

Statewide Flood Risk Assessment, WVFRF, Apr. 2025



General Information

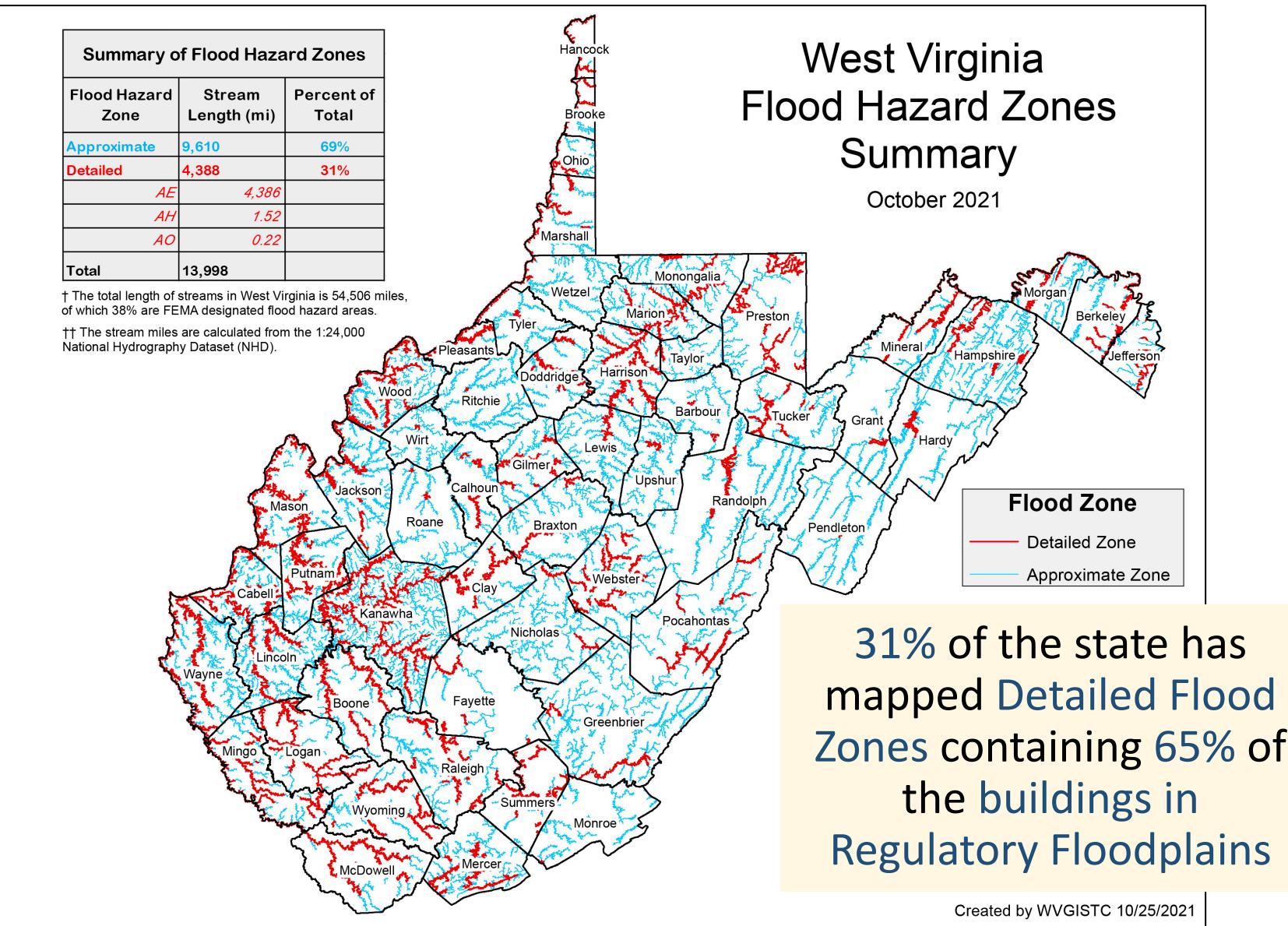
Total Area: 15,500,454 acres
 Total Structures: 1,118,761

Total Population: 1,801,049
 Population Density: 74 /sq. mile

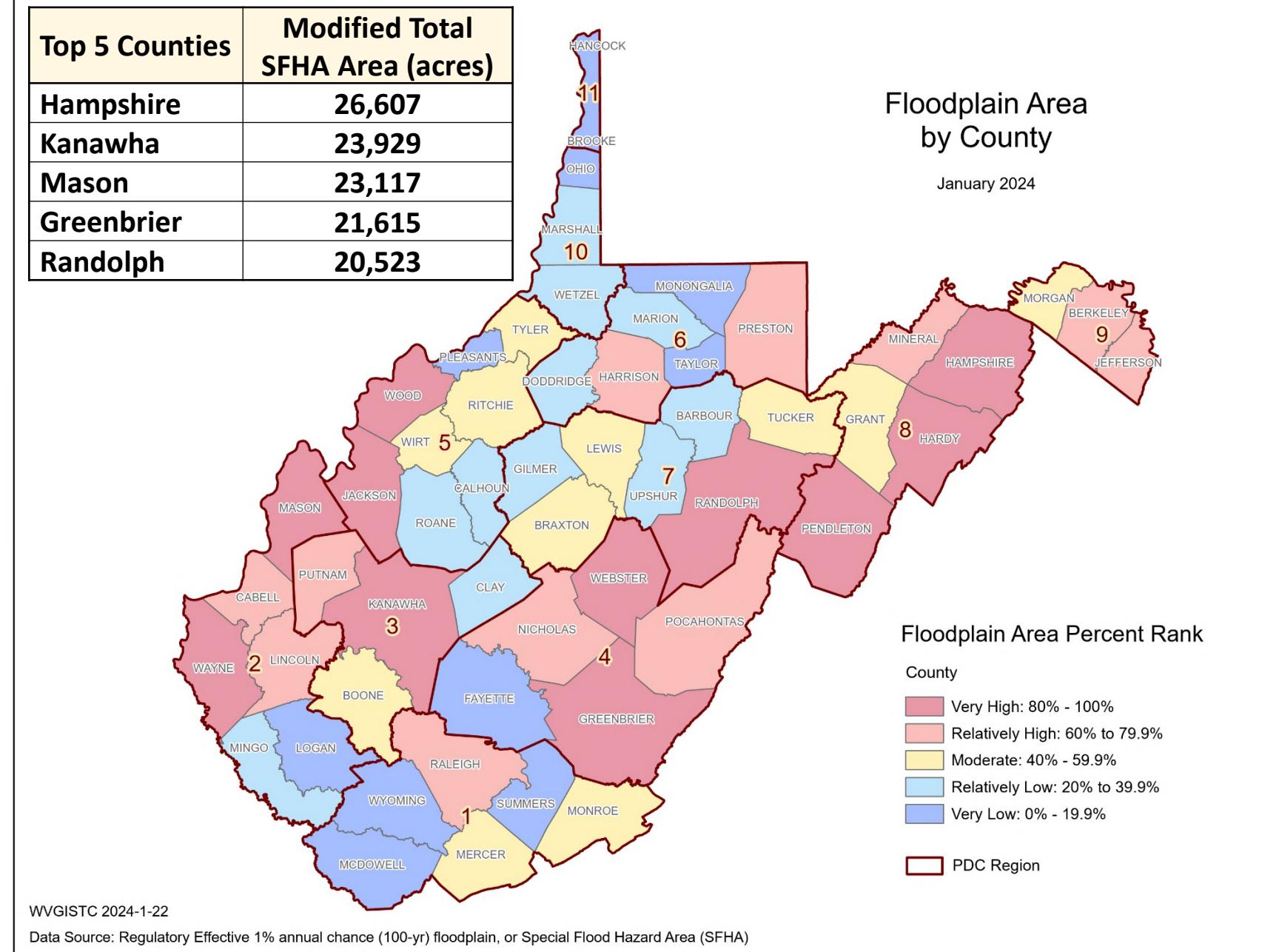
Number of Households: 711,352
 Average Household Size: 2.5

Floodplain Characteristics

- Floodplain Length: 17,205 miles of high-risk floodplain
- Floodplain Length Ratio: 0.0011 miles/acre



- Floodplain Area: 528,635 acres of high-risk floodplain
 Modified Area of Regulatory Floodplains (aSFHA) excluding large open water lakes (> 10 acres), large rivers (bank-to-bank > 500 ft.), and federal lands (> 10 acres)
- Floodplain Area Ratio: 3.4% of the state's area lies within the Special Flood Hazard Area

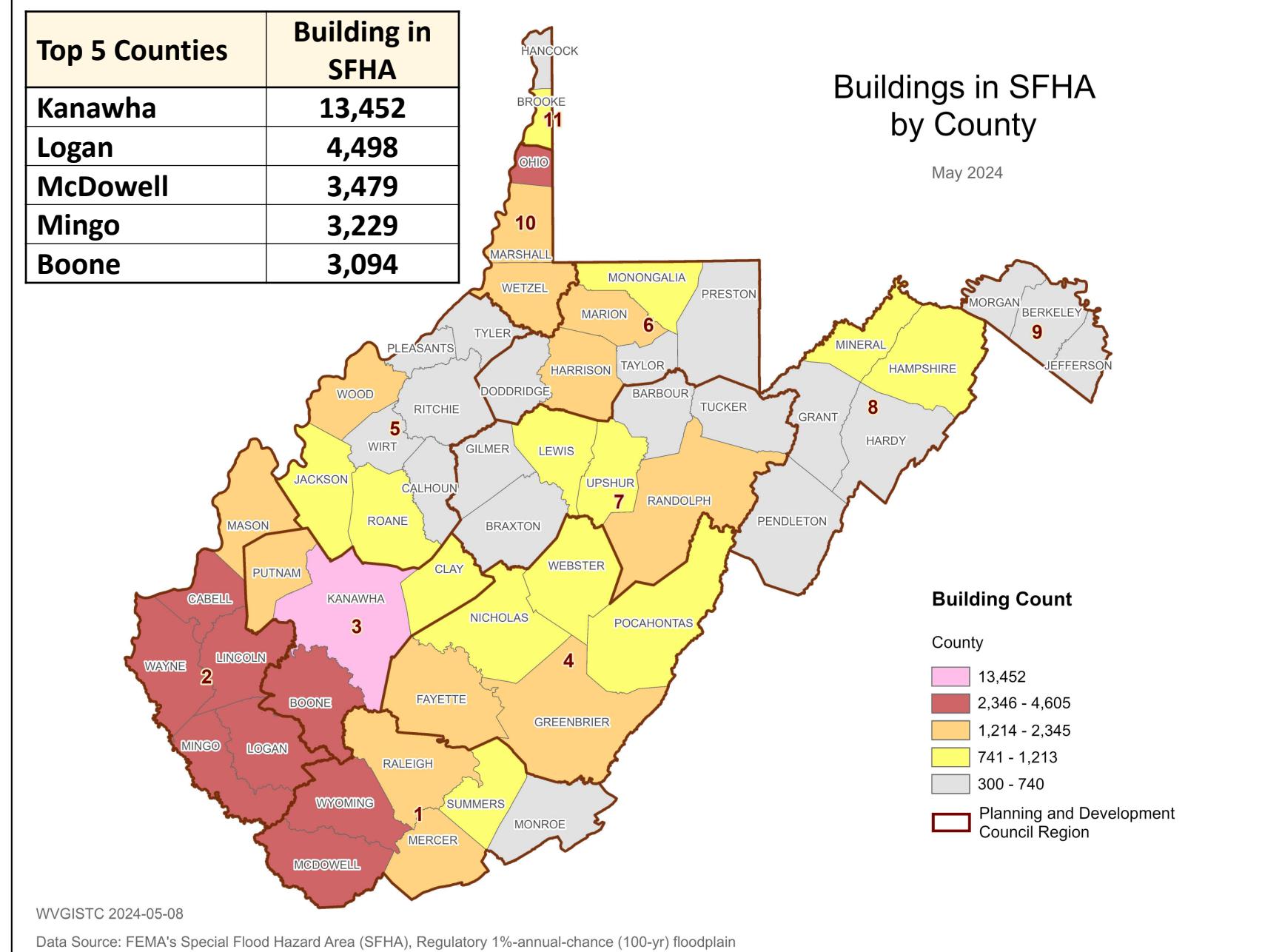


- Flood Depth Median: 1.8 ft (base flood depth)

- Total Federally-Declared Flood Disasters in the State since 1953: 64 event

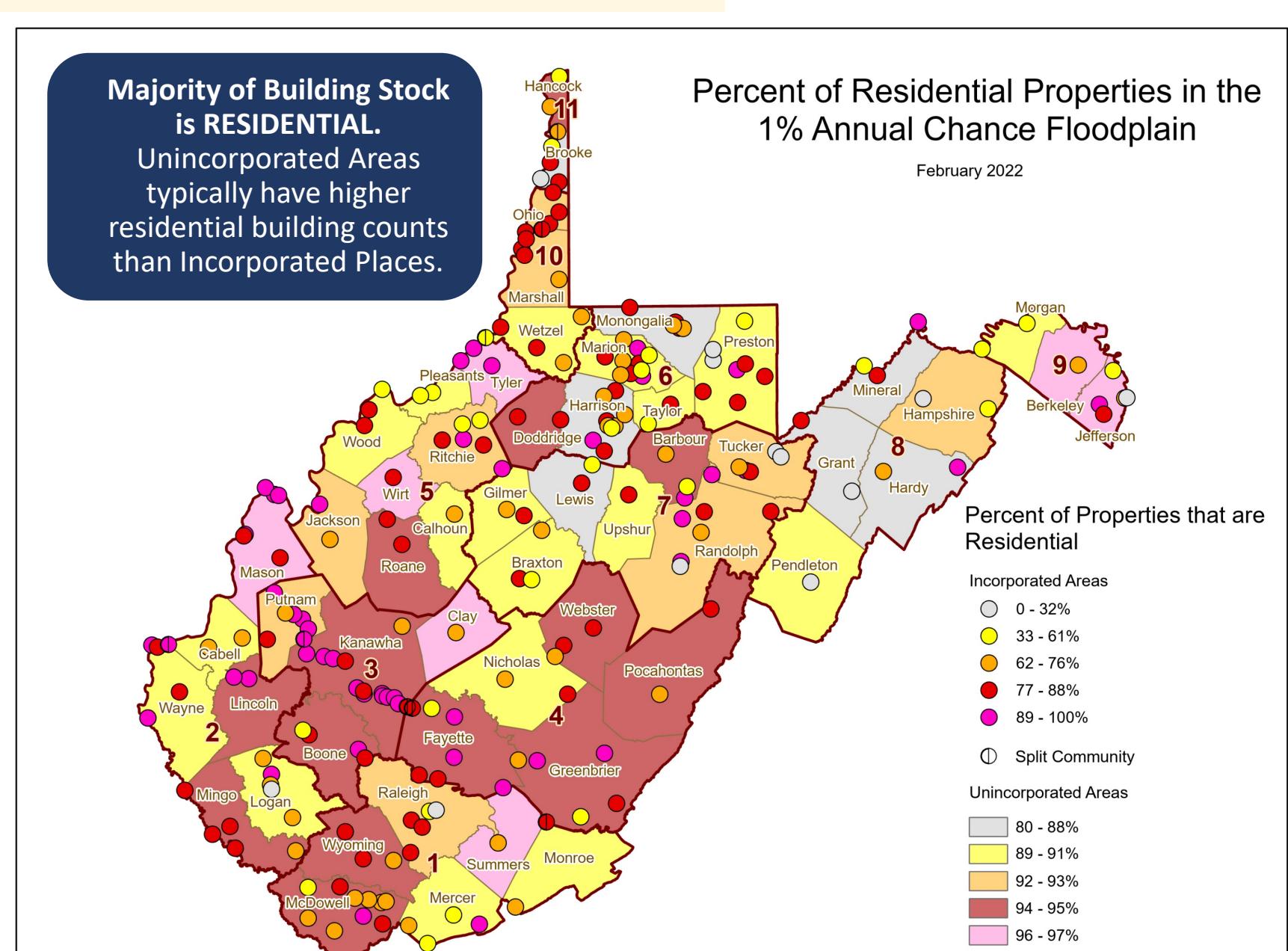
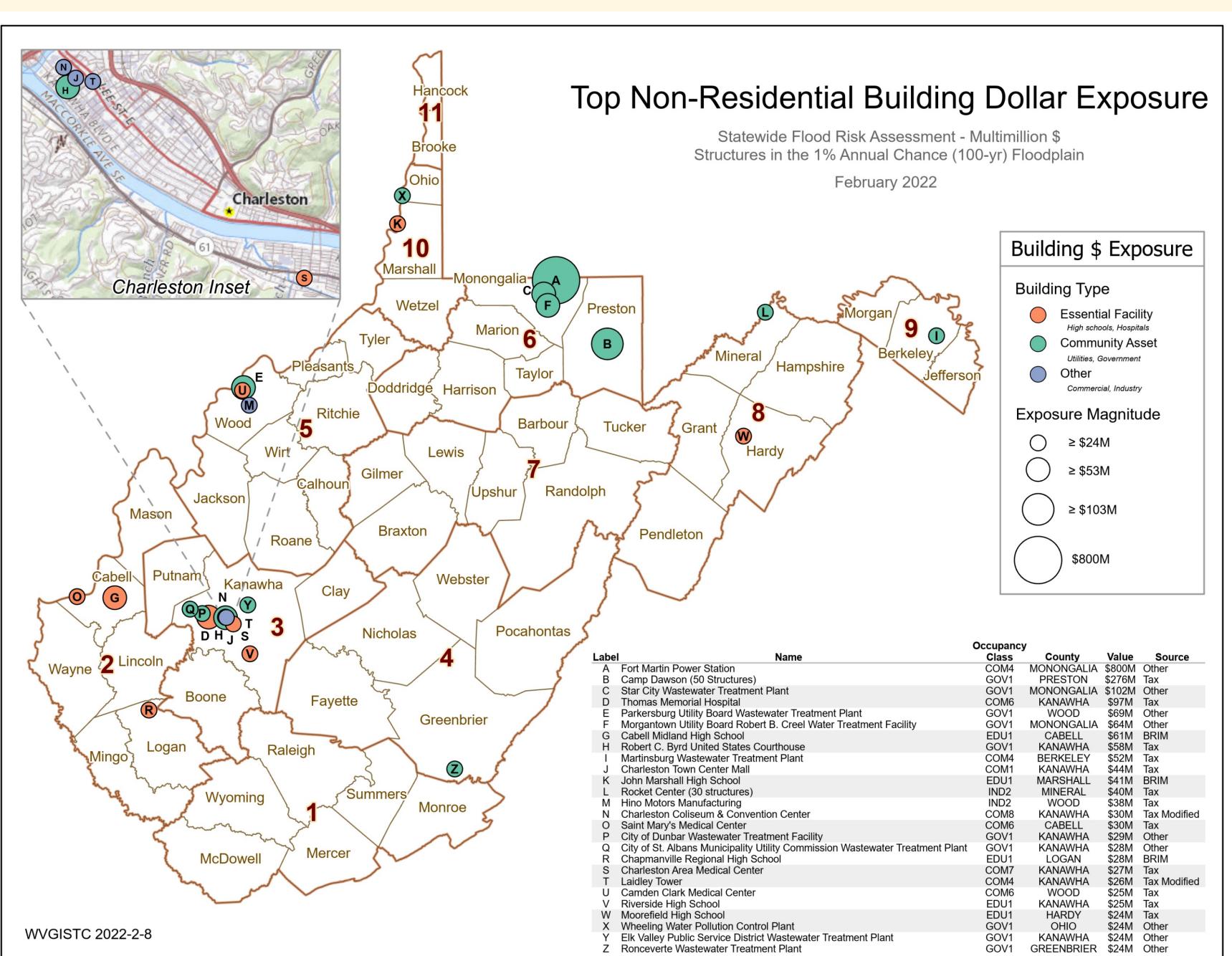
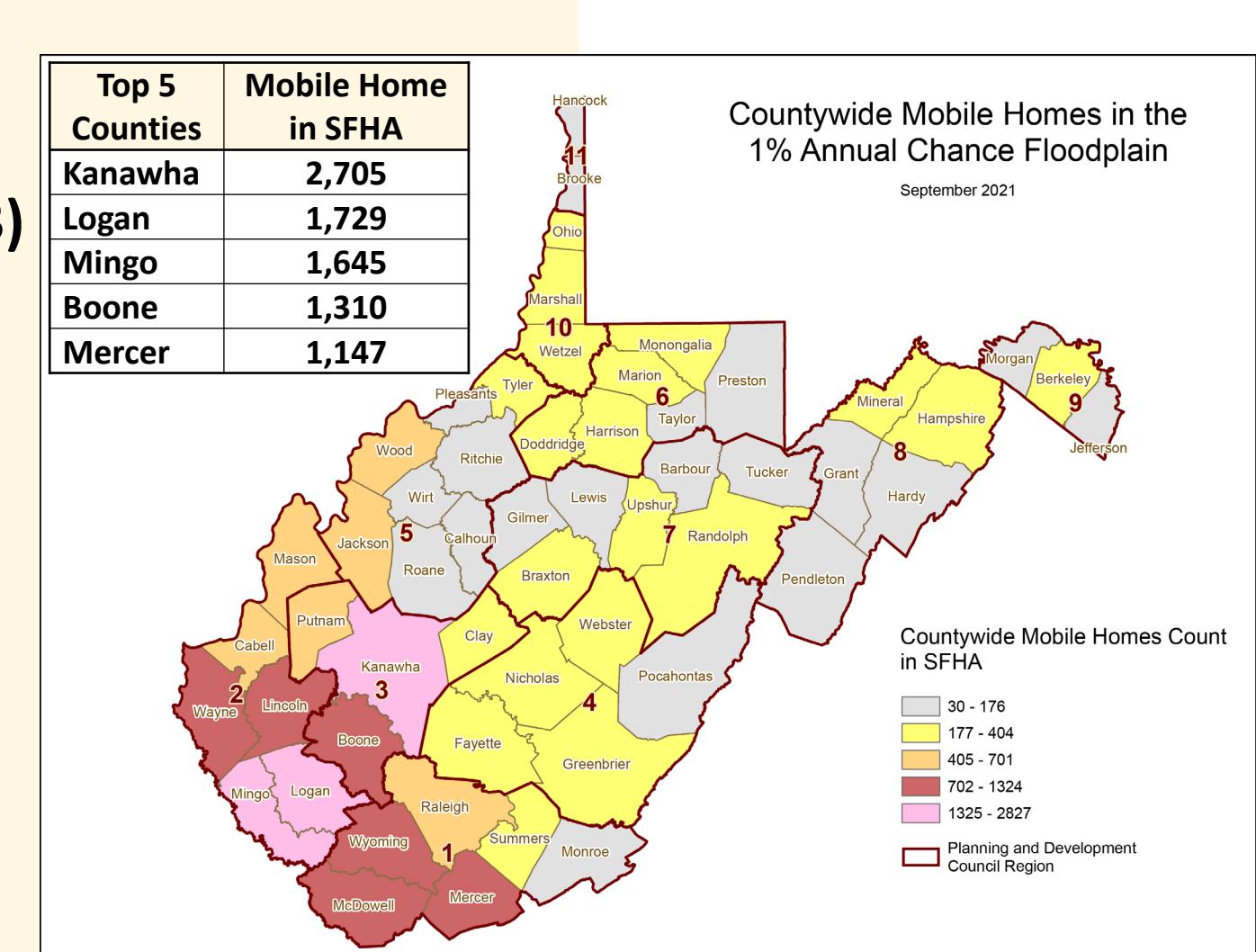
Building Exposure

- Building Floodplain Count: 82,408 Structures
- Building Floodway Count: 8,237 Structures
- Building Floodplain Ratio: 7.4% of Buildings in the state
- Building Density: 0.16 /acre (in floodplain)
 - Buildings in High-Risk Effective Zones: 84,621
 - Buildings in High-Risk Advisory Zones: 13,315
 - Buildings in All High-Risk Floodplains: 97,936 (8.8% of WV Bldgs.)
 - Buildings in Estimated Depths of Greater than 10 ft: 2,088



Building Characteristics (in High-Risk Floodplain)

- Building Median Value: \$38,200 (in floodplain)
- Bldg. Mobile Homes Ratio: 27.5% of single-family dwellings in floodplain are manufactured homes (Count: 23,315)
- Bldg. Subgrade Basements Ratio: 24.8% of floodplain buildings have subgrade basements (Count: 24,323)
- Building 1-Story Ratio: 84.0% of floodplain buildings have only one story (Count: 82,201)
- Bldg. Year Pre-FIRM Ratio: 77.5% of floodplain buildings are Pre-FIRM or built with no FIRM in effect (Count: 75,804)
- Bldg. Year Minus Rated Post-FIRM Ratio: 5.8% of floodplain buildings are Post-FIRM with lowest floor below Base Flood Elevation (BFE) (Count: 4,740)
 - Total Building Value in High-Risk Floodplain: \$9,971M
 - Residential (1-4 Units) Building Count in High-Risk Floodplain: 86,732 (88.5% of total count)
 - Residential (1-4 Units) Building Value in High-Risk Floodplain: \$4,344M (43.5% of total value)
 - Non-Residential (including Apartments) Building Count in High-Risk Floodplain: 11,204 (11.5% of total count)
 - Non-Residential (including Apartments) Building Value in High-Risk Floodplain: \$5,627M (56.5% of total value)



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Critical Infrastructure (in High-Risk Floodplain)

❖ **Essential Facilities:** 489 of 1,696 essential facilities (28.8%) in moderate or high-risk floodplains

| | | | | | |
|--------------------|---------------------|-------------------|---------------------|-------------------|--------------------|
| | | | | | |
| 88 of 312 (28%) | 187 of 548 (34%) | 10 of 54 (19%) | 170 of 828 (21%) | 15 of 67 (22%) | 19 of 111 (17%) |

Most Vulnerable: 262 (schools, hospital, nursing homes, or other essential facilities in floodway or in estimated flood depths ≥ 3 ft)



Williamson, Mingo County, February 2025

McDowell County, February 2025



Marlinton, November 1985

❖ **Roads Inundated:** 6,503 miles of total 109,052 miles (6%) estimated to be flooded by a 1% annual chance (100-year) major flood

- **Bridges Inundated:** 2,603 of 7,349 public bridges (35%) can be inundated by a 1% annual chance flood.
- **Railroads Inundated:** 617 miles of total 3,284 miles (19%) can be inundated by a 1%-annual-chance flood.



Richwood, June 2016

Most Vulnerable Non-Historical : 616
(in floodway or in estimated flood depths ≥ 3 ft)

At-Risk Community Assets

❖ **Historical Community Assets:** 2,758 in high-risk floodplain

❖ **Non-Historical Community Assets:** 2,092 in high-risk floodplain



Welch, McDowell County, February 2025



Welch, McDowell County, February 2025

Building Damage Loss

❖ **Substantial Damage Count:** 6,493 buildings substantially damaged ($\geq 50\%$ of appraised value) by a 1%-annual-chance (100-year) flood

❖ **Substantial Damage Ratio:** 7.9% of buildings in floodplain substantially damaged by a major storm

❖ **Previous Damage Claims:** 27,882 buildings with prior damage claims

❖ **Repetitive Loss Structures:** 9,698 buildings with at least 2 paid flood losses, of more than \$1,000 each, in any 10-year period since 1978

▪ Total Estimated Building Loss: \$858M (8.6% of total building value in high-risk floodplain)

▪ Building Loss Median Value: \$5,970

▪ Total Estimated Debris: 521,283 tons



Chesapeake, Kanawha County, August 2023

People / Social Vulnerabilities

❖ **Population in Floodplain Ratio:** 11.0% of the state's population (198,888 persons) residing in the high-risk flood zone

❖ **Population Displaced Ratio:** 6.6% of the state's population (119,350 persons) displaced by a 1%-annual-chance (100-year) flood event

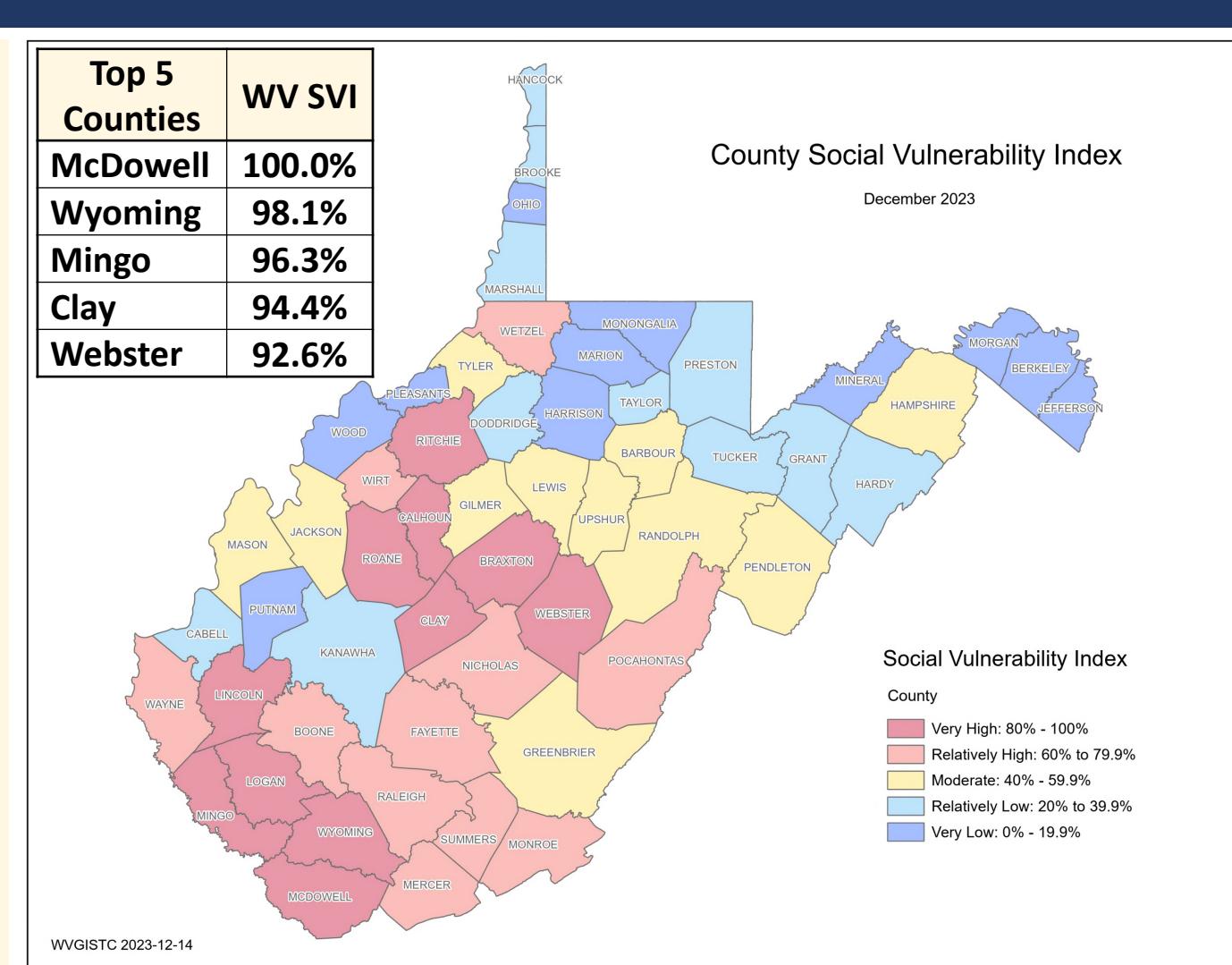
▪ Short-Term Shelter Population: 23,003 persons

▪ Short-Term Shelter Companion Pets: 6,411 (4,057 dogs and 2,354 cats)

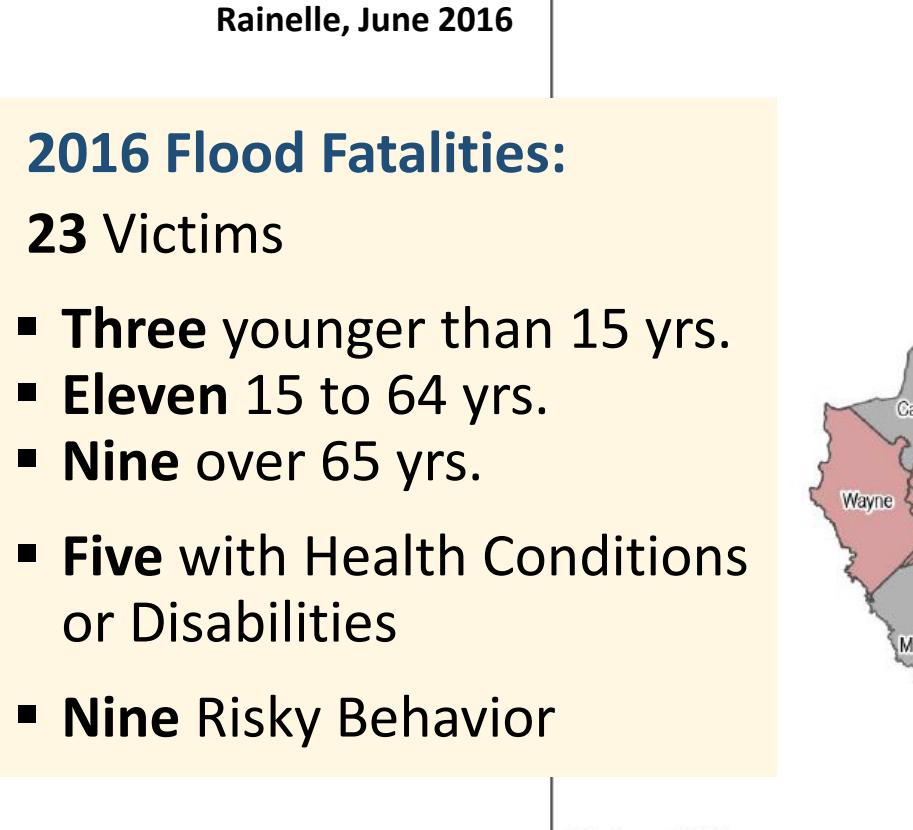
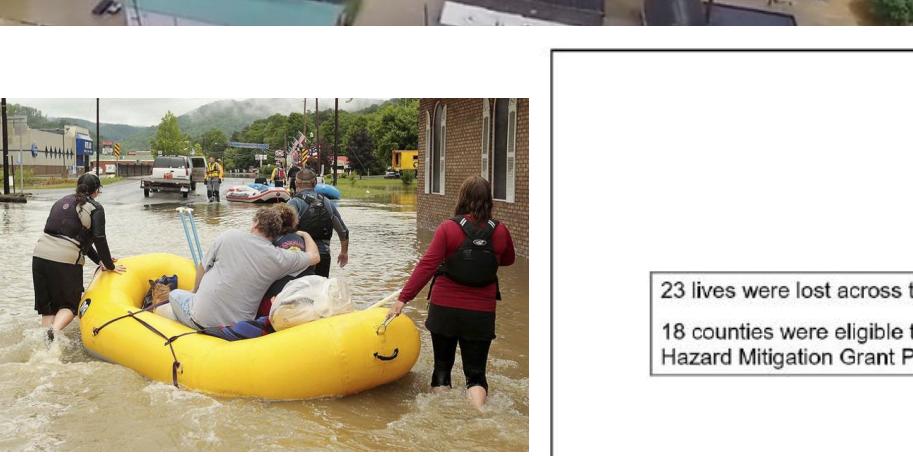
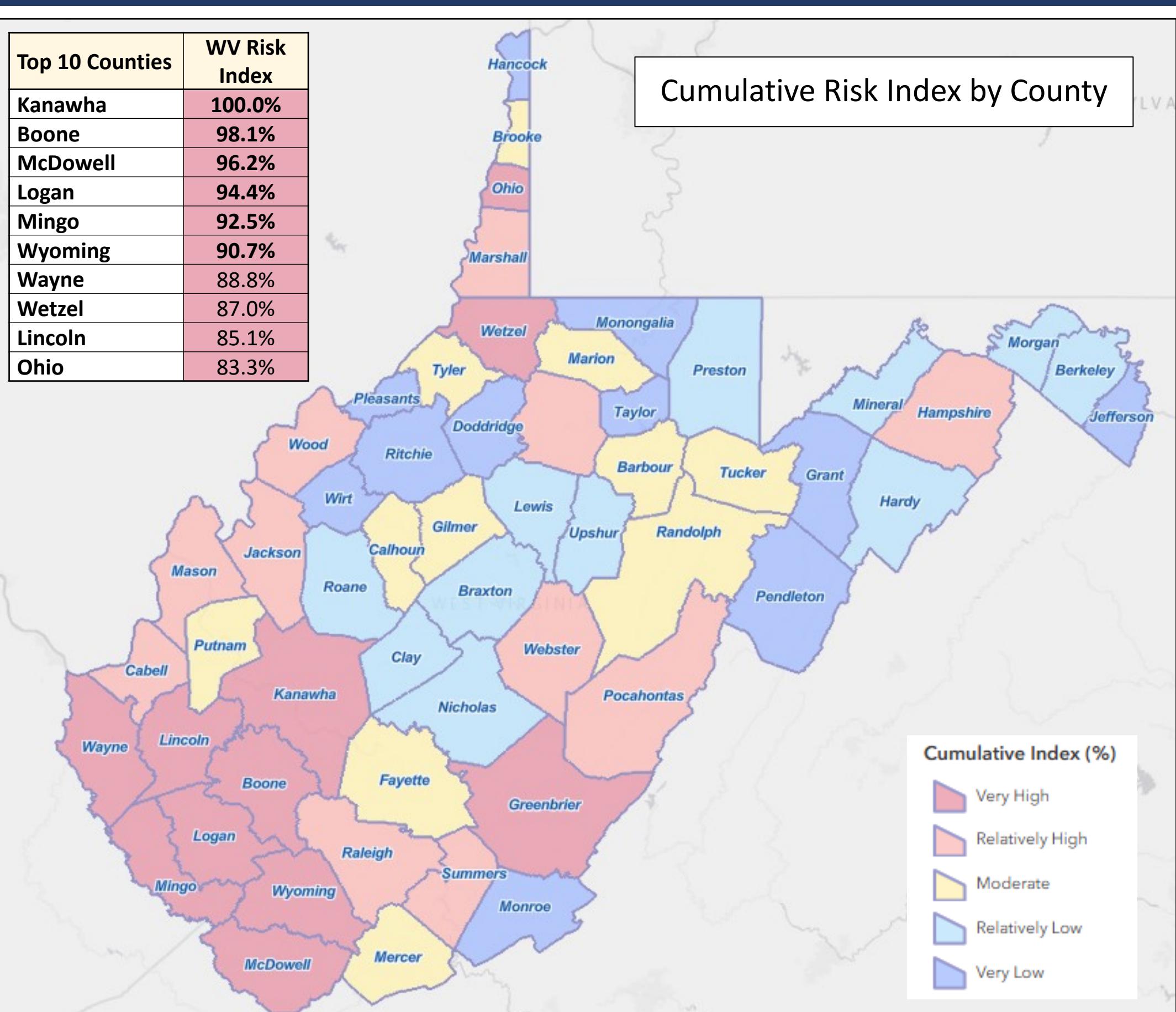
Social Vulnerability Index (WV SVI) (0% to 100%)

Combines indicators of:

- Poverty Rate
- Unemployment Rate
- Vulnerable Ages Rate
- Disability Rate
- Population without a High School Diploma
- Population Change
- Median Housing Unit Value
- Percentage of Mobile Homes in Housing Units



Cumulative Risk Index



White Sulphur Springs, June 2016



Rainelle, June 2016

