Pennsylvania
Department of Human Services



Hazard Vulnerability Assessment

Building Resilience Through Strategic Hazard Risk Assessment

The Value of Preparedness



Saves lives and protects essential services.



Minimizes recovery costs.



Meets regulatory compliance.



Builds public trust and reputation.

Objectives

- The value of preparedness.
- Definition of a hazard and overview a hazard vulnerability assessment.
- Highlight flooding hazard and other hazards.
- Walkthrough the HVA tool and information resources.
- Dialogue to shape focus areas for next meeting.
- Q&A.



What is a hazard?



May **hurt people**, **damage property**, or **disrupt activities**.

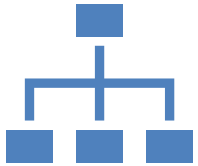


Could be **a natural**, **a human-made**, **or technological** occurring event. 2023 PEMA Hazard Mitigation Plan



Are important to identify so we can **prepare and protect**. ReadyPA.gov

What is the Hazard Vulnerability Assessment?



• A structured framework for identifying and prioritizing hazards.



• Evaluates impact across **essential services** and the likelihood of impact.



• Helps align emergency planning training and exercise with actual risks.

Case Study Hazard: Flooding

- High-likelihood hazard in many Pennsylvania regions.

- Can disrupt infrastructure and isolate communities.

- Risk varies by geography and mitigation readiness.



Community Integration & Participation

Essential Service Impact:

Includes transportation, public activities, socialization, and access to services.

Essential for the ISP, but also inclusive disaster recovery and long-term resilience.

Often vulnerable to disruption from environmental hazards.



Pennsylvania
Department of Human Services

Completing the HVA Tool – Step by Step

Select hazard: “Flooding”

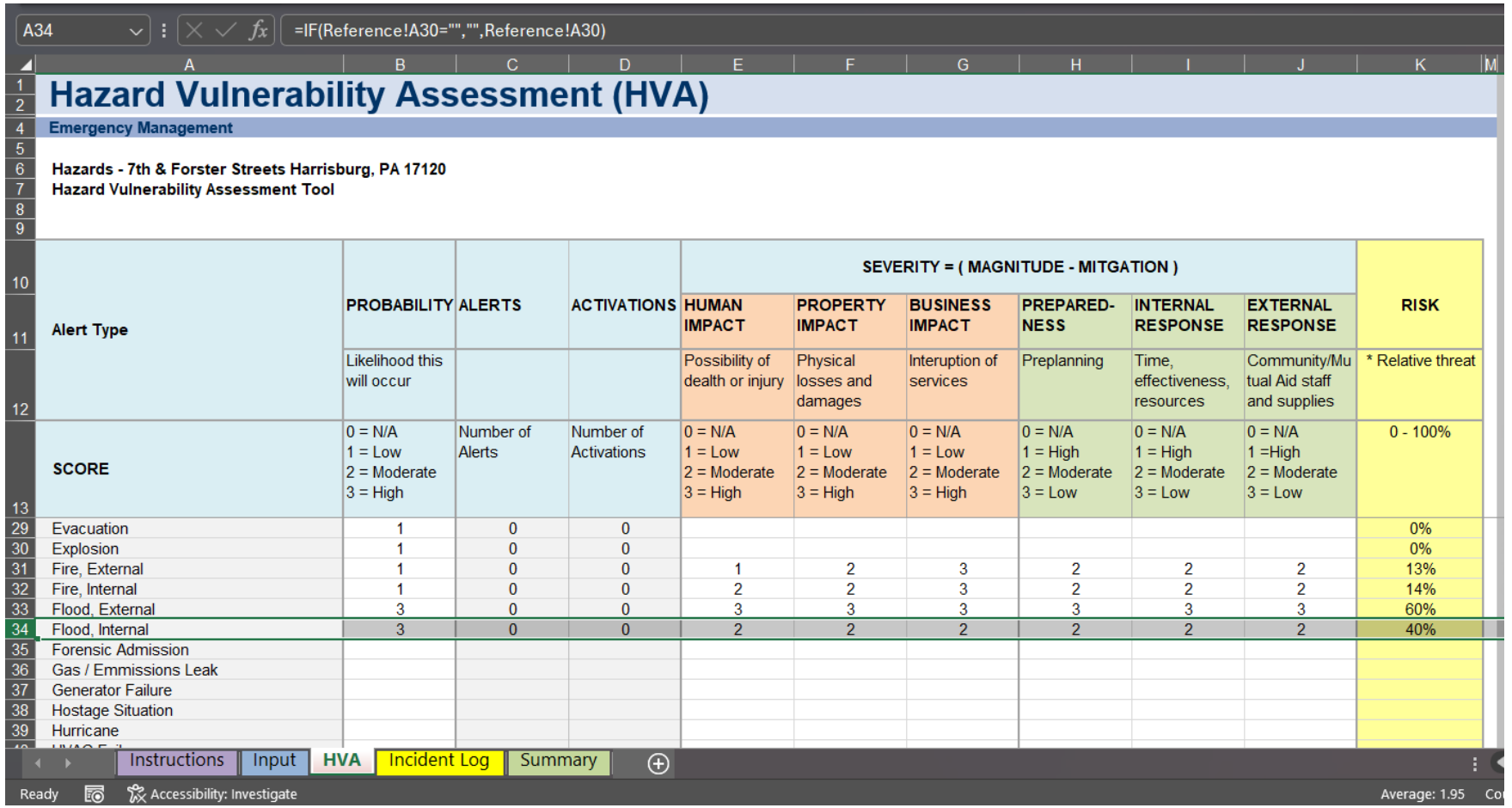
Rate likelihood, severity, mitigation

Identify affected services (e.g., Community Integration)

Review risk score and priority ranking

HVA Tool Walk-through

Let's walk through the interface.



A34 =IF(Reference!A30="","",Reference!A30)

Hazard Vulnerability Assessment (HVA)

Emergency Management

Hazards - 7th & Forster Streets Harrisburg, PA 17120
Hazard Vulnerability Assessment Tool

Alert Type	PROBABILITY	ALERTS	ACTIVATIONS	SEVERITY = (MAGNITUDE - MITGATION) HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	RISK
	Likelihood this will occur			Possibility of death or injury	Physical losses and damages	Interuption of services	Preplanning	Time, effectiveness, resources	Community/Mutual Aid staff and supplies	* Relative threat
SCORE	0 = N/A 1 = Low 2 = Moderate 3 = High	Number of Alerts	Number of Activations	0 = N/A 1 = Low 2 = Moderate 3 = High	0 = N/A 1 = Low 2 = Moderate 3 = High	0 = N/A 1 = Low 2 = Moderate 3 = High	0 = N/A 1 = High 2 = Moderate 3 = Low	0 = N/A 1 = High 2 = Moderate 3 = Low	0 = N/A 1 =High 2 = Moderate 3 = Low	0 - 100%
Evacuation	1	0	0							0%
Explosion	1	0	0							0%
Fire, External	1	0	0	1	2	3	2	2	2	13%
Fire, Internal	1	0	0	2	2	3	2	2	2	14%
Flood, External	3	0	0	3	3	3	3	3	3	60%
Flood, Internal	3	0	0	2	2	2	2	2	2	40%
Forensic Admission										
Gas / Emmissions Leak										
Generator Failure										
Hostage Situation										
Hurricane										

Instructions | Input | HVA | Incident Log | Summary

Ready | Accessibility: Investigate | Average: 1.95

Pennsylvania
Department of Human Services

Summary Screen

Summary - HVA

Emergency Management

Summary For - 7th & Forster Streets Harrisburg, PA 17120

ALERT TYPE	OCCURRENCE
Command Center Activation	5
Patient Care Impacts	4
Business / Operational Impacts	5
Structural Impacts	2
Resource Request	3
Recovery Plan Activated	2
AAR	3
Total Alert	**5**



2025

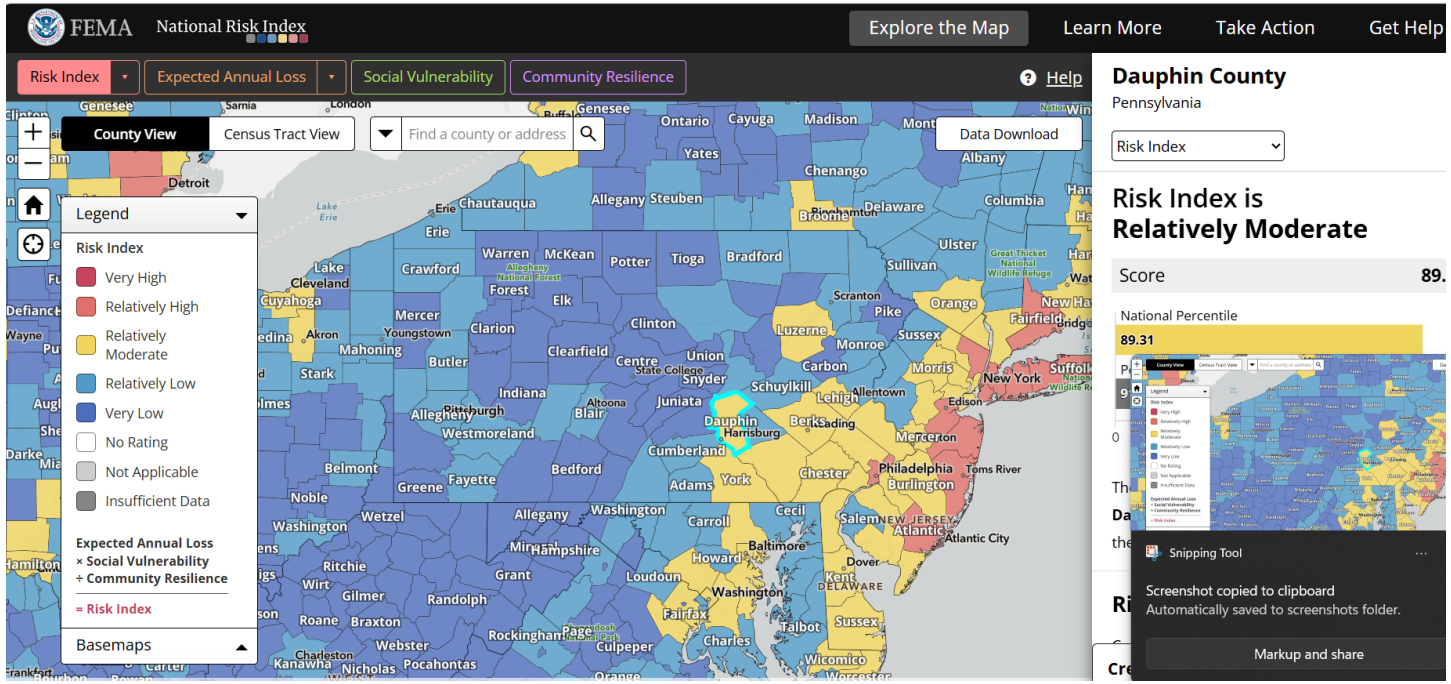
TOP 10 HVA	RANK	OCCURRENCE
Flood, External	1	0
Power Outage	2	1
Civil Unrest / Protesting	3	0
Infectious Disease Outbreak	4	3
Flood, Internal	5	0
Utility Failure	6	0
Water Disruption	7	1
Fire, Internal	8	0
Fire, External	9	0
Active Shooter	10	0

2025

TOP 10 ACTUAL ALERTS	OCCURRENCE	HVA RANK
Infectious Disease Outbreak	3	4
Water Disruption	1	7
Power Outage	1	2

Pennsylvania
Department of Human Services

FEMA's National Risk Index for Natural Hazards



- Visualize hazard exposure, population needs, and resources.
- Map zones, vulnerable populations, and emergency assets.
- Use data to inform HVA inputs.

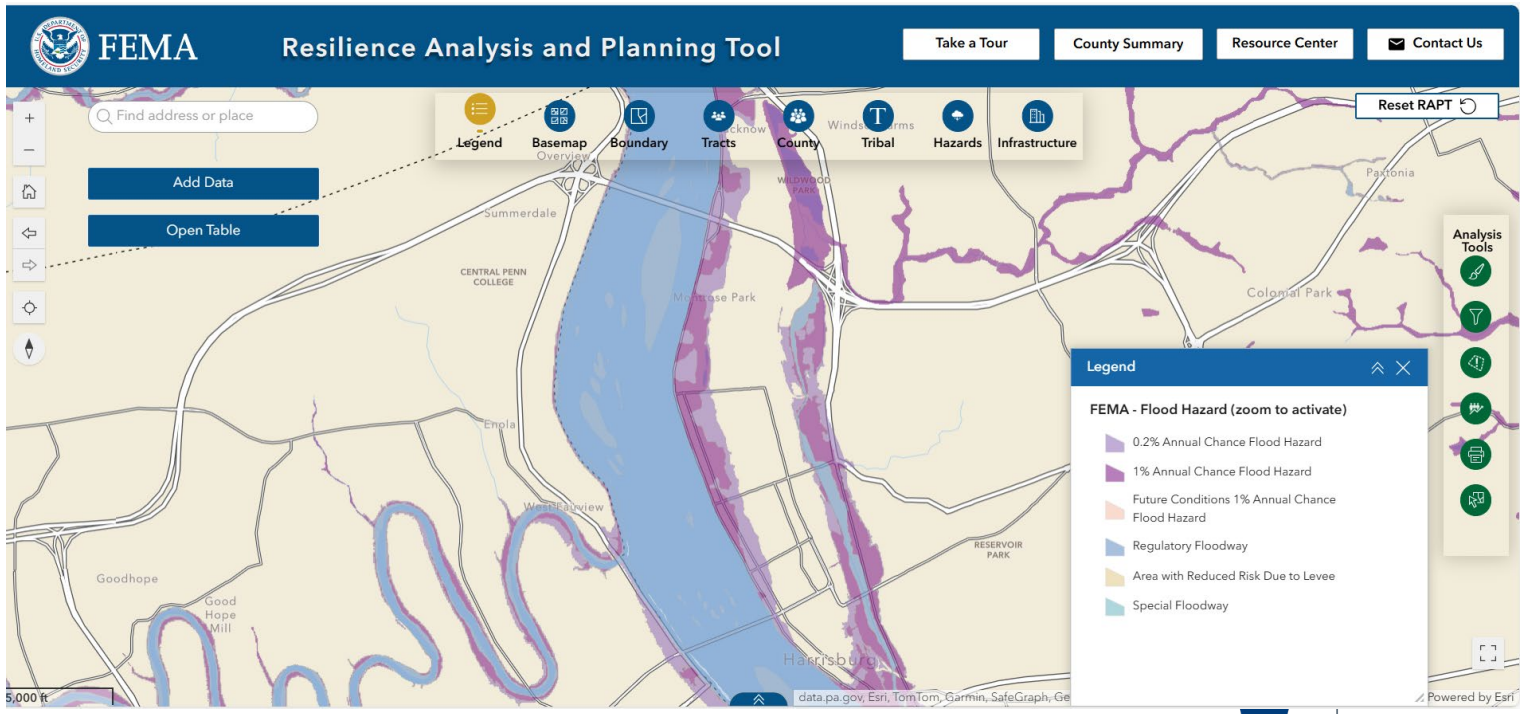
Source: FEMA NRI - https://hazards.fema.gov/nri/map

Pennsylvania
Department of Human Services

FEMA's Resiliency Analysis & Planning Tool (RAPT)

- Visualize hazard exposure, population needs, and resources.
- Map flood zones, vulnerable populations, and emergency assets.
- Use data to inform HVA inputs.

Source: FEMA RAPT - https://www.fema.gov/emergency-managers/practitioners/resilience-analysis-and-planning-tool



Pennsylvania Department of Human Services

Understanding the Output



- Composite risk scores across hazards.



- Prioritization matrix to guide planning.



- Identifies gaps in mitigation and preparedness.

Recap & Next Steps



Disaster preparedness = smart investment.



HVA Tool helps focus on real risks to services.



Use data from tools like FEMA RAPT to guide decisions.

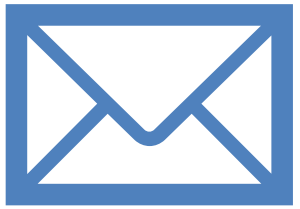


Update assessments annually or after major events.

Questions? Let's talk



- Q&A Session



- Contact Info: danielm@pa.gov