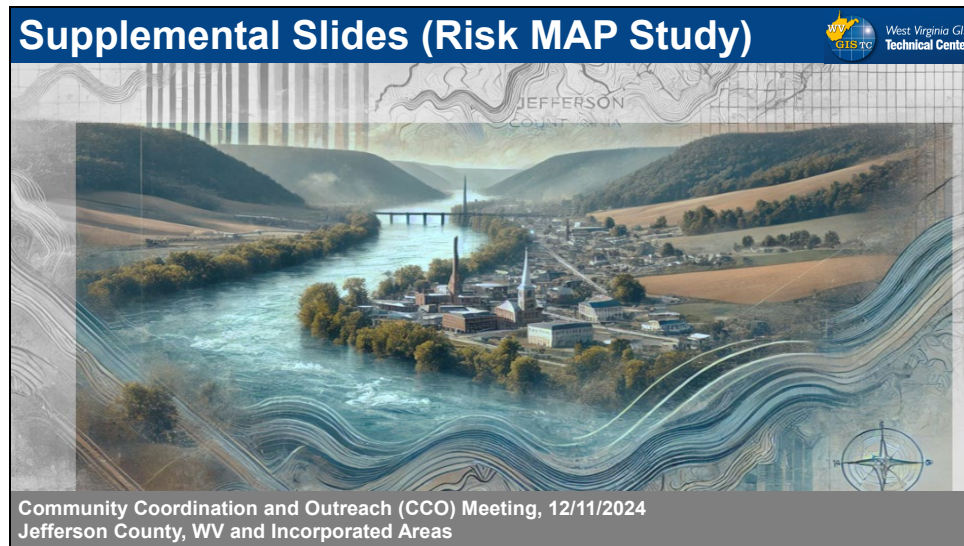



Slide 1



Risk MAP (Mapping, Assessment, Supplemental) Slides prepared by the WV GIS Technical Center at West Virginia University for the **Community Coordination and Outreach (CCO)** meeting to discuss the new preliminary Flood Insurance Study (FIS) and Flood Insurance Rate Maps (FIRMs) for Jefferson County, WV, issued on September 24, 2024. The CCO meeting was held on December 11, 2024, at the Jefferson County Office of Homeland Security and Emergency Management, 28 Industrial Boulevard, Kearneysville West Virginia, 25430.

Risk MAP (Jefferson Co. Preliminary Flood Maps)


Risk M apping (Review New Flood Risk Maps)	Risk A ssessment (Quantify Flood Risk)	Risk P lanning (Build Flood Resiliency)
Map Changes <ul style="list-style-type: none"> BFE's (e.g., 24" BFE change at Harpers Ferry) Floodplain Width (e.g., Shepherdstown) 	Statewide Risk Assessment (aggregate level or summary reports) <ul style="list-style-type: none"> <i>River/Stream Scale</i> <i>County Scale</i> <i>Unincorporated Area Scale</i> <i>Incorporated Area Scale</i> <ul style="list-style-type: none"> <i>Shepherdstown</i> <i>Harpers Ferry</i> 	Pre-Disaster Planning <ul style="list-style-type: none"> Preload WV Flood Tool Structures into FEMA's SDE Software Update Emergency Response & Hazard Mitigation Plans using risk assessments for major storm event
SFHA Building Changes <ul style="list-style-type: none"> Mapped-in/Mapped Out Bldgs. LOMAs (SFHA bldgs. mapped out) 		Higher Standards - Municipalities <ul style="list-style-type: none"> Apply for CRS status Adopt higher Freeboard value of 3 ft. in floodplain mgmt. ordinance
Risk Communications <ul style="list-style-type: none"> Outreach Letters for building changes in SFHA/Floodway 	Building Level Risk Assessments <ul style="list-style-type: none"> <i>Unmitigated Structures</i> <i>Mitigated Structure</i> 	Verify Risk Layers on WV Flood Tool <ul style="list-style-type: none"> Building-level assessments Open space properties Repetitive Loss Areas
Future Map Discovery <ul style="list-style-type: none"> Map Zone AE Upgrades for Potomac / Shenandoah Rivers? 		



WV Flood Resiliency Framework

Risk MAP: Reduce Loss of Life and Property

Web link to [Slide Deck](#)



RiskMAP
Increasing Resilience Together

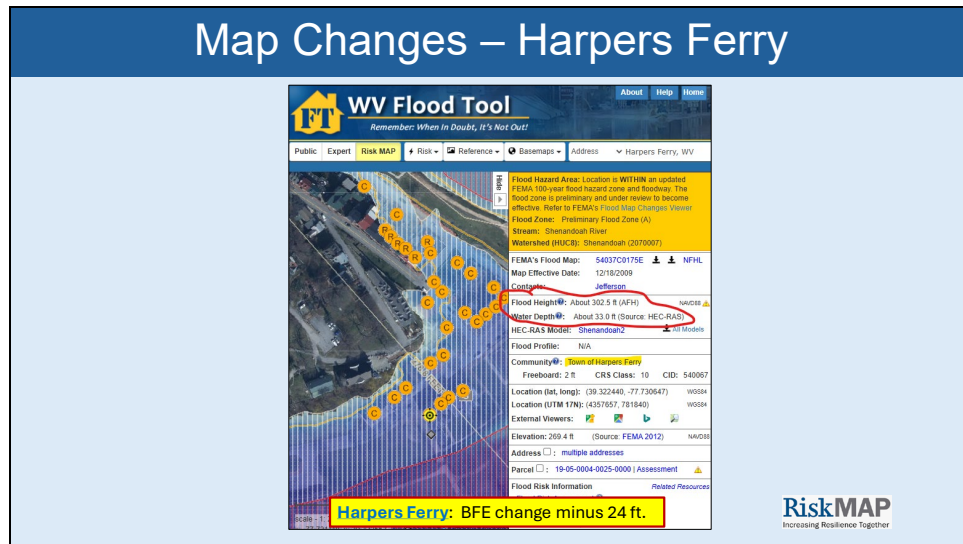
This CCO meeting is an opportunity for local government representatives to work with FEMA Region 3, state government representatives, and members of the project team on strategies and resources for public outreach, how to provide comments/appeals to the preliminary information, the ordinance update and adoption process, and other questions/answers related to the National Flood Insurance Program (NFIP) and getting the new FIRMs to effective status.

This CCO meeting is organized by the National Flood Insurance Program (NFIP), a voluntary program that works to reduce future flood losses by guiding development away from hazardous areas, and by encouraging communities to:

- Know Your Risk: Identify flood hazards through mapping.
- Insure Your Risk: Provide insurance and outreach measures.
- Reduce Your Risk: Manage floodplains through ordinances, mitigation practice and resiliency efforts.

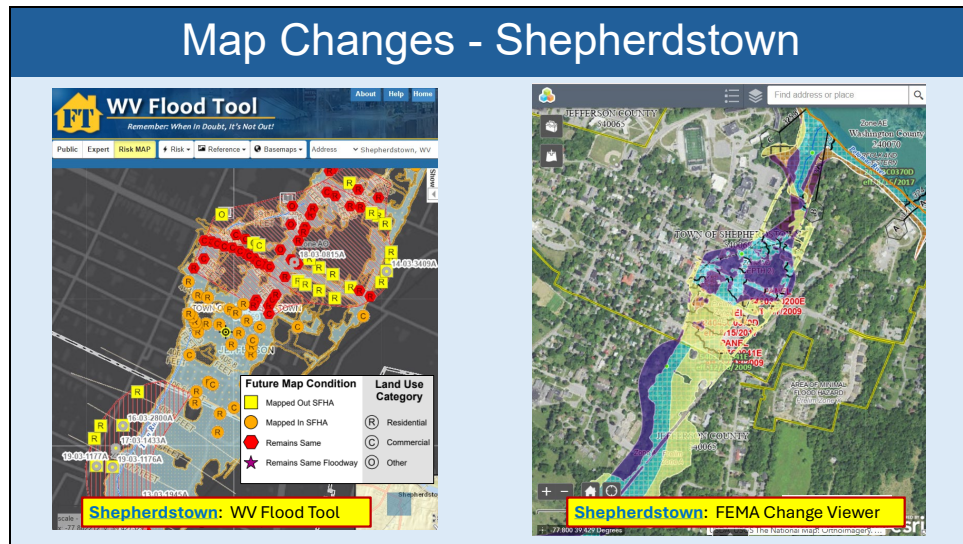
Community To-Do List

- Review the preliminary FIRM. Make corrections, share comments and submit appeals to FEMA through the community Chief Executive Officer (CEO), when appropriate.
- Reach out to notify residents, businesses and property owners affected by the changes on the FIRM.

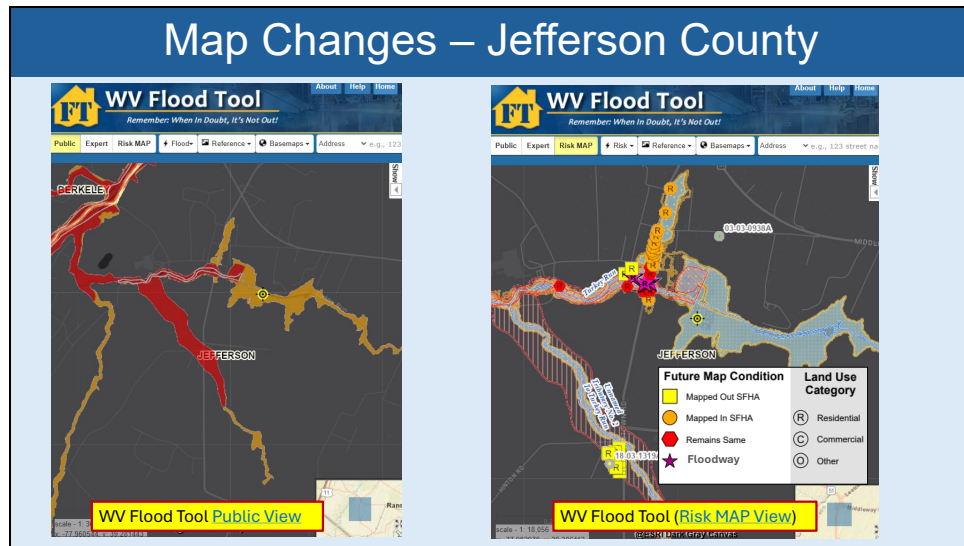


The preliminary FIRM shows flood risk zones in a community, including Special Flood Hazard Areas (SFHAs), subject to inundation by the base (1%-percent-annual-chance) flood. The 1%-annual-chance flood is also referred to as the 100-year flood.

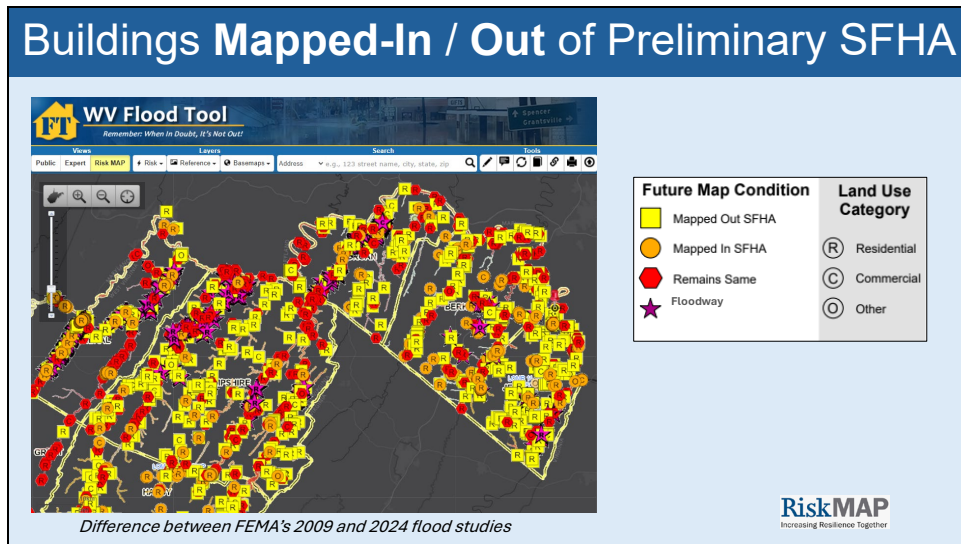
Communities like **Harpers Ferry** should review its preliminary Flood Insurance Rate Map (FIRM) where structures are being mapped into a high-risk Special Flood Hazard Area, and where the base flood elevation is decreasing by 24 feet due to the revised 1%-annual-chance backwater effect where Shenandoah River meets the larger Potomac River.



Preliminary maps show the high-risk floodplain of **Shepherdstown** is changing dramatically, and consequently these floodplain boundary changes between the current 2009 effective and 2024 preliminary flood maps should be viewed using the WV Flood Tool's Risk MAP View (SFHA Building Changes - Building Changes Since Last FIRM) and FEMA's Changes Since Last FIRM (CSLF) Viewer. **Shepherdstown** has nearly 30 structures being mapped into the updated Special Flood Hazard Area, and so it is the community's responsibility to notify property owners and other stakeholders that they will be affected by the map changes.



Preliminary map changes for **Jefferson County Unincorporated** show “mapped-in structures” (orange symbol color) along streams where studies have been extended; or “mapped-out” structures (yellow symbol color) along existing streams due to more accurate topographic data and updated hydrologic/hydraulic flood studies.



The WV Flood Tool's Risk MAP View shows the future building status change according to the new flood maps:

- **Mapped Out SFHA** (yellow square symbol). Communities should notify property owners of map-in SFHA changes. Additionally, these structures may be candidates for LiDAR LOMAS.
- **Mapped In SFHA** (orange circle symbol). Communities should notify property owners of map-out SFHA changes.
- **No Change** - Remains Same in SFHA (red hexagon symbol).
- **Floodway** (star symbol)


SFHA Building Changes: Mapped-In/Out

COMMUNITY IDENTIFICATION		Estimated structures in the Community	Estimated structures in the preliminary flood high hazard area	Estimated structures newly mapped in	Estimated structures newly mapped out
Community Name	Community Type				
Jefferson County*	Unincorporated	20,397	317	55	220
Bolivar	Incorporated	616	4	4	0
Charles Town	Incorporated	3,670	21	4	8
Harpers Ferry	Incorporated	276	31	30	0
Ranson	Incorporated	2,918	50	1	28
Shepherdstown	Incorporated	735	76	29	20
JEFFERSON	County	28,612	499	123	276

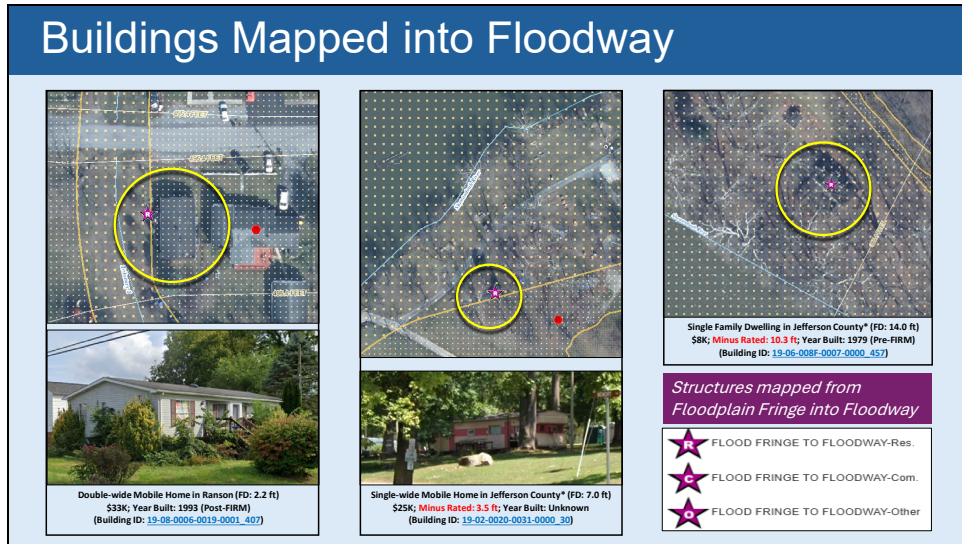
* Unincorporated Area

County Net Change in structures: - 153

County Net Change in floodway structures: - 14





Tax assessment records and aerial imagery allow for a more detailed inventory of primary buildings within the Special Flood Hazard Area and Regulatory Floodway. For **Jefferson county**, the preliminary flood maps reveal a net total of 499 structures in the preliminary SFHA, with 123 structures mapped-in the SFHA and 276 structures (more than double) mapped out. The countywide building net change is minus 153 and minus 14 structures in the preliminary SFHA and Floodway, respectively. Communities should contact the State NFIP Office for technical assistance in mailing notification letters to property owners that will be affected by these map changes.



Communities should also notify property owners being mapped into a much higher risk flood zone of the Special Flood Hazard Area (SFHA), known as the **Regulatory Floodway**, or the main channel of the river/stream where floodwaters are likely the deepest and with the highest velocities. Before a local permit can be issued for proposed development in the floodway, a “No-Rise/No Impact” certification must be submitted by a professional engineer licensed in West Virginia to ensure a proposed project won’t increase flood levels.

Risk Communications: 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

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/?wikid=102100&e=8937196.678447664&y=4550352.3162666778&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 **3.0 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

Jefferson County and Shepherdstown have 55 and 29 buildings, respectively, mapped into the SFHA

Communities should contact the State NFIP Office for technical support in creating outreach letters for property owners affected by the map changes. Based on mail merge templates, outreach letters on community letterhead can be generated for all (1) SFHA Mapped-In, (2) Mapped-In Floodway, and (3) SFHA Mapped-Out structures shown on the WV Flood Tool's RiskMAP View (www.mapwv.gov/Flood). All the communities must do is **download the files, then print, validate, and mail the letters**. CRS communities like Jefferson County Unincorporated should be eligible for credit points for this outreach activity.

For the SFHA mapped-out letters, it is important to have this text included in the letter template: "If you do currently have flood insurance, you should not cancel your flood insurance before the new flood maps are officially adopted by the community. Moreover, if you have a federally-backed mortgage, NEVER cancel your flood insurance before consulting your mortgage lender!"

Another useful resource about the Regulatory Update is FEMA's Risk Communication Guidebook for Local Officials.

https://www.fema.gov/sites/default/files/documents/fema_region-6_risk-communications-guidebook_112023.pdf#page=25

SFHA Buildings Changes: LOMAs for Mapped Out

Jefferson County

276 Mapped Out SFHA

LOMA Map: 144 APPALOOSA WAY, Charles Town, WV

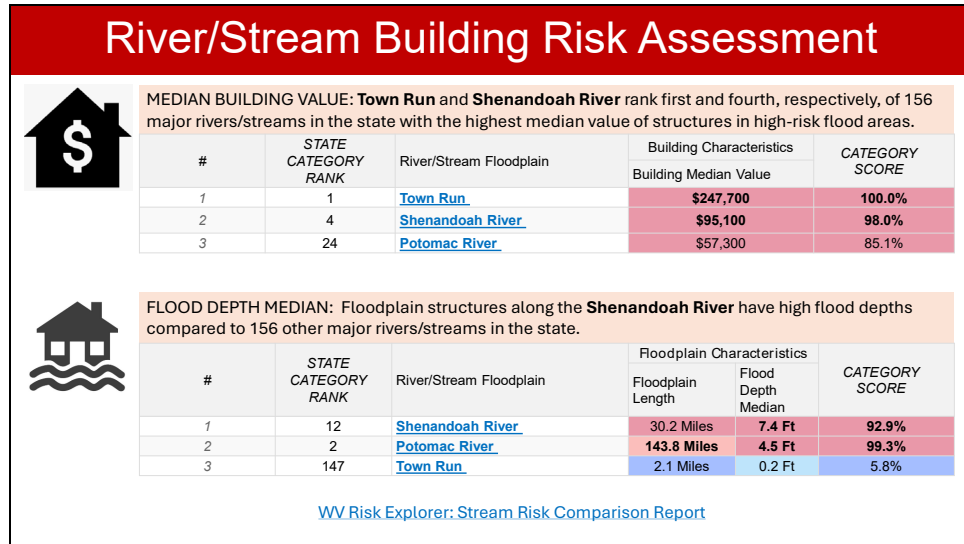
Mapped-out structures of the SFHA may qualify for LOMAs

WV Flood Tool LIDAR LOMA: [Instructions](#) | [Guide](#)

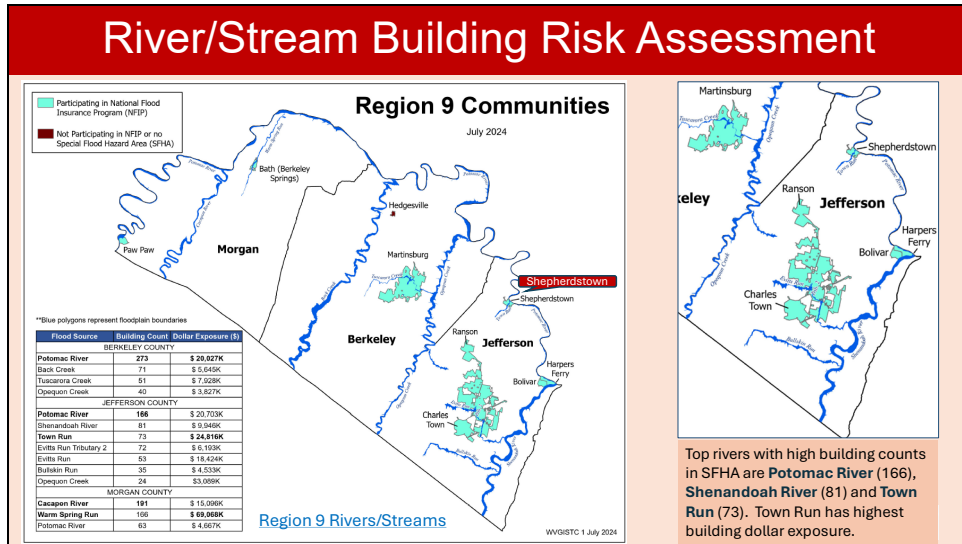
Category	Description	Zone	Return Period	Water Surface Elevation (ft)	Base Flood Elevation (ft)
1	1 Percent Annual Chance Flood Hazard Area	1	1	451.0	451.0
2	1 Percent Annual Chance Flood Hazard Area	2	1	451.0	451.0
3	1 Percent Annual Chance Flood Hazard Area	3	1	451.0	451.0
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99	1 Percent Annual Chance Flood Hazard Area	99	1	451.0	451.0
100	1 Percent Annual Chance Flood Hazard Area	100	1	451.0	451.0

Before the preliminary FIRMS become effective, property owners with structures that are mapped out of the SFHA (yellow square symbols on WV Flood Tool’s RiskMAP View) may be eligible for a **LiDAR Letter of Map Amendment (LOMA)**.

It is estimated that 276 structures are mapped out of the SFHA for the entire county. If applicable, LiDAR data can replace the requirement to submit certified elevation information for LOMAs, which can create a cost savings for property owners requiring mandatory flood insurance. If property owners want to expedite the removal of their structure from the SFHA, then refer to the information links regarding LiDAR LOMAs for more guidance.



Risk assessment results of 156 major rivers/streams in the state reveal that **Town Run** and **Shenandoah River** have high building values and thus more dollar exposure to flood damage. Both the **Shenandoah** and **Potomac Rivers** have high flood depth median values (> 4.5 feet) for a 1%-annual-chance (100-yr) flood which translates to a potential for higher damage losses and loss of life.

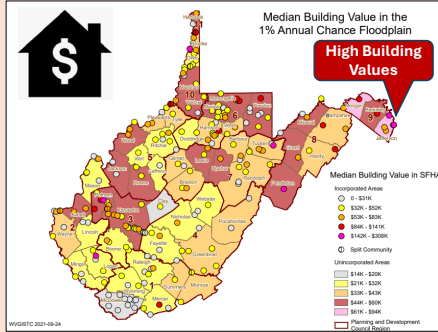


A river/stream building risk assessment for Region 9 and Jefferson County reveals that the **Potomac River** has the most structures mapped in the SFHA while **Town Run** has fewer structures but the largest cumulative building value.

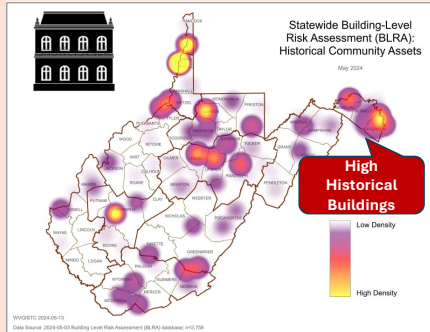
Jefferson County Risk Assessment # Statewide Rank among the Top 5					
JEFFERSON COUNTY ranks “very high” or in the top 20% of all 55 counties in the state for the five risk indicators below. View Top 20% Risk Indicators Report for county. Click on Risk Factor links for rationales/recommendations.					
Category	Flood Risk Indicator		Value for Jefferson	Indicator Score (0 - 100%)	Indicator Rating
Building Characteristics	Building Median Value	1	\$97,450 (Median \$42,200)	100.0%	VERY HIGH
	Bldg. Subgrade Basements Ratio	4	49.5%	94.4%	VERY HIGH
	Bldg. Year Minus Rated Post-FIRM Ratio		9.4%	81.4%	Very High
Community Assets	Community Assets Historical	4	120	94.4%	VERY HIGH
Building Damage Loss	Bldg. Substantial Damage Ratio		24.0%	90.7%	VERY HIGH
JEFFERSON COUNTY UNINCORPORATED* ranks “very high” or in the top 20% of all 55 unincorporated areas in the state for the six risk indicators below. View Top 20% Risk Indicators Report for incorporated area.					
Category	Flood Risk Indicator		Value for Jefferson County* - Unincorporated	Indicator Score (0 - 100%)	Indicator Rating
Floodplain Characteristics	Flood Depth Median	4	4.7 Ft	94.4%	VERY HIGH
	Building Median Value	1	\$93,150 (Median \$37,350)	100.0%	VERY HIGH
Building Characteristics	Bldg. Subgrade Basements Ratio	2	48.9%	98.1%	VERY HIGH
	Bldg. Year Minus Rated Post-FIRM Ratio		14.5%	90.7%	VERY HIGH
	Community Assets Historical	1	26	100.0%	VERY HIGH
Building Damage Loss	Bldg. Substantial Damage Ratio		29.7%	90.7%	VERY HIGH

A Top 20% Risk Indicators Report reveals that **Jefferson County** and **Jefferson County Unincorporated** have structures in the high-risk flood zones that are of high appraisal value and which reside in historical districts. View the WV Risk Explorer report for more information about these risk factors specific to Jefferson County including rationales and recommendations.

Jefferson County Building Risk Assessment



Jefferson County has very high [Building Values](#), or more than double the statewide median value.



Jefferson County has a high number of [Historical Community Assets](#) on the National Register.

Source: Statewide Building-Level Risk Assessment