

Lehigh County, PA

Risk-assessment baseline packet

County FIPS: 42077 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 (\$67,971,322 a year), Cold Wave (\$29,608,412) and Heat Wave (\$7,268,008).

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; 42077 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: 25 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 negative = days since expiry	Notes
Alburtis borough	Organized Borough	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2024-10-30
Allentown city	City	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2025-03-19
Bethlehem city	City	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2025-01-18
Catasauqua borough	Organized Borough	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2025-06-16
Coopersburg borough	Organized Borough	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2025-05-20
Coplay borough	Organized Borough	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2025-06-10
Emmaus borough	Organized Borough	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2025-05-19
Macungie borough	Organized Borough	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2025-07-21
Hanover township	Township	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2024-10-22
Heidelberg township	Township	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2025-08-21
Lower Macungie township	Township	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2025-08-21
Lower Milford township	Township	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2025-07-17
Lowhill township	Township	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2024-12-12
Lynn township	Township	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2025-06-12
North Whitehall township	Township	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2025-02-03
Salisbury township	Township	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2024-10-24
South Whitehall township	Township	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2024-11-20
Upper Macungie township	Township	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2024-11-07
Upper Milford township	Township	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2025-01-16

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Notes
Upper Saucon township	Township	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2025-02-10
Weisenberg township	Township	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2024-11-11
Whitehall township	Township	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2024-12-10
Lehigh County Authority	Water/Sewer Authority	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2024-12-09
Lehigh Valley Planning Commission	Regional Planning Agency	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2025-06-26
Lehigh-Northampton Airport Authority	Transit/Airport	Approved, expires 2029-10-16	Lehigh-Northampton Hazard Mitigation Plan (FEMA plan 109074)	2024-10-17	2029-10-16	1,112	this jurisdiction approved 2024-11-26

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 High	Relatively High	\$65,818,166	\$74,940	\$2,078,216	\$67,971,322	126	
2	Cold Wave	Very High	Very High	\$441	\$22	\$29,607,949	\$29,608,412	34	Includes 2 Frost/Freeze records (outside NRI's Cold Wave definition; counted in this table and in B1-d, not in the B1-e descriptor).
3	Heat Wave	Relatively Moderate	Relatively Moderate	\$3	\$319	\$7,267,686	\$7,268,008	70	
4	Hurricane	Relatively Moderate	Relatively Moderate	\$6,427,983	\$202,456	\$250,248	\$6,880,686	2	

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
5	Tornado	Relatively Moderate	Relatively Moderate	\$2,224,861	\$1,229	\$3,018,869	\$5,244,959	7	
6	Earthquake	Relatively Low	Relatively Moderate	\$3,362,444	n/a	\$1,133,354	\$4,495,798		Storm Events does not record earthquakes.
7	Strong Wind	Relatively High	Relatively High	\$1,102,014	\$6,574	\$1,712,576	\$2,821,164	468	Includes 34 High Wind and 85 Strong Wind records (NOAA non-thunderstorm wind types, outside NRI's Strong Wind definition).
8	Lightning	Relatively High	Relatively High	\$113,794	n/a	\$1,685,130	\$1,798,923	27	
9	Winter Weather	Very High	Very High	\$216,797	\$41	\$1,222,227	\$1,439,066	307	Includes 5 Sleet records (outside NRI's Winter Weather definition).
10	Drought	Relatively Moderate	Relatively Low	n/a	\$333,591	n/a	\$333,591	43	
11	Ice Storm	Relatively Moderate	Relatively Moderate	\$62,114	n/a	\$247,994	\$310,108	4	
12	Hail	Relatively Low	Relatively Low	\$58,226	\$55,235	\$35,468	\$148,928	82	
13	Landslide	Relatively Low	Relatively Low	\$10,270	n/a	\$2,803	\$13,073	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
14	Wildfire	Very Low	Very Low	\$11,102	\$4	\$1,567	\$12,672	7	
15	Avalanche	Very Low	Very Low	\$0	n/a	\$17	\$17	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).

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 records (Storm Events records this hazard 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 53.02 (Very Low, 5.3); tract 52 (Very Low, 5.3)
Earthquake	tract 91 (Relatively Moderate, 81.5); tract 21 (Relatively Moderate, 78.8); tract 22.02 (Relatively Moderate, 77.9)
Hurricane	tract 62.04 (Relatively Moderate, 84.8); tract 62.05 (Relatively Moderate, 83.2); tract 15.01 (Relatively Moderate, 81.8)
Landslide	tract 52 (Relatively Low, 94.0); tract 54.02 (Relatively Low, 93.9); tract 53.02 (Relatively Low, 93.5)
Tornado	tract 15.01 (Relatively Moderate, 64.5); tract 15.02 (Relatively Moderate, 63.3); tract 21 (Relatively Moderate, 61.1)
Wildfire	tract 53.02 (Very Low, 64.0); tract 57.02 (Very Low, 58.7); tract 69.05 (Very Low, 58.7)

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 53.02 is Census Tract 53.02). 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	32 records, 1996 to 2022 (32 zone-level)	1 day to 16 days (median 1 day); 26 with a recorded value	16 consecutive days, 2003-01-14 to 2003-01-29, zone-level		Countywide (zone-level records).	Cold/Wind Chill records from May to September (a frost night, not a cold wave) are counted but not used for the longest run.
Frost/Freeze (outside NRI's Cold Wave definition)	crop damage	2 records, 2007 (2 zone-level)		No crop damage reported in 2 records.		Countywide (zone-level records).	

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)	43 records, 1997 to 2010 (43 zone-level)	1 day to 385 days (median 21 days); 17 with a recorded value	385 days (about 12.6 months), 2001-11-06 to 2002-11-25, a run of 13 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)	93 records, 1962 to 2024	0.75 in to 2.5 in (median 1 in); 93 with a recorded value	2.5 in hail, 2010-05-14; same size also recorded on 2010-05-14	Hail, 2010-05-14, \$100,000 property; \$0 crops (2010 dollars)	Event records naming jurisdictions in the plan: Allentown city (12 records), Catasauqua borough (6 records), Emmaus borough (4 records), Macungie borough (4 records), Coopersburg borough (3 records), Coplay borough (3 records), Alburtis borough (1 record), Bethlehem city (1 record).	
Excessive Heat, Heat	heat index (in event narratives)	70 records, 1996 to 2025 (70 zone-level)	1 day to 10 days (median 3 days); 45 with a recorded value	10 consecutive days, 2002-08-11 to 2002-08-20, zone-level		Countywide (zone-level records).	Heat records from November to March (unseasonable warmth, not a heat wave) are counted but not used for the longest run.
Hurricane, Tropical Storm, Tropical Depression	Saffir-Simpson	2 records, 2011 to 2020 (2 zone-level)		Strongest recorded: Tropical Storm record, 2011-08-27 to 2011-08-28, \$500,000 property; \$0 crops (2011 dollars); NWS zone PAZ061		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)	4 records, 1996 to 2005 (4 zone-level)		No damage reported in 4 records.		Countywide (zone-level records).	
Flash Flood, Flood, Lakeshore Flood	damage and flood days (flood depth: FIRM)	126 records, 1996 to 2025 (10 zone-level)		Flash Flood, 2021-09-01, \$20,000,000 property; \$0 crops (2021 dollars)		Event records naming jurisdictions in the plan: Emmaus borough (6 records), Allentown city (5 records), Coplay borough (4 records), Macungie borough (4 records), Coopersburg borough (3 records), Alburtis borough (2 records), Bethlehem city (2 records), Catasauqua borough (1 record). 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					
Lightning	annualized frequency (the measure FEMA's Local Mitigation Planning Handbook names)	27 records, 2000 to 2025		Lightning, 2007-07-29, \$1,000,000 property; \$0 crops (2007 dollars)		Event records naming jurisdictions in the plan: Allentown city (3 records), Macungie borough (3 records), Alburtis borough (1 record), Coplay borough (1 record), Emmaus borough (1 record).	Storm Events lists lightning with damage or casualties.

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
High Wind and Strong Wind (outside NRI's Strong Wind definition)	wind speed (kt and mph)	119 records, 1996 to 2025 (119 zone-level)	36 kt (41 mph) to 70 kt (81 mph) (median 40 kt (46 mph)); 92 with a recorded value	70 kt (81 mph) measured gust, High Wind, 2012-10-29; NWS zone PAZ061		Countywide (zone-level records).	
Thunderstorm Wind	wind speed (kt and mph)	398 records, 1964 to 2026	50 kt (58 mph) to 95 kt (109 mph) (median 50 kt (58 mph)); 355 with a recorded value	95 kt (109 mph), measurement type not recorded, Thunderstorm Wind, 1964-06-15	Thunderstorm Wind, 2015-06-30, \$500,000 property; crops not reported (2015 dollars)	Event records naming jurisdictions in the plan: Allentown city (24 records), Coplay borough (15 records), Macungie borough (14 records), Coopersburg borough (11 records), Emmaus borough (11 records), Alburtis borough (9 records), Bethlehem city (5 records), Catasauqua borough (2 records).	
Tornado	Enhanced Fujita (Fujita before Feb 2007)	15 records, 1950 to 2023	F/EF0 to F/EF2 (median F/EF1); 15 with a recorded value	F2 tornado, 1950-07-05, 12.9 mi path length (whole path, pre-1996), 33 yd wide, \$25,000 property; crops not recorded (1950 dollars), 2 direct injuries	Tornado, 1983-08-11, \$25,000,000 property; crops not recorded (1983 dollars)	No event record names a jurisdiction in the plan.	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)	7 records, 2002 to 2015 (7 zone-level)		No damage reported in 7 records.		Countywide (zone-level records).	
Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet	none in data (snowfall: local data)	307 records, 1996 to 2026 (307 zone-level)		Blizzard, 1996-01-07, \$2,200,000 property; crops not reported (1996 dollars), 1 direct death (reported for the zone); NWS zone PAZ061		Countywide (zone-level records).	

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: 17 declarations covering 12 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>	Notes
2020-03-30	2020-01-20	DR-4506-PA	Major disaster	COVID-19 Pandemic	Non-natural, not counted	\$194,910,437	
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
2016-03-23	2016-01-22	DR-4267-PA	Major disaster	Severe Winter Storm and Snowstorm	Winter Weather	\$1,803,684.15	
2012-10-29	2012-10-26	EM-3356-PA	Emergency	Hurricane Sandy	Hurricane	no Public Assistance recorded	
2011-09-08	2011-09-03	EM-3340-PA	Emergency	Remnants of Tropical Storm Lee	Inland Flooding (primary); also designated: Hurricane	\$2,830.32	
2011-09-03	2011-08-26	DR-4025-PA	Major disaster	Hurricane Irene	Hurricane	\$604,979.05	
2011-08-29	2011-08-26	EM-3339-PA	Emergency	Hurricane Irene	Hurricane	no Public Assistance recorded	same incident as DR-4025
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	\$73,470.85	
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	
2003-03-14	2003-02-14	EM-3180-PA	Emergency	Snow	Winter Weather	\$419,881.07	
1996-01-21	1996-01-19	DR-1093-PA	Major disaster	Severe Storms and Flooding	Inland Flooding	no Public Assistance recorded	
1996-01-13	1996-01-06	DR-1085-PA	Major disaster	Blizzard of 96	Winter Weather	no Public Assistance recorded	
1994-03-10	1994-01-04	DR-1015-PA	Major disaster	Severe Winter Storms	Winter Weather	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	Notes
						<i>federal share obligated, nominal dollars</i>	
1972-06-23	1972-06-23	DR-340-PA	Major disaster	Tropical Storm Agnes	Inland Flooding (primary); also designated: Hurricane	no Public Assistance recorded	
1965-08-18	1965-08-18	DR-206-PA	Major disaster	Water Shortage	Drought	no Public Assistance recorded	

School districts and special districts in this county: \$44,259.69 (included in the county total above). Public Assistance matched by applicant name to the school districts and special districts FEMA lists as plan participants in this county. They have no row of their own in the jurisdiction table, so their total is listed here. These dollars are already included in the county PA column of the declarations table (the FEMA record places each applicant in this county), so this line is not added to it.

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
2003-08-23	2003-07-21	DR-1485-PA	Major disaster	Severe Storms, Tornadoes, and Flooding	Inland Flooding; Tornado
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.

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	34			1	0		1996 to 2026-06-30	Includes 2 Frost/Freeze records.
Drought	43			0	1		1996 to 2026-06-30	
Earthquake	0			0	0			Storm Events does not record earthquakes; the USGS earthquake catalog is the source.
Hail	93			15	0		1955 to 2026-06-30	
Heat Wave	70			4	0		1996 to 2026-06-30	

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
Hurricane	2			0	5		1996 to 2026-06-30	
Ice Storm	4			0	0		1996 to 2026-06-30	
Inland Flooding	126			10	3		1996 to 2026-06-30	
Landslide	0			0	0		1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Lightning	27			3	0		1996 to 2026-06-30	
Strong Wind	517			48	0		1955 to 2026-06-30	Includes 34 High Wind and 85 Strong Wind records.
Tornado	15			1	0		1950 to 2026-06-30	
Wildfire	7			0	0		1996 to 2026-06-30	
Winter Weather	307			36	5		1996 to 2026-06-30	Includes 5 Sleet records.

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
2026-01-25	Winter Storm		\$0 property; \$0 crops (zone total, 2026 dollars)	3, 0	NWS zone PAZ061 (LEHIGH), zone-level	within last 5 years	deaths or injuries recorded
2021-09-01	Flash Flood		\$20,000,000 property; \$0 crops (2021 dollars)	0, 0	STEINSVILLE to EMERALD		B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
2021-02-01	Winter Storm		\$0 property; \$0 crops (zone total, 2021 dollars)	1, 0	NWS zone PAZ061 (LEHIGH), zone-level		deaths or injuries recorded
2012-10-29	High Wind	70 kt (81 mph) measured gust	\$3,000,000 property; \$0 crops (zone total, 2012 dollars)	0, 0	NWS zone PAZ061 (LEHIGH), zone-level		B1-c worst recorded: High Wind and Strong Wind
2012-07-04	Heat		\$0 property; \$0 crops (zone total, 2012 dollars)	3, 0	NWS zone PAZ061 (LEHIGH), zone-level		deaths or injuries recorded
2011-08-27	Tropical Storm		\$500,000 property; \$0 crops (zone total, 2011 dollars)	0, 0	NWS zone PAZ061 (LEHIGH), zone-level		B1-c worst recorded: Hurricane, Tropical Storm, Tropical Depression
2007-07-29	Lightning		\$1,000,000 property; \$0 crops (2007 dollars)	0, 0	WEST CATASAUQUA		B1-c worst recorded: Lightning
2003-01-14	Cold/Wind Chill		damage not reported	0, 0	NWS zone PAZ061 (LEHIGH), zone-level		B1-c worst recorded: Cold/Wind Chill, Extreme Cold/Wind Chill
2002-08-11	Heat		damage not reported	0, 0	NWS zone PAZ061 (LEHIGH), zone-level		B1-c worst recorded: Excessive Heat, Heat
1996-01-07	Blizzard		\$2,200,000 property; crops not reported (zone total, 1996 dollars)	1, 0	NWS zone PAZ061 (LEHIGH), zone-level		B1-c worst recorded: Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet
1964-06-15	Thunderstorm Wind	95 kt (109 mph), measurement type not recorded	damage not recorded (pre-1996 record)	0, 0	location not recorded		B1-c worst recorded: Thunderstorm Wind
1950-07-05	Tornado	F2, 12.9 mi path length (whole path, pre-1996), 33 yd wide	\$25,000 property; crops not recorded (1950 dollars)	0, 2	location not recorded		B1-c worst recorded: Tornado

The full list is in the Excel file, sheet "B1-d Storm Events history" (1,245 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	1	event-day per year	about 1 day per year	Likely	Storm Events event-days in 13 of 30 years, 1996 to 2025 (43.3%)	19	2005-11-12 to 2024-11-12 (19 years)	countywide	
Drought	1.74	event-days per year	about 1.74 days per year	Likely	Storm Events event-days in 10 of 30 years, 1996 to 2025 (33.3%)	56	2000 to 2025 (25.25 years; D3 and D4 only)	countywide	
Earthquake	0.00132	annual probability at a location	chance a given location in the county has at least minor-damage shaking in a year: 0.132%			not shown	modeled	see B1-f	No descriptor (Storm Events does not record earthquakes).
Hail	2.7	events per year	about 2.7 per year	Highly likely	FEMA annualized frequency (modeled)	102.6 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave	6.05	event-days per year	about 6.05 days per year	Likely	Storm Events event-days in 21 of 30 years, 1996 to 2025 (70%)	91	2005-11-12 to 2024-11-12 (19 years)	countywide	
Hurricane	0.0578	events per year	about 1 in 17 years	Possible	FEMA annualized frequency (modeled)	20	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	1.52	event-days per year	about 1.52 days per year	Likely	Storm Events event-days in 4 of 30 years, 1996 to 2025 (13.3%)	103	1946-12-31 to 2014-02-12 (67 years)	countywide	
Inland Flooding	3.18	event-days per year	about 3.18 days per year	Highly likely	Storm Events event-days in 28 of 30 years, 1996 to 2025 (93.3%)	89	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	0.278	events per year (modeled)	about 1 in 4 years	Likely	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Lightning	35.2	days per year with a strike	about 35.2 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	countywide	
Strong Wind	6.29	events per year	about 6.29 per year	Highly likely	FEMA annualized frequency (modeled)	240	1986 to 2023 (38 years)	countywide	
Tornado	0.185	events per year	about 1 in 5 years	Likely	FEMA annualized frequency (modeled)	not shown	1950 to 2023 (EF2+); 1986 to 2023 (EF0-1)	see B1-f	
Wildfire	0.0000272	annual probability at a location	chance a given location in the county burns in a year: 0.00272%	Likely	Storm Events records in 5 of 30 years, 1996 to 2025 (16.7%)	not shown	modeled	see B1-f	
Winter Weather	13.5	event-days per year	about 13.5 days per year	Highly likely	Storm Events event-days in 30 of 30 years, 1996 to 2025 (100%)	257	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	42	30	1.4
Hail	2.00 in+	1996 to 2025	3	30	0.1
Thunderstorm Wind (counted as NRI Strong Wind)	50-64 kt	1996 to 2025	333	30	11.1
Thunderstorm Wind (counted as NRI Strong Wind)	65 kt+	1996 to 2025	1	30	0.0333
Thunderstorm Wind (counted as NRI Strong Wind)	unmeasured or below 50 kt	1996 to 2025	9	30	0.3
Tornado	EF0-1	1996 to 2025	7	30	0.233
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	2 of 81	5.3	5.3	5.3	Very Low 2, Not Applicable 79
Cold Wave	81 of 81	72.2	91.8	98.6	Very High 17, Relatively High 61, Relatively Moderate 3
Drought	39 of 81	68.1	82.9	92.8	Relatively Moderate 2, Relatively Low 27, Very Low 10, No Rating 42
Earthquake	81 of 81	26.2	53.9	81.5	Relatively Moderate 3, Relatively Low 64, Very Low 14
Hail	81 of 81	12.1	25.6	54.5	Relatively Low 6, Very Low 75
Heat Wave	81 of 81	41.8	75.4	92.4	Relatively High 13, Relatively Moderate 65, Relatively Low 3
Hurricane	81 of 81	58.4	74.5	84.8	Relatively Moderate 13, Relatively Low 68
Ice Storm	81 of 81	18.3	42.6	65.2	Relatively Low 62, Very Low 19
Inland Flooding	81 of 81	10.3	65.0	96.1	Very High 1, Relatively High 17, Relatively Moderate 46, Relatively Low 15, Very Low 2
Landslide	80 of 81	13.2	52.4	94.0	Relatively Low 19, Very Low 61, No Rating 1
Lightning	81 of 81	38.2	70.7	92.7	Relatively High 21, Relatively Moderate 57, Relatively Low 3
Strong Wind	81 of 81	42.7	69.3	85.3	Relatively High 3, Relatively Moderate 74, Relatively Low 4
Tornado	81 of 81	32.0	49.3	64.5	Relatively Moderate 29, Relatively Low 52
Wildfire	78 of 81	18.6	39.4	64.0	Very Low 78, No Rating 3
Winter Weather	81 of 81	71.1	90.8	97.5	Very High 6, Relatively High 73, Relatively Moderate 2

Drought: Agriculture is all of NRI's expected annual loss for this hazard in the county, so the tract range mostly reflects where crop and livestock value is.

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, drought, 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 (crop and livestock value where a line above names agriculture).

Each jurisdiction (starting figures from federal data)

Sources: 1, 3, 4, 6

Jurisdiction	Type	Plan status	Repetitive loss <i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	Public Assistance to this jurisdiction <i>FEMA records matched by applicant name; federal share obligated, nominal dollars</i>	Event records naming this place <i>all years; since its plan</i>	Notes
Alburtis borough	Organized Borough	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 0	\$12,213.92	13 total; 1 since its plan	
Allentown city	City	Approved, expires 2029-10-16	FMA RL 2, SRL 14; any 40	\$870,192.32	44 total; 0 since its plan	
Bethlehem city	City	Approved, expires 2029-10-16	FMA RL 2, SRL 7; any 19	no Public Assistance recorded	8 total; 0 since its plan	Whole community, including the part in Northampton County; in-county portion (county table): FMA RL 0, FMA SRL 1, NFIP RL 4, NFIP SRL 1, any category 4.
Catasauqua borough	Organized Borough	Approved, expires 2029-10-16	FMA RL 0, SRL 1; any 2	\$20,468.28	9 total; 0 since its plan	
Coopersburg borough	Organized Borough	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 1	\$16,020.56	17 total; 1 since its plan	
Coplay borough	Organized Borough	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 0	\$15,322.31	23 total; 1 since its plan	
Emmaus borough	Organized Borough	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 2	\$66,967.54	22 total; 1 since its plan	
Macungie borough	Organized Borough	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 3	\$12,618.53	25 total; 0 since its plan	
Hanover township	Township	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 0	\$12,755.23	0 total; 0 since its plan	
Heidelberg township	Township	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 1	\$24,761.03	0 total; 0 since its plan	
Lower Macungie township	Township	Approved, expires 2029-10-16	FMA RL 2, SRL 4; any 25	\$96,275.91	0 total; 0 since its plan	
Lower Milford township	Township	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 1	\$35,585.67	0 total; 0 since its plan	
Lowhill township	Township	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 0	\$88,544.99	0 total; 0 since its plan	
Lynn township	Township	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 0	\$19,145	0 total; 0 since its plan	
North Whitehall township	Township	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 1	\$74,413.80	0 total; 0 since its plan	Includes \$5,775.84 for declarations not counted as hazard incidents (DR-4506-PA).
Salisbury township	Township	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 1	\$108,375.17	0 total; 0 since its plan	Includes \$7,105.01 for declarations not counted as hazard incidents (DR-4506-PA).
South Whitehall township	Township	Approved, expires 2029-10-16	FMA RL 0, SRL 3; any 10	\$95,831.59	0 total; 0 since its plan	

Jurisdiction	Type	Plan status	Repetitive loss	Public Assistance to this jurisdiction	Event records naming this place	Notes
			<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>	
Upper Macungie township	Township	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 3	\$80,134.74	0 total; 0 since its plan	
Upper Milford township	Township	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 3	\$39,745.48	0 total; 0 since its plan	
Upper Saucon township	Township	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 2	\$111,848.48	0 total; 0 since its plan	
Weisenberg township	Township	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 0	\$32,174.26	0 total; 0 since its plan	
Whitehall township	Township	Approved, expires 2029-10-16	FMA RL 0, SRL 0; any 7	\$116,336.30	0 total; 0 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	\$0	n/a	under 1	\$0	n/a	\$17					building exposure is 0 in NRI
Cold Wave	\$84,825,663,059	\$101,999,263	373,891	\$441	\$22	\$29,607,949	under 0.0001%				
Drought	n/a	\$45,026,288	n/a	n/a	\$333,591	n/a	0.741% (agriculture)				NRI has no building exposure for this hazard; agriculture shown
Earthquake	\$148,727,611,333	n/a	374,557	\$3,362,444	n/a	\$1,133,354	0.00226%				
Hail	\$84,825,663,059	\$101,999,263	373,891	\$58,226	\$55,235	\$35,468	under 0.0001%				
Heat Wave	\$84,825,663,059	\$101,999,263	373,891	\$3	\$319	\$7,267,686	under 0.0001%				
Hurricane	\$84,806,026,773	\$101,973,036	373,749	\$6,427,983	\$202,456	\$250,248	0.00758%				
Ice Storm	\$84,825,097,212	n/a	373,888	\$62,114	n/a	\$247,994	under 0.0001%				
Inland Flooding	\$84,812,604,954	\$3,382,001	5,202	\$65,818,166	\$74,940	\$2,078,216	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	\$1,821,338,161	n/a	8,005	\$10,270	n/a	\$2,803	0.000564%				
Lightning	\$84,825,663,059	n/a	373,891	\$113,794	n/a	\$1,685,130	0.000134%				
Strong Wind	\$84,825,663,059	\$101,999,263	373,891	\$1,102,014	\$6,574	\$1,712,576	0.0013%				
Tornado	\$84,825,663,059	\$101,999,263	373,891	\$2,224,861	\$1,229	\$3,018,869	0.00262%				

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
Wildfire	\$9,714,705,352	\$16,163,706	44,167	\$11,102	\$4	\$1,567	0.000114%				
Winter Weather	\$84,825,663,059	\$101,999,263	373,891	\$216,797	\$41	\$1,222,227	0.000256%				

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	373,891
Building value (total, not at risk)	\$84,825,663,059
Agriculture value (total, not at risk)	\$101,999,263
NRI risk rating (all hazards)	Relatively Moderate
Expected annual loss, buildings and agriculture, all hazards	\$80,082,625
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)	\$48,264,103
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)	4	Severe repetitive loss, FMA definition (44 CFR 77.2)	23
Repetitive loss, NFIP insurance definition	105	Severe repetitive loss, NFIP insurance definition	21

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	4	23	105	21	107	2	29
of which: Allentown city	2	14	40	14	40	0	6
of which: Catasauqua borough	0	1	2	1	2	0	0
of which: Coopersburg borough	0	0	1	0	1	0	0
of which: Emmaus borough	0	0	2	0	2	0	0
of which: Lower Macungie township	2	4	23	2	25	2	11
of which: Macungie borough	0	0	3	0	3	0	0
of which: Salisbury township	0	0	1	0	1	0	1
of which: South Whitehall township	0	3	10	3	10	0	1
of which: Upper Saucon township	0	0	2	0	2	0	1
of which: Whitehall township	0	0	7	0	7	0	2
of which: Bethlehem city	0	1	4	1	4	0	1
of which: Lower Milford township	0	0	1	0	1	0	1
of which: Upper Macungie township	0	0	3	0	3	0	1
of which: Heidelberg township	0	0	1	0	1	0	1
of which: North Whitehall township	0	0	1	0	1	0	0
of which: Upper Milford township	0	0	3	0	3	0	2
of which: Washington township (community ID not in plan data)	0	0	1	0	1	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>	Note
Alburtis borough	420584	0	0	0	0	0	0	0	
Allentown city	420585	2	14	40	14	40	0	6	
Bethlehem city	420718	2	7	19	7	19	0	9	Whole community, including the part in Northampton County; in-county portion (county table): FMA RL 0, FMA SRL 1, NFIP RL 4, NFIP SRL 1, any category 4.
Catasauqua borough	420586	0	1	2	1	2	0	0	
Coopersburg borough	420587	0	0	1	0	1	0	0	
Coplay borough	421807	0	0	0	0	0	0	0	
Emmaus borough	420588	0	0	2	0	2	0	0	
Macungie borough	420590	0	0	3	0	3	0	0	
Hanover township	422261	0	0	0	0	0	0	0	
Heidelberg township	421809	0	0	1	0	1	0	1	
Lower Macungie township	420589	2	4	23	2	25	2	11	
Lower Milford township	421039	0	0	1	0	1	0	1	
Lowhill township	421811	0	0	0	0	0	0	0	
Lynn township	421812	0	0	0	0	0	0	0	
North Whitehall township	421813	0	0	1	0	1	0	0	
Salisbury township	420591	0	0	1	0	1	0	1	
South Whitehall township	420593	0	3	10	3	10	0	1	
Upper Macungie township	421044	0	0	3	0	3	0	1	
Upper Milford township	421815	0	0	3	0	3	0	2	
Upper Saucon township	420594	0	0	2	0	2	0	1	

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>	Note
Weisenberg township	421817	0	0	0	0	0	0	0	
Whitehall township	420595	0	0	7	0	7	0	2	

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	4	12	69	10	71	2	20
2 to 4 unit residential	0	0	0	0	0	0	0
other residential	0	0	3	0	3	0	2
non-residential	0	11	33	11	33	0	7
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 1 property is FMA repetitive loss but not NFIP repetitive loss, and 102 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/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

This product uses the Federal Emergency Management Agency's OpenFEMA API, but is not endorsed by FEMA. The Federal Government or FEMA cannot vouch for the data or analyses derived from these data after the data have been retrieved from the Agency's website(s).

Reuse, citation and corrections

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Cite this: Hazard Plain (2026). Lehigh County, PA: risk-assessment baseline packet, release 2026-10 (data as of 2026-09-30; County FIPS 42077). Automated baseline. <https://hazardplain.org/pa/42077/> 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