

Monroe County, MI

Risk-assessment baseline packet

County FIPS: 26115 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: Expired on 2022-07-13. Plan: Monroe County (FEMA plan 101035), approved 2017-07-14.

Since the plan was approved on 2017-07-14: 1 new hazard declaration (1 incident) and 146 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 (\$34,036,676 a year), Tornado (\$7,571,928) and Cold Wave (\$5,304,598).

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; 26115 is this area.

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

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

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

CFR: Code of Federal Regulations.

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

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

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Plan clock

Status:	Expired on 2022-07-13	Plan:	Monroe County (FEMA plan 101035)
Approved:	2017-07-14	Days since expiry:	1,540
Update underway:	none recorded in FEMA's plan tracker		

Until a new plan is approved, FEMA mitigation project grants (HMGP, FMA) need a FEMA exception (44 CFR 201.6(a)(3)).

What changed since your last plan (approved 2017-07-14)

New federal declarations:	1 new hazard declaration (1 incident): DR-4757-MI (Severe Storms, Tornadoes, and Flooding); also 2 COVID-19 declarations (not counted)	Storm Events records since approval:	146 records (data through 2026-06-30)
Repetitive loss now:	FMA RL 5, SRL 11 (44 CFR 77.2); any definition: 114	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: 25 rows, in the section "Plan clock: Plan status for every jurisdiction listed in this county" on the following pages.

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

Plan clock

Plan status for every jurisdiction listed in this county

Source: 1

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>
Monroe County	County	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Carleton village	Village	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Dundee village	Village	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Estral Beach village	Village	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Luna Pier city	City	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Maybee village	Village	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Milan city	City	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Monroe city	City	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Petersburg city	City	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
South Rockwood village	Village	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Ash township	Township	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Bedford township	Township	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Berlin charter township	Township	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Dundee township	Township	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Erie township	Township	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Exeter township	Township	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Frenchtown township	Township	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Ida township	Township	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
La Salle township	Township	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
London township	Township	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Milan township	Township	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Monroe charter township	Township	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Raisinville township	Township	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Summerfield township	Township	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540
Whiteford township	Township	Expired on 2022-07-13	Monroe County (FEMA plan 101035)	2017-07-14	2022-07-13	-1,540

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	\$33,022,427	\$178,498	\$835,751	\$34,036,676	38	
2	Tornado	Relatively Moderate	Relatively Moderate	\$4,539,720	\$1,564	\$3,030,644	\$7,571,928	15	
3	Cold Wave	Relatively Moderate	Relatively High	\$4,029	\$66,677	\$5,233,893	\$5,304,598	16	Includes 2 Frost/Freeze records (outside NRI's Cold Wave definition; counted in this table and in B1-d, not in the B1-e descriptor).
4	Strong Wind	Relatively High	Relatively High	\$1,743,964	\$91,107	\$1,095,800	\$2,930,871	294	Includes 33 High Wind and 3 Strong Wind records (NOAA non-thunderstorm wind types, outside NRI's Strong Wind definition).
5	Heat Wave	Relatively Low	Relatively Low	\$11,085	\$3	\$1,218,642	\$1,229,730	16	
6	Hail	Relatively Moderate	Relatively Moderate	\$1,158,359	\$55,473	\$9,832	\$1,223,664	95	
7	Earthquake	Relatively Low	Relatively Low	\$909,925	n/a	\$208,302	\$1,118,226		Storm Events does not record earthquakes.
8	Ice Storm	Relatively High	Relatively High	\$666,670	n/a	\$5,861	\$672,532	6	
9	Lightning	Relatively Low	Relatively Low	\$40,212	n/a	\$264,361	\$304,572	11	
10	Winter Weather	Relatively Moderate	Relatively Moderate	\$148,580	\$658	\$51,926	\$201,165	45	
11	Coastal Flooding	Relatively Low	Relatively Low	\$53,094	n/a	\$6,870	\$59,964	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
12	Hurricane	Very Low	Very Low	\$39,506	\$8,087	\$372	\$47,966	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
13	Wildfire	Very Low	Very Low	\$17,979	\$8	\$1,849	\$19,836	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
14	Landslide	Very Low	Very Low	\$97	n/a	\$181	\$278	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 <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
15	Drought	No Rating	No Expected Annual Losses	n/a	\$0	n/a	\$0	2	
	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: avalanche and volcanic activity. That is the evidence for leaving them out of the plan.

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

Supports FEMA checklist item B1-b: hazard location

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

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>
Earthquake	tract 8317 (Relatively Low, 67.9); tract 8314 (Relatively Low, 65.6); tract 8318 (Relatively Low, 58.6)
Hurricane	tract 8317 (Very Low, 41.2); tract 8314 (Very Low, 41.1); tract 8330 (Very Low, 40.6)
Landslide	tract 8302 (Very Low, 73.8); tract 8308.02 (Very Low, 72.4); tract 8337 (Very Low, 69.9)
Tornado	tract 8314 (Relatively High, 91.4); tract 8317 (Relatively High, 87.3); tract 8333 (Relatively High, 84.9)
Tsunami	no tract has a National Risk Index rating for this hazard
Wildfire	tract 8328 (Relatively Low, 71.7); tract 8306 (Relatively Low, 71.1); tract 8305 (Relatively Low, 69.1)

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 8317 is Census Tract 8317). 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
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	14 records, 1996 to 2019 (14 zone-level)	1 day to 21 days (median 2.5 days); 14 with a recorded value	January 2003 (1 monthly summary record), zone-level	Cold/Wind Chill, 2007-02-03, \$25,000 property; \$0 crops (zone total, 2007 dollars)	Countywide (zone-level records).	
Frost/Freeze (outside NRI's Cold Wave definition)	crop damage	2 records, 2007 to 2012 (2 zone-level)		Frost/Freeze, 2012-04-27, \$1,300,000 crop damage (2012 dollars); NWS zone MIZ083		Countywide (zone-level records).	
Drought	U.S. Drought Monitor scale (D0 to D4)	2 records, 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		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)	112 records, 1963 to 2026	0.75 in to 4 in (median 1 in); 112 with a recorded value	4 in hail, 1991-03-27		Event records naming jurisdictions in the plan: Monroe charter township (15 records), Monroe city (15 records), Petersburg city (10 records), Dundee township (6 records), Dundee village (6 records), Erie township (5 records), South Rockwood village (5 records), Carleton village (4 records), Maybee village (3 records), Milan city (3 records); and 4 more jurisdictions (see the Excel file).	
Excessive Heat, Heat	heat index (in event narratives)	16 records, 1999 to 2026 (16 zone-level)	1 day to 7 days (median 4.5 days); 12 with a recorded value	7 consecutive days, 2012-07-01 to 2012-07-07, zone-level		Countywide (zone-level records).	Heat records from November to March (unseasonable warmth, not a heat wave) are counted but not used for the longest run.
Hurricane, Tropical Storm, Tropical Depression	Saffir-Simpson	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)	6 records, 1997 to 2023 (6 zone-level)		Ice Storm, 2011-02-20, \$3,500,000 property; \$0 crops (2011 dollars); NWS zone MIZ083		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
Flash Flood, Flood, Lakeshore Flood	damage and flood days (flood depth: FIRM)	38 records, 1997 to 2023 (28 zone-level)		Lakeshore Flood, 2018-04-15, \$5,000,000 property; \$0 crops (2018 dollars); NWS zone MIZ083		Event records naming jurisdictions in the plan: Monroe charter township (2 records), Monroe city (2 records), South Rockwood village (2 records), Carleton village (1 record), Erie township (1 record), Milan city (1 record), Milan township (1 record). Zone-level records (28) apply countywide.	Flood depth: see the FEMA Flood Insurance Rate Map. Storm Events damage is often \$0 or blank for floods, major ones included; FEMA Public Assistance by declaration (B1-d) shows which floods cost the most.
Debris Flow	none (count and damage only)	0					
Lightning	annualized frequency (the measure FEMA's Local Mitigation Planning Handbook names)	11 records, 1999 to 2024		Lightning, 2006-06-21, \$75,000 property; crops not reported (2006 dollars)		Event records naming jurisdictions in the plan: Dundee township (3 records), Dundee village (3 records), Maybee village (1 record), Monroe charter township (1 record), Monroe city (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)	36 records, 1996 to 2026 (36 zone-level)	39 kt (45 mph) to 70 kt (81 mph) (median 52 kt (60 mph)); 35 with a recorded value	70 kt (81 mph) estimated gust, High Wind, 2018-05-04; NWS zone MIZ083	High Wind, 2017-03-08, \$15,000,000 property; \$0 crops (zone total, 2017 dollars)	Countywide (zone-level records).	
Thunderstorm Wind	wind speed (kt and mph)	317 records, 1964 to 2026	43 kt (49 mph) to 83 kt (96 mph) (median 52 kt (60 mph)); 267 with a recorded value	83 kt (96 mph) estimated gust, Thunderstorm Wind, 2004-05-21	Thunderstorm Wind, 1998-07-21, \$315,000 property; crops not reported (1998 dollars)	Event records naming jurisdictions in the plan: Monroe charter township (42 records), Monroe city (42 records), Dundee township (24 records), Dundee village (24 records), Carleton village (17 records), Maybee village (17 records), Ida township (12 records), Petersburg city (12 records), Milan city (8 records), Milan township (8 records); and 5 more jurisdictions (see the Excel file).	
Tornado	Enhanced Fujita (Fujita before Feb 2007)	41 records, 1953 to 2025	F/EF0 to F/EF4 (median F/EF1); 41 with a recorded value	F4 tornado, 1965-04-11, 200 yd wide, \$2,500,000 property; crops not recorded (1965 dollars), 2 direct deaths, 29 direct injuries	Tornado, 2010-06-06, \$50,000,000 property; \$0 crops (2010 dollars)	Event records naming jurisdictions in the plan: Estral Beach village (3 records), South Rockwood village (2 records), Milan city (1 record), Milan township (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					

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
Wildfire	acres burned (local data)	0					
Winter Storm, Heavy Snow, Blizzard, Lake- Effect Snow, Winter Weather, Sleet	none in data (snowfall: local data)	45 records, 1996 to 2026 (45 zone-level)		Winter Weather, 1999-01-12, \$30,000 property; crops not reported (1999 dollars); NWS zone MIZ083		Countywide (zone-level records).	

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

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

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.

A monthly summary record covers most or all of a month; it does not count days at wave conditions.

Supports FEMA checklist item B1-d: previous occurrences

Federal declarations for this county: 11 declarations covering 7 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
2024-02-08	2023-08-24	DR-4757-MI	Major disaster	Severe Storms, Tornadoes, and Flooding	Inland Flooding (primary); also designated: Tornado	PA not declared for this county	new since last plan; within last 5 years	
2020-03-27	2020-01-20	DR-4494-MI	Major disaster	COVID-19 Pandemic	Non-natural, not counted	\$88,515.65	new since last plan	
2020-03-13	2020-01-20	EM-3455-MI	Emergency	COVID-19	Non-natural, not counted	no Public Assistance recorded	new since last plan	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	no Public Assistance recorded		
2003-09-23	2003-08-14	EM-3189-MI	Emergency	Power Outage	Non-natural, not counted	\$15,673.40		
1999-01-27	1999-01-02	EM-3137-MI	Emergency	Mi - Severe Weather 1/2 /99	Winter Weather	\$58,881.34		
1982-03-29	1982-03-29	DR-654-MI	Major disaster	Flooding	Inland Flooding	PA not declared for this county		
1978-01-27	1978-01-27	EM-3057-MI	Emergency	Blizzards & Snowstorms	Winter Weather	no Public Assistance recorded		
1973-04-12	1973-04-12	DR-371-MI	Major disaster	Severe Storms & Flooding	Inland Flooding	no Public Assistance recorded		
1972-12-01	1972-12-01	DR-363-MI	Major disaster	Severe Storms & Flooding	Inland Flooding	no Public Assistance recorded		
1965-04-14	1965-04-14	DR-190-MI	Major disaster	Tornadoes & Severe Storms	Tornado	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
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, so they are listed on every county page in the state and not counted with county rows. Local data needed: whether each one affected this county.

Previous occurrences by hazard, with explicit no-event rows

Sources: 2, 6, 7

Hazard	Storm Events records, all years on file <i>(years in the Period column)</i>	Since plan approval records	In the 12 months before plan approval records	Last 5 years records	Declared incidents, all years <i>separate disasters</i>	Declared since approval <i>separate disasters</i>	Period	Statement
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	16	1	0	0	0	0	1996 to 2026-06-30	Includes 2 Frost/Freeze records.
Drought	2	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	112	15	0	9	0	0	1955 to 2026-06-30	
Heat Wave	16	4	0	2	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	2	0	1	0	0	1996 to 2026-06-30	
Inland Flooding	38	22	0	2	4	1	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	11	2	1	1	0	0	1996 to 2026-06-30	
Strong Wind	353	88	6	40	0	0	1955 to 2026-06-30	Includes 33 High Wind and 3 Strong Wind records.
Tornado	41	7	1	5	2	1	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	45	5	1	2	2	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
2018-05-04	High Wind	70 kt (81 mph) estimated gust	\$3,000,000 property; \$0 crops (zone total, 2018 dollars)	0, 0	NWS zone MIZ083 (MONROE), zone-level	new since last plan	B1-c worst recorded: High Wind and Strong Wind
2018-04-15	Lakeshore Flood		\$5,000,000 property; \$0 crops (zone total, 2018 dollars)	0, 0	NWS zone MIZ083 (MONROE), zone-level	new since last plan	B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
2012-07-01	Heat		\$0 property; \$0 crops (zone total, 2012 dollars)	0, 0	NWS zone MIZ083 (MONROE), zone-level		B1-c worst recorded: Excessive Heat, Heat
2012-04-27	Frost/Freeze		\$0 property; \$1,300,000 crops (zone total, 2012 dollars)	0, 0	NWS zone MIZ083 (MONROE), zone-level		B1-c worst recorded: Frost/Freeze
2011-02-20	Ice Storm		\$3,500,000 property; \$0 crops (zone total, 2011 dollars)	0, 0	NWS zone MIZ083 (MONROE), zone-level		B1-c worst recorded: Ice Storm
2004-05-21	Thunderstorm Wind	83 kt (96 mph) estimated gust	damage not reported	0, 0	MILAN		B1-c worst recorded: Thunderstorm Wind
2003-01-10	Cold/Wind Chill		damage not reported	0, 0	NWS zone MIZ083 (MONROE), zone-level		B1-c worst recorded: Cold/Wind Chill, Extreme Cold/Wind Chill
1991-03-27	Hail	4 in	damage not recorded (pre-1996 record)	0, 0	location not recorded		B1-c worst recorded: Hail
1965-04-11	Tornado	F4, 23.6 mi path length (whole path, pre-1996), 1,760 yd wide	\$2,500,000 property; crops not recorded (1965 dollars)	6, 5	location not recorded		deaths or injuries recorded
1965-04-11	Tornado	F4, 200 yd wide	\$2,500,000 property; crops not recorded (1965 dollars)	2, 29	location not recorded		B1-c worst recorded: Tornado
1965-04-11	Tornado	F4, 23.6 mi path length (whole path, pre-1996), 33 yd wide	damage not recorded (pre-1996 record)	5, 5	location not recorded		deaths or injuries recorded
1953-06-08	Tornado	F4, 5.4 mi path length (whole path, pre-1996), 200 yd wide	\$250,000 property; crops not recorded (1953 dollars)	4, 18	location not recorded		deaths or injuries recorded

The full list is in the Excel file, sheet "B1-d Storm Events history" (640 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
Coastal Flooding	0.0149	events per year at a location (modeled)	about 0.015 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	2.89	event-days per year	about 2.89 days per year	Likely	Storm Events event-days in 11 of 30 years, 1996 to 2025 (36.7%)	55	2005-11-12 to 2024-11-12 (19 years)	countywide	
Drought	0	event-days per year	none modeled	Possible	Storm Events 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); Storm Events has a record in 2 of 30 years. The descriptor comes from Storm Events, which counts D2 drought that NRI leaves out.
Earthquake	0.00109	annual probability at a location	chance a given location in the county has at least minor-damage shaking in a year: 0.109%			not shown	modeled	see B1-f	No descriptor (Storm Events does not record earthquakes).
Hail	3.14	events per year	about 3.14 per year	Highly likely	FEMA annualized frequency (modeled)	121.8 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave	3.79	event-days per year	about 3.79 days per year	Likely	Storm Events event-days in 9 of 30 years, 1996 to 2025 (30%)	58	2005-11-12 to 2024-11-12 (19 years)	countywide	
Hurricane	0.00848	events per year	about 1 in 118 years	Unlikely	FEMA annualized frequency (modeled)	4	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	1.54	event-days per year	about 1.54 days per year	Likely	Storm Events event-days in 6 of 30 years, 1996 to 2025 (20%)	87	1946-12-31 to 2014-02-12 (67 years)	countywide	
Inland Flooding	1.32	event-days per year	about 1.32 days per year	Likely	Storm Events event-days in 17 of 30 years, 1996 to 2025 (56.7%)	37	1996 to 2023 (28 years)	see B1-f	

Hazard	FEMA annualized frequency (modeled) <i>unit per row</i>	Unit	In plain terms	Descriptor	Descriptor basis	NRI events or days in its record period (hail, wind and tornado are area- weighted, so can be fractional)	NRI period	Location	Note
Landslide	0.0791	events per year (modeled)	about 1 in 13 years	Possible	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Lightning	38.1	days per year with a strike	about 38.1 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	countywide	
Strong Wind	5.01	events per year	about 5.01 per year	Highly likely	FEMA annualized frequency (modeled)	158	1986 to 2023 (38 years)	countywide	
Tornado	0.305	events per year	about 1 in 3 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	0.0000235	annual probability at a location	chance a given location in the county burns in a year: 0.00235%		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	8.89	event-days per year	about 8.89 days per year	Likely	Storm Events event-days in 22 of 30 years, 1996 to 2025 (73.3%)	169	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	46	30	1.53
Hail	2.00 in+	1996 to 2025	3	30	0.1
Thunderstorm Wind (counted as NRI Strong Wind)	50-64 kt	1996 to 2025	234	30	7.8
Thunderstorm Wind (counted as NRI Strong Wind)	65 kt+	1996 to 2025	14	30	0.467
Thunderstorm Wind (counted as NRI Strong Wind)	unmeasured or below 50 kt	1996 to 2025	3	30	0.1
Tornado	EF0-1	1996 to 2025	14	30	0.467
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

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	
Coastal Flooding	21 of 40	68.4	79.6	88.1	Relatively Low 13, Very Low 8, No Rating 19
Cold Wave	40 of 40	53.4	73.2	91.5	Relatively High 7, Relatively Moderate 33
Drought	0 of 40				No Rating 40
Earthquake	40 of 40	27.9	46.4	67.9	Relatively Low 25, Very Low 15
Hail	40 of 40	53.3	73.5	84.8	Relatively Moderate 30, Relatively Low 10
Heat Wave	40 of 40	19.0	41.0	73.5	Relatively Moderate 2, Relatively Low 38
Hurricane	40 of 40	27.2	34.5	41.2	Very Low 40
Ice Storm	40 of 40	51.6	78.7	90.9	Relatively High 2, Relatively Moderate 29, Relatively Low 9
Inland Flooding	40 of 40	16.1	64.4	98.1	Very High 1, Relatively High 9, Relatively Moderate 19, Relatively Low 11
Landslide	40 of 40	21.8	49.4	73.8	Very Low 40
Lightning	40 of 40	19.2	37.0	66.1	Relatively Moderate 3, Relatively Low 35, Very Low 2
Strong Wind	40 of 40	60.9	84.5	95.4	Relatively High 25, Relatively Moderate 15
Tornado	40 of 40	50.6	70.5	91.4	Relatively High 15, Relatively Moderate 23, Relatively Low 2
Tsunami	0 of 40				Insufficient Data 40
Wildfire	39 of 40	26.6	55.7	71.7	Relatively Low 3, Very Low 36, No Rating 1
Winter Weather	40 of 40	41.0	63.2	82.9	Relatively High 2, Relatively Moderate 33, Relatively Low 5

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

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

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

Each jurisdiction (starting figures from federal data)

Sources: 1, 3, 4, 6

Jurisdiction	Type	Plan status	Repetitive loss <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
Monroe County	County	Expired on 2022-07-13	FMA RL 0, SRL 0; any 0	\$88,515.65	0 total; 0 since its plan	Includes \$88,515.65 for declarations not counted as hazard incidents (DR-4494-MI).
Carleton village	Village	Expired on 2022-07-13	FMA RL 0, SRL 0; any 0	\$6,448.79	22 total; 9 since its plan	Includes \$1,767.29 for declarations not counted as hazard incidents (EM-3189-MI).
Dundee village	Village	Expired on 2022-07-13	FMA RL 0, SRL 0; any 4	\$3,572.25	33 total; 5 since its plan	
Estral Beach village	Village	Expired on 2022-07-13	FMA RL 0, SRL 1; any 9	no Public Assistance recorded	4 total; 1 since its plan	
Luna Pier city	City	Expired on 2022-07-13	FMA RL 0, SRL 0; any 2	no Public Assistance recorded	6 total; 1 since its plan	
Maybee village	Village	Expired on 2022-07-13	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	21 total; 1 since its plan	
Milan city	City	Expired on 2022-07-13	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	13 total; 2 since its plan	
Monroe city	City	Expired on 2022-07-13	FMA RL 0, SRL 0; any 5	\$33,822.96	60 total; 15 since its plan	Includes \$11,541.21 for declarations not counted as hazard incidents (EM-3189-MI).
Petersburg city	City	Expired on 2022-07-13	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	22 total; 0 since its plan	
South Rockwood village	Village	Expired on 2022-07-13	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	14 total; 8 since its plan	
Ash township	Township	Expired on 2022-07-13	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan	
Bedford township	Township	Expired on 2022-07-13	FMA RL 0, SRL 0; any 2	\$22,034.25	0 total; 0 since its plan	
Berlin charter township	Township	Expired on 2022-07-13	FMA RL 0, SRL 1; any 9	no Public Assistance recorded	0 total; 0 since its plan	
Dundee township	Township	Expired on 2022-07-13	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	33 total; 5 since its plan	
Erie township	Township	Expired on 2022-07-13	FMA RL 1, SRL 1; any 9	no Public Assistance recorded	11 total; 7 since its plan	
Exeter township	Township	Expired on 2022-07-13	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan	
Frenchtown township	Township	Expired on 2022-07-13	FMA RL 0, SRL 3; any 19	no Public Assistance recorded	0 total; 0 since its plan	
Ida township	Township	Expired on 2022-07-13	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	14 total; 2 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>	
La Salle township	Township	Expired on 2022-07-13	FMA RL 3, SRL 2; any 39	no Public Assistance recorded	8 total; 1 since its plan	
London township	Township	Expired on 2022-07-13	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan	
Milan township	Township	Expired on 2022-07-13	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	13 total; 2 since its plan	
Monroe charter township	Township	Expired on 2022-07-13	FMA RL 1, SRL 3; any 16	no Public Assistance recorded	60 total; 15 since its plan	
Raisinville township	Township	Expired on 2022-07-13	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan	
Summerfield township	Township	Expired on 2022-07-13	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan	
Whiteford township	Township	Expired on 2022-07-13	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan	

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

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 2017-07-14 <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
Coastal Flooding	\$6,818,896,044	n/a	13,203	\$53,094	n/a	\$6,870	0.000779%				
Cold Wave	\$37,825,737,055	\$224,660,836	154,767	\$4,029	\$66,677	\$5,233,893	under 0.0001%		\$0		
Drought	n/a	\$0	n/a	n/a	\$0	n/a					agriculture exposure is 0 in NRI
Earthquake	\$65,192,732,843	n/a	154,809	\$909,925	n/a	\$208,302	0.0014%				
Hail	\$37,825,741,812	\$224,660,836	154,767	\$1,158,359	\$55,473	\$9,832	0.00306%	\$0			
Heat Wave	\$37,825,737,055	\$224,660,836	154,767	\$11,085	\$3	\$1,218,642	under 0.0001%		\$0		
Hurricane	\$37,454,935,604	\$216,714,388	153,085	\$39,506	\$8,087	\$372	0.000105%				
Ice Storm	\$37,824,349,655	n/a	154,752	\$666,670	n/a	\$5,861	0.00176%		\$2,025,000		
Inland Flooding	\$37,775,661,276	\$11,787,665	9,901	\$33,022,427	\$178,498	\$835,751	n/a (see note)	\$5,000,000	\$5,000,000	no Public Assistance recorded (1 declaration)	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.

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 2017-07-14 <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
Landslide	\$91,113,673	n/a	277	\$97	n/a	\$181	0.000106%				
Lightning	\$37,825,741,812	n/a	154,767	\$40,212	n/a	\$264,361	0.000106%	\$12,000			
Strong Wind	\$37,825,741,812	\$224,660,836	154,767	\$1,743,964	\$91,107	\$1,095,800	0.00461%	\$85,500	\$4,225,000		Storm Events damage since the plan includes 5 zone-level High Wind records (\$4,225,000): a NOAA non-thunderstorm wind type, outside NRI's Strong Wind definition.
Tornado	\$37,825,741,812	\$224,660,836	154,767	\$4,539,720	\$1,564	\$3,030,644	0.012%	\$1,975,000		no Public Assistance recorded (1 declaration)	
Tsunami	n/a	n/a	n/a	n/a	n/a	n/a					NRI publishes no building exposure for this county
Wildfire	\$12,449,748,207	\$43,002,706	50,827	\$17,979	\$8	\$1,849	0.000144%				
Winter Weather	\$37,825,737,055	\$224,660,836	154,767	\$148,580	\$658	\$51,926	0.000393%		\$0		

Totals since 2017-07-14 (Storm Events through 2026-06-30): 108 county-coded records, 108 with a damage value recorded (including \$0), \$7,072,500; 38 zone-level records, 38 with a damage value recorded (including \$0), \$11,250,000 reported for the zone; Public Assistance: none recorded on the 1 counted declaration.

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	154,767
Building value (total, not at risk)	\$37,825,741,812
Agriculture value (total, not at risk)	\$224,660,836
NRI risk rating (all hazards)	Relatively Moderate
Expected annual loss, buildings and agriculture, all hazards	\$42,757,722
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)	\$11,964,286
Social vulnerability rating	Relatively Low
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)	5	Severe repetitive loss, FMA definition (44 CFR 77.2)	11
Repetitive loss, NFIP insurance definition	114	Severe repetitive loss, NFIP insurance definition	11

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

Repeat-flood properties: county and state-level rows

Sources: 1, 4

Scope	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
County total	5	11	114	11	114	0	29
of which: Bedford township	0	0	2	0	2	0	0
of which: Berlin charter township	0	1	9	1	9	0	2
of which: Erie township	1	1	9	1	9	0	1
of which: Frenchtown charter township	0	3	19	3	19	0	0
of which: Lasalle township	3	2	39	2	39	0	15
of which: Luna Pier city	0	0	2	0	2	0	1
of which: Monroe city	0	0	5	0	5	0	0
of which: Monroe charter township	1	3	16	3	16	0	5
of which: Estral Beach village	0	1	9	1	9	0	3
of which: Dundee village	0	0	4	0	4	0	2
Statewide, no county in FEMA's file	0	0	4	0	4	0	0

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

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

Sources: 1, 4

Jurisdiction	NFIP community ID	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
Monroe County	260956	0	0	0	0	0	0	0
Carleton village	260953	0	0	0	0	0	0	0
Dundee village	260313	0	0	4	0	4	0	2
Estral Beach village	260261	0	1	9	1	9	0	3
Luna Pier city	260150	0	0	2	0	2	0	1
Maybee village	260954	0	0	0	0	0	0	0
Milan city	260151	0	0	0	0	0	0	0
Monroe city	260153	0	0	5	0	5	0	0
Petersburg city	260288	0	0	0	0	0	0	0
South Rockwood village	260320	0	0	0	0	0	0	0
Ash township	260141	0	0	0	0	0	0	0
Bedford township	260142	0	0	2	0	2	0	0
Berlin charter township	260143	0	1	9	1	9	0	2
Dundee township	260144	0	0	0	0	0	0	0
Erie township	260145	1	1	9	1	9	0	1

Jurisdiction	NFIP community ID	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
Exeter township	260586	0	0	0	0	0	0	0
Frenchtown township	260146	0	3	19	3	19	0	0
Ida township	260147	0	0	0	0	0	0	0
La Salle township	260148	3	2	39	2	39	0	15
London township	260149	0	0	0	0	0	0	0
Milan township	260152	0	0	0	0	0	0	0
Monroe charter township	260154	1	3	16	3	16	0	5
Raisinville township	260155	0	0	0	0	0	0	0
Summerfield township	260156	0	0	0	0	0	0	0
Whiteford township	260157	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	5	10	103	10	103	0	28
2 to 4 unit residential	0	0	2	0	2	0	0
other residential	0	0	2	0	2	0	0
non-residential	0	1	7	1	7	0	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 109 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

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Cite this: Hazard Plain (2026). Monroe County, MI: risk-assessment baseline packet, release 2026-10 (data as of 2026-09-30; County FIPS 26115). Automated baseline. <https://hazardplain.org/mi/26115/> 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