

Federally-Declared Flood Disasters (DCL DSTR)



West Virginia University
WV GIS Technical Center

April 2024

Declared Flood Disasters

Major Category	Detailed Category	Code	Indicator	Short Description	Unit
Flood Hazard Risk	Declared Disasters	DCL_DSTR	Declared Flood Disasters	Number of federally-declared flood disasters in the county since 1953	#

Rationale	Recommendations	Data Source
<p>Previous disasters indicate potential for future risk. In addition, the recentness of a flood disaster has proven to increase communities' willingness to seek/accept change/mitigation.</p> <p>In West Virginia, many flood control structures (e.g., dams, levees, flood walls) built in the 20th Century have decreased the number of major flood disasters.</p>	<p>A major disaster declaration provides a wide range of federal assistance programs for individuals and public infrastructure, including funds for both emergency and permanent work.</p> <p>Historical flooding including high water marks should be incorporated into communities' flood reduction efforts to include areas of mitigation interest.</p>	<p>Open FEMA</p>

Declared Flood Disasters; Rankings

Top 20% Ranking:

NAME	WV RPDC Region	Declared Disasters	Last Disaster	Percent Rank Declared Disasters	Score Category
Mingo County, West Virginia	2	28	3/4/2021	100.0%	Very High
Lincoln County, West Virginia	2	27	3/4/2021	96.3%	Very High
Logan County, West Virginia	2	27	3/4/2021	96.3%	Very High
Kanawha County, West Virginia	3	24	3/4/2021	94.4%	Very High
Wayne County, West Virginia	2	23	3/4/2021	92.6%	Very High
Cabell County, West Virginia	2	21	3/4/2021	88.9%	Very High
Wyoming County, West Virginia	1	21	3/14/2015	88.9%	Very High
Boone County, West Virginia	3	20	3/4/2021	85.2%	Very High
Raleigh County, West Virginia	1	20	3/14/2015	85.2%	Very High

Percent Rank Declared Disasters: Percent rank score for number of declared flood disasters; Calculated in Excel: PERCENTRANK.INC on Declared Disasters array

Score Category: Indicator class (category) based on the legend (Very High, Relatively High, Moderate, Relatively Low, or Very Low)

Scores Legend:

80 to 100	Very High	Red text: 90 to 100 Very High
60 to 79.9	Relatively High	
40 to 59.9	Moderate	
20 to 39.9	Relatively Low	
0 to 19.9	Very Low	

Bottom 20% Ranking:

Berkeley County, West Virginia	9	12	7/8/2012	14.8%	Very Low
Grant County, West Virginia	8	12	6/30/2019	14.8%	Very Low
Jefferson County, West Virginia	9	12	6/3/2018	14.8%	Very Low
Ritchie County, West Virginia	5	12	4/11/2015	14.8%	Very Low
Hampshire County, West Virginia	8	11	6/3/2018	5.6%	Very Low
Mineral County, West Virginia	8	11	6/3/2018	5.6%	Very Low
Monroe County, West Virginia	1	11	6/29/2016	5.6%	Very Low
Morgan County, West Virginia	9	11	6/3/2018	5.6%	Very Low
Wood County, West Virginia	5	11	7/14/2015	5.6%	Very Low
Brooke County, West Virginia	11	9	4/11/2015	0.0%	Very Low
Hancock County, West Virginia	11	9	11/8/2012	0.0%	Very Low
Pleasants County, West Virginia	5	9	4/15/2015	0.0%	Very Low

Total federally-declared flood disasters in West Virginia: 64

Total in USA: 2,397

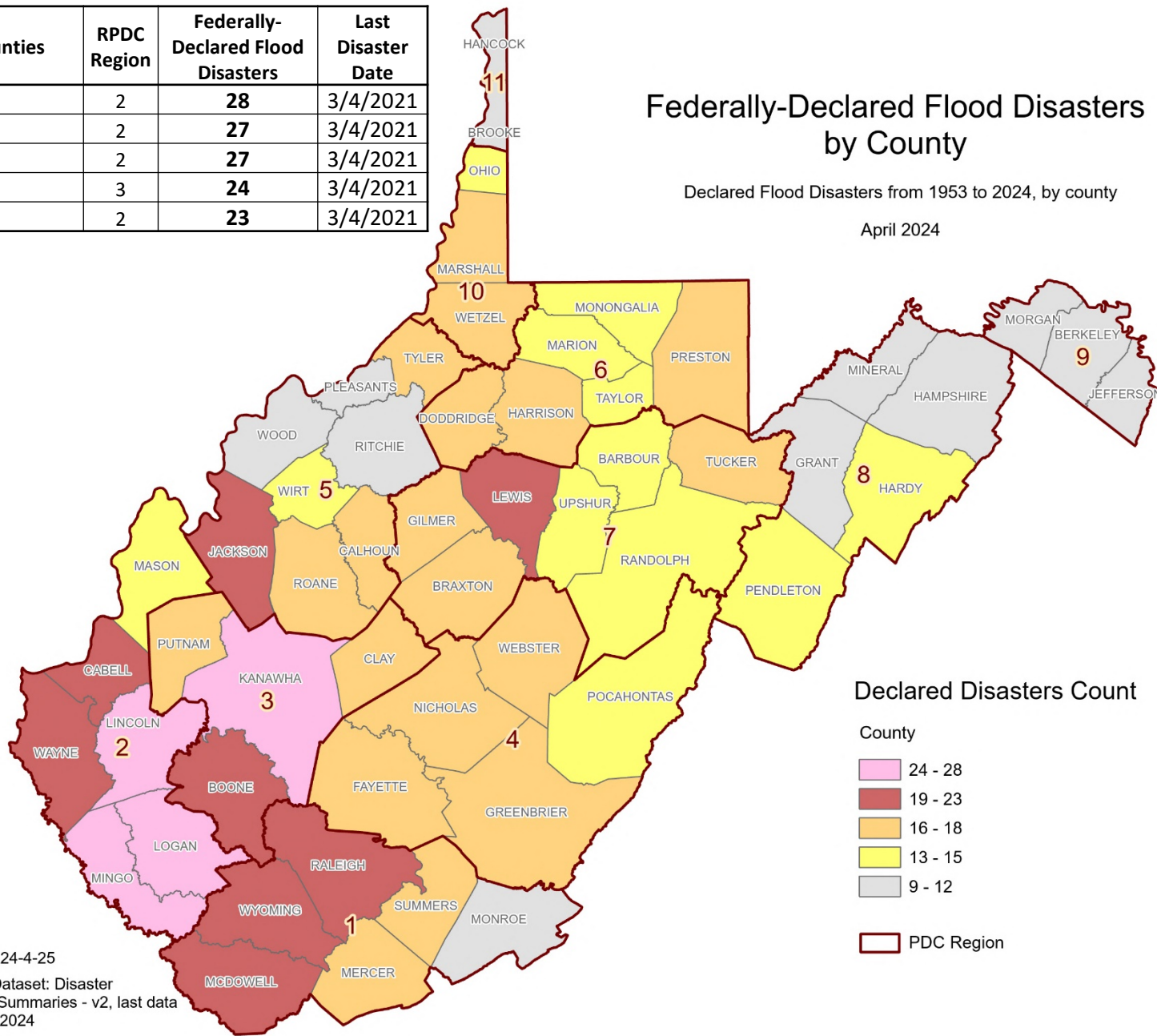
Declared Flood Disasters; Maps

Top 5 Counties	RPDC Region	Federally-Declared Flood Disasters	Last Disaster Date
Mingo	2	28	3/4/2021
Lincoln	2	27	3/4/2021
Logan	2	27	3/4/2021
Kanawha	3	24	3/4/2021
Wayne	2	23	3/4/2021

Federally-Declared Flood Disasters by County

Declared Flood Disasters from 1953 to 2024, by county

April 2024



Declared Disasters Count

County

- 24 - 28
- 19 - 23
- 16 - 18
- 13 - 15
- 9 - 12

PDC Region

WVGISTC 2024-4-25

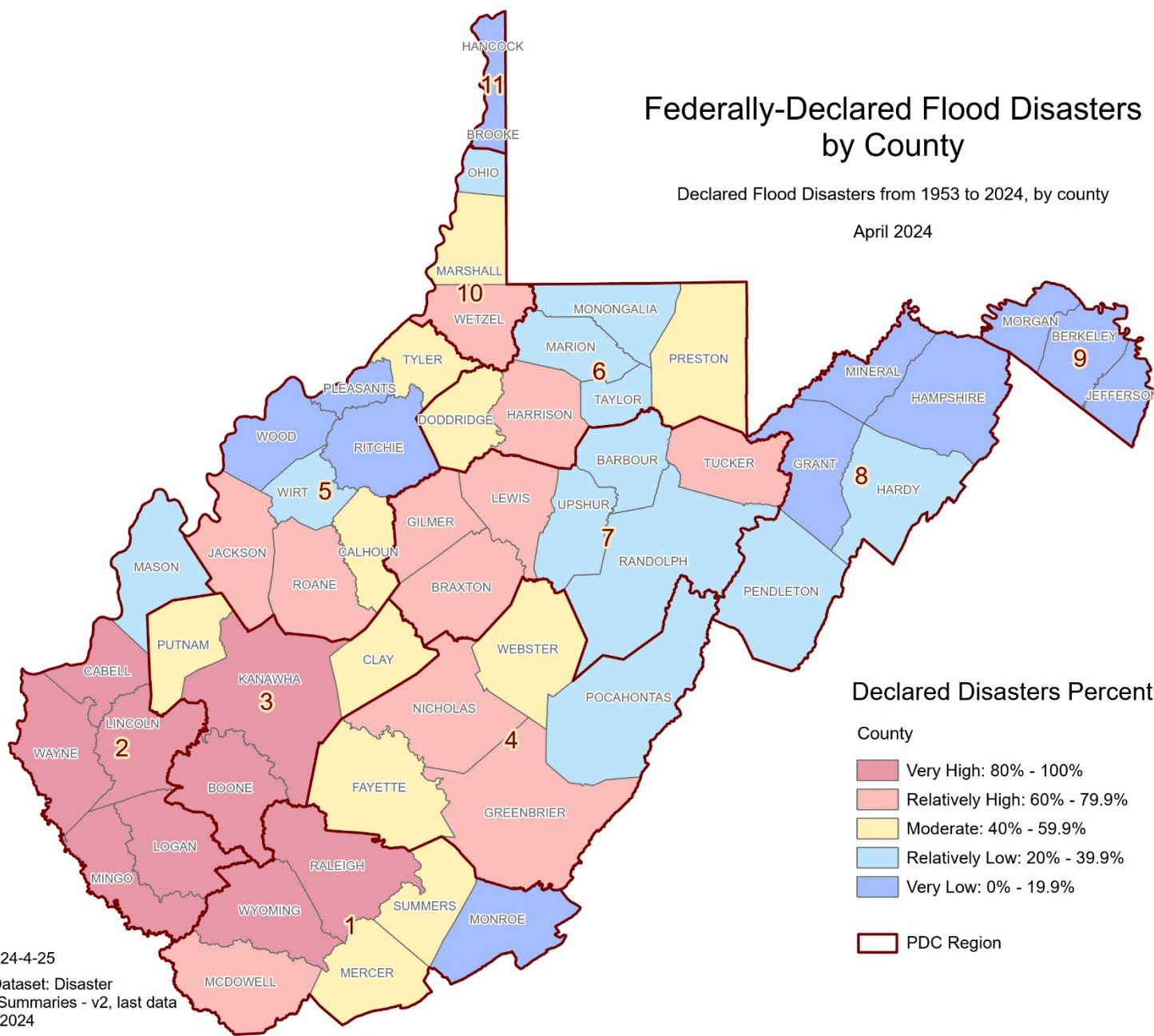
OpenFEMA Dataset: Disaster
Declarations Summaries - v2, last data
refresh: 4-24-2024

Declared Flood Disasters; Maps

Federally-Declared Flood Disasters by County

Declared Flood Disasters from 1953 to 2024, by county

April 2024



Declared Disasters Percent Rank

County

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

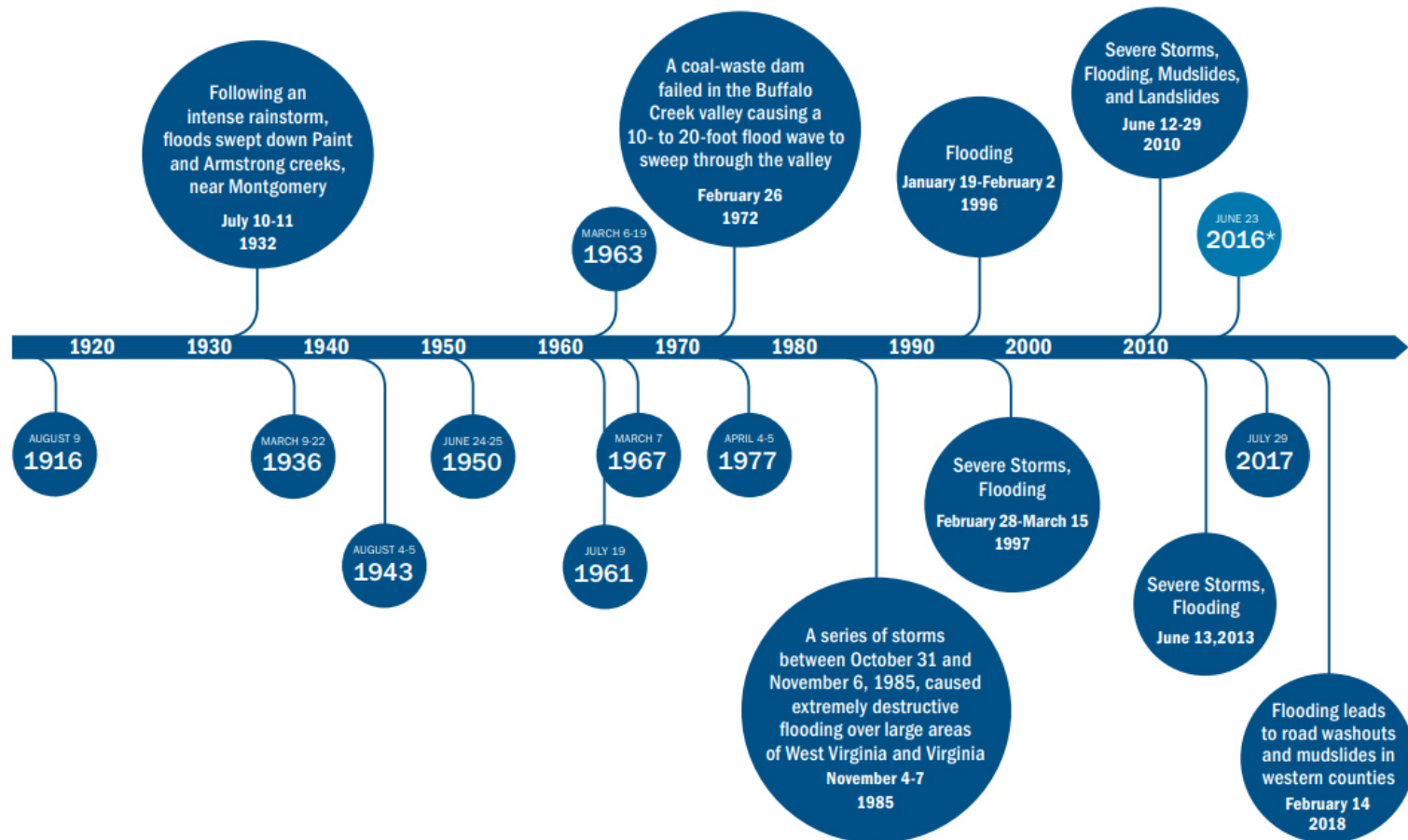
PDC Region

WVGISTC 2024-4-25

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refresh: 4-24-2024

Declared Flood Disasters; Historic Events

Timeline of notable flood events in WV (1916 – 2018)



Source:

Federal Emergency Management Agency (FEMA). *Understanding flood dangers in central West Virginia: Lessons learned from the June 2016 flood.* https://www.fema.gov/sites/default/files/documents/Region_III_WV_FloodReport.pdf

Declared Flood Disasters; Deadliest Events since 1954



July 1961 (22 + 2 landslide fatalities)
Image: Kanawha County ([Image link](#))



February 1972 (125 fatalities including 4 missing)
Image: Huntington ([Image link](#))



November 1985 (47 fatalities in WV)
Image: Moorefield ([Image link](#))



June 2016 (23 fatalities)
Image: Rainelle ([Image link](#))

Declared Flood Disasters; Focus Communities

Federally-Declared Flood Disasters for the Counties of Focus Study Communities

(Rainelle, White Sulphur Springs, Clendenin, Richwood, Marlinton, and Camden-on-Gauley)

Indicator	Greenbrier County	Kanawha County	Nicholas County	Pocahontas County	Webster County	Statewide Median
Federally-Declared Flood Disasters	18	24	18	15	17	16
Last Disaster Date	6/29/2016	3/4/2021	6/29/2016	6/29/2016	6/29/2016	Latest in the state: 8/30/2023
Declared Flood Disasters Percent Ranks	64.8% (Relatively High)	94.4% (Very High)	64.8% (Relatively High)	33.3% (Relatively Low)	55.6% (Moderate)	-

Percent Rank Legend:

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

Relatively High: 60% to 79.9%

Moderate: 40% to 59.9%

Relatively Low: 20% to 39.9%

Very Low: 0% to 19.9%

Declared Flood Disasters; Findings

Summary of Findings:

- **64 flood disasters** have been federally declared in West Virginia since 1953 which equals to 2.7% of the total federally-declared flood disasters nationwide.
- **Mingo County** has experienced the highest number of disasters (28) since 1954 while **Pleasants County** has the lowest number (9).
- **Harrison, Roane, Calhoun, and Clay** counties have experienced the most recent federally-declared flood disaster (8/30/2023) while **Berkeley** and **Hancock** counties have not had such an event since August 2012.
- Counties experiencing the highest or most recent disasters may bear a greater impact from these events, but they might also have increased awareness and willingness to seek mitigation regarding such disasters. Conversely, in counties with the lowest or least recent disasters, additional efforts may be necessary to effectively communicate the associated risks.

Declared Flood Disasters Spatial Distribution:

- Counties with the **highest** number of federally-declared disasters are mostly clustered in the **Southwestern part** of the state.
- Counties with the **lowest** number of federally-declared disasters are mostly clustered in the **Eastern Panhandle**.

Focus Communities Highlights:

About the counties where the focus study communities are located:

- **Kanawha County** has the highest number of federally-declared flood disasters (n=24, among the top 10%) followed by **Greenbrier** and **Nicholas** counties (n=18, among the top 20%).
- **Kanawha County** has experienced the most recent disaster (3/4/2021) among these counties.