STATE FLOOD RISK FOCUS STUDY RESOURCES (CATALOG)  
*Compiled by Behrang, Mar. 2024*

**Indicator Materials:** Materials related to risk/mitigation indicators in WV and supporting documents prepared for different scales of Communities (both types), Incorporated Places, Unincorporated Areas, Counties, Regions, Streams, and Watersheds.

The folders are on the FTP drive under: **\\gistc-outfilesrv1-22\FTPDrive\pub\RA\RI\ST**

On the FTP drive, the folder names are the abbreviations mentioned in parenthesis on this list.

Contents

[I. Flood Hazard Risk Indicators 2](#_Toc162272208)

[a) Floodplain Area 2](#_Toc162272209)

[b) Floodplain Length 3](#_Toc162272210)

[c) Declared Flood Disasters (DCL\_DSTR) 3](#_Toc162272211)

[d) Flood Depth (FLD\_DPT) 3](#_Toc162272212)

[e) Other Documents (z\_MISC\_HZ) 3](#_Toc162272213)

[II. Structure Risk Indicators 3](#_Toc162272214)

[a) Building Counts / Ratios 3](#_Toc162272215)

[b) Building Types & Values 4](#_Toc162272216)

[c) Vulnerable Structures 4](#_Toc162272217)

[d) FIRM Status 5](#_Toc162272218)

[e) Building Year / New Construction 5](#_Toc162272219)

[f) Significant Structures (SIG\_STRC) 5](#_Toc162272220)

[g) Physical Damage Estimates 5](#_Toc162272221)

[h) Recorded Building Damage Losses 5](#_Toc162272222)

[i) Transportation Infrastructure 5](#_Toc162272223)

[j) Other Documents (z\_MISC\_STR) 5](#_Toc162272224)

[III. People/Social Risk Indicators 6](#_Toc162272225)

[a) Social Vulnerability 6](#_Toc162272226)

[b) Population Exposure 6](#_Toc162272227)

[c) Population Displacement & Shelter Needs (POP\_DSP\_SHLT) 6](#_Toc162272228)

[d) Fatalities by the 2016 Flood (FAT\_2016) 6](#_Toc162272229)

[e) Fatalities by the 1985 Flood (FAT\_1985) 6](#_Toc162272230)

[IV. Other Hazards 6](#_Toc162272231)

[a) Dams/Levees (DAM\_LEV) 6](#_Toc162272232)

[b) Landslide (LNDSLD) 6](#_Toc162272233)

[V. Mitigation Measures 6](#_Toc162272234)

[a) Floodplain Management 6](#_Toc162272235)

[b) Flood Insurance 6](#_Toc162272236)

[c) Mitigated Structures 6](#_Toc162272237)

[d) Green Infrastructure (GI) 7](#_Toc162272238)

[e) Other Documents 7](#_Toc162272239)

[VI. Visualizations 7](#_Toc162272240)

[a) Multimedia 7](#_Toc162272241)

[b) PowerPoint (PPT) 7](#_Toc162272242)

[c) Posters (PSTR) 7](#_Toc162272243)

[d) Story Maps (STR\_M) 7](#_Toc162272244)

[e) Flood Dashboards (DB) 7](#_Toc162272245)

[f) Web Viewers 7](#_Toc162272246)

[VII. Reports / Publications 7](#_Toc162272247)

[a) Project Reports 7](#_Toc162272248)

[b) Scholarly Articles 8](#_Toc162272249)

[VIII. Presentations 8](#_Toc162272250)

[IX. FEMA Flood Studies and Reports 8](#_Toc162272251)

[c) 2016 Flood Report 8](#_Toc162272252)

# Flood Hazard Risk Indicators

## Floodplain Area

* + 1. Floodplain Area Ratio (SFHA\_RT) (Incorporated Place Scale)

*Maps:* [Communities Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA_RT/FloodplainArea_PCTrank_Community_20240122.pdf), [Incorporated Places Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA_RT/FloodplainAreaRatio_PCTrank_Incorporated_20240123.pdf)

*Tables:* [Top 20% Rankings (Incorporated & Community levels)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA_RT/SFHA_RT.pdf#page=3),[Top 20% Excel Dataset (SFHA\_RT\_80pct\_Incorporated.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA_RT),[Excel Dataset (aSFHA.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA_RT)

* + 1. Floodplain Area (SFHA) (Unincorporated Area Scale & Larger)

*Maps:* [Communities Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA/FloodplainArea_PCTrank_Community_20240122.pdf), [Unincorporated Areas Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA/FloodplainArea_PCTrank_Unincorporated_20240123.pdf), [Counties Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA/FloodplainArea_PCTrank_County_20240122.pdf), [Regions Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA/FloodplainArea_PCTrank_Region_20240123.pdf)

*Tables:* [Top 20% Rankings (Unincorporated Area Level & Larger)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA/SFHA.pdf#page=3), [Top 10 unincorporated communities](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA/SFHA.pdf#page=9), [Top 5 Counties](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA/SFHA.pdf#page=9),[Top 20% Excel Dataset (SFHA\_80pct\_All\_Scales.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA),[Excel Dataset (aSFHA.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA)

## Floodplain Length

* + 1. Floodplain Length Ratio (FLDPLN\_L\_RT)

*Maps:* [Communities Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/FLDPLN_L_RT/FloodplainLength_PCTrank_Community_20240122.pdf), [Counties Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/FLDPLN_L_RT/FloodplainLengthRatio_PCTrank_Incorporated_20240123.pdf)

*Tables:* [Excel Dataset (Stream\_Length\_w-wo\_300ftbuffer.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/FLDPLN_L_RT/)

* + 1. Floodplain Length (FLDPLN\_LNG)

*Maps:* [Communities Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/FLDPLN_LNG/FloodplainLength_PCTrank_Community_20240122.pdf), [Unincorporated Areas Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/FLDPLN_LNG/FloodplainLength_PCTrank_Unincorporated_20240123.pdf), [Counties Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/FLDPLN_LNG/FloodplainLength_PCTrank_County_20240122.pdf), [Regions Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/FLDPLN_LNG/FloodplainLength_PCTrank_Region_20240123.pdf)

*Tables:* [Excel Dataset (Stream\_Length\_w-wo\_300ftbuffer.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/FLDPLN_LNG/)

## Declared Flood Disasters (DCL\_DSTR)

*Maps:* [Counties Count](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/DCL_DSTR/DeclaredDisasters_Count_County.pdf), [Counties Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/DCL_DSTR/DeclaredDisasters_PCTrank_County.pdf)

*Tables:* [Top & Bottom 20% Counties](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/DCL_DSTR/DCL_DSTR.pdf#page=3), [Excel Dataset (DCL\_DSTR.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/DCL_DSTR/)

## Flood Depth (FLD\_DPT)

* + 1. Maximum Flood Depth
    2. High Water Marks: [*Map (Dec. 2020)*](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/FLD_DPT/HWM_20201221.pdf)*,* [*GIS Data*](https://services.wvgis.wvu.edu/arcgis/rest/services/Hazards/floodTool_highWaterMarks/MapServer)*,* [*Table*](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/FLD_DPT/HWM/)

## Other Documents (z\_MISC\_HZ)

* + 1. Active Flood Studies and Mapping: [*Map (Feb. 2024)*](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/z_MISC_HZ/Mapping/RiskMAPStudies.pdf)*,* [*Table*](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/z_MISC_HZ/Mapping/)
    2. Model-Backed A Zones: [*Map (Jul. 2023)*](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/z_MISC_HZ/A_Zones/Advisoy_A_and_AFH_Status.pdf)*,* [*Table*](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/z_MISC_HZ/Mapping/)*,* [*Info Sheet*](https://www.mapwv.gov/flood/content/documents/AFHhandout.pdf)
    3. Updated AE Status: [*Map (Jul. 2022)*](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/z_MISC_HZ/Updated_Zone_AE_Status.pdf)*,* [*Methodology Info.*](https://data.wvgis.wvu.edu/pub/RA/_resources/FloodTool/WV-Flood-Tool_FRA_Glossary.pdf#page=20)
    4. Model-Backed Depth Grid (1% Effective and Advisory): [*Map (Jun. 2021)*](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/z_MISC_HZ/DepthWSEL.pdf)*,* [*Table*](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/z_MISC_HZ/DepthGrid/)
    5. Flood Hazard Zone Summary (Area and Length): [*Map (Oct. 2021)*](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/z_MISC_HZ/WVFloodHazardZonesSummary.pdf)

# Structure Risk Indicators

## Building Counts / Ratios

* + 1. Building Count in SFHA (BLDG\_SFHA)

*Maps:* [Communities Count](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BldgCountSFHA_Count_Community.pdf), [Communities Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BldgCountSFHA_PCTrank_Community.pdf), [Counties Count](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BldgCountSFHA_Count_County.pdf), [Counties Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BldgCountSFHA_PCTrank_County.pdf), [Regions Count](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BldgCountSFHA_Count_Region.pdf), [Regions Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BldgCountSFHA_PCTrank_Region.pdf), [Streams (>100 bldg.) Count](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BldgCountSFHA_Count_Stream.pdf), [Streams (>100 bldg.) Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BldgCountSFHA_PCTrank_Stream.pdf), [Watersheds Count](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BldgCountSFHA_Count_Watershed.pdf), [Watersheds Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BldgCountSFHA_PCTrank_Watershed.pdf), [Major Land Resource Area (MLRA)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BldgCountSFHA_Count_MLRA.pdf)

*Tables:* [Top 20% Rankings (Community to Region levels)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BLDG_SFHA.pdf#page=3), [Top 20% Rankings (Stream and Watershed levels)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BLDG_SFHA.pdf#page=4), [Top 10 communities (Incorporated & Unincorporated)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BLDG_SFHA.pdf" \l "page=17), [Top 5 Counties](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BLDG_SFHA.pdf#page=17), [Excel Dataset (CL\_detailed\_flood\_zones.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/), [Top 20% Excel Dataset (BLDG\_SFHA\_80pct\_All\_Scales.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/)

* + 1. Building Count in Floodway (BLDG\_FLDW)

*Maps:* [Communities Count](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW/BldgCountFloodway_Count_Community.pdf), [Communities Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW/BldgCountFloodway_PCTrank_Community.pdf), [Counties Count](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW/BldgCountFloodway_Count_County.pdf), [Counties Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW/BldgCountFloodway_PCTrank_County.pdf), [Regions Count](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW/BldgCountFloodway_Count_Region.pdf), [Regions Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW/BldgCountFloodway_PCTrank_Region.pdf), [Streams Count](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW/BldgCountFloodway_Count_Stream.pdf), Streams Percent Rank, [Watersheds Count](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW/BldgCountFloodway_Count_Watershed.pdf), [Watersheds Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW/BldgCountFloodway_PCTrank_Watershed.pdf), [Major Land Resource Area (MLRA)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW/BldgCountFloodway_Count_MLRA.pdf)

*Tables:* Top 20% Rankings (Community to Region levels), Top 20% Rankings (Stream and Watershed levels)*,* Top 10 communities (Incorporated & Unincorporated), Top 5 Counties, [Excel Dataset (CL\_detailed\_flood\_zones.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW/), [Top 20% Excel Dataset (BLDG\_FLDW\_80pct\_All\_Scales.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW/)

* + 1. SFHA Buildings to Total Buildings Ratio (BLDG\_SFHA\_RT)

*Maps:* [Communities Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA_RT/FloodplainBuildingRatio_PCTrank_Community.pdf), [Incorporated Places Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA_RT/FloodplainBuildingRatio_PCTrank_Incorporated.pdf), [Unincorporated Areas Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA_RT/FloodplainBuildingRatio_PCTrank_Unincorporated.pdf), [Counties Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA_RT/FloodplainBuildingRatio_PCTrank_County.pdf), [Regions Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA_RT/FloodplainBuildingRatio_PCTrank_Region.pdf)

*Tables:* [Excel Dataset (bSF\_building\_ratio.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA_RT)

* + 1. Floodway Buildings to Exposed Buildings Ratio (BLDG\_FLDW\_RT)

*Maps:* [Communities Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW_RT/FloodwayBuildingRatio_PCTrank_Community.pdf), [Incorporated Places Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW_RT/FloodwayBuildingRatio_PCTrank_Incorporated.pdf), [Unincorporated Areas Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW_RT/FloodwayBuildingRatio_PCTrank_Unincorporated.pdf), [Counties Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW_RT/FloodwayBuildingRatio_PCTrank_County.pdf), [Regions Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW_RT/FloodwayBuildingRatio_PCTrank_Region.pdf)

*Tables:* [Excel Dataset (bSF\_building\_ratio.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLDW_RT)

* + 1. Building Density in Floodplain (BLDG\_DENS)

*Maps:* [Communities Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_DENS/BuildingDensity_PCTrank_Community.pdf), [Incorporated Places Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_DENS/BuildingDensity_PCTrank_Incorporated.pdf), [Unincorporated Areas Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_DENS/BuildingDensity_PCTrank_Unincorporated.pdf), [Counties Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_DENS/BuildingDensity_PCTrank_County.pdf), [Regions Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_DENS/BuildingDensity_PCTrank_Region.pdf), [Watersheds Percent Rank](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_DENS/SFHA_BuildingsPerArea_Watershed.pdf), [Density by Stream Area](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_DENS/BuildingDensity_Stream_Area.pdf), [Density by Stream Length](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_DENS/BuildingDensity_Stream_Length.pdf), [Floodplain Density by Major Land Resource Area (MLRA)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_DENS/BuildingDensity_MLRA.pdf), [SFHA Density by Major Land Resource Area (MLRA)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_DENS/BuildingDensity_MLRA_SFHA.pdf), [Density by Stream Length by Major Land Resource Area (MLRA)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_DENS/BuildingDensity_Stream_Length_MLRA.pdf), [Density by Stream Length overlaid with Density by Stream Length by Major Land Resource Area (MLRA)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_DENS/BuildingDensity_Stream_MLRA_Length.pdf)

*Tables:* [Excel Dataset (bSF\_building\_density.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_DENS/)

* + 1. High-Risk Floodplain Buildings Total (BLDG\_FLD)

*Maps:* [Streams Count](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLD/BldgCountHighRisk_Count_Stream.pdf), [Major Land Resource Area (MLRA)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_FLD/BldgCountHighRisk_Count_MLRA.pdf)

*Tables:*

* + 1. Buildings in FEMA Depth > 10 ft (FEMA\_DPT10)
    2. Buildings in FSF 2052 Depth > 10 ft (FSF\_DPT10)
    3. Mapped-In Buildings (MPD\_IN)
    4. Mapped-Out Buildings (MPD\_OUT)

## Building Types & Values

* + 1. Total Building Value in Floodplain (FLD\_VAL)
    2. Floodplain Building Value Ratio (FLD\_VAL\_RT)
    3. Median Floodplain Building Value (MED\_FLD\_VAL)
    4. Exposed Residential Count Ratio (RES\_RT)
    5. Exposed Non-Residential Count Ratio (NONRES\_RT)
    6. Residential Value in Floodplain (RES\_VAL)
    7. Exposed Residential Value Ratio (RES\_VAL\_RT)
    8. High-Value Residential Count (RES\_HIGH\_VAL)
    9. Non-Residential Value in Floodplain (NONRES\_VAL)
    10. Exposed Non-Residential Value Ratio (NONRES\_VAL\_RT)

## Vulnerable Structures

* + 1. Manufactured Homes in Floodplain (MOB\_FLD)
    2. Floodplain Manufactured Homes Ratio (MOB\_RT)
    3. Floodplain Buildings with Basements Ratio (BSM\_FLD)
    4. One-Story Residential Buildings Ratio (1STR\_FLD\_RT)
    5. Renter-Occupied Housing in Floodplain Ratio (RENT\_FLD\_RT)
    6. Low-Value Floodplain Buildings Ratio (RED\_TAG\_RT)

## FIRM Status

* + 1. Pre-FIRM in Floodplain Ratio (PRE-FIRM\_RT)
    2. Post-FIRM in Floodplain Ratio (POST-FIRM\_RT)

## Building Year / New Construction

* + 1. Median Building Year in Floodplain (MED\_YR\_FLD)
    2. Minus-Rated Post-FIRM Buildings (MIN\_RTD)
    3. Minus-Rated Post-FIRM Ratio (MIN\_RTD\_RT)

## Significant Structures (SIG\_STRC)

* + 1. Most Vulnerable Essential Facilities (EF\_VUL)
    2. Floodplain Essential Facilities (EF\_FLD)
    3. Most Vulnerable Non-Historical Community Assets (NONH\_CA\_VUL)
    4. Floodplain Non-Hist. Community Assets (NONH\_CA\_FLD)
    5. Most Vulnerable Historical Community Assets in Floodplain (HIST\_CA\_VUL)
    6. Floodplain Historical Community Assets (HIST\_CA\_FLD)
    7. Critical Structures in Community Disaster Resiliency Zones (CS\_CDRZ): [*Map*](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/SIG_STRC/CS_CDRZ/CDRZ_Critical_Infrastructure.pdf)*,* [*Table* (Crtitical\_Infrastructure\_in\_CDRZ.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/SIG_STRC/CS_CDRZ)

## Physical Damage Estimates

* + 1. Building Flood Loss Ratio (LOSS\_RT)
    2. Substantial Damage Buildings (SD\_FLD)
    3. Substantial Damage Ratio (SD\_RT)
    4. Median Building Flood Damage (MED\_USD\_LOSS)
    5. Median Building Percent Damage (MED\_PCT\_LOSS)
    6. High Damage Buildings (HIGH\_LOSS)
    7. Debris Removal (DBR\_FLD)

## Recorded Building Damage Losses

* + 1. Previous Flood Claims (PREV\_CLM)
    2. Previous Paid Losses (PREV\_LOSS)
    3. Repetitive Loss Structures (REP\_LOSS)
    4. Inundated Roads Ratio (ROAD\_FLD\_RT)

## Transportation Infrastructure

* + 1. Inundated Roads Ratio (ROAD\_FLD\_RT)

## Other Documents (z\_MISC\_STR)

* + 1. [A Zone Structure Clusters (Feb. 2022)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/z_MISC_STR/Zone_A_cluster_analysis_5-10-15ft.pdf)
    2. Verified LOMA Properties Removal Status. Future SFHA Status

# People/Social Risk Indicators

## Social Vulnerability

* + 1. WV Social Vulnerability Index ([WV\_SVI](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/WV_SVI/WV_SVI.pdf))

*Maps:* [Communities Index](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/WV_SVI/WV_SVI_Maps.pdf#page=1), [Incorporated Places Index](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/WV_SVI/WV_SVI_Maps.pdf#page=2), [Unincorporated Areas Index](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/WV_SVI/WV_SVI_Maps.pdf#page=3), [Counties Index](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/WV_SVI/WV_SVI_Maps.pdf#page=4), [Regions Index](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/WV_SVI/WV_SVI_Maps.pdf#page=5)

*Tables:* [Top 20% Rankings (All scales)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/WV_SVI/WV_SVI.pdf#page=3), [Top 10 communities (Incorporated & Unincorporated)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/WV_SVI/WV_SVI.pdf#page=11), [Top 5 Counties](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/WV_SVI/WV_SVI.pdf#page=12), [Excel Dataset (WV\_SVI.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/WV_SVI/), [Top 20% Excel Dataset (WV\_SVI\_80pct\_All\_Scales.xlsx)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/WV_SVI/)

## Population Exposure

* + 1. Floodplain Population Ratio (FLD\_POP\_RT)

## Population Displacement & Shelter Needs (POP\_DSP\_SHLT)

* + 1. Displaced Population Ratio (DISP\_POP\_RT)
    2. Population Displaced (DISP\_POP)
    3. Short-Term Shelter Population (SHLT\_POP)
    4. Short-Term Shelter Ratio (SHLT\_POP\_RT)
    5. Shelter Companion Pets (SHLT\_PET)

## Fatalities by the 2016 Flood (FAT\_2016)

*Map:* [2016 Fatalities Locations](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/FAT_2016/2016_FloodVictim_Location_Map.pdf)

*Charts:* [Age Distribution in State Population and 2016 Flood Fatalities](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/FAT_2016/2016FloodVictims_Age_Chart.pdf), [Vulnerable Ages in State Population and 2016 Flood Fatalities](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/FAT_2016/2016FloodVictims_Vulnerable_Ages_Chart.pdf)

## Fatalities by the 1985 Flood (FAT\_1985)

*Map:* [1985 Fatalities Locations](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/FAT_1985/1985_Victim_Location_Map.pdf)

# Other Hazards

## Dams/Levees (DAM\_LEV)

* + 1. Dam Failure Risk (DAM\_RSK)
    2. Levee Failure Risk (LEV\_RSK)

## Landslide (LNDSLD)

* + 1. High-Susceptibility Landslide Ratio (LNDSLD\_RSK)

# Mitigation Measures

## Floodplain Management

* + 1. CRS Class (CRS\_CLS)
    2. Freeboard (FB\_2FT)
    3. Flood Disclosure Laws (FLD\_DSCL)

## Flood Insurance

* + 1. Flood Insurance Ratio (FLD\_INSC\_RT)

## Mitigated Structures

* + 1. Structures to DFE (DFE\_BLDG)
    2. Wet Floodproofing Structures (WET\_FLD\_PRF)
    3. Dry Floodproofing Structures (DRY\_FLD\_PRF)

## Green Infrastructure (GI)

* + 1. Buyout Parcels (BOUT\_PRPT)
    2. Open Space in Floodplain Ratio (OSP\_RT)
    3. Open Space Acreage (OSP\_AREA)

## Other Documents

# Visualizations

## Multimedia

## PowerPoint (PPT)

* + 1. [Federally-Declared Flood Disasters (Jan. 2024)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/DCL_DSTR/DCL_DSTR.pdf)
    2. [Building Count in SFHA (Feb. 2024)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/BLDG_SFHA/BLDG_SFHA.pdf)
    3. [WV Social Vulnerability Index (WV SVI) (Jan. 2024)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/WV_SVI/WV_SVI.pdf)
    4. [Floodplain Area (SFHA) (Unincorporated Area Scale and Larger), (Feb. 2024)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA/SFHA.pdf)
    5. [Floodplain Area Ratio (SFHA RT) (Incorporated Place Scale) (Feb. 2024)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/1_Flood_Hazard_ST/SFHA_RT/SFHA_RT.pdf)

## Posters (PSTR)

1. [Statewide Flood Risk Assessment, WVFRF (Flood Day, Feb. 2024)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/Visualization_ST/Posters_PSTR/Statewide_RA_Poster_20240205.pdf)
2. [WV Flood Tool Risk Map View, WVFRF (Flood Day, Feb. 2024)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/Visualization_ST/Posters_PSTR/FloodTool_Poster_20240213.pdf)

## Story Maps (STR\_M)

* + 1. Flood Risk

[Flood Risk in West Virginia: What We Learned from the June 2016 Flood](https://wvu.maps.arcgis.com/apps/Cascade/index.html?appid=32292859b21b44e99c0be706f6da8aa3)

[WV Flooded Towns, June 2016. The Historic Flooding of Southern West Virginia on June 23, 2016](https://wvu.maps.arcgis.com/apps/Cascade/index.html?appid=7b98379452094cd6827dc8f09c8293bd)

[1985 Flood: The Historic WV Flooding of November 4-5 1985](https://wvu.maps.arcgis.com/apps/Cascade/index.html?appid=8c8fd107215443b98dbd61252a9c6c40)

[The Buffalo Creek Disaster: 50 Years From Flooding](https://storymaps.arcgis.com/stories/a2f1ea2c8ba9494b821d76458b15b41c)

* + 1. Landslide Risk

[Causes of Landslides in Mountain State](https://wvu.maps.arcgis.com/apps/Cascade/index.html?appid=a8a366dea00f41e5909e9400c7d61019)

[West Virginia Landslides and Slide Prone Areas, WVGES 1976](https://www.arcgis.com/apps/MapJournal/index.html?appid=eaefcd5d06404891899fc266f4ef2da0)

## Flood Dashboards (DB)

## Web Viewers

* + 1. WV Flood Tool Risk MAP View: <https://www.mapwv.gov/flood>
    2. WV Landslides: <https://www.mapwv.gov/landslide>
    3. WV Dam Inundations: <https://wvu.maps.arcgis.com/apps/mapviewer/index.html?webmap=dfb557cfc0724556a7b3dd2fdc52f180>

<https://www.mapwv.gov/dams>

# Reports / Publications

## Project Reports

* + 1. [Essential Facilities Reports (0.2% floodplain) (2021 & 2022)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/SIG_STRC/EF_FLD/EF_Reports/)
    2. [Community Assets Reports (Historical & Non-Historical) (2022)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/SIG_STRC/CA_FLD/CA_Reports/)
    3. [Regional Building Exposure Reports (2022)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/2_Structure_ST/z_STRC_EXP_Reports/)
    4. [Population Displacement and Short-Term Shelter Needs Reports (2021)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/3_People_Social_ST/POP_DSP_SHLT/POP_Reports/)
    5. [Landslides Reports (2022)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/4_Other_Hazards_ST/LNDSLD/LNDSLD_Reports/)
    6. [Dams Failure/Inundation in Region 9 Report (2021)](https://data.wvgis.wvu.edu/pub/RA/State/CL/Dams_Levees/Reports/)
    7. [Open Space Preservation in Mount Hope, Fayette County (2020)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/5_Mitigation_ST/GI/GI_Reports/Fayette%20County%20(Mount%20Hope)/)
    8. [Region 4 Risk Assessment Report (Draft, Feb. 2022)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/Reports_Publications_ST/R4_Risk_Assessment_202202010_draft.pdf)
    9. [Statewide Flood Risk Assessment & WV Flood Tool – Community Engagement (TEIF – Total Exposure in Floodplain) (May 2023)](https://data.wvgis.wvu.edu/pub/RA/RI/ST/Reports_Publications_ST/WV_FPM_FloodTool_CommunityEngagment_20230515.pdf)

## Scholarly Articles

# Presentations

* + 1. [Statewide Flood Risk Assessment & WV Flood Tool – Community Engagement, May 2023](https://data.wvgis.wvu.edu/pub/RA/RI/ST/Presentations_ST/Community_Engagment_20230515/WV_FPM_FloodTool_CommunityEngagment_20230515.pdf)
    2. [WV Flood Risk Assessment & Visualization Tools; Presented in Symposium: Building Flood Resiliency in West Virginia Communities, March 2024](https://data.wvgis.wvu.edu/pub/RA/RI/ST/Presentations_ST/Flood_Resiliency_Symposium_20240312/WVGISTC_Symposium_Presentation_20240312_FINAL5_Edited.pdf)

# FEMA Flood Studies and Reports

## 2016 Flood Report

* + 1. FEMA [Lessons Learned from June 2016 Flood](https://www.fema.gov/sites/default/files/documents/Region_III_WV_FloodReport.pdf)
    2. USGS [Characteristics of peak streamflows and extent of inundation in areas of West Virginia and southwestern Virginia affected by flooding, June 2016](https://pubs.er.usgs.gov/publication/ofr20171140) | [Publication Download Site](https://pubs.er.usgs.gov/publication/ofr20171140)