

St. Clair County, MI

Risk-assessment baseline packet

Unit **County area 26147** Release **2026-10** As of **2026-09-28** 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.

A starting point for the plan's risk assessment (FEMA Local Mitigation Plan Review Tool, Element B). It does not replace local data or FEMA review. Section headings say which FEMA review item each table supports; whether an item is satisfied is decided by the plan and its reviewers.

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Plan clock

Status	Approved, expires 2027-08-29	Plan	St. Clair County Update (FEMA plan 108393)
Approved	2022-08-30	Expires	2027-08-29
As of	2026-09-28	Days	335 days to expiry
Update underway	none in FEMA's plan tracker		

What changed since your last plan (approved 2022-08-30)

New federal declarations	none (0 declaration rows; 0 counted incidents)	Storm Events records since approval	45 (data through 2026-06-30)
Repetitive loss now	FMA RL 1, SRL 4 (44 CFR 77.2); any definition: 73	Repeat-flood change	First release: no prior release to compare.

SOURCES: FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API); FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API); NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>; FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)

Plan status for every jurisdiction listed in this county: 33 rows, in the section "Plan clock: Plan status for every jurisdiction listed in this county" after these cover pages.

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

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Plan clock**Plan status for every jurisdiction listed in this county**

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
St. Clair County	County	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-09-15
Algonac city	City	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-09-15
Capac village	Village	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-12-07
Emmett village	Village	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-18
Marine City city	City	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-05
Marysville city	City	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-09-15
Memphis city	City	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-05
Port Huron city	City	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-05
St. Clair city	City	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-27
Yale city	City	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-12-07
Berlin township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-27
Brockway township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-12-21
Burtchville township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-05
Casco township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-09-15
China township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-12-07

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
Clay township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-05
Clyde township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-05
Columbus township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-05
Cottrellville township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-12-07
East China township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		
Emmett township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-12-07
Fort Gratiot charter township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-13
Grant township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-05
Greenwood township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-05
Ira township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-09-15
Kenockee township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-05
Kimball township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-09-30
Lynn township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-11-14
Mussey township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-18
Port Huron charter township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-05
Riley township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-11
St. Clair township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-10-05
Wales township	Township	Approved, expires 2027-08-29	St. Clair County Update (FEMA plan 108393)	2022-08-30	2027-08-29	335		member approved 2022-09-15

SOURCEFEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

Supports B1-a: hazards

Hazards NRI does not cover: check locally

- 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)

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>	EAL population equivalence <i>statistical value of life and injury, \$13.7M per life, not property damage</i>	EAL total (see note) <i>modeled dollars per year</i>	Storm Events records since 1996 <i>count</i>	Evidence for an omission <i>NRI Not Applicable, no declaration and no Storm Events record since 1996</i>	Storm Events coverage note
1	Inland Flooding	Relatively Moderate	Relatively Moderate	\$28,933,199	\$37,302	\$7,887	\$28,978,389	30		
2	Cold Wave	Relatively High	Relatively High	\$1,746	\$65,490	\$9,963,968	\$10,031,204	15		Includes 2 Frost/Freeze records, event types the NRI definition of this hazard leaves out.
3	Tornado	Relatively Moderate	Relatively Moderate	\$2,622,956	\$1,287	\$3,589,051	\$6,213,294	10		
4	Strong Wind	Relatively High	Relatively High	\$1,679,657	\$1,250	\$59,605	\$1,740,511	286		Includes 36 High Wind records and 7 Strong Wind records, event types the NRI definition of this hazard leaves out.
5	Heat Wave	Relatively Low	Relatively Low	\$6,282	\$1	\$727,021	\$733,303	13		
6	Ice Storm	Relatively High	Relatively High	\$695,707		\$9,558	\$705,264	6		
7	Earthquake	Very Low	Relatively Low	\$236,091		\$68,874	\$304,965			Not in Storm Events. Storm Events coverage of this hazard is limited; absence is not evidence of low risk.
8	Hail	Relatively Low	Relatively Low	\$225,090	\$17,084	\$13,486	\$255,660	87		
9	Lightning	Relatively Low	Relatively Low	\$64,016		\$135,426	\$199,442	7		
10	Winter Weather	Relatively Low	Relatively Moderate	\$70,818	\$442	\$16,456	\$87,717	75		
11	Coastal Flooding	Relatively Low	Relatively Low	\$51,470		\$5,720	\$57,190	0		No recorded events in Storm Events since 1996 (data through 2026-06-30).
12	Hurricane	Very Low	Very Low	\$14,421	\$9,006	\$174	\$23,601	0		No recorded events in Storm Events since 1996 (data through 2026-06-30).

Rank by EAL	Hazard	NRI risk rating	EAL rating	EAL buildings modeled dollars per year	EAL agriculture modeled dollars per year	EAL population equivalence statistical value of life and injury, \$13.7M per life, not property damage	EAL total (see note) modeled dollars per year	Storm Events records since 1996 count	Evidence for an omission NRI Not Applicable, no declaration and no Storm Events record since 1996	Storm Events coverage note
13	Wildfire	Very Low	Very Low	\$17,135	\$3	\$1,788	\$18,927	0		No recorded events in Storm Events since 1996 (data through 2026-06-30). Storm Events coverage of this hazard is limited; absence is not evidence of low risk.
14	Landslide	Very Low	Very Low	\$163		\$426	\$589	0		No recorded events in Storm Events since 1996 (data through 2026-06-30). Storm Events coverage of this hazard is limited; absence is not evidence of low risk.
15	Drought	No Rating	No Expected Annual Losses		\$0		\$0	2		
	Avalanche	Not Applicable	Not Applicable					0	NRI rates avalanche Not Applicable for this county, and no federal declaration for this county names it.	No recorded events in Storm Events since 1996 (data through 2026-06-30).
	Tsunami	Insufficient Data	Insufficient Data					0		No recorded events in Storm Events since 1996 (data through 2026-06-30). Storm Events coverage of this hazard is limited; absence is not evidence of low risk.
	Volcanic Activity	Not Applicable	Not Applicable					0	NRI rates volcanic activity Not Applicable for this county, and no federal declaration for this county names it.	No recorded events in Storm Events since 1996 (data through 2026-06-30). Storm Events coverage of this hazard is limited; absence is not evidence of low risk.

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

SOURCES

FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, 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)
NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

Check your state hazard mitigation plan's hazard list for this county; explain any hazard you drop.

Supports B1-b: location

Where each hazard occurs

Hazard	Location	Census tracts rated rated of all tracts
Avalanche	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	0 of 50
Coastal 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.	28 of 50

Hazard	Location	Census tracts rated <i>rated of all tracts</i>
Cold Wave	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	50 of 50
Drought	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	0 of 50
Earthquake	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	50 of 50
Hail	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	50 of 50
Heat Wave	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	50 of 50
Hurricane	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	50 of 50
Ice Storm	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	50 of 50
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.	50 of 50
Landslide	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	49 of 50
Lightning	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	50 of 50
Strong Wind	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	50 of 50
Tornado	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	50 of 50
Tsunami	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	0 of 50
Volcanic Activity	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	0 of 50
Wildfire	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	49 of 50
Winter Weather	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	50 of 50

SOURCE
FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, 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)

Supports B1-c: extent

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

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Avalanche	none (count and damage)	0					Physical measure: in event narratives only; local data required.
Coastal Flood, Storm Surge/ Tide	none in data (FIRM for depth)	0					Flood depth: see the FEMA Flood Insurance Rate Map.
Cold/Wind Chill, Extreme Cold/Wind Chill	wind chill	13, 1996 to 2019 (13 zone-level)	1 day to 21 days (median 3 days); 13 with a recorded value	21 days, 2003-01-10 to 2003-01-30, from 1 monthly summary record (a monthly summary record covers most or all of a month; it does not count days at wave conditions), zone-level	Cold/Wind Chill, 2007-02-03, \$25,000 property; \$0 crops, reported for the zone (2007 dollars)	Zone-level records: applies countywide; national data do not locate these events within the county.	Wind chill: in event narratives only; local data required.

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Frost/Freeze (outside NRI Cold Wave definition)	crop damage	2, 2007 to 2012 (2 zone- level)		Frost/Freeze, 2012-04-27, \$1,300,000 crop damage, reported for the zone (2012 dollars); NWS zone MIZ063 (ST. CLAIR), zone-level: may include parts of neighboring counties		Zone-level records: applies countywide; national data do not locate these events within the county.	Temperature: in event narratives only; local data required.
Drought	US Drought Monitor D- scale	2, 2001 to 2002 (2 zone- level)	30 days to 31 days (median 30.5 days); 2 with a recorded value	31 days (1 month), 2001-07-01 to 2001-07-31, zone-level		Zone-level records: applies countywide; national data do not locate these events within the county.	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					No Storm Events record; local data required (e.g., USGS).
Hail	hail size (inches)	95, 1970 to 2026	0.75 in to 2.75 in (median 0.88 in); 95 with a recorded value	2.75 in hail, 2000-07-14		Event records naming member places: Port Huron charter township (13 records), Port Huron city (13 records), Yale city (12 records), St. Clair city (10 records), St. Clair township (10 records), Capac village (7 records), Algonac city (5 records), Marysville city (4 records), Kimball township (3 records), Brockway township (1 record); and 3 more member places (see the XLSX file).	
Excessive Heat, Heat	heat index (narratives)	13, 1999 to 2018 (13 zone- level)	1 day to 7 days (median 5 days); 9 with a recorded value	7 consecutive days, 2012-07-01 to 2012-07-07, zone-level		Zone-level records: applies countywide; national data do not locate these events within the county.	Heat index: in event narratives only; local data required. 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	0					Storm Events files every zone of a storm's episode under the storm's event type and category, so a Hurricane (Typhoon) record, especially an inland or remnant one, does not by itself mean hurricane-force winds here; read the damage and wind columns.

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Ice Storm	Sperry-Piltz (local data)	6, 1997 to 2023 (6 zone- level)		Ice Storm, 2003-04-03, \$10,000,000 property; crops not reported, reported for the zone (2003 dollars); NWS zone MIZ063 (ST. CLAIR), zone-level: may include parts of neighboring counties		Zone-level records: applies countywide; national data do not locate these events within the county.	Ice thickness: in event narratives only; local data required.
Flash Flood, Flood, Lakeshore Flood	damage and flood days (FIRM for depth)	30, 1996 to 2022 (14 zone- level)		Flood, 2019-11-01, \$11,900,000 property; \$0 crops (2019 dollars)		Event records naming member places: Capac village (4 records), Yale city (2 records), Kimball township (1 record), Marysville city (1 record), Port Huron charter township (1 record), Port Huron city (1 record). Zone-level records (14) apply countywide.	Flood depth: see the FEMA Flood Insurance Rate Map. Storm Events damage can be \$0 or blank even for a major flood, so the worst record here may not be the worst flood; compare FEMA Public Assistance by declaration in B1-d.
Debris Flow	none (count and damage)	0					Physical measure: in event narratives only; local data required.
Lightning	annualized frequency (the measure FEMA's Local Mitigation Planning Handbook names)	7, 1998 to 2023		Lightning, 2001-09-09, \$20,000 property; crops not reported (2001 dollars)		Event records naming member places: Port Huron charter township (3 records), Port Huron city (3 records), St. Clair city (1 record), St. Clair township (1 record), Yale city (1 record).	Storm Events lists lightning with damage or casualties; physical measure in event narratives only; local data required.
High Wind and Strong Wind (outside NRI Strong Wind definition)	wind speed (kt and mph)	43, 1996 to 2026 (43 zone- level)	35 kt (40 mph) to 70 kt (81 mph) (median 52 kt (60 mph)); 41 with a recorded value	70 kt (81 mph), measurement type not recorded, High Wind, 1997-04-06; NWS zone MIZ063 (ST. CLAIR), zone-level: may include parts of neighboring counties	High Wind, 2017-03-08, \$25,000,000 property; \$0 crops, reported for the zone (2017 dollars)	Zone-level records: applies countywide; national data do not locate these events within the county.	
Thunderstorm Wind	wind speed (kt and mph)	281, 1956 to 2026	43 kt (49 mph) to 78 kt (90 mph) (median 52 kt (60 mph)); 255 with a recorded value	78 kt (90 mph), measurement type not recorded, Thunderstorm Wind, 1975-06-04	Thunderstorm Wind, 2008-06-08, \$1,000,000 property; \$0 crops (2008 dollars)	Event records naming member places: Port Huron charter township (32 records), Port Huron city (32 records), Marine City city (30 records), Algonac city (24 records), Capac village (13 records), Yale city (12 records), St. Clair city (10 records), St. Clair township (10 records), Marysville city (9 records), Emmett township (8 records); and 4 more member places (see the XLSX file).	

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Tornado	Enhanced Fujita (F before Feb 2007)	23, 1953 to 2021	F/EF0 to F/EF4 (median F/EF1); 22 with a recorded value	F4 tornado, 1953-05-21, 10 mi path length (records before 1996 may include the whole path; rating and listing come from the county where the tornado began), 1,760 yd wide, \$2,500,000 property; crops not recorded (1953 dollars), 2 direct deaths, 68 direct injuries	Tornado, 1983-05-02, \$25,000,000 property; crops not recorded (1983 dollars)	Event records naming member places: Yale city (2 records).	From 1996 on, tornado records are per-county segments and length is the path length within this county (NWS Instruction 10-1605); records before 1996 may give the whole path length, including the path outside this county, and before 1996 a tornado is listed once, under the county where it began, with the whole path's rating; counties farther along the path may not list it. Length is not used to rank tornadoes.
Tsunami	none (count and damage)	0					Physical measure: in event narratives only; local data required.
Volcanic Ash, Volcanic Ashfall	Volcanic Explosivity Index (local data)	0					Physical measure: in event narratives only; local data required.
Wildfire	acres burned (local data)	0					Acres burned: in event narratives only; local data required.
Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet	none in data (snowfall local)	75, 1996 to 2026 (75 zone-level)		Winter Storm, 2018-04-14, \$1,000,000 property; \$0 crops, reported for the zone (2018 dollars); NWS zone MIZ063 (ST. CLAIR), zone-level: may include parts of neighboring counties		Zone-level records: applies countywide; national data do not locate these events within the county.	Snow depth: in event narratives only; local data required.

Where a hazard names more than 10 member places, the table lists the 10 with the most records; every place is in the XLSX file, sheet "B1-c Extent".

Storm Events records are more complete after 1996; before 1996 only Tornado (from 1950), Hail and Thunderstorm Wind (from 1955) exist. Zone-level records are placed with NWS zone-county files, which exist from 2020 on; an earlier record is placed by its zone number in the nearest later file only when its zone name matches that file, records from zones NWS renumbered are placed by name or left out, and a record whose zone is in no known file is left out of every count, so counts before 2020 can be low. Some current zones are also missing from the NWS files, so recent counts can be low too.

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

SOURCES

NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-28, <https://www.weather.gov/gis/ZoneCounty>

Supports B1-d: previous occurrences

Declaration rows12

Counted incidents8

Federal disaster declarations for this county

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance <i>federal share obligated, nominal dollars</i>	Flags	Notes
2020-03-27	2020-01-20	DR-4494-MI	Major disaster	COVID-19 PANDEMIC	Non-natural, not counted	\$5,324,728.86		
2020-03-13	2020-01-20	EM-3455-MI	Emergency	COVID-19	Non-natural, not counted	none found		same incident as DR-4494
2005-09-07	2005-08-29	EM-3225-MI	Emergency	HURRICANE KATRINA EVACUATION	Hurricane: evacuation support, not a local hazard event; not counted	none found		
2004-06-30	2004-05-20	DR-1527-MI	Major disaster	SEVERE STORMS, TORNADOES, AND FLOODING	Inland Flooding; Tornado	PA not declared for this county		
2003-09-23	2003-08-14	EM-3189-MI	Emergency	POWER OUTAGE	Non-natural, not counted	\$119,955.97		
2001-01-10	2000-12-11	EM-3160-MI	Emergency	SNOW	Winter Weather	\$230,538.21		
1996-07-23	1996-06-21	DR-1128-MI	Major disaster	SEVERE STORMS AND FLOODING	Inland Flooding	none found		
1978-01-27	1978-01-27	EM-3057-MI	Emergency	BLIZZARDS & SNOWSTORMS	Winter Weather	none found		
1976-03-19	1976-03-19	DR-495-MI	Major disaster	SEVERE STORMS, TORNADOES, ICING & FLOODING	Inland Flooding; Tornado	none found		
1975-04-26	1975-04-26	DR-465-MI	Major disaster	SEVERE STORMS, HIGH WINDS & FLOODING	Inland Flooding (primary); also designated: Strong Wind	none found		
1973-04-12	1973-04-12	DR-371-MI	Major disaster	SEVERE STORMS & FLOODING	Inland Flooding	none found		
1972-12-01	1972-12-01	DR-363-MI	Major disaster	SEVERE STORMS & FLOODING	Inland Flooding	none found		

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

SOURCES

FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)
FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-26T151157Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)
FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

Statewide declarations

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	Flags	Notes
1956-04-05	1956-04-05	DR-53-MI	Major disaster	TORNADO	Tornado		
1953-06-09	1953-06-09	DR-6-MI	Major disaster	TORNADO	Tornado		
1953-06-02	1953-06-02	DR-4-MI	Major disaster	TORNADO	Tornado		

FEMA recorded these with designated area Statewide and no county. Listed on every county page in the state; not counted with county rows.

SOURCE

FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)

Public Assistance filed under this county for declarations that do not list it: 1 row, \$5,312.25

FEMA number	Declared	Title	Applicant	PA obligated <i>federal share obligated, nominal dollars</i>
EM-3137-MI	1999-01-27	MI - SEVERE WEATHER 1/2 /99	Anchor Bay School District	\$5,312.25

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.

SOURCES

FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-26T151157Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)

FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)

Previous occurrences by hazard, with explicit no-event rows

Hazard	Storm Events records <i>full period</i>	Since plan approval records	During plan review records	Last 5 years records	Declared incidents <i>distinct incidents</i>	Declared since approval <i>distinct incidents</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	15	0	0	0	0	0	1996 to 2026-06-30	Includes 2 Frost/Freeze records, event types the NRI definition of this hazard leaves out.
Drought	2	0	0	0	0	0	1996 to 2026-06-30	
Earthquake	0	0	0	0	0	0		No Storm Events record; local data required (e.g., USGS).
Hail	95	8	0	8	0	0	1955 to 2026-06-30	
Heat Wave	13	0	0	0	0	0	1996 to 2026-06-30	
Hurricane	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Ice Storm	6	1	0	1	0	0	1996 to 2026-06-30	
Inland Flooding	30	0	1	1	6	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	7	1	0	1	0	0	1996 to 2026-06-30	
Strong Wind	324	30	7	33	1	0	1955 to 2026-06-30	Includes 36 High Wind records and 7 Strong Wind records, event types the NRI definition of this hazard leaves out.

Hazard	Storm Events records <i>full period</i>	Since plan approval <i>records</i>	During plan review <i>records</i>	Last 5 years <i>records</i>	Declared incidents <i>distinct incidents</i>	Declared since approval <i>distinct incidents</i>	Period	Statement
Tornado	23	0	1	1	2	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
Volcanic Activity	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	75	5	1	6	2	0	1996 to 2026-06-30	

SOURCES

NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)

NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-28, <https://www.weather.gov/gis/ZoneCounty>

Notable Storm Events records

Date	Event type	Magnitude or extent	Damage <i>nominal dollars</i>	Direct deaths, injuries <i>indirect not counted</i>	Location	Flags	Why listed
2019-11-01	Flood		\$11,900,000 property; \$0 crops (2019 dollars)	0, 0	ANCHORVILLE to JEDDO		B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
2018-01-01	Cold/Wind Chill		\$0 property; \$0 crops, reported for the zone (2018 dollars)	1, 0	NWS zone MIZ063 (ST. CLAIR), zone-level: may include parts of neighboring counties		deaths or injuries recorded
2012-07-01	Heat		\$0 property; \$0 crops, reported for the zone (2012 dollars)	0, 0	NWS zone MIZ063 (ST. CLAIR), zone-level: may include parts of neighboring counties		B1-c worst recorded: Excessive Heat, Heat
2012-04-27	Frost/Freeze		\$0 property; \$1,300,000 crops, reported for the zone (2012 dollars)	0, 0	NWS zone MIZ063 (ST. CLAIR), zone-level: may include parts of neighboring counties		B1-c worst recorded: Frost/Freeze (outside NRI Cold Wave definition)
2010-06-27	Tornado	EF1, 2.91 mi within this county, 250 yd wide	\$700,000 property; \$0 crops (2010 dollars)	1, 4	THORNTON to WADNAMS		deaths or injuries recorded
2003-04-03	Ice Storm		\$10,000,000 property; crops not reported, reported for the zone (2003 dollars)	0, 0	NWS zone MIZ063 (ST. CLAIR), zone-level: may include parts of neighboring counties		B1-c worst recorded: Ice Storm
2003-01-10	Cold/Wind Chill		damage not reported	0, 0	NWS zone MIZ063 (ST. CLAIR), zone-level: may include parts of neighboring counties		B1-c worst recorded: Cold/Wind Chill, Extreme Cold/Wind Chill
2001-09-09	Lightning		\$20,000 property; crops not reported (2001 dollars)	0, 0	ANCHORVILLE		B1-c worst recorded: Lightning
2000-07-14	Hail	2.75 in	\$125,000 property; crops not reported (2000 dollars)	0, 0	ALGONAC		B1-c worst recorded: Hail

Date	Event type	Magnitude or extent	Damage <i>nominal dollars</i>	Direct deaths, injuries <i>indirect not counted</i>	Location	Flags	Why listed
1997-04-06	High Wind	70 kt (81 mph), measurement type not recorded	\$75,000 property; crops not reported, reported for the zone (1997 dollars)	0, 0	NWS zone MIZ063 (ST. CLAIR), zone-level: may include parts of neighboring counties		B1-c worst recorded: High Wind and Strong Wind (outside NRI Strong Wind definition)
1975-06-04	Thunderstorm Wind	78 kt (90 mph), measurement type not recorded	damage not recorded (pre-1996 record)	0, 0	location not recorded		B1-c worst recorded: Thunderstorm Wind
1953-05-21	Tornado	F4, 10 mi path length (records before 1996 may include the whole path; rating and listing come from the county where the tornado began), 1,760 yd wide	\$2,500,000 property; crops not recorded (1953 dollars)	2, 68	location not recorded		deaths or injuries recorded

The full list is in the XLSX file, sheet "B1-d Storm Events history" (590 rows).

Storm Events records are more complete after 1996; before 1996 only Tornado (from 1950), Hail and Thunderstorm Wind (from 1955) exist. Zone-level records are placed with NWS zone-county files, which exist from 2020 on; an earlier record is placed by its zone number in the nearest later file only when its zone name matches that file, records from zones NWS renumbered are placed by name or left out, and a record whose zone is in no known file is left out of every count, so counts before 2020 can be low. Some current zones are also missing from the NWS files, so recent counts can be low too.

SOURCES

NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>
NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-28, <https://www.weather.gov/gis/ZoneCounty>
FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

State-declared emergencies are not in federal data. Add them from your state emergency management agency.

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

Supports B1-e: probability

Probability: FEMA annualized frequency and descriptor per hazard

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		events per year					1994 to 2023 (30 years)	see B1-f	Not Applicable in NRI for this county; no descriptor.
Coastal Flooding	0.0128	events per year at a location (modeled)	about 0.013 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 Storm Events record of this hazard, 1996 to 2025; descriptor not assigned (the NRI value is the chance at a location in the county, not how often the hazard affects the county)

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
Cold Wave	3	event-days per year	about 3 days per year	Likely	event-days in 10 of 30 years, 1996 to 2025 (33.3%)	57	2005-11-12 to 2024-11-12 (19 years)	countywide	NRI gives about 3 cold wave event-days a year here (its annualized frequency over 19 years; not its event count divided by the years), but Storm Events has a record in only 10 of 30 years. NRI counts from a different source that records far more events than Storm Events, so this descriptor reads much lower than NRI's frequency; read the two together. Frost/Freeze records are not counted in this descriptor: they record crop freezes, not cold waves.
Drought	0	event-days per year	none modeled	Possible	event-days in 2 of 30 years, 1996 to 2025 (6.67%)	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), but Storm Events has a record in 2 of 30 years. The descriptor comes from Storm Events, which records events NRI's definition leaves out, so the two use different thresholds; read them together.
Earthquake	0.000703	annual probability at a location	chance a given location in the county has at least minor- damage shaking in a year: 0.0703%			not shown	modeled	see B1-f	Descriptor not assigned: the NRI value is the chance at a location in the county, not how often the hazard affects the county, and Storm Events does not record earthquakes.
Hail	1.66	events per year	about 1.66 per year	Highly likely	FEMA annualized frequency (modeled)	67.8 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave	2.37	event-days per year	about 2.37 days per year	Likely	event-days in 8 of 30 years, 1996 to 2025 (26.7%)	36	2005-11-12 to 2024-11-12 (19 years)	countywide	NRI gives about 2.37 heat wave event-days a year here (its annualized frequency over 19 years; not its event count divided by the years), but Storm Events has a record in only 8 of 30 years. NRI counts from a different source that records far more events than Storm Events, so this descriptor reads much lower than NRI's frequency; read the two together.
Hurricane	0.0164	events per year	about 1 in 61 years	Possible	FEMA annualized frequency (modeled)	6	1851 to 2024 (Atlantic)	see B1-f	NRI counts hurricane and tropical storm tracks passing within storm-force wind range; federal declarations are counted separately in B1-d and need not match.
Ice Storm	1.9	event-days per year	about 1.9 days per year	Likely	event-days in 6 of 30 years, 1996 to 2025 (20%)	122	1946-12-31 to 2014-02-12 (67 years)	countywide	NRI gives about 1.9 ice storm event-days a year here (its annualized frequency over 67 years; not its event count divided by the years), but Storm Events has a record in only 6 of 30 years. NRI counts from a different source that records far more events than Storm Events, so this descriptor reads much lower than NRI's frequency; read the two together.

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	1.04	event-days per year	about 1.04 days per year	Likely	event-days in 13 of 30 years, 1996 to 2025 (43.3%)	29	1996 to 2023 (28 years)	see B1-f	NRI gives about 1.04 inland flooding event-days a year here (its annualized frequency over 28 years; not its event count divided by the years), but Storm Events has a record in only 13 of 30 years. NRI counts from a different source that records far more events than Storm Events, so this descriptor reads much lower than NRI's frequency; read the two together.
Landslide	0.0989	events per year (modeled)	about 1 in 10 years	Possible	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Lightning	32.3	days per year with a strike	about 32.3 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	countywide	
Strong Wind	3.52	events per year	about 3.52 per year	Highly likely	FEMA annualized frequency (modeled)	125	1986 to 2023 (38 years)	countywide	
Tornado	0.207	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	
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 Storm Events record of this hazard, 1996 to 2025; descriptor not assigned (the NRI value is the chance at a location in the county, not how often the hazard affects the county)
Volcanic Activity		annual probability				not shown	modeled	see B1-f	Not Applicable in NRI for this county; no descriptor.
Wildfire	0.0000155	annual probability at a location	chance a given location in the county burns in a year: 0.00155%		Storm Events records in 0 of 30 years, 1996 to 2025 (0%)	not shown	modeled	see B1-f	No Storm Events record of this hazard, 1996 to 2025; descriptor not assigned (the NRI value is the chance at a location in the county, not how often the hazard affects the county)
Winter Weather	12.9	event-days per year	about 12.9 days per year	Highly likely	event-days in 28 of 30 years, 1996 to 2025 (93.3%)	245	2005-11-12 to 2024-11-12 (19 years)	countywide	

FEMA annualized frequency (modeled) comes from the National Risk Index v1.20 (December 2025). It is not recorded events divided by years, and what it measures depends on the hazard. For most hazards it estimates how often the hazard affects this county each year: it counts events or event-days (drought, heat wave, cold wave, winter weather, ice storm and inland flooding are in days per year; lightning is the number of days per year with a recorded cloud-to-ground strike, from the NOAA Storm Prediction Center daily lightning climatology); it may count events in the surrounding area (hail, strong wind, tornado, hurricane and ice storm use a 49 km grid and buffers) and is averaged over the county's area; and some hazards use a minimum value for places with no recorded event. Earthquake, wildfire and coastal flooding are different: FEMA computes them for each census block and averages them over the county, so the value is the chance (for coastal flooding, the modeled number of floods per year) at a location in the county, which is lower than the chance that the hazard strikes somewhere in the county. Earthquake is the chance of at least minor-damage shaking (U.S. Geological Survey model); wildfire is the chance that a location

burns in a large fire (U.S. Forest Service burn probability); coastal flooding comes from FEMA flood zones and NOAA high-tide flooding, so it can be above 1 where high-tide flooding is frequent. Tsunami is the value at the county's most exposed location, from recorded events and modeled return periods. For these four hazards the packet gives no "1 in N years" and takes the descriptor from Storm Events (none for earthquake) unless the value is 1 or more a year. Landslide is a U.S. Geological Survey modeled county rate spread by slope susceptibility. Volcanic activity is the chance that a volcano affecting the county erupts in a year. Drought counts only extreme and exceptional drought (D3 and D4). Source: FEMA, National Risk Index Technical Documentation v1.20, sections 5.2.2 (Table 5), 5.2.3, 7.4, 10.4, 16.5, 17.1, 17.3.1, 17.5, 20.3.1, 21.4, 22.4 and 6 to 23.

SOURCES
FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, 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)
NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

Descriptor scale used in this packet (defined per unit)

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

SOURCES
FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, 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)
NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

Intensity bands: historical frequency (Storm Events)

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	38	30	1.27
Hail	2.00 in+	1996 to 2025	1	30	0.0333
Strong Wind (Thunderstorm Wind records)	50-64 kt	1996 to 2025	231	30	7.7
Strong Wind (Thunderstorm Wind records)	65 kt+	1996 to 2025	5	30	0.167
Strong Wind (Thunderstorm Wind records)	unmeasured or below 50 kt	1996 to 2025	3	30	0.1
Tornado	EF0-1	1996 to 2025	9	30	0.3
Tornado	EF2-3	1996 to 2025	1	30	0.0333
Tornado	EF4-5	1996 to 2025	0	30	0
Tornado	unrated (EFU)	1996 to 2025	0	30	0

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.

SOURCE

NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

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.

Supports B1-f: variation across the planning area

Range of census tract risk within the county

Hazard	Tracts <i>rated of all</i>	Risk score min <i>NRI score, 0 to 100</i>	Median	Max	Tracts by rating	Note
Avalanche	0 of 50				Not Applicable 50	
Coastal Flooding	28 of 50	68.1	76.0	90.2	Relatively Moderate 1, Relatively Low 12, Very Low 15, No Rating 22	
Cold Wave	50 of 50	17.0	80.6	94.2	Relatively High 31, Relatively Moderate 18, Very Low 1	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Drought	0 of 50				No Rating 50	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Earthquake	50 of 50	7.7	17.8	42.1	Relatively Low 1, Very Low 49	
Hail	50 of 50	20.3	41.2	61.2	Relatively Low 36, Very Low 14	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Heat Wave	50 of 50	1.8	18.1	44.2	Relatively Low 29, Very Low 21	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Hurricane	50 of 50	16.8	26.9	41.3	Very Low 50	
Ice Storm	50 of 50	37.8	75.2	91.4	Relatively High 1, Relatively Moderate 33, Relatively Low 16	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Inland Flooding	50 of 50	2.8	40.3	85.5	Relatively High 4, Relatively Moderate 15, Relatively Low 24, Very Low 7	
Landslide	49 of 50	13.3	50.7	81.9	Relatively Low 1, Very Low 48, No Rating 1	
Lightning	50 of 50	0.9	21.1	42.6	Relatively Low 28, Very Low 22	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Strong Wind	50 of 50	27.3	67.5	88.0	Relatively High 5, Relatively Moderate 38, Relatively Low 7	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.

Hazard	Tracts <i>rated of all</i>	Risk score	Median	Max	Tracts by rating	Note
		min <i>NRI score, 0 to 100</i>				
Tornado	50 of 50	23.7	60.6	82.9	Relatively High 4, Relatively Moderate 36, Relatively Low 9, Very Low 1	
Tsunami	0 of 50				Insufficient Data 50	
Volcanic Activity	0 of 50				Not Applicable 50	
Wildfire	49 of 50	22.6	53.7	71.5	Relatively Low 1, Very Low 48, No Rating 1	
Winter Weather	50 of 50	20.7	39.9	62.4	Relatively Moderate 8, Relatively Low 42	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.

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.

SOURCE

FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, 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)

Per-member block (Starter, confirm locally)

Member	Type	Plan status	Repetitive loss <i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	Public Assistance matched <i>federal share obligated, nominal dollars</i>	Event records naming this place <i>all years; since the member's plan</i>	Notes
St. Clair County	County	Approved, expires 2027-08-29		\$26,478.27	0; 0	No NFIP community ID on this member's plan row. Includes \$16,903.02 for declarations not counted as hazard incidents (EM-3189-MI).
Algonac city	City	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 8	\$6,292.08	29; 0	Includes \$1,613.43 for declarations not counted as hazard incidents (EM-3189-MI).
Capac village	Village	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	\$9,114.88	24; 3	Includes \$2,047.91 for declarations not counted as hazard incidents (EM-3189-MI).
Emmett village	Village	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	9; 1	
Marine City city	City	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 6	\$2,300.10	31; 6	Includes \$2,300.10 for declarations not counted as hazard incidents (EM-3189-MI).
Marysville city	City	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	\$46,799.62	14; 2	Includes \$31,178.62 for declarations not counted as hazard incidents (DR-4494-MI, EM-3189-MI).
Memphis city	City	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	0; 0	
Port Huron city	City	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 4	\$223,309.71	49; 4	Includes \$180,177.96 for declarations not counted as hazard incidents (DR-4494-MI, EM-3189-MI).
St. Clair city	City	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	\$12,792.09	21; 1	Includes \$1,494.50 for declarations not counted as hazard incidents (EM-3189-MI).

Member	Type	Plan status	Repetitive loss	Public Assistance matched	Event records naming this place	Notes
			<i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	<i>federal share obligated, nominal dollars</i>	<i>all years; since the member's plan</i>	
Yale city	City	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	\$3,794.33	29; 1	
Berlin township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	0; 0	
Brockway township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	6; 0	
Burtchville township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 1; any 1	none found	0; 0	
Casco township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	0; 0	
China township	Township	Approved, expires 2027-08-29	FMA RL 1, SRL 0; any 3	none found	0; 0	
Clay township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 2; any 18	none found	0; 0	
Clyde township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	0; 0	
Columbus township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	7; 2	
Cottrellville township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 2	none found	0; 0	
East China township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 16	\$1,891.54	0; 0	Includes \$1,891.54 for declarations not counted as hazard incidents (EM-3189-MI).
Emmett township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	9; 1	
Fort Gratiot charter township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 6	none found	0; 0	
Grant township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	0; 0	
Greenwood township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	0; 0	
Ira township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 1; any 8	\$6,223.75	0; 0	Includes \$4,875.44 for declarations not counted as hazard incidents (EM-3189-MI).
Kenockee township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	0; 0	
Kimball township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 1	\$1,526.01	7; 1	Includes \$1,526.01 for declarations not counted as hazard incidents (EM-3189-MI).
Lynn township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	0; 0	

Member	Type	Plan status	Repetitive loss <i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	Public Assistance matched <i>federal share obligated, nominal dollars</i>	Event records naming this place <i>all years; since the member's plan</i>	Notes
Mussey township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	0; 0	
Port Huron charter township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	49; 4	
Riley township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	0; 0	
St. Clair township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	21; 1	
Wales township	Township	Approved, expires 2027-08-29	FMA RL 0, SRL 0; any 0	none found	0; 0	

Member 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 member row, while the county table counts only its part in this county.

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

SOURCES

FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)

FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-26T151157Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)

NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

Supports B2-a and B2-b: assets and impacts

Local data required

County-level starter. The plan must describe impacts for each participant and its own assets.

- Critical facilities and lifelines per hazard
- A problem statement per participant 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

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>	EAL population equivalence <i>statistical value of life and injury, \$13.7M per life, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since 2022-08-30 <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											Not Applicable in NRI for this county
Coastal Flooding	\$6,175,182,323		12,313	\$51,470		\$5,720	0.000834%				

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>	EAL population equivalence <i>statistical value of life and injury, \$13.7M per life, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since 2022-08-30 <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
Cold Wave	\$34,294,624,496	\$104,159,716	160,353	\$1,746	\$65,490	\$9,963,968	under 0.0001%				
Drought		\$0			\$0						agriculture exposure is 0 in NRI
Earthquake	\$59,008,584,275		160,383	\$236,091		\$68,874	0.0004%				
Hail	\$34,294,624,496	\$104,159,716	160,353	\$225,090	\$17,084	\$13,486	0.000656%	\$0			
Heat Wave	\$34,294,624,496	\$104,159,716	160,353	\$6,282	\$1	\$727,021	under 0.0001%				
Hurricane	\$34,264,537,593	\$102,025,116	160,041	\$14,421	\$9,006	\$174	under 0.0001%				
Ice Storm	\$34,237,082,543		159,915	\$695,707		\$9,558	0.00203%		\$0		
Inland Flooding	\$34,188,445,862	\$3,744,555	9,072	\$28,933,199	\$37,302	\$7,887	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. EAL as % of exposure: n/a.
Landslide	\$108,961,453		448	\$163		\$426	0.000149%				
Lightning	\$34,294,624,496		160,353	\$64,016		\$135,426	0.000187%	\$0			
Strong Wind	\$34,294,624,496	\$104,159,716	160,353	\$1,679,657	\$1,250	\$59,605	0.0049%	\$77,000	\$100,000		Storm Events damage since the plan includes 1 zone-level High Wind record (\$100,000), an event type the NRI definition of this hazard leaves out.
Tornado	\$34,294,624,496	\$104,159,716	160,353	\$2,622,956	\$1,287	\$3,589,051	0.00765%				
Tsunami											NRI publishes no building exposure for this county
Volcanic Activity											Not Applicable in NRI for this county
Wildfire	\$12,924,474,606	\$29,695,705	63,513	\$17,135	\$3	\$1,788	0.000133%				
Winter Weather	\$34,294,624,496	\$104,159,716	160,353	\$70,818	\$442	\$16,456	0.000206%		\$0		

Totals since 2022-08-30 (Storm Events through 2026-06-30): 38 county-coded records, 38 with a damage value recorded (including \$0), \$77,000; 7 zone-level records, 7 with a damage value recorded (including \$0), \$100,000 reported for the zone; Public Assistance on counted declarations none found (0 declarations, 0 with PA).

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

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 must not be added up; the unit total counts each declaration once.

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

SOURCES

FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, 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)
NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-28, <https://www.weather.gov/gis/ZoneCounty>
FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)
FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-26T151157Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)
FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

Supports B2-a: context

County context

Measure	Value
Population	160,353
Building value (total, not at risk)	\$34,294,624,496
Agriculture value (total, not at risk)	\$104,159,716
NRI risk rating (all hazards)	Relatively Moderate
Expected annual loss, buildings and agriculture, all hazards	\$34,750,616
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)	\$14,599,440
Social vulnerability rating	Relatively Low
Community resilience rating	Very High
NRI version	December 2025

FEMA's all-hazard expected annual loss total adds buildings, agriculture and population equivalence; the two parts are shown separately so the property figure is not read as including the statistical value of life.

SOURCE
FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, 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)

Supports B2-c: repetitive loss

Repetitive loss in this county, both definitions

Definition	Properties	Severe repetitive loss	Properties
Repetitive loss, FMA definition (44 CFR 77.2)	1	Severe repetitive loss, FMA definition (44 CFR 77.2)	4
Repetitive loss, NFIP insurance definition	73	Severe repetitive loss, NFIP insurance definition	4

Your state NFIP coordinator's list may use the NFIP insurance definition, so its counts can be higher.

SOURCES
FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)
FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

Repeat-flood properties: county and state-level rows

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	1	4	73	4	73	1	18
ALGONAC, CITY OF	0	0	8	0	8	0	2

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>
BURTCHVILLE, TOWNSHIP OF	0	1	1	1	1	0	0
CLAY, TOWNSHIP OF	0	2	18	2	18	1	5
COTTRELLVILLE, TOWNSHIP OF	0	0	2	0	2	0	0
EAST CHINA, CHARTER TOWNSHIP OF	0	0	16	0	16	0	8
FORT GRATIOT, CHARTER TOWNSHIP OF	0	0	6	0	6	0	0
IRA, TOWNSHIP OF	0	1	8	1	8	0	1
MARINE CITY, CITY OF	0	0	6	0	6	0	2
CHINA, CHARTER TOWNSHIP OF	1	0	3	0	3	0	0
PORT HURON, CITY OF	0	0	4	0	4	0	0
KIMBALL, TOWNSHIP OF	0	0	1	0	1	0	0
State level, not in this county: county not reported	0	0	4	0	4	0	0

SOURCESFEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)**Repeat-flood properties by plan member (NFIP community)**

Member	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
Algonac city	260191	0	0	8	0	8	0	2	
Capac village	260615	0	0	0	0	0	0	0	
Emmett village	260539	0	0	0	0	0	0	0	
Marine City city	260200	0	0	6	0	6	0	2	
Marysville city	260201	0	0	0	0	0	0	0	
Memphis city	260202	0	0	0	0	0	0	0	
Port Huron city	260204	0	0	4	0	4	0	0	
St. Clair city	260279	0	0	0	0	0	0	0	
Yale city	260329	0	0	0	0	0	0	0	
Berlin township	260192	0	0	0	0	0	0	0	
Brockway township	260505	0	0	0	0	0	0	0	
Burtchville township	260193	0	1	1	1	1	0	0	
Casco township	260506	0	0	0	0	0	0	0	
China township	260203	1	0	3	0	3	0	0	
Clay township	260194	0	2	18	2	18	1	5	
Clyde township	260195	0	0	0	0	0	0	0	
Columbus township	260507	0	0	0	0	0	0	0	
Cottrellville township	260196	0	0	2	0	2	0	0	

Member	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
East China township	260197	0	0	16	0	16	0	8	
Emmett township	260619	0	0	0	0	0	0	0	
Fort Gratiot charter township	260198	0	0	6	0	6	0	0	
Grant township	260488	0	0	0	0	0	0	0	
Greenwood township	260324	0	0	0	0	0	0	0	
Ira township	260199	0	1	8	1	8	0	1	
Kenockee township	260915	0	0	0	0	0	0	0	
Kimball township	260594	0	0	1	0	1	0	0	
Lynn township	260592	0	0	0	0	0	0	0	
Mussey township	260620	0	0	0	0	0	0	0	
Port Huron charter township	260672	0	0	0	0	0	0	0	
Riley township	260621	0	0	0	0	0	0	0	
St. Clair township	260205	0	0	0	0	0	0	0	
Wales township	260508	0	0	0	0	0	0	0	

Per-member types: XLSX sheet 'B2-c Members'.

Member 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 member row, while the county table counts only its part in this county.

SOURCES

FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)

FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

County repeat-flood properties by occupancy group

Occupancy group	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
single-family residential	1	4	59	4	59	1	17
2 to 4 unit residential	0	0	1	0	1	0	0
other residential	0	0	8	0	8	0	0
non-residential	0	0	5	0	5	0	1
not reported	0	0	0	0	0	0	0

Institutional properties cannot be separated in this data: FEMA's occupancy groups have no institutional class, so they fall in non-residential or other residential in the table by occupancy group.

SOURCES

FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)

FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

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; OpenFEMA's fmaRI field description omits the Increased Cost of Compliance clause of 44 CFR 77.2(i). NFIP repetitive loss (FEMA insurance definition, nfipRI) is 2 or more claims over \$1,000 in 10 years and can drop to false when a property is mitigated. Also shown: NFIP severe repetitive loss, any category, mitigated and currently insured.

Your state NFIP coordinator's list may use the NFIP insurance definition, so its counts can be higher.

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

Counts may differ from your state NFIP coordinator's list, which is the source the Handbook names.

In this county 0 properties are FMA repetitive loss but not NFIP repetitive loss, and 72 properties are NFIP repetitive loss but not FMA repetitive loss.

Exact counts; no count suppression.

Sources

Every table above lists its own sources. The full list, for the plan's bibliography (FEMA review item A4-a):

1. FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)
2. FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)
3. FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-26T151157Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)
4. FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <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 2026-09-28, 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 2026-09-28, <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 2026-09-28, <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 2026-09-28, 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

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Corrections: to report an error, name the packet, the table and what your records show. Contact: to be added

Hazard Plain release 2026-10. As of 2026-09-28; Storm Events data through 2026-06-30. File hazard-plain_2026-10_MI_26147. Preview: automated baseline.