

Tioga County, PA

Risk-assessment baseline packet

County FIPS: 42117 Release: 2026-10 Data as of: 2026-09-30 Storm Events data through: 2026-06-30

Hazard Plain is an independent product built from public federal data. It is not a FEMA document and is not reviewed or endorsed by FEMA or any state agency.

Summary

Plan status as of 2026-09-30: No county-level plan row in FEMA data.

Highest expected annual loss (FEMA National Risk Index, modeled total; see B1-a): Inland Flooding (\$16,321,065 a year), Hurricane (\$620,229) and Strong Wind (\$558,144).

The tables that follow are organized by the items of FEMA's Local Mitigation Plan Review Tool, Element B (B1-a to B2-c); each heading says which item its tables support.

TERMS USED

EAL: expected annual loss: FEMA's modeled average yearly loss from a hazard.

NRI: FEMA's National Risk Index (version 1.20, December 2025).

NFIP: National Flood Insurance Program.

RL, SRL: repetitive loss and severe repetitive loss: flood-insured properties with repeated claims (definitions in B2-c).

FMA, HMGP: Flood Mitigation Assistance and Hazard Mitigation Grant Program, FEMA mitigation grants.

PA: FEMA Public Assistance: disaster aid to governments and some nonprofits.

Zone-level: NOAA logged the event for a National Weather Service forecast zone, which may include parts of neighboring counties.

County-coded: NOAA logged the event to this county.

FIPS: the federal code for a place; 42117 is this area.

D0 to D4: U.S. Drought Monitor categories, from abnormally dry (D0) to exceptional drought (D4).

F/EF, EFU: Fujita and Enhanced Fujita tornado ratings; EFU is an unrated tornado.

kt, CONUS: knots (1 kt is about 1.15 mph); the contiguous United States.

CFR: Code of Federal Regulations.

A4-a, E1-a: other items of FEMA's Local Mitigation Plan Review Tool (sources, and changes since the last plan).

Dollars: nominal (as reported, labeled with the year), not adjusted for inflation.

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Plan clock

No county-level plan row in FEMA data

What changed since your last plan

Not available. No county-level plan row in FEMA data, so there is no approval date to count from.

Sources: 1, 2, 4, 6 (numbered list at the end)

Plan status for every jurisdiction listed in this county: 42 rows, in the section "Plan clock: Plan status for every jurisdiction listed in this county" on the following pages.

State plan status and tribal plans in this state: see the state page.

Plan clock

Plan status for every jurisdiction listed in this county

Source: 1

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
Blossburg borough	Organized Borough	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Elkland borough	Organized Borough	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Knoxville borough	Organized Borough	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Lawrenceville borough	Organized Borough	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Liberty borough	Organized Borough	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Mansfield borough	Organized Borough	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Roseville borough	Organized Borough	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Tioga borough	Organized Borough	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Wellsboro borough	Organized Borough	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Westfield borough	Organized Borough	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Bloss township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Brookfield township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Charleston township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Chatham township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Clymer township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Covington township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Deerfield township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Delmar township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Duncan township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
Elk township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Farmington township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Gaines township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Hamilton township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Jackson township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Lawrence township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Liberty township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Middlebury township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Morris township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Nelson township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Osceola township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Putnam township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Richmond township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Rutland township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Shippen township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Sullivan township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Tioga township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Union township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Ward township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Westfield township	Township	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	
Elkland Borough Authority	Special District	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220		

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
Mansfield University	College/ University	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220	FEMA tracker shows a plan in progress	this jurisdiction approved 2023-09-12
Watrous Water Authority	Water/Sewer Authority	Approved, expires 2027-05-08	Tioga County Hazard Mitigation Plan (FEMA plan 108024)	2022-05-09	2027-05-08	220		this jurisdiction approved 2025-08-19

Supports FEMA checklist item B1-a: hazard identification

Hazards NRI does not cover (local data needed)

- dam failure (incl. upstream dams)
- levee failure
- flash flood as its own subtype
- ice jams
- debris flows
- erosion (riverine and coastal)
- land subsidence and sinkholes
- expansive soils

The 18 National Risk Index hazards, ranked by expected annual loss (EAL)

Sources: 5, 6

Rank by EAL	Hazard	NRI risk rating	EAL rating	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL total (see note) <i>modeled dollars per year</i>	Storm Events records, 1996 to 2026-06-30 <i>count</i>	Storm Events coverage note
1	Inland Flooding	Relatively Moderate	Relatively Moderate	\$16,263,998	\$7,244	\$49,824	\$16,321,065	50	
2	Hurricane	Relatively Low	Relatively Low	\$510,873	\$94,206	\$15,150	\$620,229	1	
3	Strong Wind	Relatively Moderate	Relatively Moderate	\$51,542	\$1,187	\$505,415	\$558,144	204	Includes 12 High Wind and 2 Strong Wind records (NOAA non-thunderstorm wind types, outside NRI's Strong Wind definition).
4	Tornado	Very Low	Very Low	\$147,427	\$995	\$147,322	\$295,745	5	
5	Lightning	Relatively Moderate	Relatively Low	\$2,339	n/a	\$278,179	\$280,518	1	
6	Winter Weather	Relatively Moderate	Relatively Moderate	\$10,969	\$55	\$138,779	\$149,803	89	
7	Cold Wave	Very Low	Relatively Low	\$690	\$330	\$126,181	\$127,200	22	

Rank by EAL	Hazard	NRI risk rating	EAL rating	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL total (see note) <i>modeled dollars per year</i>	Storm Events records, 1996 to 2026-06-30 <i>count</i>	Storm Events coverage note
8	Earthquake	Very Low	Very Low	\$63,620	n/a	\$11,626	\$75,246		Storm Events does not record earthquakes.
9	Hail	Very Low	Very Low	\$9,336	\$10,771	\$18,125	\$38,232	39	
10	Heat Wave	Very Low	Very Low	under \$1	\$1,873	\$33,922	\$35,795	1	
11	Ice Storm	Relatively Low	Relatively Low	\$24,656	n/a	\$3,725	\$28,381	11	
12	Landslide	Relatively Low	Relatively Low	\$2,425	n/a	\$16,028	\$18,453	0	Declared 1 time; no Storm Events record of this type.
13	Wildfire	Very Low	Very Low	\$5,089	\$27	\$1,905	\$7,021	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
14	Avalanche	Relatively Low	Very Low	under \$1	n/a	\$4,250	\$4,250	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
15	Drought	No Rating	No Expected Annual Losses	n/a	\$0	n/a	\$0	7	

Total = buildings + agriculture + population equivalence; FEMA values each expected death (or 10 injuries) at \$13.7 million (2024 dollars).

NRI risk rating combines expected annual loss with social vulnerability and community resilience; EAL rating rates expected annual loss alone. Both compare this county with all U.S. counties.

Local data needed: state and local landslide and wildfire records (Storm Events records these hazards only in part).

Not applicable to this county per NRI, with no federal declaration and no Storm Events record since 1996: coastal flooding, tsunami and volcanic activity. That is the evidence for leaving them out of the plan.

The state hazard mitigation plan also lists hazards for this county; FEMA asks the plan to explain any hazard it leaves out.

Supports FEMA checklist item B1-b: hazard location

Affects the whole county (national data give no location within it): Cold Wave, Drought, Hail, Heat Wave, Ice Storm, Lightning, Strong Wind and Winter Weather.

Inland Flooding: The FEMA Flood Insurance Rate Map (FIRM) is the required location source for flooding. See the FEMA Flood Map Service Center (<https://msc.fema.gov>) for this county.

Hazards that vary within the county: highest-rated census tracts

Source: 5

Hazard	Highest-rated census tracts <i>NRI risk rating, score 0 to 100</i>
Avalanche	tract 9503 (Very Low, 63.5); tract 9509 (Very Low, 63.5); tract 9505 (Very Low, 63.2)
Earthquake	tract 9508 (Very Low, 35.4); tract 9506 (Very Low, 33.8); tract 9507 (Very Low, 27.9)
Hurricane	tract 9507 (Relatively Low, 77.4); tract 9506 (Relatively Low, 77.0); tract 9505 (Relatively Low, 76.4)
Landslide	tract 9509 (Relatively Moderate, 97.7); tract 9504 (Relatively Low, 95.2); tract 9510 (Relatively Low, 95.1)
Tornado	tract 9507 (Relatively Low, 45.4); tract 9506 (Relatively Low, 43.3); tract 9505 (Relatively Low, 41.5)
Wildfire	tract 9507 (Relatively Low, 71.7); tract 9501 (Very Low, 68.0); tract 9505 (Very Low, 67.4)

Up to 3 census tracts per hazard, highest National Risk Index rating first, then highest score; a tract number is the Census tract number (for example 9503 is Census Tract 9503). FEMA's Resilience Analysis and Planning Tool maps the National Risk Index for every tract: <https://www.fema.gov/emergency-managers/practitioners/resilience-analysis-and-planning-tool>

Supports FEMA checklist item B1-c: hazard extent

Extent: scale, observed range and worst recorded event per hazard

Sources: 6, 7

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
Avalanche	none (count and damage only)	0					
Cold/Wind Chill, Extreme Cold/Wind Chill	wind chill	22 records, 2004 to 2026 (22 zone-level)	1 day to 4 days (median 2 days); 22 with a recorded value	4 consecutive days, 2007-02-03 to 2007-02-06, zone-level		Countywide (zone-level records).	
Frost/Freeze (outside NRI's Cold Wave definition)	crop damage	0					

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
Drought	U.S. Drought Monitor scale (D0 to D4)	7 records, 1997 to 2020 (7 zone-level)	1 day to 70 days (median 31.5 days); 4 with a recorded value	70 days (about 2.3 months), 2020-09-22 to 2020-11-30, a run of 3 consecutive Storm Events drought records, zone-level		Countywide (zone-level records).	Storm Events enters a drought at D2 or worse east of the Rockies and D3 or worse from the Rockies west (NWS Instruction 10-1605); NRI drought counts D3 and D4 only.
Earthquake	Modified Mercalli (local data)	0					Storm Events does not record earthquakes; the USGS earthquake catalog is the source.
Hail	hail size (inches)	54 records, 1967 to 2025	0.75 in to 2.5 in (median 1 in); 54 with a recorded value	2.5 in hail, 2002-05-31	Hail, 2009-06-26, \$5,000 property; \$0 crops (2009 dollars)	Event records naming jurisdictions in the plan: Wellsboro borough (10 records), Mansfield borough (7 records), Blossburg borough (3 records), Liberty borough (3 records), Liberty township (3 records), Covington township (2 records), Elkland borough (2 records), Lawrenceville borough (2 records), Knoxville borough (1 record), Morris township (1 record); and 4 more jurisdictions (see the Excel file).	
Excessive Heat, Heat	heat index (in event narratives)	1 record, 2025 (1 zone-level)	1 day; 1 with a recorded value	1 consecutive day, 2025-06-23, zone-level		Countywide (zone-level records).	
Hurricane, Tropical Storm, Tropical Depression	Saffir-Simpson	1 record, 2003 (1 zone-level)		Strongest recorded: Tropical Storm record, 2003-09-18 to 2003-09-19, damage not reported; NWS zone PAZ037		Countywide (zone-level records).	Storm Events files every zone of a storm's episode under the storm's type; flooding from the storm is filed as Flood or Flash Flood records.
Ice Storm	Sperry-Piltz ice scale (local data)	11 records, 1997 to 2008 (11 zone-level)		No damage reported in 11 records.		Countywide (zone-level records).	
Flash Flood, Flood, Lakeshore Flood	damage and flood days (flood depth: FIRM)	50 records, 1996 to 2026 (10 zone-level)		Flash Flood, 1996-11-08, \$2,500,000 property; \$0 crops (1996 dollars)		Event records naming jurisdictions in the plan: Wellsboro borough (5 records), Elkland borough (3 records), Roseville borough (3 records), Knoxville borough (2 records), Westfield borough (2 records), Westfield township (2 records), Blossburg borough (1 record), Charleston township (1 record), Lawrenceville borough (1 record), Mansfield borough (1 record); and 5 more jurisdictions (see the Excel file). Zone-level records (10) apply countywide.	Flood depth: see the FEMA Flood Insurance Rate Map. Storm Events damage is often \$0 or blank for floods, major ones included; FEMA Public Assistance by declaration (B1-d) shows which floods cost the most.
Debris Flow	none (count and damage only)	0					

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
Lightning	annualized frequency (the measure FEMA's Local Mitigation Planning Handbook names)	1 record, 2005		Lightning, 2005-08-13, damage not reported, 1 direct injury		Event records naming jurisdictions in the plan: Covington township (1 record).	Storm Events lists lightning with damage or casualties.
High Wind and Strong Wind (outside NRI's Strong Wind definition)	wind speed (kt and mph)	14 records, 1999 to 2026 (14 zone-level)	39 kt (45 mph) to 63 kt (72 mph) (median 50 kt (58 mph)); 13 with a recorded value	63 kt (72 mph) measured, High Wind, 2002-02-01; NWS zone PAZ037	Strong Wind, 2026-02-22, \$30,000 property; \$0 crops (zone total, 2026 dollars)	Countywide (zone-level records).	
Thunderstorm Wind	wind speed (kt and mph)	238 records, 1971 to 2026	43 kt (49 mph) to 87 kt (100 mph) (median 52 kt (60 mph)); 171 with a recorded value	87 kt (100 mph) estimated gust, Thunderstorm Wind, 2025-03-16	Thunderstorm Wind, 1994-08-02, \$1,500 property; \$500,000 crops (1994 dollars)	Event records naming jurisdictions in the plan: Mansfield borough (21 records), Wellsboro borough (21 records), Lawrenceville borough (11 records), Liberty borough (10 records), Liberty township (10 records), Osceola township (9 records), Blossburg borough (8 records), Knoxville borough (8 records), Charleston township (7 records), Covington township (7 records); and 6 more jurisdictions (see the Excel file).	
Tornado	Enhanced Fujita (Fujita before Feb 2007)	7 records, 1970 to 2019	F/EF0 to F/EF2 (median F/EF1); 7 with a recorded value	F2 tornado, 1983-05-02, 9.8 mi path length (whole path, pre-1996), 30 yd wide, \$2,500,000 property; crops not recorded (1983 dollars)		Event records naming jurisdictions in the plan: Tioga borough (2 records), Tioga township (2 records), Knoxville borough (1 record).	Before 1996 a tornado is listed once, under the county where it began, with its whole path's rating and length; from 1996 on, each county lists its own segment. Length is not used to rank tornadoes (see Methods).
Wildfire	acres burned (local data)	0					
Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet	none in data (snowfall: local data)	89 records, 1996 to 2026 (89 zone-level)		Winter Weather, 2024-03-20, \$15,000 property; \$0 crops (2024 dollars); NWS zone PAZ037		Countywide (zone-level records).	

Where a hazard names more than 10 jurisdictions, the table lists the 10 with the most records; every one is in the Excel file, sheet "B1-c Extent".

In event narratives only (local data needed): wind chill, temperature, heat index, ice thickness, acres burned and snow depth; any physical measure of avalanche, debris flow and lightning.

Storm Events records are more complete after 1996; before 1996 only Tornado (from 1950), Hail and Thunderstorm Wind (from 1955) exist. Zone-level records from zones that no NWS zone-county file places in this county (mostly before 2020) are not counted here (the Methods page explains the zone matching).

Dollars are nominal (as reported), labeled with the year; not adjusted for inflation.

Supports FEMA checklist item B1-d: previous occurrences

Federal declarations for this county: 20 declarations covering 15 separate hazard incidents counted in this packet (declarations for the same incident count once; non-natural and evacuation-only declarations are not counted).

No county-level plan row in FEMA data, so there is no approval date to count from.

Federal disaster declarations for this county

Sources: 1, 2, 3

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance <i>federal share obligated, nominal dollars</i>	Flags	Notes
2024-09-11	2024-08-09	DR-4815-PA	Major disaster	Tropical Storm Debby	Hurricane (primary); also designated: Inland Flooding	\$7,408,636.35	within last 5 years	
2020-03-30	2020-01-20	DR-4506-PA	Major disaster	COVID-19 Pandemic	Non-natural, not counted	\$62,148.50		
2020-03-13	2020-01-20	EM-3441-PA	Emergency	COVID-19	Non-natural, not counted	no Public Assistance recorded		same incident as DR-4506
2018-11-27	2018-08-10	DR-4408-PA	Major disaster	Severe Storms and Flooding	Inland Flooding	\$222,029.86		
2012-10-29	2012-10-26	EM-3356-PA	Emergency	Hurricane Sandy	Hurricane	no Public Assistance recorded		
2011-09-12	2011-09-03	DR-4030-PA	Major disaster	Tropical Storm Lee	Inland Flooding (primary); also designated: Hurricane	\$591,337.35		
2011-09-08	2011-09-03	EM-3340-PA	Emergency	Remnants of Tropical Storm Lee	Inland Flooding (primary); also designated: Hurricane	no Public Assistance recorded		same incident as DR-4030
2011-07-13	2011-04-25	DR-4003-PA	Major disaster	Severe Storms and Flooding	Inland Flooding	\$2,843,605.37		
2006-06-30	2006-06-23	DR-1649-PA	Major disaster	Severe Storms, Flooding, and Mudslides	Inland Flooding; Landslide	\$146,961.14		
2005-09-10	2005-08-29	EM-3235-PA	Emergency	Hurricane Katrina	Hurricane: evacuation support, not a local hazard event; not counted	no Public Assistance recorded		
2004-09-19	2004-09-17	DR-1557-PA	Major disaster	Tropical Depression Ivan	Hurricane	\$473,712.49		
2004-09-19	2004-09-08	DR-1555-PA	Major disaster	Severe Storms and Flooding Associated with Tropical Depression Frances	Hurricane; Inland Flooding: designated for Hazard Mitigation only (no Public or Individual Assistance for this county); not counted	PA not declared for this county		
2003-08-23	2003-07-21	DR-1485-PA	Major disaster	Severe Storms, Tornadoes, and Flooding	Inland Flooding; Tornado	\$488,278.90		
1996-12-23	1996-11-08	DR-1150-PA	Major disaster	Severe Thunderstorms, High Winds,Rain, Flooding	Inland Flooding (primary); also designated: Strong Wind	no Public Assistance recorded		
1996-01-21	1996-01-19	DR-1093-PA	Major disaster	Severe Storms and Flooding	Inland Flooding	no Public Assistance recorded		
1993-03-16	1993-03-13	EM-3105-PA	Emergency	Severe Snowfall & Winter Storm	Winter Weather	no Public Assistance recorded		

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance	Flags	Notes
						<i>federal share obligated, nominal dollars</i>		
1977-01-29	1977-01-29	EM-3026-PA	Emergency	Snowstorms	Winter Weather	no Public Assistance recorded		
1976-07-07	1976-07-07	DR-513-PA	Major disaster	High Winds, Flash Floods	Inland Flooding	no Public Assistance recorded		
1975-09-26	1975-09-26	DR-485-PA	Major disaster	Severe Storms, Heavy Rains & Flooding	Inland Flooding	no Public Assistance recorded		
1972-06-23	1972-06-23	DR-340-PA	Major disaster	Tropical Storm Agnes	Inland Flooding (primary); also designated: Hurricane	no Public Assistance recorded		

County Public Assistance: applicants the FEMA record places in this county, including any state agencies FEMA files there; statewide rows are listed on the state page; federal share obligated, nominal dollars.

Statewide declarations

Source: 2

Declared	Incident began	FEMA number	Type	Title	Mapped hazard
1959-01-23	1959-01-23	DR-89-PA	Major disaster	Floods	Inland Flooding
1956-08-09	1956-08-09	DR-61-PA	Major disaster	Storm	Hazard not mapped (severe storm title names no single hazard); not counted
1956-05-21	1956-05-21	DR-58-PA	Major disaster	Severe Storm	Hazard not mapped (severe storm title names no single hazard); not counted
1956-03-15	1956-03-15	DR-51-PA	Major disaster	Flood	Inland Flooding
1955-08-20	1955-08-20	DR-40-PA	Major disaster	Floods & Rains	Inland Flooding

FEMA recorded these with designated area Statewide and no county, so they are listed on every county page in the state and not counted with county rows. Local data needed: whether each one affected this county.

Public Assistance filed under this county for declarations that do not list it: 2 rows, \$124,361.71

Sources: 2, 3

FEMA number	Declared	Title	Applicant	PA obligated
				<i>federal share obligated, nominal dollars</i>
DR-4292-PA	2016-12-02	Severe Storms and Flooding	MCNETT (TOWNSHIP OF)	\$121,579.17
EM-3180-PA	2003-03-14	Snow	McNett, Township of (Tioga County)	\$2,782.54

FEMA's Public Assistance summaries file these applicants under this county, but FEMA's declaration rows for these disasters do not designate it (an electric cooperative or district serving several counties, for example). Not in any declaration row above and not counted.

Previous occurrences by hazard, with explicit no-event rows

Sources: 2, 6, 7

Hazard	Storm Events records, all years on file <i>(years in the Period column)</i>	Since plan approval <i>records</i>	In the 12 months before plan approval <i>records</i>	Last 5 years <i>records</i>	Declared incidents, all years <i>separate disasters</i>	Declared since approval <i>separate disasters</i>	Period	Statement
Avalanche	0			0	0		1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Cold Wave	22			3	0		1996 to 2026-06-30	
Drought	7			0	0		1996 to 2026-06-30	
Earthquake	0			0	0			Storm Events does not record earthquakes; the USGS earthquake catalog is the source.
Hail	54			1	0		1955 to 2026-06-30	
Heat Wave	1			1	0		1996 to 2026-06-30	
Hurricane	1			0	5		1996 to 2026-06-30	
Ice Storm	11			0	0		1996 to 2026-06-30	
Inland Flooding	50			3	11		1996 to 2026-06-30	
Landslide	0			0	1		1996 to 2026-06-30	No Storm Events records of this type; 1 federal declared incident (see declarations table)
Lightning	1			0	0		1996 to 2026-06-30	
Strong Wind	252			37	1		1955 to 2026-06-30	Includes 12 High Wind and 2 Strong Wind records.
Tornado	7			0	1		1950 to 2026-06-30	
Wildfire	0			0	0		1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Winter Weather	89			21	2		1996 to 2026-06-30	

Notable Storm Events records

Sources: 1, 6, 7

Date	Event type	Magnitude or extent	Damage <i>nominal dollars</i>	Deaths, injuries <i>direct only</i>	Location	Flags	Why listed
2025-03-16	Thunderstorm Wind	87 kt (100 mph) estimated gust	\$100,000 property; \$0 crops (2025 dollars)	0, 0	BALSAM	within last 5 years	B1-c worst recorded: Thunderstorm Wind
2024-03-20	Winter Weather		\$15,000 property; \$0 crops (zone total, 2024 dollars)	0, 0	NWS zone PAZ037 (TIOGA), zone-level	within last 5 years	B1-c worst recorded: Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet
2022-02-03	Winter Storm		property not reported; \$0 crops (zone total, 2022 dollars)	0, 2	NWS zone PAZ037 (TIOGA), zone-level	within last 5 years	deaths or injuries recorded
2011-05-26	Thunderstorm Wind	70 kt (81 mph) estimated gust	\$5,000 property; \$0 crops (2011 dollars)	0, 9	BLOSSBURG		deaths or injuries recorded
2007-02-03	Extreme Cold/ Wind Chill		\$0 property; \$0 crops (zone total, 2007 dollars)	0, 0	NWS zone PAZ037 (TIOGA), zone-level		B1-c worst recorded: Cold/Wind Chill, Extreme Cold/ Wind Chill
2005-08-13	Lightning		damage not reported	0, 1	COVINGTON		B1-c worst recorded: Lightning
2003-09-18	Tropical Storm		damage not reported	0, 0	NWS zone PAZ037 (TIOGA), zone-level		B1-c worst recorded: Hurricane, Tropical Storm, Tropical Depression
2002-05-31	Hail	2.5 in	damage not reported	0, 0	TIOGA		B1-c worst recorded: Hail
2002-02-01	High Wind	63 kt (72 mph) measured	damage not reported	0, 0	NWS zone PAZ037 (TIOGA), zone-level		B1-c worst recorded: High Wind and Strong Wind
1996-11-08	Flash Flood		\$2,500,000 property; \$0 crops (1996 dollars)	0, 0	WELLSBORO		B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
1989-11-20	Thunderstorm Wind	speed not recorded	damage not recorded (pre-1996 record)	0, 2	location not recorded		deaths or injuries recorded
1983-05-02	Tornado	F2, 9.8 mi path length (whole path, pre-1996), 30 yd wide	\$2,500,000 property; crops not recorded (1983 dollars)	0, 0	location not recorded		B1-c worst recorded: Tornado

The full list is in the Excel file, sheet "B1-d Storm Events history" (495 rows).

Location is the place NOAA recorded, as written in its data; it need not be a jurisdiction in this plan.

Local data needed: state-declared emergencies, from your state emergency management agency (federal data do not include them).

FEMA's declaration data list no tribal or special-area declarations for this state.

Supports FEMA checklist item B1-e: probability of future events

Probability: FEMA annualized frequency and descriptor per hazard

Sources: 5, 6

Hazard	FEMA annualized frequency (modeled) <i>unit per row</i>	Unit	In plain terms	Descriptor	Descriptor basis	NRI events or days in its record period (hail, wind and tornado are area-weighted, so can be fractional)	NRI period	Location	Note
Avalanche	0.01	events per year	about 1 in 100 years	Possible	FEMA annualized frequency (modeled)	0	1994 to 2023 (30 years)	see B1-f	0.01 is NRI's minimum avalanche frequency for a county in an avalanche susceptibility zone; NRI records no avalanche here, so the descriptor reflects the floor, not local events.
Cold Wave	3.74	event-days per year	about 3.74 days per year	Likely	Storm Events event-days in 11 of 30 years, 1996 to 2025 (36.7%)	71	2005-11-12 to 2024-11-12 (19 years)	countywide	
Drought	0	event-days per year	none modeled	Likely	Storm Events event-days in 4 of 30 years, 1996 to 2025 (13.3%)	0	2000 to 2025 (25.25 years; D3 and D4 only)	countywide	NRI models no drought event-days here (2000 to 2025, 25.25 years; D3 and D4 only); Storm Events has a record in 4 of 30 years. The descriptor comes from Storm Events, which counts D2 drought that NRI leaves out.
Earthquake	0.000392	annual probability at a location	chance a given location in the county has at least minor-damage shaking in a year: 0.0392%			not shown	modeled	see B1-f	No descriptor (Storm Events does not record earthquakes).
Hail	1.47	events per year	about 1.47 per year	Highly likely	FEMA annualized frequency (modeled)	56.0 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave	0.684	event-days per year	about 0.684 days per year	Possible	Storm Events event-days in 1 of 30 years, 1996 to 2025 (3.33%)	14	2005-11-12 to 2024-11-12 (19 years)	countywide	
Hurricane	0.0363	events per year	about 1 in 28 years	Possible	FEMA annualized frequency (modeled)	12	1851 to 2024 (Atlantic)	see B1-f	NRI counts hurricane and tropical storm tracks passing within storm-force wind range; federal declarations are in B1-d.
Ice Storm	0.193	event-days per year	about 0.193 days per year	Likely	Storm Events event-days in 6 of 30 years, 1996 to 2025 (20%)	13	1946-12-31 to 2014-02-12 (67 years)	countywide	
Inland Flooding	1.32	event-days per year	about 1.32 days per year	Likely	Storm Events event-days in 15 of 30 years, 1996 to 2025 (50%)	37	1996 to 2023 (28 years)	see B1-f	

Hazard	FEMA annualized frequency (modeled) <i>unit per row</i>	Unit	In plain terms	Descriptor	Descriptor basis	NRI events or days in its record period (hail, wind and tornado are area- weighted, so can be fractional)	NRI period	Location	Note
Landslide	1.37	events per year (modeled)	about 1.37 per year	Highly likely	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Lightning	30.9	days per year with a strike	about 30.9 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	countywide	
Strong Wind	1.81	events per year	about 1.81 per year	Highly likely	FEMA annualized frequency (modeled)	69	1986 to 2023 (38 years)	countywide	
Tornado	0.278	events per year	about 1 in 4 years	Likely	FEMA annualized frequency (modeled)	not shown	1950 to 2023 (EF2+); 1986 to 2023 (EF0-1)	see B1-f	
Wildfire	0.000251	annual probability at a location	chance a given location in the county burns in a year: 0.0251%		Storm Events records in 0 of 30 years, 1996 to 2025 (0%)	not shown	modeled	see B1-f	No descriptor: no Storm Events record 1996 to 2025
Winter Weather	15.5	event-days per year	about 15.5 days per year	Highly likely	Storm Events event-days in 28 of 30 years, 1996 to 2025 (93.3%)	294	2005-11-12 to 2024-11-12 (19 years)	countywide	

FEMA annualized frequency (modeled) is the National Risk Index v1.20 (December 2025) estimate of how often a hazard affects this county in a year; it is not recorded events divided by years, and its unit differs by hazard (events, event-days, or days with a lightning strike per year). For earthquake, wildfire, coastal flooding and tsunami the value is the chance (or number of events) at a location in the county, not across the county, so no "1 in N years" is given and the descriptor comes from Storm Events where it has a record (none for earthquake). The Methods page gives each hazard's method, from FEMA's National Risk Index Technical Documentation v1.20.

Where NRI gives event-days, the descriptor comes from the share of years with a Storm Events record; NRI's source records more events, so the two differ.

Descriptor scale used in this packet (defined per unit)

Sources: 5, 6

Unit	Descriptor	Definition
events per year	Highly likely	1 or more per year
events per year	Likely	about once in 1 to 10 years
events per year	Possible	about once in 10 to 100 years
events per year	Unlikely	less than once in 100 years
annual probability	Likely	10% to under 100% chance in a given year
annual probability	Possible	1% to under 10% chance in a given year
annual probability	Unlikely	under 1% chance in a given year
event-days (share of years)	Highly likely	event-days recorded in 90% or more of years
event-days (share of years)	Likely	event-days recorded in 10% to under 90% of years
event-days (share of years)	Possible	event-days recorded in some years but under 10% of years
lightning strike-days	Highly likely	cloud-to-ground strikes on 1 or more days per year

Intensity bands: historical frequency (Storm Events)

Source: 6

Hazard	Band	Years	Events <i>county-coded records</i>	Years in period	Events per year <i>events / years</i>
Hail	1.00-1.99 in	1996 to 2025	15	30	0.5
Hail	2.00 in+	1996 to 2025	4	30	0.133
Thunderstorm Wind (counted as NRI Strong Wind)	50-64 kt	1996 to 2025	153	30	5.1
Thunderstorm Wind (counted as NRI Strong Wind)	65 kt+	1996 to 2025	12	30	0.4
Thunderstorm Wind (counted as NRI Strong Wind)	unmeasured or below 50 kt	1996 to 2025	22	30	0.733
Tornado	EF0-1	1996 to 2025	5	30	0.167
Tornado	EF2-3	1996 to 2025	0	30	0
Tornado	EF4-5	1996 to 2025	0	30	0
Tornado	unrated (EFU)	1996 to 2025	0	30	0

The bands show how often events of each severity were recorded in this county, to profile how severe events have been (FEMA's probability item asks for the range of intensities).

Hail smaller than 1 inch is not counted: on 2010-01-05 the National Weather Service raised its severe-hail threshold from 3/4 inch to 1 inch, so smaller reports became less common after 2009 (NWS Service Change Notice 09-52). NRI hail frequency uses a 0.75 inch threshold.

Optional: future conditions. Not a required item in the 2025 FEMA Local Mitigation Planning Policy Guide; some states ask for it. The federal Climate Mapping for Resilience and Adaptation (CMRA) site gives county exposure to future climate conditions (<https://resilience.climate.gov/>).

Supports FEMA checklist item B1-f: hazards that vary across jurisdictions

Range of census tract risk within the county

Source: 5

Hazard	Tracts <i>rated of all</i>	NRI risk score, 0 to 100			Tracts by rating
		Min	Median	Max	
Avalanche	7 of 10	61.7	63.0	63.5	Very Low 7, Not Applicable 3
Cold Wave	10 of 10	24.1	27.4	32.1	Relatively Low 10
Drought	0 of 10				No Rating 10
Earthquake	10 of 10	19.0	22.3	35.4	Very Low 10
Hail	10 of 10	32.8	42.7	45.3	Relatively Low 9, Very Low 1
Heat Wave	10 of 10	3.8	5.1	7.1	Very Low 10
Hurricane	10 of 10	68.5	72.2	77.4	Relatively Low 10
Ice Storm	10 of 10	33.3	37.7	46.0	Relatively Low 9, Very Low 1
Inland Flooding	10 of 10	79.4	92.2	98.3	Very High 3, Relatively High 7
Landslide	10 of 10	72.0	92.7	97.7	Relatively Moderate 1, Relatively Low 8, Very Low 1
Lightning	10 of 10	71.1	82.0	90.8	Relatively High 7, Relatively Moderate 3
Strong Wind	10 of 10	77.2	82.7	90.2	Relatively High 5, Relatively Moderate 5
Tornado	10 of 10	35.5	37.3	45.4	Relatively Low 10
Wildfire	10 of 10	49.4	64.9	71.7	Relatively Low 1, Very Low 9
Winter Weather	10 of 10	85.1	90.8	94.7	Relatively High 10

Rated tracts only: No Rating (score 0.0), Not Applicable and Insufficient Data tracts are counted but not used for the minimum, median and maximum.

The score ranks a tract against all U.S. tracts (100 = highest). The rating is FEMA's category for the tract's risk value, computed differently, so the two can disagree.

Frequency data for cold wave, hail, heat wave, ice storm, lightning, strong wind and winter weather are county-wide or coarse (49 km grid or NWS zone), the same for every jurisdiction; the tract range mostly reflects where buildings and people are.

Each jurisdiction (starting figures from federal data)

Sources: 1, 3, 4, 6

Jurisdiction	Type	Plan status	Repetitive loss	Public Assistance to this jurisdiction	Event records naming this place
			<i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	<i>FEMA records matched by applicant name; federal share obligated, nominal dollars</i>	<i>all years; since its plan</i>
Blossburg borough	Organized Borough	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 2	\$29,986.10	12 total; 2 since its plan
Elkland borough	Organized Borough	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	8 total; 0 since its plan
Knoxville borough	Organized Borough	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 2	\$47,086.94	12 total; 1 since its plan
Lawrenceville borough	Organized Borough	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	14 total; 0 since its plan

Jurisdiction	Type	Plan status	Repetitive loss	Public Assistance to this jurisdiction	Event records naming this place
			FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition	FEMA records matched by applicant name; federal share obligated, nominal dollars	all years; since its plan
Liberty borough	Organized Borough	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$64,936.61	13 total; 0 since its plan
Mansfield borough	Organized Borough	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$36,889.50	29 total; 2 since its plan
Roseville borough	Organized Borough	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 1	\$3,600	4 total; 0 since its plan
Tioga borough	Organized Borough	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	10 total; 0 since its plan
Wellsboro borough	Organized Borough	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$31,185.15	36 total; 3 since its plan
Westfield borough	Organized Borough	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$247,916.02	3 total; 1 since its plan
Bloss township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$37,428.93	0 total; 0 since its plan
Brookfield township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$135,862.85	0 total; 0 since its plan
Charleston township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$171,688.50	8 total; 4 since its plan
Chatham township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$94,936.49	0 total; 0 since its plan
Clymer township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$1,147,418.94	0 total; 0 since its plan
Covington township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$488,462.74	10 total; 1 since its plan
Deerfield township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 4	\$303,517.22	0 total; 0 since its plan
Delmar township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$424,014.42	0 total; 0 since its plan
Duncan township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan
Elk township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 1	no Public Assistance recorded	0 total; 0 since its plan
Farmington township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$78,487.78	0 total; 0 since its plan
Gaines township	Township	Approved, expires 2027-05-08	FMA RL 1, SRL 0; any 3	\$510,250.26	0 total; 0 since its plan
Hamilton township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$47,355.14	0 total; 0 since its plan
Jackson township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$298,611.84	0 total; 0 since its plan
Lawrence township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$109,527.95	0 total; 0 since its plan
Liberty township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$592,768.19	13 total; 0 since its plan
Middlebury township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 2	\$248,987.98	0 total; 0 since its plan
Morris township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$371,641	9 total; 1 since its plan
Nelson township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$151,593.48	3 total; 0 since its plan
Osceola township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 2	\$42,016.50	10 total; 4 since its plan
Putnam township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 1	\$19,896.97	0 total; 0 since its plan
Richmond township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 1	\$278,186.86	0 total; 0 since its plan
Rutland township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$524,137.95	0 total; 0 since its plan
Shippen township	Township	Approved, expires 2027-05-08	FMA RL 1, SRL 1; any 3	\$39,778.99	0 total; 0 since its plan
Sullivan township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$316,864.81	0 total; 0 since its plan
Tioga township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$792,844.13	10 total; 0 since its plan
Union township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 1; any 2	\$181,061.32	0 total; 0 since its plan

Jurisdiction	Type	Plan status	Repetitive loss	Public Assistance to this jurisdiction	Event records naming this place
			<i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	<i>FEMA records matched by applicant name; federal share obligated, nominal dollars</i>	<i>all years; since its plan</i>
Ward township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan
Westfield township	Township	Approved, expires 2027-05-08	FMA RL 0, SRL 0; any 0	\$2,494,359.33	3 total; 1 since its plan

Repetitive-loss counts are for whole NFIP communities, which can extend beyond this county (see the note in B2-c).

School districts and special districts get a plan clock row only.

County Public Assistance in B1-d also includes applicants filed under the county that are not jurisdictions in this plan (for example state agencies, special districts and nonprofits), so the jurisdiction rows add up to less.

Supports FEMA checklist items B2-a and B2-b: vulnerability and potential impacts

Local data needed

The table below gives county-level starting figures; the plan describes impacts for each jurisdiction and its own assets.

No county-level plan row in FEMA data, so there is no approval date to count from.

- Critical facilities and lifelines per hazard
- A problem statement per jurisdiction per hazard
- Changes in development in hazard-prone areas since the last approval, or a statement of none (E1-a)
- Future assets

County-level starter: exposure, expected annual loss and damage since the plan

Sources: 1, 2, 3, 5, 6, 7

Hazard	Building exposure <i>modeled dollars</i>	Agriculture exposure <i>modeled dollars</i>	Population exposed <i>people</i>	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since plan <i>county-coded records, property plus crops, nominal dollars</i>	Zone-level damage since plan <i>property plus crops, reported for the zone</i>	Public Assistance since plan <i>nominal dollars; see note</i>	Note
Avalanche	\$264,482	n/a	1	under \$1	n/a	\$4,250	under 0.0001%				
Cold Wave	\$9,718,386,666	\$118,787,143	41,034	\$690	\$330	\$126,181	under 0.0001%				
Drought	n/a	\$0	n/a	n/a	\$0	n/a					agriculture exposure is 0 in NRI
Earthquake	\$17,096,548,305	n/a	41,045	\$63,620	n/a	\$11,626	0.000372%				
Hail	\$9,718,386,666	\$118,787,143	41,034	\$9,336	\$10,771	\$18,125	under 0.0001%				
Heat Wave	\$9,718,386,666	\$118,787,143	41,034	under \$1	\$1,873	\$33,922	under 0.0001%				
Hurricane	\$9,716,154,317	\$118,722,026	41,017	\$510,873	\$94,206	\$15,150	0.00526%				
Ice Storm	\$9,711,525,277	n/a	40,982	\$24,656	n/a	\$3,725	0.000254%				

Hazard	Building exposure <i>modeled dollars</i>	Agriculture exposure <i>modeled dollars</i>	Population exposed <i>people</i>	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since plan <i>county-coded records, property plus crops, nominal dollars</i>	Zone-level damage since plan <i>property plus crops, reported for the zone</i>	Public Assistance since plan <i>nominal dollars; see note</i>	Note
Inland Flooding	\$9,703,742,297	\$11,900,754	2,810	\$16,263,998	\$7,244	\$49,824	n/a (see note)				NRI counts the full building value of any census block with some flood loss; this is not the value of buildings in the floodplain. Use local FIRM overlays for B2-a/B2-b.
Landslide	\$585,849,281	n/a	2,676	\$2,425	n/a	\$16,028	0.000414%				
Lightning	\$9,718,386,666	n/a	41,034	\$2,339	n/a	\$278,179	under 0.0001%				
Strong Wind	\$9,718,386,666	\$118,787,143	41,034	\$51,542	\$1,187	\$505,415	0.00053%				
Tornado	\$9,718,386,666	\$118,787,143	41,034	\$147,427	\$995	\$147,322	0.00152%				
Wildfire	\$604,231,662	\$14,931,484	5,568	\$5,089	\$27	\$1,905	0.000842%				
Winter Weather	\$9,718,386,666	\$118,787,143	41,034	\$10,969	\$55	\$138,779	0.000113%				

Totals since the plan: not available. No county-level plan row in FEMA data, so there is no approval date to count from.

FEMA does not split Public Assistance by hazard. A declaration mapped to several hazards is listed under each of them with its full amount, so the per-hazard column does not add up to the total; the unit total counts each declaration once.

NRI computes earthquake exposure on its own basis, so it exceeds the county building value in B2-a.

Supports FEMA checklist item B2-a: vulnerability (county context)

County context

Source: 5

Measure	Value
Population	41,034
Building value (total, not at risk)	\$9,718,386,666
Agriculture value (total, not at risk)	\$118,787,143
NRI risk rating (all hazards)	Relatively Low
Expected annual loss, buildings and agriculture, all hazards	\$17,209,651
Expected annual loss, population equivalence, all hazards (NRI values each statistical life at \$13.7M; a modeled value of expected deaths and injuries, not property damage)	\$1,350,432
Social vulnerability rating	Relatively Moderate
Community resilience rating	Relatively High
NRI version	December 2025

FEMA's all-hazard expected annual loss adds buildings, agriculture and population equivalence; this table gives the property part and the population-equivalence part as separate rows.

Social vulnerability: higher means people are more likely to be harmed and slower to recover. Community resilience: lower means the community is less able to recover. High social vulnerability and low resilience both raise the NRI risk rating.

Supports FEMA checklist item B2-c: repetitive loss properties

Repetitive loss in this county, both definitions

Sources: 1, 4

Definition	Properties	Severe repetitive loss	Properties
Repetitive loss, FMA definition (44 CFR 77.2)	2	Severe repetitive loss, FMA definition (44 CFR 77.2)	2
Repetitive loss, NFIP insurance definition	23	Severe repetitive loss, NFIP insurance definition	1

The state NFIP coordinator's list, the source FEMA's Handbook names, often uses the NFIP insurance definition (second row).

Repeat-flood properties: county and state-level rows

Sources: 1, 4

Scope	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
County total	2	2	23	1	24	0	10
of which: Blossburg borough	0	0	2	0	2	0	1
of which: Knoxville borough	0	0	2	0	2	0	1
of which: Putnam township	0	0	1	0	1	0	1
of which: Richmond township	0	0	1	0	1	0	0

Scope	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
of which: Roseville borough	0	0	1	0	1	0	1
of which: Gaines township	1	0	3	0	3	0	0
of which: Elk township	0	0	1	0	1	0	0
of which: Deerfield township	0	0	4	0	4	0	4
of which: Middlebury township	0	0	2	0	2	0	0
of which: Osceola township	0	0	2	0	2	0	1
of which: Union township	0	1	1	0	2	0	0
of which: Shippen township	1	1	3	1	3	0	1
Statewide, no county in FEMA's file	0	0	1	0	1	0	0

The statewide row counts properties FEMA's file gives with no county in this state; they are listed for reference and are not in this county's counts.

Repeat-flood properties by jurisdiction in the plan (NFIP community)

Sources: 1, 4

Jurisdiction	NFIP community ID	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
Blossburg borough	420817	0	0	2	0	2	0	1
Elkland borough	420818	0	0	0	0	0	0	0
Knoxville borough	420819	0	0	2	0	2	0	1
Lawrenceville borough	420821	0	0	0	0	0	0	0
Liberty borough	420822	0	0	0	0	0	0	0
Mansfield borough	420823	0	0	0	0	0	0	0
Roseville borough	420826	0	0	1	0	1	0	1
Tioga borough	420827	0	0	0	0	0	0	0
Wellsboro borough	420829	0	0	0	0	0	0	0
Westfield borough	422093	0	0	0	0	0	0	0
Bloss township	422094	0	0	0	0	0	0	0
Brookfield township	421171	0	0	0	0	0	0	0
Charleston township	421172	0	0	0	0	0	0	0
Chatham township	421173	0	0	0	0	0	0	0
Clymer township	421174	0	0	0	0	0	0	0
Covington township	421175	0	0	0	0	0	0	0
Deerfield township	421176	0	0	4	0	4	0	4
Delmar township	421177	0	0	0	0	0	0	0
Duncan township	422095	0	0	0	0	0	0	0
Elk township	421154	0	0	1	0	1	0	0
Farmington township	422097	0	0	0	0	0	0	0

Jurisdiction	NFIP community ID	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
Gaines township	421005	1	0	3	0	3	0	0
Hamilton township	421178	0	0	0	0	0	0	0
Jackson township	420820	0	0	0	0	0	0	0
Lawrence township	421006	0	0	0	0	0	0	0
Liberty township	422098	0	0	0	0	0	0	0
Middlebury township	421179	0	0	2	0	2	0	0
Morris township	421155	0	0	0	0	0	0	0
Nelson township	421181	0	0	0	0	0	0	0
Osceola township	421182	0	0	2	0	2	0	1
Putnam township	420824	0	0	1	0	1	0	1
Richmond township	420825	0	0	1	0	1	0	0
Rutland township	422099	0	0	0	0	0	0	0
Shippen township	422100	1	1	3	1	3	0	1
Sullivan township	421183	0	0	0	0	0	0	0
Tioga township	420828	0	0	0	0	0	0	0
Union township	421184	0	1	1	0	2	0	0
Ward township	422101	0	0	0	0	0	0	0
Westfield township	421185	0	0	0	0	0	0	0

Counts by occupancy group for each jurisdiction are in the Excel file, sheet "B2-c Jurisdictions".

Jurisdiction rows are whole NFIP communities and need not add up to the county total: a community that extends into another county is counted in full on each jurisdiction row, while the county table counts only its part in this county.

County repeat-flood properties by occupancy group

Sources: 1, 4

Occupancy group	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
single-family residential	1	2	20	1	21	0	10
2 to 4 unit residential	0	0	0	0	0	0	0
other residential	0	0	0	0	0	0	0
non-residential	1	0	3	0	3	0	0
not reported	0	0	0	0	0	0	0

FEMA's occupancy groups have no institutional class; institutional properties are counted in non-residential or other residential in the table by occupancy group.

FMA RL and FMA SRL are the Flood Mitigation Assistance definitions (44 CFR 77.2), the ones the FEMA Local Mitigation Planning Policy Guide cites. NFIP repetitive loss (the FEMA insurance definition) is 2 or more claims over \$1,000 in 10 years, and a property can leave that group once it is mitigated. Also shown: NFIP severe repetitive loss, any category, mitigated and currently insured. The Methods page gives the OpenFEMA field details.

Counts are aggregates of FEMA's public NFIP Multiple Loss Properties file (FEMA's data date 2026-08-02; file version 2026-08-04). No property is identified. County assignment is FEMA's geocode.

In this county 0 properties are FMA repetitive loss but not NFIP repetitive loss, and 21 properties are NFIP repetitive loss but not FMA repetitive loss.

Exact counts; no count suppression.

Sources

Tables cite these sources by number. The full list, for the plan's bibliography (FEMA review item A4-a):

1. FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-29T134039Z, pulled 2026-09-30, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)
2. FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-29T162832Z, pulled 2026-09-30, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)
3. FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-29T150754Z, pulled 2026-09-30, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)
4. FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-30, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)
5. FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-30, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)
6. NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-30, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>
7. NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-30, <https://www.weather.gov/gis/ZoneCounty>
8. U.S. Census Bureau, Census 2024 Gazetteer, 2020 place by county, CT county-to-cousub crosswalk, version 2024-gazetteer, pulled 2026-09-30, https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_counties_national.zip, [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_cousubs_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_cousubs_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_place_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_place_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_unsd_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_unsd_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_elsd_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_elsd_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_scsd_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_scsd_national.zip), https://www2.census.gov/geo/docs/reference/codes2020/national_place_by_county2020.txt, https://www2.census.gov/geo/docs/reference/ct_change/ct_cou_to_cousub_crosswalk.xlsx (used to match place names and codes; no table prints its values)

What this packet is and what the plan adds

This packet is the federal data for the plan's risk assessment (the summary on page 1 says how it is organized); the plan and FEMA's review decide whether each item is met.

The plan adds what only the community has: local data on assets, critical facilities, development and each jurisdiction's impacts; local hazard history, including state-declared emergencies; the mitigation strategy; and adoption.

How the federal data are built: National Risk Index values are FEMA's model, not counts of events. Storm Events is more complete from 1996; zone-level records are placed by forecast zone, not by location in the county. Public Assistance for a jurisdiction is matched by applicant name. The Methods page gives every rule and the known edge cases.

OpenFEMA disclaimer

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Reuse, citation and corrections

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Cite this: Hazard Plain (2026). Tioga County, PA: risk-assessment baseline packet, release 2026-10 (data as of 2026-09-30; County FIPS 42117). Automated baseline. <https://hazardplain.org/pa/42117/> Built from FEMA OpenFEMA, the FEMA National Risk Index and NOAA NCEI Storm Events; source versions in the packet's Sources list.

Corrections: to report an error, name the packet, the table and what your records show. Contact: contact@hazardplain.org