



Community Coordination & Outreach (CCO) Meeting

Hampshire County, West Virginia
April 17, 2022



FEMA

Agenda

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



Welcome and Introductions



FEMA

RiskMAP
Increasing Resilience Together

Where We Are - Preliminary Maps



FEMA

RiskMAP
Increasing Resilience Together

Timeline – Looking Back

Effective FIRM

(Digital Conversion)

November 2002

Flood Risk Review Meeting

May 4, 2023

Risk MAP Study Notification

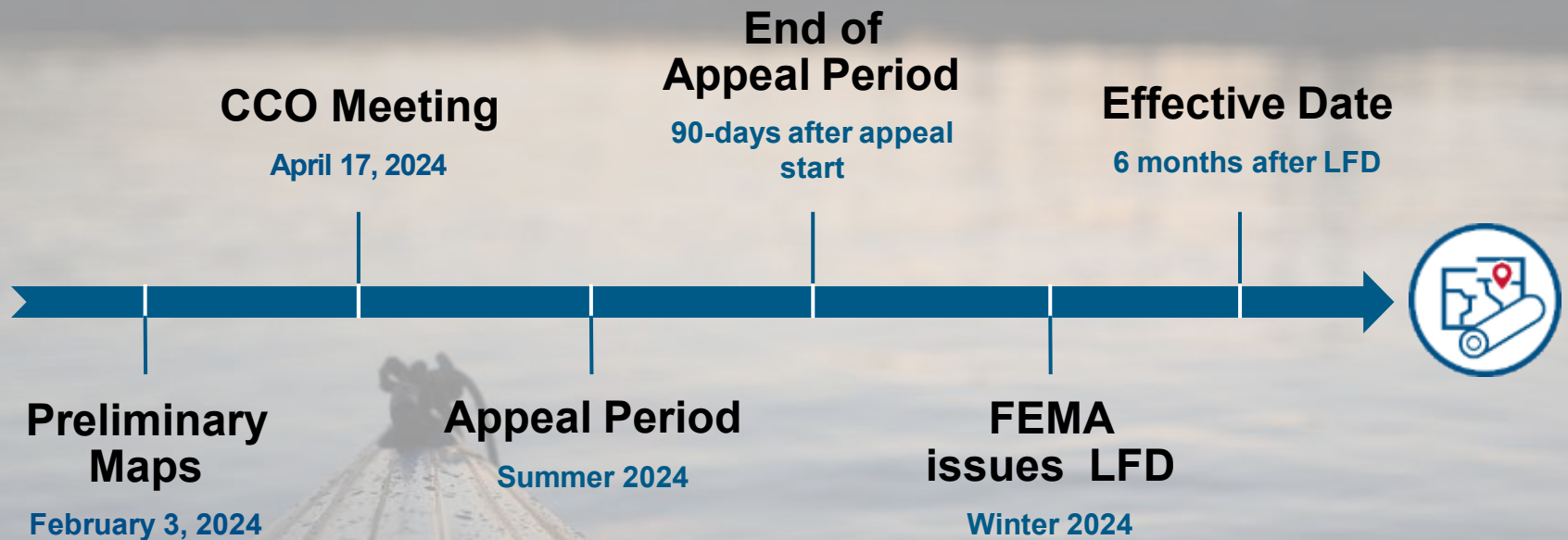
May 2021

Risk MAP Kickoff Meeting

June 2021



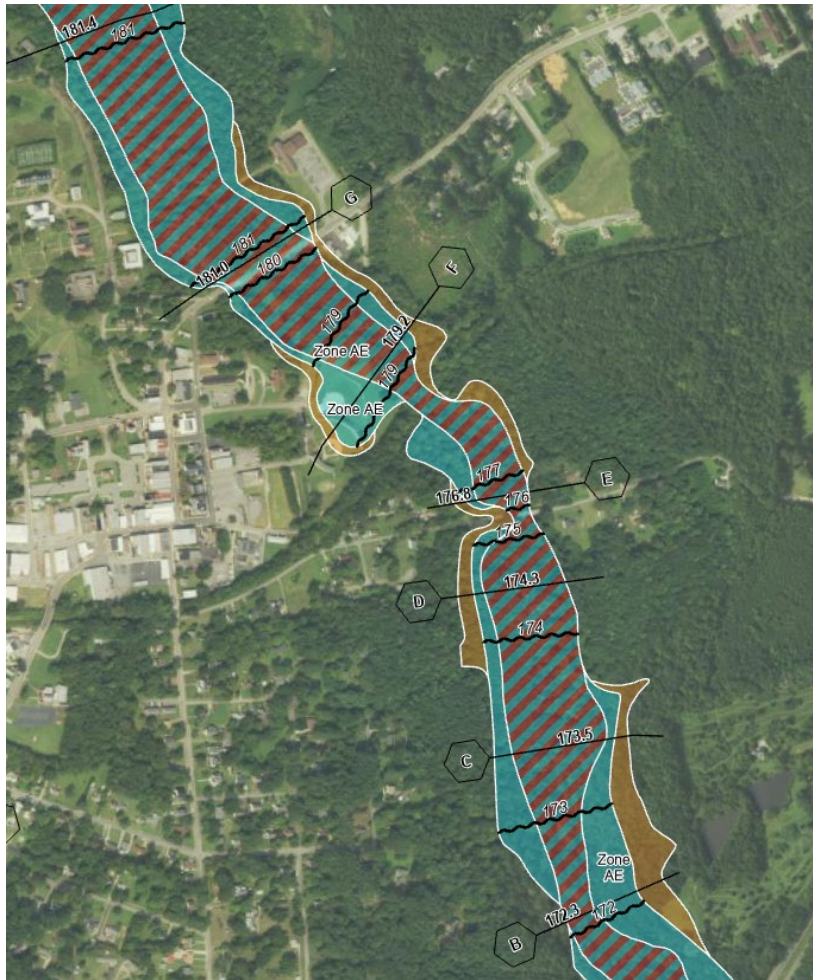
Timeline – Looking Forward





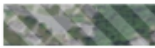


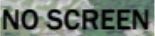














CCO: Community Coordination and Outreach

LFD: Letter of Final Determination

Floodplain Map Overview

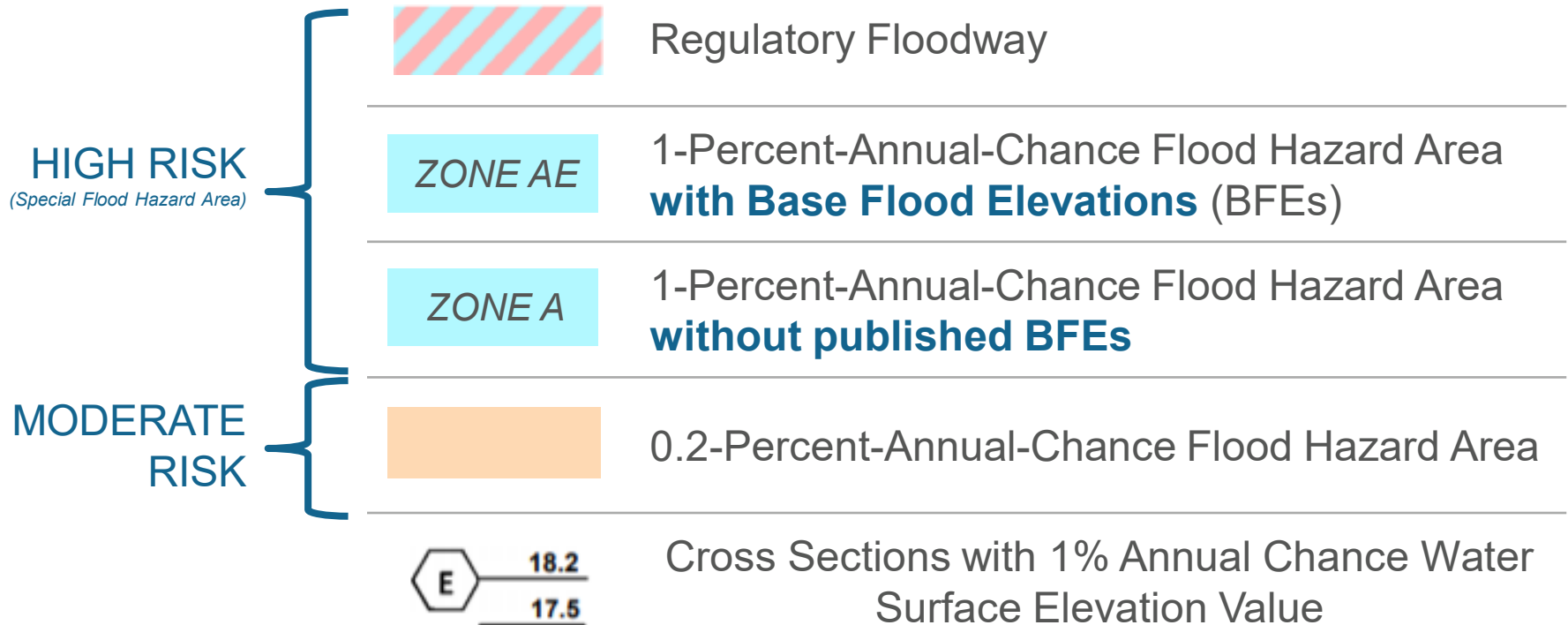


SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of 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
OTHER AREAS		Area of Minimal Flood Hazard Zone X
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		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



FEMA

Floodplain Map Overview

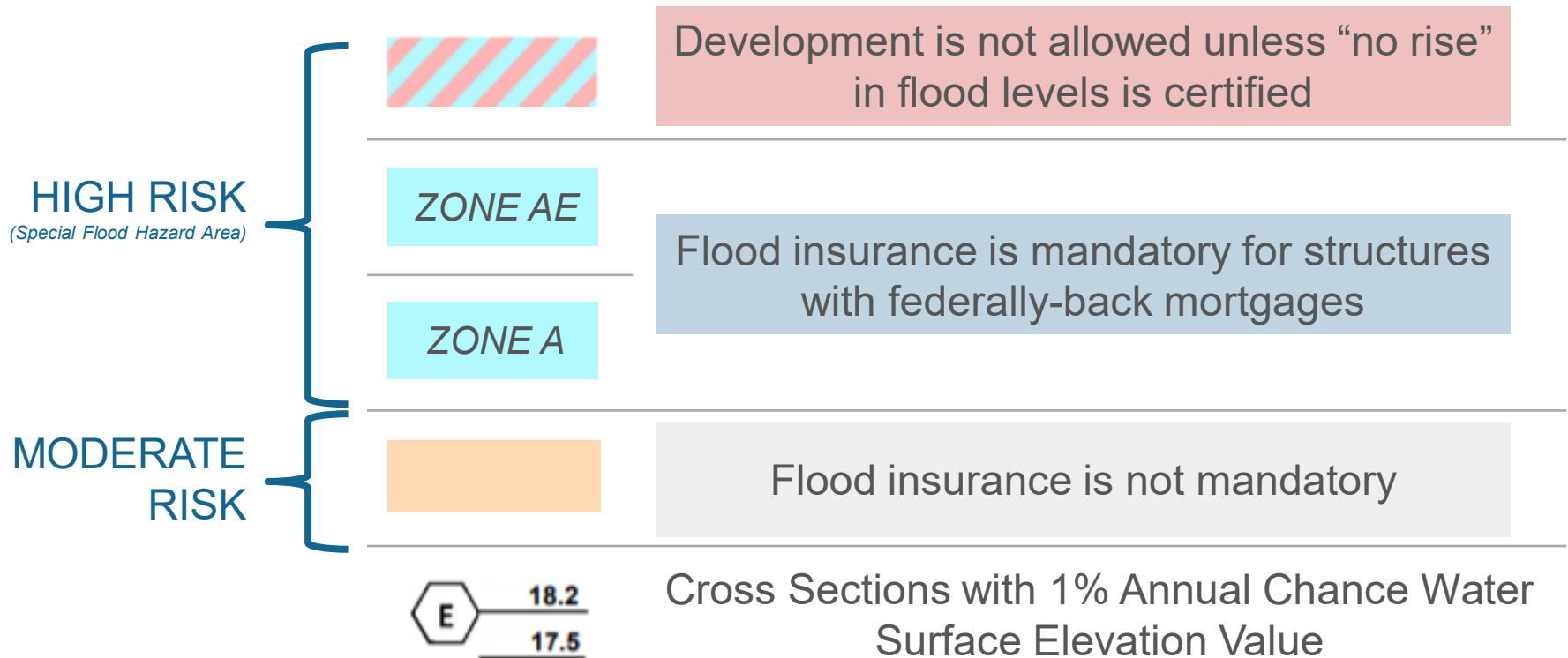


["The 100-Year Flood Zone Explained"](#)



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 this is a search bar with the text "Looking for a Flood Map?". A red callout box points to the search bar with the text "Enter an address for location search". Below the search bar is a text input field with the placeholder "Enter an address, a place, or longitude/latitude coordinates" and a "Search" button. Below the search bar 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 points to this link with the text "Menu Search". To the right of the search bar is a small map thumbnail. Below the map is a section titled "Search Results for HAMPSHIRE COUNTY ALL JURISDICTIONS". This section includes links for "subscribe" and "download a listing of all products", and a note: "Please Note: Searching All Products by county displays all products for all communities within the county. You can refine your search results by specifying your specific jurisdiction location using the drop-down menus above." Below the note is an "Expand All" button and a list of product categories: "Effective Products (159)", "Preliminary Products (95)", "Pending Product (0)", "Historic Products (33)", and "Flood Risk Products (3)".



FEMA

RiskMAP
Increasing Resilience Together

National Flood Hazard Layer

Visit <https://www.fema.gov/national-flood-hazard-layer-nfhl> 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

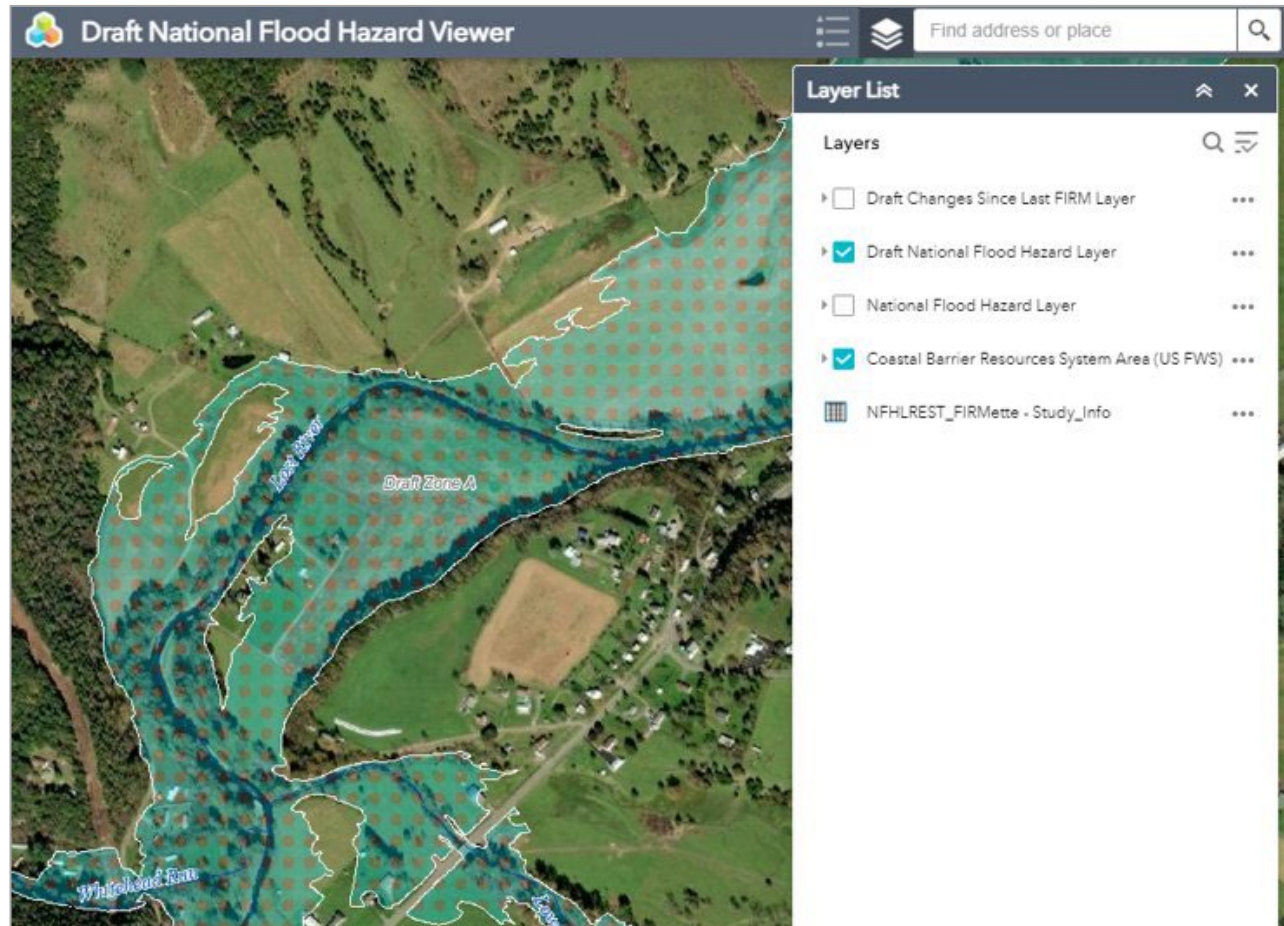
The [Draft National Flood Hazard Layer](#) is for early awareness of possible changes to regulatory flood map information. Until the data becomes effective and it appears in the National Flood Hazard Layer, the data cannot be used to rate flood insurance policies or enforce the federal mandatory purchase 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/1bufO40>

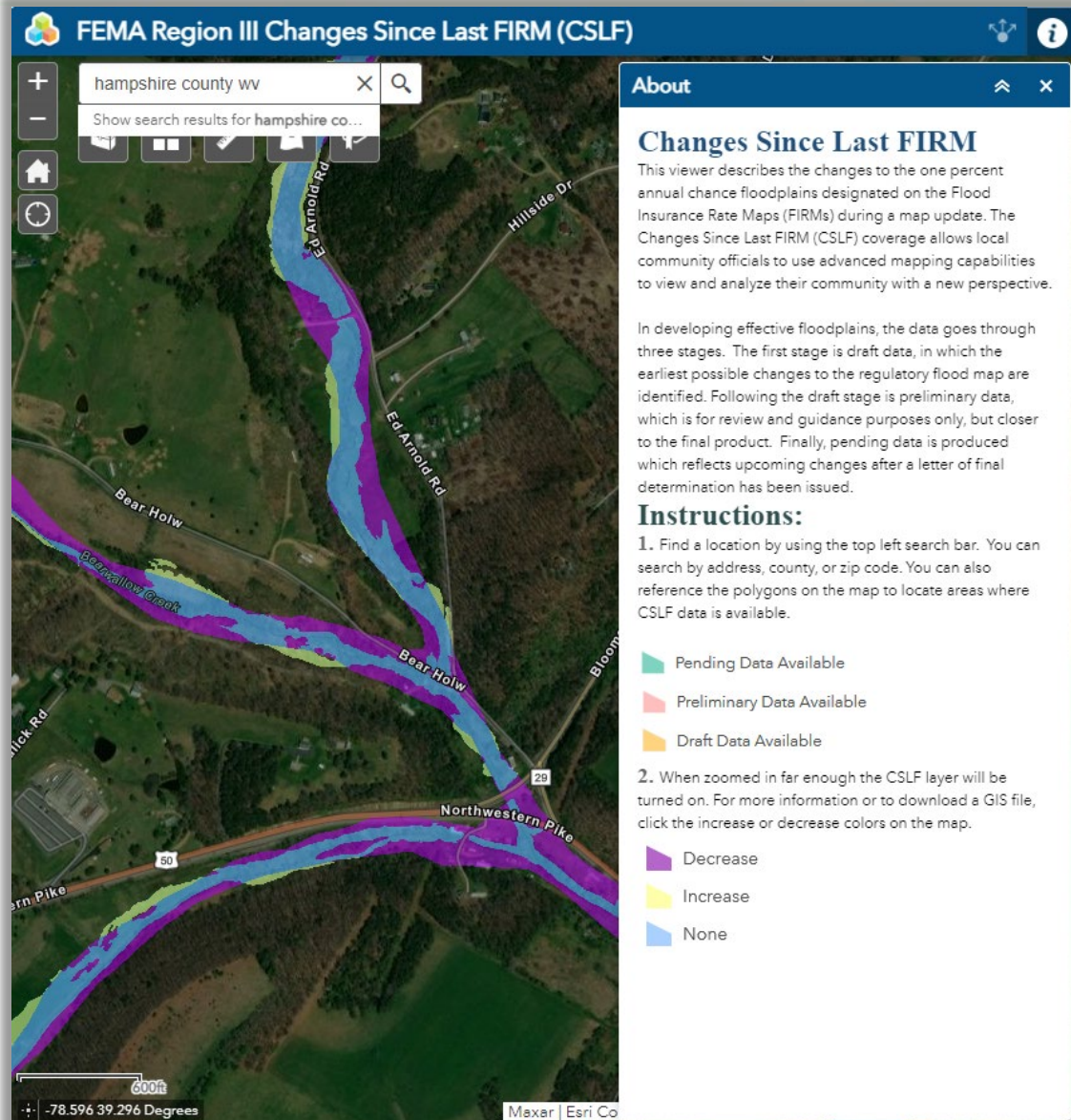
- Change in Floodplain Extents:
 - **Purple** – Decrease
 - **Blue** – Still Floodplain
 - **Yellow** – Increase

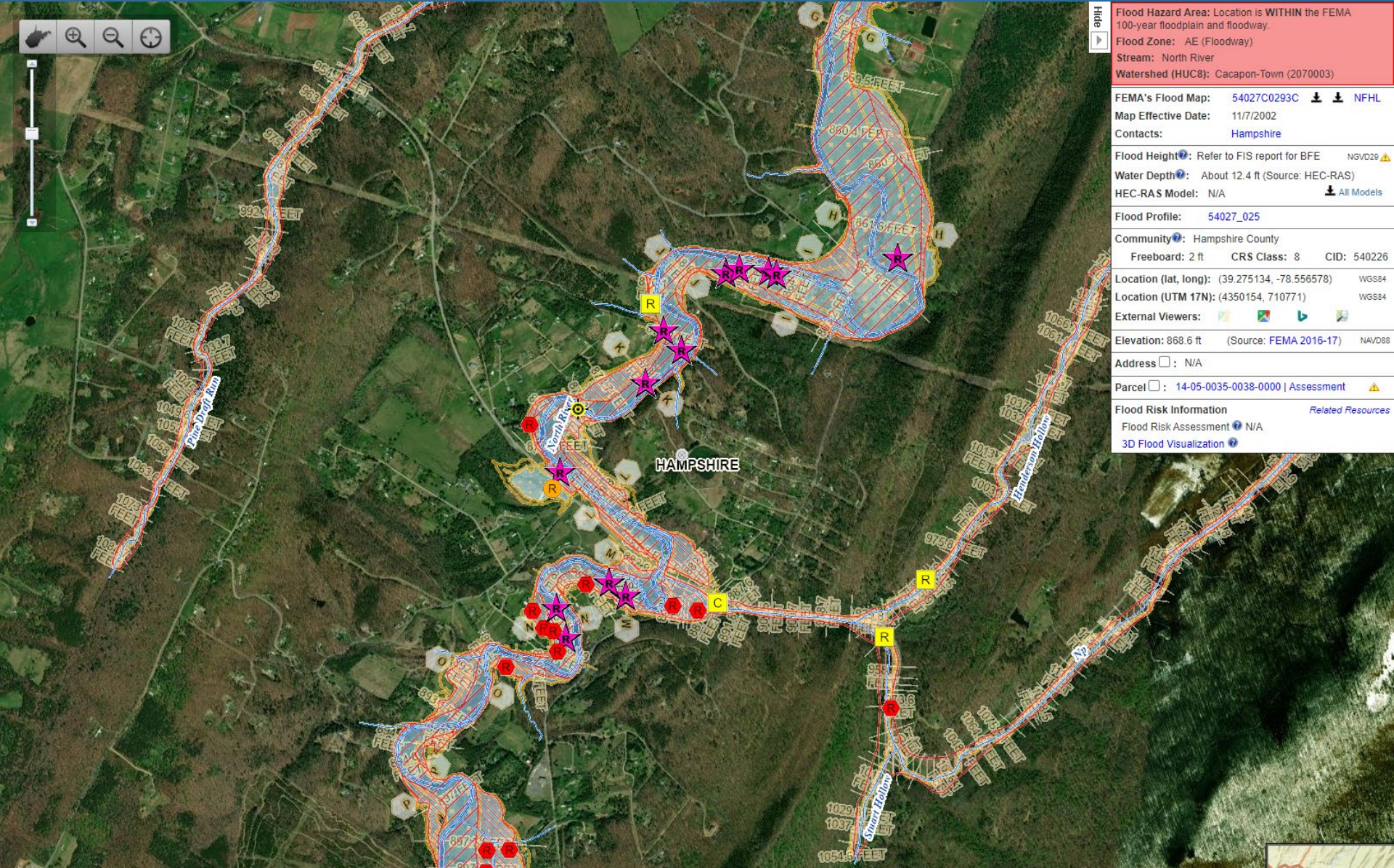
- FEMA Flood Map Changes Viewer:

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



FEMA





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

Flood Zone: AE (Floodway)

Stream: North River

Watershed (HUC8): Cacapon-Town (2070003)

FEMA's Flood Map: 54027C0293C | NFHL

Map Effective Date: 11/7/2002

Contacts: Hampshire

Flood Height: Refer to FIS report for BFE

Water Depth: About 12.4 ft (Source: HEC-RAS)

HEC-RAS Model: N/A

Flood Profile: 54027_025

Community: Hampshire County

Freeboard: 2 ft | **CRS Class:** 8 | **CID:** 540226

Location (lat, long): (39.275134, -78.556578)

Location (UTM 17N): (4350154, 710771)

External Viewers: [Icons]

Elevation: 868.6 ft (Source: FEMA 2016-17)

Address: N/A

Parcel: 14-05-0035-0038-0000 | Assessment

Flood Risk Information [Related Resources](#)

Flood Risk Assessment: N/A

3D Flood Visualization: [Icon]



Impacts

Study Recap: Hampshire County

Hydrologic and Hydraulic Modeling and Mapping, including:

- Updated Detailed '**ZONE AE**' Studies (70 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 (445 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 FEMA R3 North East Lidar 2016

Significant Impacts Overview: Hampshire County

Comparing the PRELIMINARY and EFFECTIVE flood data:

- The study led to moderate changes in Special Flood Hazard Area (SFHA) extent. There were increases in some locations and decreases in others. In many areas, the floodplain is extended upstream of the previous study limits.
- **There are more buildings expected to be mapped out of the SFHA than mapped in.** About 115 structures are expected to be newly mapped into the regulatory floodplain, and 585 are expected to be mapped out.
 - Mapped In: Along the North River near the unincorporated Town of Rio in the southern part of the county.
 - Mapped Out: There are clusters of mapped out structures along the South Branch Potomac River and its tributaries, along the tributaries of the Little Cacapon River, and along Capon Springs Run.
- **Most properties in the effective SFHA are not insured.** Within the effective SFHA, there are about 1,420 structures and 115 National Flood Insurance Program policies.

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.



FEMA

RiskMAP
Increasing Resilience Together

Risk MAP (Hampshire 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)

All Essential Facilities mapped
out

New Vertical Datum (NAVD88)

Risk **A**nalysis (Risk Identification)

Large Floodplain Area (acres) and
Length (miles)

Higher Number of Community
Assets

High Flood Depths

High Building Damage Losses

High Repetitive Loss Structures and
Paid Claims

Higher Number of Recreational
Vehicles

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 higher CRS status class

Plan for more stream gauges besides
South Branch of Potomac

Publish Elevation Certificates on WV
Flood Tool



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
Hampshire County*	Unincorporated	14,884	727	31	384
Capon Bridge	Incorporated	263	26	0	12
Romney	Incorporated	1,158	4	0	3
	County	16,305	757	31	399

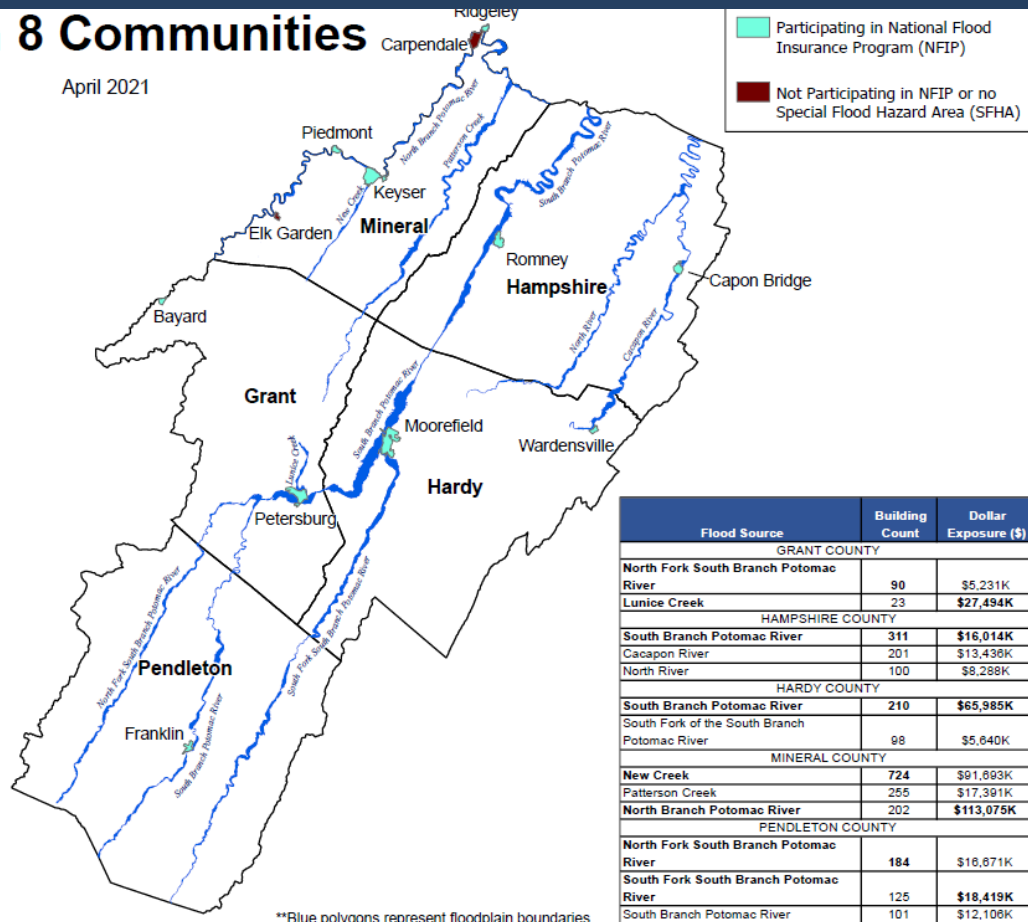
County Net Change in structures: - 368

County Net Change in floodway structures: - 74

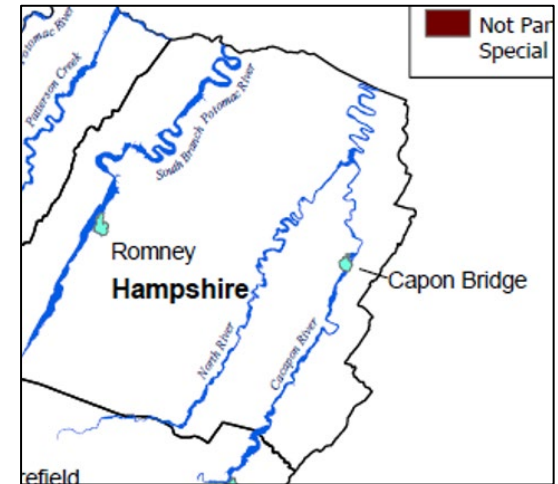
Building Counts & Values by Rivers (2021)

Region 8 Communities

April 2021



Flood Source	Building Count	Dollar Exposure (\$)
GRANT COUNTY		
North Fork South Branch Potomac River	90	\$5,231K
Lunice Creek	23	\$27,494K
HAMPSHIRE COUNTY		
South Branch Potomac River	311	\$16,014K
Cacapon River	201	\$13,436K
North River	100	\$8,288K
HARDY COUNTY		
South Branch Potomac River	210	\$65,985K
South Fork of the South Branch Potomac River	98	\$5,640K
MINERAL COUNTY		
New Creek	724	\$91,093K
Patterson Creek	255	\$17,391K
North Branch Potomac River	202	\$113,075K
PENDLETON COUNTY		
North Fork South Branch Potomac River	184	\$16,071K
South Fork South Branch Potomac River	125	\$18,419K
South Branch Potomac River	101	\$12,106K



Top Rivers with highest building counts are **South Branch of Potomac River (311)**, **Cacapon River (201)**, and **North River (100)**.

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](#)

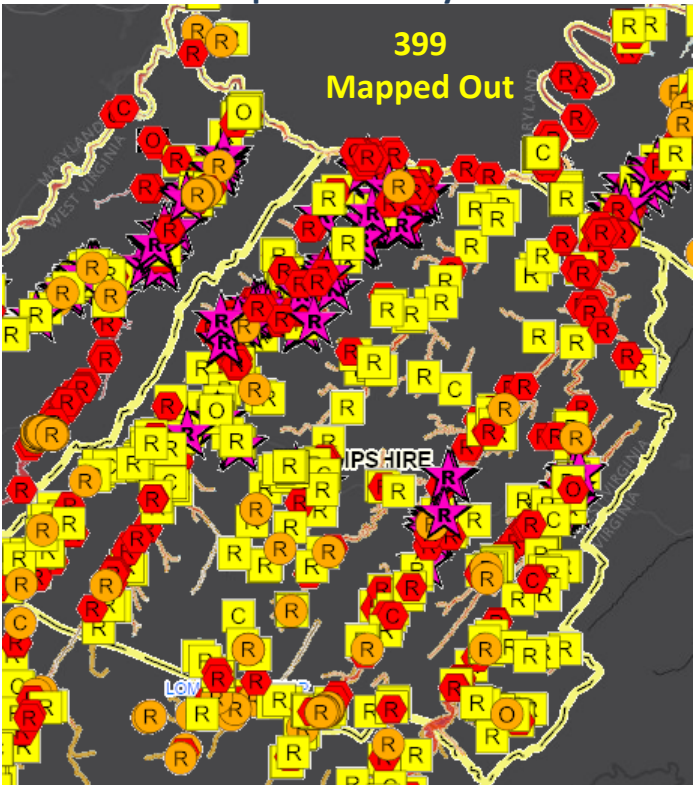
Counties which recently sent outreach letters to homeowners:

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

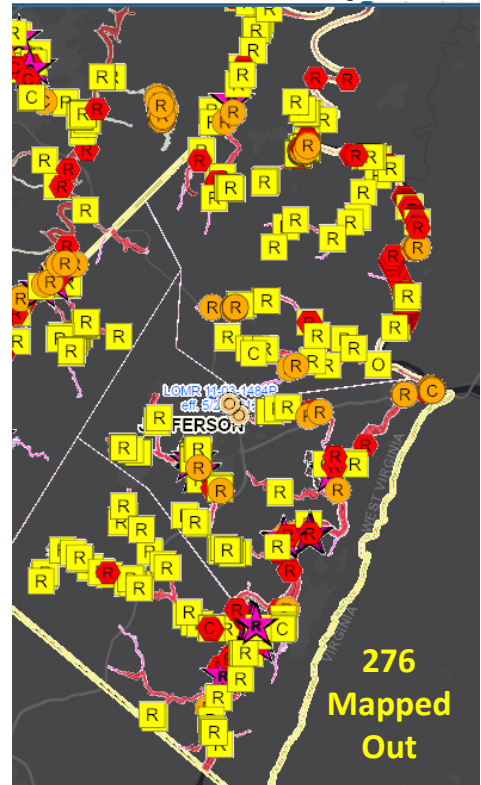


Building SFHA Change (LiDAR LOMAs)

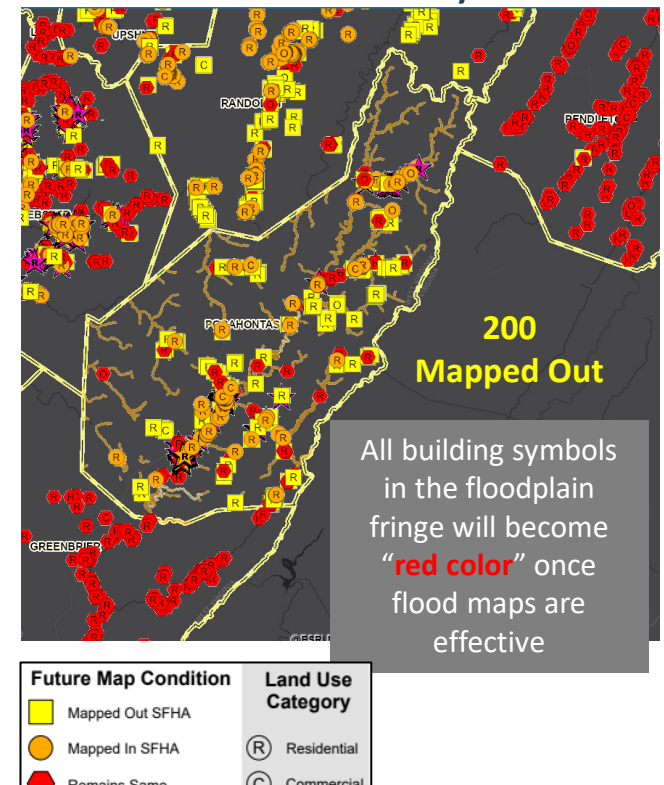
Hampshire County



Jefferson County



Pocahontas County



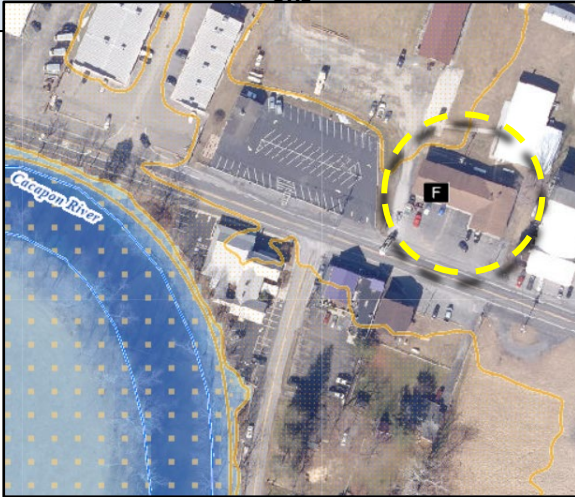
All building symbols in the floodplain fringe will become "red color" once flood maps are effective

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

All Essential Facilities Mapped Out




All essential facilities in Hampshire County mapped out:

Capon Bridge Volunteer Fire Department mapped



Building ID: [14-03-0002-0012-0000_2766](#)

Preliminary Floodplain

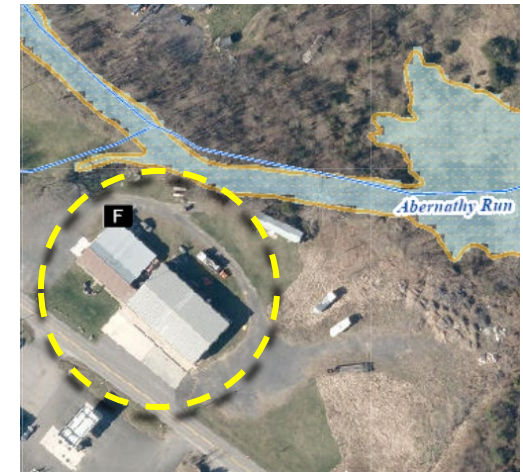
-  FLOODWAY
-  Zone AE
-  Zone A

North River Valley Volunteer Fire Company in Hampshire County* mapped out



Building ID: [14-09-0001-0034-0000_15137](#)

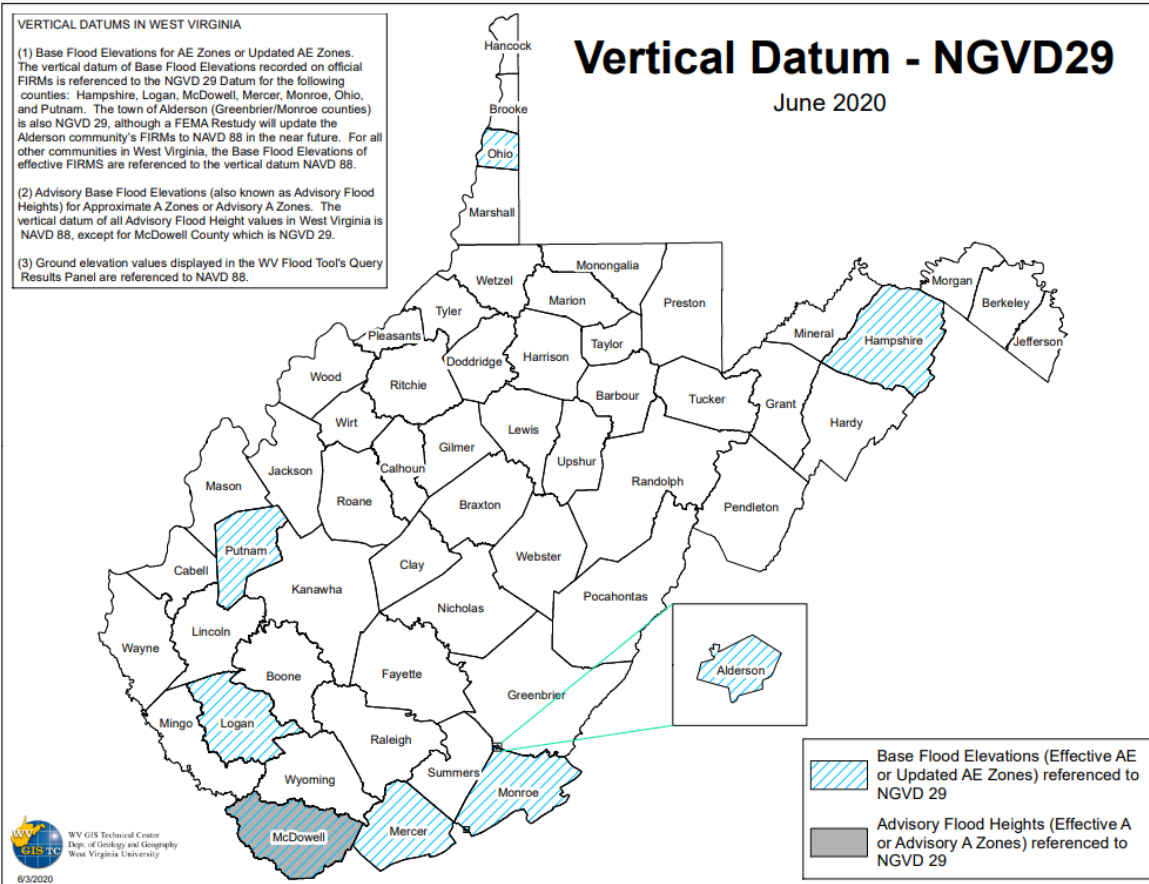
Springfield Valley Fire Co. in Hampshire County* mapped out



Building ID: [14-10-0018-0094-0002_221](#)

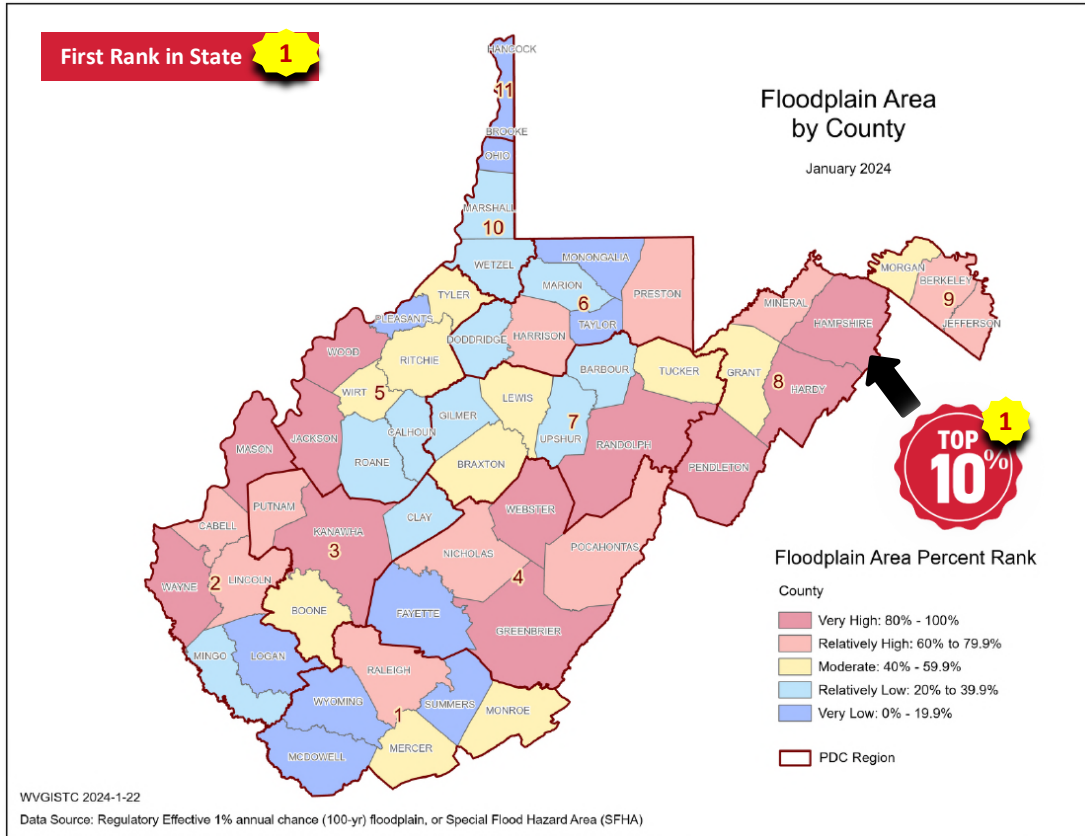


Newer Vertical Data (NAVD 88)



Old NGVD 29
Vertical Datum
modernized to
NAVD 88

Risk Indicator: Large Floodplain Area & Length



Community	Community Area (acres)	SFHA Area	Ratio of SFHA to Community Area
Hampshire County*	411,510	26,373	6.4%
Capon Bridge	470	179	38.1%
Romney	677	55	8.1

For unincorporated areas and at the county level, it may be more challenging for communities larger in geographic size to enforce their floodplain management ordinance. Often larger jurisdictions have more acres and miles of floodplain extent than compared to smaller communities.

Consequently, larger jurisdictions must be vigilant in monitoring and permitting new development for an expansive geographic area that includes a large amount floodplain area/miles.

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	EMS	Utility		National Register	In Historic Districts Older than 1930	
Hampshire County*	8	5	0	3	16	2	5	7
Capon Bridge	1	1	1	0	3	0	0	0
Romney	0	1	0	0	1	0	0	0

* Unincorporated area



Central Hampshire Public Service District
Wastewater Treatment Plant
Highest Non-Hist. CA Value (\$3.0M)
(Building ID: [14-05-0018-0092-0000_251](#))

Among the community assets in Hampshire Communities, four of them are more vulnerable (in Floodway or Depths ≥ 4 ft)



Potomac Edison Augusta Service Center
Highest
2nd Highest Non-Hist. CA Value (\$1.4M)
(Building ID: [14-05-0017-0024-0000_18444](#))



Green Spring Assembly of God
Highest Hist. CA Depth (9.1 ft) & Value (\$76K)
(Building ID: [14-10-022B-0062-0000-131](#))



United States Post Office
Highest Hist. CA Depth (9.1 ft) & Value (\$32K)
(Building ID: [14-10-022B-0037-0000-167](#))



Risk Indicator: High Flood Depths

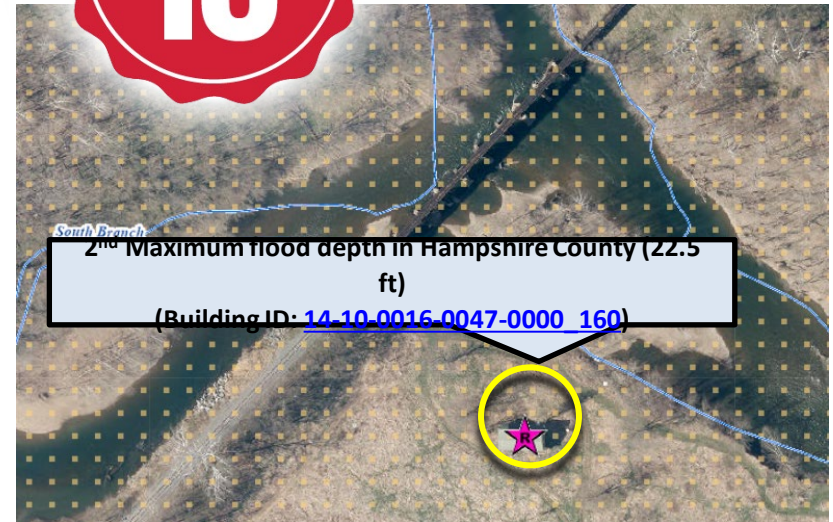
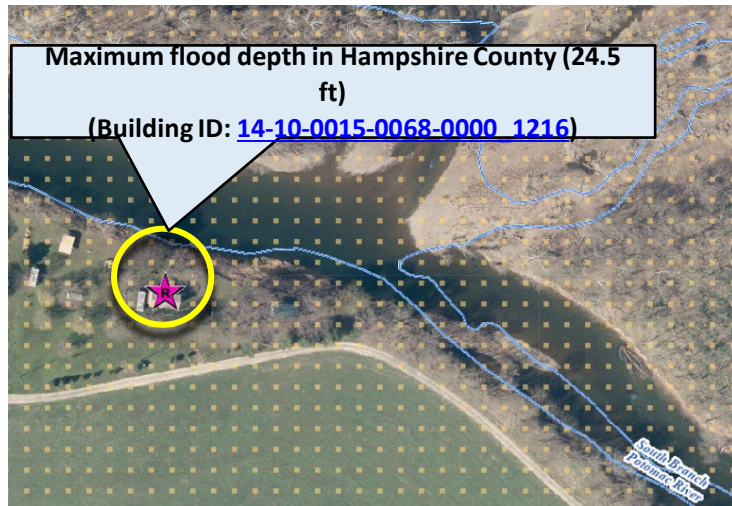
Community	Maximum Flood Depth (Feet)	Median Flood Depth (Feet)
* Unincorporated area		
Hampshire County*	24.5	5.1
Capon Bridge	10.2	3.4
Romney	0.1	0.1
	Rank among Unincorporated places: 5	Rank among Unincorporated places: 3

Hampshire County*



Preliminary Floodplain

-  FLOODWAY
-  Zone AE
-  Zone A



Question: Are these primary structures or carports on the South Branch?

Risk Indicator: Higher Number of Recreational Vehicles

Recreational Vehicles

In a Special Flood Hazard Area, a Recreational Vehicle (RV) must:

- Remain on site for fewer than 180 consecutive days, or
- Be fully licensed and ready for highway use; or
- Meet the permitting, elevation, and anchoring requirements for manufactured homes of the community's Flood Damage Prevention Ordinance.

A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect type utilities and security devices, and has no permanently attached additions.

RVs that do not meet these conditions must be installed and elevated like a manufactured home, including a permanent foundation and tie-down (See pages 55 and 56).



Important Information

Camping near the water? Ask the campground or RV Park operator about flood warnings and plans for safe evacuations.

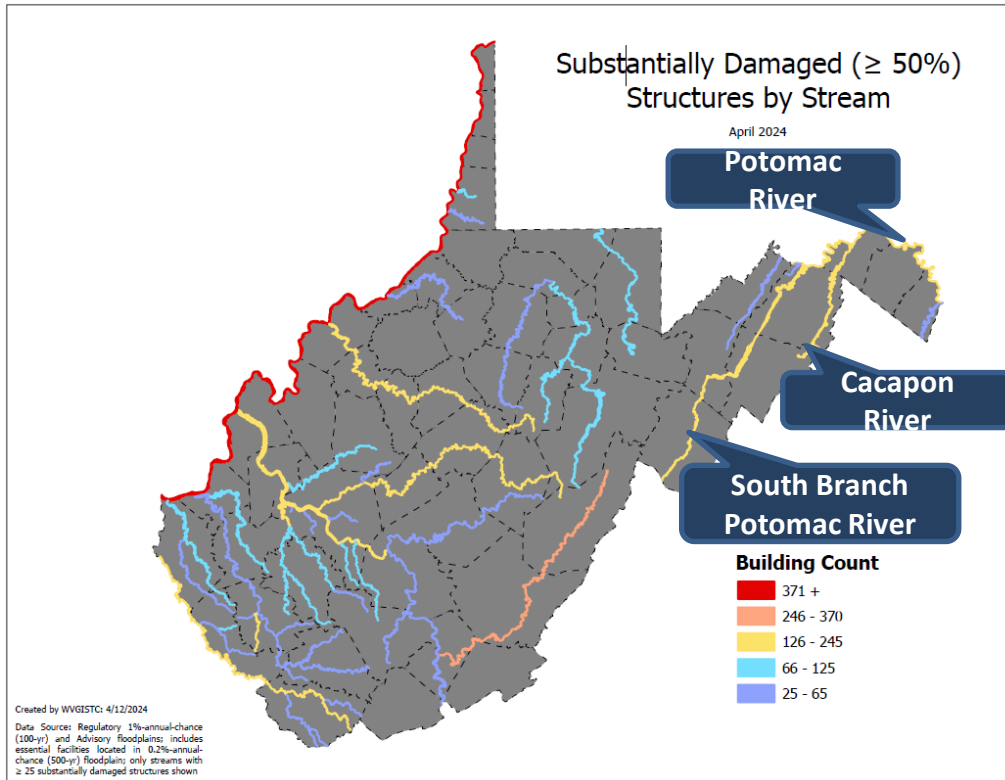
Risk Indicator: High Building Damage Losses

Among Top
10%
Among Top
20%

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

Estimated / Previous Damage	Hampshire County	Hampshire Unincorporated Area	Capon Bridge	Romney	State
Population Residing in Floodplain Ratio	8.9%	9.5%	15.9%	0.1%	11.1%
Displaced Population Ratio	7.2%	7.7%	15.1%	0.1%	6.6%
Population in Need of Short-Term Shelter	290	278	11	1	22,930
WV SVI	48.1%	37.0%	22.0%	68.7%	N/A
Estimated / Previous Damage					
Building Flood Loss Ratio	13.3%	14.0%	5.3%	0.0%	8.6%
Substantial Damage Count	253	251	2	0	6,493
Substantial Damage Count Ratio	35.9%	25.1%	2.4%	0.0%	6.6%
Minus Rated (>1ft) Post-FIRM Count Ratio	15.6%	10.8%	2.4%	0.0%	4.8%
Median Building Damage Value (>= \$1K)	\$13,933	\$14,135	\$9,596	\$67	\$7,657
Total Number of Claims since 1978	335	319	12	4	27,880
Total Paid Claims since 1978	\$5,322K	\$5,017K	\$220K	\$85K	\$368,292K
Number of Repetitive Losses	116	109	7	0	9,716

Risk Indicator: High 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

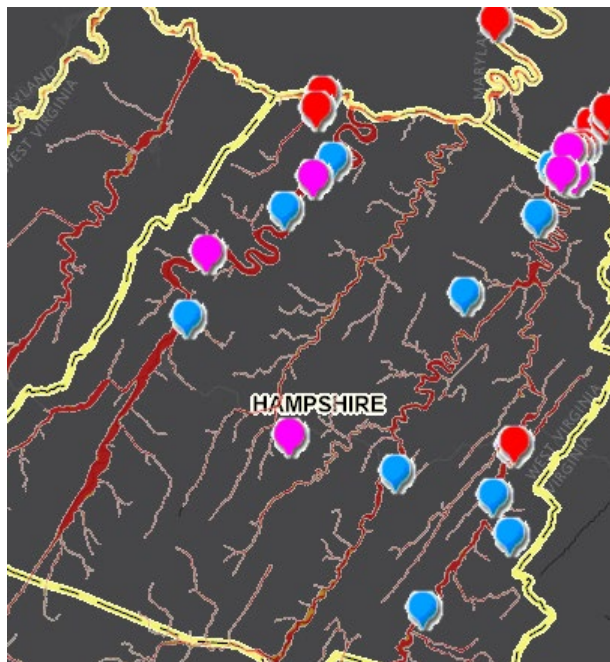
Flood Risk Indicator: **Substantial Damage**

Statewide Stream Scale



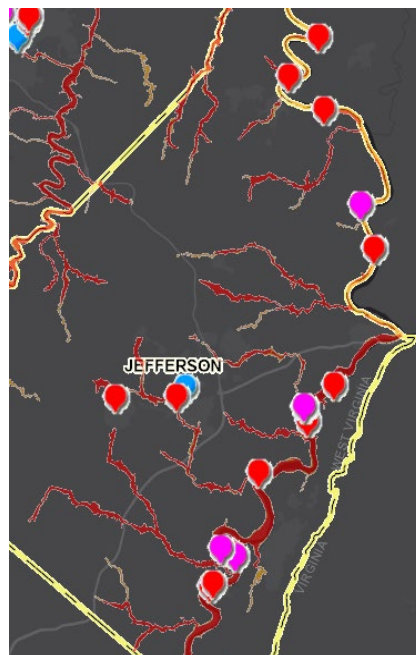
Repetitive Loss Structures (Mapped)

Hampshire County



Severe Repetitive Loss
(Site Address Matched)

Jefferson County



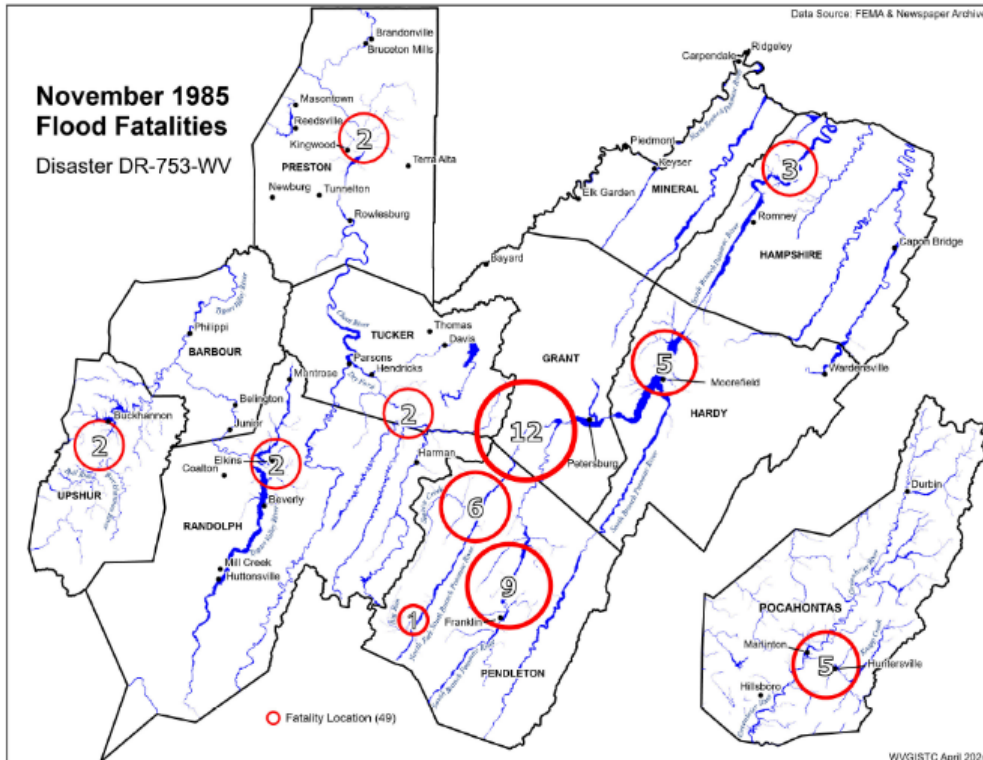
Repetitive Loss
(Site Address Matched)

Marlinton (Pocahontas County)



Repetitive Loss
(Street Address Matched)

Site Hazard Study (South Branch, Springfield)



Missing hunters found drowned near campsite

SPRINGFIELD, W.Va. — The bodies of two local hunters, missing since last Tuesday were found Thursday morning close to their washed-out campsite.

The bodies of C. Leonard Hammond, 49, Clover Hill, Frederick, and Bill McKimney, 42, Waterford, Va., were found about 9:30 a.m. Thursday, West Virginia State Police said.

Hammond, McKimney and another hunter, Oden, Brunswick, were swept away by flood waters as they attempted to reach their campsite in Hampshire County, W.Va., along the south branch of the Potomac River, reports indicate.

A trooper said the bodies were found about 35 feet apart approximately 1.5 miles south of the campsite. The body of the third hunter was found about noon Saturday. It also was found south of the campsite, officials said.

The men — members of a hunting party — were attempting to break camp when a "wall of water" surrounded them as they walked across a field. The men clung to trees and limbs.

Funeral services for Hammond are slated for 10 a.m. Saturday, Nov. 16, at Frederick Funeral Home of Robert E. Dailey & Son, 1201 North Market St.

Funeral services for McKimney will be held at 3 p.m. Saturday, Nov. 16, at Hall Funeral Home, Purcellville, Va.

—Susan C. Nicol

3 Hunters Drowned on South Branch

Missing hunters found drowned near campsite

West Virginians Start From Scratch And Await State, Federal Aid

ERIC NILER
Record Staff Writer
PETERSBURG, W.Va. — This flood has left more than 100,000 residents displaced and thousands still missing, officials here begin to take effect.

...nd, 11
...approximately
...ing to officials.
...nd placed the
...nd 10 miss-

...eth Lee Schell,
...Stelman W.
...James O.
...Rob Roy
...Moorefield, and Noble
...Beckley.

...In Pendleton County, the towns
...Onego and Riverton were
...destroyed, according to Charlotte
...Roberts, press secretary to W.Va.
...Gov. Arch Moore. Figures on missing
...or dead in Pendleton and
...Pocahontas counties were
...unavailable.

...Twenty people were confirmed
...dead in the flooded areas of West
...Virginia and state officials
...estimated damage in the state at
...up to \$200 million.

...Ms. Roberts said emergency
...shelters are open at the Seneca
...Rock School, near the town of
...Mouth of Seneca. Similar food
...and evacuation centers were set up
...at several Moorefield, W.Va., churches
...and Petersburg High School.

...“We’re not going to clean up
...overnight,” said Harold Hisner,
...Grant County relief coordinator.
...Hisner said an estimated 1,500
...Petersburg area residents were
...displaced by the floods but many
...more people are still isolated.

...“Some people are scattered, living
...with relatives and friends, but
...there are many that we’re not
...aware of and won’t be able to
...locate for days,” said Hisner.

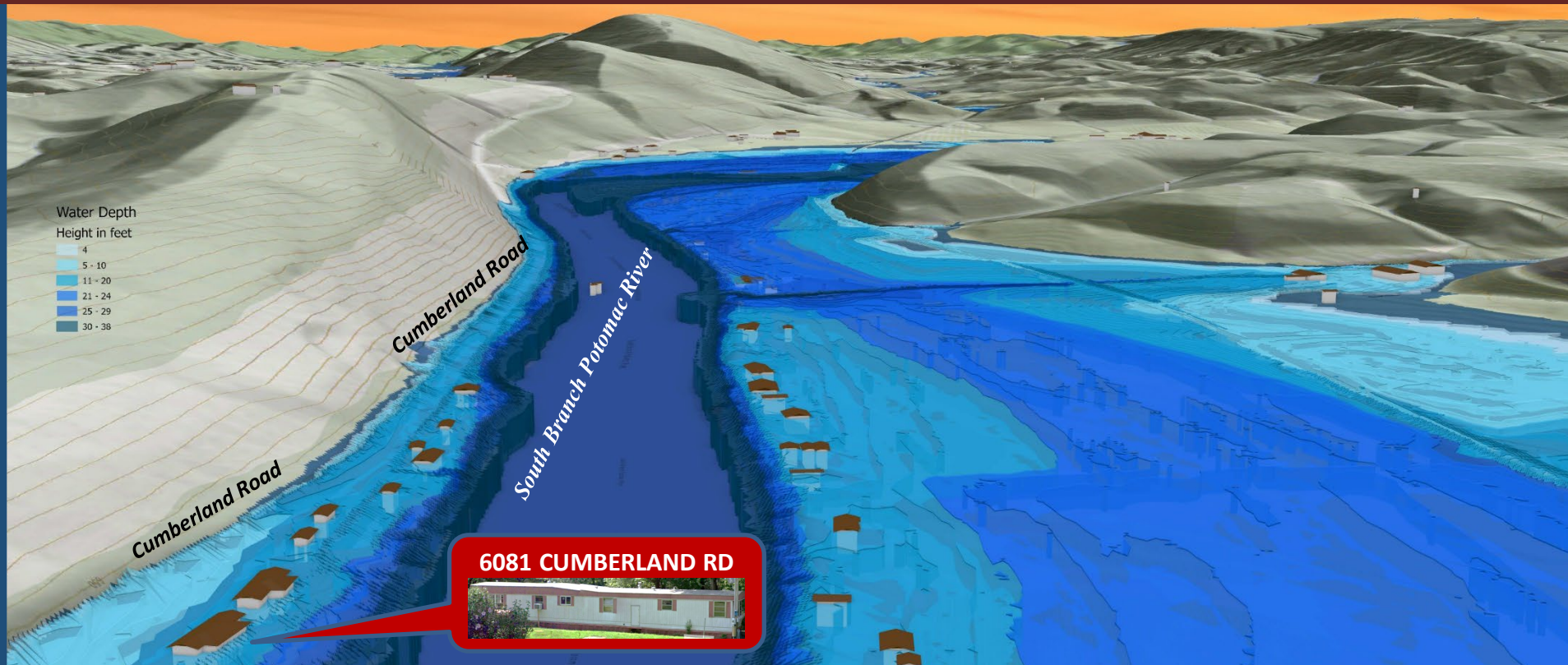
...Twisted wreckage and uprooted
...trees made Petersburg’s main
...street look like a mud-encrusted
...moonscape. More than 100
...uniformed National Guard troops
...from around the state patrolled the
...downtown Friday and helped
...rebuilding efforts. County officials
...said every single downtown-area
...business was damaged by the flood
...— an estimated \$30 million loss.

...Trailer homes were especially
...vulnerable to the flood’s destruction
...and those on low-lying ground
...near the river were smashed to bits
...and strewn across otherwise empty
...fields. In the south end of town, one
...trailer home was impaled by a

See PETERSBURG, Page 25

November 1985 Flood (47 fatalities – 3 in Hampshire)

Site Hazard Study (Springfield, WV)



FEMA 1% Annual Chance (100-year)

26% probability of flooding at least once over 30 years

Community Scale Flood Visualization

Site Study: High Flood Depths

6081 CUMBERLAND RD, Springfield, WV, 26757

12.2' Preliminary 1% (New BFE)

10.1' Effective 1% (Current BFE)

FLOOD DEPTH

2002 Effective 1% (current BFE)	10.1
2024 Preliminary 1% (Preliminary BFE)	12.2

Building: 14-10-0016-0024-0000 6081

Mitigation measures of elevation and wet floodproofing are not economically effective for very deep flood depths greater than 12 ft.

Building Scale (Flood Profile) Visualization

Site Study: High Flood Depth Impact

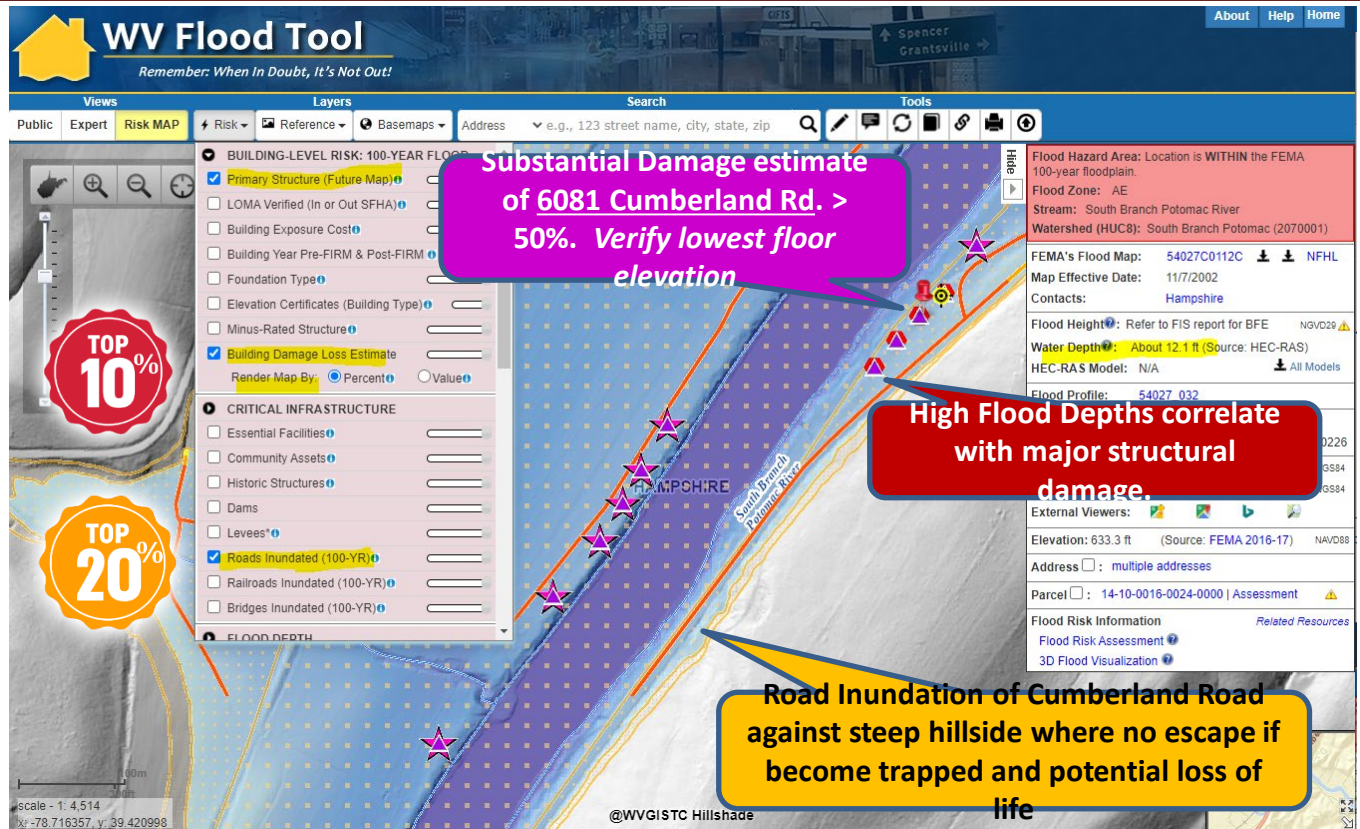
Primary Structures
(n = 757; verify status)

Building Damage
(Top 10%)

Road Inundation
(Top 20%)

Building Damage Estimate (100-YR Flood)

- ▲ 50-100% (Substantial Damage)
- ▲ 10-50% (Moderate Damage)
- ▲ 1-10% (Slight Damage)
- ▲ <1% or No Depth Value



WV Flood Tool's Risk MAP View (property level)

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



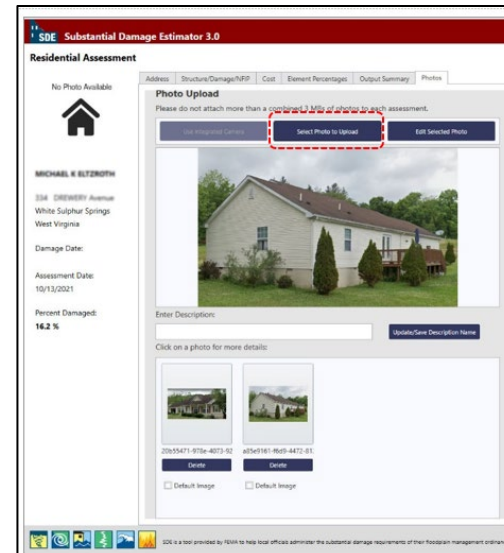
Please Select a Property

Structure Owner Name	Property Address	County/Parish	Parcel Number	Lot Number	Subdivision	Year of Construction
MICHAEL GARFIELD VE.	1836 ROYER Road	Greene	13-04-0238-0010-0000	13-04-0238-0010-0000	Greene	1960
MICHAEL JOCHAMER	381 HILLSIDE Avenue	Greene	13-17-0212-0034-0000	13-17-0212-0034-0000	White Sulphur Springs	1920
MICHAEL J SMITH	156 MAPLE AVE	Greene	13-01-0206-0038-0000	13-01-0206-0038-0000	Albion	2020
MICHAEL K BELZONIA	334 DREWEERY Avenue	Greene	13-17-0209-0089-0000	13-17-0209-0089-0000	White Sulphur Springs	1918
MICHAEL K BRODSKAT	396 HAYFIELD HILLS	Greene	13-02-0229-0022-0001	13-02-0229-0022-0001	Greene	1991
MICHAEL LEE ET AL'S B.	6088 TUCKER RD	Greene	13-16-0236-0002-0000	13-16-0236-0002-0000	Greene	1972
MICHAEL LEE ET AL'S B.	9 TUCKER RD	Greene	13-16-0236-0002-0000	13-16-0236-0002-0000	Greene	1972
MICHAEL PAUL TRAINER	156 8TH Avenue	Greene	13-02-0238-0087-0000	13-02-0238-0087-0000	Greene	1990
MICHAEL ROBERT ET AL.	249 GREENBERRY Ave	Greene	13-17-0211-0037-0000	13-17-0211-0037-0000	White Sulphur Springs	1957
MICHAEL SCOTT HILL	493 RED ROCK Trail	Greene	13-08-0219-0031-0000	13-08-0219-0031-0000	Greene	1999
MICHAEL TOLLEY	324 RIVER EDGE Lane	Greene	13-06-0240-0003-0000	13-06-0240-0003-0000	Greene	1987
MICHAEL W BRACKEN	310 HILL CREEK Road	Greene	13-11-0255-0030-0000	13-11-0255-0030-0000	Greene	1900
MICHAEL W CARRINGTON	252 HOLMES Lane	Greene	13-17-0212-0031-0001	13-17-0212-0031-0000	White Sulphur Springs	1999
MICHAEL W CARRINGTON	282 HOLMES Lane	Greene	13-17-0212-0047-0000	13-17-0212-0047-0000	White Sulphur Springs	1999
MICHAEL W H SAMS	425 8TH Street	Greene	13-13-0205-0480-0000	13-13-0205-0480-0000	Rainelle	1975
MICHAEL W SHOCKEY	274 MOUNTAIN Avenue	Greene	13-17-0209-0039-0000	13-17-0209-0039-0000	White Sulphur Springs	1921
MICHAEL WINGS	287 UTTER ROAD	Greene	13-02-0240-0038-0000	13-02-0240-0038-0000	Greene	1970
MICHAEL & DIXON	153 WOODLAND Ave.	Greene	13-17-0211-0011-0000	13-17-0211-0011-0000	White Sulphur Springs	1964
MICHELLE L BRENNAN	191 MIDGOWN RIVERL	Greene	13-11-0257-0039-0000	13-11-0257-0039-0000	Greene	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

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

1st Floors completely inundated

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

– Texas State Operations Center

Risk MAP (Hampshire 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)

All Essential Facilities mapped
out

New Vertical Datum (NAVD88)

Risk **A**nalysis (Risk Identification)

Large Floodplain Area (acres) and
Length (miles)

Higher Number of Community
Assets

High Flood Depths

High Building Damage Losses

High Repetitive Loss Structures and
Paid Claims

Higher Number of Recreational
Vehicles

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

Plan for more stream gauges besides
South Branch of Potomac

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

LETTER OF MAP AMENDMENT DETERMINATION DOCUMENT (OUT AS SHOWN)			
COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION	
COMMUNITY	HAMPSHIRE COUNTY, WEST VIRGINIA (Unincorporated Areas)	A parcel of land, Section 1, Farms of the River Region, as described in the Deed, recorded in Book 414, Pages 267, 268 and 286, in the Office of the Clerk of the County Commission, Hampshire County, West Virginia (TM 35; TL: 82)	
	COMMUNITY NO.: 540226		
AFFECTED MAP PANEL	NUMBER: 54027C0308C DATE: 11/7/2002		

FLOODING SOURCE: CACAPON RIVER

LOT	BLOCK/SECTION	SUBDIVISION	STREET
--	1	Farms of the River Region	--



PRELIMINARY SUMMARY OF MAP ACTIONS

Community: HAMPSHIRE COUNTY

Community No: 540226

2A. LOMCs on Revised Panels

LOMC	Case No.	Date Issued	Project Identifier	Original Panel	Current Panel
LOMA	03-03-1346A	05/19/2003	HC 86, BOX 4, STATE ROUTE 28 -- (TAX PARCEL 10-018-059.1)	54027C0105C	54027C0105D
LOMA	07-03-1092A	07/31/2007	11.81 ACRES IN GORE DISTRICT, TAX MAP 37, PARCELS 33.4 & 33.6 -- BRILL LANE, LOT 5	54027C0291C	54027C0291D
LOMA	07-03-1228A	10/04/2007	LONG ACRE ESTATES, LOT 11	54027C0112C	54027C0112D
LOMA	09-03-0722A	04/07/2009	FRENCH'S NECK WEST SUBDIV, LOTS 2-6 -- S LAZY RIVER ROAD	54027C0039C	54027C0039D
LOMA	09-03-1939A	10/23/2009	Tax Map 15; Parcel 2.1	54027C0245C	54027C0245D
LOMA	11-03-0804A	02/15/2011	HC 71 BOX 86A	54027C0308C	54027C0308D



FEMA

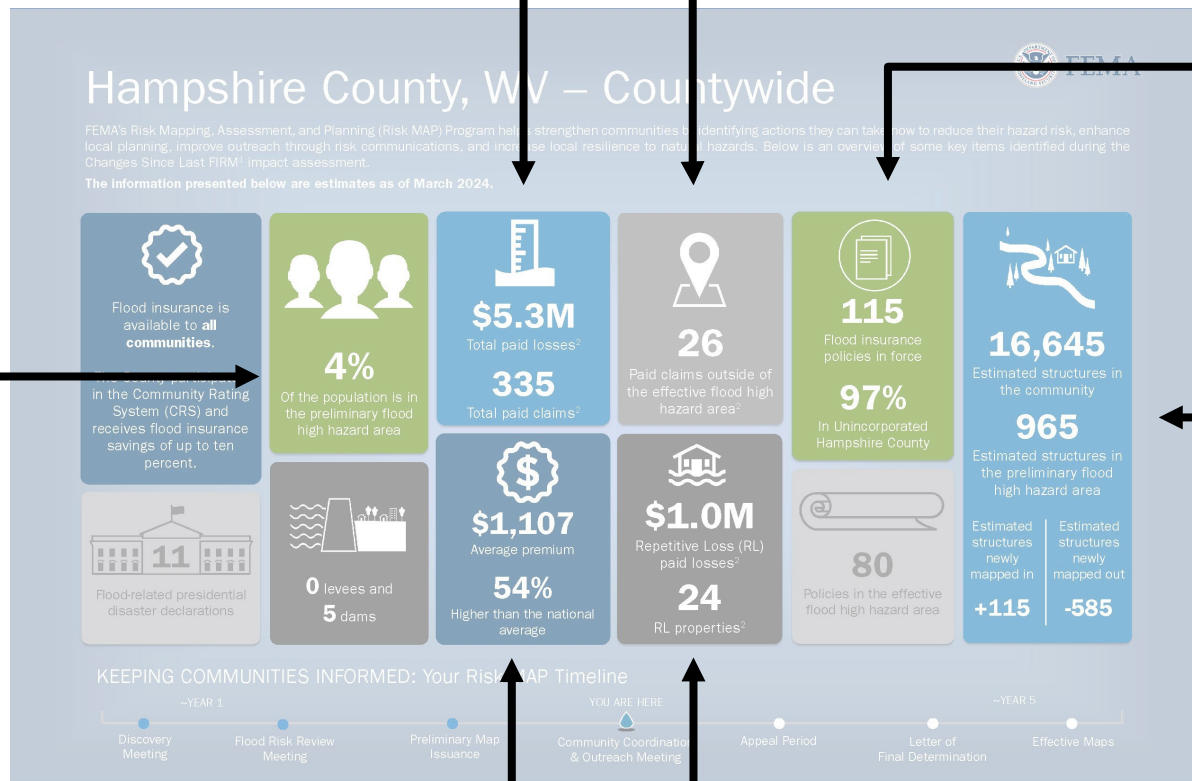
RiskMAP
Increasing Resilience Together

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



Hampshire 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 FIRM¹ impact assessment.

The information presented below are estimates as of March 2024.



KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

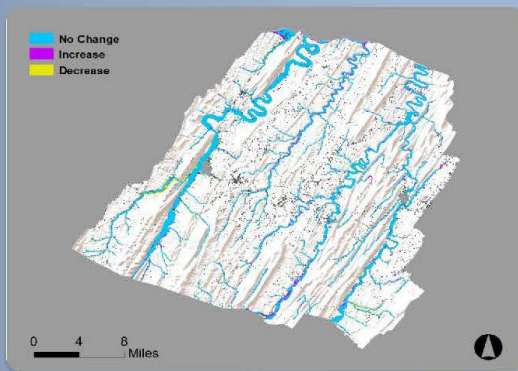


Flood Risk Dashboard



Unincorporated Areas/Hampshire County, WV

KNOW YOUR RISK The information presented below are estimates as of March 2024. ¹Flood Insurance Rate Map. ²Since 1978.



8/1/1987
Initial FIRM¹ date

11/7/2002
Effective FIRM date

\$5M
Total paid losses²

319
Total paid claims²

112
Flood insurance policies in force

78
Policies in the effective flood high hazard area

15,630
Estimated structures in the community

930
Estimated structures in the preliminary flood high hazard area

Estimated structures newly mapped in: **+115**

Estimated structures newly mapped out: **-570**

4%
Of the population is in the preliminary flood high hazard area

18%
Of households spend 30% or more of their income on housing

20
Paid claims outside of the effective flood high hazard area²

\$922K
Repetitive Loss (RL) paid losses²

22
RL properties²

11
Flood-related countywide presidential disaster declarations

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

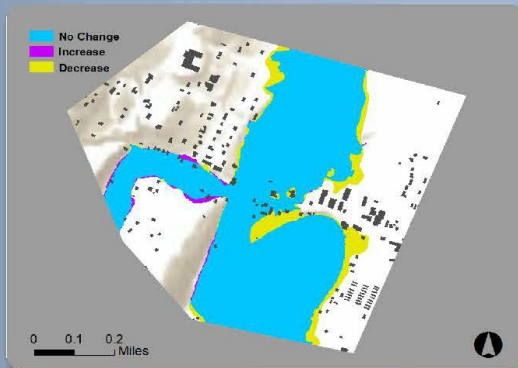


Flood Risk Dashboard



Capon Bridge Town/Hampshire County, WV

KNOW YOUR RISK The information presented below are estimates as of March 2024. ¹Flood Insurance Rate Map. ²Since 1978.



4/1/1988
Initial FIRM¹ date

11/7/2002
Effective FIRM date

\$220K
Total paid losses²

12
Total paid claims²

2
Flood insurance policies in force

2
Policies in the effective flood high hazard area

200
Estimated structures in the community

30
Estimated structures in the preliminary flood high hazard area

16%
Of the population is in the preliminary flood high hazard area

25%
Of households spend 30% or more of their income on housing

6
Paid claims outside of the effective flood high hazard area²

\$108K
Repetitive Loss (RL) paid losses²

2
RL properties²

11
Flood-related countywide presidential disaster declarations

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

Estimated structures newly mapped out: **-10**

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline



Flood Risk Dashboard



Town of Romney/Hampshire County, WV

KNOW YOUR RISK The information presented below are estimates as of March 2024. ¹Flood Insurance Rate Map. ²Since 1978.



6/15/1988
Initial FIRM¹ date

11/7/2002
Effective FIRM date

\$85K
Total paid losses²

4
Total paid claims²

1
Flood insurance policies in force

0
Policies in the effective flood high hazard area

815
Estimated structures in the community

5
Estimated structures in the preliminary flood high hazard area

<1%
Of the population is in the preliminary flood high hazard area

35%
Of households spend 30% or more of their income on housing

0
Paid claims outside of the effective flood high hazard area²

\$0
Repetitive Loss (RL) paid losses²

0
RL properties²

11
Flood-related countywide presidential disaster declarations

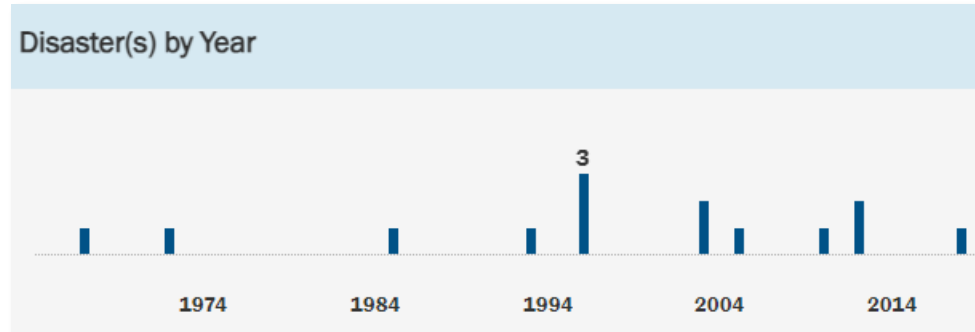
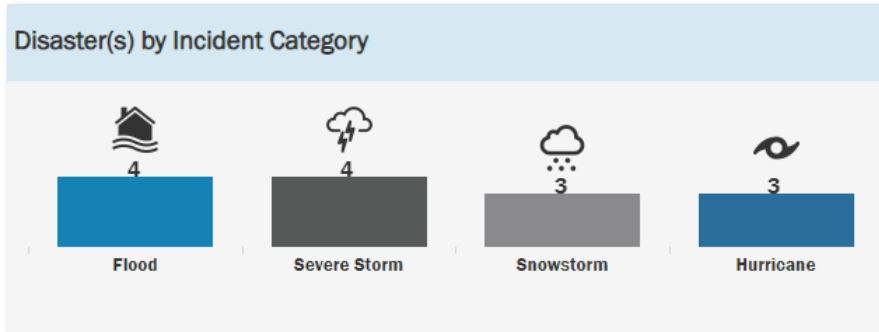
Estimated structures newly mapped in	Estimated structures newly mapped out
+0	-5

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline



History of Flooding

- 58 flood events reported by National Weather Service from 1996 to 2019¹
- 14 flood-related presidential disaster declarations since 1953²



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

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

² Includes Flood, Hurricane, Severe Storm(s), Snow, Coastal Storm, Severe Ice Storm

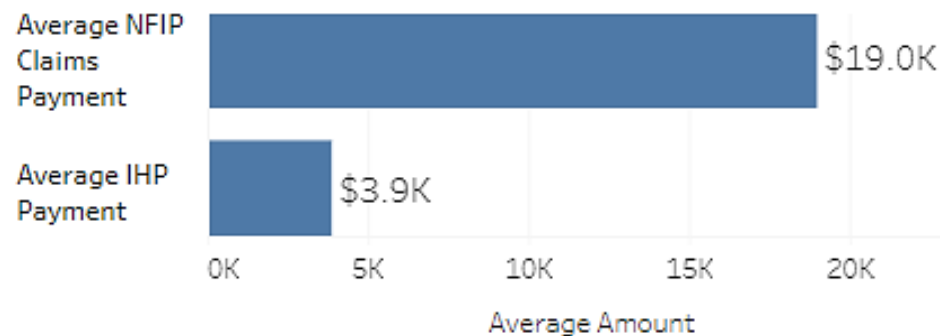
Costs of Flooding

- 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 **Hampshire County** show the economic impact of flooding:

Category	Federal Funding	# of Projects
Protective Measures	\$285,850	20
Public Buildings	\$2,503	3
Public Utilities	\$3,299	1
Recreational or Other	\$59,337	5
Roads and Bridges	\$145,022	2
State Management	\$10,280	4
TOTAL	\$506,291	35

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 insurance¹



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

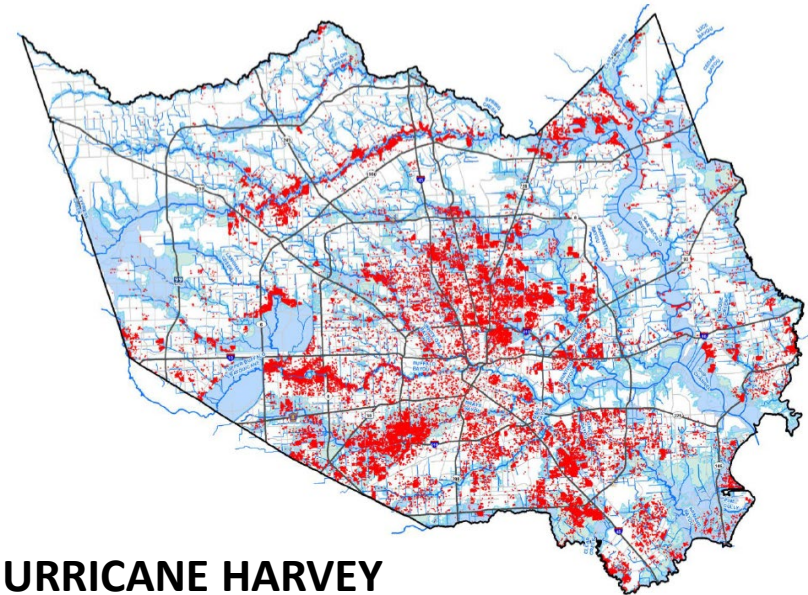


Floodplain Management

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



FEMA

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

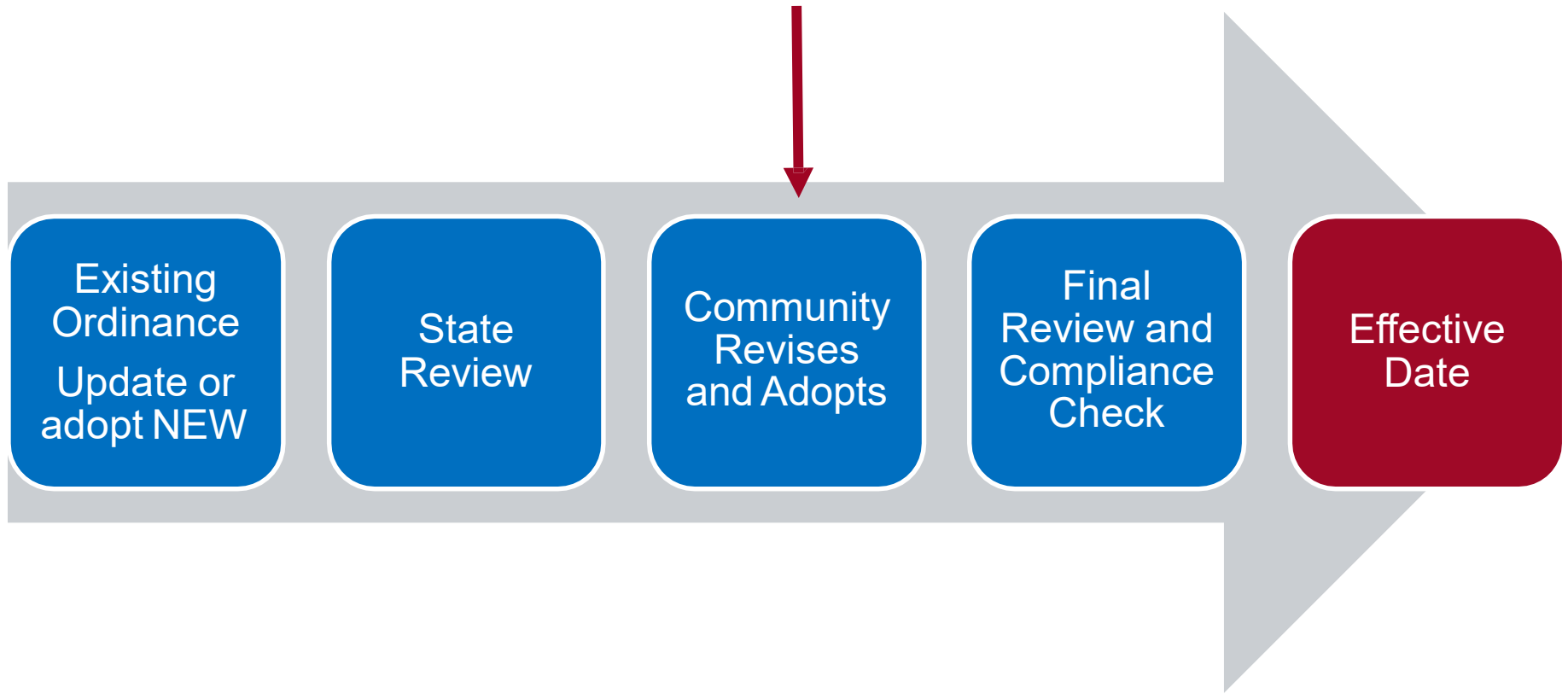


FEMA

RiskMAP
Increasing Resilience Together

Establish a Timeline (After LFD)

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



FEMA

RiskMAP
Increasing Resilience Together

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**



FEMA

RiskMAP
Increasing Resilience Together

Timeline for Hampshire County

**Preliminary
Maps Issued**

February 23, 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



RiskMAP
Increasing Resilience Together

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 and www.fema.gov/national-flood-insurance-program for additional info



FEMA

RiskMAP
Increasing Resilience Together

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.



FEMA

RiskMAP
Increasing Resilience Together

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 displays the FEMA YouTube channel page. On the left is a sidebar with navigation icons for Home, Shorts, Subscriptions, Library, and History. The main content area features a video player for the first video, 'Introduction to the National Flood Insurance Program (NFIP)'. Below the player, the series title 'Flood Risk Communication Video Series' and the channel name 'FEMA' are shown, along with statistics: 14 videos, 8,962 views, and a last update on Feb 8, 2022. There are buttons for 'Play all' and 'Shuffle'. To the right, a list of seven video thumbnails is displayed, each with a title, view count, and upload time. The videos are:

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

Below the list, a partial view of the eighth video, 'Mitigation -- A Customer Experience Video Toolkit', is visible with 1.2K views.

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)



FEMA

RiskMAP
Increasing Resilience Together

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 and 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



FEMA

RiskMAP
Increasing Resilience Together

Community Action Items



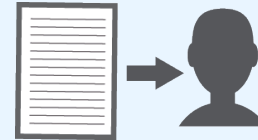
**Review
Preliminary
Map, FIS
and SOMA**



**Comment on
Preliminary
Information**



**Appeal
Preliminary
Map If
Desired**



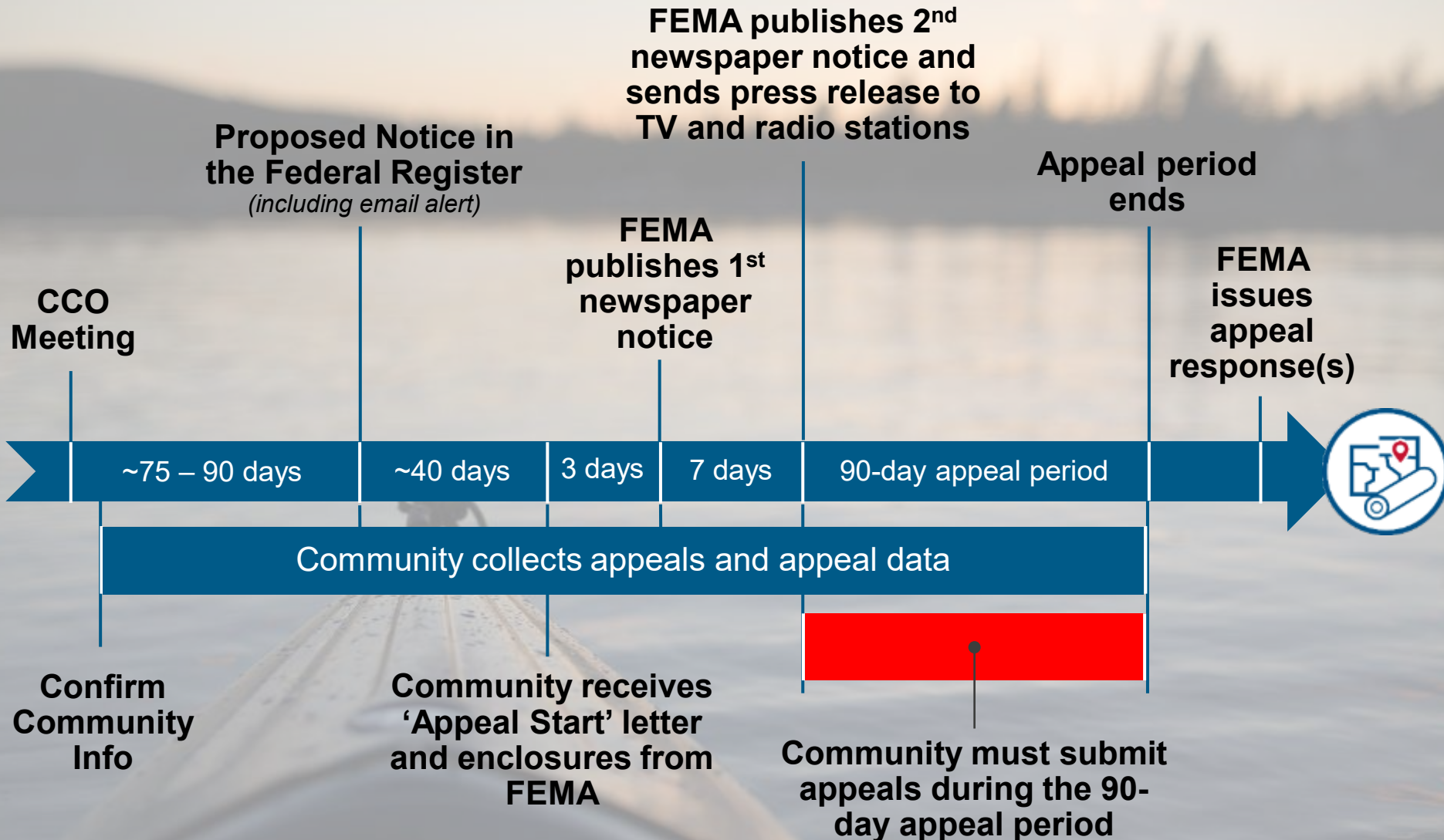
**Reach out to
Community
Members**



**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 with input fields for community information:

- Date:** A single-line text input field.
- Community Name:** A single-line text input field.
- County/ State:** A single-line text input field.
- Does your community have a map repository address?** A checkbox.
- Community location where residents can review the Flood Insurance Rate Map (must be physical address):** A section with fields for Building Name, Address, Name, Title, and Address.
- Local newspaper(s) that your community uses for public/legal notices:** A section with fields for Name/ Location, Telephone, and E-mail.
- Television station(s) through which your community most frequently receives local news & information:** A section with fields for Name/ Location, Title, and Address.
- Radio station(s) through which your community most frequently receives local news & information:** A section with fields for Name/ Location, Telephone, and E-mail.
- Other (social media page, etc.):** A section with fields for Name/ Location, Name/ Location, and Name/ Location.

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'.

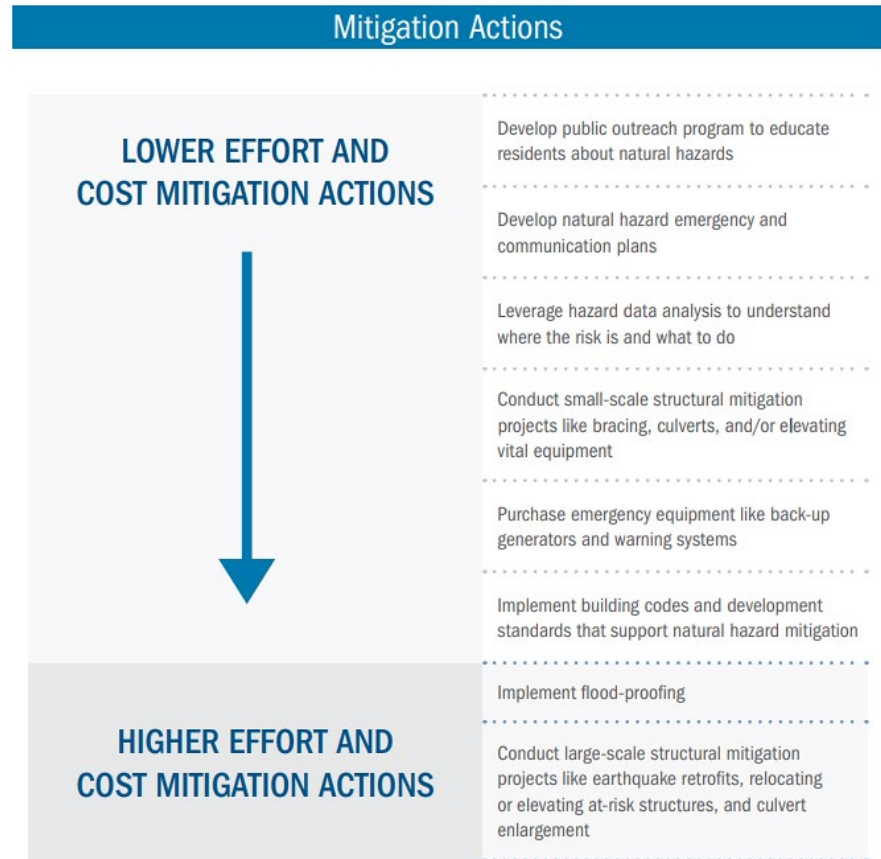


FEMA

Your Role

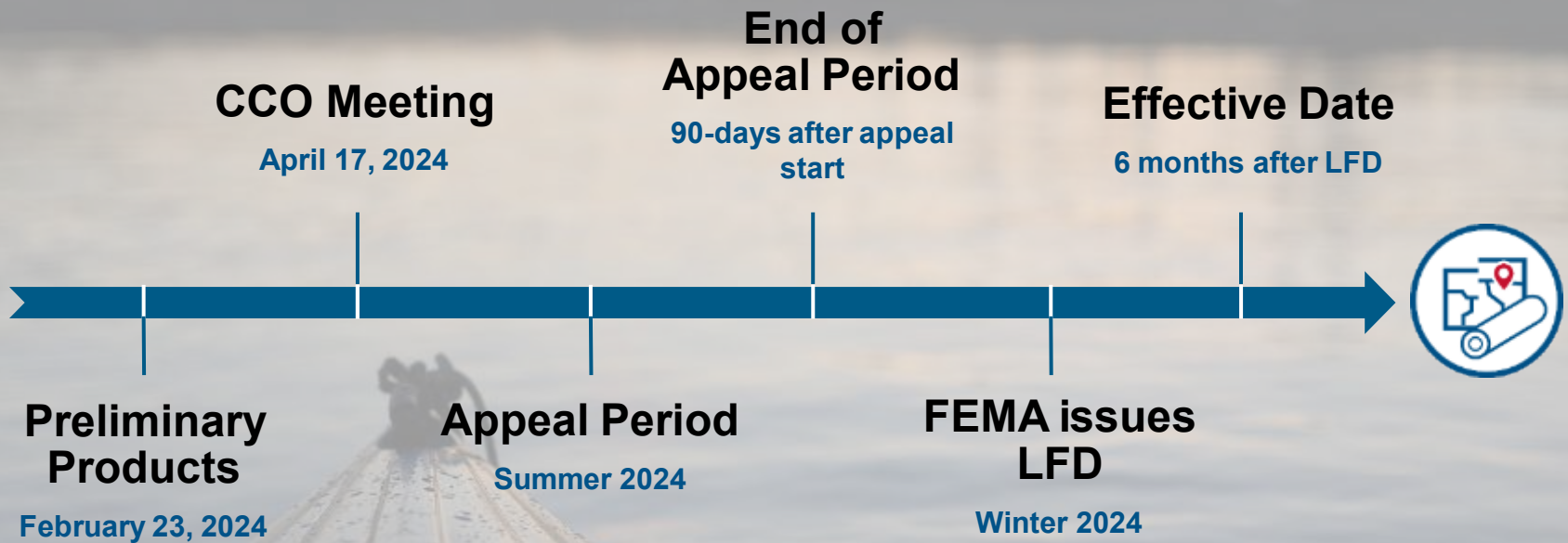
KNOW YOUR RISK – INSURE YOUR RISK – REDUCE YOUR RISK

- 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](#)).



FEMA

Timeline – Hampshire County



CCO: Community Coordination and Outreach

LFD: Letter of Final Determination

Project Contacts



State NFIP/CTP Coordinator:
Timothy W. Keaton, CFM
(304) 414-7659
Tim.W.Keaton@wv.gov



FEMA Region III:
Elizabeth Ranson
Mitigation Planning Specialist
(215) 347-0686
Elizabeth.Ranson@fema.dhs.gov



Mapping Partner:
Jonathan Langley
Project Manager
(703) 964-1335
Jonathan.langley@wsp.com

Vinod Mahat
Project Officer
(202) 664-9597
Vinod.mahat@fema.dhs.gov

WVGISTC:
Kurt Donaldson, GISP, CFM
Manager
(304) 293-9467
Kurt.Donaldson@mail.wvu.edu



FEMA

RiskMAP
Increasing Resilience Together

Additional Contacts - Insurance



FEMA Region 3:

Bill Bradfield, CFM

Flood Insurance Outreach Specialist

(202) 880-5906

william.b.bradfield@fema.dhs.gov



FEMA

RiskMAP
Increasing Resilience Together

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

Online Chat:

www.floodmaps.fema.gov/fhm/fmx_main.html



FEMA

RiskMAP
Increasing Resilience Together



FEMA



FEMA

RiskMAP
Increasing Resilience Together