



pennsylvania PA

Pennsylvania Emergency Management Agency

EM Hazard Mitigation, Insurance & Resilient Communities Office

State Flood Insurance Premium Task Force Meeting

Feb 7, 2024 Harrisburg



Climate Change

“Climate change is the defining issue of our time....every day we fail to act is a day that we step a little closer towards a fate that none of us wants—a fate that will resonate through generations in the damage done to humankind and life on earth.”

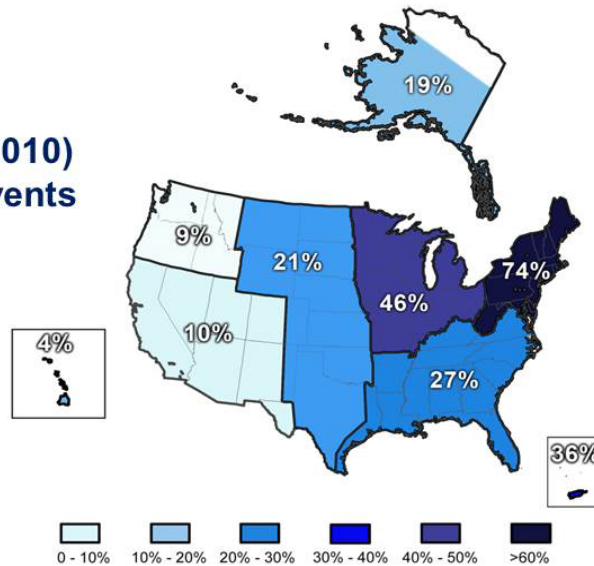


**Antonio Guterres,
United Nations Secretary-General,
2018**

Heavy Rain Events are Increasing

Regardless of Shifts in Total Annual Rain
More of It Is Coming in Heavy Downpours

Percent Increase (1958-2010)
in Heavy Precipitation Events
(>2inch/48 hr)

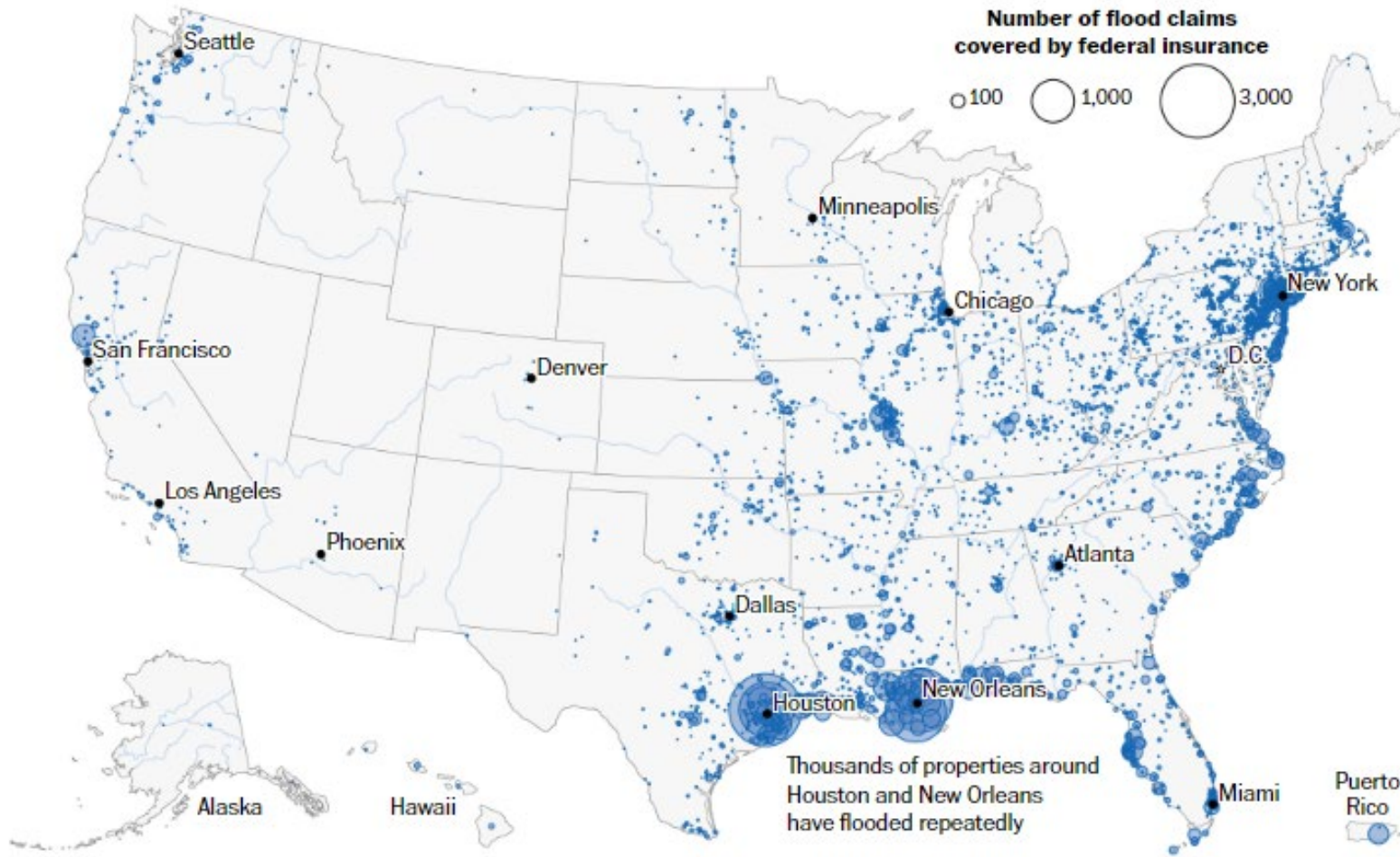


NOAA, provided by A. DeGaetano, NERCC, Cornell

- The Northeast U.S. leads the country with a 74% increase in heavy rain events over the past five decades
- Heavy downpours are increasing nationally, especially over the last three to five decades, with the largest increases in the Northeast
- Increases in extreme precipitation are projected for all U.S. regions
- All reasons to for flood insurance **both inside and outside flood plains**

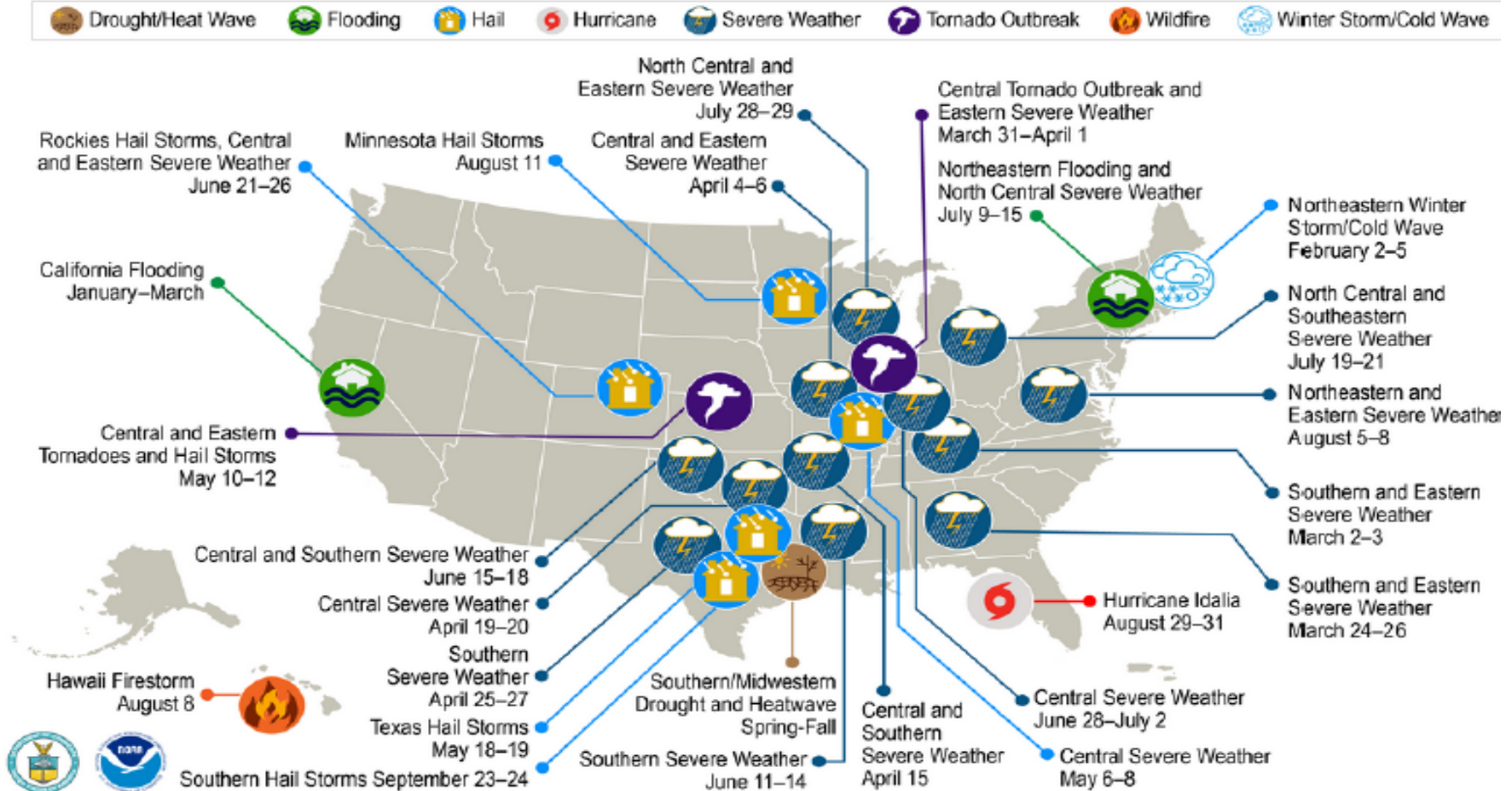
Sources: A. DeGaetano, Global Change.gov

FEMA NFIP Repetitive Loss



Source: Federal Emergency Management Agency, Natural Resources Defense Council

Billion-dollar WX & Climate Disasters in US, 2023



This map denotes the approximate location for each of the 25 separate billion-dollar weather and climate disasters that impacted the United States through November 2023.

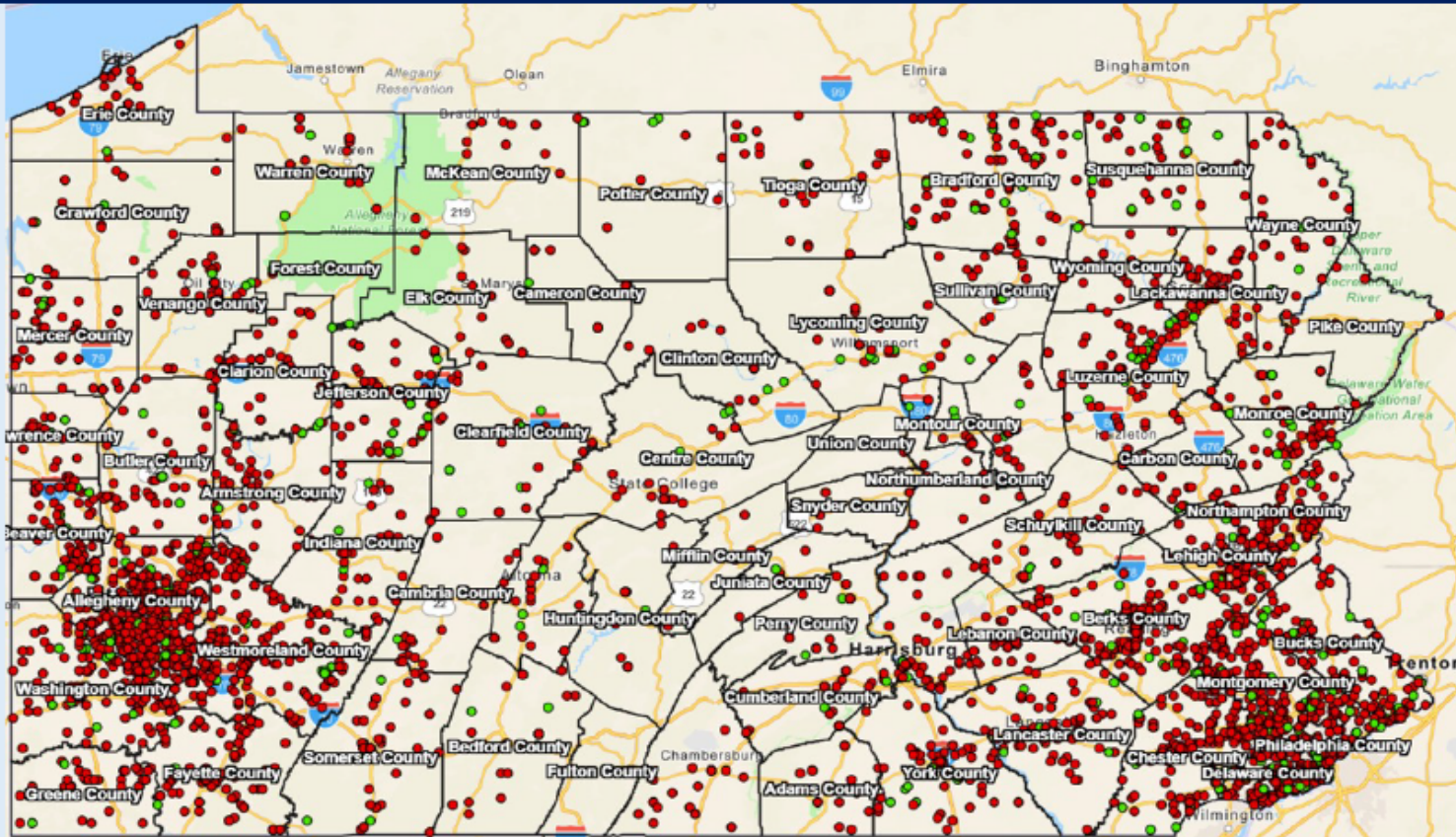


Where it can rain, it can flood



DID YOU KNOW?

Roughly 9 out of 10 flood reports made to the National Weather Service were outside the FEMA 100-year floodplain.



Locations of flood reports made to NWS between 1993 and 2021. Flood reports over one half mile outside the floodplain area are in **red**. Flood reports within a half mile of the FEMA 100-year floodplains are in **green**.



Just one inch of floodwater can cause up to \$25,000 in damage. Most homeowner and renter insurance does not cover flood damage. Flood insurance is a separate policy that can cover buildings, the contents in a building, or both.

Avert or Limit Development



Underinsured in US

Adequately Insured vs Underinsured



64% of
homes are
underinsured by an
average of 24%

24% of a \$200,000 home is \$48,000



Businesses Underinsured

Adequately Insured vs Underinsured



**75% of
businesses are
underinsured by an
average of 40%**

40% of a \$500,000 business is \$200,000

What moved the NFIP forward in Pennsylvania?

PA Act of 166 of 1978 Floodplain Management

- **Administratively went from Dept of Community Affairs (DCA), to PA Dept of Community and Economic (DCED) Development, to PEMA Operationally 2018 and then Administratively in 2021 through legislation to PEMA's EM Mitigation, Insurance & Resilient Communities (MIRC) Office (Permitting by Floodplain Managers (Municipality) and Floodplain Enforcement (Municipality) – All communities must participate in the NFIP**

PA Act of 167 of 1978 Pennsylvania Stormwater Management Act of 1978 –

- **Administered by the PA Department of Environmental Resources and then to the Department of Environmental Protection (Permitting of Floodplain/Floodway)**

PEMA interaction with FPM/BCOs?

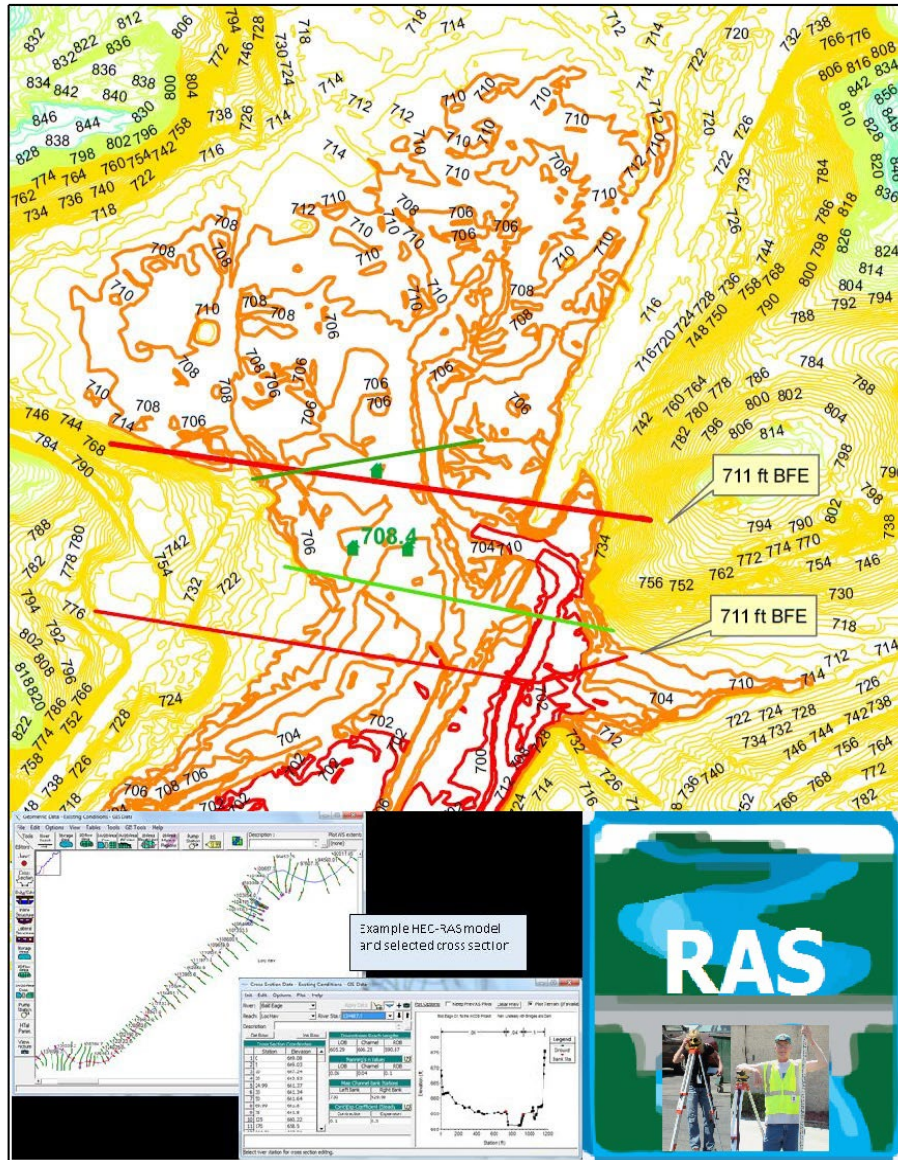
- **PEMA Coordinates Annual Risk Reduction Consultations, Participate in CAVs, CACs, GTAs with locals and policy owners regarding policies, substantial damage, improvement.**
- **Provide Free Training to locals on SD/SI, Elevation Certificates, FPM Ordinances Floodplain Management**
- **Provides the PA Flood Tool with FEMA CTP Funds for Pennsylvanians (Non-Regulatory)**

PEMA's Joint Outreach

- **Flood Insurance Round Tables (Williamsport, Etna, Reading, Latrobe, Harrisburg)**
- **PA Farm Show (Each January) – Flood Tool**
- **Municipal/County Open Houses,**
- **FEMA CCO meetings**
- **CCAP, PML, PSATS, KEMA, PAFPM, PBA, etc.**
- **Penn State University – Harrisburg Campus Study**

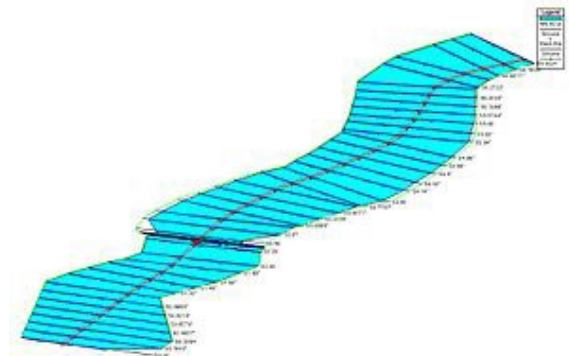


How are Flood Maps Developed?

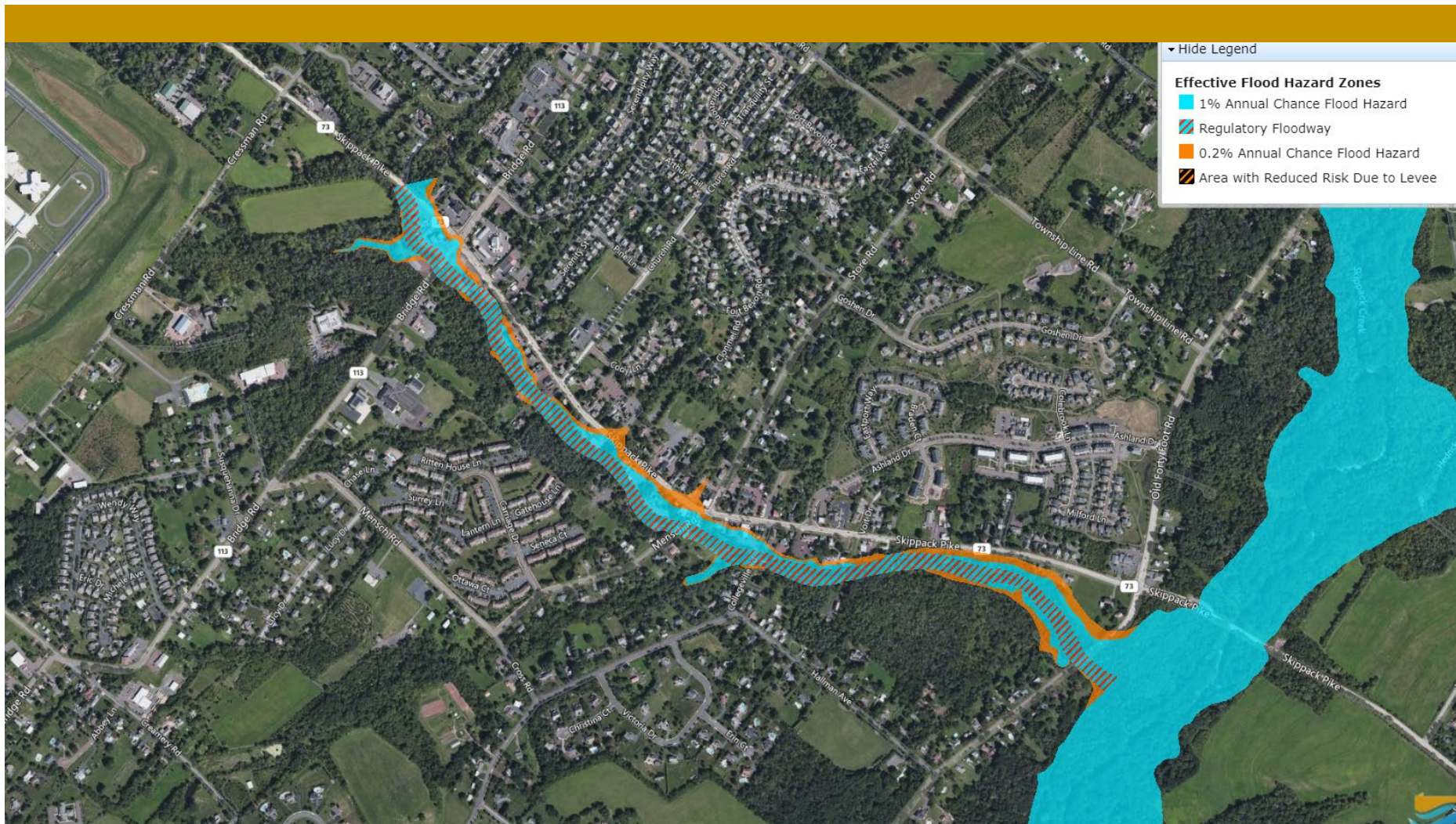


HEC-RAS is a computer program that models the hydraulics of water flow through natural rivers and other channels. ... The Hydrologic Engineering Center (**HEC**) in Davis, California developed the River Analysis System (**RAS**) to aid hydraulic engineers in channel flow analysis and floodplain determination.

Topography
Hydrology
Hydraulics
Field Survey



PA FLOOD Tool Use/DFIRM



<https://pafloodrisk.psu.edu/home>

Disaster Recovery Assistance

Usually comes in these forms

- A US Small Business Administration (SBA) loan, which must be paid back with interest (low interest)
- A FEMA Disaster Individual Assistance (IA) Grant, which is about \$5,000 on average/household – *Not always granted, 2 per since 2011*
- A FEMA Hazard Mitigation Grant – which can take about 18-24 months – Acquisition, Elevation, Mitigation/ Reconstruction – *Not a guarantee either*
- NFIP Policy Claim Payout (last 5 years averaged \$69k/payout)
- Use of an NFIP's Increase Cost of Compliance Check – Up to 30,000.00 for eligible mitigation activities
- Donation from a Voluntary Organization

HMA Grants Overview

	BRIC	PDM	FMA	HMGP
Full Name	Building Resilience in Communities	Pre-Disaster Mitigation	Flood Mitigation Assistance	Hazard Mitigation Grant Program
Availability	Annual Competition	Annual Competition	Annual Competition	After a Presidentially/Federally Declared Disaster
Use	All-hazards mitigation projects and planning (no plan components)—includes resilient infrastructure	All-hazards mitigation projects and planning (no plan components)—includes resilient infrastructure	Flood-specific projects and planning activities—includes community-based projects	All-hazards mitigation projects and planning (including plan components)
Match Requirement	10% non-federal match on all awards	25% non-federal match on all awards	25% non-federal match* <i>*Possibility of a federal share greater than 75%</i>	Up to 25% non-federal match
Eligibility	Private Non-Profit Organizations NOT Eligible	Private Non-Profit Organizations NOT Eligible	Private Non-Profit Organizations NOT Eligible	Certain Private Non-Profit Organizations eligible for HMGP grants
Limitations	Funding priorities determined by FEMA Limit on total project costs	Funding priorities determined by FEMA Limit on total project costs	Structures must be in Special Flood Hazard Area or insured by National Flood Insurance Program	(PA + IA) x 0.15 = HMGP funding available

Eligible HM Funded Projects

- Hazard Mitigation Projects
 - Property Acquisition and Structure Demolition
 - Structure Relocation
 - Dry Floodproofing of Historic Residential Structures
 - Dry Floodproofing of Non-residential Structures
 - Minor Localized Flood Reduction Projects
 - Structural Retrofitting of Existing Buildings
 - Non-structural Retrofitting of Existing Buildings and Facilities
 - Safe Room Construction
 - Infrastructure Retrofit
 - Structure Elevation
 - Soil Stabilization
 - Wildfire Mitigation
 - Post-disaster Code Enforcement
 - 5% Initiative Projects
 - Hazard Mitigation Planning (counties)



PA Flood Disaster Individual Assistance

Disaster Recovery Assistance Program (DRAP)

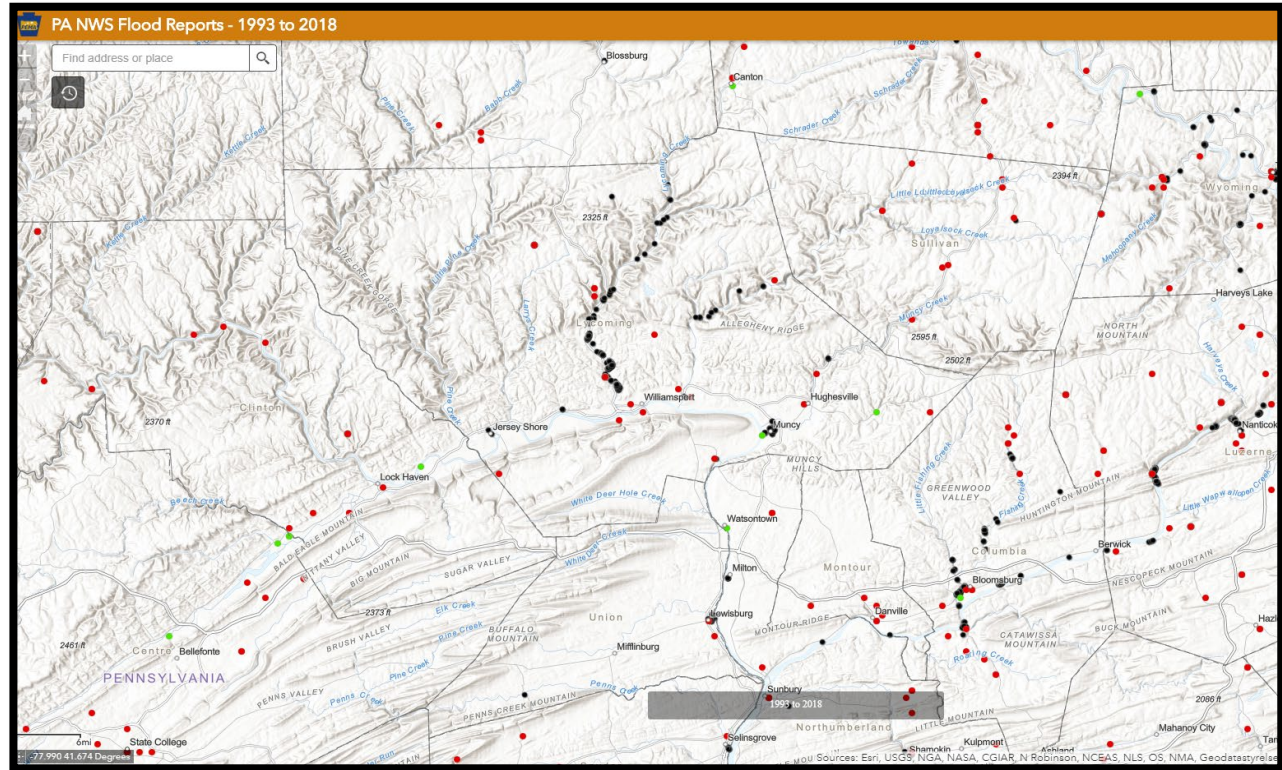
- **New Program – In its infancy**
- **Disaster without FEMA Assistance**
- **Must have been denied if there is a Small Business Administration (SBA) Declaration**
- **Must meet eligibility requirements**
- **Support capped at \$10,000.00**
- **Ex: Summer flooding experienced in Berks, Bucks, Northampton Counties**

Pennsylvania Flood Mitigation

Red dots are flood reports outside the 100-year floodplain

Green dots are flood reports inside the 100-year floodplain

Black dots are flood mitigation projects completed to reduce flood hazards and damages



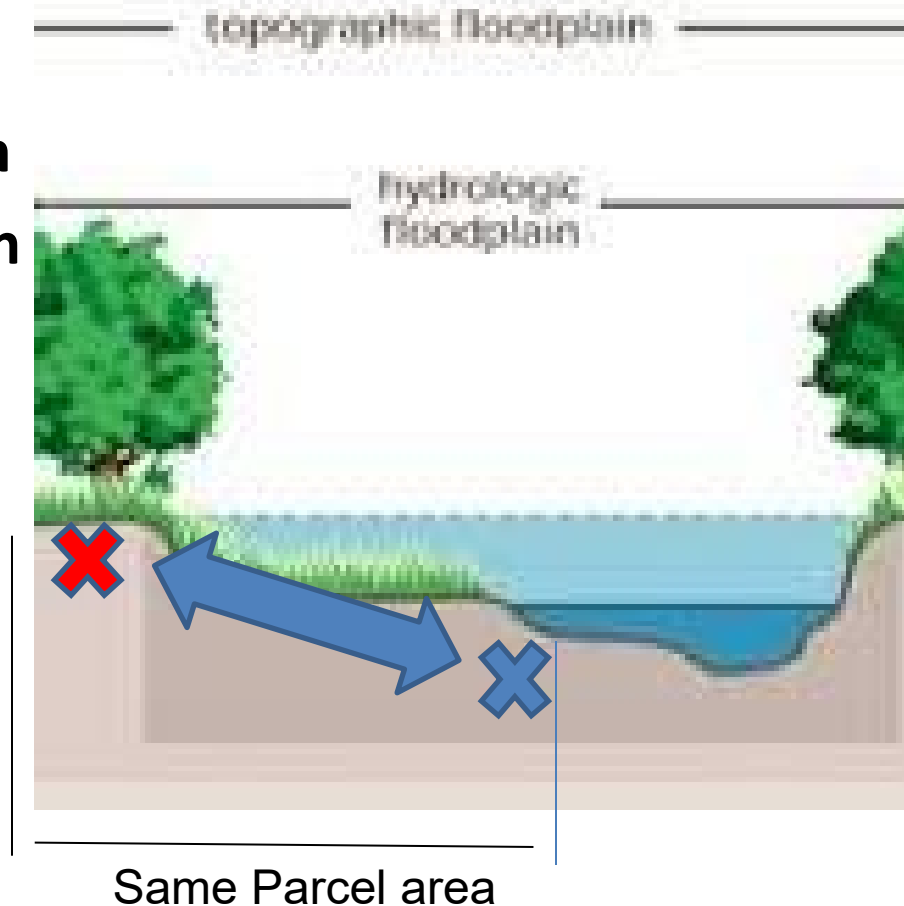
[Interactive map link](#)

Flood reports to the NWS from 1993-2018
Some locations may be approximate

Current FEMA Policy doesn't allow below

Example: Same parcel in Floodplain

- Must be within same Foundation
- Not a FEMA Eligible Activity
- Environmental Concern
- Historic Preservation Concern
- Lessens Flood Risks
- Prepares for Future Conditions
- Would lower flood premium!



Increased Cost of Compliance (ICC)

Up to \$30,000 to cover flood mitigation measures

- Structures substantially damaged or repetitive loss
- Can be used individually or assigned

ICC coverage can help to pay the cost of one or any combination of these four mitigation activities.



Elevate above the flood level required by your community



Relocate to a new site, preferably out of the floodplain

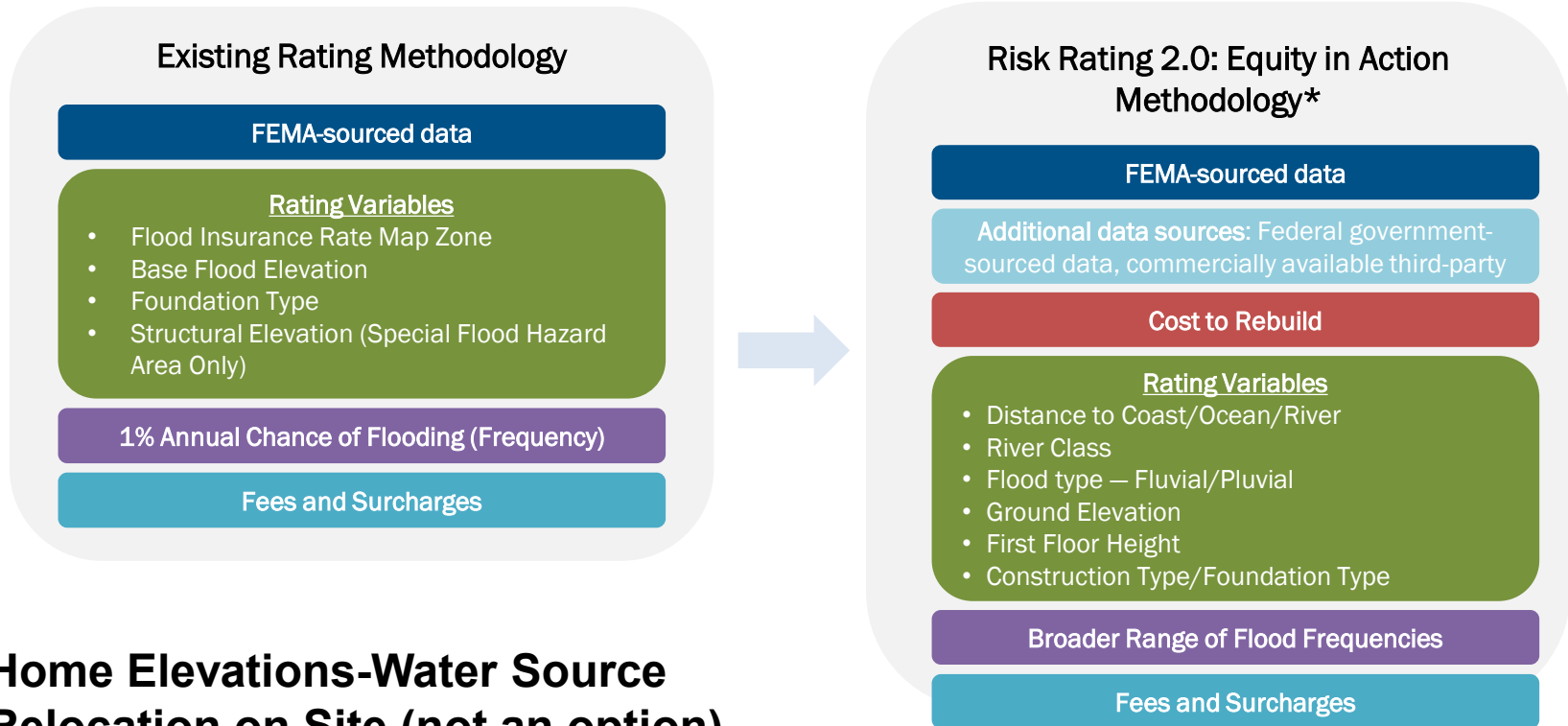


Demolish the building



Dry floodproof the building (primarily non-residential)

PA Issues with Equity in Action (RR2.0)



Home Elevations-Water Source
Relocation on Site (not an option)

Home Mitigation/Reconstruction-Water Source

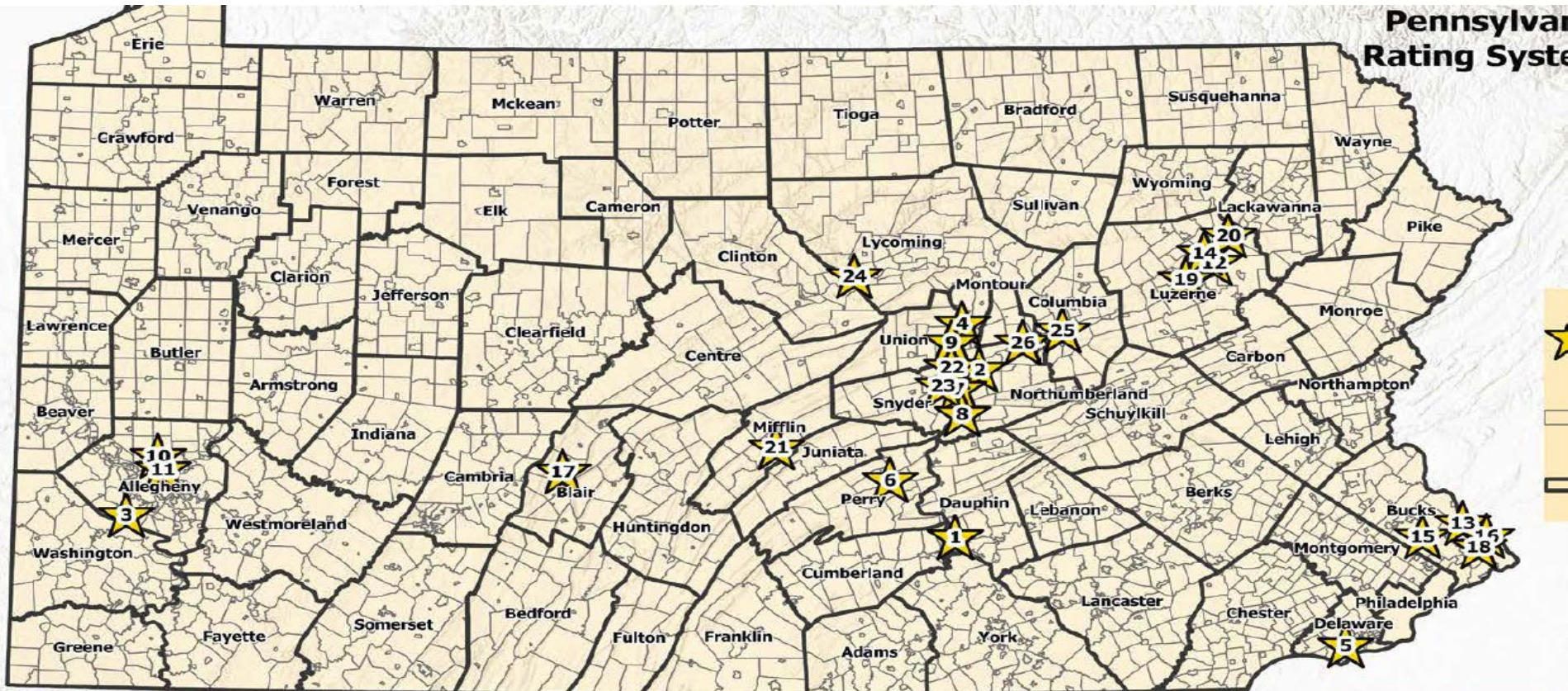
*Additional variables are not shown here



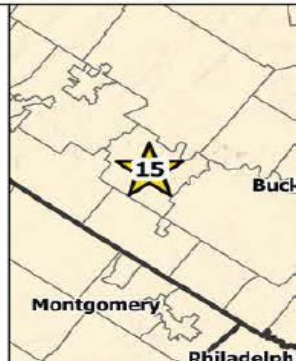
New premiums do reflect a property's unique flood risk



Community Rating System(CRS) Municipalities



CRS Municipality	Map Identifier	CRS Municipality	Map Identifier
CITY OF HARRISBURG	1	BOROUGH OF KINGSTON	14
CITY OF SUNBURY	2	TOWNSHIP OF WARWICK	15
TOWNSHIP UPPER ST CLAIR	3	BOROUGH OF YARDLEY	16
BOROUGH OF MILTON	4	CITY OF ALTOONA	17
BOROUGH OF BROOKHAVEN	5	TOWNSHIP OF LOWER MAKEFIELD	18
BOROUGH OF NEWPORT	6	TOWNSHIP OF HANOVER	19
BOROUGH OF SELINGSGROVE	7	BOROUGH OF WEST PITTSION	20
BOROUGH OF HERNDON	8	BOROUGH OF LEWISTOWN	21
BOROUGH OF LEWISBURG	9	TOWNSHIP OF MONROE	22
TOWNSHIP OF SHALER	10	TOWNSHIP OF PENN	23
BOUROUGH OF ETNA	11	BOROUGH OF JERSEY SHORE	24
CITY OF WILKES-BARRE	12	TOWNSHIP OF BLOOMSBURG	25
TOWNSHIP OF UPPER MAKEFIELD	13	BOROUGH OF DANVILLE	26



Benefits of CRS

- Money stays in the community
- Insurance savings can help offset costs of participation
- Improved flood protection
- Better organized programs
- Technical assistance
- Incentive to continue implementing
- Enhanced public information



Premium Discounts

<u>Class</u>	<u>Points</u>	<u>SFHA</u>	<u>Non-SFHA</u>	
1	4,500	45%	10%	
2	4,000	40%	10%	
3	3,500	35%	10%	
4	3,000	30%	10%	
5	2,500	25%	10%	
6	2,000	20%	10%	
7	1,500	15%	5%	
8	1,000	10%	5%	
9	500	5%	5%	
10		0	0	

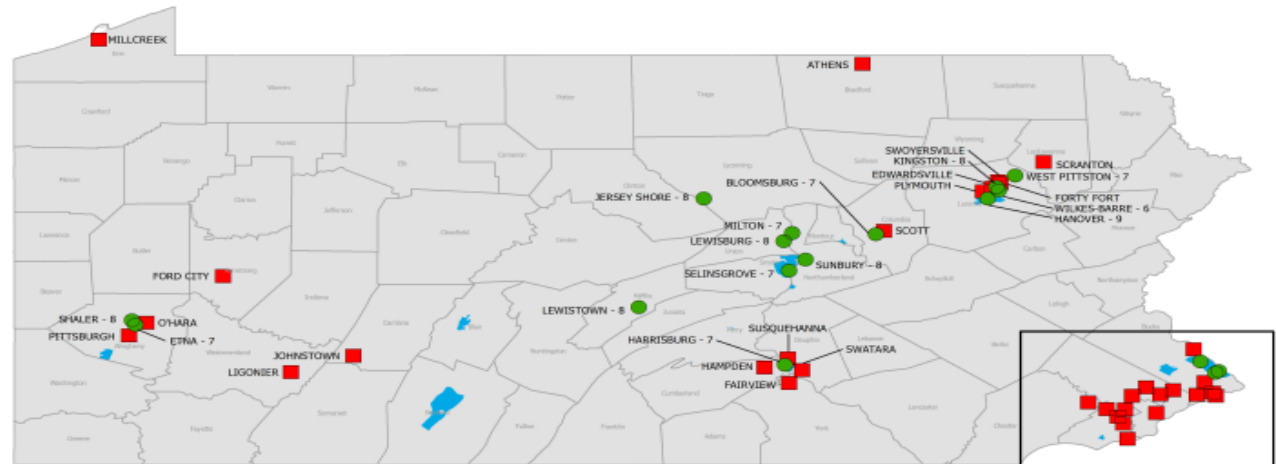
27 Current PA CRS Communities (Red Municipal Opportunities)

Pennsylvania

Top 50 National Flood Insurance Program (NFIP) Policy Count Communities* and Community Rating System (CRS) Participation

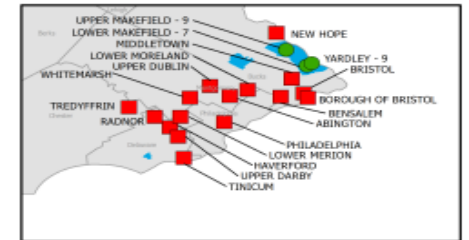
*Ranked by the total number of NFIP insurance policies-in-force

Rank	CID	Community Name	Policies	Class
1	420757	Philadelphia	3,642	--
2	420612	Kingston	1,736	8
3	420631	Wilkes-Barre	1,151	6
4	420380	Harrisburg	737	7
5	420607	Forty Fort	627	--
6	420063	Pittsburgh	520	--
7	420984	Bristol	507	--
8	420701	Lower Merion	470	--
9	420627	Swyersville	439	--
10	420608	Hanover	402	9
11	420538	Scranton	375	--
12	420695	Abington	315	--
13	420231	Johnstown	314	--
14	420702	Lower Moreland	310	--
15	420191	Lower Makefield	309	7
16	420628	West Pittston	298	7
17	420339	Bloomsburg	254	7
18	420193	Middletown	241	--
19	420195	New Hope	216	--
20	420440	Upper Darby	216	--
21	420604	Edwardsville	216	--
22	420167	Athens	204	--
23	420397	Susquehanna	195	--
24	420210	Yardley	193	9
25	420398	Swatara	187	--
26	420743	Sunbury	181	8
27	425384	Milton	175	7
28	421062	Etna	170	7
29	420183	Bristol Borough Of	170	--
30	420207	Upper Makefield	167	9
31	420417	Haverford	166	--
32	421605	Tinicum	166	--
33	420428	Radnor	163	--
34	420923	Fairview	158	--
35	420094	Ford City	157	--
36	420708	Upper Dublin	157	--
37	420642	Jersey Shore	148	8
38	420622	Plymouth	146	--
39	420712	Whitemarsh	146	--
40	420360	Hampden	144	--
41	420181	Bensalem	143	--
42	420687	Lewistown	142	8
43	421101	Shaler	141	8
44	420831	Lewisburg	140	8
45	420452	Millcreek	139	--
46	421004	Scott	136	--
47	421088	O'Hara	135	--
48	420291	Tredyffrin	135	--
49	420884	Ligonier	135	--
50	425387	Selinsgrove	130	7



Top 50 NFIP Communities

- Participating in CRS
 - Not Participating in CRS
- #### Other NFIP Communities
- Participating Borough/City/Town/Township
 - Not Participating



CRS Class Data: October 1, 2020 / Policy Data: August 7, 2020

For a full list of CRS communities, visit <https://www.fema.gov/flood-insurance/rules-legislation/community-rating-system>

As of August 2020, 2473 communities in Pennsylvania participate in the National Flood Insurance Program (NFIP). Of these communities, 27 (or 1%) participate in the Community Rating System (CRS). Of the top 50 Pennsylvania communities (in terms of flood insurance policies-in-force), 17 participate in the CRS. The remaining 33 communities present an outreach opportunity for encouraging participation in the CRS.

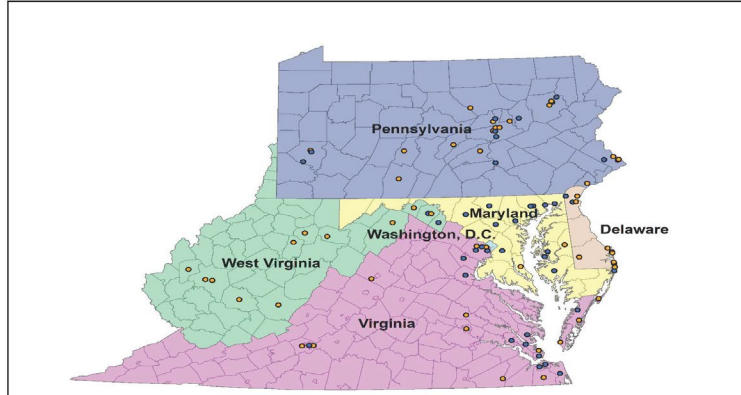


Benefits of Joining the CRS

- * Activities credited by the CRS provide direct benefits to the community, including enhanced public safety, reduction in flood damage and environmental protection.
- * Residents are reminded that the community is working to protect them from flood losses.
- * Public information activities will build a knowledgeable constituency interested in supporting and improving flood protection measures.
- * Money stays in the community instead of being spent on insurance premiums.

Region III CRS Communities

CRS Class Data: October 2020 / Policy Data: August 2020



CRS Classifications

- ★ 1 - 4 Advanced Classes: 0% of Total
- 5 - 7 Intermediate Classes: 45% of Total
- 8 - 9 Introductory Classes: 55% of Total

	Participating Communities			Policies In-Force		
	NFIP	CRS	CRS as a % of NFIP	NFIP	CRS	CRS as a % of NFIP
Region III	3,240	93	3%	265,802	142,123	54%
DC	1	0	0%	4,134	0	0%
DE	50	11	22%	26,325	8,848	34%
MD	147	15	10%	65,506	38,518	59%
PA	2,473	27	1%	51,531	7,056	14%
VA	291	27	9%	104,708	84,453	81%
WV	278	13	5%	13,398	3,248	24%

Region III States	Participating Communities	# of CRS Communities
PA	2,473	27
MD	147	15
DE	50	11
WV	278	13
VA	291	27

Contact Information

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Questions

