

Ingham County, MI

Risk-assessment baseline packet

Unit **County area 26065** Release **2026-10** As of **2026-09-28** Storm Events data through **2026-06-30**

Hazard Plain is an independent product built from public federal data. It is not a FEMA document and is not reviewed or endorsed by FEMA or any state agency.

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

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Plan clock

Status	Approved, expires 2028-03-02	Plan	Tri-County HMP Update (Clinton, Eaton, Ingham) (FEMA plan 108837)
Approved	2023-03-03	Expires	2028-03-02
As of	2026-09-28	Days	521 days to expiry

What changed since your last plan (approved 2023-03-03)

New federal declarations	DR-4757-MI (1 declaration row; 1 counted incident)	Storm Events records since approval	39 (data through 2026-06-30)
Repetitive loss now	FMA RL 0, SRL 0 (44 CFR 77.2); any definition: 15	Repeat-flood change	First release: no prior release to compare.

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

Plan status for every jurisdiction listed in this county

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
Ingham County	County	Approved, expires 2028-03-02	Tri-County HMP Update (Clinton, Eaton, Ingham) (FEMA plan 108837)	2023-03-03	2028-03-02	521		member approved 2023-08-25
East Lansing city	City	Approved, expires 2028-03-02	Tri-County HMP Update (Clinton, Eaton, Ingham) (FEMA plan 108837)	2023-03-03	2028-03-02	521		member approved 2023-08-25
Lansing city	City	Expired on 2024-01-30	City of Lansing (FEMA plan 105552)	2019-01-31	2024-01-30	-972		
Delhi charter township	Township	Approved, expires 2028-03-02	Tri-County HMP Update (Clinton, Eaton, Ingham) (FEMA plan 108837)	2023-03-03	2028-03-02	521		member approved 2023-08-25

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry	Update underway	Notes
						<i>negative = days since expiry</i>		
Ingham township	Township	Plan 108837 approved 2023-03-03, pending adoption here; not yet eligible	Tri-County HMP Update (Clinton, Eaton, Ingham) (FEMA plan 108837), pending adoption here	2023-03-03 by FEMA; not yet adopted here	2028-03-02 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.
Locke township	Township	Approved, expires 2028-03-02	Tri-County HMP Update (Clinton, Eaton, Ingham) (FEMA plan 108837)	2023-03-03	2028-03-02	521		member approved 2023-08-25
Meridian charter township	Township	Approved, expires 2028-03-02	Tri-County HMP Update (Clinton, Eaton, Ingham) (FEMA plan 108837)	2023-03-03	2028-03-02	521		member approved 2023-09-28
Williamstown township	Township	Approved, expires 2028-03-02	Tri-County HMP Update (Clinton, Eaton, Ingham) (FEMA plan 108837)	2023-03-03	2028-03-02	521		member approved 2023-09-19
Michigan State University	College/University	Expired on 2021-11-29	Michigan State University (FEMA plan 102784)	2016-11-29	2021-11-29	-1,764		

Plan 108837 lists 17 other participants not on this page, 9 of them not covered by it yet (named in the XLSX file).

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

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

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Supports B1-a: hazards

Hazards NRI does not cover: check locally

- dam failure (incl. upstream dams)
 - levee failure
 - flash flood as its own subtype
 - ice jams
- debris flows
 - erosion (riverine and coastal)
 - land subsidence and sinkholes
 - expansive soils

The 18 National Risk Index hazards, ranked by expected annual loss (EAL)

Rank by EAL	Hazard	NRI risk rating	EAL rating	EAL buildings modeled dollars per year	EAL agriculture modeled dollars per year	EAL population equivalence statistical value of life and injury, \$13.7M per life, not property damage	EAL total (see note) modeled dollars per year	Storm Events records since 1996 count	Evidence for an omission NRI Not Applicable, no declaration and no Storm Events record since 1996	Storm Events coverage note
1	Inland Flooding	Relatively Moderate	Relatively Moderate	\$36,170,207	\$10,817	\$16,334	\$36,197,358	13		
2	Tornado	Relatively High	Relatively High	\$9,652,274	\$4,951	\$6,834,388	\$16,491,611	10		
3	Cold Wave	Relatively High	Relatively High	\$2,764	\$53,694	\$6,994,926	\$7,051,385	0		No recorded events in Storm Events since 1996 (data through 2026-06-30).
4	Strong Wind	Very High	Very High	\$4,939,343	\$56,831	\$1,735,985	\$6,732,159	140		Includes 9 High Wind records, event types the NRI definition of this hazard leaves out.
5	Hail	Relatively Moderate	Relatively Moderate	\$2,197,248	\$63,379	\$82,875	\$2,343,502	57		
6	Heat Wave	Relatively Low	Relatively Low	\$11,581	\$1	\$1,077,307	\$1,088,889	0		No recorded events in Storm Events since 1996 (data through 2026-06-30).
7	Earthquake	Relatively Low	Relatively Low	\$682,163		\$258,972	\$941,136			Not in Storm Events. Storm Events coverage of this hazard is limited; absence is not evidence of low risk.
8	Ice Storm	Relatively High	Relatively High	\$577,441		\$30,846	\$608,287	5		
9	Lightning	Relatively Moderate	Relatively Moderate	\$68,469		\$504,685	\$573,154	0		No recorded events in Storm Events since 1996 (data through 2026-06-30). Storm Events coverage of this hazard is limited; absence is not evidence of low risk.

Rank by EAL	Hazard	NRI risk rating	EAL rating	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	EAL population equivalence <i>statistical value of life and injury, \$13.7M per life, not property damage</i>	EAL total (see note) <i>modeled dollars per year</i>	Storm Events records since 1996 <i>count</i>	Evidence for an omission <i>NRI Not Applicable, no declaration and no Storm Events record since 1996</i>	Storm Events coverage note
10	Winter Weather	Relatively Moderate	Relatively Moderate	\$60,759	\$798	\$148,168	\$209,725	60		Includes 1 Sleet record, event types the NRI definition of this hazard leaves out.
11	Hurricane	Very Low	Very Low	\$48,336	\$5,699	\$219	\$54,255	0		No recorded events in Storm Events since 1996 (data through 2026-06-30).
12	Wildfire	Very Low	Very Low	\$13,298	\$6	\$1,569	\$14,873	0		No recorded events in Storm Events since 1996 (data through 2026-06-30). Storm Events coverage of this hazard is limited; absence is not evidence of low risk.
13	Landslide	Very Low	Very Low	\$422		\$784	\$1,205	0		No recorded events in Storm Events since 1996 (data through 2026-06-30). Storm Events coverage of this hazard is limited; absence is not evidence of low risk.
14	Drought	No Rating	No Expected Annual Losses		\$0		\$0	0		No recorded events in Storm Events since 1996 (data through 2026-06-30).
	Avalanche	Not Applicable	Not Applicable					0	NRI rates avalanche Not Applicable for this county, and no federal declaration for this county names it.	No recorded events in Storm Events since 1996 (data through 2026-06-30).
	Coastal Flooding	Not Applicable	Not Applicable					0	NRI rates coastal flooding Not Applicable for this county, and no federal declaration for this county names it.	No recorded events in Storm Events since 1996 (data through 2026-06-30).
	Tsunami	Not Applicable	Not Applicable					0	NRI rates tsunami Not Applicable for this county, and no federal declaration for this county names it.	No recorded events in Storm Events since 1996 (data through 2026-06-30). Storm Events coverage of this hazard is limited; absence is not evidence of low risk.
	Volcanic Activity	Not Applicable	Not Applicable					0	NRI rates volcanic activity Not Applicable for this county, and no federal declaration for this county names it.	No recorded events in Storm Events since 1996 (data through 2026-06-30). Storm Events coverage of this hazard is limited; absence is not evidence of low risk.

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

SOURCES

FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)

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

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

Supports B1-b: location

Where each hazard occurs

Hazard	Location	Census tracts rated <i>rated of all tracts</i>
Avalanche	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	0 of 84
Coastal Flooding	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	0 of 84
Cold Wave	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	84 of 84
Drought	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	0 of 84
Earthquake	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	84 of 84
Hail	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	84 of 84
Heat Wave	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	84 of 84
Hurricane	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	84 of 84
Ice Storm	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	84 of 84
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.	84 of 84
Landslide	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	84 of 84
Lightning	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	84 of 84
Strong Wind	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	84 of 84
Tornado	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	84 of 84
Tsunami	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	0 of 84
Volcanic Activity	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	0 of 84
Wildfire	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	82 of 84
Winter Weather	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	84 of 84

SOURCE
FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)

Supports B1-c: extent

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

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Avalanche	none (count and damage)	0					Physical measure: in event narratives only; local data required.
Coastal Flood, Storm Surge/ Tide	none in data (FIRM for depth)	0					Flood depth: see the FEMA Flood Insurance Rate Map.

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Cold/Wind Chill, Extreme Cold/Wind Chill	wind chill	0					Wind chill: in event narratives only; local data required.
Frost/Freeze (outside NRI Cold Wave definition)	crop damage	0					Temperature: in event narratives only; local data required.
Drought	US Drought Monitor D- scale	0					Storm Events enters a drought at D2 or worse east of the Rockies and D3 or worse from the Rockies west (NWS Instruction 10-1605); NRI drought counts D3 and D4 only.
Earthquake	Modified Mercalli (local data)	0					No Storm Events record; local data required (e.g., USGS).
Hail	hail size (inches)	79, 1956 to 2026	0.75 in to 2.75 in (median 1 in); 79 with a recorded value	2.75 in hail, 1998-06-24	Hail, 2003-08-21, \$100,000 property; \$50,000 crops (2003 dollars)	Event records naming member places: Lansing city (8 records), East Lansing city (3 records).	
Excessive Heat, Heat	heat index (narratives)	0					Heat index: in event narratives only; local data required.
Hurricane, Tropical Storm, Tropical Depression	Saffir-Simpson	0					Storm Events files every zone of a storm's episode under the storm's event type and category, so a Hurricane (Typhoon) record, especially an inland or remnant one, does not by itself mean hurricane-force winds here; read the damage and wind columns.
Ice Storm	Sperry-Piltz (local data)	5, 1997 to 2023 (5 zone- level)		Ice Storm, 2013-12-21, \$5,000,000 property; \$0 crops, reported for the zone (2013 dollars); NWS zone MIZ067 (INGHAM), zone-level: may include parts of neighboring counties		Zone-level records: applies countywide; national data do not locate these events within the county.	Ice thickness: in event narratives only; local data required.

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Flash Flood, Flood, Lakeshore Flood	damage and flood days (FIRM for depth)	13, 1996 to 2026 (2 zone-level)		Flood, 2013-04-17, \$5,000,000 property; \$0 crops (2013 dollars)		Event records naming member places: Lansing city (4 records). Zone-level records (2) apply countywide.	Flood depth: see the FEMA Flood Insurance Rate Map. Storm Events damage can be \$0 or blank even for a major flood, so the worst record here may not be the worst flood; compare FEMA Public Assistance by declaration in B1-d.
Debris Flow	none (count and damage)	0					Physical measure: in event narratives only; local data required.
Lightning	annualized frequency (the measure FEMA's Local Mitigation Planning Handbook names)	0					Storm Events lists lightning with damage or casualties; physical measure in event narratives only; local data required.
High Wind and Strong Wind (outside NRI Strong Wind definition)	wind speed (kt and mph)	9, 1997 to 2019 (9 zone-level)	42 kt (48 mph) to 61 kt (70 mph) (median 54 kt (62 mph)); 8 with a recorded value	61 kt (70 mph) estimated gust, High Wind, 2017-03-08; same speed and measurement basis also recorded on 2013-11-17; NWS zone MIZ067 (INGHAM), zone-level: may include parts of neighboring counties		Zone-level records: applies countywide; national data do not locate these events within the county.	
Thunderstorm Wind	wind speed (kt and mph)	193, 1956 to 2026	45 kt (52 mph) to 78 kt (90 mph) (median 52 kt (60 mph)); 127 with a recorded value	78 kt (90 mph) estimated gust, Thunderstorm Wind, 2011-05-29	Thunderstorm Wind, 2023-08-24, \$15,000,000 property; \$0 crops (2023 dollars)	Event records naming member places: Lansing city (21 records), East Lansing city (8 records).	

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Tornado	Enhanced Fujita (F before Feb 2007)	29, 1962 to 2025	F/EF0 to F/EF2 (median F/EF1); 29 with a recorded value	EF2 tornado, 2023-08-24, 10.7 mi within this county, 500 yd wide, \$75,000,000 property; \$0 crops (2023 dollars), 2 direct deaths, 4 direct injuries		Event records naming member places: Lansing city (3 records).	From 1996 on, tornado records are per-county segments and length is the path length within this county (NWS Instruction 10-1605); records before 1996 may give the whole path length, including the path outside this county, and before 1996 a tornado is listed once, under the county where it began, with the whole path's rating; counties farther along the path may not list it. Length is not used to rank tornadoes.
Tsunami	none (count and damage)	0					Physical measure: in event narratives only; local data required.
Volcanic Ash, Volcanic Ashfall	Volcanic Explosivity Index (local data)	0					Physical measure: in event narratives only; local data required.
Wildfire	acres burned (local data)	0					Acres burned: in event narratives only; local data required.
Winter Storm, Heavy Snow, Blizzard, Lake- Effect Snow, Winter Weather, Sleet	none in data (snowfall local)	60, 1996 to 2025 (60 zone- level)		Winter Storm, 2011-11-29, \$1,000,000 property; \$0 crops, reported for the zone (2011 dollars); NWS zone MIZ067 (INGHAM), zone- level: may include parts of neighboring counties		Zone-level records: applies countywide; national data do not locate these events within the county.	Snow depth: in event narratives only; local data required.

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

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

SOURCES

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

Supports B1-d: previous occurrences

Declaration rows

12

Counted incidents

8

Federal disaster declarations for this county

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance <i>federal share obligated, nominal dollars</i>	Flags	Notes
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	\$665,088,965.49		
2020-03-13	2020-01-20	EM-3455-MI	Emergency	COVID-19	Non-natural, not counted	none found		same incident as DR-4494
2008-07-14	2008-06-06	DR-1777-MI	Major disaster	SEVERE STORMS, TORNADOES, AND FLOODING	Inland Flooding; Tornado	\$3,763,672.34		
2005-09-07	2005-08-29	EM-3225-MI	Emergency	HURRICANE KATRINA EVACUATION	Hurricane: evacuation support, not a local hazard event; not counted	\$529,527.66		
2004-06-30	2004-05-20	DR-1527-MI	Major disaster	SEVERE STORMS, TORNADOES, AND FLOODING	Inland Flooding; Tornado	PA not declared for this county		
2003-09-23	2003-08-14	EM-3189-MI	Emergency	POWER OUTAGE	Non-natural, not counted	\$174,178.43		
2001-01-10	2000-12-11	EM-3160-MI	Emergency	SNOW	Winter Weather	\$399,962.74		
1978-01-27	1978-01-27	EM-3057-MI	Emergency	BLIZZARDS & SNOWSTORMS	Winter Weather	none found		
1975-09-30	1975-09-30	DR-486-MI	Major disaster	SEVERE STORMS, HIGH WINDS & FLOODING	Inland Flooding (primary); also designated: Strong Wind	none found		
1975-04-26	1975-04-26	DR-465-MI	Major disaster	SEVERE STORMS, HIGH WINDS & FLOODING	Inland Flooding (primary); also designated: Strong Wind	none found		
1972-04-05	1972-04-05	DR-330-MI	Major disaster	SEVERE STORM & FREEZING	Winter Weather	none found		

School districts and special districts in this county: \$46,533 (included in the county total above). Public Assistance matched by applicant name to the school districts and special districts FEMA lists as plan members in this county. They are not shown as member blocks, so their total is listed here. These dollars are already included in the county PA column of the declarations table (the FEMA record places each applicant in this county); do not add this line to the county total.

County Public Assistance: applicants the FEMA record places in this county, including any state agencies FEMA files there; statewide rows are listed on the state page; federal share obligated, nominal dollars.

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

SOURCES

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

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

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

Statewide declarations

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

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

SOURCE

Public Assistance filed under this county for declarations that do not list it: 1 row, \$15,253.49

FEMA number	Declared	Title	Applicant	PA obligated <i>federal share obligated, nominal dollars</i>
DR-4195-MI	2014-09-25	SEVERE STORMS AND FLOODING	Michigan Department of Health and Human Services (MICHIGAN DEPARTMENT OF HUMAN SERVICES)	\$15,253.49

FEMA's Public Assistance summaries file these applicants under this county, but FEMA's declaration rows for these disasters do not designate it (an electric cooperative or district serving several counties, for example). Not in any declaration row above and not counted.

SOURCES

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

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

Previous occurrences by hazard, with explicit no-event rows

Hazard	Storm Events records <i>full period</i>	Since plan approval records	During plan review records	Last 5 years records	Declared incidents <i>distinct incidents</i>	Declared since approval <i>distinct incidents</i>	Period	Statement
Avalanche	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Coastal Flooding	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Cold Wave	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Drought	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Earthquake	0	0	0	0	0	0		No Storm Events record; local data required (e.g., USGS).
Hail	79	12	1	13	0	0	1955 to 2026-06-30	
Heat Wave	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Hurricane	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Ice Storm	5	0	1	1	0	0	1996 to 2026-06-30	
Inland Flooding	13	1	0	1	5	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	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Strong Wind	202	21	2	23	2	0	1955 to 2026-06-30	Includes 9 High Wind records, event types the NRI definition of this hazard leaves out.
Tornado	29	3	0	3	3	1	1950 to 2026-06-30	

Hazard	Storm Events records <i>full period</i>	Since plan approval <i>records</i>	During plan review <i>records</i>	Last 5 years <i>records</i>	Declared incidents <i>distinct incidents</i>	Declared since approval <i>distinct incidents</i>	Period	Statement
Tsunami	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Volcanic Activity	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Wildfire	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Winter Weather	60	2	3	6	3	0	1996 to 2026-06-30	Includes 1 Sleet record, event types the NRI definition of this hazard leaves out.

SOURCES

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

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

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

Notable Storm Events records

Date	Event type	Magnitude or extent	Damage <i>nominal dollars</i>	Direct deaths, injuries <i>indirect not counted</i>	Location	Flags	Why listed
2023-08-24	Tornado	EF2, 10.7 mi within this county, 500 yd wide	\$75,000,000 property; \$0 crops (2023 dollars)	2, 4	MERIDAN to WEBBERVILLE	new since last plan; within last 5 years	deaths or injuries recorded
2023-08-24	Thunderstorm Wind	65 kt (75 mph) estimated gust	\$15,000,000 property; \$0 crops (2023 dollars)	0, 0	FOREST HILLS	new since last plan; within last 5 years	B1-c most damaging: Thunderstorm Wind
2023-08-24	Thunderstorm Wind	65 kt (75 mph) estimated gust	\$10,000,000 property; \$0 crops (2023 dollars)	1, 0	WAVERLY PARK	new since last plan; within last 5 years	deaths or injuries recorded
2017-03-08	High Wind	61 kt (70 mph) estimated gust	\$10,000,000 property; \$0 crops, reported for the zone (2017 dollars)	0, 0	NWS zone MIZ067 (INGHAM), zone-level: may include parts of neighboring counties		B1-c worst recorded: High Wind and Strong Wind (outside NRI Strong Wind definition)
2013-12-21	Ice Storm		\$5,000,000 property; \$0 crops, reported for the zone (2013 dollars)	0, 0	NWS zone MIZ067 (INGHAM), zone-level: may include parts of neighboring counties		B1-c worst recorded: Ice Storm
2013-04-17	Flood		\$5,000,000 property; \$0 crops (2013 dollars)	0, 0	LANSING to ONONDAGA		B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
2011-11-29	Winter Storm		\$1,000,000 property; \$0 crops, reported for the zone (2011 dollars)	0, 0	NWS zone MIZ067 (INGHAM), zone-level: may include parts of neighboring counties		B1-c worst recorded: Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet
2011-05-29	Thunderstorm Wind	78 kt (90 mph) estimated gust	\$500,000 property; crops not reported (2011 dollars)	0, 0	MILLVILLE		B1-c worst recorded: Thunderstorm Wind
2007-10-18	Tornado	EF2, 17 mi within this county, 300 yd wide	\$15,000,000 property; \$0 crops (2007 dollars)	2, 0	VANTOWN to BELL OAK		deaths or injuries recorded

Date	Event type	Magnitude or extent	Damage	Direct deaths, injuries	Location	Flags	Why listed
			nominal dollars	indirect not counted			
2003-08-21	Hail	1.5 in	\$100,000 property; \$50,000 crops (2003 dollars)	0, 0	EAST LANSING		B1-c most damaging: Hail
1998-06-24	Hail	2.75 in	damage not reported	0, 0	ONONDAGA		B1-c worst recorded: Hail
1994-06-28	Thunderstorm Wind	speed not recorded	damage not recorded (pre-1996 record)	1, 0	Holt (9 SSE LAN)		deaths or injuries recorded

The full list is in the XLSX file, sheet "B1-d Storm Events history" (388 rows).

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

SOURCES

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

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

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

Supports B1-e: probability

Probability: FEMA annualized frequency and descriptor per hazard

Hazard	FEMA annualized frequency (modeled)	Unit	In plain terms	Descriptor	Descriptor basis	NRI events or days in its record period (hail, wind and tornado are area-weighted, so can be fractional)	NRI period	Location	Note
Avalanche		events per year					1994 to 2023 (30 years)	see B1-f	Not Applicable in NRI for this county; no descriptor.
Coastal Flooding		events per year at a location (modeled)				not shown	modeled	see B1-f	Not Applicable in NRI for this county; no descriptor.
Cold Wave	2.26	event-days per year	about 2.26 days per year		event-days in 0 of 30 years, 1996 to 2025 (0%)	43	2005-11-12 to 2024-11-12 (19 years)	countywide	No recorded event-days, 1996 to 2025; descriptor not assigned. Frost/Freeze records are not counted in this descriptor: they record crop freezes, not cold waves.
Drought	0	event-days per year	none modeled		event-days in 0 of 30 years, 1996 to 2025 (0%)	0	2000 to 2025 (25.25 years; D3 and D4 only)	countywide	No recorded event-days, 1996 to 2025; descriptor not assigned

Hazard	FEMA annualized frequency (modeled) <i>unit per row</i>	Unit	In plain terms	Descriptor	Descriptor basis	NRI events or days in its record period (hail, wind and tornado are area- weighted, so can be fractional)	NRI period	Location	Note
Earthquake	0.000844	annual probability at a location	chance a given location in the county has at least minor-damage shaking in a year: 0.0844%			not shown	modeled	see B1-f	Descriptor not assigned: the NRI value is the chance at a location in the county, not how often the hazard affects the county, and Storm Events does not record earthquakes.
Hail	3.01	events per year	about 3.01 per year	Highly likely	FEMA annualized frequency (modeled)	114.2 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave	2.63	event-days per year	about 2.63 days per year		event-days in 0 of 30 years, 1996 to 2025 (0%)	38	2005-11-12 to 2024-11-12 (19 years)	countywide	No recorded event-days, 1996 to 2025; descriptor not assigned
Hurricane	0.0124	events per year	about 1 in 80 years	Possible	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 counted separately in B1-d and need not match.
Ice Storm	1.73	event-days per year	about 1.73 days per year	Likely	event-days in 5 of 30 years, 1996 to 2025 (16.7%)	116	1946-12-31 to 2014-02-12 (67 years)	countywide	NRI gives about 1.73 ice storm event-days a year here (its annualized frequency over 67 years; not its event count divided by the years), but Storm Events has a record in only 5 of 30 years. NRI counts from a different source that records far more events than Storm Events, so this descriptor reads much lower than NRI's frequency; read the two together.
Inland Flooding	0.393	event-days per year	about 0.393 days per year	Likely	event-days in 8 of 30 years, 1996 to 2025 (26.7%)	11	1996 to 2023 (28 years)	see B1-f	
Landslide	0.0955	events per year (modeled)	about 1 in 10 years	Possible	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Lightning	34.1	days per year with a strike	about 34.1 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	countywide	
Strong Wind	6.03	events per year	about 6.03 per year	Highly likely	FEMA annualized frequency (modeled)	230	1986 to 2023 (38 years)	countywide	
Tornado	0.289	events per year	about 1 in 3 years	Likely	FEMA annualized frequency (modeled)	not shown	1950 to 2023 (EF2+); 1986 to 2023 (EF0-1)	see B1-f	

Hazard	FEMA annualized frequency (modeled) <i>unit per row</i>	Unit	In plain terms	Descriptor	Descriptor basis	NRI events or days in its record period (hail, wind and tornado are area- weighted, so can be fractional)	NRI period	Location	Note
Tsunami		annual probability at the most exposed location (used in place of a county value)				not shown	modeled	see B1-f	Not Applicable in NRI for this county; no descriptor.
Volcanic Activity		annual probability				not shown	modeled	see B1-f	Not Applicable in NRI for this county; no descriptor.
Wildfire	0.0000161	annual probability at a location	chance a given location in the county burns in a year: 0.00161%		Storm Events records in 0 of 30 years, 1996 to 2025 (0%)	not shown	modeled	see B1-f	No Storm Events record of this hazard, 1996 to 2025; descriptor not assigned (the NRI value is the chance at a location in the county, not how often the hazard affects the county)
Winter Weather	16.5	event-days per year	about 16.5 days per year	Likely	event-days in 23 of 30 years, 1996 to 2025 (76.7%)	314	2005-11-12 to 2024-11-12 (19 years)	countywide	

FEMA annualized frequency (modeled) comes from the National Risk Index v1.20 (December 2025). It is not recorded events divided by years, and what it measures depends on the hazard. For most hazards it estimates how often the hazard affects this county each year: it counts events or event-days (drought, heat wave, cold wave, winter weather, ice storm and inland flooding are in days per year; lightning is the number of days per year with a recorded cloud-to-ground strike, from the NOAA Storm Prediction Center daily lightning climatology); it may count events in the surrounding area (hail, strong wind, tornado, hurricane and ice storm use a 49 km grid and buffers) and is averaged over the county's area; and some hazards use a minimum value for places with no recorded event. Earthquake, wildfire and coastal flooding are different: FEMA computes them for each census block and averages them over the county, so the value is the chance (for coastal flooding, the modeled number of floods per year) at a location in the county, which is lower than the chance that the hazard strikes somewhere in the county. Earthquake is the chance of at least minor-damage shaking (U.S. Geological Survey model); wildfire is the chance that a location burns in a large fire (U.S. Forest Service burn probability); coastal flooding comes from FEMA flood zones and NOAA high-tide flooding, so it can be above 1 where high-tide flooding is frequent. Tsunami is the value at the county's most exposed location, from recorded events and modeled return periods. For these four hazards the packet gives no "1 in N years" and takes the descriptor from Storm Events (none for earthquake) unless the value is 1 or more a year. Landslide is a U.S. Geological Survey modeled county rate spread by slope susceptibility. Volcanic activity is the chance that a volcano affecting the county erupts in a year. Drought counts only extreme and exceptional drought (D3 and D4). Source: FEMA, National Risk Index Technical Documentation v1.20, sections 5.2.2 (Table 5), 5.2.3, 7.4, 10.4, 16.5, 17.1, 17.3.1, 17.5, 20.3.1, 21.4, 22.4 and 6 to 23.

SOURCES
FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)
NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

Descriptor scale used in this packet (defined per unit)

Unit	Descriptor	Definition
events per year	Highly likely	1 or more per year
events per year	Likely	about once in 1 to 10 years
events per year	Possible	about once in 10 to 100 years
events per year	Unlikely	less than once in 100 years
annual probability	Likely	10% to under 100% chance in a given year
annual probability	Possible	1% to under 10% chance in a given year
annual probability	Unlikely	under 1% chance in a given year
event-days (share of years)	Highly likely	event-days recorded in 90% or more of years

Unit	Descriptor	Definition
event-days (share of years)	Likely	event-days recorded in 10% to under 90% of years
event-days (share of years)	Possible	event-days recorded in some years but under 10% of years
lightning strike-days	Highly likely	cloud-to-ground strikes on 1 or more days per year

SOURCES
FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)
NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

Intensity bands: historical frequency (Storm Events)

Hazard	Band	Years	Events <i>county-coded records</i>	Years in period	Events per year <i>events / years</i>
Hail	1.00-1.99 in	1996 to 2025	33	30	1.1
Hail	2.00 in+	1996 to 2025	2	30	0.0667
Strong Wind (Thunderstorm Wind records)	50-64 kt	1996 to 2025	102	30	3.4
Strong Wind (Thunderstorm Wind records)	65 kt+	1996 to 2025	9	30	0.3
Strong Wind (Thunderstorm Wind records)	unmeasured or below 50 kt	1996 to 2025	16	30	0.533
Tornado	EF0-1	1996 to 2025	7	30	0.233
Tornado	EF2-3	1996 to 2025	3	30	0.1
Tornado	EF4-5	1996 to 2025	0	30	0
Tornado	unrated (EFU)	1996 to 2025	0	30	0

Hail smaller than 1 inch is not counted: on 2010-01-05 the National Weather Service raised its severe-hail threshold from 3/4 inch to 1 inch, so smaller reports became less common after 2009 (NWS Service Change Notice 09-52). NRI hail frequency uses a 0.75 inch threshold.

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

Optional: future conditions. Not a required item in the 2025 FEMA Local Mitigation Planning Policy Guide; some states ask for it. The federal Climate Mapping for Resilience and Adaptation (CMRA) site gives county exposure to future climate conditions.

Supports B1-f: variation across the planning area

Range of census tract risk within the county

Hazard	Tracts <i>rated of all</i>	Risk score min <i>NRI score, 0 to 100</i>	Median	Max	Tracts by rating	Note
Avalanche	0 of 84				Not Applicable 84	
Coastal Flooding	0 of 84				Not Applicable 84	

Hazard	Tracts rated of all	Risk score min NRI score, 0 to 100	Median	Max	Tracts by rating	Note
Cold Wave	84 of 84	16.0	60.4	78.4	Relatively High 3, Relatively Moderate 67, Relatively Low 11, Very Low 3	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Drought	0 of 84				No Rating 84	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Earthquake	84 of 84	0.2	22.3	79.8	Relatively Moderate 1, Relatively Low 5, Very Low 78	
Hail	84 of 84	6.5	70.0	97.0	Relatively High 1, Relatively Moderate 45, Relatively Low 31, Very Low 7	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Heat Wave	84 of 84	1.4	16.1	35.6	Relatively Low 37, Very Low 47	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Hurricane	84 of 84	13.6	29.7	46.1	Very Low 84	
Ice Storm	84 of 84	0.1	54.7	94.7	Relatively High 1, Relatively Moderate 16, Relatively Low 54, Very Low 13	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Inland Flooding	84 of 84	0.1	24.3	89.2	Relatively High 4, Relatively Moderate 16, Relatively Low 38, Very Low 26	
Landslide	84 of 84	9.8	43.0	86.1	Relatively Low 3, Very Low 81	
Lightning	84 of 84	0.1	32.2	53.9	Relatively Moderate 6, Relatively Low 67, Very Low 11	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Strong Wind	84 of 84	3.6	83.4	99.7	Very High 2, Relatively High 42, Relatively Moderate 34, Relatively Low 4, Very Low 2	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Tornado	84 of 84	1.2	69.4	99.4	Very High 1, Relatively High 30, Relatively Moderate 45, Relatively Low 6, Very Low 2	
Tsunami	0 of 84				Not Applicable 84	
Volcanic Activity	0 of 84				Not Applicable 84	
Wildfire	82 of 84	18.7	39.2	66.5	Very Low 82, No Rating 2	
Winter Weather	84 of 84	10.8	46.2	72.8	Relatively Moderate 37, Relatively Low 44, Very Low 3	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.

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

SOURCE

FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)

Per-member block (Starter, confirm locally)

Member	Type	Plan status	Repetitive loss <i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	Public Assistance matched <i>federal share obligated, nominal dollars</i>	Event records naming this place <i>all years; since the member's plan</i>	Notes
Ingham County	County	Approved, expires 2028-03-02		\$1,956.61	0; 0	No NFIP community ID on this member's plan row. Includes \$1,047.71 for declarations not counted as hazard incidents (EM-3189-MI).
East Lansing city	City	Approved, expires 2028-03-02	FMA RL 0, SRL 0; any 5	\$96,888.56	11; 3	Includes \$56,711.81 for declarations not counted as hazard incidents (DR-4494-MI, EM-3189-MI).
Lansing city	City	Expired on 2024-01-30	FMA RL 0, SRL 0; any 4	\$1,853,556.14	36; 5	Includes \$1,032,003.31 for declarations not counted as hazard incidents (DR-4494-MI, EM-3189-MI, EM-3225-MI).
Delhi charter township	Township	Approved, expires 2028-03-02	FMA RL 0, SRL 0; any 0	\$28,253.93	0; 0	Includes \$21,996.68 for declarations not counted as hazard incidents (DR-4494-MI).
Ingham township	Township	Plan 108837 approved 2023-03-03, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 0	none found	0; no approved plan	
Locke township	Township	Approved, expires 2028-03-02	FMA RL 0, SRL 0; any 0	none found	0; 0	
Meridian charter township	Township	Approved, expires 2028-03-02	FMA RL 0, SRL 0; any 4	none found	0; 0	
Williamstown township	Township	Approved, expires 2028-03-02	FMA RL 0, SRL 0; any 0	none found	0; 0	

Member rows are whole NFIP communities and need not add up to the county total: a community that extends into another county is counted in full on each member row, while the county table counts only its part in this county.

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

SOURCES

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

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

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

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

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

Local data required

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

- Critical facilities and lifelines per hazard
- A problem statement per participant per hazard
- Changes in development in hazard-prone areas since the last approval, or a statement of none (E1-a)
- Future assets

County-level starter: exposure, expected annual loss and damage since the plan

Hazard	Building exposure <i>modeled dollars</i>	Agriculture exposure <i>modeled dollars</i>	Population exposed <i>people</i>	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	EAL population equivalence <i>statistical value of life and injury, \$13.7M per life, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since 2023-03-03 <i>county-coded records, property plus crops, nominal dollars</i>	Zone-level damage since plan <i>property plus crops, reported for the zone</i>	Public Assistance since plan <i>nominal dollars; see note</i>	Note
Avalanche											Not Applicable in NRI for this county
Coastal Flooding											Not Applicable in NRI for this county
Cold Wave	\$56,905,748,101	\$146,555,299	284,838	\$2,764	\$53,694	\$6,994,926	under 0.0001%				
Drought		\$0			\$0						agriculture exposure is 0 in NRI
Earthquake	\$103,787,541,903		284,900	\$682,163		\$258,972	0.000657%				
Hail	\$56,905,756,878	\$146,555,299	284,838	\$2,197,248	\$63,379	\$82,875	0.00386%	\$100,000			
Heat Wave	\$56,905,748,101	\$146,555,299	284,838	\$11,581	\$1	\$1,077,307	under 0.0001%				
Hurricane	\$56,846,591,181	\$145,853,812	284,498	\$48,336	\$5,699	\$219	under 0.0001%				
Ice Storm	\$56,905,103,427		284,832	\$577,441		\$30,846	0.00101%				
Inland Flooding	\$56,844,711,922	\$8,517,806	10,322	\$36,170,207	\$10,817	\$16,334	n/a (see note)	\$0		none found (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. EAL as % of exposure: n/a.
Landslide	\$279,757,880		1,296	\$422		\$784	0.000151%				
Lightning	\$56,905,756,878		284,838	\$68,469		\$504,685	0.00012%				
Strong Wind	\$56,905,756,878	\$146,555,299	284,838	\$4,939,343	\$56,831	\$1,735,985	0.00868%	\$35,315,000			
Tornado	\$56,905,756,878	\$146,555,299	284,838	\$9,652,274	\$4,951	\$6,834,388	0.017%	\$75,000,000		none found (1 declaration)	
Tsunami											Not Applicable in NRI for this county
Volcanic Activity											Not Applicable in NRI for this county
Wildfire	\$11,663,078,583	\$44,468,476	66,179	\$13,298	\$6	\$1,569	0.000114%				
Winter Weather	\$56,905,748,101	\$146,555,299	284,838	\$60,759	\$798	\$148,168	0.000107%		\$0		

Totals since 2023-03-03 (Storm Events through 2026-06-30): 37 county-coded records, 18 with a damage value recorded (including \$0), \$110,415,000; 2 zone-level records, 1 with a damage value recorded (including \$0), \$0 reported for the zone; Public Assistance on counted declarations none found (1 declaration, 0 with PA).

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

FEMA does not split Public Assistance by hazard. A declaration mapped to several hazards is listed under each of them with its full amount, so the per-hazard column must not be added up; the unit total counts each declaration once.

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

SOURCES

FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)

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

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

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

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

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

Supports B2-a: context

County context

Measure	Value
Population	284,838
Building value (total, not at risk)	\$56,905,756,878
Agriculture value (total, not at risk)	\$146,555,299
NRI risk rating (all hazards)	Relatively Moderate
Expected annual loss, buildings and agriculture, all hazards	\$54,620,481
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)	\$17,687,059
Social vulnerability rating	Relatively Low
Community resilience rating	Very High
NRI version	December 2025

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

SOURCE

FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)

Supports B2-c: repetitive loss

Repetitive loss in this county, both definitions

Definition	Properties	Severe repetitive loss	Properties
Repetitive loss, FMA definition (44 CFR 77.2)	0	Severe repetitive loss, FMA definition (44 CFR 77.2)	0
Repetitive loss, NFIP insurance definition	15	Severe repetitive loss, NFIP insurance definition	0

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

SOURCES

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

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

Repeat-flood properties: county and state-level rows

Scope	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
County total	0	0	15	0	15	1	7
EAST LANSING, CITY OF	0	0	5	0	5	0	1
LANSING, CITY OF	0	0	4	0	4	0	3
MASON, CITY OF (community ID not in plan data)	0	0	1	0	1	1	0
MERIDIAN, CHARTER TOWNSHIP OF	0	0	4	0	4	0	2
LANSING, CHARTER TOWNSHIP OF (community ID not in plan data)	0	0	1	0	1	0	1
State level, not in this county: county not reported	0	0	4	0	4	0	0

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

Member	NFIP community ID	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>	Note
East Lansing city	260089	0	0	5	0	5	0	1	
Lansing city	260090	0	0	4	0	4	0	3	
Delhi charter township	260088	0	0	0	0	0	0	0	
Ingham township	261323	0	0	0	0	0	0	0	
Locke township	260671	0	0	0	0	0	0	0	
Meridian charter township	260093	0	0	4	0	4	0	2	
Williamstown township	260095	0	0	0	0	0	0	0	

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

Member rows are whole NFIP communities and need not add up to the county total: a community that extends into another county is counted in full on each member row, while the county table counts only its part in this county.

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

Occupancy group	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
single-family residential	0	0	9	0	9	1	3
2 to 4 unit residential	0	0	2	0	2	0	1
other residential	0	0	2	0	2	0	1
non-residential	0	0	2	0	2	0	2
not reported	0	0	0	0	0	0	0

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

SOURCES

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

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

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

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

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

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

In this county 0 properties are FMA repetitive loss but not NFIP repetitive loss, and 15 properties are NFIP repetitive loss but not FMA repetitive loss.

Exact counts; no count suppression.

Sources

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

1. FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)
 2. FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)
 3. FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-26T151157Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)
 4. FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)
 5. FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)
 6. NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>
 7. NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-28, <https://www.weather.gov/gis/ZoneCounty>
 8. U.S. Census Bureau, Census 2024 Gazetteer, 2020 place by county, CT county-to-cousub crosswalk, version 2024-gazetteer, pulled 2026-09-28, https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_counties_national.zip, [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_cousubs_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_cousubs_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_place_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_place_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_unsd_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_unsd_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_elsd_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_elsd_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_scsd_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_scsd_national.zip), https://www2.census.gov/geo/docs/reference/codes2020/national_place_by_county2020.txt, https://www2.census.gov/geo/docs/reference/ct_change/ct_cou_to_cousub_crosswalk.xlsx
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Corrections: to report an error, name the packet, the table and what your records show. Contact: to be added

Hazard Plain release 2026-10. As of 2026-09-28; Storm Events data through 2026-06-30. File hazard-plain_2026-10_MI_26065. Preview: automated baseline.