

# 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): DR-4757-MI (Severe Storms, Tornadoes, and Flooding); also 2 COVID-19 declarations (not counted).

NOAA Storm Events records since that date: 146 records (data through 2026-06-30).

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).

Repetitive-loss flood properties now: FMA RL 5, SRL 11 (44 CFR 77.2); any definition: 114.

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.

## CONTENTS

1. Summary and terms used, page 1
2. Plan clock, page 2
3. What changed since your last plan (approved 2017-07-14), page 2
4. Supports FEMA checklist item B1-a: hazard identification, page 3
5. Supports FEMA checklist item B1-b: hazard location, page 5
6. Supports FEMA checklist item B1-c: hazard extent, page 6
7. Supports FEMA checklist item B1-d: previous occurrences, page 9
8. Supports FEMA checklist item B1-e: probability of future events, page 12
9. Supports FEMA checklist item B1-f: hazards that vary across jurisdictions, page 15
10. Supports FEMA checklist items B2-a and B2-b: vulnerability and potential impacts, page 18
11. Supports FEMA checklist item B2-a: vulnerability (county context), page 20
12. Supports FEMA checklist item B2-c: repetitive loss properties, page 20
13. Sources, what the plan adds, disclaimer and citation, page 22

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)**

|                                  |                                                                                                                                        |                                             |                                       |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|---------------------------------------|
| <b>New federal declarations:</b> | 1 new hazard declaration (1 incident): DR-4757-MI (Severe Storms, Tornadoes, and Flooding); also 2 COVID-19 declarations (not counted) | <b>Storm Events records since approval:</b> | 146 records (data through 2026-06-30) |
| <b>Repetitive loss now:</b>      | FMA RL 5, SRL 11 (44 CFR 77.2); any definition: 114                                                                                    | <b>Repeat-flood change:</b>                 | 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<br><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<br>by EAL | Hazard           | NRI risk<br>rating  | EAL rating          | EAL buildings<br><i>modeled dollars<br/>per year</i> | EAL agriculture<br><i>modeled dollars<br/>per year</i> | Cost of expected<br>deaths and injuries<br><i>FEMA's dollar value per<br/>year, not property<br/>damage</i> | EAL total (see<br>note)<br><i>modeled dollars<br/>per year</i> | Storm Events<br>records, 1996 to<br>2026-06-30<br><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<br>by EAL | Hazard  | NRI risk<br>rating   | EAL rating                   | EAL buildings<br><i>modeled dollars<br/>per year</i> | EAL agriculture<br><i>modeled dollars<br/>per year</i> | Cost of expected<br>deaths and injuries<br><i>FEMA's dollar value per<br/>year, not property<br/>damage</i> | EAL total (see<br>note)<br><i>modeled dollars<br/>per year</i> | Storm Events<br>records, 1996 to<br>2026-06-30<br><i>count</i> | Storm Events coverage note                                                  |
|----------------|---------|----------------------|------------------------------|------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------------------|
| 15             | Drought | No Rating            | No Expected<br>Annual Losses | n/a                                                  | \$0                                                    | n/a                                                                                                         | \$0                                                            | 2                                                              |                                                                             |
|                | Tsunami | Insufficient<br>Data | Insufficient Data            | n/a                                                  | n/a                                                    | n/a                                                                                                         | n/a                                                            | 0                                                              | No recorded events in Storm Events since 1996<br>(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<br><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<br><i>count and years</i>        | Observed range                                                 | Worst recorded event                                                              | Most damaging<br>(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, reported for the zone (2007 dollars) | Countywide (zone-level records).                                                                                                                                                                                                                                                                                                                                                                       | Wind chill: in event narratives only (local data needed).                                                                                                                          |
| 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).                                                                                                                                                                                                                                                                                                                                                                       | Temperature: in event narratives only (local data needed).                                                                                                                         |
| 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 index: in event narratives only (local data needed). Heat records from November to March (unseasonable warmth, not a heat wave) are counted but not used for the longest run. |

| Hazard                                                           | Scale                                                                              | Records<br><i>count and years</i>        | Observed range                                                                      | Worst recorded event                                                                         | Most damaging<br>(when different)                                                             | How it applies to jurisdictions                                                                                                                                                                                                                                                                                                                                                                    | Note                                                                                                                                                                                                          |
|------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hurricane,<br>Tropical Storm,<br>Tropical<br>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).                                                                                                                                                                                                                                                                                                                                                                   | Ice thickness: in event narratives only (local data needed).                                                                                                                                                  |
| 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                                        |                                                                                     |                                                                                              |                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                    | Physical measure: in event narratives only (local data needed).                                                                                                                                               |
| 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; physical measure in event narratives only (local data needed).                                                                                        |
| 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, reported for the zone (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). |                                                                                                                                                                                                               |

| Hazard                                                                      | Scale                                    | Records<br><i>count and years</i>        | Observed range                                          | Worst recorded event                                                                                                              | Most damaging<br>(when different)                                    | How it applies to jurisdictions                                                                                                                                         | Note                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------|------------------------------------------|------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                        |                                                         |                                                                                                                                   |                                                                      |                                                                                                                                                                         | Physical measure: in event narratives only (local data needed).                                                                                                                                                      |
| Wildfire                                                                    | acres burned (local data)                | 0                                        |                                                         |                                                                                                                                   |                                                                      |                                                                                                                                                                         | Acres burned: in event narratives only (local data needed).                                                                                                                                                          |
| 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).                                                                                                                                        | Snow depth: in event narratives only (local data needed).                                                                                                                                                            |

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".

Storm Events records are more complete after 1996; before 1996 only Tornado (from 1950), Hail and Thunderstorm Wind (from 1955) exist. Zone-level records whose zone 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<br><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

| <b>Hazard</b>    | <b>Storm Events records,<br/>all years on file<br/><i>(years in the Period column)</i></b> | <b>Since plan<br/>approval<br/>records</b> | <b>In the 12 months before<br/>plan approval<br/>records</b> | <b>Last 5<br/>years<br/>records</b> | <b>Declared incidents,<br/>all years<br/><i>separate disasters</i></b> | <b>Declared since<br/>approval<br/><i>separate disasters</i></b> | <b>Period</b>      | <b>Statement</b>                                                                     |
|------------------|--------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------|-------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------|
| 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<br><i>nominal dollars</i>                                      | Deaths,<br>injuries<br><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, reported for the zone (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, reported for the zone (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, reported for the zone (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, reported for the zone (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, reported for the zone (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)<br><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 (from Storm Events: 11 of 30 years)  | 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 (from Storm Events: 2 of 30 years) | 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 (from Storm Events: 9 of 30 years)   | 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 (from Storm Events: 6 of 30 years)   | 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 (from Storm Events: 17 of 30 years)  | event-days in 17 of 30 years, 1996 to 2025 (56.7%)       | 37                                                                                                       | 1996 to 2023 (28 years)                    | see B1-f   |                                                                                                                                                                                                                     |

| Hazard            | FEMA<br>annualized<br>frequency<br>(modeled)<br><i>unit per row</i> | Unit                                                                                          | In plain terms                                                           | Descriptor                                       | Descriptor<br>basis                                               | NRI events or days in its<br>record period (hail, wind<br>and tornado are area-<br>weighted, so can be<br>fractional) | NRI period                                      | Location   | Note                                                  |
|-------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------|-------------------------------------------------------|
| Landslide         | 0.0791                                                              | events per year<br>(modeled)                                                                  | about 1 in 13 years                                                      | Possible                                         | FEMA<br>annualized<br>frequency<br>(modeled)                      | not shown                                                                                                             | modeled                                         | see B1-f   |                                                       |
| Lightning         | 38.1                                                                | days per year with<br>a strike                                                                | about 38.1 days per<br>year                                              | Highly likely                                    | FEMA<br>annualized<br>frequency<br>(modeled)                      | not shown                                                                                                             | 1995 to 2023<br>(29 years;<br>CONUS)            | countywide |                                                       |
| Strong<br>Wind    | 5.01                                                                | events per year                                                                               | about 5.01 per year                                                      | Highly likely                                    | FEMA<br>annualized<br>frequency<br>(modeled)                      | 158                                                                                                                   | 1986 to 2023<br>(38 years)                      | countywide |                                                       |
| Tornado           | 0.305                                                               | events per year                                                                               | about 1 in 3 years                                                       | Likely                                           | FEMA<br>annualized<br>frequency<br>(modeled)                      | not shown                                                                                                             | 1950 to 2023<br>(EF2+); 1986 to<br>2023 (EF0-1) | see B1-f   |                                                       |
| Tsunami           |                                                                     | annual probability<br>at the most<br>exposed location<br>(used in place of a<br>county value) |                                                                          |                                                  | Storm Events<br>records in 0 of<br>30 years, 1996<br>to 2025 (0%) | not shown                                                                                                             | modeled                                         | see B1-f   | No descriptor: no Storm Events record<br>1996 to 2025 |
| Wildfire          | 0.0000235                                                           | annual probability<br>at a location                                                           | chance a given<br>location in the<br>county burns in a<br>year: 0.00235% |                                                  | Storm Events<br>records in 0 of<br>30 years, 1996<br>to 2025 (0%) | not shown                                                                                                             | modeled                                         | see B1-f   | No descriptor: no Storm Events record<br>1996 to 2025 |
| Winter<br>Weather | 8.89                                                                | event-days per<br>year                                                                        | about 8.89 days per<br>year                                              | Likely (from<br>Storm Events:<br>22 of 30 years) | event-days in 22<br>of 30 years, 1996<br>to 2025 (73.3%)          | 169                                                                                                                   | 2005-11-12 to<br>2024-11-12 (19<br>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<br><i>county-coded records</i> | Years in period | Events per year<br><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<br><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

| <b>Jurisdiction</b>     | <b>Type</b> | <b>Plan status</b>    | <b>Repetitive loss</b><br><i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i> | <b>Public Assistance to this jurisdiction</b><br><i>FEMA records matched by applicant name; federal share obligated, nominal dollars</i> | <b>Event records naming this place</b><br><i>all years; since its plan</i> | <b>Notes</b>                                                                        |
|-------------------------|-------------|-----------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 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<br><i>modeled dollars</i> | Agriculture exposure<br><i>modeled dollars</i> | Population exposed<br><i>people</i> | EAL buildings<br><i>modeled dollars per year</i> | EAL agriculture<br><i>modeled dollars per year</i> | Cost of expected deaths and injuries<br><i>FEMA's dollar value per year, not property damage</i> | EAL as % of exposure<br><i>buildings; agriculture where noted</i> | Storm Events damage since 2017-07-14<br><i>county-coded records, property plus crops, nominal dollars</i> | Zone-level damage since plan<br><i>property plus crops, reported for the zone</i> | Public Assistance since plan<br><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. |

| <b>Hazard</b>  | <b>Building exposure</b><br><i>modeled dollars</i> | <b>Agriculture exposure</b><br><i>modeled dollars</i> | <b>Population exposed</b><br><i>people</i> | <b>EAL buildings</b><br><i>modeled dollars per year</i> | <b>EAL agriculture</b><br><i>modeled dollars per year</i> | <b>Cost of expected deaths and injuries</b><br><i>FEMA's dollar value per year, not property damage</i> | <b>EAL as % of exposure</b><br><i>buildings; agriculture where noted</i> | <b>Storm Events damage since 2017-07-14</b><br><i>county-coded records, property plus crops, nominal dollars</i> | <b>Zone-level damage since plan</b><br><i>property plus crops, reported for the zone</i> | <b>Public Assistance since plan</b><br><i>nominal dollars; see note</i> | <b>Note</b>                                                                                                                                                        |
|----------------|----------------------------------------------------|-------------------------------------------------------|--------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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<br><i>properties</i> | SRL, FMA<br><i>properties</i> | RL, NFIP<br><i>properties</i> | SRL, NFIP<br><i>properties</i> | Any category<br><i>properties</i> | Mitigated<br><i>properties</i> | Currently insured<br><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<br><i>properties</i> | SRL, FMA<br><i>properties</i> | RL, NFIP<br><i>properties</i> | SRL, NFIP<br><i>properties</i> | Any category<br><i>properties</i> | Mitigated<br><i>properties</i> | Currently insured<br><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<br><i>properties</i> | SRL, FMA<br><i>properties</i> | RL, NFIP<br><i>properties</i> | SRL, NFIP<br><i>properties</i> | Any category<br><i>properties</i> | Mitigated<br><i>properties</i> | Currently insured<br><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<br><i>properties</i> | SRL, FMA<br><i>properties</i> | RL, NFIP<br><i>properties</i> | SRL, NFIP<br><i>properties</i> | Any category<br><i>properties</i> | Mitigated<br><i>properties</i> | Currently insured<br><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](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](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_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_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_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_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_Gazetteer/2024_Gaz_elsd_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024\\_Gazetteer/2024\\_Gaz\\_scscd\\_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_scscd_national.zip), [https://www2.census.gov/geo/docs/reference/codes2020/national\\_place\\_by\\_county2020.txt](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](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)

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## What this packet is and what the plan adds

This packet is the federal data for the plan's risk assessment, organized by the items of FEMA's Local Mitigation Plan Review Tool, Element B. Each section heading names the item its tables support; the plan and FEMA's review decide whether the 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.

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## 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).

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