

Floodplain Area (SFHA) (Unincorporated Area Scale and Larger)



West Virginia University
WV GIS Technical Center

February 2024

Floodplain Area

Major Category	Detailed Category	Code	Indicator	Short Description	Unit
Flood Hazard Risk	Floodplain Area	SFHA	Floodplain Area (Unincorporated Area Scale and Larger)	<p>Acreage of modified Special Flood Hazard Area (SFHA), or 1%-annual-chance (100-yr) floodplain</p> <p>Areas excluded from Total aSFHA: Open water lakes > 10 acres; Large river bank-to-bank > 500 ft.; Federal lands > 10 acres.</p>	Acres

Rationale	Recommendations	Data Source
<p>For unincorporated areas and at the county level, it can 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. In smaller communities, the floodplain area is compacted and thus new development in the floodplain should be easier to monitor than larger rural areas or countywide.</p> <p>The acreage of the SFHA (aSFHA) is a programming variable required for those communities participating in FEMA's Community Rating System (CRS) program.</p>	<p>Larger jurisdictions must be vigilant in monitoring and permitting new development for an expansive geographic area that includes a large amount floodplain area/miles.</p>	<p>FEMA FIRM</p> <p>Streams and Waterbodies (USGS NHD 24K), National Public Lands (USGS PAD-US)</p>

Floodplain Area; Top 20% Rankings

RANK	All Communities	Percent_Rank	Unincorporated Areas	Percent_Rank	Counties	Percent_Rank	Regions	Percent_Rank
1	Hampshire County*	100.0%	Hampshire County*	100.0%	HAMPSHIRE	100.0%	5	100%
2	Mason County*	99.6%	Mason County*	98.1%	KANAWHA	98.1%	8	90%
3	Kanawha County*	99.2%	Kanawha County*	96.2%	MASON	96.2%	2	80%
4	Greenbrier County*	98.9%	Greenbrier County*	94.4%	GREENBRIER	94.4%		
5	Randolph County*	98.5%	Randolph County*	92.5%	RANDOLPH	92.5%		
6	Webster County*	98.2%	Webster County*	90.7%	WOOD	90.7%		
7	Wood County*	97.8%	Wood County*	88.8%	WEBSTER	88.8%		
8	Hardy County*	97.5%	Hardy County*	87.0%	HARDY	87.0%		
9	Jackson County*	97.1%	Jackson County*	85.1%	JACKSON	85.1%		
10	Pendleton County*	96.8%	Pendleton County*	83.3%	WAYNE	83.3%		
11	Wayne County*	96.4%	Wayne County*	81.4%	PENDLETON	81.4%		
12	Lincoln County*	96.1%						
13	Berkeley County*	95.7%						
14	Cabell County*	95.4%						
15	Pocahontas County*	95.0%						
16	Preston County*	94.6%						
17	Putnam County*	94.3%						
18	Nicholas County*	93.9%						
19	Mineral County*	93.6%						
20	Raleigh County*	93.2%						
21	Jefferson County*	92.9%						
22	Morgan County*	92.5%						
23	Harrison County*	92.2%						
24	Wirt County*	91.8%						
25	Tyler County*	91.5%						
26	Ritchie County*	91.1%						
27	Braxton County*	90.8%						
28	Boone County*	90.4%						
29	Monroe County*	90.1%						
30	Tucker County*	89.7%						
31	Mercer County*	89.3%						
32	Grant County*	89.0%						
33	Lewis County*	88.6%						
34	Roane County*	88.3%						
35	Gilmer County*	87.9%						
36	Wetzel County*	87.6%						
37	Calhoun County*	87.2%						
38	Barbour County*	86.9%						
39	Upshur County*	86.5%						
40	Clay County*	86.2%						
41	Doddridge County*	85.8%						
42	Mingo County*	85.5%						
43	Marshall County*	85.1%						
44	Logan County*	84.8%						
45	Marion County*	84.4%						
46	Wyoming County*	84.0%						
47	Monongalia County*	83.7%						
48	Fayette County*	83.3%						
49	Summers County*	83.0%						
50	Pleasants County*	82.6%						
51	McDowell County*	82.3%						
52	Taylor County*	81.9%						
53	Brooke County*	81.6%						
54	Wheeling**	81.2%						
55	Parkersburg	80.9%						
56	Ohio County*	80.5%						
57	Huntington**	80.2%						

Colors:

Black --> Incorporated areas

Brown --> Unincorporated areas

Green --> Counties (Total)

Red --> Split communities

Blue --> Incorporated communities participating in the National Flood Insurance Program (NFIP) with no regulatory Special Flood Hazard Area (SFHA)

Purple --> Incorporated communities with no regulatory Special Flood Hazard Area (SFHA) not participating in the National Flood Insurance Program (NFIP) (not mentioned in the FEMA's Community Status Book Report)

Black on blue: Six incorporated communities included in the detailed risk study (Camden-on-Gauley, Clendenin, Rainelle, Richwood, White Sulphur Springs, and Marlinton)

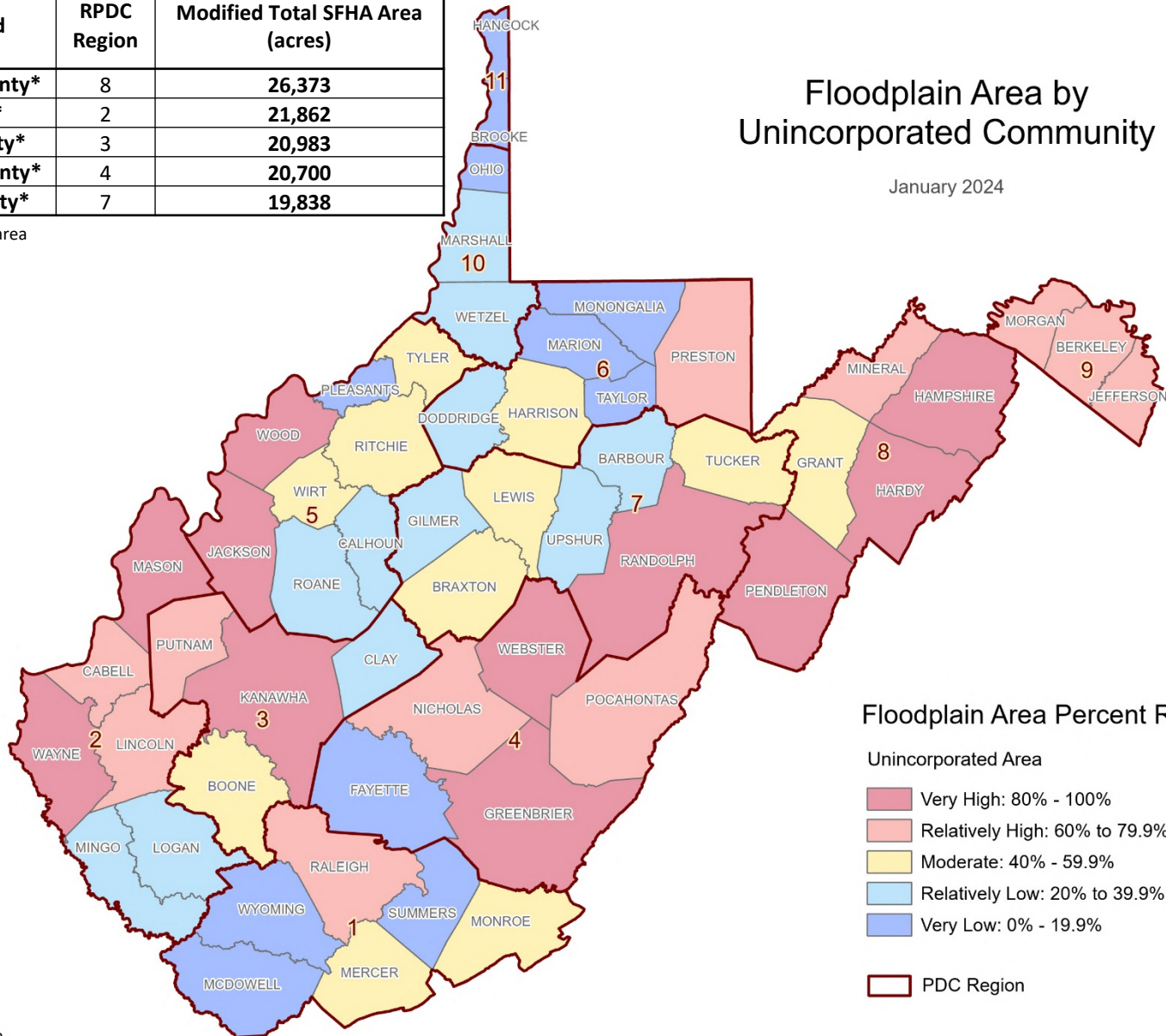
Floodplain Area; Maps

Floodplain Area by Unincorporated Community

January 2024

Top 5 Unincorporated Communities	RPDC Region	Modified Total SFHA Area (acres)
Hampshire County*	8	26,373
Mason County*	2	21,862
Kanawha County*	3	20,983
Greenbrier County*	4	20,700
Randolph County*	7	19,838

* Unincorporated area



WVGISTC 2024-1-23

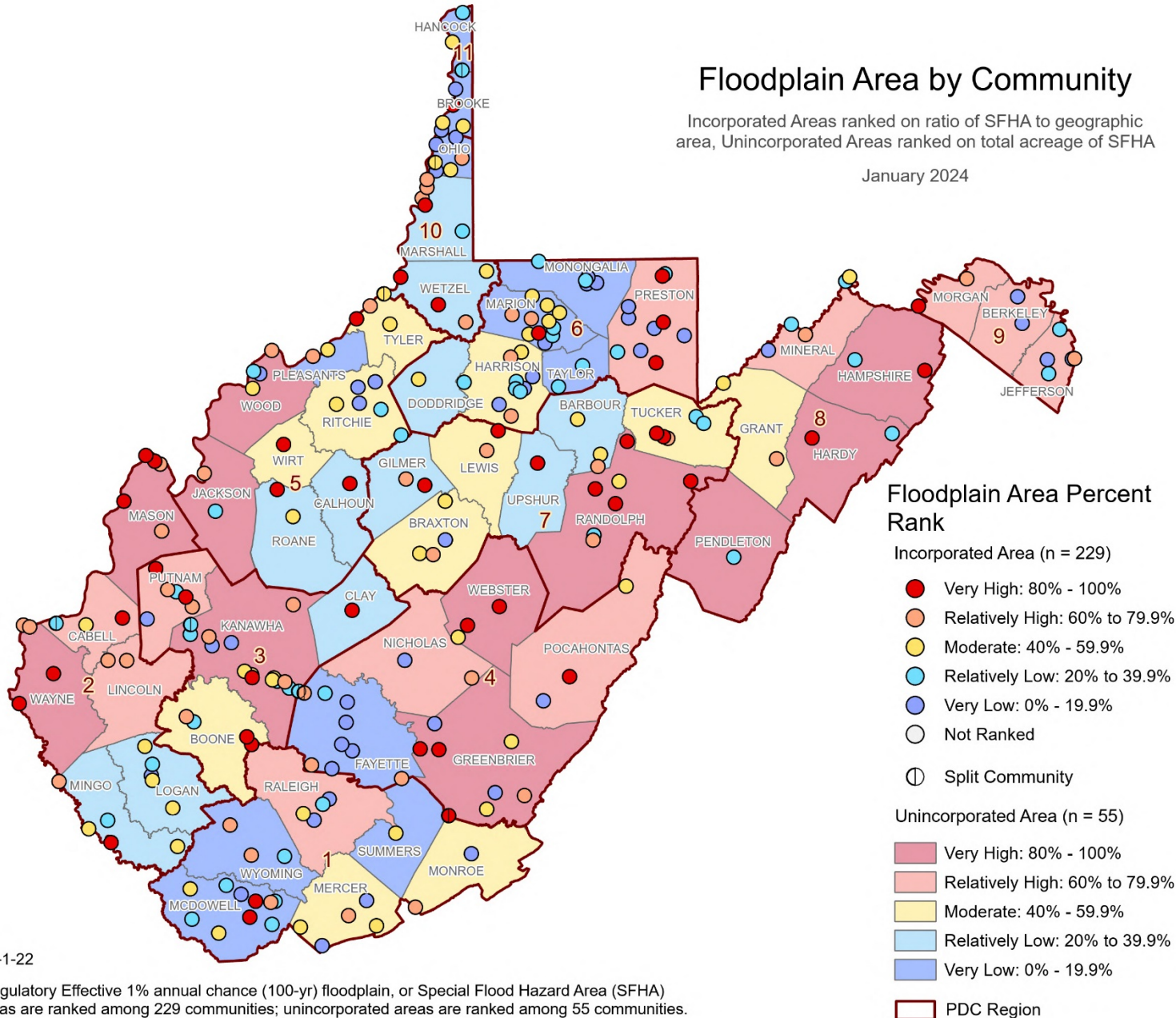
Data Source: Regulatory Effective 1% annual chance (100-yr) floodplain, or Special Flood Hazard Area (SFHA)

Floodplain Area; Maps

Floodplain Area by Community

Incorporated Areas ranked on ratio of SFHA to geographic area, Unincorporated Areas ranked on total acreage of SFHA

January 2024



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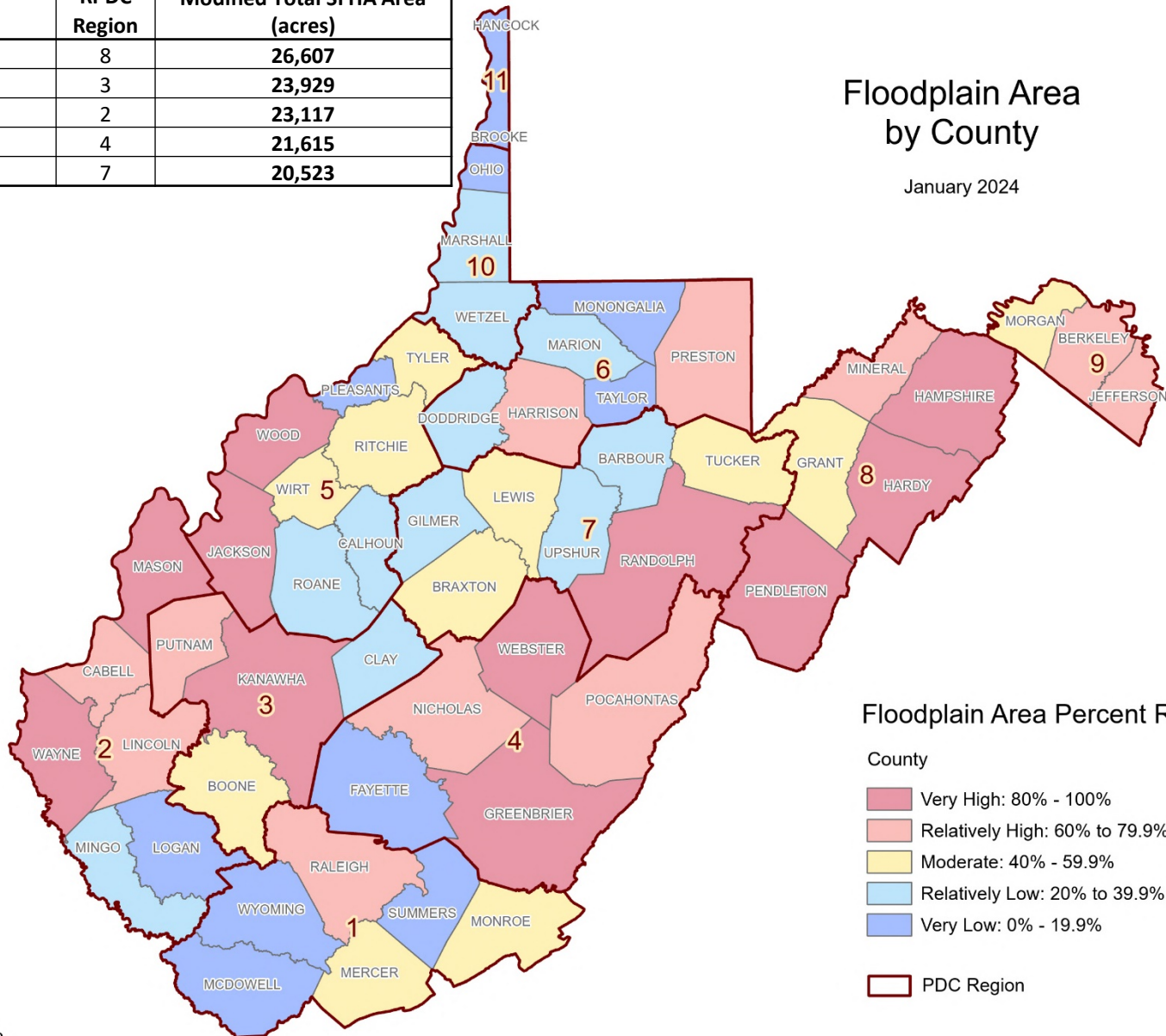
Data Source: Regulatory Effective 1% annual chance (100-yr) floodplain, or Special Flood Hazard Area (SFHA)
Incorporated areas are ranked among 229 communities; unincorporated areas are ranked among 55 communities.

Floodplain Area; Maps

Floodplain Area by County

January 2024

Top 5 Counties	RPDC Region	Modified Total SFHA Area (acres)
Hampshire	8	26,607
Kanawha	3	23,929
Mason	2	23,117
Greenbrier	4	21,615
Randolph	7	20,523



WVGISTC 2024-1-22

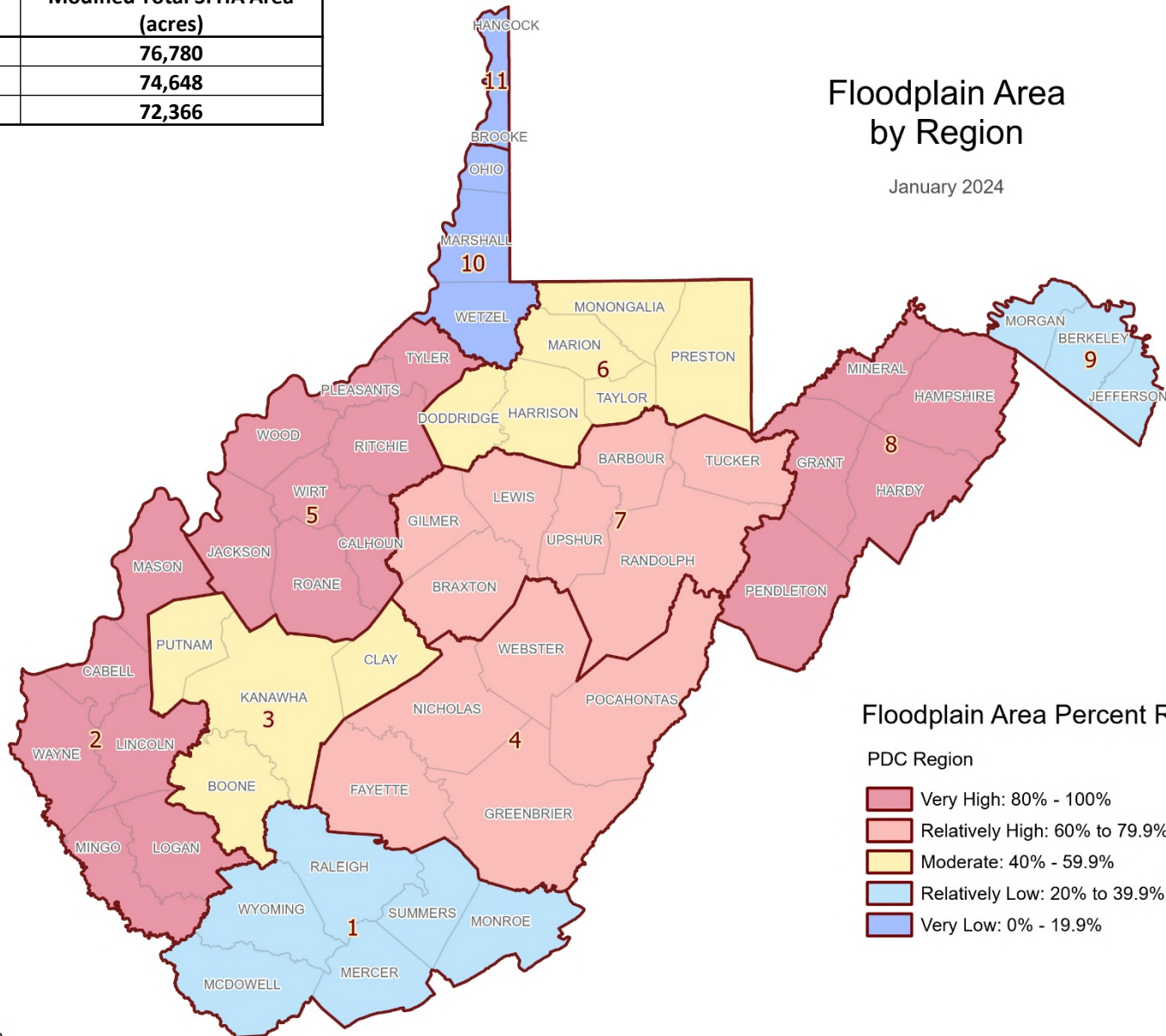
Data Source: Regulatory Effective 1% annual chance (100-yr) floodplain, or Special Flood Hazard Area (SFHA)

Floodplain Area; Maps

Top 3 Regions	Modified Total SFHA Area (acres)
5	76,780
8	74,648
2	72,366

Floodplain Area by Region

January 2024

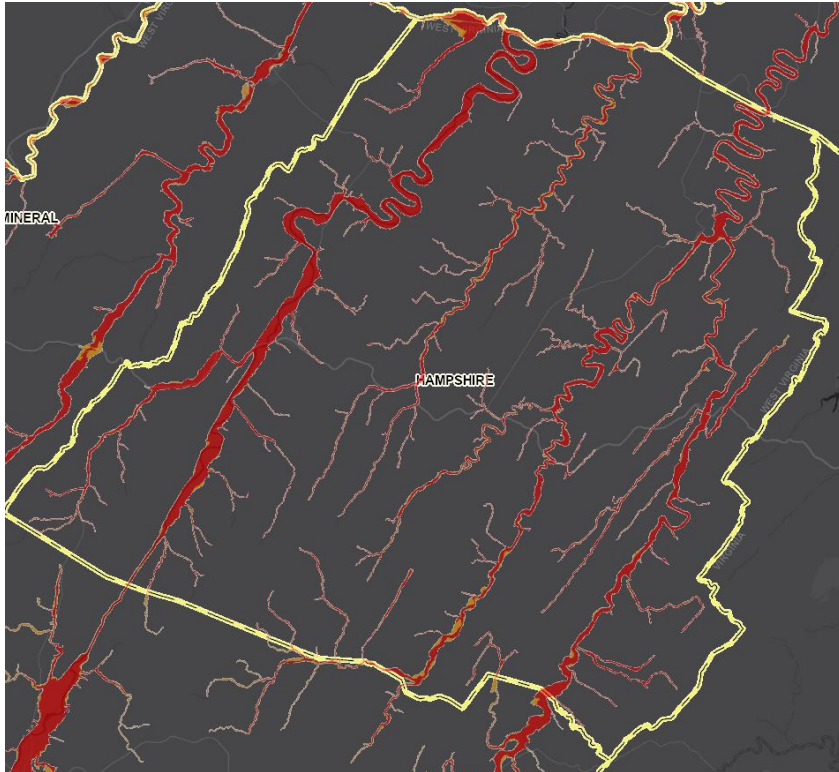


Floodplain Area Percent Rank

PDC Region

- Very High: 80% - 100%
- Relatively High: 60% to 79.9%
- Moderate: 40% - 59.9%
- Relatively Low: 20% to 39.9%
- Very Low: 0% - 19.9%

Floodplain Area; WV Flood Tool

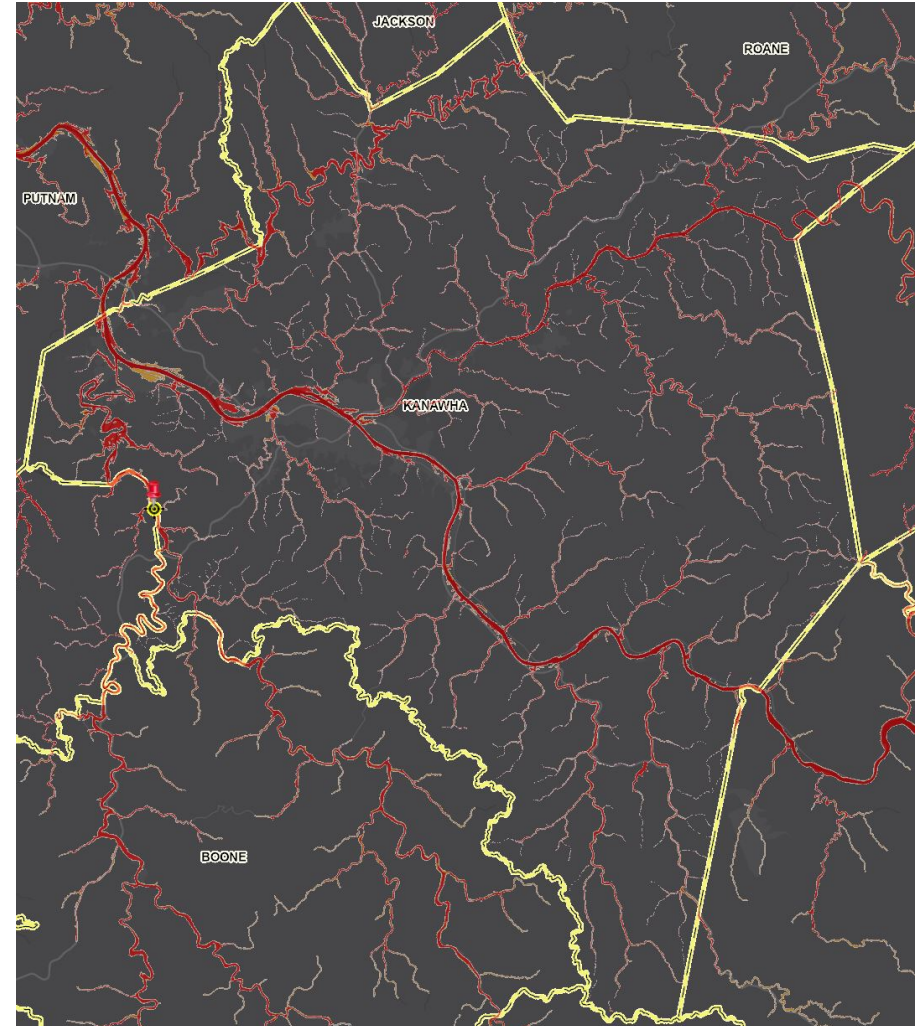


A WV Flood Tool Screenshot of the floodplains in Hampshire County

[\(Image link\)](#)

100-year High Risk Flood Zones

- FEMA Effective Floodplain
- High Risk Advisory Flood Zone



A WV Flood Tool Screenshot of the floodplains in Kanawha County

[\(Image link\)](#)

Floodplain Area; Findings

Top 10 unincorporated communities with the highest floodplain areas:

SFHA, Top 10 Unincorporated Communities							
Rank	Community	RPDC Region	Total SFHA Area (acres)	Water Bodies > 10 acres & Wide Streams > 500 ft.	Federal Lands (> 10 acres)	Modified Total SFHA Area (acres) (Minus large water bodies and federal lands)	Percent Rank
UNINCORPORATED							
1	Hampshire County*	8	26,409	9	27	26,373	100.0%
2	Mason County*	2	30,008	7,993	26	21,989	99.6%
3	Kanawha County*	3	21,456	473	0	20,983	99.2%
4	Greenbrier County*	4	22,674	463	1,511	20,700	98.9%
5	Randolph County*	7	25,982	20	6,124	19,838	98.5%
6	Webster County*	4	22,052	435	4,062	17,555	98.2%
7	Wood County*	5	22,895	5,113	415	17,367	97.8%
8	Hardy County*	8	17,090	55	152	16,883	97.5%
9	Jackson County*	5	19,109	3,912	155	15,042	97.1%
10	Pendleton County*	8	15,005	118	769	14,118	96.8%

Top 5 counties with the highest floodplain areas:

SFHA, Top 5 Counties							
Rank	County	RPDC Region	Total SFHA Area (acres)	Water Bodies > 10 acres & Wide Streams > 500 ft.	Federal Lands (> 10 acres)	Modified Total SFHA Area (acres) (Minus large water bodies and federal lands)	Percent Rank
1	HAMPSHIRE	8	26,643	9	27	26,607	100.0%
2	KANAWHA	3	25,863	1,934	0	23,929	98.1%
3	MASON	2	31,694	8,551	26	23,117	96.2%
4	GREENBRIER	4	23,589	463	1,511	21,615	94.4%
5	RANDOLPH	7	26,676	29	6,124	20,523	92.5%

Percent Rank Legend:

Very High: 80% to 100%
Red: 90% to 100%

Floodplain Area; Findings

Summary of Findings:

- The total **modified area of floodplains (aSFHA) in West Virginia**, excluding large open water lakes (> 10 acres), large rivers (bank-to-bank > 500 ft.), and federal lands (> 10 acres), amounts to **528,635 acres** which constitutes **3.4%** of the state's total land area.
- At the **county level**, **Hampshire County** has the highest modified area of floodplains (aSFHA) with 26,607 acres followed by **Kanawha County** with 23,929 acres.
- Among all **unincorporated areas** in the state, **Hampshire** is ranked first for the modified area of floodplains (aSFHA) with 26,373 acres followed by **Mason** Unincorporated Area with 21,989 acres.

Floodplain Area Spatial Distribution:

- Counties with the **highest** modified acreage of floodplains are mostly located in two clusters in the **Eastern** and **Western** parts of the state.