

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

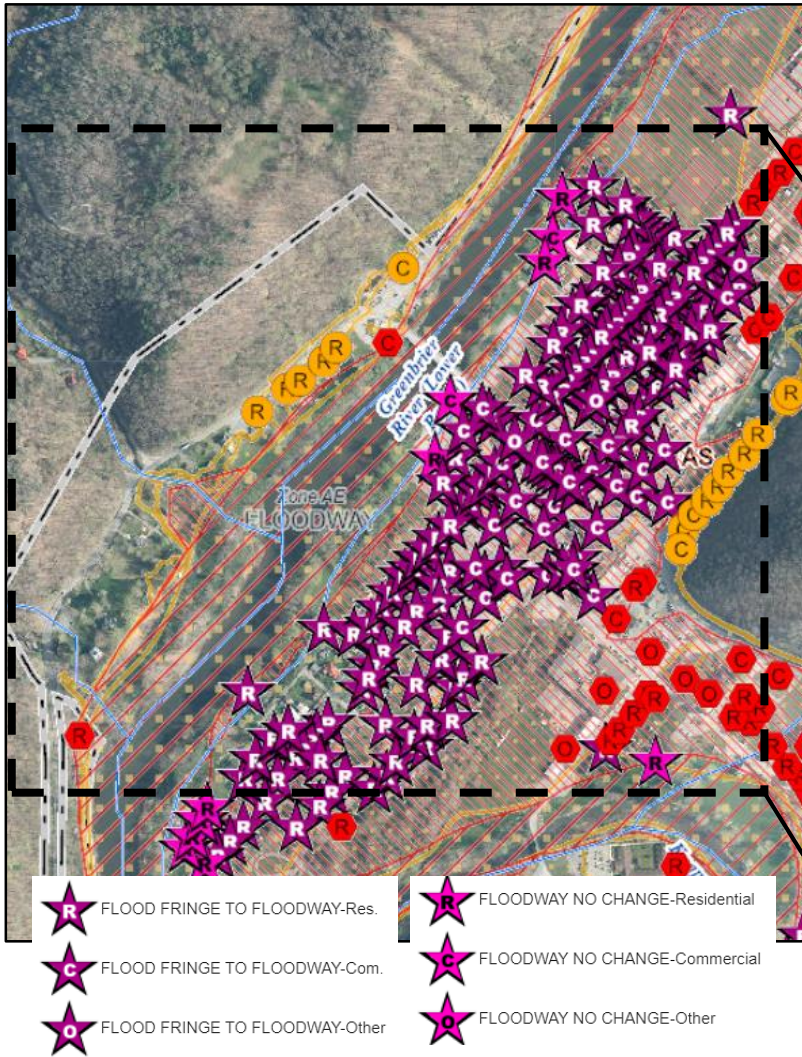


Buildings in Preliminary Floodway

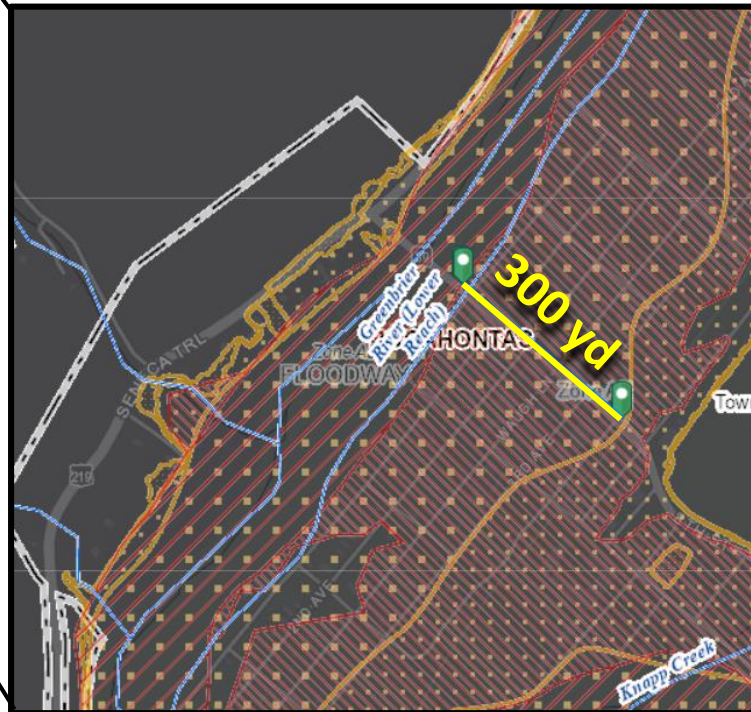
Floodway Increase in Marlinton

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.

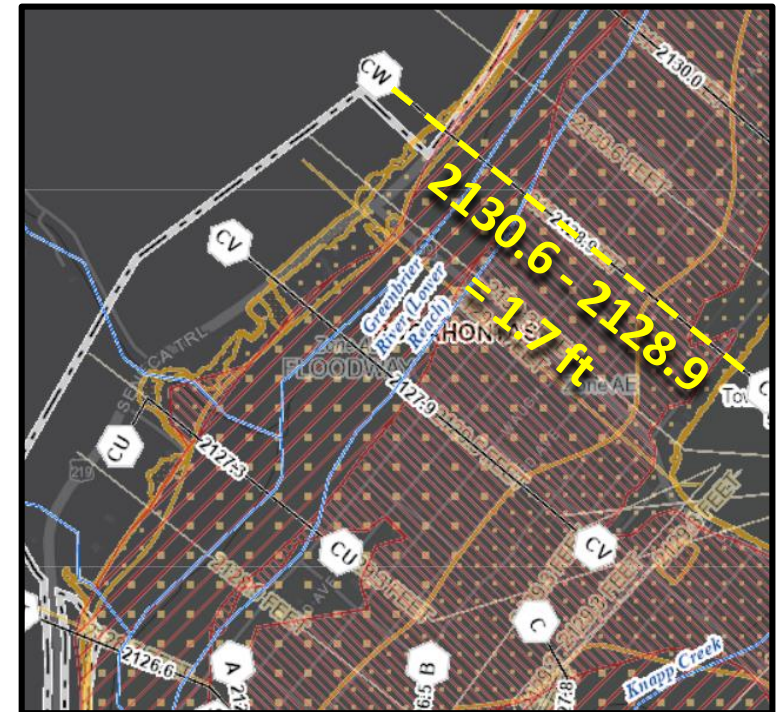
Community	Buildings in Preliminary Floodway	Buildings in Effective Floodway	Net Change in Floodway
Marlinton	190	14	+ 176



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
	County	7,257	784	206	200

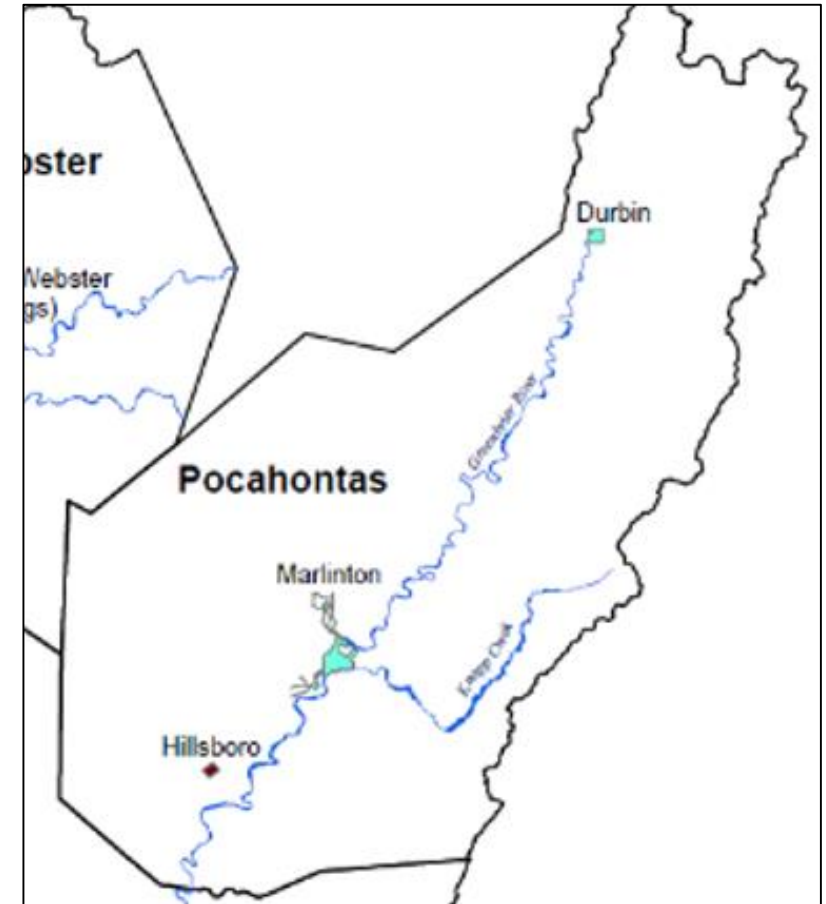
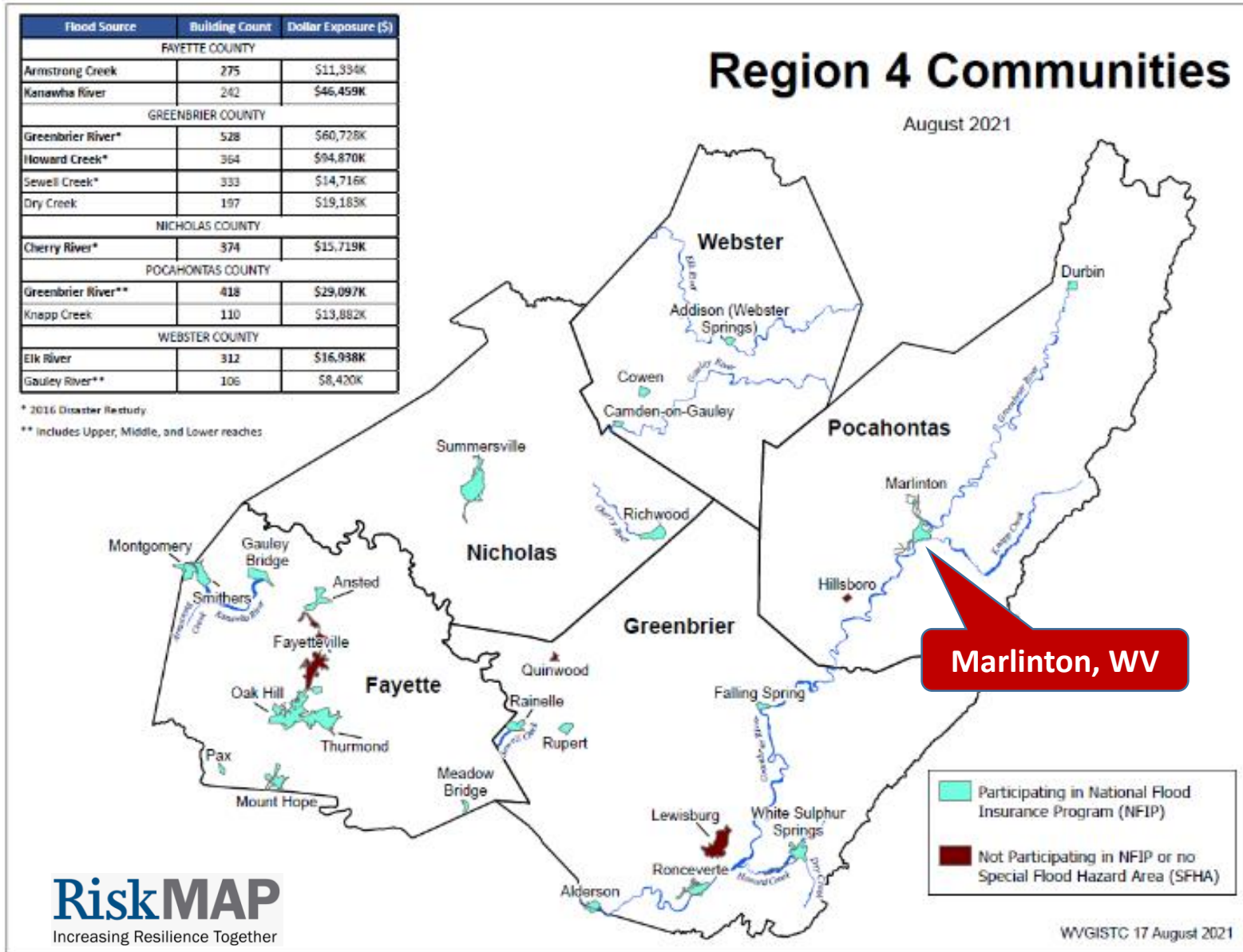
* Unincorporated

** Marlinton has a total of 190 floodway structures, of which 176 were moved from floodplain fringe to floodway, an increase of 1,157%.

County Net Change in structures: + 6

County Net Change in floodway structures: + 192

Building Counts & Values by Rivers (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 the data we can retrieve for it. I 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:

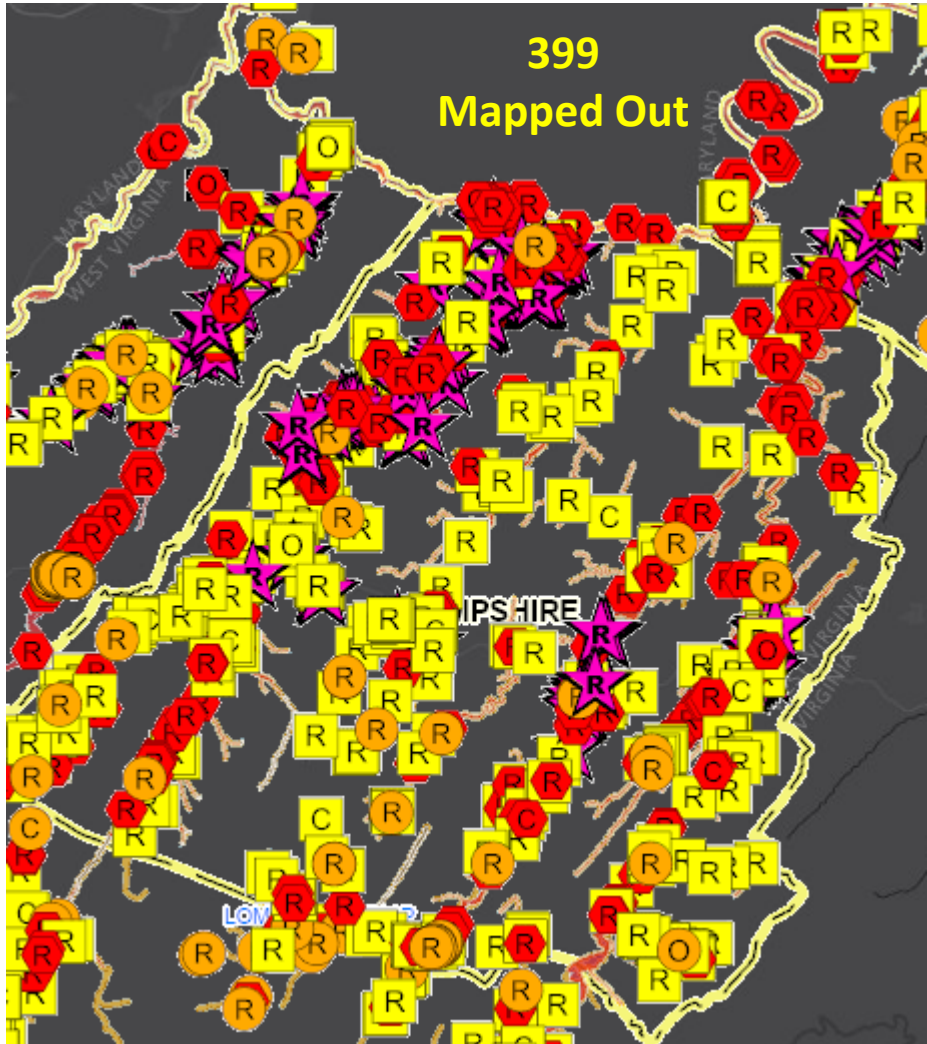
- Hardy County Risk MAP
- Kanawha County - Elk River PMR
- Greenbrier County Risk MAP



Building SFHA Change (LiDAR LOMAs)

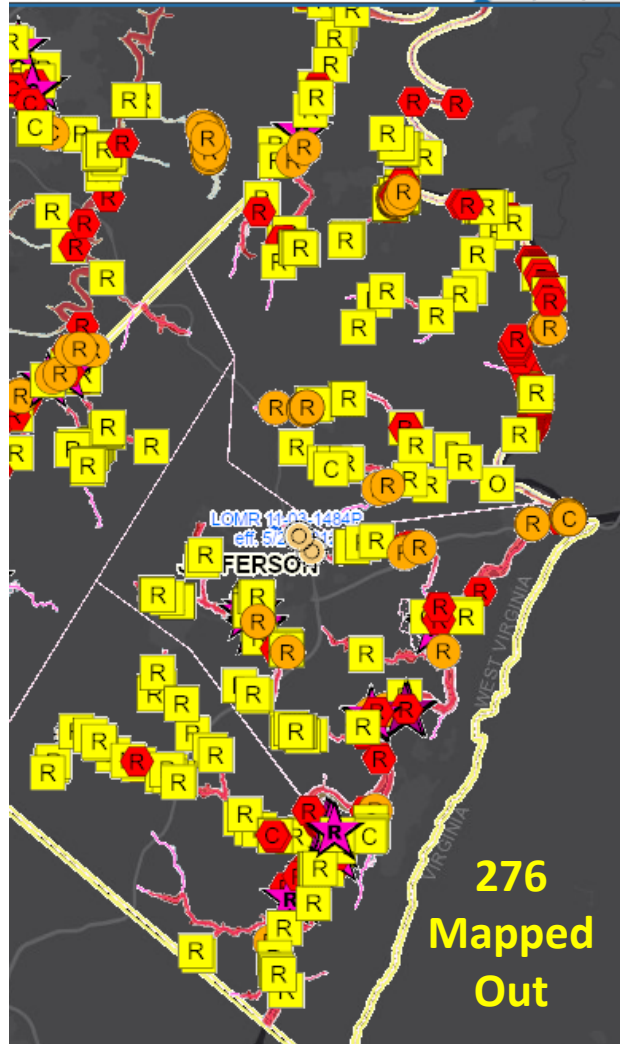
Hampshire County

399
Mapped Out



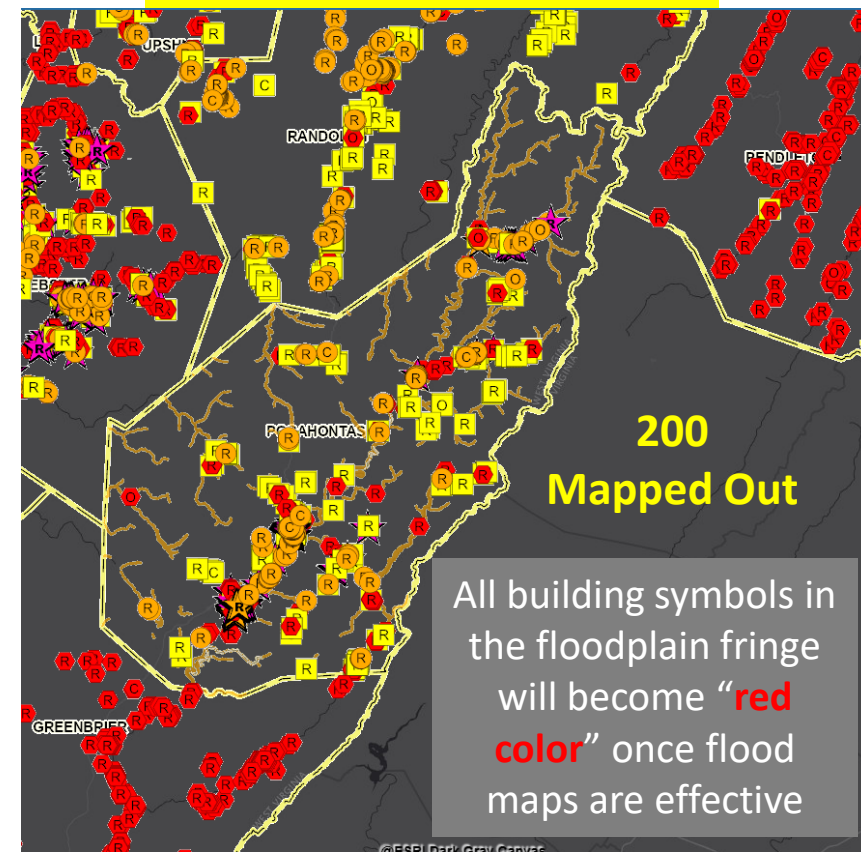
Jefferson County

276
Mapped Out



Pocahontas County

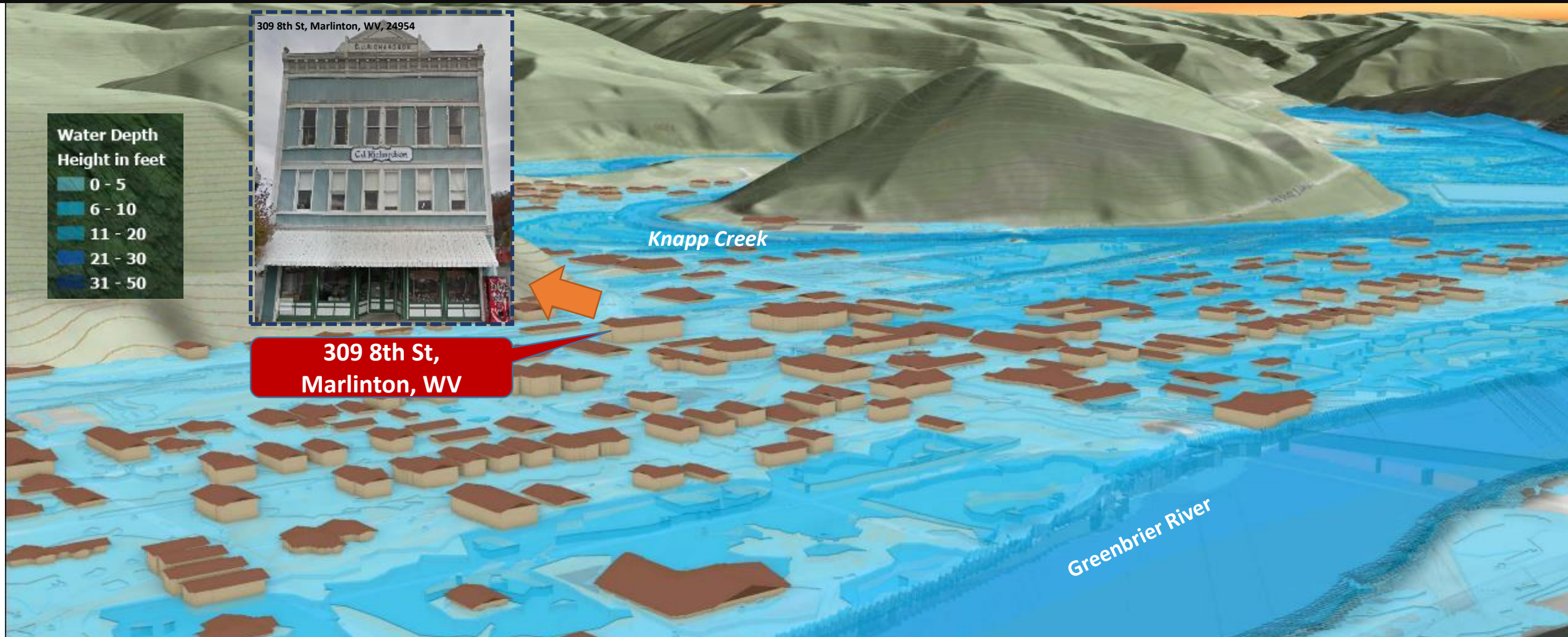
200
Mapped Out



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, 24954

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
Floodplain Characteristics					
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
Building Counts					
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	308	113	190 1	2	8,637
Buildings in Effective Floodway	73	55	14	1	8,299
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
Building Characteristics					
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%
Critical Infrastructure					
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%
Community Assets					
Historical Community Assets	10	6	4	0	2,758
Non-Historical Community Assets	24	9	13	2	2,093

Notes:

Essential Facilities identified in both 1%-annual-chance (100-year) and 0.2%-annual-chance (500-year) floodplains.

State values and ratios calculated for all floodplain buildings (from BLRA) in the state.

Buildings in High-Risk Floodplain Breakdown:

Pocahontas County → in Effective: 778, in Advisory: 206

Pocahontas Unincorporated Area → in Effective: 414, in Advisory: 154

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
People / Social					
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
Estimated / Previous Damage					
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 100%, based on eight social and economic indicators to measure a population's vulnerability to flood hazards: Poverty Rate, Unemployment Rate, Vulnerable Ages Rate, Disability Rate, Population without a 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.

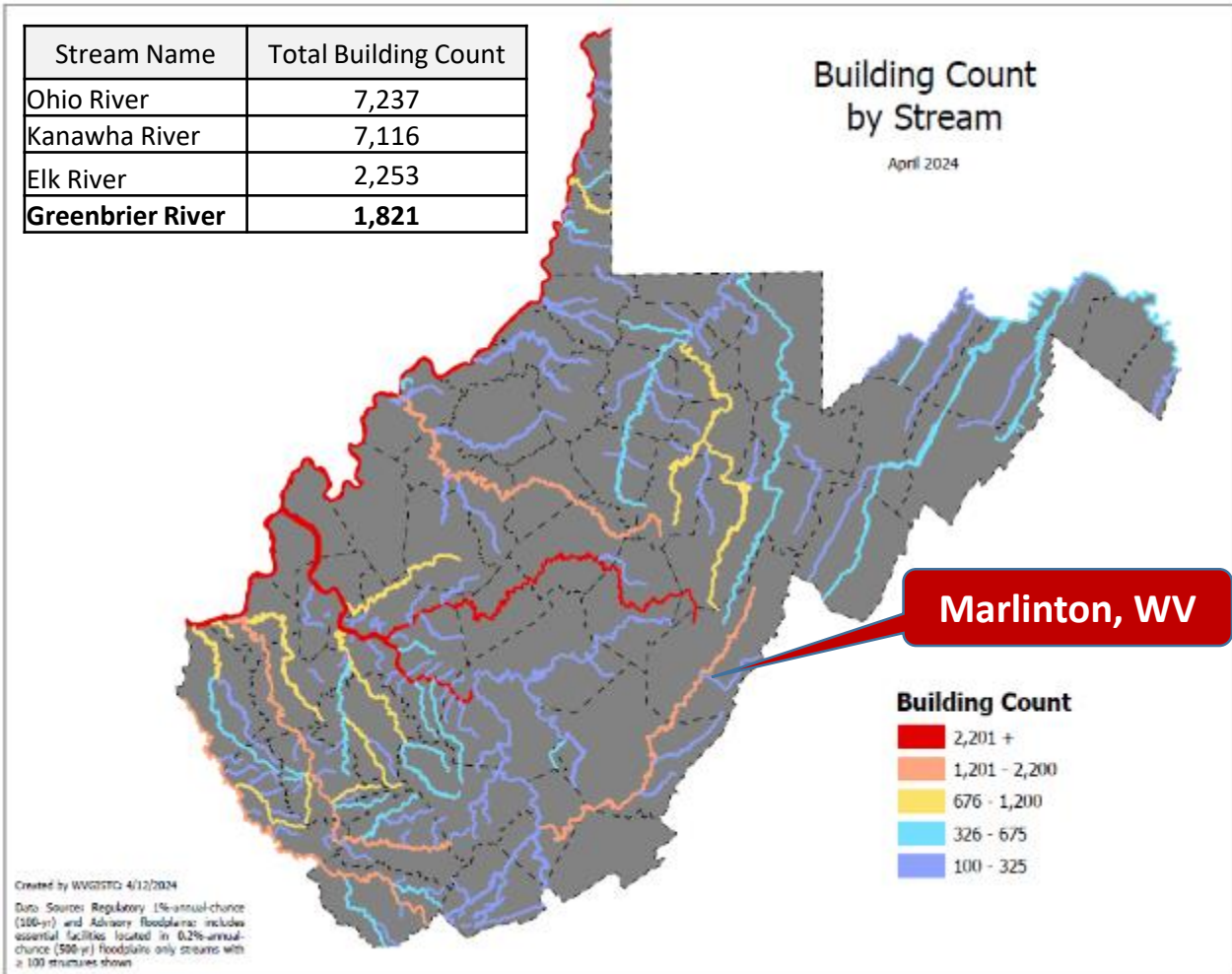
Substantial Damage: Estimated damage of equal to or greater than 50% of building value before the event

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

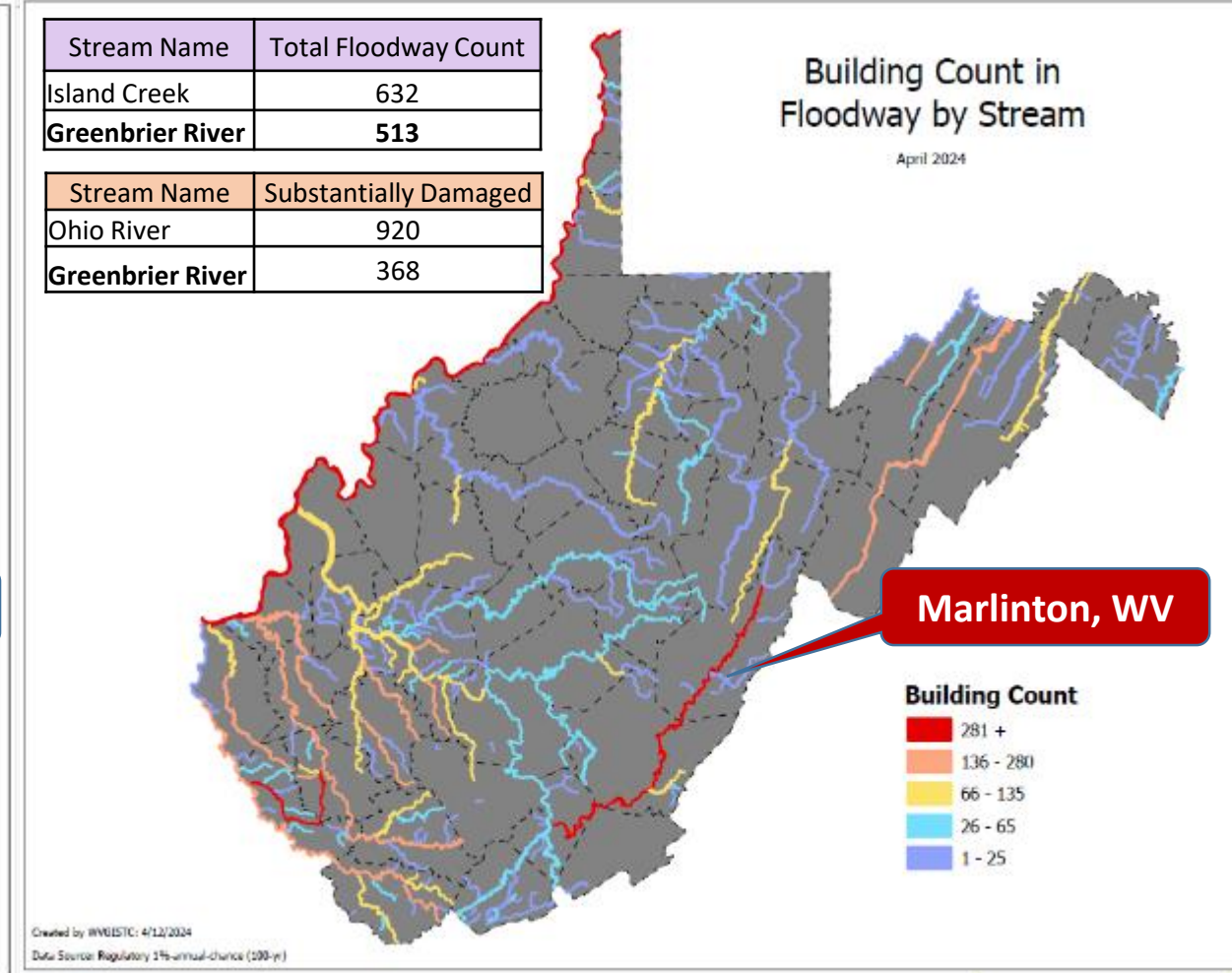
Post-FIRM: Constructed after community's initial Flood Insurance Rate Map (FIRM) date

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

Greenbrier River (Building Counts)



Buildings in SFHA

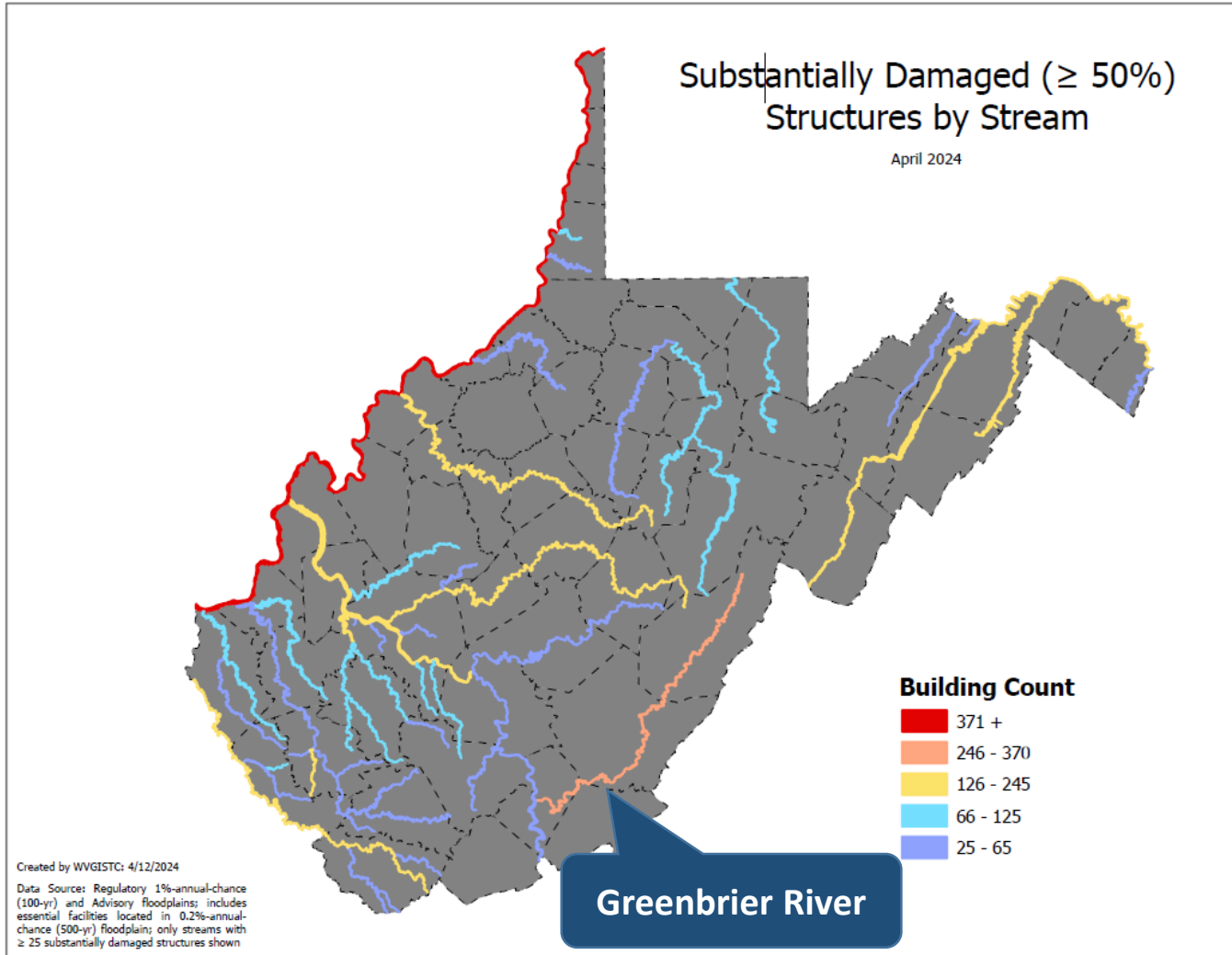


Flood Risk Indicators

Buildings in Floodway

Statewide Stream Scale

Greenbrier River (Substantial Damage Loss Estimates)



Stream Name	Substantially Damaged Building Count
Ohio River	920
Greenbrier River	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

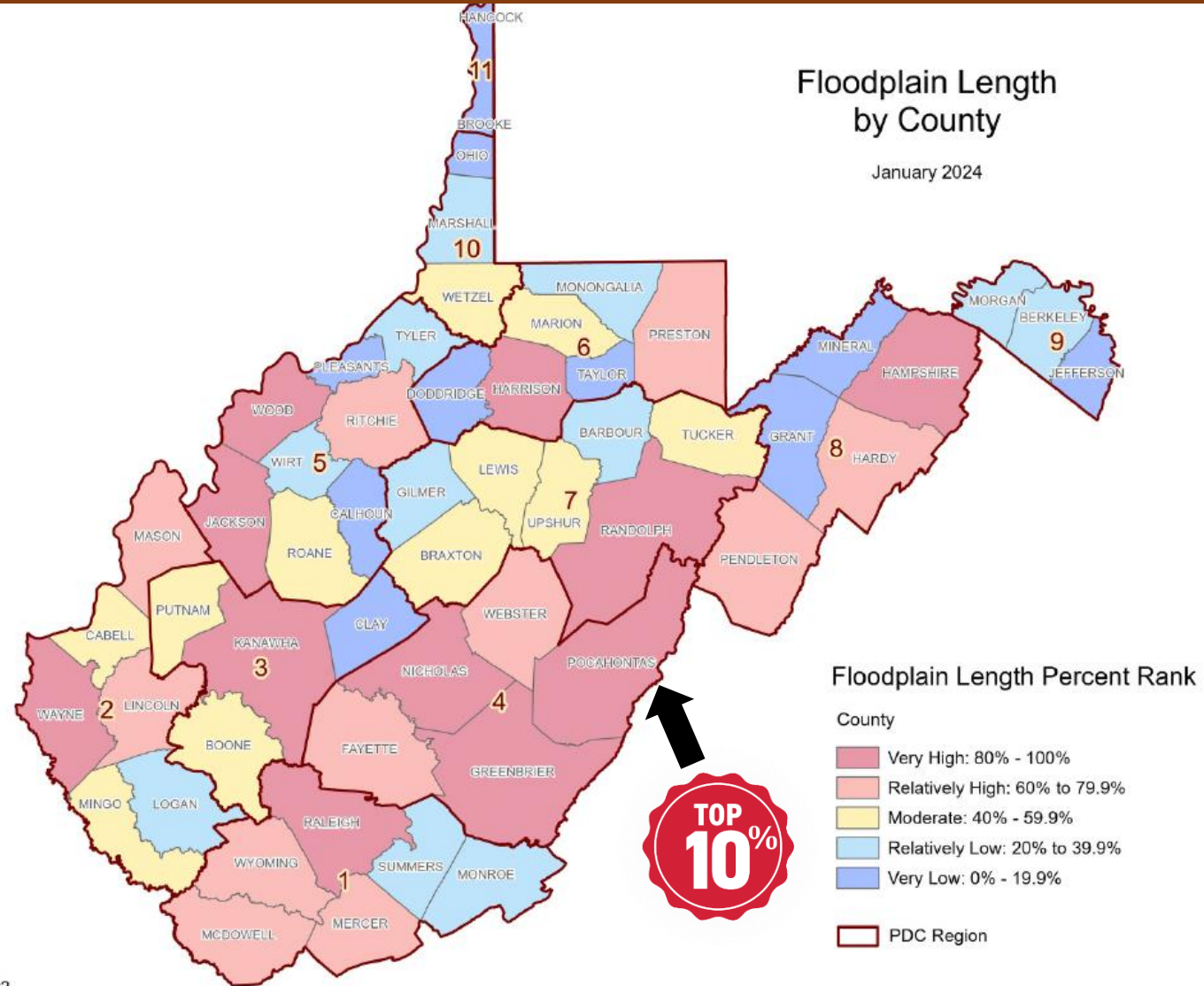
Risk Indicator: High Amount of Floodplain Miles

Floodplain Miles

Total Length in Miles of Flood Zones

Flood Risk Indicator

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.

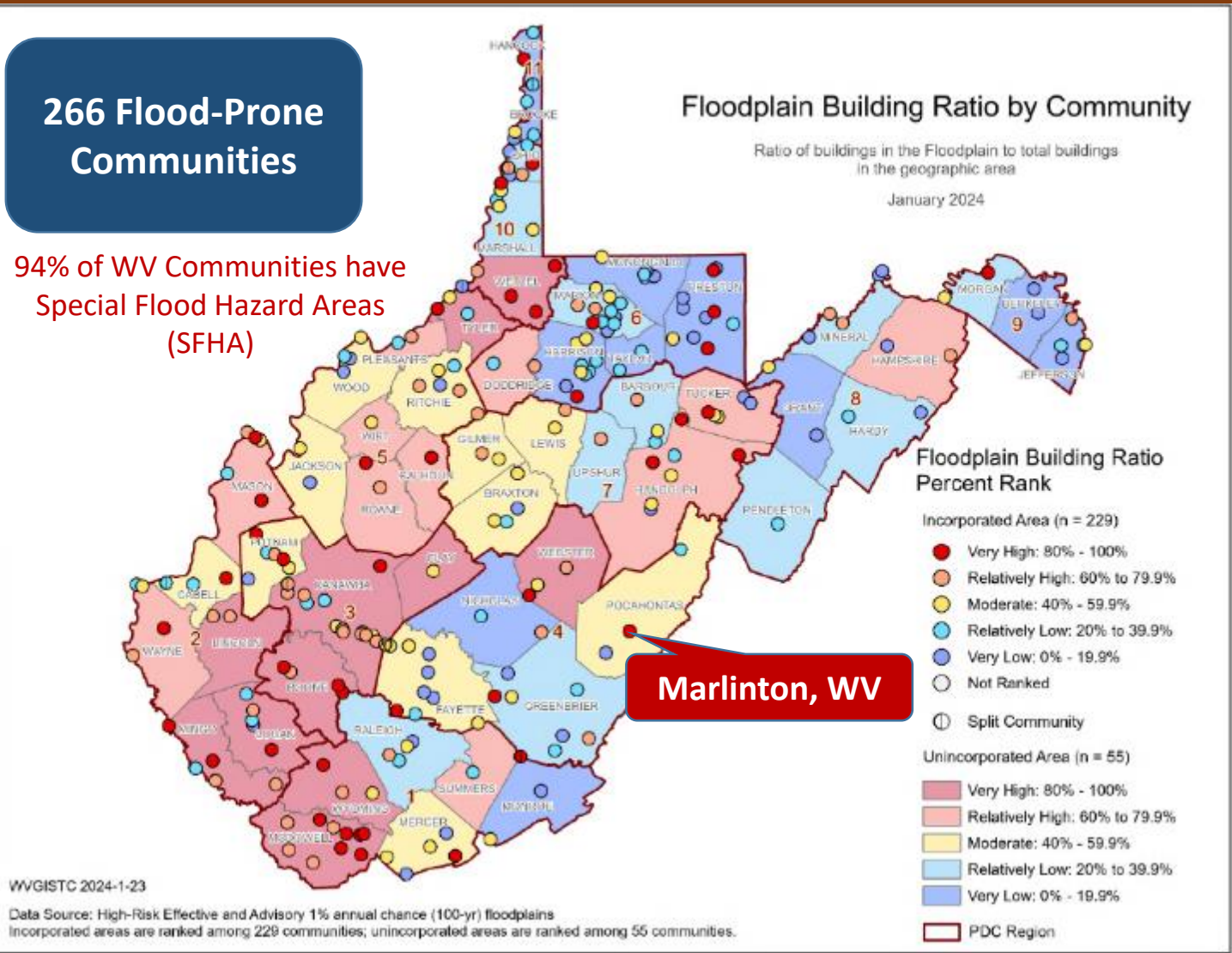
County Scale

Risk Indicator: Floodplain Building Ratio (Marlinton)

Floodplain Building Ratio

Ratio of building in floodplains to total buildings in Marlinton

Flood Risk Indicator



Community Scale

Risk Indicators: (Marlinton)

TOP 10%

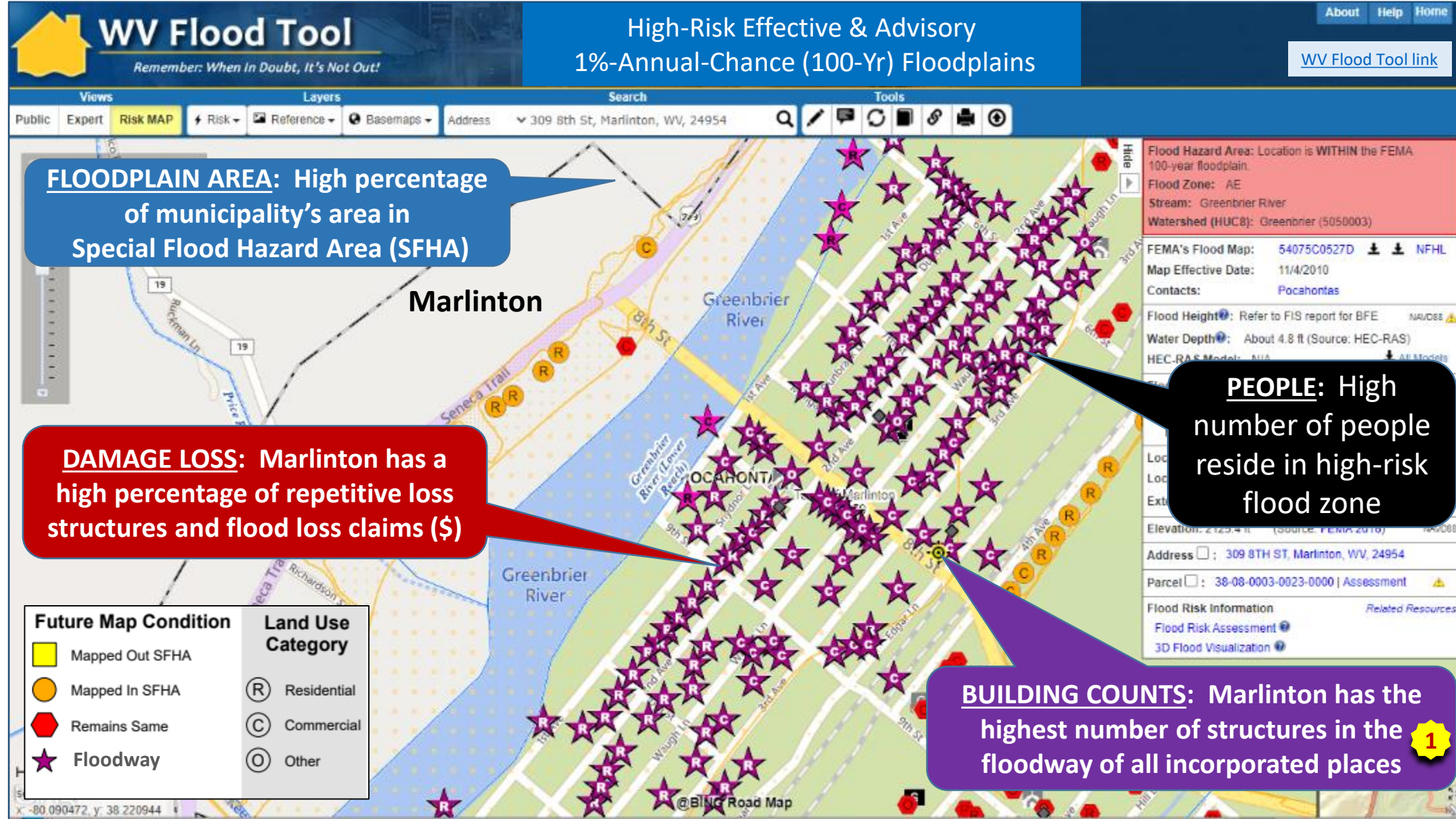
Top 10% rankings among 229 incorporated places

Floodplain Characteristics
High percentage of community in 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



FLOODPLAIN AREA: High percentage of municipality's area in Special Flood Hazard Area (SFHA)

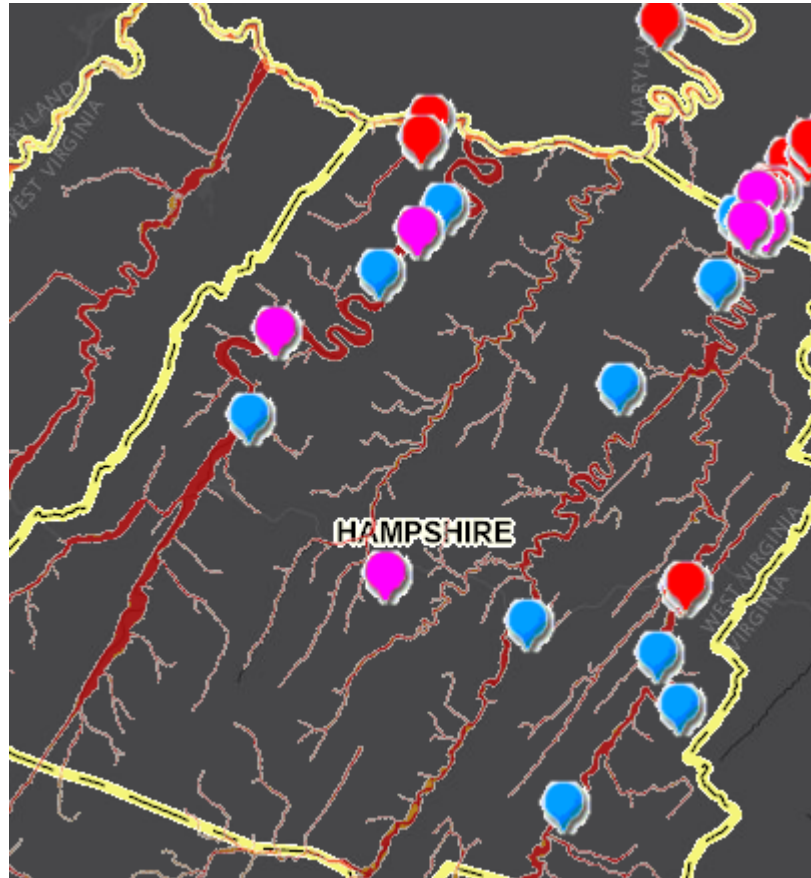
DAMAGE LOSS: Marlinton has a high percentage of repetitive loss structures and flood loss claims (\$)

PEOPLE: High number of people reside in high-risk flood zone

BUILDING COUNTS: Marlinton has the highest number of structures in the floodway of all incorporated places **1**

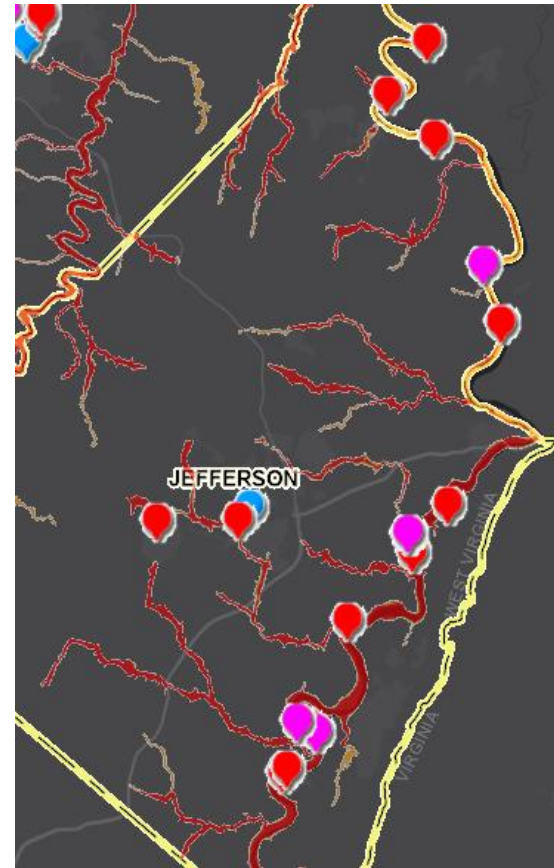
Risk Indicator: Repetitive Loss Structures (Mapped)

Hampshire County



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


Jefferson County



 **Repetitive Loss**
(Site Address Matched)

Marlinton (Pocahontas County)



 **Repetitive Loss**
(Street Address Matched)

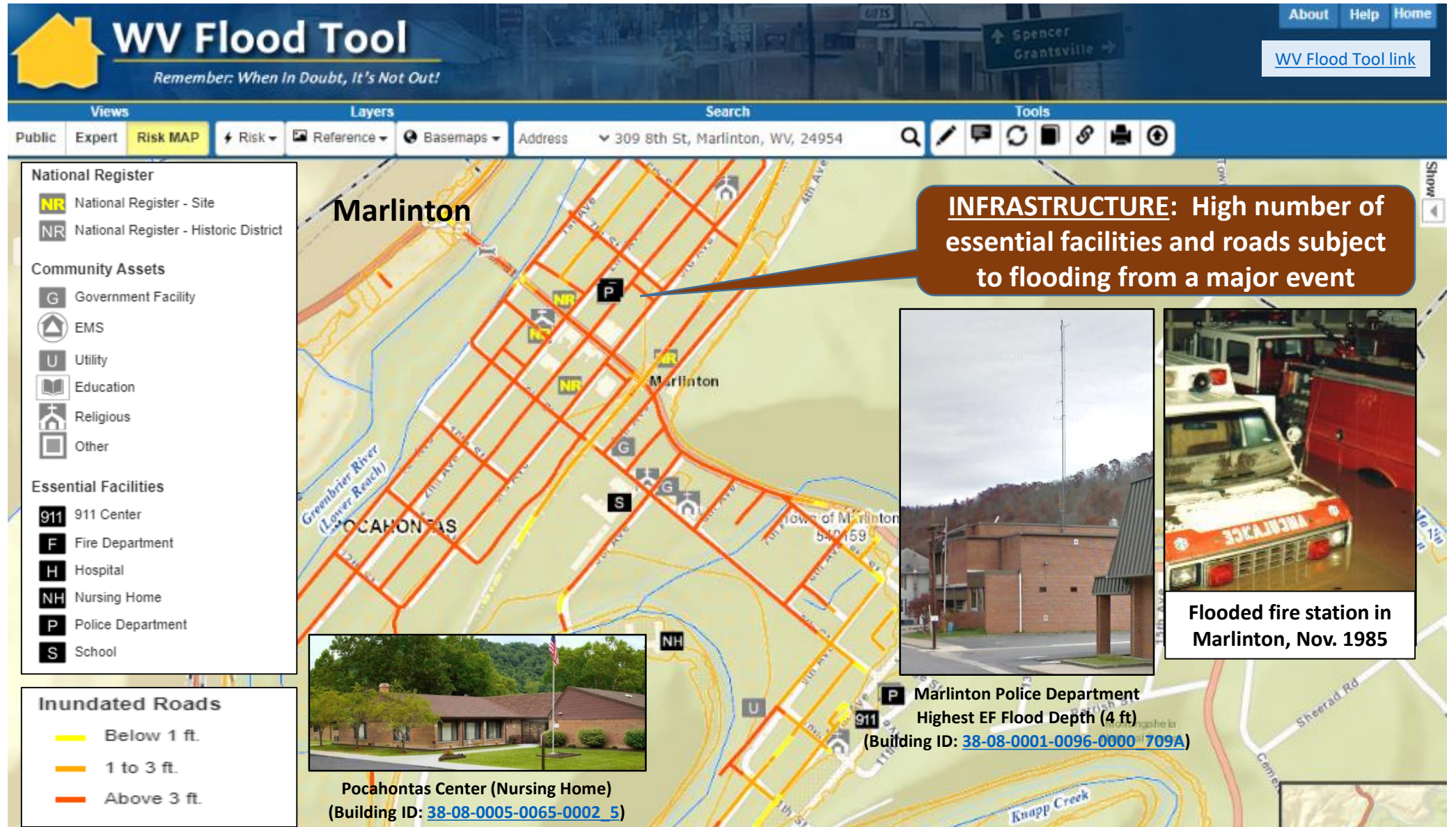
Risk Indicators: Critical Infrastructure (Marlinton)

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.

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 and are listed on the National Register of Historic Places.



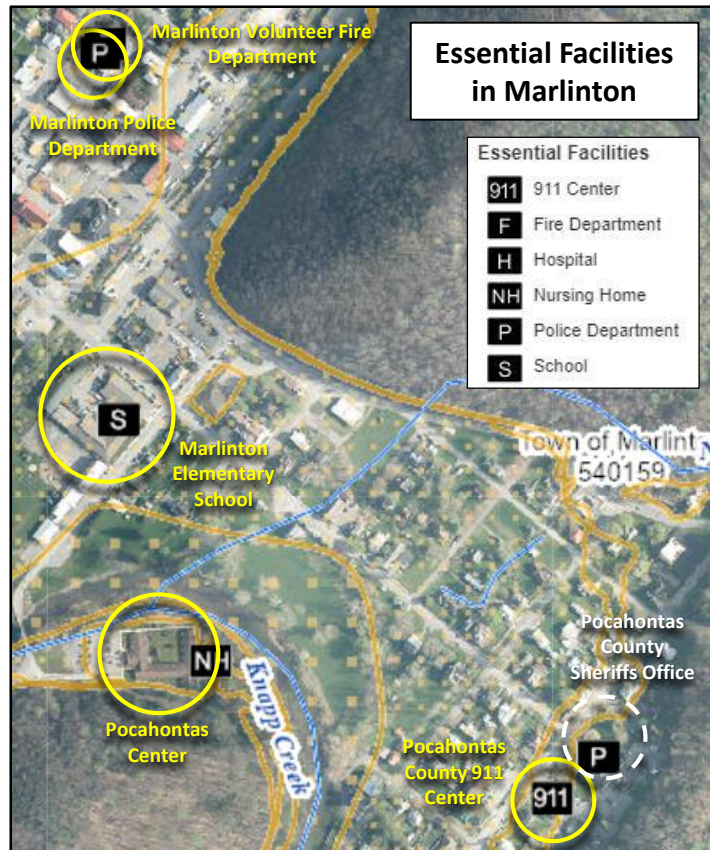
Flooded fire station in Marlinton, Nov. 1985

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

Marlinton



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

Pocahontas County Courthouse and Jail mapped out

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

Marlinton TOP 20%

TOP 10%

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



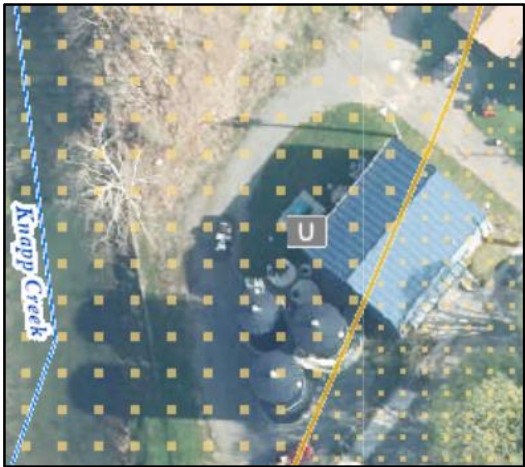
Community Assets in Marlinton

Community Assets Legend:

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

Preliminary Floodplain Legend:

- FLOODWAY
- Zone AE
- Zone A



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](#))

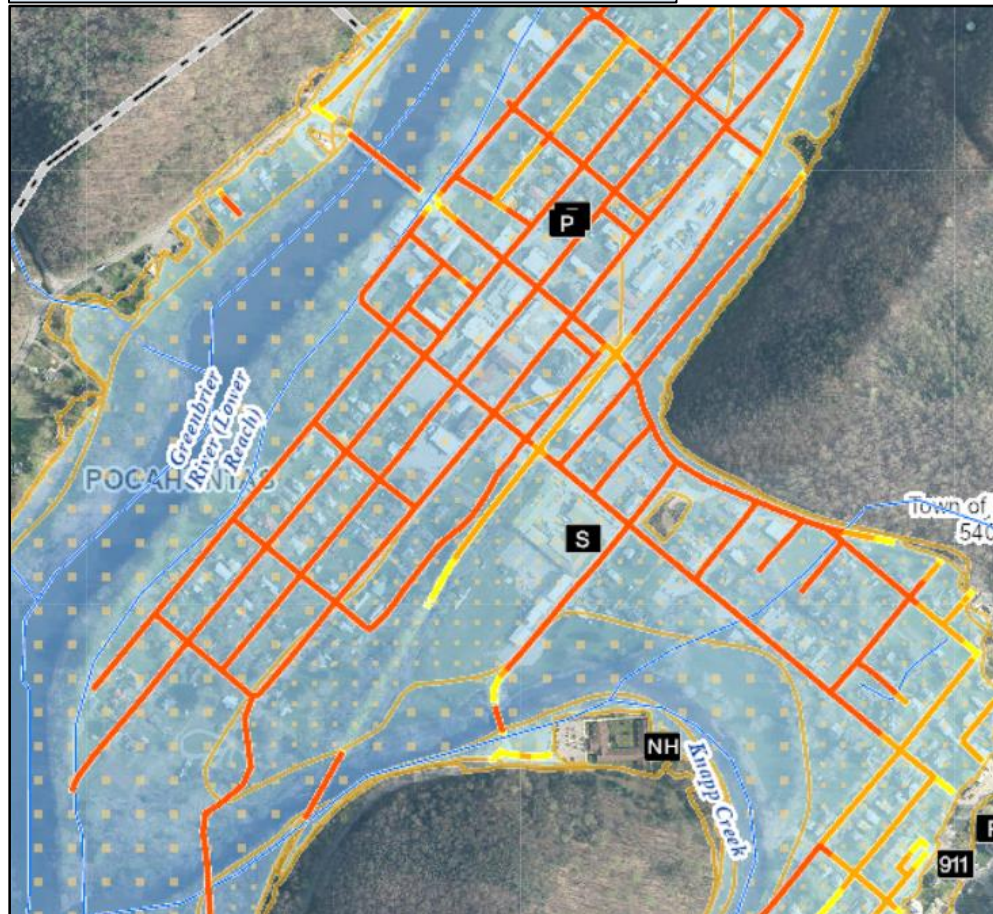


Marlinton Opera House
 Highest Hist. CA Depth (4.7 ft) & Value (\$148K)
 (Building ID: [38-08-0002-0159-0000_818](#))

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



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

Marlinton



Marlinton



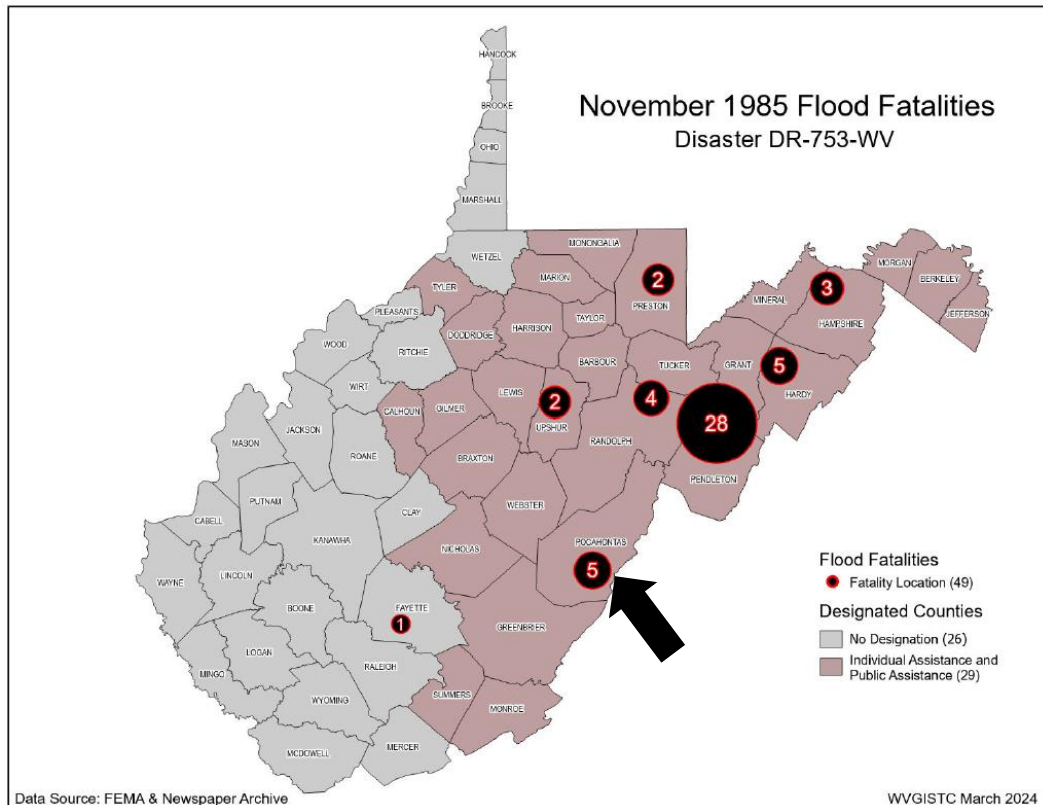
A foot of water will float many vehicles and make roads impassable. About three feet is near the limit to use high profile vehicles to perform high water rescues and instead boats and helicopters are required to perform rescues.

Risk Indicator: Population Exposure

Marlinton



Community <small>* Unincorporated area</small>	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
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

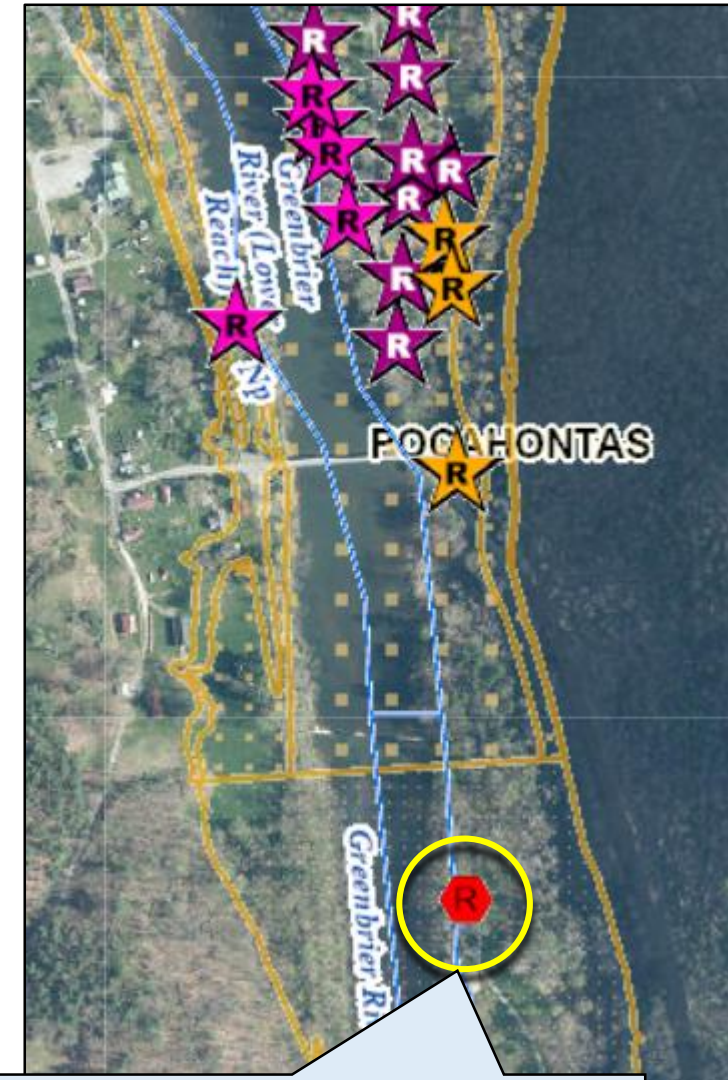
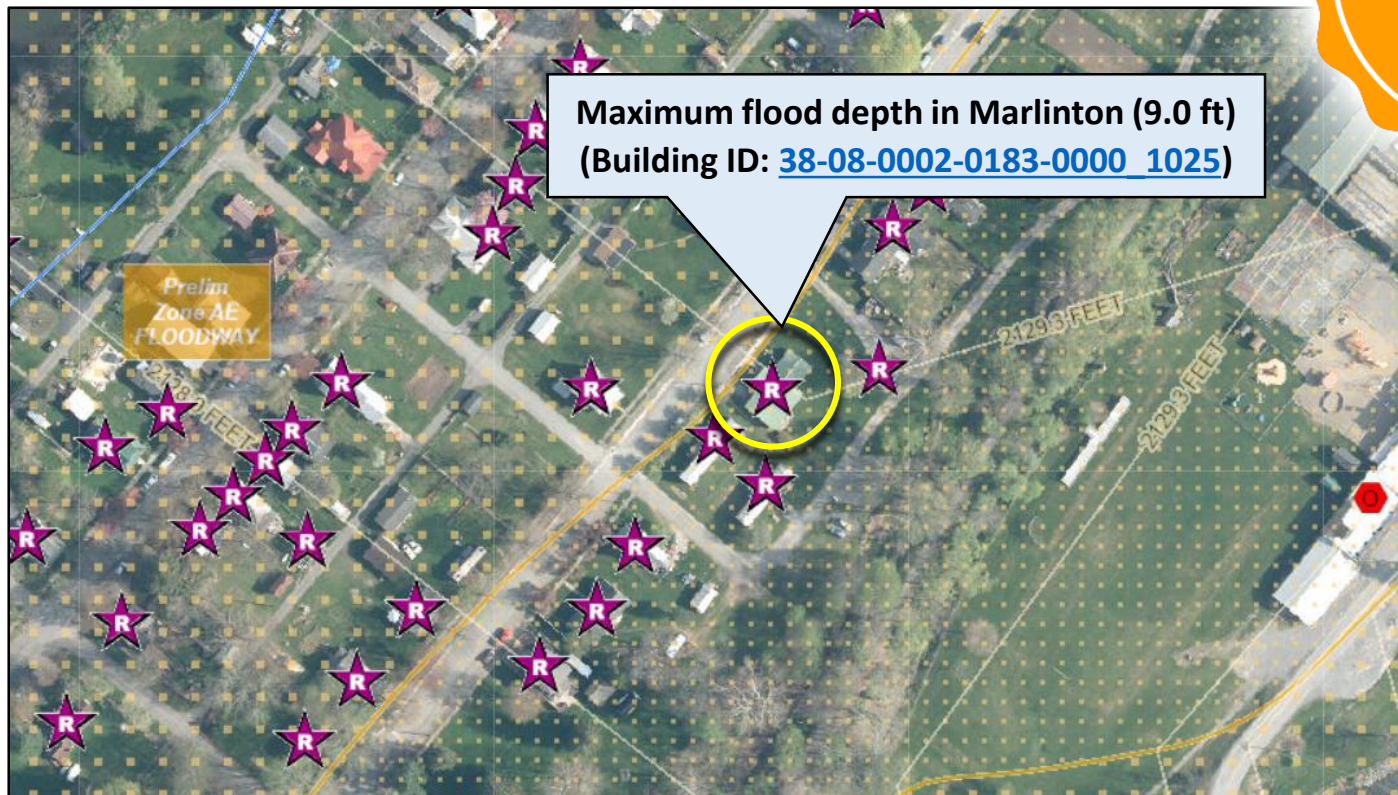


Nov. 1985

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



Preliminary Floodplain

-  FLOODWAY
-  Zone AE
-  Zone A

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



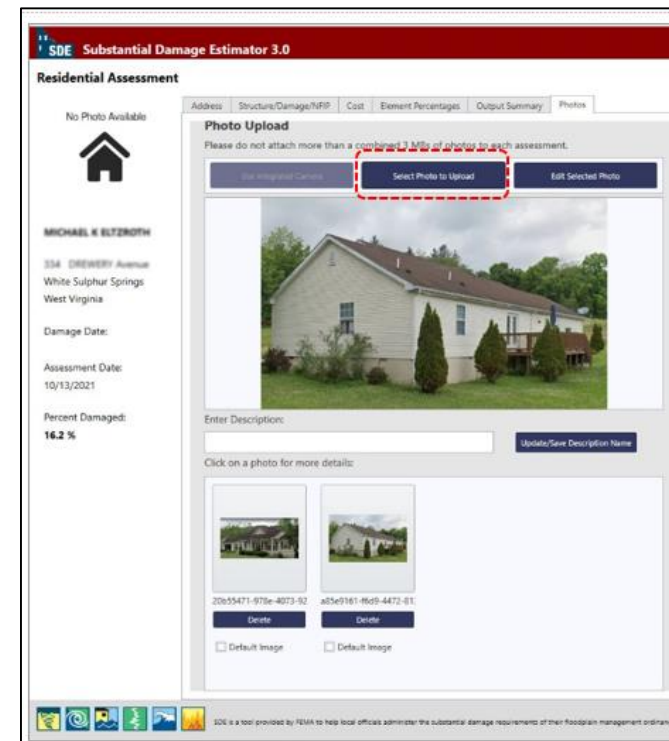
Please Select a Property

Structure Owner Name	Property Address	County/Parish	Parcel Number	Lot Number	Subdivision	Year of Construction
MICHAEL GARFIELD SE...	1836 RORER Road	Greenbrier	13-04-055E-0010-0000	13-04-055E-0010-0000	Greenbrier County	1960
MICHAEL J HONAKER	381 INGLESDALE Avenue	Greenbrier	13-17-0012-0084-0000	13-17-0012-0084-0000	White Sulphur Springs	1930
MICHAEL J SMITH	156 MAPLE AVE	Greenbrier	13-01-0006-0358-0000	13-01-0006-0358-0000	Alderson	2020
MICHAEL K ELTZROTH	334 DREWERY Avenue	Greenbrier	13-17-0009-0383-0000	13-17-0009-0383-0000	White Sulphur Springs	1918
MICHAEL L ARBOGAST	396 HATFIELD HOLLID...	Greenbrier	13-02-0029-0022-0001	13-02-0029-0022-0001	Greenbrier County	1991
MICHAEL LEE ET ALS B...	6896 TUCKAHOE RD	Greenbrier	13-16-0036-0002-0000	13-16-0036-0002-0000	Greenbrier County	1972
MICHAEL LEE ET ALS B...	0 TUCKAHOE Road	Greenbrier	13-16-0036-0002-0000	13-16-0036-0002-0000	Greenbrier County	1972
MICHAEL PAUL TRAINER	156 99TH Avenue	Greenbrier	13-02-0358-0067-0000	13-02-0358-0067-0000	Greenbrier County	1950
MICHAEL ROBERT ET AL...	349 GREENBRIER Aven...	Greenbrier	13-17-0011-0037-0000	13-17-0011-0037-0000	White Sulphur Springs	1957
MICHAEL SCOTT HILL	691 RED ROCK Trail	Greenbrier	13-06-0019-0061-0000	13-06-0019-0061-0000	Greenbrier County	1999
MICHAEL TOLLEY	324 RIVER EDGE Lane	Greenbrier	13-06-024D-0003-0000	13-06-024D-0003-0000	Greenbrier County	1987
MICHAEL W BRACKENL...	310 MILL CREEK Road	Greenbrier	13-11-055C-0070-0000	13-11-055C-0070-0000	Greenbrier County	1900
MICHAEL W CARRANST...	252 HOLMES Lane	Greenbrier	13-17-0012-0021-0001	13-17-0012-0021-0001	White Sulphur Springs	1999
MICHAEL W CARRANST...	262 HOLMES Lane	Greenbrier	13-17-0012-0047-0000	13-17-0012-0047-0000	White Sulphur Springs	1999
MICHAEL W SIMS	429 6TH Street	Greenbrier	13-13-0005-0490-0000	13-13-0005-0490-0000	Rainelle	1975
MICHAEL W SHOCKEY	274 MOUNTAIN Avenue	Greenbrier	13-17-0009-0289-0000	13-17-0009-0289-0000	White Sulphur Springs	1921
MICHAEL WARD	267 LITTLE CREEK Road	Greenbrier	13-02-0040-0028-0000	13-02-0040-0028-0000	Greenbrier County	1970
MICHELE A DIRCH	153 WOODLAND Ave...	Greenbrier	13-17-0011-0011-0000	13-17-0011-0011-0000	White Sulphur Springs	1964
MICHELE L ORENENEN	191 MEADOW RIVER...	Greenbrier	13-11-055F-0039-0000	13-11-055F-0039-0000	Greenbrier County	1973

Preload using default values.

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

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



[SDE Upload Files and Instructions](#)

Verify Building Risk Assessments

Verify
Primary
Structures
for High
Depths

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

Verify
Lowest
Floor
Elevations

Verify
Foundation
& Basement
Types



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



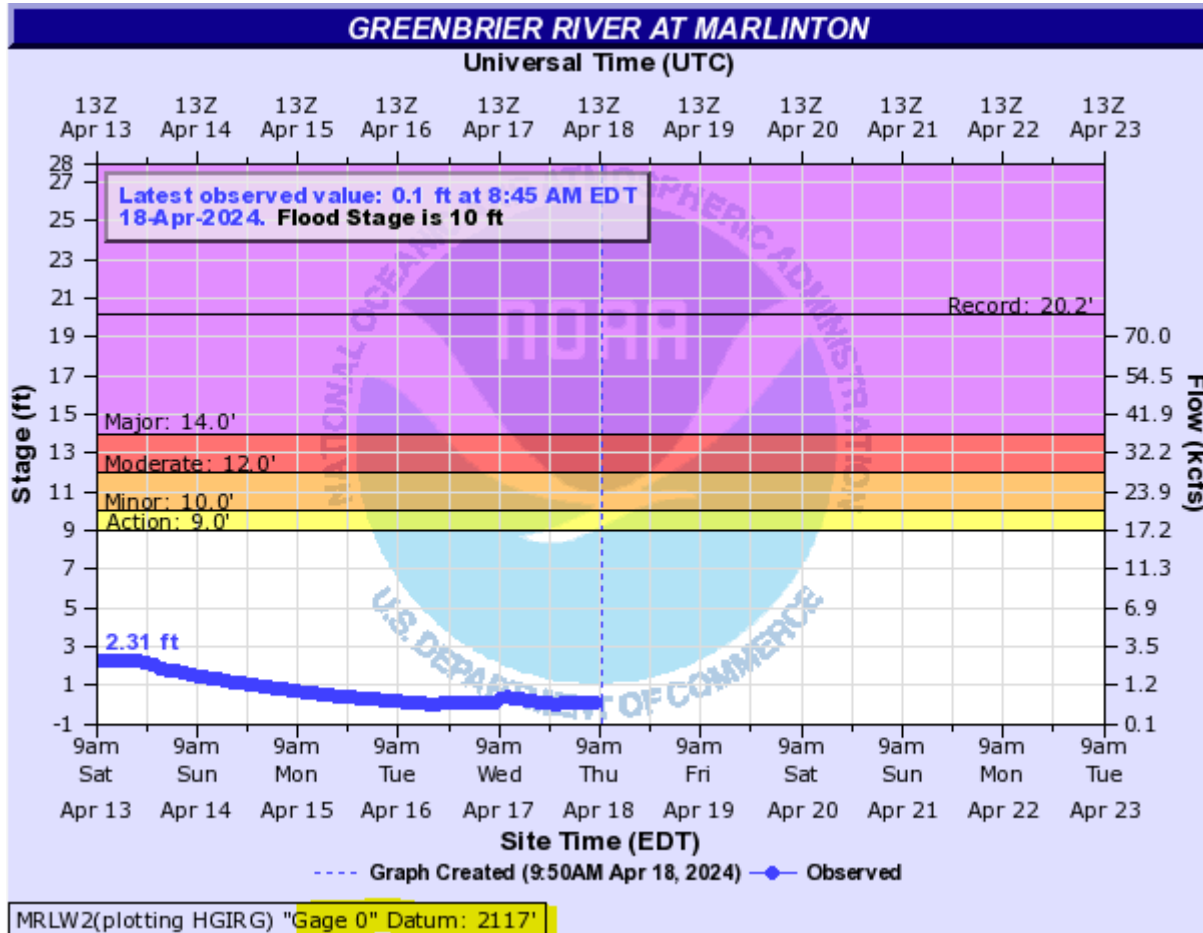
~9 Feet

1st 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

(P): Preliminary values subject to further review.

Low Water Records
(1) 0.00 ft on 10/13/1988

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.

Map: Seneca River, Marlinton, 1st Ave, 7th St, 2nd Ave, 8th St, 9th St, 10th St. Gauge Location. Disclaimers: VITA, West Virginia GIS, Esri, esri. 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

The screenshot displays the WV Flood Tool interface. At the top, the logo reads "WV Flood Tool" with the tagline "Remember: When In Doubt, It's Not Out!". Below the logo are navigation tabs for "Views" (Public, Expert, Risk MAP) and "Layers" (Risk, Reference, Basemaps). A search bar is present with the text "Address" and a placeholder "e.g., 123 street name, city, state, zip". To the right are "Tools" icons for search, refresh, print, and share. The main map area shows an aerial view of a nursing home building with yellow flood contours overlaid. A yellow callout box at the top of the map reads "Water enters Nursing Home at 2131 ft. ground elevation or 14 ft. flood stage". A specific point on the map is labeled "2131 ft. Ground Elevation minus 2117 ft. Gauge Zero = 14 ft. flood stage". The map also shows "Knapp Creek" and a "Prelim Zone AE" label. The right-hand panel contains detailed information: "Flood Hazard Area: Location is WITHIN a moderate flood risk hazard such as a FEMA 500-year floodplain.", "Flood Zone: Shaded X (500-YR Flood)", "Stream: Knapp Creek", and "Watershed (HUC8): Greenbrier (5050003)". It also lists FEMA's Flood Map (54075C0529D), Map Effective Date (11/4/2010), and Contacts (Pocahontas). Other data includes Flood Height (N/A), Water Depth (N/A), HEC-RAS Model (N/A), Flood Profile (N/A), Community (Town of Marlinton), Freeboard (2 ft), CRS Class (10), CID (540159), Location (lat, long) (38.218753, -80.093331), Location (UTM 17N) (4230474, 579367), External Viewers, Elevation (2130.7 ft), Address (5 EVERETT TIBBS RD, Marlinton, WV, 24954), and Parcel (38-08-0005-0065-0000 | Assessment). The bottom of the map shows a scale of 1:564 and coordinates (-80.092302, y: 38.218372). The footer text reads "@WVGISTC Leaf-Off Mixed-Resolution Imagery".

[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

