

Chautauqua County, NY

Risk-assessment baseline packet

County FIPS: 36013 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: Approved, expires 2029-06-20. Plan: Chautauqua County 2024 (FEMA plan 109750), approved 2024-06-21.

Since the plan was approved on 2024-06-21: no new hazard declaration and 64 NOAA Storm Events records; details under "What changed since your last plan".

Highest expected annual loss (FEMA National Risk Index, modeled total; see B1-a): Inland Flooding (\$35,963,222 a year), Tornado (\$2,664,048) and Cold Wave (\$1,628,604).

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; 36013 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.

CONTENTS

- 1. Summary and terms used, page 1
- 2. Plan clock, page 2
- 3. What changed since your last plan (approved 2024-06-21), page 2
- 4. B1-a: hazard identification, page 6
- 5. B1-b: hazard location, page 8
- 6. B1-c: hazard extent, page 8
- 7. B1-d: previous occurrences, page 11
- 8. B1-e: probability of future events, page 15
- 9. B1-f: hazards that vary across jurisdictions, page 18
- 10. B2-a and B2-b: vulnerability and potential impacts, page 22
- 11. B2-a: vulnerability (county context), page 23
- 12. B2-c: repetitive loss properties, page 24
- 13. Sources, what the plan adds, disclaimer and citation, page 26

Plan clock

Status:	Approved, expires 2029-06-20	Plan:	Chautauqua County 2024 (FEMA plan 109750)
Approved:	2024-06-21	Days to expiry:	994
What changed since your last plan (approved 2024-06-21)			
New federal declarations:	none	Storm Events records since approval:	64 records (data through 2026-06-30)
Repetitive loss now:	FMA RL 3, SRL 16 (44 CFR 77.2); any definition: 233	Repeat-flood change:	this release sets the baseline count.
Sources: 1, 2, 4, 6 (numbered list at the end)			

Plan status for every jurisdiction listed in this county: 43 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
Chautauqua County	County Subdivision	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-08-23
Bemus Point village	Village	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2025-07-02
Brocton village	Village	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-18
Cassadaga village	Village	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-08-01
Celoron village	Village	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-19
Dunkirk city	City	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2025-02-25
Falconer village	Village	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-10
Fredonia village	Village	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		
Jamestown city	City	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2025-02-13
Lakewood village	Village	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-12
Mayville village	Village	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-10
Panama village	Village	Plan 109750 approved 2024-06-21, pending adoption here; not yet eligible	Chautauqua County 2024 (FEMA plan 109750), pending adoption here	2024-06-21 by FEMA; not yet adopted here	2029-06-20 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.
Sherman village	Village	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-11

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
Silver Creek village	Village	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-17
Sinclairville village	Village	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-23
Westfield village	Village	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-17
Arkwright town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-12-04
Busti town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-12
Carroll town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-11
Charlotte town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-19
Chautauqua town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-11
Cherry Creek town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-08-19
Clymer town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-11
Dunkirk town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-18
Ellery town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-16
Ellicott town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-08
Ellington town	Town	Plan 109750 approved 2024-06-21, pending adoption here; not yet eligible	Chautauqua County 2024 (FEMA plan 109750), pending adoption here	2024-06-21 by FEMA; not yet adopted here	2029-06-20 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.
French Creek town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2025-04-21

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
Gerry town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-17
Hanover town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-08-01
Harmony town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2025-04-21
Kiantone town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-08-05
Mina town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-31
North Harmony town	Town	Plan 109750 approved 2024-06-21, pending adoption here; not yet eligible	Chautauqua County 2024 (FEMA plan 109750), pending adoption here	2024-06-21 by FEMA; not yet adopted here	2029-06-20 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.
Poland town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-09-17
Pomfret town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-11
Portland town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-17
Ripley town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2025-04-21
Sheridan town	Town	Plan 109750 approved 2024-06-21, pending adoption here; not yet eligible	Chautauqua County 2024 (FEMA plan 109750), pending adoption here	2024-06-21 by FEMA; not yet adopted here	2029-06-20 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.
Sherman town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-16
Stockton town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-12

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
Villanova town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-11
Westfield town	Town	Approved, expires 2029-06-20	Chautauqua County 2024 (FEMA plan 109750)	2024-06-21	2029-06-20	994		this jurisdiction approved 2024-07-31

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	\$35,842,404	\$68,722	\$52,095	\$35,963,222	122	
2	Tornado	Relatively Moderate	Relatively Moderate	\$660,051	\$3,792	\$2,000,206	\$2,664,048	6	
3	Cold Wave	Relatively Moderate	Relatively Moderate	\$1,231	\$51,848	\$1,575,524	\$1,628,604	37	Includes 35 Frost/Freeze records (outside NRI's Cold Wave definition; counted in this table and in B1-d, not in the B1-e descriptor).
4	Strong Wind	Relatively High	Relatively Moderate	\$765,253	\$6,975	\$503,128	\$1,275,356	490	Includes 90 High Wind records (a NOAA non-thunderstorm wind type, outside NRI's Strong Wind definition).
5	Lightning	Relatively High	Relatively High	\$12,513	n/a	\$939,549	\$952,063	6	
6	Hurricane	Relatively Low	Relatively Low	\$340,360	\$78,107	\$13,492	\$431,959	0	Declared 2 times; no Storm Events record of this type.

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
7	Earthquake	Very Low	Very Low	\$125,039	n/a	\$26,557	\$151,596		Storm Events does not record earthquakes.
8	Ice Storm	Relatively Moderate	Relatively Moderate	\$103,737	n/a	\$45,484	\$149,221	2	
9	Winter Weather	Relatively Moderate	Relatively Moderate	\$35,679	\$230	\$92,797	\$128,705	221	
10	Heat Wave	Very Low	Very Low	under \$1	\$4,256	\$105,136	\$109,392	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
11	Hail	Very Low	Very Low	\$32,695	\$53,652	\$6,233	\$92,579	77	
12	Wildfire	Very Low	Very Low	\$22,009	\$48	\$3,639	\$25,696	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
13	Landslide	Very Low	Very Low	\$620	n/a	\$1,233	\$1,853	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
14	Coastal Flooding	Very Low	Very Low	\$1,033	n/a	\$15	\$1,048	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
15	Avalanche	Very Low	Very Low	\$0	n/a	\$14	\$14	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
16	Drought	No Rating	No Expected Annual Losses	n/a	\$0	n/a	\$0	3	
	Tsunami	Insufficient Data	Insufficient Data	n/a	n/a	n/a	n/a	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 wildfire, landslide and tsunami 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: 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.

Coastal Flooding and 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 375 (Very Low, 6.1); tract 364.01 (Very Low, 6.0); tract 365 (Very Low, 5.8)
Earthquake	tract 359.02 (Very Low, 28.5); tract 364.01 (Very Low, 26.8); tract 301 (Very Low, 26.4)
Hurricane	tract 367 (Relatively Low, 66.0); tract 361 (Relatively Low, 62.2); tract 364.01 (Relatively Low, 59.3)
Landslide	tract 361 (Relatively Low, 91.0); tract 367 (Relatively Low, 87.7); tract 374 (Relatively Low, 86.1)
Tornado	tract 367 (Relatively Moderate, 69.8); tract 307 (Relatively Moderate, 63.3); tract 375 (Relatively Moderate, 62.8)
Tsunami	no tract has a National Risk Index rating for this hazard
Wildfire	tract 364.02 (Relatively Low, 75.9); tract 361 (Relatively Low, 75.8); tract 360 (Relatively Low, 74.9)

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 375 is Census Tract 375). 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					
Coastal Flood, Storm Surge/ Tide	none in data (flood depth: FIRM)	0					Flood depth: see the FEMA Flood Insurance Rate Map.
Cold/Wind Chill, Extreme Cold/Wind Chill	wind chill	2 records, 2019 to 2026 (2 zone-level)	2 days; 2 with a recorded value	2 consecutive days, 2026-02-07 to 2026-02-08, zone-level		Countywide (zone-level records).	
Frost/Freeze (outside NRI's Cold Wave definition)	crop damage	35 records, 2008 to 2026 (35 zone-level)		Frost/Freeze, 2010-05-10, \$50,000 crop damage (2010 dollars); NWS zone NYZ019		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)	3 records, 2016 (3 zone-level)	57 days; 1 with a recorded value	57 days (about 1.9 months), 2016-07-21 to 2016-09-15, 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)	90 records, 1958 to 2026	0.75 in to 2 in (median 1 in); 90 with a recorded value	2 in hail, 2019-04-14; same size also recorded on 2017-05-28	Hail, 2012-05-02, \$10,000 property; \$25,000 crops (2012 dollars)	Event records naming jurisdictions in the plan: Jamestown city (10 records), Ripley town (8 records), Dunkirk city (6 records), Dunkirk town (6 records), Lakewood village (6 records), Sherman town (4 records), Sherman village (4 records), Mayville village (3 records), Westfield town (3 records), Westfield village (3 records); and 11 more jurisdictions (see the Excel file).	
Excessive Heat, Heat	heat index (in event narratives)	0					
Hurricane, Tropical Storm, Tropical Depression	Saffir-Simpson	0					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)	2 records, 1997 to 2002 (2 zone-level)		Ice Storm, 2002-01-31, \$250,000 property; crops not reported (2002 dollars); NWS zone NYZ019		Countywide (zone-level records).	
Flash Flood, Flood, Lakeshore Flood	damage and flood days (flood depth: FIRM)	122 records, 1996 to 2025 (17 zone-level)		Flash Flood, 2009-08-09, \$30,000,000 property; \$0 crops (2009 dollars)		Event records naming jurisdictions in the plan: Jamestown city (17 records), Silver Creek village (12 records), Dunkirk city (6 records), Dunkirk town (6 records), Lakewood village (6 records), Ellington town (4 records), Falconer village (4 records), Kiantone town (4 records), Fredonia village (3 records), Ripley town (3 records); and 16 more jurisdictions (see the Excel file). Zone-level records (17) 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)	6 records, 2003 to 2013		Lightning, 2011-06-07, \$40,000 property; \$0 crops (2011 dollars)		Event records naming jurisdictions in the plan: Fredonia village (2 records), Silver Creek village (2 records), Chautauqua town (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)	90 records, 1996 to 2026 (90 zone-level)	35 kt (40 mph) to 65 kt (75 mph) (median 52 kt (60 mph)); 83 with a recorded value	65 kt (75 mph) estimated gust, High Wind, 2008-12-28; NWS zone NYZ019	High Wind, 2019-10-31, \$500,000 property; \$0 crops (zone total, 2019 dollars)	Countywide (zone-level records).	
Thunderstorm Wind	wind speed (kt and mph)	537 records, 1957 to 2026	44 kt (51 mph) to 105 kt (121 mph) (median 50 kt (58 mph)); 367 with a recorded value	105 kt (121 mph), measurement type not recorded, Thunderstorm Wind, 1982-09-02	Thunderstorm Wind, 1999-07-09, \$100,000 property; \$100,000 crops (1999 dollars)	Event records naming jurisdictions in the plan: Jamestown city (27 records), Westfield town (20 records), Westfield village (20 records), Dunkirk city (17 records), Dunkirk town (17 records), Lakewood village (16 records), Panama village (15 records), Ellington town (14 records), Gerry town (14 records), Fredonia village (12 records); and 22 more jurisdictions (see the Excel file).	Speeds under 20 kt (likely entry errors) are left out of the observed range.
Tornado	Enhanced Fujita (Fujita before Feb 2007)	29 records, 1959 to 2024	F/EF0 to F/EF4 (median between F/EF1 and F/EF2); 26 with a recorded value	F4 tornado, 1985-05-31, 8 mi path length (whole path, pre-1996), 440 yd wide, \$2,500,000 property; crops not recorded (1985 dollars)	Tornado, 2010-07-24, \$5,000,000 property; \$0 crops (2010 dollars)	Event records naming jurisdictions in the plan: Brocton village (2 records), Fredonia village (2 records), Westfield town (2 records), Westfield village (2 records), Arkwright town (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).
Tsunami	none (count and damage only)	0					
Wildfire	acres burned (local data)	0					
Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet	none in data (snowfall: local data)	221 records, 1996 to 2026 (218 zone-level)		Heavy Snow, 2000-11-21, \$10,000,000 property; crops not reported (2000 dollars); NWS zone NYZ019		Event records naming jurisdictions in the plan: Dunkirk city (1 record), Dunkirk town (1 record), Panama village (1 record). Zone-level records (218) apply countywide.	

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, lightning and tsunami.

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: 24 declarations covering 17 separate hazard incidents counted in this packet (declarations for the same incident count once; non-natural and evacuation-only declarations are not counted).

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
2022-11-20	2022-11-18	EM-3589-NY	Emergency	Severe Winter Storm and Snowstorm	Winter Weather	no Public Assistance recorded	within last 5 years	
2020-03-20	2020-01-20	DR-4480-NY	Major disaster	COVID-19 Pandemic	Non-natural, not counted	\$19,996,384.04		
2020-03-13	2020-01-20	EM-3434-NY	Emergency	COVID-19	Non-natural, not counted	no Public Assistance recorded		same incident as DR-4480
2019-12-19	2019-10-31	DR-4472-NY	Major disaster	Severe Storms, Straight-Line Winds, and Flooding	Inland Flooding; Strong Wind	\$805,776.29		
2014-12-22	2014-11-17	DR-4204-NY	Major disaster	Severe Winter Storm, Snowstorm, and Flooding	Winter Weather (primary); also designated: Inland Flooding	\$381,529.10		
2014-07-08	2014-05-13	DR-4180-NY	Major disaster	Severe Storms and Flooding	Inland Flooding	\$2,069,299.14		
2013-07-12	2013-06-26	DR-4129-NY	Major disaster	Severe Storms and Flooding	Inland Flooding	\$349,992.94		
2012-10-28	2012-10-27	EM-3351-NY	Emergency	Hurricane Sandy	Hurricane	no Public Assistance recorded		
2009-09-01	2009-08-08	DR-1857-NY	Major disaster	Severe Storms and Flooding	Inland Flooding	\$3,464,103.74		
2005-09-30	2005-08-29	EM-3262-NY	Emergency	Hurricane Katrina Evacuation	Hurricane: evacuation support, not a local hazard event; not counted	no Public Assistance recorded		
2005-04-19	2005-04-02	DR-1589-NY	Major disaster	Severe Storms and Flooding	Inland Flooding	\$705,113.12		
2004-10-01	2004-08-13	DR-1564-NY	Major disaster	Severe Storms and Flooding	Inland Flooding	\$590,850.54		
2004-08-03	2004-05-13	DR-1534-NY	Major disaster	Severe Storms and Flooding	Inland Flooding	\$741,332.79		
2003-08-23	2003-08-14	EM-3186-NY	Emergency	Power Outage	Non-natural, not counted	\$3,075.59		
2001-12-31	2001-12-24	EM-3170-NY	Emergency	Snow	Winter Weather	\$567,422.08		
2001-09-11	2001-09-11	DR-1391-NY	Major disaster	Fires and Explosions	Non-natural, not counted	\$12,538.64		
2000-12-04	2000-11-19	EM-3157-NY	Emergency	Snow	Winter Weather	\$285,161.40		
2000-10-11	2000-05-22	EM-3155-NY	Emergency	West Nile Virus	Non-natural, not counted	no Public Assistance recorded		
1999-01-15	1999-01-01	EM-3136-NY	Emergency	Snow	Winter Weather	\$322,584.79		

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance	Flags	Notes
						<i>federal share obligated, nominal dollars</i>		
1993-03-17	1993-03-13	EM-3107-NY	Emergency	Severe Blizzard	Winter Weather	no Public Assistance recorded		
1977-02-05	1977-02-05	DR-527-NY	Major disaster	Snowstorms	Winter Weather	no Public Assistance recorded		
1977-01-29	1977-01-29	EM-3027-NY	Emergency	Snowstorms	Winter Weather	no Public Assistance recorded		same incident as DR-527
1976-03-19	1976-03-19	DR-494-NY	Major disaster	Ice Storm,Severe Storms & Flooding	Ice Storm (primary); also designated: Inland Flooding	no Public Assistance recorded		
1972-06-23	1972-06-23	DR-338-NY	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
1963-08-23	1963-08-23	DR-158-NY	Major disaster	Heavy Rains & Flooding	Inland Flooding
1962-03-16	1962-03-16	DR-129-NY	Major disaster	Severe Storm, High Tides & Flooding	Inland Flooding (primary); also designated: Coastal Flooding
1956-03-29	1956-03-29	DR-52-NY	Major disaster	Flood	Inland Flooding
1955-08-22	1955-08-22	DR-45-NY	Major disaster	Hurricane & Floods	Hurricane (primary); also designated: Inland Flooding
1954-10-07	1954-10-07	DR-26-NY	Major disaster	Hurricanes	Hurricane (primary); also designated: 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.

1 Fire Management declaration (1995-08-25 to 1995-08-25) FEMA filed as Statewide with no county; each names one local fire. Listed on the state page.

Public Assistance filed under this county for declarations that do not list it: 2 rows, \$20,286.97

Sources: 2, 3

FEMA number	Declared	Title	Applicant	PA obligated
				<i>federal share obligated, nominal dollars</i>
DR-1486-NY	2003-08-29	Severe Storms, Flooding, and Tornadoes	South Valley, Town of	\$15,818.39
DR-1335-NY	2000-07-21	Severe Storms and Flooding	South Valley, Town of	\$4,468.58

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	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Coastal Flooding	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Cold Wave	37	4	0	5	0	0	1996 to 2026-06-30	Includes 35 Frost/Freeze records.
Drought	3	0	0	0	0	0	1996 to 2026-06-30	
Earthquake	0	0	0	0	0	0		Storm Events does not record earthquakes; the USGS earthquake catalog is the source.
Hail	90	7	0	7	0	0	1955 to 2026-06-30	
Heat Wave	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Hurricane	0	0	0	0	2	0	1996 to 2026-06-30	No Storm Events records of this type; 2 federal declared incidents (see declarations table)
Ice Storm	2	0	0	0	1	0	1996 to 2026-06-30	
Inland Flooding	122	3	2	10	10	0	1996 to 2026-06-30	
Landslide	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Lightning	6	0	0	0	0	0	1996 to 2026-06-30	
Strong Wind	627	32	20	107	1	0	1955 to 2026-06-30	Includes 90 High Wind records.
Tornado	29	1	0	1	0	0	1950 to 2026-06-30	
Tsunami	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Wildfire	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Winter Weather	221	17	4	35	7	0	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
2026-02-07	Extreme Cold/ Wind Chill		damage not reported	0, 0	NWS zone NYZ019 (CHAUTAUQUA), zone-level	new since last plan; within last 5 years	B1-c worst recorded: Cold/Wind Chill, Extreme Cold/Wind Chill
2011-06-07	Lightning		\$40,000 property; \$0 crops (2011 dollars)	0, 0	SILVER CREEK		B1-c worst recorded: Lightning
2010-05-10	Frost/Freeze		\$0 property; \$50,000 crops (zone total, 2010 dollars)	0, 0	NWS zone NYZ019 (CHAUTAUQUA), zone-level		B1-c worst recorded: Frost/Freeze
2009-08-09	Flash Flood		\$30,000,000 property; \$0 crops (2009 dollars)	0, 0	SILVER CREEK		B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
2008-12-28	High Wind	65 kt (75 mph) estimated gust	\$50,000 property; \$0 crops (zone total, 2008 dollars)	0, 0	NWS zone NYZ019 (CHAUTAUQUA), zone-level		B1-c worst recorded: High Wind and Strong Wind
2002-01-31	Ice Storm		\$250,000 property; crops not reported (zone total, 2002 dollars)	0, 0	NWS zone NYZ019 (CHAUTAUQUA), zone-level		B1-c worst recorded: Ice Storm
2000-11-21	Heavy Snow		\$10,000,000 property; crops not reported (zone total, 2000 dollars)	0, 0	NWS zone NYZ019 (CHAUTAUQUA), zone-level		B1-c worst recorded: Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet
1985-05-31	Tornado	F3, 13 mi path length (whole path, pre-1996), 177 yd wide	\$2,500,000 property; crops not recorded (1985 dollars)	0, 10	location not recorded		deaths or injuries recorded
1985-05-31	Tornado	F4, 8 mi path length (whole path, pre-1996), 440 yd wide	\$2,500,000 property; crops not recorded (1985 dollars)	0, 0	location not recorded		B1-c worst recorded: Tornado
1983-05-02	Tornado	F3, 28 mi path length (whole path, pre-1996), 450 yd wide	\$2,500,000 property; crops not recorded (1983 dollars)	2, 0	location not recorded		deaths or injuries recorded
1982-09-02	Thunderstorm Wind	105 kt (121 mph), measurement type not recorded	damage not recorded (pre-1996 record)	0, 0	location not recorded		B1-c worst recorded: Thunderstorm Wind
1968-08-06	Tornado	F2, 31.8 mi path length (whole path, pre-1996), 250 yd wide	\$250,000 property; crops not recorded (1968 dollars)	0, 4	location not recorded		deaths or injuries recorded

The full list is in the Excel file, sheet "B1-d Storm Events history" (1,137 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).

Tribal and special-area declarations in this state are listed on the state page.

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.
Coastal Flooding	0.01	events per year at a location (modeled)	about 0.01 per year at a given location in the county		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
Cold Wave	3.69	event-days per year	about 3.69 days per year	Possible	Storm Events event-days in 1 of 30 years, 1996 to 2025 (3.33%)	70	2005-11-12 to 2024-11-12 (19 years)	countywide	
Drought	0	event-days per year	none modeled	Possible	Storm Events event-days in 1 of 30 years, 1996 to 2025 (3.33%)	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 1 of 30 years. The descriptor comes from Storm Events, which counts D2 drought that NRI leaves out.
Earthquake	0.000469	annual probability at a location	chance a given location in the county has at least minor-damage shaking in a year: 0.0469%			not shown	modeled	see B1-f	No descriptor (Storm Events does not record earthquakes).
Hail	1.23	events per year	about 1.23 per year	Highly likely	FEMA annualized frequency (modeled)	47.8 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave	0.895	event-days per year	about 0.895 days per year		Storm Events event-days in 0 of 30 years, 1996 to 2025 (0%)	19	2005-11-12 to 2024-11-12 (19 years)	countywide	No Storm Events heat wave record, 1996 to 2025
Hurricane	0.03	events per year	about 1 in 33 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	1.06	event-days per year	about 1.06 days per year	Possible	Storm Events event-days in 2 of 30 years, 1996 to 2025 (6.67%)	53	1946-12-31 to 2014-02-12 (67 years)	countywide	

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
Inland Flooding	2.68	event-days per year	about 2.68 days per year	Likely	Storm Events event-days in 26 of 30 years, 1996 to 2025 (86.7%)	75	1996 to 2023 (28 years)	see B1-f	
Landslide	0.445	events per year (modeled)	about 1 in 2 years	Likely	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Lightning	35.4	days per year with a strike	about 35.4 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	countywide	
Strong Wind	1.6	events per year	about 1.6 per year	Highly likely	FEMA annualized frequency (modeled)	45	1986 to 2023 (38 years)	countywide	
Tornado	0.285	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	
Tsunami		annual probability at the most exposed location (used in place of a county value)			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
Wildfire	0.0000768	annual probability at a location	chance a given location in the county burns in a year: 0.00768%		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	37.1	event-days per year	about 37.1 days per year	Highly likely	Storm Events event-days in 30 of 30 years, 1996 to 2025 (100%)	705	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	37	30	1.23
Hail	2.00 in+	1996 to 2025	2	30	0.0667
Thunderstorm Wind (counted as NRI Strong Wind)	50-64 kt	1996 to 2025	338	30	11.3
Thunderstorm Wind (counted as NRI Strong Wind)	65 kt+	1996 to 2025	7	30	0.233
Thunderstorm Wind (counted as NRI Strong Wind)	unmeasured or below 50 kt	1996 to 2025	47	30	1.57
Tornado	EF0-1	1996 to 2025	3	30	0.1
Tornado	EF2-3	1996 to 2025	3	30	0.1
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	3 of 36	5.8	6.0	6.1	Very Low 3, Not Applicable 33
Coastal Flooding	10 of 36	68.1	68.5	79.2	Relatively Low 1, Very Low 9, No Rating 26
Cold Wave	36 of 36	32.4	50.6	64.9	Relatively Moderate 21, Relatively Low 15
Drought	0 of 36				No Rating 36
Earthquake	36 of 36	8.1	17.2	28.5	Very Low 36
Hail	36 of 36	12.1	30.9	62.9	Relatively Low 12, Very Low 24
Heat Wave	36 of 36	2.7	4.4	7.6	Very Low 36
Hurricane	36 of 36	44.2	53.1	66.0	Relatively Low 22, Very Low 14
Ice Storm	36 of 36	24.5	48.0	66.6	Relatively Low 32, Very Low 4
Inland Flooding	36 of 36	3.9	68.9	98.7	Very High 2, Relatively High 12, Relatively Moderate 13, Relatively Low 8, Very Low 1
Landslide	36 of 36	13.4	63.6	91.0	Relatively Low 7, Very Low 29
Lightning	36 of 36	54.8	80.7	92.1	Relatively High 22, Relatively Moderate 14
Strong Wind	36 of 36	47.8	73.6	86.3	Relatively High 5, Relatively Moderate 28, Relatively Low 3
Tornado	36 of 36	38.3	55.6	69.8	Relatively Moderate 23, Relatively Low 13
Tsunami	0 of 36				Insufficient Data 36
Wildfire	36 of 36	29.1	62.1	75.9	Relatively Low 6, Very Low 30
Winter Weather	36 of 36	41.3	61.3	74.1	Relatively Moderate 31, Relatively Low 5

Hail: Agriculture is 58% 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, 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
Chautauqua County	County Subdivision	Approved, expires 2029-06-20		\$1,825,537.67	0 total; 0 since its plan	No NFIP community ID on this jurisdiction's plan row. Includes \$736,029.65 for declarations not counted as hazard incidents (DR-1391-NY, DR-4480-NY, EM-3186-NY).
Bemus Point village	Village	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan	
Brocton village	Village	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$202,968.54	12 total; 0 since its plan	
Cassadaga village	Village	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$6,517.10	6 total; 0 since its plan	
Celoron village	Village	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$6,524.60	9 total; 1 since its plan	
Dunkirk city	City	Approved, expires 2029-06-20	FMA RL 1, SRL 1; any 7	\$990,108.25	30 total; 0 since its plan	
Falconer village	Village	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$14,130.85	11 total; 0 since its plan	
Fredonia village	Village	Approved, expires 2029-06-20	FMA RL 0, SRL 1; any 11	\$200,067.91	20 total; 1 since its plan	
Jamestown city	City	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 1	\$304,823.84	54 total; 3 since its plan	Includes \$8,683.86 for declarations not counted as hazard incidents (DR-4480-NY).
Lakewood village	Village	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 1	\$23,388.79	28 total; 1 since its plan	
Mayville village	Village	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$12,705.81	12 total; 0 since its plan	
Panama village	Village	Plan 109750 approved 2024-06-21, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	19 total; no approved plan	
Sherman village	Village	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$4,338.86	16 total; 0 since its plan	
Silver Creek village	Village	Approved, expires 2029-06-20	FMA RL 1, SRL 1; any 13	\$1,870,325.20	24 total; 0 since its plan	
Sinclairville village	Village	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$3,076.88	14 total; 1 since its plan	
Westfield village	Village	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$130,755.30	25 total; 1 since its plan	
Arkwright town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$252,851.21	7 total; 1 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>	
Busti town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$98,329.44	12 total; 3 since its plan	Includes \$3,776.58 for declarations not counted as hazard incidents (DR-4480-NY).
Carroll town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$114,126.77	1 total; 0 since its plan	
Charlotte town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$78,039.20	0 total; 0 since its plan	
Chautauqua town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 5	\$88,032.68	11 total; 0 since its plan	
Cherry Creek town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$100,438.91	13 total; 1 since its plan	
Clymer town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$10,489.78	11 total; 0 since its plan	
Dunkirk town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	30 total; 0 since its plan	
Ellery town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 2	\$88,877.21	0 total; 0 since its plan	
Ellicott town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 2	\$274,407.75	1 total; 0 since its plan	
Ellington town	Town	Plan 109750 approved 2024-06-21, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 0	\$57,919.26	19 total; no approved plan	
French Creek town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$11,709.75	1 total; 0 since its plan	
Gerry town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$52,581.27	16 total; 2 since its plan	
Hanover town	Town	Approved, expires 2029-06-20	FMA RL 1, SRL 13; any 176	\$956,441.88	0 total; 0 since its plan	
Harmony town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$55,223.28	0 total; 0 since its plan	
Kiantone town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$172,791.42	10 total; 1 since its plan	
Mina town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	3 total; 0 since its plan	
North Harmony town	Town	Plan 109750 approved 2024-06-21, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 2	\$104,894.12	0 total; no approved 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>	
Poland town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 1	\$114,307.31	0 total; 0 since its plan	
Pomfret town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$140,836.84	1 total; 0 since its plan	
Portland town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 1	\$113,037.29	12 total; 1 since its plan	
Ripley town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$70,179.88	15 total; 1 since its plan	
Sheridan town	Town	Plan 109750 approved 2024-06-21, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 2	\$397,576.78	4 total; no approved plan	
Sherman town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$26,621.07	16 total; 0 since its plan	
Stockton town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$114,618.71	11 total; 1 since its plan	
Villanova town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan	
Westfield town	Town	Approved, expires 2029-06-20	FMA RL 0, SRL 0; any 0	\$107,111.66	25 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).

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.

- 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 2024-06-21 <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	\$14					building exposure is 0 in NRI
Coastal Flooding	\$824,691,335	n/a	69	\$1,033	n/a	\$15	0.000125%				
Cold Wave	\$30,926,355,134	\$207,254,168	127,598	\$1,231	\$51,848	\$1,575,524	under 0.0001%		\$0		
Drought	n/a	\$0	n/a	n/a	\$0	n/a					agriculture exposure is 0 in NRI
Earthquake	\$55,232,414,027	n/a	127,657	\$125,039	n/a	\$26,557	0.000226%				
Hail	\$30,926,355,134	\$207,254,168	127,598	\$32,695	\$53,652	\$6,233	0.000106%				
Heat Wave	\$30,926,355,134	\$207,254,168	127,598	under \$1	\$4,256	\$105,136	under 0.0001%				
Hurricane	\$30,840,255,722	\$206,111,952	127,211	\$340,360	\$78,107	\$13,492	0.0011%				
Ice Storm	\$30,887,614,994	n/a	127,304	\$103,737	n/a	\$45,484	0.000336%				
Inland Flooding	\$30,842,263,212	\$5,538,770	2,445	\$35,842,404	\$68,722	\$52,095	n/a (see note)	\$0			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	\$502,355,784	n/a	2,262	\$620	n/a	\$1,233	0.000123%				
Lightning	\$30,926,355,134	n/a	127,598	\$12,513	n/a	\$939,549	under 0.0001%				
Strong Wind	\$30,926,355,134	\$207,254,168	127,598	\$765,253	\$6,975	\$503,128	0.00247%	\$39,500	\$5,000		Storm Events damage since the plan includes 1 zone-level High Wind record (\$5,000): a NOAA non-thunderstorm wind type, outside NRI's Strong Wind definition.

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 2024-06-21 <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
Tornado	\$30,926,355,134	\$207,254,168	127,598	\$660,051	\$3,792	\$2,000,206	0.00213%				
Tsunami	n/a	n/a	n/a	n/a	n/a	n/a					NRI publishes no building exposure for this county
Wildfire	\$9,915,946,353	\$78,042,325	44,254	\$22,009	\$48	\$3,639	0.000222%				
Winter Weather	\$30,926,355,134	\$207,254,168	127,598	\$35,679	\$230	\$92,797	0.000115%		\$0		

Totals since 2024-06-21 (Storm Events through 2026-06-30): 36 county-coded records, 23 with a damage value recorded (including \$0), \$39,500; 28 zone-level records, 22 with a damage value recorded (including \$0), \$5,000 reported for the zone; Public Assistance: no counted declaration since the plan.

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	127,598
Building value (total, not at risk)	\$30,926,355,134
Agriculture value (total, not at risk)	\$207,254,168
NRI risk rating (all hazards)	Relatively Moderate
Expected annual loss, buildings and agriculture, all hazards	\$38,210,253
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)	\$5,365,103
Social vulnerability rating	Relatively High
Community resilience rating	Very 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)	3	Severe repetitive loss, FMA definition (44 CFR 77.2)	16
Repetitive loss, NFIP insurance definition	233	Severe repetitive loss, NFIP insurance definition	15

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 properties	SRL, FMA properties	RL, NFIP properties	SRL, NFIP properties	Any category properties	Mitigated properties	Currently insured properties
County total	3	16	233	15	233	2	34
of which: Dunkirk city	1	1	7	1	7	0	1
of which: Fredonia village	0	1	11	1	11	0	0
of which: Jamestown city	0	0	1	0	1	0	0
of which: Lakewood village	0	0	1	0	1	0	0
of which: Silver Creek village	1	1	13	1	13	0	1
of which: Chautauqua town	0	0	5	0	5	0	0
of which: Ellery town	0	0	2	0	2	0	1
of which: Ellicott town	0	0	2	0	2	0	0
of which: North Harmony town	0	0	2	0	2	0	0
of which: Poland town	0	0	1	0	1	0	0
of which: Portland town	0	0	1	0	1	0	0
of which: Sheridan town	0	0	2	0	2	0	1
of which: Seneca Nation of Indians (community ID not in plan data)	0	0	9	0	9	0	0
of which: Hanover town	1	13	176	12	176	2	30
Statewide, no county in FEMA's file	0	0	19	0	19	0	3

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>
Bemus Point village	360133	0	0	0	0	0	0	0
Brocton village	360134	0	0	0	0	0	0	0
Cassadaga village	361053	0	0	0	0	0	0	0
Celoron village	360135	0	0	0	0	0	0	0
Dunkirk city	360137	1	1	7	1	7	0	1
Falconer village	360138	0	0	0	0	0	0	0
Fredonia village	360139	0	1	11	1	11	0	0
Jamestown city	360141	0	0	1	0	1	0	0
Lakewood village	360142	0	0	1	0	1	0	0
Mayville village	361059	0	0	0	0	0	0	0
Panama village	360143	0	0	0	0	0	0	0
Sherman village	361502	0	0	0	0	0	0	0
Silver Creek village	360144	1	1	13	1	13	0	1
Sinclairville village	360145	0	0	0	0	0	0	0
Westfield village	360146	0	0	0	0	0	0	0
Arkwright town	361105	0	0	0	0	0	0	0
Busti town	361106	0	0	0	0	0	0	0
Carroll town	360994	0	0	0	0	0	0	0
Charlotte town	361070	0	0	0	0	0	0	0
Chautauqua town	361071	0	0	5	0	5	0	0
Cherry Creek town	361107	0	0	0	0	0	0	0
Clymer town	361369	0	0	0	0	0	0	0
Dunkirk town	361108	0	0	0	0	0	0	0
Ellery town	361072	0	0	2	0	2	0	1
Ellicott town	361073	0	0	2	0	2	0	0
Ellington town	361074	0	0	0	0	0	0	0
French Creek town	361370	0	0	0	0	0	0	0
Gerry town	361109	0	0	0	0	0	0	0
Hanover town	365336	1	13	176	12	176	2	30
Harmony town	361611	0	0	0	0	0	0	0
Kiantone town	361075	0	0	0	0	0	0	0
Mina town	361371	0	0	0	0	0	0	0
North Harmony town	361076	0	0	2	0	2	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>
Poland town	361077	0	0	1	0	1	0	0
Pomfret town	361078	0	0	0	0	0	0	0
Portland town	361079	0	0	1	0	1	0	0
Ripley town	361372	0	0	0	0	0	0	0
Sheridan town	361080	0	0	2	0	2	0	1
Sherman town	361373	0	0	0	0	0	0	0
Stockton town	361081	0	0	0	0	0	0	0
Villanova town	361082	0	0	0	0	0	0	0
Westfield town	361083	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	3	11	208	10	208	1	33
2 to 4 unit residential	0	1	8	1	8	0	0
other residential	0	0	2	0	2	0	0
non-residential	0	4	15	4	15	1	1
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 230 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

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

Reuse and citation: Hazard Plain text and tables are licensed under Creative Commons Attribution 4.0 International (CC BY 4.0, <https://creativecommons.org/licenses/by/4.0/>); credit Hazard Plain and the release. The underlying federal data are public domain; OpenFEMA data are also subject to the OpenFEMA terms and conditions.

Cite this: Hazard Plain (2026). Chautauqua County, NY: risk-assessment baseline packet, release 2026-10 (data as of 2026-09-30; County FIPS 36013). Automated baseline. <https://hazardplain.org/ny/36013/> 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