



West Piedmont Hazard Mitigation Plan Update

Public Meeting #1

May 4, 2021 / Virtual



AGENDA

Background - Why Have a Plan?

Hazard ID & Risk Assessment

Mitigation Goals, Objectives & Strategies

Next Steps & How You Can Provide Input



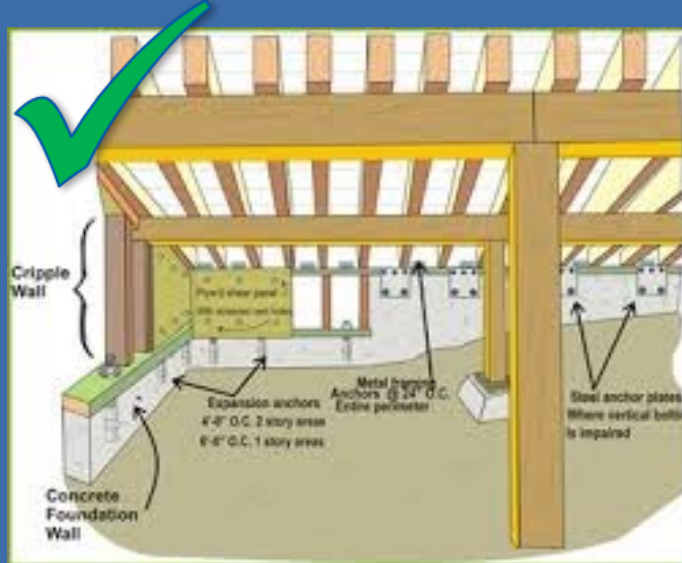
Danville, VA

What is **hazard mitigation**?

Any sustainable action that will **reduce or eliminate injury** to citizens, damages to structures and allow continuity of critical society functions



Mitigation
Defensible Space for
Wildfire Mitigation



Mitigation
Earthquake Retrofit



Preparedness & Response
purchase of a police
command vehicle

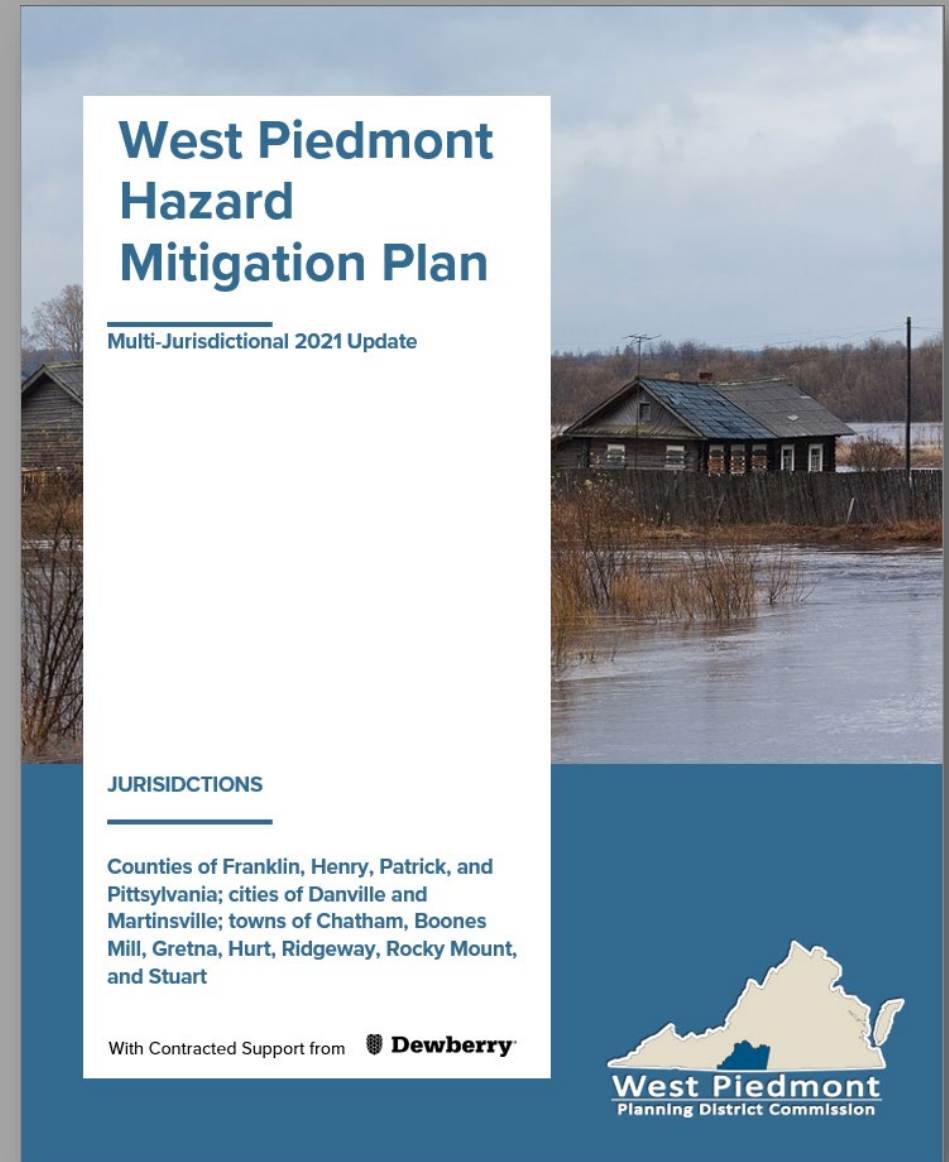
Why have a hazard mitigation plan?

Franklin County, VA

- Reduces or eliminates the need to respond (Lessens resource burden)
- Creates resiliency and sustainability
- Promotes Data sharing between different levels of government and academia
- Supports decision-making
- Disaster Mitigation Act of 2000
 - Certain FEMA Public Assistance (State Plans)
 - FEMA's Hazard Mitigation Assistance Programs

Plan Components

- Planning Process Description
- Capability Assessment
- Hazard ID and Risk Assessment
- Vulnerability Analysis and Loss Estimations
- Hazard Mitigation Strategy
- Implementation Plan



Hazard Identification and Risk Assessment (HIRA)

Purpose: Provide a factual basis for prioritizing hazard mitigation activities

HIRA Components



Hazard Ranking



Hazard Profiles



**Climate Change
Impacts**



**Hazard History (Locations,
Extents, Occurrences)**



**Vulnerability, Exposure,
and Loss Estimations**



**Probability of Future
Events**



Potential Impacts



State HMP Integration

Hazard Identification

West Piedmont's Natural Hazards



Flooding



Winter Storm



Hurricane



Severe Weather



Wildfire



Drought



Tornado



Earthquake



Landslide

Human-Caused Hazards

West Piedmont's Human-Caused Hazards



**Organic /
Inorganic Spills**



**Dam
Inundation**



**Pipeline
Failure**



HVT Lines



Agroterrorism

		Hazard Type	2016 Priority Level	2021 Priority Level
Natural		Flooding (with Shoreline Erosion)	High	High (Top)
		→ Pluvial Flooding	Not Addressed	High (Top)
		Winter Storms	High	High
		Wind (Hurricane, Thunderstorms – 2016 only)	Medium-High	Medium-High
		Severe Weather	Addressed in “Wind”	Medium-High
		Drought	Medium-Low	Medium-Low
		Wildfire	Medium	Medium
		Tornado	Medium	Medium-High
		Earthquake	Low	Medium-Low
		Landslide	Low	Low
Human-Caused		Dams (Impoundment Failure)	Medium-Low	Medium-Low
		High Voltage Transmission (HVT) Lines	Medium	Medium
		Organic/Inorganic Spills	Medium-High	Medium-High
		Pipeline Failure	Medium	Medium
		Agriterrorism	Medium-Low	Medium-Low

Hazard Ranking Priority Comparison

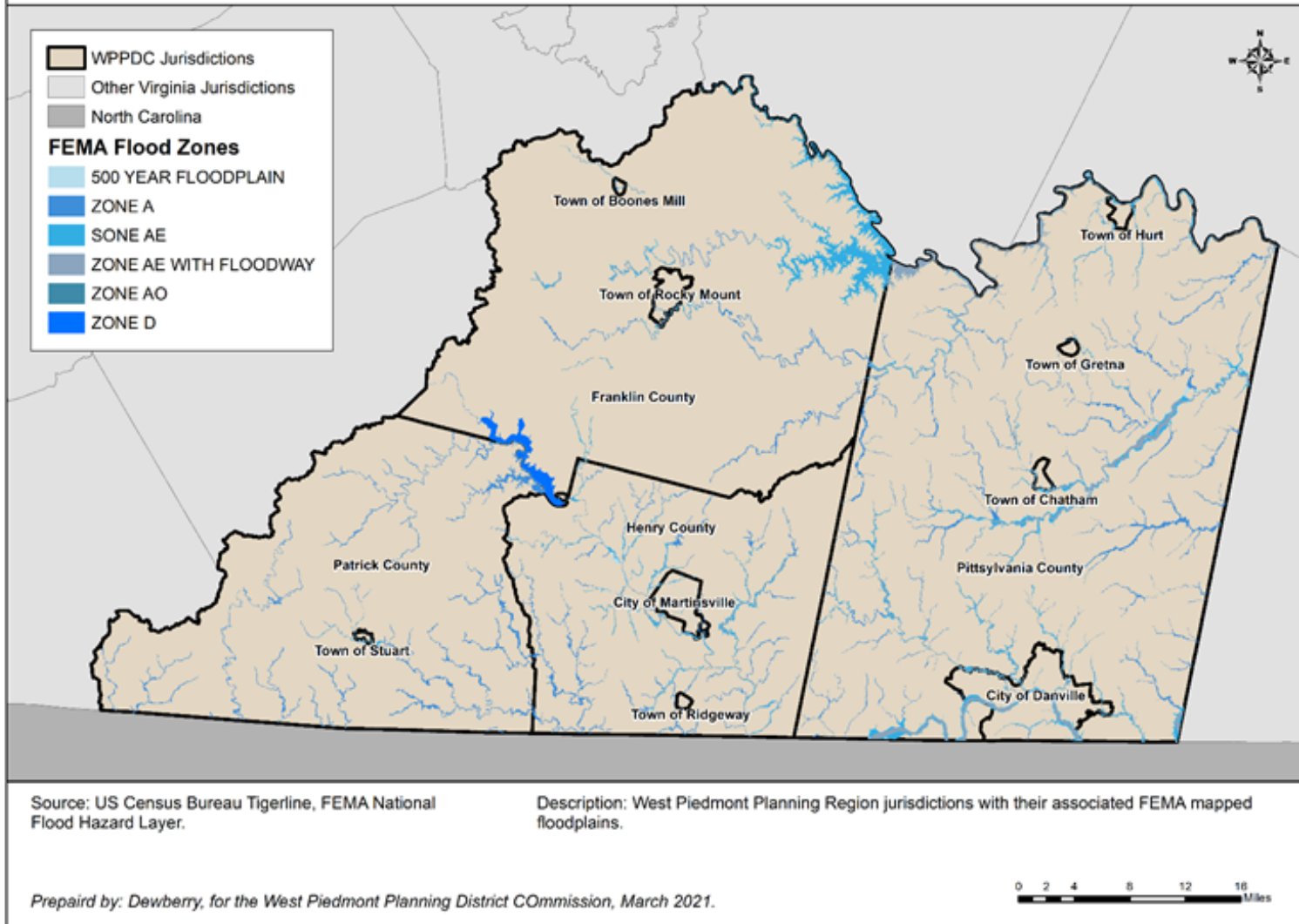
Community	Severe Storm & Flooding	Hurricane/ Tropical Storm	Severe Winter Storm/Ice Storm	Wildfire	Severe Storm & Wind (inc. Tornado)	Total
City of Danville	4	7	2	0	2	15
Franklin County	7	6	2	0	4	19
Henry County	5	5	2	0	3	15
City of Martinsville	2	6	2	0	2	12
Patrick County	5	4	3	1	3	16
Pittsylvania County	8	7	6	0	1	22

Major Disasters – Federal Declarations



Flooding

West Piedmont Region: FEMA Mapped Floodplains



Mapped Floodplains

Exposure Analysis: Value



County	Total Value	100 YR Total Exposed Value (all parcels)	100 YR SFHA Exposed Value (weighted by %)	100 YR SFHA Exposed Value Percent	500 YR Total Exposed Value (all parcels)	500 YR SFHA Exposed Value (weighted by %)	500 YR SFHA Exposed Value Percent
City of Danville	\$2,820,000,000	\$409,000,000	\$108,000,000	3.8%	\$479,000,000	\$141,000,000	5.0%
Franklin County	\$8,130,000,000	\$3,120,000,000	\$412,000,000	5.1%	\$3,150,000,000	\$427,000,000	5.3%
Henry County	\$5,180,000,000	\$880,000,000	\$115,000,000	2.2%	\$962,000,000	\$136,000,000	2.6%
City of Martinsville	\$1,250,000,000	\$51,800,000	\$12,100,000	1.0%	\$91,700,000	\$20,500,000	1.6%
Patrick County	\$2,160,000,000	\$417,000,000	\$50,800,000	2.4%	\$418,000,000	\$51,400,000	2.4%
Pittsylvania County	\$6,590,000,000	\$918,000,000	\$115,000,000	1.7%	\$939,000,000	\$126,000,000	1.9%
WPPDC	\$26,130,000,000	\$5,795,800,000	\$812,900,000	3.1%	\$6,039,700,000	\$901,900,000	3.5%



Winter Storm

Winter Storm Events in NCEI Storm Events Database
(1996 – February 2019)



Jurisdiction	Annualized Property Damage	Annualized Crop Damage	Total Annualized Damages
Franklin County	\$6,543	\$19,870	\$26,413
Henry County	\$8,304	\$11,435	\$19,739
Patrick County	\$2,652	\$15,870	\$18,522
Pittsylvania County	\$36,739	\$13,000	\$49,739
Total	\$54,239	\$60,174	\$114,413



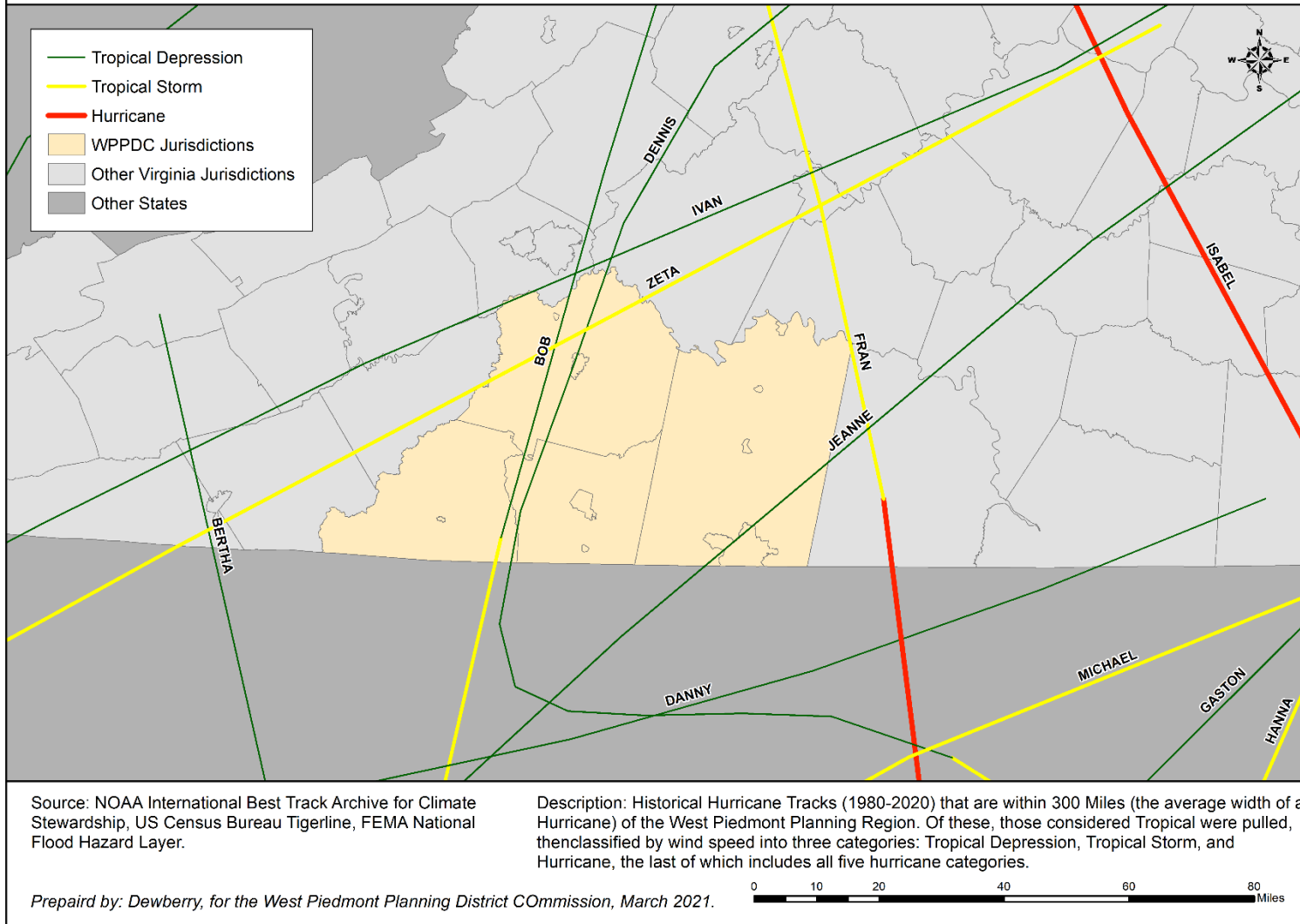
Annualized Damages





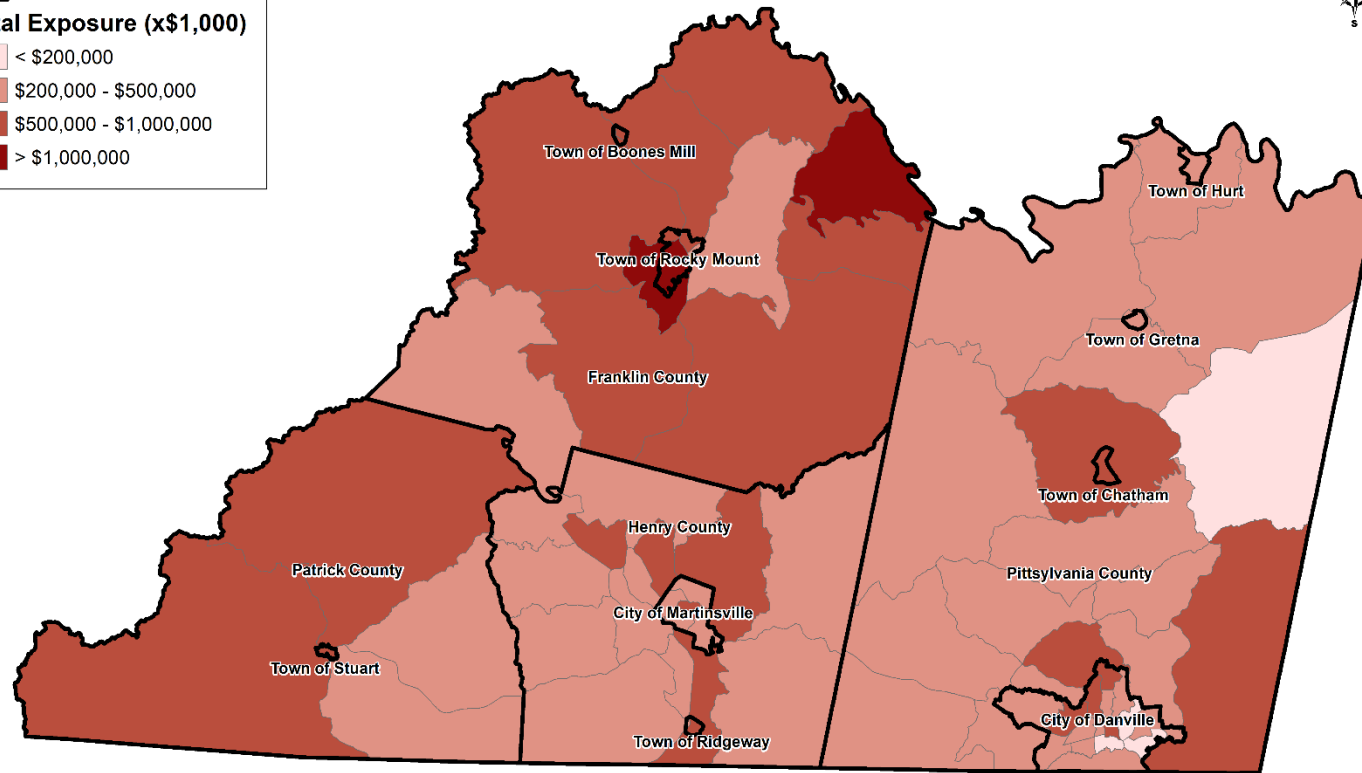
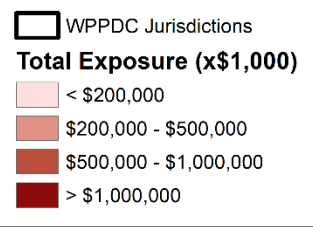
Hurricane Wind

West Piedmont Region: 1980-2020 Tropical Depression, Tropical Storm, and Hurricane Tracks.



Historical Hurricane Tracks

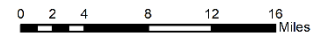
West Piedmont Region: Total Exposure by Census Tract



Source: NOAA NCEI Storm Events Database, US Census Bureau Tigerline, FEMA National Flood Hazard Layer.

Description: West Piedmont Planning Region jurisdiction Census Tracts by total exposure.

Prepared by: Dewberry, for the West Piedmont Planning District Commission, March 2021.



Total Exposure

Total Annualized Hurricane Wind Loss

Hazus-MH v4.2



Jurisdiction	Buildings	Contents	Inventory	Relocation	Income	Rental	Wages	Total Loss	Total Exposure
City of Danville	\$164,589	\$24,219	\$368	\$11,155	\$793	\$4,667	\$1,374	\$207,166	\$5,667,085
Franklin County	\$155,949	\$27,789	\$421	\$7,467	\$269	\$2,426	\$494	\$194,815	\$7,095,280
Town of Boones Mill	\$140	\$16	\$0	\$8	\$0	\$2	\$1	\$166	\$8,035
Town of Rocky Mount	\$5,651	\$1,080	\$108	\$351	\$41	\$143	\$72	\$7,446	\$331,698
Henry County	\$145,635	\$24,893	\$454	\$9,213	\$582	\$3,006	\$1,094	\$184,875	\$6,046,498
Town of Ridgeway	\$683	\$111	\$5	\$44	\$7	\$15	\$7	\$871	\$31,593
City of Martinsville	\$43,943	\$6,656	\$252	\$2,792	\$300	\$1,166	\$484	\$55,594	\$2,158,182
Patrick County	\$41,654	\$4,374	\$76	\$2,391	\$110	\$748	\$271	\$49,624	\$1,964,965
Town of Stuart	\$53	\$6	\$0	\$3	\$0	\$1	\$0	\$63	\$2,783
Pittsylvania County	\$205,571	\$45,841	\$246	\$11,095	\$380	\$3,240	\$1,125	\$267,498	\$6,102,244
Town of Chatham	\$617	\$254	\$1	\$29	\$2	\$9	\$6	\$918	\$18,642
Town of Gretna	\$393	\$153	\$1	\$17	\$0	\$5	\$1	\$570	\$10,099
Town of Hurt	\$761	\$69	\$0	\$44	\$2	\$13	\$2	\$892	\$31,073
Total	\$765,640	\$135,458	\$1,932	\$44,610	\$2,485	\$15,442	\$4,931	\$970,498	\$29,468,177



Tornado

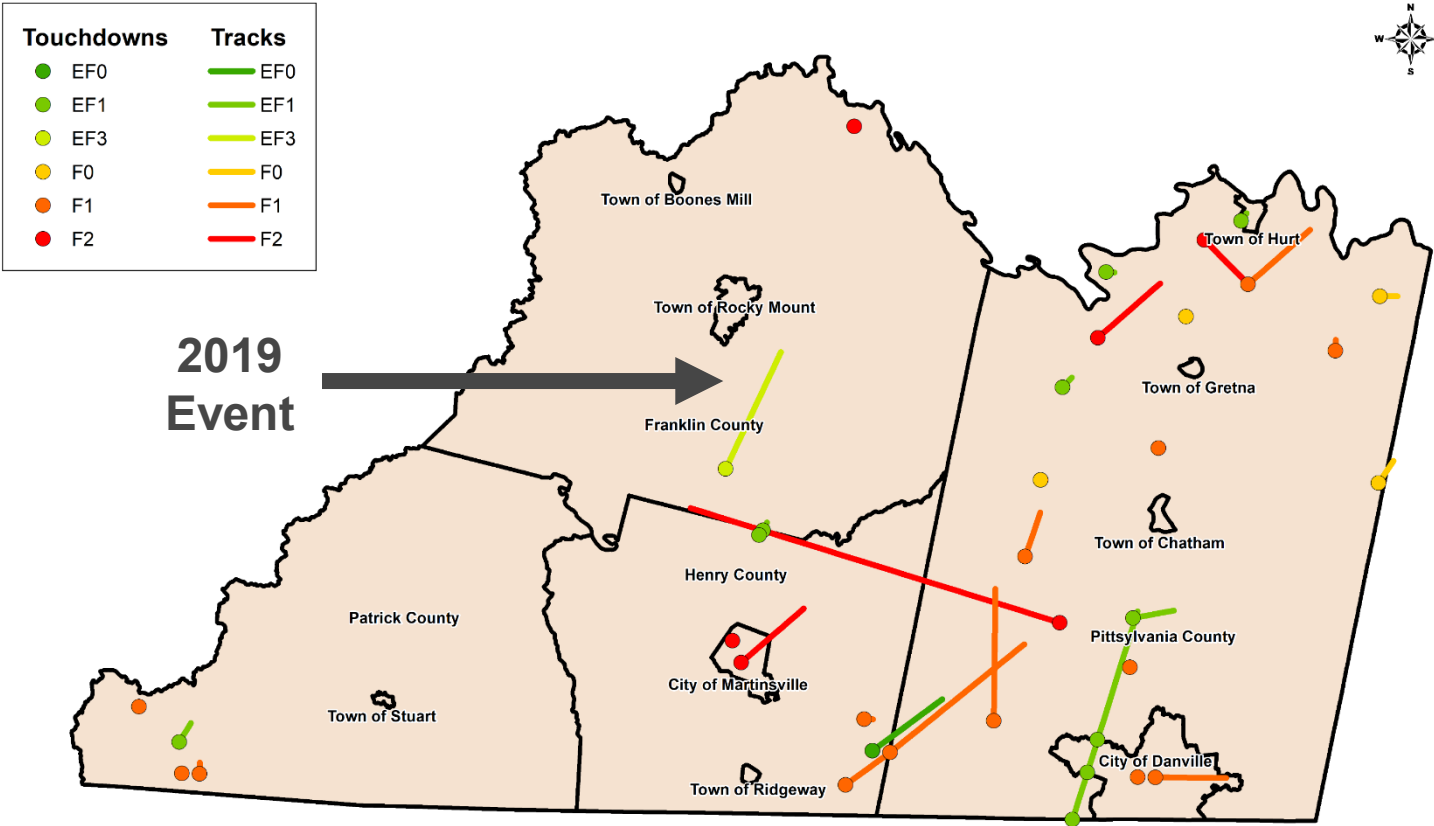
Tornado Touchdowns



Tornado Statistics by Fujita Intensity Scale (1953-2019)
West Piedmont Region Tornado Touchdowns

Jurisdiction	Unknown	F0	F1	F2	≥ F3	Total
City of Danville	1	0	2	0	0	3
City of Martinsville	0	0	0	1	0	1
Franklin County	1	1	1	1	1	5
Henry County	0	1	3	2	0	6
Patrick County	0	0	4	0	0	4
Pittsylvania County	1	5	14	2	0	22
Total	3	7	24	6	1	41

West Piedmont Region: 1950-2020 Tornado Touchdowns and Tracks



Source: NCEI, US Census Bureau Tigerline, FEMA National Flood Hazard Layer.

Description: West Piedmont Planning Region's historic tornado touchdown areas, with associated tornado tracks. The first recorded tornado was in 1953, and the last in 2019.

Prepared by: Dewberry, for the West Piedmont Planning District Commission, March 2021.

0 2 4 8 12 16 Miles

Tornado Touchdowns and Tracks

Probability and Annualized Loss



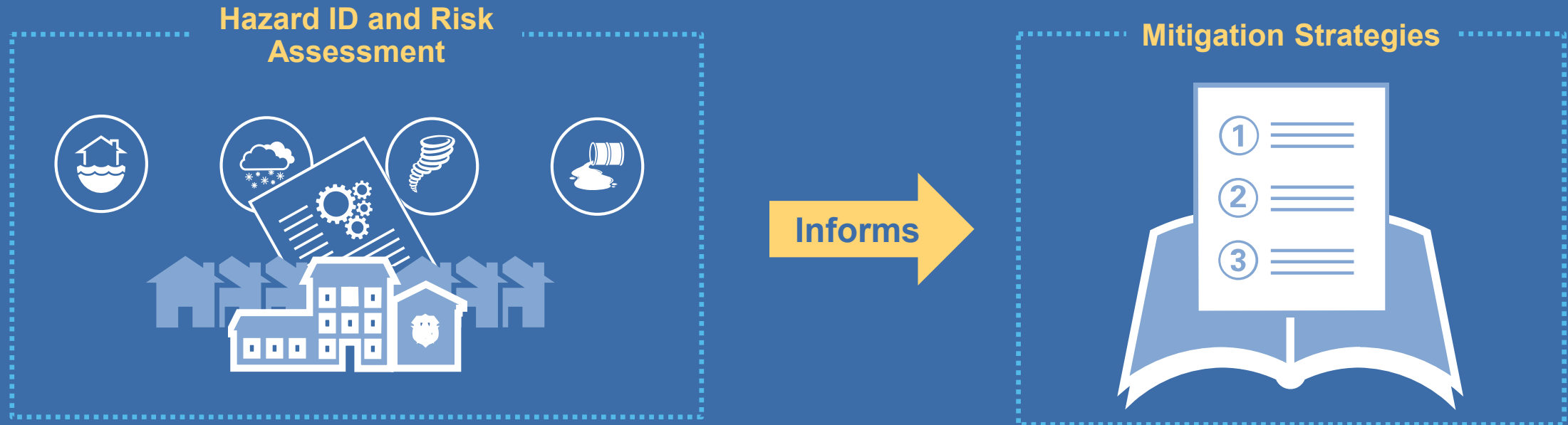
Tornado Events in NCEI Storm Events Database (2021)		
Jurisdiction	Number of events annually	Annualized Loss
Franklin County	0.08	\$10,015
Henry County	0.11	\$1,583,205
City of Martinsville		
Patrick County	0.06	\$8,258
Pittsylvania	0.33	\$53,489
City of Danville	0.05	\$51,515
Total	0.62	\$1,706,481



Mitigation Goals, Objectives & Strategies

Purpose: Reduce societal, economic, and environmental exposure to hazard impacts

HIRA → Mitigation Strategies



Definitions



Goal: general guidelines that describes what planning region would like to achieve



Objective: specific and measurable actions that must be implemented to achieve the identified goals



Strategy: methods and capabilities to achieve an objective with identified responsible parties, timeframes, and potential funding sources



Goal 1: Physical Projects



Reduce future damages, losses, and risks to the community by **protecting new and existing built infrastructure** (homes, businesses, utility infrastructure, critical facilities, and other property) from the effects of hazards.

Goal 2: Capability- and Capacity-Building

Future Development



Ensure local ability to mitigate, prepare for, respond to, and recover from hazard impacts by **enhancing the capabilities and capacities of local governments** through regional partnership; the efficient use of new and existing technology; and the implementation of hazard mitigation policies, regulation and planning.

Goal 3: Public Awareness and Education



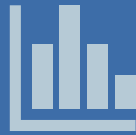
Implement **education and outreach programs and campaigns** to increase public awareness of hazard risks; promote hazard mitigation's importance to health, safety, and welfare; and enhance public engagement.

How can you stay involved?

Public Input



Project Website
(WPPDC)



Online Public
Survey



Virtual Public
Meetings



Story Map

Hazard Mitigation Plan



	Dec '20	Jan '21	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Public Engagement Milestones						Public Meeting, Survey & Data Gathering		Public Meeting				Final Plan Distribution	
Kick-Off Meeting & Data Collection													
HIRA Update / Development													
Capability Assessment													
Mitigation Strategies													
Draft Plans													
VDEM / FEMA Review													
Adoption Support													

Next Steps

1. Take our brief online **public survey**:
<https://www.surveymonkey.com/r/West-Piedmont-Hazard-Survey>
2. Learn more about the planning process, and **provide information on problem areas you're aware of in your community** through our **story map**: [LINK COMING SOON]
3. Stay up-to-date on when the next public meeting will be via our **website**: <http://www.wppdc.org/hazard-mitigation-plan>

Final hazard mitigation plan expected distribution – **November 2021**

Questions?

