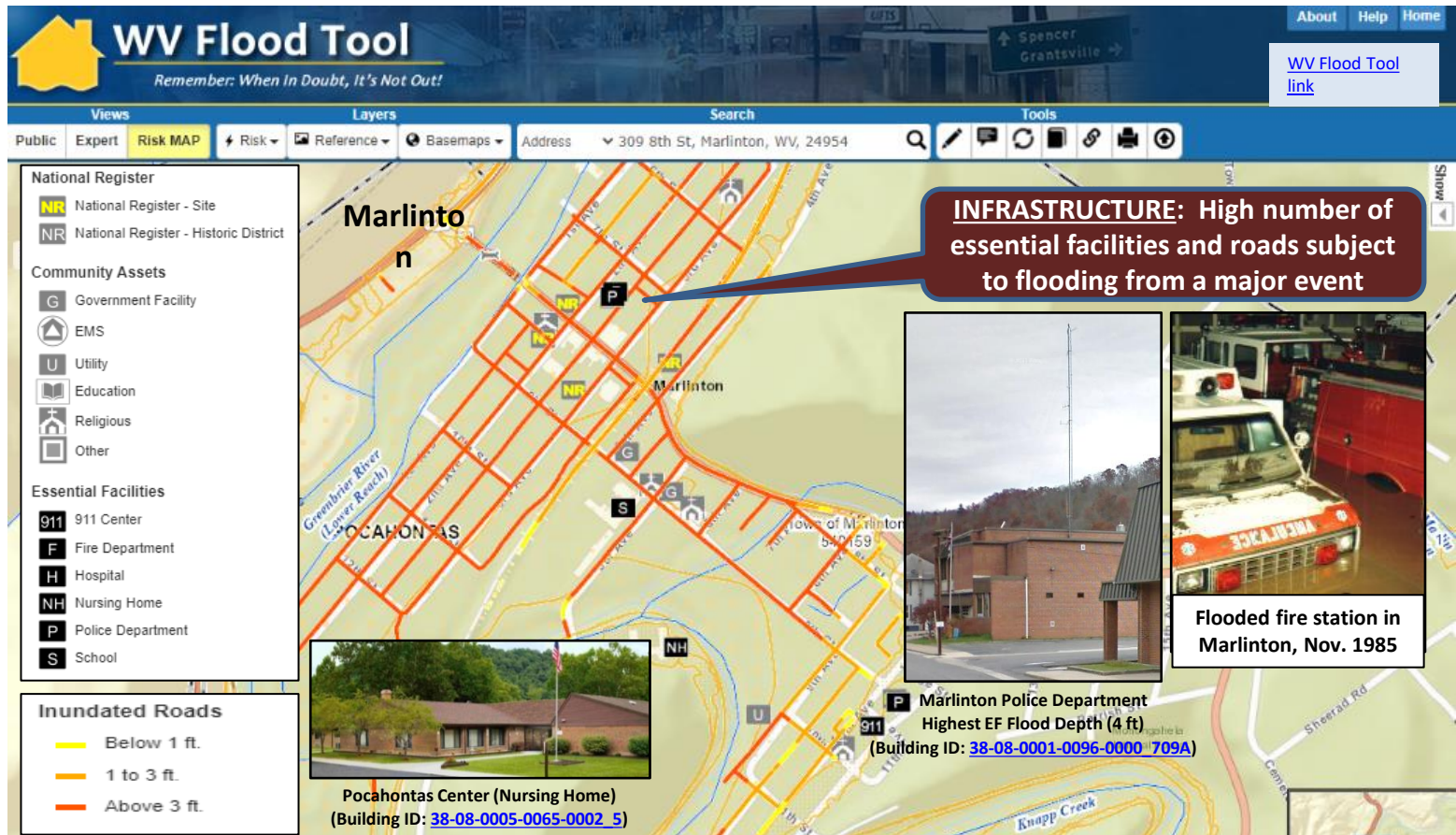
# Risk Indicators: Critical Infrastructure (Marlinton)

TOP 10%

Top 10% rankings among 229 incorporated places

Critical Infrastructure

High number of essential facilities & flooded roads



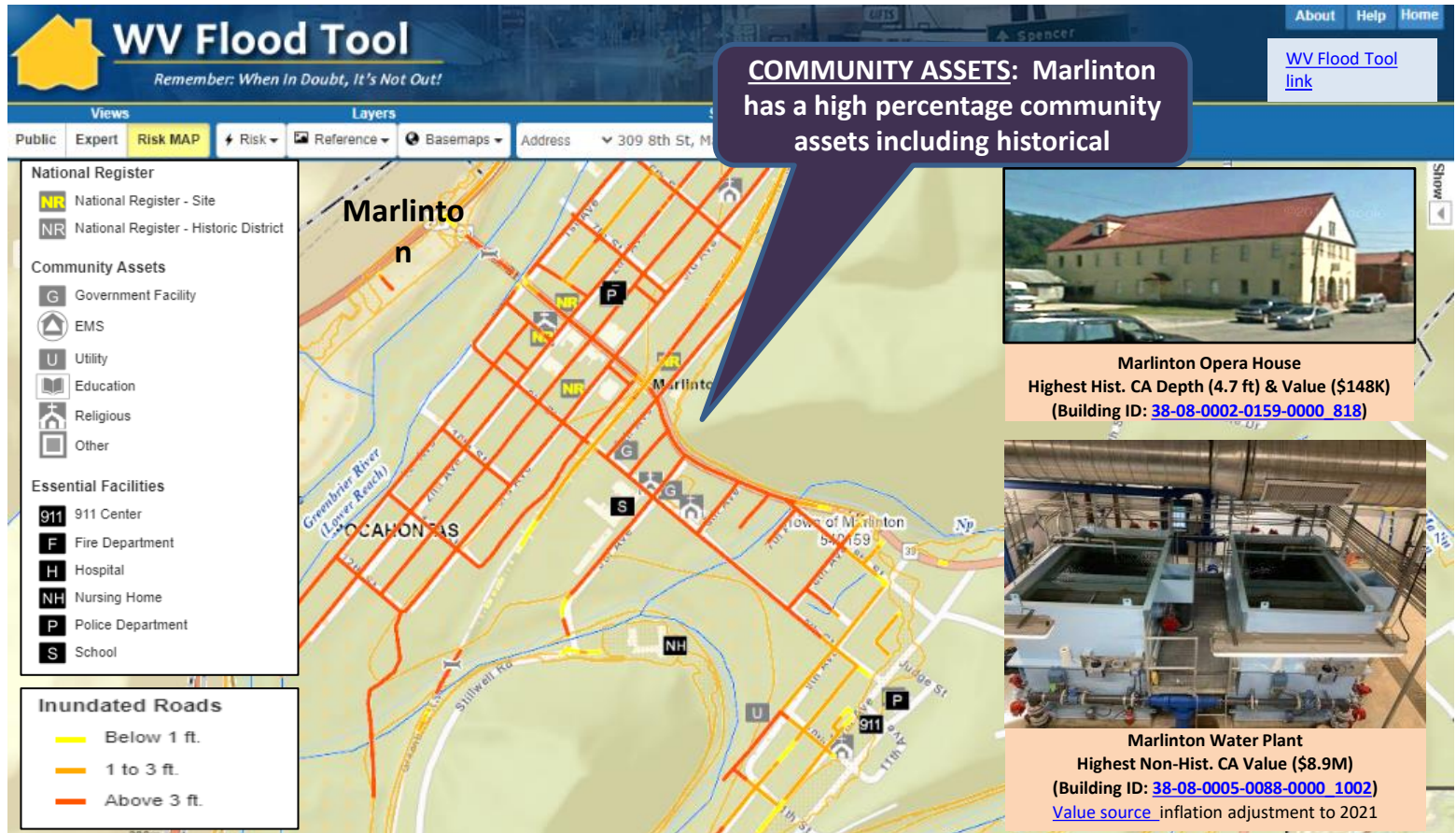
# Risk Indicators: Community Assets (Marlinton)

TOP 10%

Top 10% rankings among 229 incorporated places

## Community Assets

High number of non-historical community assets



# Significant Structures

## Types & Rationale

### Essential Facilities



Police Station



Fire Station



E-911 Dispatch



School



Hospital



Nursing Home

- Essential Facilities provide emergency services during a flood.
- Hospitals and nursing homes with immobile patients are particularly susceptible to flooding. Schools often serve as refuges during floods.
- Communities need to establish emergency protocols to maintain critical services amidst a flood.



Flooded fire station in Marlinton, Nov. 1985

### Community Assets: Non-Historical Historical



Religious Organization



Educational Building



Emergency Medical Services



Government Building



Utility



National Register Historical Structure

- Non-Historical buildings such as churches often serve as emergency shelters during floods. Flooding can disrupt critical community lifelines including safety, water, shelter, health, and energy.
- Historical assets often have significant cultural value. Besides, It may affect insurance premiums for these assets and eligibility for government funding for flood mitigation.

# Risk Indicator: High Number of Essential Facilities

COMMUNITY	ESSENTIAL FACILITIES					FLOOD ZONE BREAKDOWN			
						1%-Annual-Chance (100-yr) Floodplain		0.2% (500-yr)	High & Moderate Risk
	Police Station	Fire Station	911 Center	School	Nursing Home	Preliminary Floodway	High-Risk 100-Yr Floodplain	Moderate-Risk 500-Yr Floodplain	Total in 100 & 500-Yr Floodplains
Durbin	0	1	0	0	0	0	0	1	1
Marlinton	1	1	1	1	1	2	1	2	5
									Rank among incorporated places: 7



Among the essential facilities in Marlinton 4 are more vulnerable:  
 1 School, 1 Nursing Home, 2 in Floodway (Fire & Police Stations)

- Marlinton Volunteer Fire Department and Marlinton Police Department mapped from flood fringe to floodway
- Pocahontas Center (NH) and Pocahontas County 911 Center mapped from 100-yr to 500-yr
- Pocahontas County Sheriffs Office mapped out high- & moderate-risk floodplains



Marlinton Police Department  
 Highest EF Flood Depth (4 ft)  
 (Building ID: [38-08-0001-0096-0000\\_709A](#))



Marlinton Elementary School  
 (Building ID: [38-08-0005-0009-0000\\_926](#))



Pocahontas Center (Nursing Home)  
 (Building ID: [38-08-0005-0065-0002\\_5](#))

# Risk Indicator: High Number of Community Assets

COMMUNITY	NON-HISTORICAL COMMUNITY ASSETS			Total Non-Historical Community Assets	HISTORICAL COMMUNITY ASSETS		Total Historical Community Assets
	Religious	Government	Utility		National Register	In Historic Districts Older than 1930	
* Unincorporated area							
Pocahontas County*	7	2	0	9	1	5	6
Durbin	0	2	0	2	0	0	0
Marlinton	6	5	2	13	4	0	4

Marlinton Rank: 9

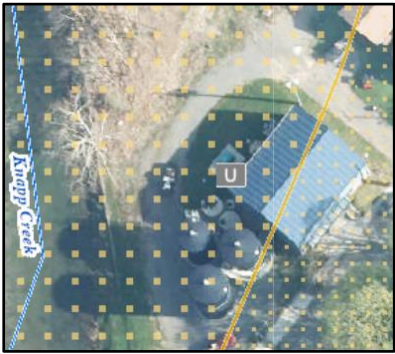
Rank: 29

Pocahontas County Courthouse and Jail mapped out

Marlinton TOP 20%

TOP 10%

Among the community assets in Marlinton 10 are more vulnerable (in Floodway or Depths >= 3 ft)



**Marlinton Water Plant**  
 Highest Non-Hist. CA Value (\$8.9M)  
 (Building ID: [38-08-0005-0088-0000 1002](#))  
[Value source](#) inflation adjustment to 2021



**USPS in Marlinton**  
 Highest Non-Hist. CA Depth (4.8 ft)  
 (Building ID: [38-08-0005-0006-0000 819](#))



**Marlinton Opera House**  
 Highest Hist. CA Depth (4.7 ft) & Value (\$148K)  
 (Building ID: [38-08-0002-0159-0000 818](#))



### Community Assets in Marlinton

**Community Assets**

- G Government Facility
- EMS
- U Utility
- E Education
- R Religious
- Other

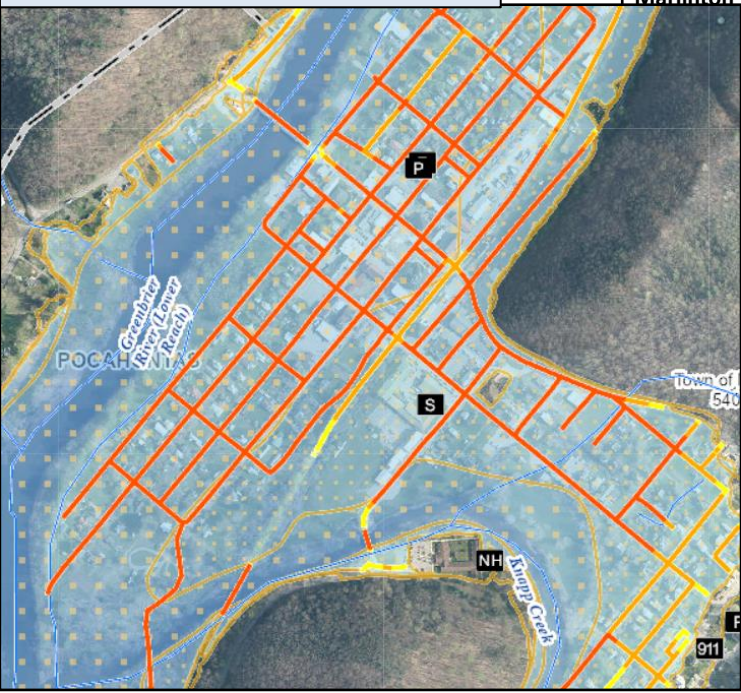
**Preliminary Floodplain**

- FLOODWAY
- Zone AE
- Zone A



# Risk Indicator: Roads Inundated

Road Inundation and Essential Facilities in Marlinton



Community	Total Roads (TIGER) (Miles)	Roads Inundated (Miles)	Inundated Roads Ratio
* Unincorporated area			
Pocahontas County*	2,209.8	97.5	4.4%
Durbin	9.9	1.3	13.1%
Marlinton	63.7	14.5	22.8%
		Rank among incorporated places: 7	Rank among incorporated places: 38

**Marlinton**



**Marlinton**



[Flood Tool Link](#)

**Inundated Roads**

- Below 1 ft.
- 1 to 3 ft.
- Above 3 ft.

**Essential Facilities**

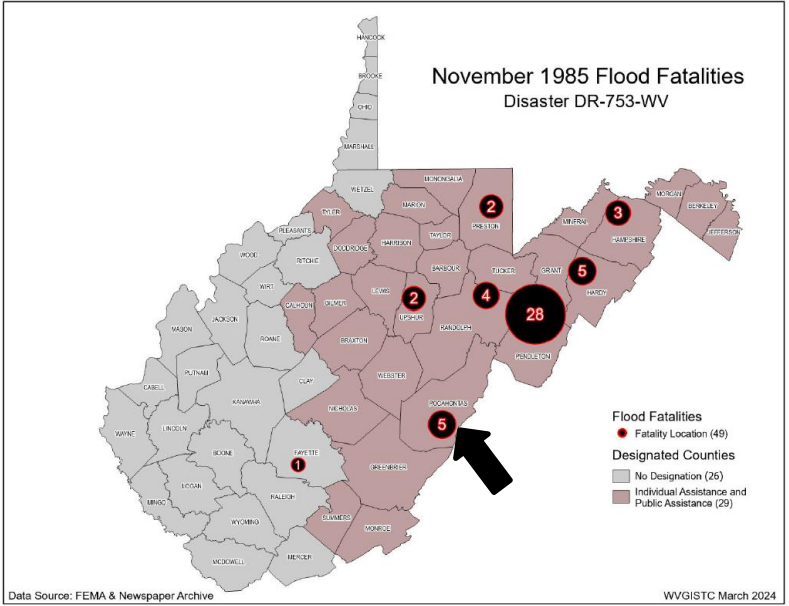
- 911** 911 Center
- F** Fire Department
- H** Hospital
- NH** Nursing Home
- P** Police Department
- S** School

A foot of water will float many vehicles and make roads impassable. About three feet is near the limit to use high profile vehicles to perform high water rescues and instead boats and helicopters are required to perform rescues.

# Risk Indicator: Population Exposure

Community	Total County Population	Population Residing in High-Risk Flood Zones	Population Residing in Floodplain Ratio	Estimated Displaced Population	Displaced Population Ratio	Estimated Population in Need of Short-Term Shelter
<i>* Unincorporated area</i>						
Pocahontas County*	6,255	930	14.9%	648	10.4%	137
Durbin	293	33	11.3%	12	4.1%	2
Marlinton	1,329	1,138	85.6%	1,010	76.0%	201
		Rank among incorporated places: 9	Rank among incorporated places: 8	Rank among incorporated places: 8	Rank among incorporated places: 6	Rank among incorporated places: 7

**Marlinton**



Nov. 1985

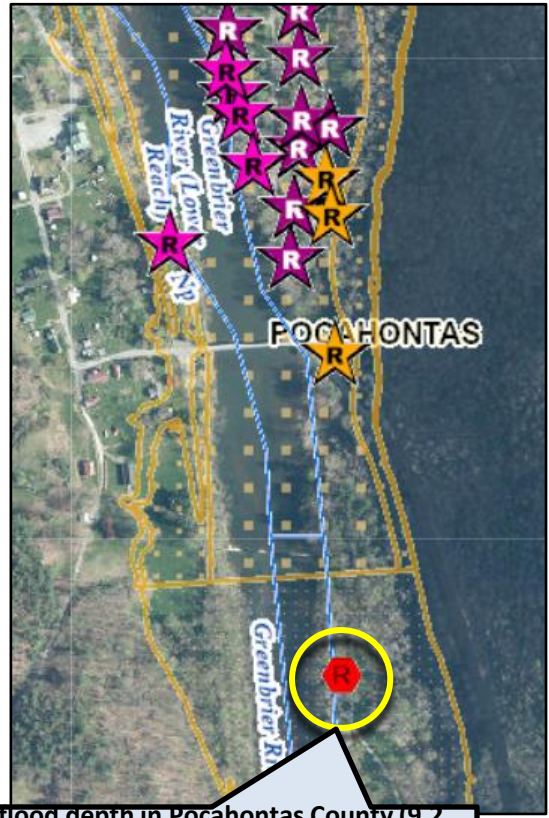
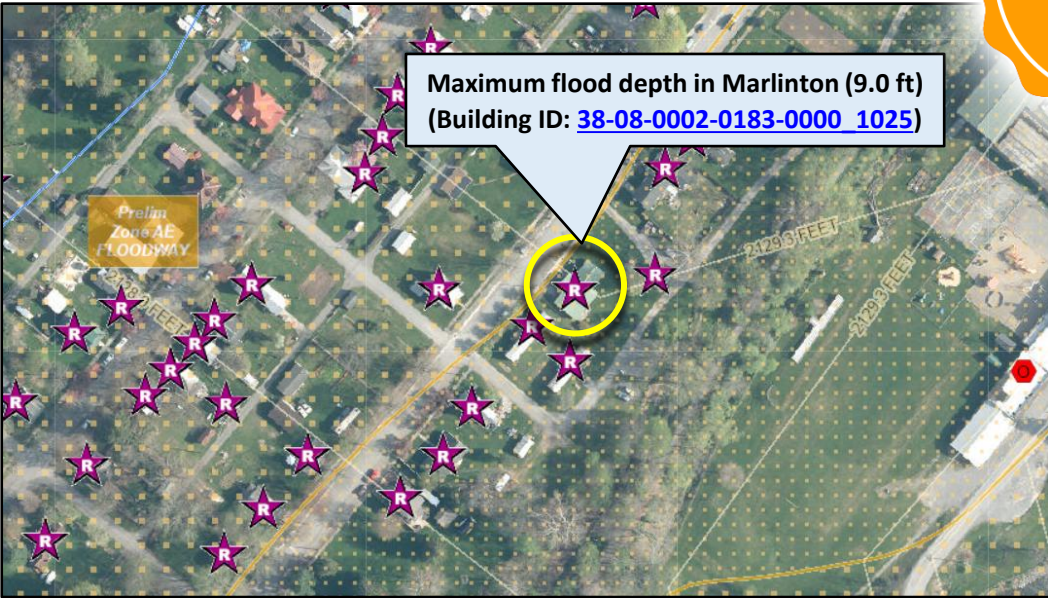
Data Source: FEMA & Newspaper Archive

WVGISTC March 2024

# Risk Indicator: Maximum Flood Depths

Community	Maximum Flood Depth (Feet)	Median Flood Depth (Feet)
* Unincorporated area		
Pocahontas County*	9.2	2.1
Durbin	6.7	1.4
Marlinton	9.0	4.0
Rank among incorporated places: 36		

Marlinton



Maximum flood depth in Pocahontas County (9.2 ft)  
 (Building ID: [38-07-0039-0041-0001 836](#))

# Preload Structures into SDE Software

Incorporate 1% Floodplain Building Risk Assessment Inventory into **Mitigation** and **NFIP/CRS Management** Activities

**STEP 1:** Community preloads Floodplain Properties into FEMA's Substantial Damage Estimator software



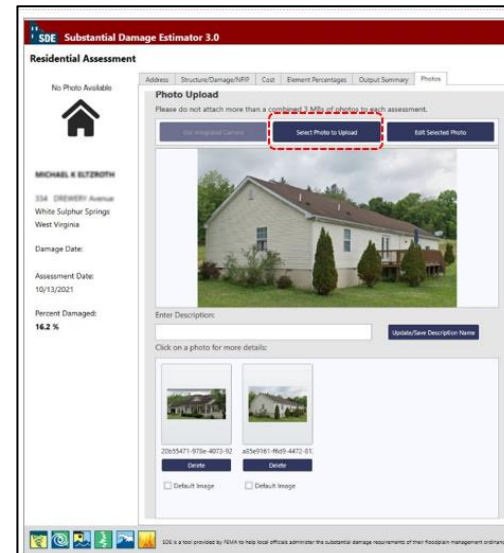
**STEP 2:** Community performs practice Substantial Damage Assessments for Residential and Non-Residential Properties

Please Select a Property

Structure Owner Name	Property Address	County/Parish	Parcel Number	Lot Number	Subdivision	Year of Construction
MICHAEL GARFIELD JR.	1838 ROBER Road	Greenebier	13-04-0238-0010-0000	13-04-0238-0010-0000	Greenebier County	1960
MICHAEL HOGANER	391 HILLSIDE Avenue	Greenebier	13-17-0012-0004-0000	13-17-0012-0004-0000	White Sulphur Springs	1920
MICHAEL J SMITH	156 MAPLE AVE	Greenebier	13-01-0006-0018-0000	13-01-0006-0018-0000	Alderson	2020
MICHAEL K BLIZNECH	334 ONEHERRY Avenue	Greenebier	13-17-0020-0000-0000	13-17-0009-0000-0000	White Sulphur Springs	1918
MICHAEL L ARMSTRONG	296 WINDMILL HOLLOW	Greenebier	13-02-0020-0002-0001	13-02-0020-0002-0001	Greenebier County	1991
MICHAEL LEE ET ALI B.	6988 TUCKER RD	Greenebier	13-16-0036-0000-0000	13-16-0036-0000-0000	Greenebier County	1972
MICHAEL LEE ET ALI B.	9 TUCKER RD	Greenebier	13-16-0036-0000-0000	13-16-0036-0000-0000	Greenebier County	1972
MICHAEL PAUL TRAINER	136 87TH Avenue	Greenebier	13-02-0238-0007-0000	13-02-0238-0007-0000	Greenebier County	1990
MICHAEL ROBERT ET AL.	349 GREENBRIER Ave.	Greenebier	13-17-0011-0007-0000	13-17-0011-0007-0000	White Sulphur Springs	1957
MICHAEL SCOTT HILL	851 RED ROCK Trail	Greenebier	13-08-0019-0001-0000	13-08-0019-0001-0000	Greenebier County	1999
MICHAEL TOLLEY	324 RIVER EDGE Lane	Greenebier	13-06-0240-0000-0000	13-06-0240-0000-0000	Greenebier County	1987
MICHAEL W BRACKENRILL	210 HILL CREEK Road	Greenebier	13-11-0255-0000-0000	13-11-0255-0000-0000	Greenebier County	1900
MICHAEL W CARRINGTON	252 HOLMES Lane	Greenebier	13-17-0012-0001-0001	13-17-0012-0001-0000	White Sulphur Springs	1999
MICHAEL W CARRINGTON	262 HOLMES Lane	Greenebier	13-17-0012-0001-0000	13-17-0012-0001-0000	White Sulphur Springs	1999
MICHAEL W H SAMS	425 8TH Street	Greenebier	13-13-0005-0000-0000	13-13-0005-0000-0000	Rainelle	1975
MICHAEL W SHOCKEY	274 MOUNTAIN Avenue	Greenebier	13-17-0020-0000-0000	13-17-0009-0000-0000	White Sulphur Springs	1921
MICHAEL WINDS	287 JETTY CREEK Road	Greenebier	13-02-0040-0000-0000	13-02-0040-0000-0000	Greenebier County	1930
MICHAELLE A DIXON	103 WOODLAND Ave.	Greenebier	13-17-0011-0011-0000	13-17-0011-0011-0000	White Sulphur Springs	1964
MICHAELLE L BRENNAN	191 MEADOW RIVER.	Greenebier	13-11-0257-0000-0000	13-11-0257-0000-0000	Greenebier County	1973

Preload using default values.

Hampshire County has 1,111 Structures (both effective and preliminary floodplains) that can be uploaded



[SDE Upload Files and Instructions](#)

# Verify Building Risk Assessments

Verify Primary Structures for High Depths

Verify Lowest Floor Elevations

Verify Foundation & Basement Types

Use **Building-Level (BL) Tables** to identify **Most Vulnerable Structures**

- [Statewide BLRA \(GIS\)](#)
- [BLRA County Tables](#) organized by region
- [BLRA Data Extract Tables](#): High Building Value, High Damage Loss, **High Minus Ratings**
- [BLRA Statewide Top Lists](#): Building Value, Flood Depth, Damage Loss \$, Damage Loss %, Minus Rated, Mitigated Structures
- [Risk Indicator Matrices](#): Exposure and Damage Loss Matrices of Risk Indicators

Verify Mitigation Status of Post-FIRM Structures

Publish Elevation Certificates to WV Flood Tool



# Plan for Inundated Road Impacts

## Why Water Depth Matters



~1 Foot

Response focused on those who need additional assistance



~3 Feet

Near the limit to use High Profile Vehicles to perform high water rescues



~6 Feet

Boats and helicopters now required to perform high water rescues



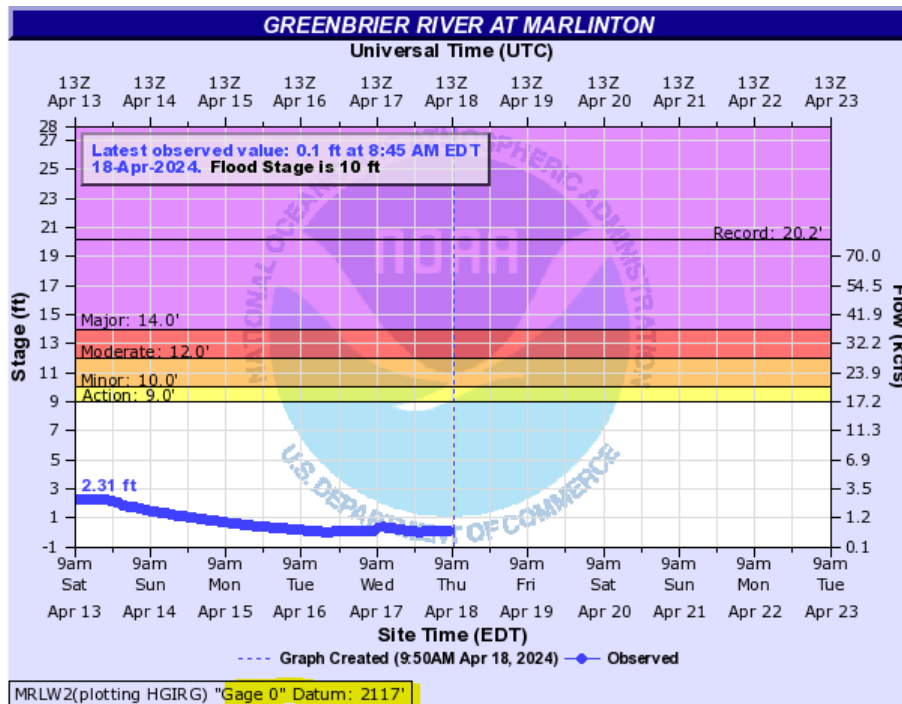
~9 Feet

1<sup>st</sup> Floors completely inundated

**"How many helicopters, boats, and high profile vehicles and where to send them"**

**– Texas State Operations Center**

# Plan with Stream Gauges and Flood Tool



Upstream Gauge Downstream Gauge

Flood Categories (in feet)  
Major Flood Stage: 14  
Moderate Flood Stage: 12  
Flood Stage: 10  
Action Stage: 9

Historic Crests  
(1) 20.20 ft on 11/05/1985  
(2) 18.03 ft on 01/19/1996  
(3) 13.70 ft on 01/25/2010  
(4) 12.91 ft on 11/20/2003  
(5) 12.87 ft on 03/02/2007  
(6) 12.25 ft on 03/05/2008  
(7) 12.00 ft on 06/24/2016  
(8) 11.37 ft on 01/31/2013  
(9) 10.72 ft on 03/11/2015  
(10) 10.67 ft on 04/13/2011  
Show More Historic Crests

(P): Preliminary values subject to further review.

Recent Crests  
(1) 10.38 ft on 03/01/2021  
(2) 10.16 ft on 04/16/2018  
(3) 12.00 ft on 06/24/2016  
(4) 10.72 ft on 03/11/2015  
(5) 10.29 ft on 05/16/2014  
Show More Recent Crests

Low Water Records  
(1) 0.00 ft on 10/13/1998

From NWS Gauge Website

Stage

14 Most areas near the river and along Knapps Creek are flooded. 5th Avenue and other sections of Marlinton are flooded. **Water starts into nursing home.** Homes flooded in Campbelltown.

12 Sections of 1st, 2nd and 3rd Avenues in Marlinton are flooded. Sections of 9th Street start to flood. Sections of Campbelltown start to flood.

10 Low areas along the river are flooded. 1st & 2nd Avenues start to flood.

Zoom Level: 16  
Switch Basemap

Marlinton

Gauge Location

Disclaimer

The gauge location shown in the above map is the latitude/longitude coordinates provided to the

<https://water.weather.gov/ahps2/hydrograph.php?wfo=rlx&gage=mrlw2>

# Plan with Stream Gauges and Flood Tool



[WV Flood Tool](#) (use 1-ft. ground elevation contours or displayed elevation value in query results panel)



# Risk MAP (Pocahontas Co. Preliminary Flood Maps)

## Risk **M**apping (New Preliminary Flood Maps)

Understand Flood Map Changes  
(BFEs, Floodplains/Floodways)

Floodplain Building Counts

SFHA Building Changes and  
Outreach Letters

LOMAs (SFHA mapped out)

## Risk **A**nalysis (Risk Identification)

Large Floodplain Area (acres) and  
Length (miles)

Highest number of floodway  
structures

Higher Number of Critical  
Infrastructure/Essential Facilities  
and Community Assets

High Building Damage Losses

High Repetitive Loss Structures and  
Paid Claims

High Population Exposure

## Risk **P**lanning (Flood resiliency)

Swift Grant Funding for RL Structures

Preload Structures into FEMA SDE  
Software

Validate floodplain building inventory

Plan for Inundated Roads

Verify Buyout Properties

Apply for CRS status

Use stream gauge stages and ground  
elevation for emergency planning

Publish Elevation Certificates on WV  
Flood Tool




# LOMCs and SOMAs

## Preliminary Summary of Maps Actions (SOMA)

- Now available with preliminary maps
- Identifies previously issued Letter of Map Change (LOMCs) and how those determinations are impacted by the new mapping effort



Page 1 of 2		Date: May 09, 2013	Case No.: 13-03-1418A	LOMA
 <b>Federal Emergency Management Agency</b> Washington, D.C. 20472				
<b>LETTER OF MAP AMENDMENT          DETERMINATION DOCUMENT (REMOVAL)</b>				
COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION		
COMMUNITY	POCAHONTAS COUNTY, WEST VIRGINIA (Unincorporated Areas)		A parcel of land, as described in the Deed of Trust, recorded as Instrument No. 40621, in Book 288, Pages 258 through 266, in the Office of the Clerk of the County Commission, Pocahontas County, West Virginia (TM: 86A; TP: 29)	
AFFECTED MAP PANEL	COMMUNITY NO.: 540283 NUMBER: 54075C0410D DATE: 11/4/2010			
FLOODING SOURCE: SITLINGTON CREEK				
LOT	BLOCK/SECTION	SUBDIVISION		
--	--	--		



### 2A. LOMCs on Revised Panels

LOMC	Case No.	Date Issued	Project Identifier	Original Panel	Current Panel
LOMA	09-03-0849A	04/07/2009	RIVERFRONT SUBDIV OF SENECA ESTATES, LDT., LOT 7	54075C0137C	54075C0517E
LOMA	10-03-1284A	07/08/2010	BUILDING I- BARN, II- HOUSE, III- RESTAURANT, IV- MOTEL	54075C0285C	54075C0285E
LOMA	11-03-2247A	08/23/2011	TAX PARCEL 56-11-- HC 64 BOX 149	54075C0610D	54075C0610E
LOMA	12-03-1791A	10/04/2012	ROUTE 28	54075C0410D	54075C0410E
LOMA	13-03-1418A	05/09/2013	MAP NO. 86A, PARCEL NO. 29 -- ROUTE 28	54075C0410D	54075C0410E



FEMA

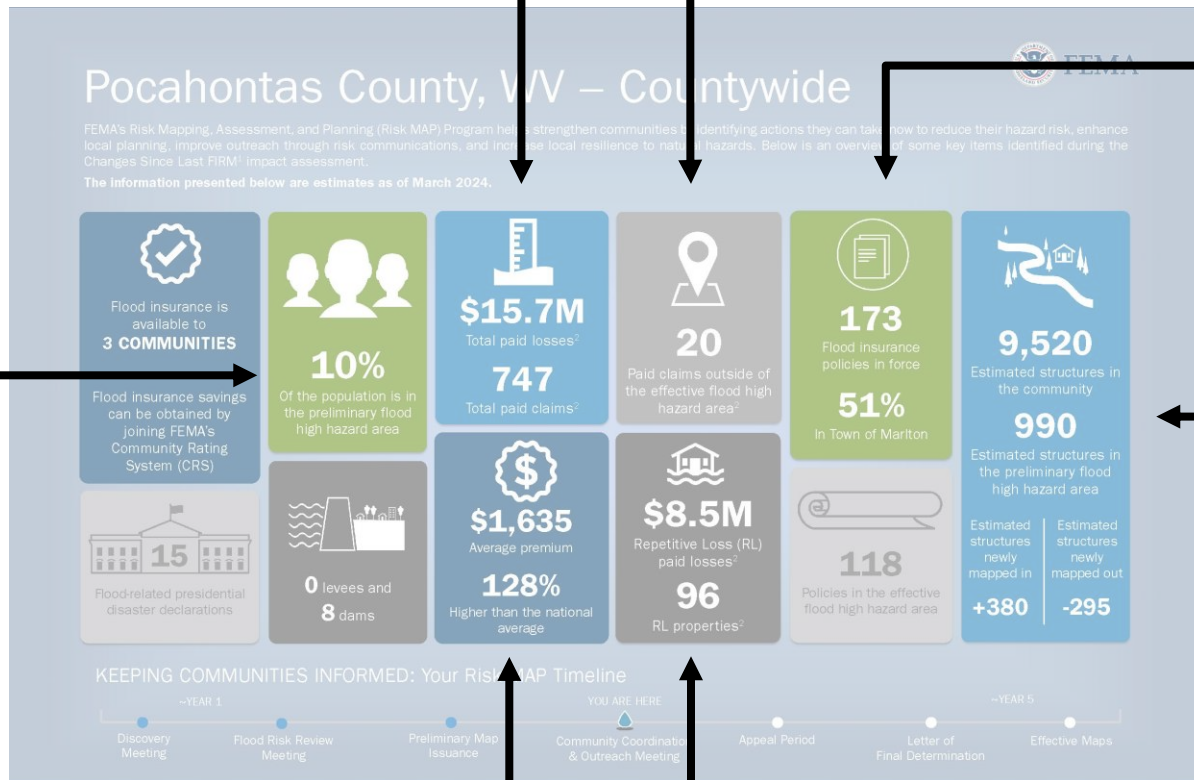
**RiskMAP**  
Increasing Resilience Together

# Flood Risk Dashboards

**NFIP FLOOD CLAIM PAYOUTS**

**CLAIMS OUTSIDE OF SFHA**

**NFIP FLOOD POLICIES**



**AFFECTED RESIDENTS**

**HIGH-RISK STRUCTURES**

**AVERAGE PREMIUM**

**REPETITIVE LOSSES**

# Flood Risk Dashboard



## Pocahontas County, WV – Countywide

FEMA's Risk Mapping, Assessment, and Planning (Risk MAP) Program helps strengthen communities by identifying actions they can take now to reduce their hazard risk, enhance local planning, improve outreach through risk communications, and increase local resilience to natural hazards. Below is an overview of some key items identified during the Changes Since Last FIRM<sup>2</sup> impact assessment.

The information presented below are estimates as of March 2024.



### KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

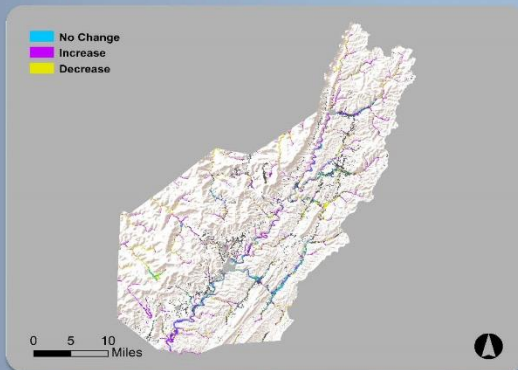


# Flood Risk Dashboard



## Unincorporated Areas/Pocahontas County, WV

**KNOW YOUR RISK** (The information presented below are estimates as of March 2024. <sup>1</sup> Flood Insurance Rate Map. <sup>2</sup> Since 1978.)



**10/17/1989**  
Initial FIRM<sup>1</sup> date

**11/4/2010**  
Effective FIRM date

**\$2.2M**  
Total paid losses<sup>2</sup>

**155**  
Total paid claims<sup>2</sup>

**84**  
Flood insurance policies in force

**46**  
Policies in the effective flood high hazard area

**8,560**  
Estimated structures in the community

**585**  
Estimated structures in the preliminary flood high hazard area

Estimated structures newly mapped in	Estimated structures newly mapped out
<b>+310</b>	<b>-260</b>

**5%**  
Of the population is in the preliminary flood high hazard area

**19%**  
Of households spend 30% or more of their income on housing

**9**  
Paid claims outside of the effective flood high hazard area<sup>2</sup>

**\$321K**  
Repetitive Loss (RL) paid losses<sup>2</sup>

**22**  
RL properties<sup>2</sup>

**15**  
Flood-related countywide presidential disaster declarations

### KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

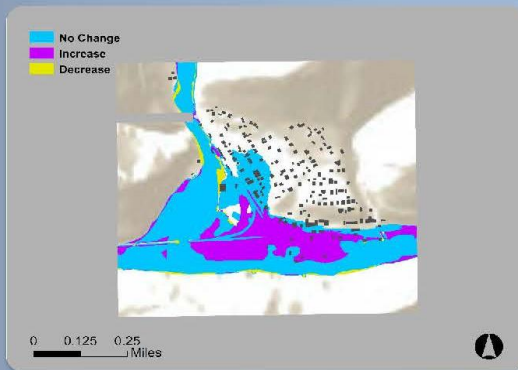


# Flood Risk Dashboard



## Town of Durbin/Pocahontas County, WV

**KNOW YOUR RISK** (The information presented below are estimates as of March 2024. <sup>1</sup> Flood Insurance Rate Map. <sup>2</sup> Since 1978.)



**8/24/1984**  
Initial FIRM<sup>1</sup> date

**11/4/2010**  
Effective FIRM date

**\$39K**  
Total paid losses<sup>2</sup>

**5**  
Total paid claims<sup>2</sup>

**1**  
Flood insurance policies in force

**0**  
Policies in the effective flood high hazard area

**190**  
Estimated structures in the community

**25**  
Estimated structures in the preliminary flood high hazard area

Estimated structures newly mapped in	Estimated structures newly mapped out
<b>+15</b>	<b>-0</b>

**3%**  
Of the population is in the preliminary flood high hazard area

**2%**  
Of households spend 30% or more of their income on housing

**0**  
Paid claims outside of the effective flood high hazard area<sup>2</sup>

**\$0**  
Repetitive Loss (RL) paid losses<sup>2</sup>

**0**  
RL properties<sup>2</sup>

**15**  
Flood-related countywide presidential disaster declarations

### KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

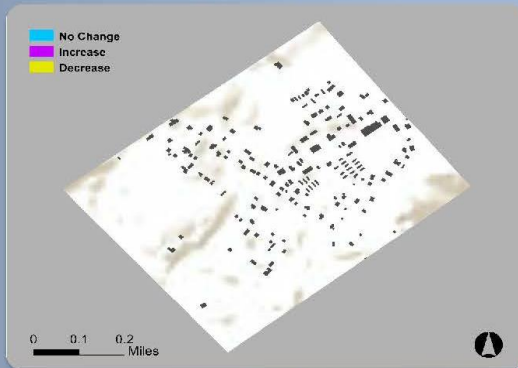


# Flood Risk Dashboard



## Town of Hillsboro/Pocahontas County, WV

**KNOW YOUR RISK** (The information presented below are estimates as of March 2024. <sup>1</sup>Flood Insurance Rate Map. <sup>2</sup>Since 1978.)



**10/17/1989**  
Initial FIRM<sup>1</sup> date

**11/4/2010**  
Effective FIRM date

**\$0**  
Total paid losses<sup>2</sup>

**0**  
Total paid claims<sup>2</sup>

**0**  
Flood insurance policies in force

**0**  
Policies in the effective flood high hazard area

**130**  
Estimated structures in the community

**0**  
Estimated structures in the preliminary flood high hazard area

**0%**  
Of the population is in the preliminary flood high hazard area

**15%**  
Of households spend 30% or more of their income on housing

**0**  
Paid claims outside of the effective flood high hazard area<sup>2</sup>

**\$0**  
Repetitive Loss (RL) paid losses<sup>2</sup>

**0**  
RL properties<sup>2</sup>

**15**  
Flood-related countywide presidential disaster declarations

Estimated structures newly mapped in: **+0**

Estimated structures newly mapped out: **-0**

### KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

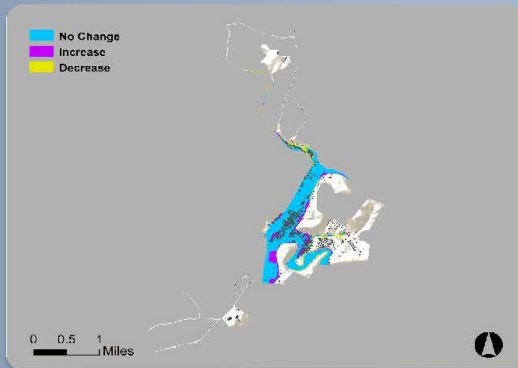


# Flood Risk Dashboard



## Town of Marlinton/Pocahontas County, WV

**KNOW YOUR RISK** (The information presented below are estimates as of March 2024. <sup>1</sup>Flood Insurance Rate Map. <sup>2</sup>Since 1978.)



**10/17/1989**  
Initial FIRM<sup>1</sup> date

**11/4/2010**  
Effective FIRM date

**\$13.5M**  
Total paid losses<sup>2</sup>

**585**  
Total paid claims<sup>2</sup>

**88**  
Flood insurance policies in force

**72**  
Policies in the effective flood high hazard area

**635**  
Estimated structures in the community

**380**  
Estimated structures in the preliminary flood high hazard area

Estimated structures newly mapped in	Estimated structures newly mapped out
<b>+55</b>	<b>-35</b>

**53%**  
Of the population is in the preliminary flood high hazard area

**32%**  
Of households spend 30% or more of their income on housing

**11**  
Paid claims outside of the effective flood high hazard area<sup>2</sup>

**\$8.2M**  
Repetitive Loss (RL) paid losses<sup>2</sup>

**74**  
RL properties<sup>2</sup>

**15**  
Flood-related countywide presidential disaster declarations

### KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

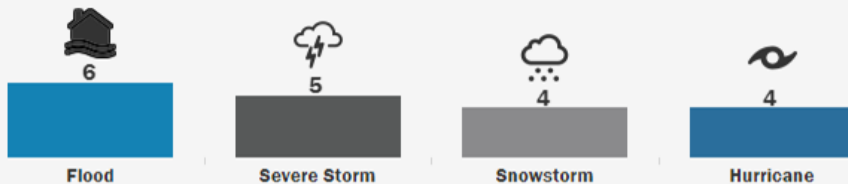




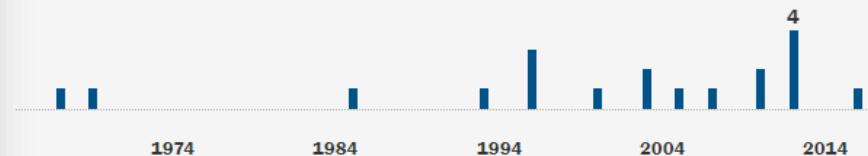
# History of Flooding

- 55 flood events reported by National Weather Service from 1996 to 2019<sup>1</sup>
- 19 flood-related presidential disaster declarations since 1953<sup>2</sup>

Disaster(s) by Incident Category



Disaster(s) by Year



- What was the most recent major flood event in your community and what were some of its impacts?

<sup>1</sup> <https://www.fema.gov/data-visualization/historical-flood-risk-and-costs>

<sup>2</sup> Includes Flood, Hurricane, Severe Storm(s), Snow, Coastal Storm, Severe Ice Storm

# Costs of Flooding

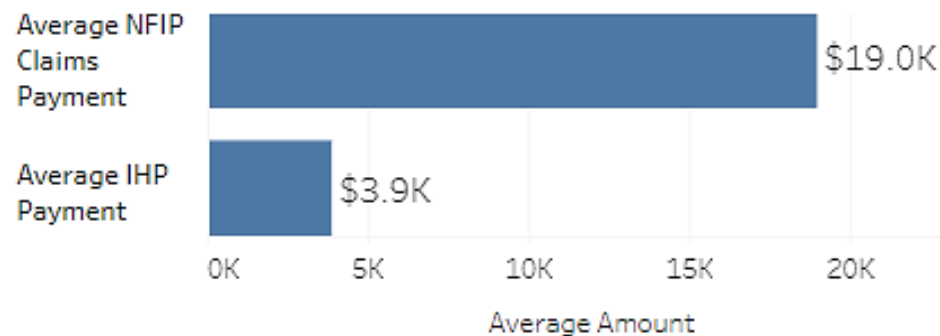
- The costs of flooding to the community include response (sheltering and debris removal) and recovery (repair work to damaged infrastructure)
- For declared disasters, FEMA helps cover these costs through its Public Assistance program
- Public Assistance project costs in **Pocahontas County** show the economic impact of flooding:

Category	Federal Funding	# of Projects
Protective Measures	\$136,522	12
Public Buildings	\$25,065	4
Recreational or Other	\$2,020	1
<b>TOTAL</b>	<b>\$163,607</b>	<b>17</b>

<https://www.fema.gov/data-visualization/public-assistance-program-summary-obligations>

# Costs of Flooding

- The costs of flooding to residents include lost belongings and home repairs.
- The NFIP helps cover these costs for insured homes, even if a disaster is not declared.
- The Individual and Households Program (IHP) can provide some disaster assistance, but only when a disaster is declared.
- The differences in NFIP claims and IHP payments for Virginia show the benefits of flood insurance<sup>1</sup>



<sup>1</sup> <https://www.fema.gov/data-visualization/historical-flood-risk-and-costs>

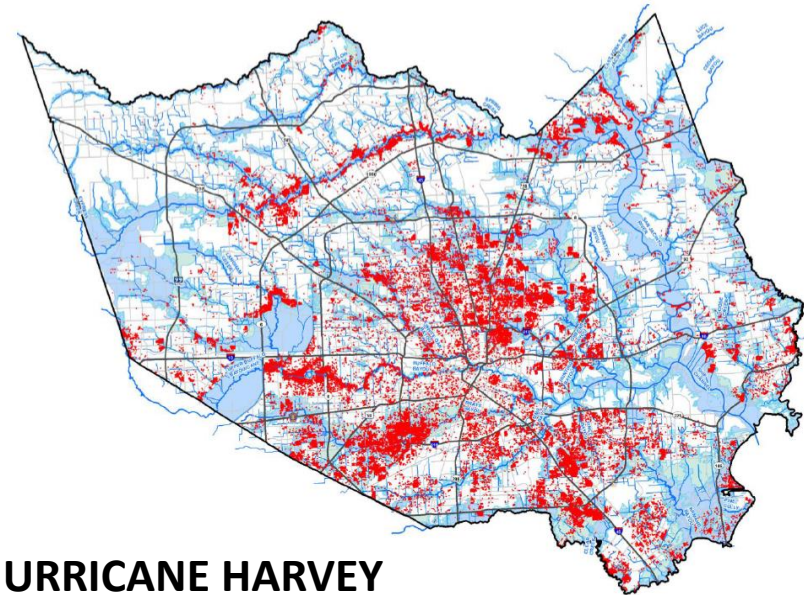


# Floodplain Management

# Flood Risk Doesn't Stop at a Line

- Nationally, 25% of flood insurance claims come from outside high-risk areas.
- Your community can regulate to standards higher than the NFIP minimum standards. Consider strengthening regulations using:
  - 0.2% annual chance flood
  - “Freeboard”
  - Buffer around SFHAs
  - Flood depth grids
- For additional information and resources for adopting higher standards, visit:

[Local Government Officials – Floodplain Management Resources | FEMA.gov](#)



**HURRICANE HARVEY  
GREATER HOUSTON  
154,170 Homes Flooded**

32% < 100-yr  
23% > 100 yr, < 500 yr  
46% > 500 yr

*SOURCE: Harris County Flood Control District*

# Update Ordinance

- Communities agree to adopt ordinances that meet or exceed the minimum requirements of the NFIP to participate in the program
- New maps = new ordinances
- No postponement waivers or extensions will be granted
- The time to update your ordinance will be after the Appeals Period and after the LFD is issued
- Remember, without a compliant floodplain ordinance adopted and effective prior to the effect date of the new maps a community will be **suspended** from the National Flood Insurance Program (NFIP)



# Types of Ordinances

- **Zoning Ordinances**
- **Building Codes**
  - Subdivision Regulations
  - Sanitary Regulations
- **“Stand Alone” Ordinance**

*\*Remember severability clause and most restrictive local regulation applies!*



September 21, 1999. Hurricane Floyd left the downtown section of Franklin, VA under six feet of water.

Source: Photo by Liz Roll/ FEMA News Photo

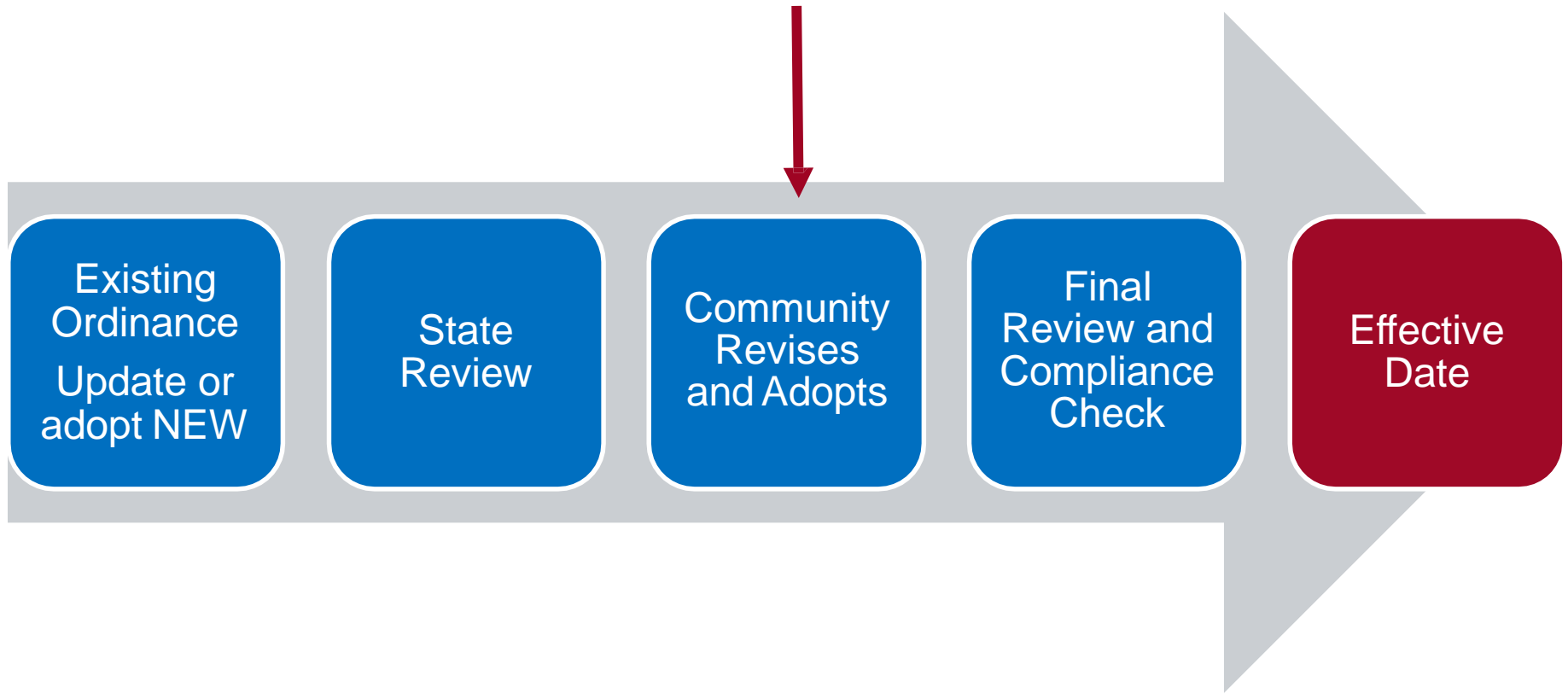


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# Establish a Timeline (After LFD)

Anticipate your local procedural requirements and timeline for the process for adoption meetings, postings, reviews, adoption





# Planning Recommendations

- Set a date for adoption and notify state of scheduled date
- Signed, adopted ordinances should be submitted to State NFIP Coordinator
- All communities need to have adopted a compliant ordinance
  - Failure to do so will result in suspension from the NFIP
  - Following state review, ordinances will be forwarded to FEMA
- It is strongly recommended that communities adopt and submit their ordinances as early as possible to avoid last minute complications
- FEMA can not guarantee last minute reviews by effective date
- **Don't wait until the deadline!**



# Permitting with Preliminary Data

- Recommend using preliminary data to **build / rebuild** safely
  - Permit with two sets of data and regulate to the **most restrictive**
  - Inform applicants of the future risk and **insurance implications**
  - Potential community liability
- Recommendation vs. requirement
  - Unless formally adopted by the community, use of preliminary data is not required
  - Communities must regulate at least to **current effective data**



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# Timeline for Pocahontas County

**Preliminary  
Maps Issued**

March 4, 2024

- Insurance is not impacted by Preliminary Maps.
- Insurance changes with Effective Maps.
- There is time between to reach out to impacted property owners.

**Effective Date**

6 months after LFD



# Public Outreach



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# Resources for Property Owners

- [WV Flood Tool](#)  
(updated end-user brochure)
- Advise property owners to contact **their insurance agents**
- Call the FEMA Flood Mapping and Insurance Exchange: **1-877-336-2627**
- Visit: [www.floodsmart.gov](http://www.floodsmart.gov) and [www.fema.gov/national-flood-insurance-program](http://www.fema.gov/national-flood-insurance-program) for additional info



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# Public Open House

- Engagement opportunity with community members, led by local officials with support from state and federal partners in planning and executing
- Consideration for timing, format, invitations, and response
- Examples of what has worked well, and what has not
- A variety of Open House resources are available, including checklist, guidance documents, brochures (e.g., [Protect Your Home from Flooding – Low-Cost Projects You Can Do Yourself](#)), and more.



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# Outreach Messaging for Residents

Flood Risk Communication Video Series on [FEMA YouTube Channel](#) to help understand, relate to, and communicate about the flood map update process

The screenshot shows the FEMA YouTube channel page for the "Flood Risk Communication Video Series". The page features a search bar at the top, a navigation menu on the left, and a list of 8 videos. The video player on the left shows the first video, "Introduction to the National Flood Insurance Program (NFIP)".

**Navigation Menu:**

- Home
- Shorts
- Subscriptions
- Library
- History

**Video Series Details:**

- Flood Risk Communication Video Series**
- FEMA**
- 14 videos • 8,962 views • Last updated on Feb 8, 2022
- Buttons: Play all, Shuffle

**Video List:**

- 1** Introduction to the National Flood Insurance Program -- a Customer Experience Toolkit video  
FEMA • 5.7K views • 3 years ago  
Duration: 2:34
- 2** Flood Insurance and Communities -- a Customer Experience Toolkit video  
FEMA • 1.6K views • 3 years ago  
Duration: 3:13
- 3** Flood Risk Basics and Communities -- a Customer Experience Toolkit Video  
FEMA • 3.4K views • 3 years ago  
Duration: 3:42
- 4** Introduction to Risk MAP - a Customer Experience Toolkit video  
FEMA • 2.5K views • 3 years ago  
Duration: 3:18
- 5** Providing Input as the Map is Developed -- a Customer Experience Toolkit video  
FEMA • 1.4K views • 3 years ago  
Duration: 3:16
- 6** Collecting Data to Create Flood Maps -- a Customer Experience Toolkit video  
FEMA • 2.1K views • 3 years ago  
Duration: 2:45
- 7** We have a Map. Now What? -- A Customer Experience Toolkit video  
FEMA • 1.4K views • 3 years ago  
Duration: 2:50
- Mitigation -- A Customer Experience Video Toolkit  
FEMA • 1.2K views • 3 years ago

# Local Officials Toolkit

- Collection of resources to support a variety of community outreach following the CCO meeting until maps become effective:

[FEMA Flood Risk Communication Toolkit for Community Officials | FEMA.gov](https://www.fema.gov/local-officials-toolkit)

- Templated letters, messaging, and more to help communicate your community's flood risk and flood insurance requirements
- Bilingual (in English and Spanish)



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# How You Can Help Property Owners

- Advise property owners to contact **their insurance agents** for an updated quote
- Help residents understand their flood risk and highlight the value of flood insurance
- Encourage your communities to think about mitigation
- Visit: [www.floodsmart.gov](http://www.floodsmart.gov) and [www.fema.gov/national-flood-insurance-program](http://www.fema.gov/national-flood-insurance-program) for additional information
- Call the FEMA Flood Mapping and Insurance Exchange: **1-877-336-2627**





# What You Should Do



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# Community Action Items



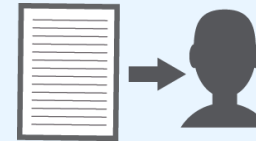
**Review  
Preliminary  
Map, FIS  
and SOMA**



**Comment on  
Preliminary  
Information**



**Appeal  
Preliminary  
Map If  
Desired**



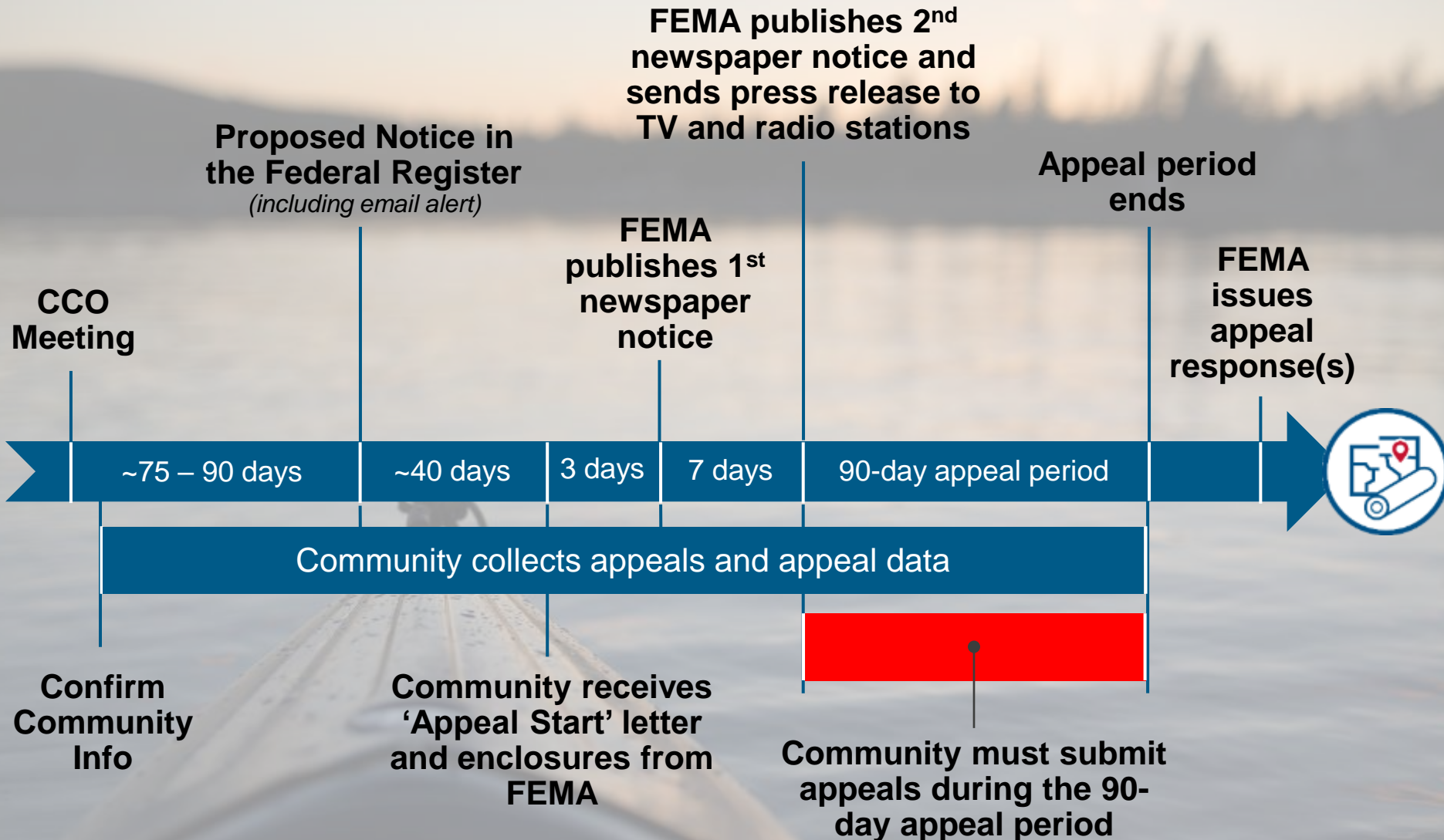
**Reach out to  
Community  
Members**



**Wait for  
LFD to  
Adopt**

**FIS:** Flood Insurance Study  
**SOMA:** Summary of Map Actions  
**LFD:** Letter of Final Determination

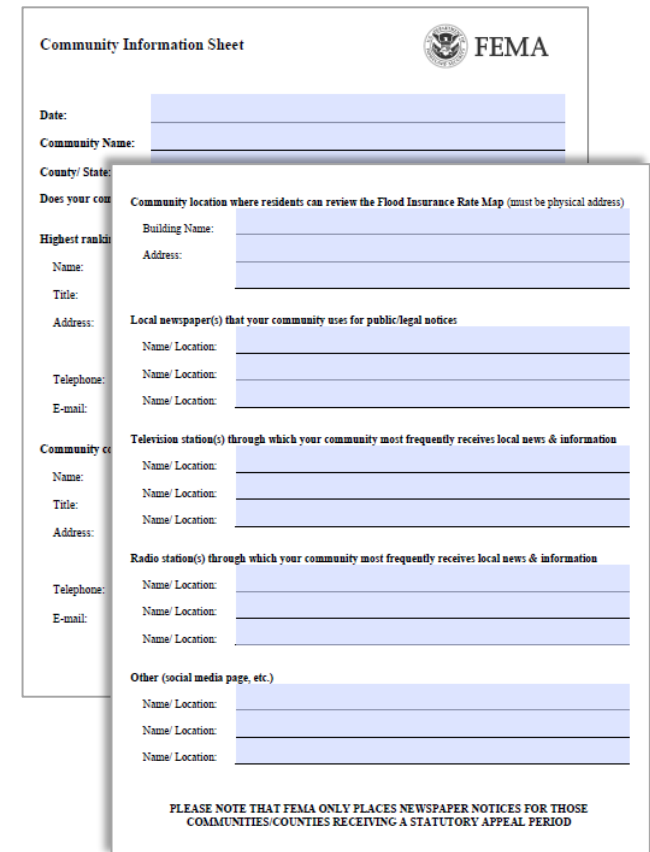
# Appeal Period Timeline



# Appeal Period Prerequisite

- Fill out the Community Information Sheet to ensure accurate information for the forthcoming Appeal Period, importantly:
  - **Map Repository Address** (where FIRMs are available for public viewing / reference) which will be specified in the **Federal Register**
  - **Local Media Names**
    - FEMA will publish two legal notices in a local newspaper
    - FEMA will also send a press release to local TV, radio stations, and newspapers

Example: <https://www.fema.gov/press-release/20210709/public-invited-review-flood-maps-baltimore-county-md>



The image shows a 'Community Information Sheet' form from FEMA. The form is titled 'Community Information Sheet' and features the FEMA logo in the top right corner. It contains several sections for data entry, each with a label and a corresponding input field. The sections are: 'Date', 'Community Name', 'County/ State', 'Does your community have a map repository address?', 'Highest ranked building', 'Local newspaper(s) that your community uses for public/legal notices', 'Television station(s) through which your community most frequently receives local news & information', 'Radio station(s) through which your community most frequently receives local news & information', and 'Other (social media page, etc.)'. Each section has a 'Name/ Location' label and an 'Address' label. The form is partially filled out with blue lines representing input fields. At the bottom of the form, there is a note: 'PLEASE NOTE THAT FEMA ONLY PLACES NEWSPAPER NOTICES FOR THOSE COMMUNITIES/COUNTIES RECEIVING A STATUTORY APPEAL PERIOD'.

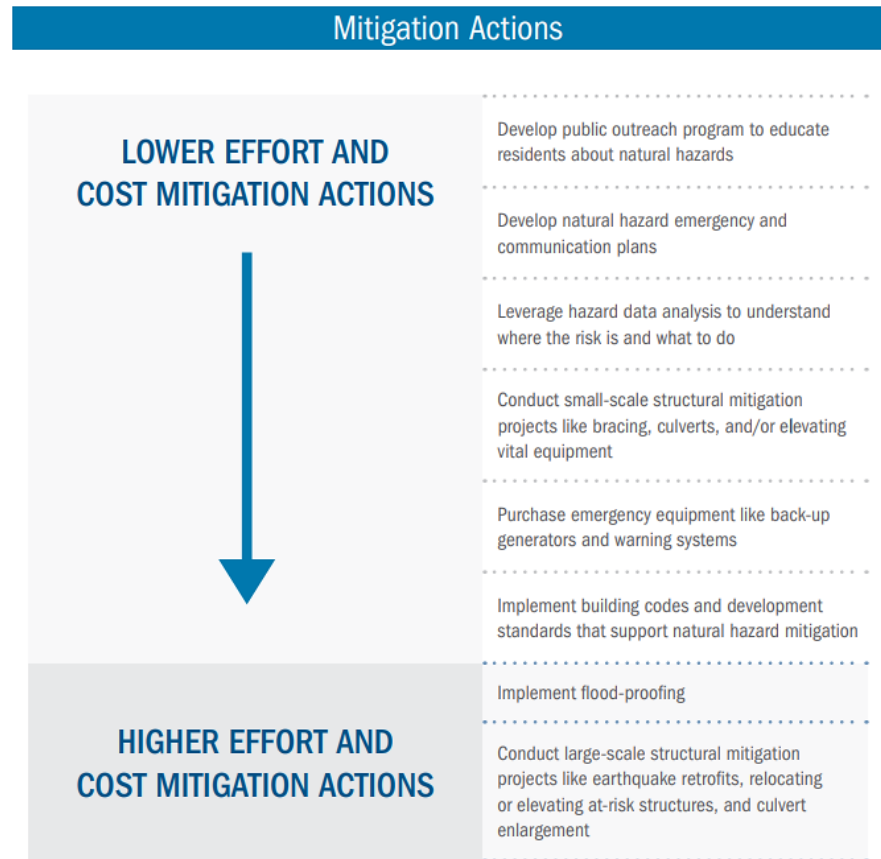


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# Your Role

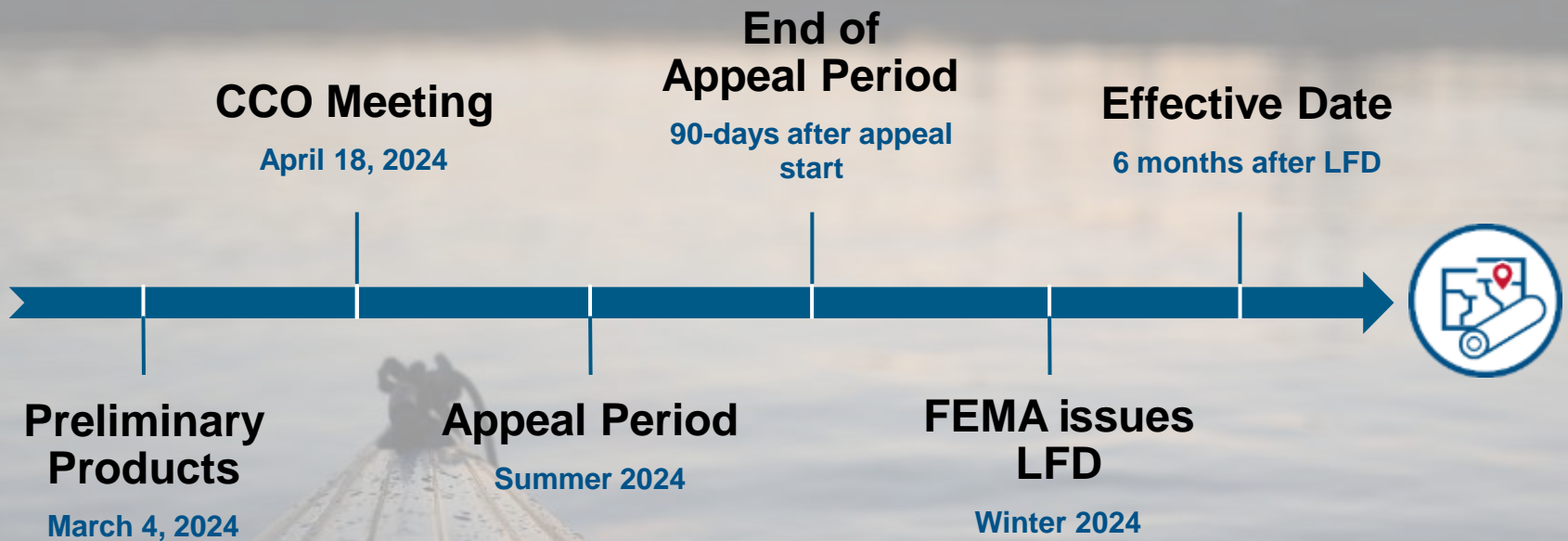
## KNOW YOUR RISK – INSURE YOUR RISK – REDUCE YOUR RISK

- Leverage federal and state resources (such as FEMA's **Local Officials Toolkit** and the [WV Flood Tool](#)) to understand and communicate your community's flood risk and flood insurance requirements.
- Consider [mitigation actions](#) that could make your community safer and more resilient to disasters.
- Work with property owners on risk reduction (e.g., FEMA Brochure: [Protect Your Home from Flooding – Low-Cost Projects You Can Do Yourself](#)).



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# Timeline: Pocahontas County



**CCO:** Community Coordination and Outreach

**LFD:** Letter of Final Determination

# Project Contacts



**State NFIP/CTP Coordinator:**  
**Timothy W. Keaton, CFM**  
(304) 414-7659  
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**Vinod Mahat**  
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**WVGISTC:**  
**Kurt Donaldson, GISP, CFM**  
Manager  
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[Kurt.Donaldson@mail.wvu.edu](mailto:Kurt.Donaldson@mail.wvu.edu)



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# Additional Contacts - Insurance



## **FEMA Region 3:**

**Bill Bradfield, CFM**

Flood Insurance Outreach Specialist

(202) 880-5906

[william.b.bradfield@fema.dhs.gov](mailto:william.b.bradfield@fema.dhs.gov)



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# General Assistance

Map specialists are available at the **FEMA Mapping and Insurance eXchange (FMIX)** to assist customers. **FMIX** also connects stakeholders with a wide range of technical subject matter experts.



**1-877-FEMA MAP**  
(1-877-336-2627)



**[FEMAMapSpecialist@riskmapcds.com](mailto:FEMAMapSpecialist@riskmapcds.com)**

Online Chat:

**[www.floodmaps.fema.gov/fhm/fmx\\_main.html](http://www.floodmaps.fema.gov/fhm/fmx_main.html)**



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# FEMA



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