

# Physical and Human Flood Loss

## White Sulphur Springs and Rainelle

Category	Loss Indicator	White Sulphur Springs	Rainelle	Rate* in WV Incorporated Areas (2021)
Physical (Building) Loss By 1%-Annual-Chance Flood Event	TEIF Building Dollar Loss Estimates	<b>\$1,225K</b>	<b>\$994K</b>	\$1,246K (Avg.)
	TEIF Building Loss Ratio	<b>3%</b>	<b>6%</b>	10%
	Median Individual Building Damage	<b>\$3K</b>	<b>\$2K</b>	\$7K (Mdn.)
	Substantial Damage (>50%) Estimates	<b>0</b> <small>89 in 2016 Flood</small>	<b>1</b>	7 (Avg.)
	Percent Substantial Damage Estimates	<b>0%</b>	<b>0%</b>	6% (Avg.)
	Moderate Damage (10-50%) Estimates	<b>78</b> <small>98 in 2016 Flood</small>	<b>106</b>	47 (Avg.)
	Percent Moderate Damage Estimates	<b>18%</b>	<b>31%</b>	34% (Avg.)
	Building Debris Removal Estimates	<b>450 ton</b>	<b>809 ton</b>	165 ton (Mdn.)
	Number of Previous Paid Losses	<b>89</b>	<b>152</b> <small>(Rank**: 20<sup>th</sup>)</small>	63 (Avg.)
	Dollar Amount of Previous Insurance Claims	<b>\$2,975K</b> <small>(Rank: 15<sup>th</sup>)</small>	<b>\$3,720K</b> <small>(Rank: 10<sup>th</sup>)</small>	\$845K (Avg.)
	Number of Repetitive Loss Structures	<b>2</b>	<b>23</b>	3 (Mdn.)

# Physical and Human Flood Loss

## White Sulphur Springs and Rainelle

Category	Loss Indicator	White Sulphur Springs	Rainelle	Rate* in WV Incorporated Areas (2021)
Human Loss By 1%-Annual-Chance Flood Event	Displaced Population Estimates	<b>462</b> (Rank: 17 <sup>th</sup> )	<b>487</b> (Rank: 16 <sup>th</sup> )	173 (Avg.)
	Percent of Community Population Displaced	<b>17%</b>	<b>36%</b>	13%
	Estimated Population in Need of Short-Term Shelter	<b>104</b> (Rank: 18 <sup>th</sup> )	<b>123</b> (Rank: 14 <sup>th</sup> )	37 (Avg.)
	Percent of Displaced Population in Need of Short-Term Shelter	<b>23%</b>	<b>25%</b>	24%

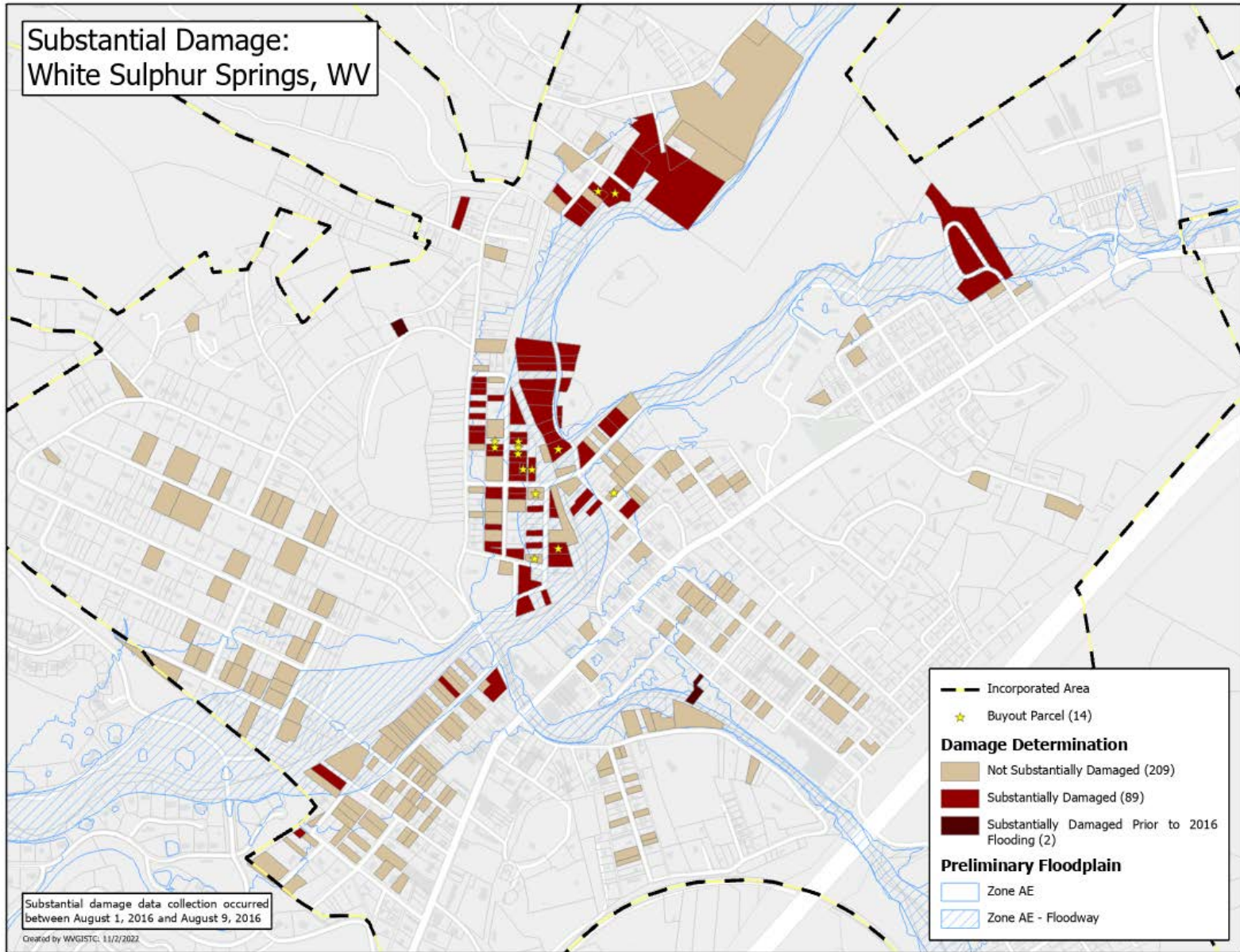
\* For numbers and dollar values, used median, or average where the median was zero or too low, in the state's 213 incorporated areas

\*\* Ranks mentioned based on the BLRA data of April 2022 where the community is among the top 20 incorporated areas in WV

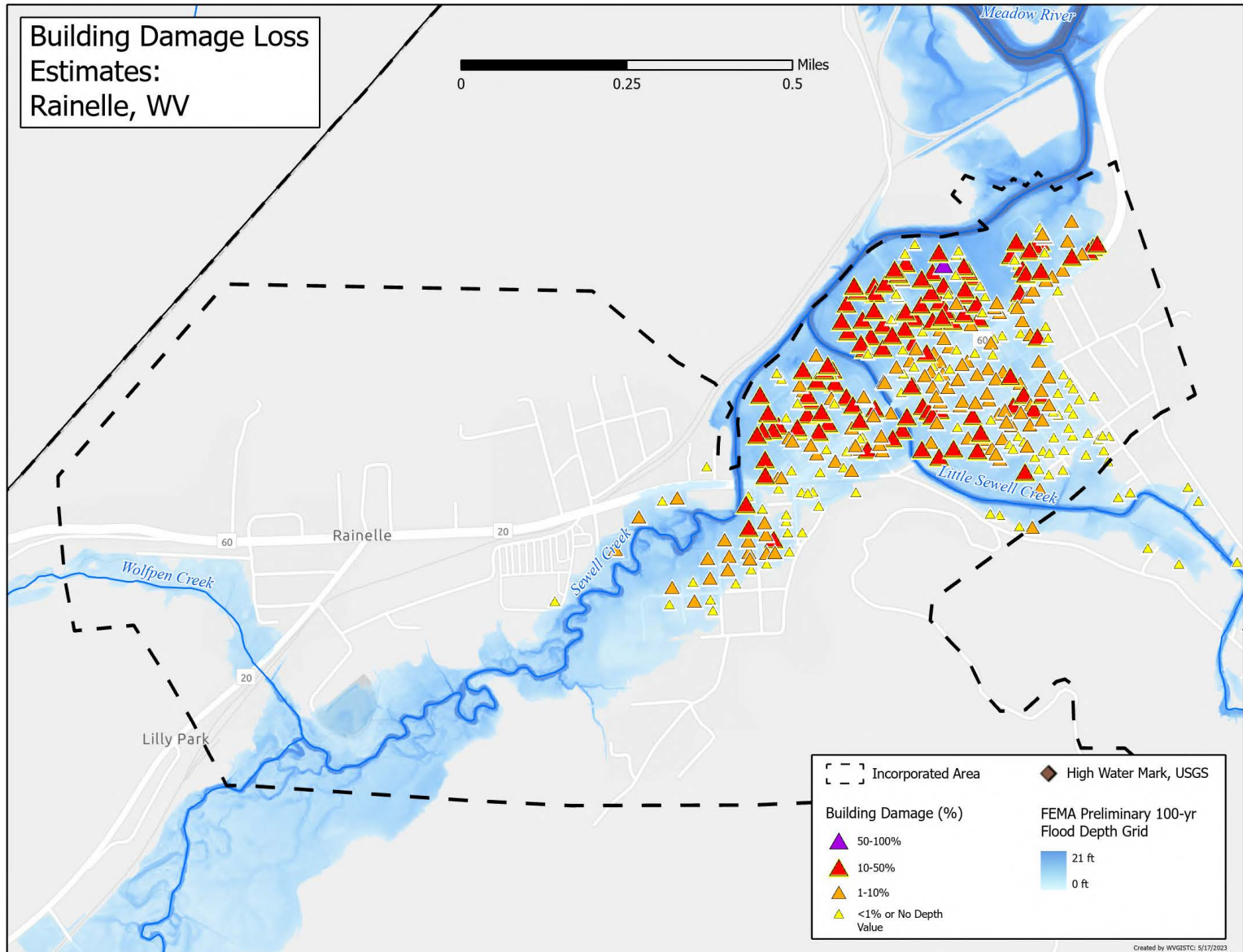
The red texts show large difference, to the risk side, from the state ratios.

The green texts show large difference, to the resilience side, from the state ratios.

# Substantial Damage (2016 Flood) White Sulphur Springs



# Building Damage Loss Estimates Rainelle



# Structures with High Building Loss White Sulphur Springs

## Highest Building Loss (USD) in White Sulphur Springs:

Building ID: 13-17-0008-0186-0000\_703  
Hazard Occupancy Class: COM8 (Restaurant)  
FIRM Status: Pre-FIRM (1968)  
Water Depth in Structure: 1.2 ft (minus rated -1 ft)  
Appraised Value: \$1,422,200  
Estimated Building Loss: \$133,687  
Building Damage Percentage: 10%  
[Flood Tool Link](#)



## Highest Building Damage Percentage in White Sulphur Springs:

Building ID: 13-17-0008-0435-0000\_382  
Hazard Occupancy Class: RES1 (Residential 1 Family)  
FIRM Status: Post-FIRM (1988)  
Water Depth in Structure: 3.9 ft (minus rated -4 ft)  
Appraised Value: \$62,200  
Estimated Building Loss: \$28,799  
Building Damage Percentage: 46%  
[Flood Tool Link](#)



# Structures with High Building Loss Rainelle

## Highest Building Loss (USD) in Rainelle:

Building ID: 13-13-0001-0077-0000\_144  
Hazard Occupancy Class: RES1 (Residential 1 Family)  
FIRM Status: Post-FIRM regulated to Pre-FIRM (2005)  
Water Depth in Structure: 3.7 ft (minus rated -4 ft)  
Appraised Value: \$92,800  
Estimated Building Loss: \$41,667  
Building Damage Percentage: 45%

[Flood Tool Link](#)



## Highest Building Damage Percentage in Rainelle:

Building ID: 13-13-0001-0091-0000\_435  
Hazard Occupancy Class: RES2 (Mobile Home)  
FIRM Status: Pre-FIRM (1973)  
Water Depth in Structure: 2.7 ft (minus rated -3 ft)  
Appraised Value: \$11,600  
Estimated Building Loss: \$8,120  
Building Damage Percentage: 70%

[Flood Tool Link](#)



# Criteria, Rationale, and Data Sources

Loss Indicator	Criteria	Rationale	Data Source
<b>TEIF Building Dollar Loss Estimates</b>	Using FEMA's open-source Hazus utility, Flood Assessment Structure Tool (FAST) for a 1%-annual-chance flood event to calculate the damage percentages of the total building values (Total Exposure in Floodplain or TEIF)	Flood loss models quantify the degree of flood risk, including estimates of substantially damaged structures. Quantifying the degree of flood risk is important for risk communications and flood reduction efforts.	BLRA of 5/9/2023(based on 2022 tax assessment), Total Exposure in Floodplain (TEIF), Building percent damage estimate values, Depth grids
<b>TEIF Building Loss Ratio</b>			
<b>Median Individual Building Damage</b>	The median estimated individual building loss in each community		
<b>Substantial Damage (&gt;50%) Estimates</b>	Number/percent of primary structures with the estimated damages of greater than 50% of the building value		BLRA of 5/9/2023(based on 2022 tax assessment), Total Exposure in Floodplain (TEIF), Building percent damage estimate values, Depth grids
<b>Percent Substantial Damage Estimates</b>			
<b>Moderate Damage (10-50%) Estimates</b>	Number/percent of primary structures with the estimated damages of 10% to 50% of the building value		
<b>Percent Moderate Damage Estimates</b>			
<b>Building Debris Removal Estimates</b>	The total tonnage of building debris that will be generated from a riverine 1%-annual-chance flood event based on FEMA's Hazus Flood Model. The model calculates only debris from the structure and not other types of debris (e.g., woody debris, sediment, content of buildings, etc.).	Debris disposal can be a significant issue following floods. Debris removal estimates should be incorporated into debris removal plans.	BLRA of 5/9/2023(based on 2022 tax assessment), Total Exposure in Floodplain (TEIF)
<b>Number of Previous Paid Losses</b>	Number of paid losses in the community's history up to 2019	A high number of claims in a community indicates that flooding is occurring, and community members are making claims against their policies.	FEMA's Community Information System (CIS) 2019

# Criteria, Rationale, and Data Sources...

Loss Indicator	Criteria	Rationale	Data Source
<b>Dollar Amount of Previous Insurance Claims</b>	Dollar amount of paid losses in the community's history up to 2019	A high total dollar amount of previous claims in a community indicates that flooding is occurring, and community members are making claims against their policies.	FEMA's Community Information System (CIS) 2019
<b>Number of Repetitive Loss Structures</b>	Number of structures (covered by NFIP Policies) that have experienced two or more losses of at least \$1,000 each in a ten-year period.	A preponderance of repetitive loss structures indicates that the community is at a higher risk for future losses.	FEMA's Community Information System (CIS) 2019
<b>Displaced Population Estimates</b>	Estimated Displaced Population (by inundation $\geq$ 1 foot) for a 1%-Annual-Chance Flood	The short-term displacement may happen by inundation causing damages to the residential units or blocking access to them. The evacuees plan to return to their communities after the inundation ends and the damaged residential units are restored. Until then, they may stay with their relatives or friends in safer areas, go to hotels, or use short-term shelters. The flood depth of evacuation is considered one foot that is the inundation at which vehicles begin to float.	BLRA of 5/9/2023(based on 2017 tax assessment), Census 2017 ACS
<b>Percent of Community Population Displaced</b>	Percent of the estimated displaced population in total community population		
<b>Estimated Population in Need of Short-Term Shelter</b>	Estimated Population in Need of Short-Term (up to two weeks) shelters computed using Hazus methodology with modifications of Age and Income (adjusted for inflation) factors.	A Short-Term Shelter is in an existing facility, such as a school, community center, convention center, or church temporarily converted to provide safe, accessible, and secure short-term housing for disaster survivors. It provides safe and accessible locations with a wide range of services for the survivors for up to two weeks.	BLRA of 5/9/2023(based on 2017 tax assessment), Census 2017 ACS
<b>Percent of Displaced Population in Need of Short-Term Shelter</b>	Percent of the individuals in need of short-term shelter in the estimated displaced population		