

Kent County, MI

Risk-assessment baseline packet

County FIPS: 26081 Release: 2026-10 Data as of: 2026-09-30 Storm Events data through: 2026-06-30

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

Summary

Plan status as of 2026-09-30: Approved, expires 2028-01-25. Plan: Kent County (Ottawa County) (FEMA plan 108781), approved 2023-01-26.
Since the plan was approved on 2023-01-26: 1 new hazard declaration (1 incident): DR-4757-MI (Severe Storms, Tornadoes, and Flooding).
NOAA Storm Events records since that date: 71 records (data through 2026-06-30).
Highest expected annual loss (FEMA National Risk Index, modeled total; see B1-a): Inland Flooding (\$89,051,560 a year), Tornado (\$27,886,387) and Strong Wind (\$9,936,296).
Repetitive-loss flood properties now: FMA RL 9, SRL 12 (44 CFR 77.2); any definition: 73.
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; 26081 is this area.
D0 to D4: U.S. Drought Monitor categories, from abnormally dry (D0) to exceptional drought (D4).
F/EF, EFU: Fujita and Enhanced Fujita tornado ratings; EFU is an unrated tornado.
kt, CONUS: knots (1 kt is about 1.15 mph); the contiguous United States.
CFR: Code of Federal Regulations.
A4-a, E1-a: other items of FEMA's Local Mitigation Plan Review Tool (sources, and changes since the last plan).
Dollars: nominal (as reported, labeled with the year), not adjusted for inflation.

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Plan clock

Status:	Approved, expires 2028-01-25	Plan:	Kent County (Ottawa County) (FEMA plan 108781)
Approved:	2023-01-26	Days to expiry:	482

What changed since your last plan (approved 2023-01-26)

New federal declarations:	1 new hazard declaration (1 incident): DR-4757-MI (Severe Storms, Tornadoes, and Flooding)	Storm Events records since approval:	71 records (data through 2026-06-30)
Repetitive loss now:	FMA RL 9, SRL 12 (44 CFR 77.2); any definition: 73	Repeat-flood change:	this release sets the baseline count.

Sources: 1, 2, 4, 6 (numbered list at the end)

Plan status for every jurisdiction listed in this county: 36 rows, in the section "Plan clock: Plan status for every jurisdiction listed in this county" on the following pages.

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

Plan clock

Plan status for every jurisdiction listed in this county

Source: 1

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
Kent County	County	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-05-05
Caledonia village	Village	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	Kent County (Ottawa County) (FEMA plan 108781), pending adoption here	2023-01-26 by FEMA; not yet adopted here	2028-01-25 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.
Casnovia village	Village	Approved, expires 2030-05-20	Muskegon County 2025 Hazard Mitigation Plan (FEMA plan 110169)	2025-05-21	2030-05-20	1,328		this jurisdiction approved 2025-07-30
Cedar Springs city	City	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-08-25
East Grand Rapids city	City	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-08-25
Grand Rapids city	City	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		
Grandville city	City	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-06-01
Kent City village	Village	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-08-25
Kentwood city	City	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	Kent County (Ottawa County) (FEMA plan 108781), pending adoption here	2023-01-26 by FEMA; not yet adopted here	2028-01-25 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.
Lowell city	City	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	Kent County (Ottawa County) (FEMA plan 108781), pending adoption here	2023-01-26 by FEMA; not yet adopted here	2028-01-25 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.
Rockford city	City	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	Kent County (Ottawa County) (FEMA plan 108781), pending adoption here	2023-01-26 by FEMA; not yet adopted here	2028-01-25 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry	Update underway	Notes
						<i>negative = days since expiry</i>		
Sand Lake village	Village	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	Kent County (Ottawa County) (FEMA plan 108781), pending adoption here	2023-01-26 by FEMA; not yet adopted here	2028-01-25 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.
Sparta village	Village	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-08-25
Walker city	City	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-05-18
Wyoming city	City	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	Kent County (Ottawa County) (FEMA plan 108781), pending adoption here	2023-01-26 by FEMA; not yet adopted here	2028-01-25 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.
Ada township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-06-01
Algoma township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-08-25
Alpine township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-05-18
Bowne township	Township	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	Kent County (Ottawa County) (FEMA plan 108781), pending adoption here	2023-01-26 by FEMA; not yet adopted here	2028-01-25 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.
Byron township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-05-18
Caledonia township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-06-01
Cannon township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-05-18
Cascade charter township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-06-01
Courtland township	Township	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	Kent County (Ottawa County) (FEMA plan 108781), pending adoption here	2023-01-26 by FEMA; not yet adopted here	2028-01-25 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
Gaines charter township	Township	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	Kent County (Ottawa County) (FEMA plan 108781), pending adoption here	2023-01-26 by FEMA; not yet adopted here	2028-01-25 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.
Grand Rapids charter township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-06-01
Grattan township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-05-18
Lowell charter township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-08-25
Nelson township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-08-25
Oakfield township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-08-25
Plainfield charter township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-03-20
Solon township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-08-25
Sparta township	Township	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	Kent County (Ottawa County) (FEMA plan 108781), pending adoption here	2023-01-26 by FEMA; not yet adopted here	2028-01-25 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.
Spencer township	Township	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	Kent County (Ottawa County) (FEMA plan 108781), pending adoption here	2023-01-26 by FEMA; not yet adopted here	2028-01-25 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.
Tyrone township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-05-18
Vergennes township	Township	Approved, expires 2028-01-25	Kent County (Ottawa County) (FEMA plan 108781)	2023-01-26	2028-01-25	482		this jurisdiction approved 2023-06-01

Supports FEMA checklist item B1-a: hazard identification

Hazards NRI does not cover (local data needed)

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

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

Sources: 5, 6

Rank by EAL	Hazard	NRI risk rating	EAL rating	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL total (see note) <i>modeled dollars per year</i>	Storm Events records, 1996 to 2026-06-30 <i>count</i>	Storm Events coverage note
1	Inland Flooding	Relatively High	Relatively High	\$88,995,237	\$32,665	\$23,658	\$89,051,560	29	
2	Tornado	Relatively High	Relatively High	\$14,091,032	\$6,408	\$13,788,946	\$27,886,387	22	
3	Strong Wind	Very High	Very High	\$3,933,012	\$1,063,261	\$4,940,024	\$9,936,296	207	Includes 17 High Wind and 2 Strong Wind records (NOAA non-thunderstorm wind types, outside NRI's Strong Wind definition).
4	Cold Wave	Relatively High	Relatively High	\$240	\$140,189	\$8,023,142	\$8,163,571	1	
5	Heat Wave	Relatively Moderate	Relatively Moderate	\$190	\$3	\$7,581,222	\$7,581,415	1	
6	Earthquake	Relatively Low	Relatively Low	\$933,740	n/a	\$314,960	\$1,248,700		Storm Events does not record earthquakes.
7	Winter Weather	Relatively High	Very High	\$267,350	\$2,736	\$679,724	\$949,810	109	Includes 1 Sleet record (outside NRI's Winter Weather definition).
8	Hail	Relatively Moderate	Relatively Moderate	\$762,932	\$26,436	\$13,761	\$803,128	92	
9	Ice Storm	Relatively High	Relatively High	\$517,090	n/a	\$157,695	\$674,785	5	
10	Lightning	Relatively Moderate	Relatively Moderate	\$63,629	n/a	\$601,769	\$665,397	3	
11	Wildfire	Very Low	Very Low	\$33,546	\$15	\$3,807	\$37,368	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).

Rank by EAL	Hazard	NRI risk rating	EAL rating	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL total (see note) <i>modeled dollars per year</i>	Storm Events records, 1996 to 2026-06-30 <i>count</i>	Storm Events coverage note
12	Landslide	Relatively Low	Relatively Low	\$10,350	n/a	\$19,627	\$29,977	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
13	Hurricane	Very Low	Very Low	\$15,461	\$7,422	\$20	\$22,903	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
14	Drought	No Rating	No Expected Annual Losses	n/a	\$0	n/a	\$0	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).

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

NRI risk rating combines expected annual loss with social vulnerability and community resilience; EAL rating rates expected annual loss alone. Both compare this county with all U.S. counties.

Local data needed: state and local wildfire and landslide 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, coastal flooding, tsunامي 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.

Inland Flooding: The FEMA Flood Insurance Rate Map (FIRM) is the required location source for flooding. See the FEMA Flood Map Service Center (<https://msc.fema.gov>) for this county.

Hazards that vary within the county: highest-rated census tracts

Source: 5

Hazard	Highest-rated census tracts <i>NRI risk rating, score 0 to 100</i>
Earthquake	tract 20 (Relatively Low, 58.5); tract 116.01 (Relatively Low, 51.5); tract 44 (Relatively Low, 44.4)
Hurricane	tract 120.02 (Very Low, 34.1); tract 101.01 (Very Low, 32.1); tract 120.03 (Very Low, 30.1)
Landslide	tract 119.01 (Relatively Moderate, 97.0); tract 120.02 (Relatively Low, 94.6); tract 120.03 (Relatively Low, 94.4)
Tornado	tract 20 (Very High, 93.6); tract 145.05 (Relatively High, 91.9); tract 146.05 (Relatively High, 89.9)
Wildfire	tract 120.03 (Relatively Low, 70.8); tract 120.02 (Relatively Low, 70.0); tract 119.01 (Relatively Low, 69.6)

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 20 is Census Tract 20). FEMA's Resilience Analysis and Planning Tool maps the National Risk Index for every tract: <https://www.fema.gov/emergency-managers/practitioners/resilience-analysis-and-planning-tool>

Supports FEMA checklist item B1-c: hazard extent

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

Sources: 6, 7

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
Cold/Wind Chill, Extreme Cold/Wind Chill	wind chill	1 record, 1996 (1 zone-level)	5 days; 1 with a recorded value	5 consecutive days, 1996-02-01 to 1996-02-05, zone-level		Countywide (zone-level records).	Wind chill: in event narratives only (local data needed).
Frost/Freeze (outside NRI's Cold Wave definition)	crop damage	0					Temperature: in event narratives only (local data needed).
Drought	U.S. Drought Monitor scale (D0 to D4)	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					Storm Events does not record earthquakes; the USGS earthquake catalog is the source.
Hail	hail size (inches)	142 records, 1956 to 2026	0.5 in to 4 in (median 1 in); 141 with a recorded value	4 in hail, 1993-08-01	Hail, 2011-04-26, \$12,000,000 property; crops not reported (2011 dollars)	Event records naming jurisdictions in the plan: Grand Rapids charter township (16 records), Grand Rapids city (16 records), Grandville city (8 records), Kentwood city (6 records), Cascade charter township (5 records), Kent City village (5 records), Lowell charter township (5 records), Lowell city (5 records), Wyoming city (4 records), Ada township (3 records); and 10 more jurisdictions (see the Excel file).	
Excessive Heat, Heat	heat index (in event narratives)	1 record, 2018 (1 zone-level)	1 day; 1 with a recorded value	1 consecutive day, 2018-06-30, zone-level		Countywide (zone-level records).	Heat index: in event narratives only (local data needed).
Hurricane, Tropical Storm, Tropical Depression	Saffir-Simpson	0					Storm Events files every zone of a storm's episode under the storm's type; flooding from the storm is filed as Flood or Flash Flood records.
Ice Storm	Sperry-Piltz ice scale (local data)	5 records, 1997 to 2019 (5 zone-level)		Ice Storm, 2019-02-05, \$5,000,000 property; \$0 crops (2019 dollars); NWS zone MIZ057		Countywide (zone-level records).	Ice thickness: in event narratives only (local data needed).

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
Flash Flood, Flood, Lakeshore Flood	damage and flood days (flood depth: FIRM)	29 records, 1996 to 2026 (7 zone-level)		Flood, 2004-05-21, \$3,000,000 property; \$200,000 crops (2004 dollars); NWS zone MIZ057		Event records naming jurisdictions in the plan: Grand Rapids charter township (6 records), Grand Rapids city (6 records), Grandville city (2 records), Kentwood city (2 records), Ada township (1 record), Alpine township (1 record), Cascade charter township (1 record). Zone-level records (7) 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)	3 records, 1998 to 2010		Lightning, 2010-09-21, \$500,000 property; crops not reported (2010 dollars)		Event records naming jurisdictions in the plan: Kentwood 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)	19 records, 1997 to 2021 (19 zone-level)	42 kt (48 mph) to 66 kt (76 mph) (median 52.5 kt (60 mph)); 18 with a recorded value	66 kt (76 mph), measurement type not recorded, High Wind, 1998-11-10; NWS zone MIZ057	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)	298 records, 1956 to 2026	48 kt (55 mph) to 87 kt (100 mph) (median 52.5 kt (60 mph)); 216 with a recorded value	87 kt (100 mph) estimated gust, Thunderstorm Wind, 2019-09-11; same speed and measurement basis also recorded on 2016-08-20, 2019-09-11	Thunderstorm Wind, 1998-05-31, \$49,340,000 property; \$20,000,000 crops (1998 dollars)	Event records naming jurisdictions in the plan: Grand Rapids charter township (28 records), Grand Rapids city (28 records), Lowell charter township (13 records), Lowell city (13 records), Sparta township (10 records), Sparta village (10 records), Cedar Springs city (9 records), Rockford city (9 records), Cascade charter township (8 records), Caledonia township (7 records); and 11 more jurisdictions (see the Excel file).	
Tornado	Enhanced Fujita (Fujita before Feb 2007)	45 records, 1956 to 2026	F/EF0 to F/EF5 (median F/EF1); 44 with a recorded value	F5 tornado, 1956-04-03, 33.8 mi path length (whole path, pre-1996), 400 yd wide, \$25,000 property; crops not recorded (1956 dollars), 4 direct deaths, 130 direct injuries	Tornado, 1967-04-21, \$25,000,000 property; crops not recorded (1967 dollars)	Event records naming jurisdictions in the plan: Rockford city (3 records), Grand Rapids charter township (2 records), Grand Rapids city (2 records), Lowell charter township (2 records), Lowell city (2 records), Alpine township (1 record), Caledonia township (1 record), Caledonia village (1 record), East Grand Rapids city (1 record), Grandville city (1 record); and 1 more jurisdiction (see the Excel file).	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).

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
Wildfire	acres burned (local data)	0					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)	109 records, 1996 to 2026 (109 zone-level)		Winter Storm, 2018-04-14, \$100,000 property; \$0 crops (2018 dollars); NWS zone MIZ057		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.

Supports FEMA checklist item B1-d: previous occurrences

Federal declarations for this county: 13 declarations covering 9 separate hazard incidents counted in this packet (declarations for the same incident count once; non-natural and evacuation-only declarations are not counted).

Federal disaster declarations for this county

Sources: 1, 2, 3

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance <i>federal share obligated, nominal dollars</i>	Flags	Notes
2024-02-08	2023-08-24	DR-4757-MI	Major disaster	Severe Storms, Tornadoes, and Flooding	Inland Flooding (primary); also designated: Tornado	PA not declared for this county	new since last plan; within last 5 years	
2020-03-27	2020-01-20	DR-4494-MI	Major disaster	COVID-19 Pandemic	Non-natural, not counted	\$81,965,978.46		
2020-03-13	2020-01-20	EM-3455-MI	Emergency	COVID-19	Non-natural, not counted	no Public Assistance recorded		same incident as DR-4494
2013-06-18	2013-04-16	DR-4121-MI	Major disaster	Flooding	Inland Flooding	\$1,343,622.62		
2005-09-07	2005-08-29	EM-3225-MI	Emergency	Hurricane Katrina Evacuation	Hurricane: evacuation support, not a local hazard event; not counted	\$72,230.79		
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		
2001-01-10	2000-12-11	EM-3160-MI	Emergency	Snow	Winter Weather	\$362,501.43		
1999-01-27	1999-01-02	EM-3137-MI	Emergency	Mi - Severe Weather 1/2 /99	Winter Weather	\$286,511.38		
1998-06-24	1998-05-29	DR-1226-MI	Major disaster	Severe Storms	Hazard not mapped (severe storm title names no single hazard); not counted	no Public Assistance recorded		
1986-09-18	1986-09-10	DR-774-MI	Major disaster	Severe Storms & Flooding	Inland Flooding	no Public Assistance recorded		

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance	Flags	Notes
						<i>federal share obligated, nominal dollars</i>		
1978-01-27	1978-01-27	EM-3057-MI	Emergency	Blizzards & Snowstorms	Winter Weather	no Public Assistance recorded		
1976-03-19	1976-03-19	DR-495-MI	Major disaster	Severe Storms, Tornadoes, Icing & Flooding	Inland Flooding; Tornado	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.

Public Assistance filed under this county for declarations that do not list it: 1 row, \$8,102.12

Sources: 2, 3

FEMA number	Declared	Title	Applicant	PA obligated
				<i>federal share obligated, nominal dollars</i>
EM-3189-MI	2003-09-23	Power Outage	MERCY HOSPITAL-PORT HURON	\$8,102.12

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

Previous occurrences by hazard, with explicit no-event rows

Sources: 2, 6, 7

Hazard	Storm Events records, all years on file <i>(years in the Period column)</i>	Since plan approval <i>records</i>	In the 12 months before plan approval <i>records</i>	Last 5 years <i>records</i>	Declared incidents, all years <i>separate disasters</i>	Declared since approval <i>separate disasters</i>	Period	Statement
Cold Wave	1	0	0	0	0	0	1996 to 2026-06-30	
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		Storm Events does not record earthquakes; the USGS earthquake catalog is the source.
Hail	142	10	1	11	0	0	1955 to 2026-06-30	

Hazard	Storm Events records, all years on file <i>(years in the Period column)</i>	Since plan approval <i>records</i>	In the 12 months before plan approval <i>records</i>	Last 5 years <i>records</i>	Declared incidents, all years <i>separate disasters</i>	Declared since approval <i>separate disasters</i>	Period	Statement
Heat Wave	1	0	0	0	0	0	1996 to 2026-06-30	
Hurricane	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Ice Storm	5	0	0	0	0	0	1996 to 2026-06-30	
Inland Flooding	29	3	0	3	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	3	0	0	0	0	0	1996 to 2026-06-30	
Strong Wind	317	47	4	54	0	0	1955 to 2026-06-30	Includes 17 High Wind and 2 Strong Wind records.
Tornado	45	7	0	7	4	1	1950 to 2026-06-30	
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	109	4	2	7	3	0	1996 to 2026-06-30	Includes 1 Sleet record.

Notable Storm Events records

Sources: 1, 6, 7

Date	Event type	Magnitude or extent	Damage <i>nominal dollars</i>	Deaths, injuries <i>direct only</i>	Location	Flags	Why listed
2023-08-24	Thunderstorm Wind	61 kt (70 mph) estimated gust	\$10,000,000 property; \$0 crops (2023 dollars)	3, 0	SAND LAKE	new since last plan; within last 5 years	deaths or injuries recorded
2019-09-11	Thunderstorm Wind	87 kt (100 mph) estimated gust	\$1,000,000 property; \$0 crops (2019 dollars)	0, 0	LEONARD HGTS to CASCADE		B1-c worst recorded: Thunderstorm Wind
2019-02-05	Ice Storm		\$5,000,000 property; \$0 crops, reported for the zone (2019 dollars)	0, 0	NWS zone MIZ057 (KENT), zone-level		B1-c worst recorded: Ice Storm
2018-06-30	Excessive Heat		\$0 property; \$0 crops, reported for the zone (2018 dollars)	0, 0	NWS zone MIZ057 (KENT), zone-level		B1-c worst recorded: Excessive Heat, Heat
2018-04-14	Winter Storm		\$100,000 property; \$0 crops, reported for the zone (2018 dollars)	0, 0	NWS zone MIZ057 (KENT), zone-level		B1-c worst recorded: Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet
2010-09-21	Lightning		\$500,000 property; crops not reported (2010 dollars)	0, 0	EASTMONT		B1-c worst recorded: Lightning
2004-05-21	Flood		\$3,000,000 property; \$200,000 crops, reported for the zone (2004 dollars)	0, 0	NWS zone MIZ057 (KENT), zone-level		B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
1998-11-10	High Wind	66 kt (76 mph), measurement type not recorded	damage not reported	0, 0	NWS zone MIZ057 (KENT), zone-level		B1-c worst recorded: High Wind and Strong Wind
1996-02-01	Cold/Wind Chill		\$150,000 property; crops not reported, reported for the zone (1996 dollars)	0, 0	NWS zone MIZ057 (KENT), zone-level		B1-c worst recorded: Cold/Wind Chill, Extreme Cold/Wind Chill
1993-08-01	Hail	4 in	damage not recorded (pre-1996 record)	0, 0	Cannon Township		B1-c worst recorded: Hail
1965-04-11	Tornado	F4, 6.2 mi path length (whole path, pre-1996), 300 yd wide	\$2,500,000 property; crops not recorded (1965 dollars)	5, 142	location not recorded		deaths or injuries recorded
1956-04-03	Tornado	F5, 33.8 mi path length (whole path, pre-1996), 400 yd wide	\$25,000 property; crops not recorded (1956 dollars)	4, 130	location not recorded		deaths or injuries recorded

The full list is in the Excel file, sheet "B1-d Storm Events history" (652 rows).

Location is the place NOAA recorded, as written in its data; it need not be a jurisdiction in this plan.

Local data needed: state-declared emergencies, from your state emergency management agency (federal data do not include them).

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

Supports FEMA checklist item B1-e: probability of future events

Probability: FEMA annualized frequency and descriptor per hazard

Sources: 5, 6

Hazard	FEMA annualized frequency (modeled) <i>unit per row</i>	Unit	In plain terms	Descriptor	Descriptor basis	NRI events or days in its record period (hail, wind and tornado are area-weighted, so can be fractional)	NRI period	Location	Note
Cold Wave	1.32	event-days per year	about 1.32 days per year	Possible (from Storm Events: 1 of 30 years)	event-days in 1 of 30 years, 1996 to 2025 (3.33%)	25	2005-11-12 to 2024-11-12 (19 years)	countywide	
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 Storm Events drought record, 1996 to 2025
Earthquake	0.000711	annual probability at a location	chance a given location in the county has at least minor-damage shaking in a year: 0.0711%			not shown	modeled	see B1-f	No descriptor (Storm Events does not record earthquakes).
Hail	1.62	events per year	about 1.62 per year	Highly likely	FEMA annualized frequency (modeled)	61.6 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave	2.47	event-days per year	about 2.47 days per year	Possible (from Storm Events: 1 of 30 years)	event-days in 1 of 30 years, 1996 to 2025 (3.33%)	37	2005-11-12 to 2024-11-12 (19 years)	countywide	
Hurricane	0.0106	events per year	about 1 in 94 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 in B1-d.
Ice Storm	1.26	event-days per year	about 1.26 days per year	Likely (from Storm Events: 4 of 30 years)	event-days in 4 of 30 years, 1996 to 2025 (13.3%)	85	1946-12-31 to 2014-02-12 (67 years)	countywide	
Inland Flooding	0.857	event-days per year	about 0.857 days per year	Likely (from Storm Events: 13 of 30 years)	event-days in 13 of 30 years, 1996 to 2025 (43.3%)	24	1996 to 2023 (28 years)	see B1-f	
Landslide	0.313	events per year (modeled)	about 1 in 3 years	Likely	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Lightning	31.9	days per year with a strike	about 31.9 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	countywide	
Strong Wind	2.84	events per year	about 2.84 per year	Highly likely	FEMA annualized frequency (modeled)	108	1986 to 2023 (38 years)	countywide	

Hazard	FEMA annualized frequency (modeled) <i>unit per row</i>	Unit	In plain terms	Descriptor	Descriptor basis	NRI events or days in its record period (hail, wind and tornado are area-weighted, so can be fractional)	NRI period	Location	Note
Tornado	0.302	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	
Wildfire	0.0000206	annual probability at a location	chance a given location in the county burns in a year: 0.00206%		Storm Events records in 0 of 30 years, 1996 to 2025 (0%)	not shown	modeled	see B1-f	No descriptor: no Storm Events record 1996 to 2025
Winter Weather	24.5	event-days per year	about 24.5 days per year	Highly likely (from Storm Events: 27 of 30 years)	event-days in 27 of 30 years, 1996 to 2025 (90%)	466	2005-11-12 to 2024-11-12 (19 years)	countywide	

FEMA annualized frequency (modeled) is the National Risk Index v1.20 (December 2025) estimate of how often a hazard affects this county in a year; it is not recorded events divided by years, and its unit differs by hazard (events, event-days, or days with a lightning strike per year). For earthquake, wildfire, coastal flooding and tsunami the value is the chance (or number of events) at a location in the county, not across the county, so no "1 in N years" is given and the descriptor comes from Storm Events where it has a record (none for earthquake). The Methods page gives each hazard's method, from FEMA's National Risk Index Technical Documentation v1.20.

Where NRI gives event-days, the descriptor comes from the share of years with a Storm Events record; NRI's source records more events, so the two differ.

Descriptor scale used in this packet (defined per unit)

Sources: 5, 6

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

Intensity bands: historical frequency (Storm Events)

Source: 6

Hazard	Band	Years	Events <i>county-coded records</i>	Years in period	Events per year <i>events / years</i>
Hail	1.00-1.99 in	1996 to 2025	45	30	1.5
Hail	2.00 in+	1996 to 2025	0	30	0
Thunderstorm Wind (counted as NRI Strong Wind)	50-64 kt	1996 to 2025	139	30	4.63
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	18	30	0.6
Tornado	EF0-1	1996 to 2025	21	30	0.7
Tornado	EF2-3	1996 to 2025	0	30	0
Tornado	EF4-5	1996 to 2025	0	30	0
Tornado	unrated (EFU)	1996 to 2025	0	30	0

The bands show how often events of each severity were recorded in this county, to profile how severe events have been (FEMA's probability item asks for the range of intensities).

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

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

Supports FEMA checklist item B1-f: hazards that vary across jurisdictions

Range of census tract risk within the county

Source: 5

Hazard	Tracts <i>rated of all</i>	NRI risk score, 0 to 100			Tracts by rating
		Min	Median	Max	
Cold Wave	145 of 145	24.5	49.2	66.1	Relatively Moderate 81, Relatively Low 64
Drought	0 of 145				No Rating 145
Earthquake	145 of 145	4.2	19.4	58.5	Relatively Low 8, Very Low 137
Hail	145 of 145	17.6	38.9	70.1	Relatively Moderate 1, Relatively Low 84, Very Low 60
Heat Wave	145 of 145	13.1	56.3	76.3	Relatively Moderate 77, Relatively Low 66, Very Low 2
Hurricane	145 of 145	13.1	19.0	34.1	Very Low 145
Ice Storm	145 of 145	7.3	41.4	77.7	Relatively Moderate 3, Relatively Low 103, Very Low 39
Inland Flooding	145 of 145	1.0	33.0	97.6	Very High 3, Relatively High 5, Relatively Moderate 31, Relatively Low 65, Very Low 41
Landslide	145 of 145	14.7	60.3	97.0	Relatively Moderate 1, Relatively Low 33, Very Low 111
Lightning	145 of 145	5.0	23.5	39.7	Relatively Low 89, Very Low 56
Strong Wind	145 of 145	36.5	79.6	97.2	Very High 1, Relatively High 58, Relatively Moderate 80, Relatively Low 6

Hazard	Tracts <i>rated of all</i>	NRI risk score, 0 to 100			Tracts by rating
		Min	Median	Max	
Tornado	145 of 145	36.6	67.3	93.6	Very High 1, Relatively High 35, Relatively Moderate 94, Relatively Low 15
Wildfire	136 of 145	19.3	39.6	70.8	Relatively Low 3, Very Low 133, No Rating 9
Winter Weather	145 of 145	33.8	68.8	85.0	Relatively High 15, Relatively Moderate 120, Relatively Low 10

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

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

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

Each jurisdiction (starting figures from federal data)

Sources: 1, 3, 4, 6

Jurisdiction	Type	Plan status	Repetitive loss <i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	Public Assistance to this jurisdiction <i>FEMA records matched by applicant name; federal share obligated, nominal dollars</i>	Event records naming this place <i>all years; since its plan</i>	Notes
Kent County	County	Approved, expires 2028-01-25		\$2,581,448.45	0 total; 0 since its plan	No NFIP community ID on this jurisdiction's plan row. Includes \$2,474,245.37 for declarations not counted as hazard incidents (DR-4494-MI, EM-3225-MI).
Caledonia village	Village	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 0	\$13,652.49	9 total; no approved plan	
Casnovia village	Village	Approved, expires 2030-05-20	FMA RL 0, SRL 0; any 0	\$908.25	0 total; 0 since its plan	
Cedar Springs city	City	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 0	\$2,571.75	12 total; 2 since its plan	
East Grand Rapids city	City	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 1	\$20,033.64	9 total; 3 since its plan	
Grand Rapids city	City	Approved, expires 2028-01-25	FMA RL 0, SRL 2; any 14	\$1,058,664.87	52 total; 4 since its plan	Includes \$15,891.97 for declarations not counted as hazard incidents (DR-4494-MI, EM-3225-MI).
Grandville city	City	Approved, expires 2028-01-25	FMA RL 0, SRL 1; any 7	\$85,421.81	15 total; 0 since its plan	
Kent City village	Village	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	8 total; 1 since its plan	
Kentwood city	City	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 0	\$44,136.72	12 total; no approved plan	

Jurisdiction	Type	Plan status	Repetitive loss	Public Assistance to this jurisdiction	Event records naming this place	Notes
			<i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	<i>FEMA records matched by applicant name; federal share obligated, nominal dollars</i>	<i>all years; since its plan</i>	
Lowell city	City	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 4	\$70,423.45	20 total; no approved plan	
Rockford city	City	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 0	\$7,709.72	14 total; no approved plan	
Sand Lake village	Village	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	8 total; no approved plan	
Sparta village	Village	Approved, expires 2028-01-25	FMA RL 1, SRL 1; any 1	\$5,599.95	12 total; 1 since its plan	
Walker city	City	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 0	\$29,233.46	4 total; 1 since its plan	
Wyoming city	City	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 7	\$108,950.74	5 total; no approved plan	
Ada township	Township	Approved, expires 2028-01-25	FMA RL 2, SRL 3; any 5	\$5,888.39	7 total; 0 since its plan	
Algoma township	Township	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 3	no Public Assistance recorded	0 total; 0 since its plan	
Alpine township	Township	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	6 total; 1 since its plan	
Bowne township	Township	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; no approved plan	
Byron township	Township	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan	
Caledonia township	Township	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 2	no Public Assistance recorded	9 total; 3 since its plan	
Cannon township	Township	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan	
Cascade charter township	Township	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 0	\$24,014.94	14 total; 2 since its plan	
Courtland township	Township	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; no approved plan	

Jurisdiction	Type	Plan status	Repetitive loss	Public Assistance to this jurisdiction	Event records naming this place	Notes
			<i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	<i>FEMA records matched by applicant name; federal share obligated, nominal dollars</i>	<i>all years; since its plan</i>	
Gaines charter township	Township	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; no approved plan	
Grand Rapids charter township	Township	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	52 total; 4 since its plan	
Grattan township	Township	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	6 total; 0 since its plan	
Lowell charter township	Township	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	20 total; 2 since its plan	
Nelson township	Township	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan	
Oakfield township	Township	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan	
Plainfield charter township	Township	Approved, expires 2028-01-25	FMA RL 6, SRL 5; any 29	\$18,006.29	0 total; 0 since its plan	
Solon township	Township	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan	
Sparta township	Township	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	12 total; no approved plan	
Spencer township	Township	Plan 108781 approved 2023-01-26, pending adoption here; not yet eligible	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; no approved plan	
Tyrone township	Township	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan	
Vergennes township	Township	Approved, expires 2028-01-25	FMA RL 0, SRL 0; any 0	no Public Assistance recorded	0 total; 0 since its plan	

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

County Public Assistance in B1-d also includes applicants filed under the county that are not jurisdictions in this plan (for example state agencies, special districts and nonprofits), so the jurisdiction rows add up to less.

Supports FEMA checklist items B2-a and B2-b: vulnerability and potential impacts

Local data needed

The table below gives county-level starting figures; the plan describes impacts for each jurisdiction and its own assets.

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

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

Sources: 1, 2, 3, 5, 6, 7

Hazard	Building exposure <i>modeled dollars</i>	Agriculture exposure <i>modeled dollars</i>	Population exposed <i>people</i>	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since 2023-01-26 <i>county-coded records, property plus crops, nominal dollars</i>	Zone-level damage since plan <i>property plus crops, reported for the zone</i>	Public Assistance since plan <i>nominal dollars; see note</i>	Note
Cold Wave	\$137,146,867,309	\$338,411,295	657,870	\$240	\$140,189	\$8,023,142	under 0.0001%				
Drought	n/a	\$0	n/a	n/a	\$0	n/a					agriculture exposure is 0 in NRI
Earthquake	\$245,478,732,644	n/a	657,974	\$933,740	n/a	\$314,960	0.00038%				
Hail	\$137,146,867,309	\$338,411,295	657,870	\$762,932	\$26,436	\$13,761	0.000556%	\$200,000			
Heat Wave	\$137,146,867,309	\$338,411,295	657,870	\$190	\$3	\$7,581,222	under 0.0001%				
Hurricane	\$136,057,244,477	\$337,133,196	652,507	\$15,461	\$7,422	\$20	under 0.0001%				
Ice Storm	\$137,146,803,802	n/a	657,870	\$517,090	n/a	\$157,695	0.000377%				
Inland Flooding	\$137,088,079,326	\$4,027,674	7,271	\$88,995,237	\$32,665	\$23,658	n/a (see note)	\$0		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.
Landslide	\$2,097,007,673	n/a	9,385	\$10,350	n/a	\$19,627	0.000494%				

Hazard	Building exposure <i>modeled dollars</i>	Agriculture exposure <i>modeled dollars</i>	Population exposed <i>people</i>	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since 2023-01-26 <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
Lightning	\$137,146,867,309	n/a	657,870	\$63,629	n/a	\$601,769	under 0.0001%				
Strong Wind	\$137,146,867,309	\$338,411,295	657,870	\$3,933,012	\$1,063,261	\$4,940,024	0.00287%	\$21,440,000			
Tornado	\$137,146,867,309	\$338,411,295	657,870	\$14,091,032	\$6,408	\$13,788,946	0.0103%	\$10,000,000	no Public Assistance recorded (1 declaration)		
Wildfire	\$25,722,080,991	\$85,730,403	123,933	\$33,546	\$15	\$3,807	0.00013%				
Winter Weather	\$137,146,867,309	\$338,411,295	657,870	\$267,350	\$2,736	\$679,724	0.000195%		\$0		

Totals since 2023-01-26 (Storm Events through 2026-06-30): 67 county-coded records, 26 with a damage value recorded (including \$0), \$31,640,000; 4 zone-level records, 2 with a damage value recorded (including \$0), \$0 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	657,870
Building value (total, not at risk)	\$137,146,867,309
Agriculture value (total, not at risk)	\$338,411,295
NRI risk rating (all hazards)	Relatively Moderate
Expected annual loss, buildings and agriculture, all hazards	\$110,902,940
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)	\$36,148,356
Social vulnerability rating	Very 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)	9	Severe repetitive loss, FMA definition (44 CFR 77.2)	12
Repetitive loss, NFIP insurance definition	71	Severe repetitive loss, NFIP insurance definition	11

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

Repeat-flood properties: county and state-level rows

Sources: 1, 4

Scope	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
County total	9	12	71	11	73	1	26
of which: East Grand Rapids city	0	0	1	0	1	0	1
of which: Grand Rapids city	0	2	14	2	14	0	4
of which: Lowell city	0	0	4	0	4	0	2
of which: Plainfield charter township	6	5	28	5	29	1	12
of which: Wyoming city	0	0	7	0	7	0	2
of which: Ada township	2	3	5	3	5	0	2
of which: Grandville city	0	1	6	0	7	0	2
of which: Sparta village	1	1	1	1	1	0	0
of which: Caledonia charter township	0	0	2	0	2	0	1
of which: Algoma township	0	0	3	0	3	0	0
Statewide, no county in FEMA's file	0	0	4	0	4	0	0

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

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

Sources: 1, 4

Jurisdiction	NFIP community ID	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
Caledonia village	260964	0	0	0	0	0	0	0
Casnovia village	260965	0	0	0	0	0	0	0
Cedar Springs city	260966	0	0	0	0	0	0	0
East Grand Rapids city	260105	0	0	1	0	1	0	1
Grand Rapids city	260106	0	2	14	2	14	0	4

Jurisdiction	NFIP community ID	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
Grandville city	260271	0	1	6	0	7	0	2
Kent City village	260971	0	0	0	0	0	0	0
Kentwood city	260107	0	0	0	0	0	0	0
Lowell city	260108	0	0	4	0	4	0	2
Rockford city	260975	0	0	0	0	0	0	0
Sand Lake village	260976	0	0	0	0	0	0	0
Sparta village	260336	1	1	1	1	1	0	0
Walker city	260110	0	0	0	0	0	0	0
Wyoming city	260111	0	0	7	0	7	0	2
Ada township	260248	2	3	5	3	5	0	2
Algoma township	260738	0	0	3	0	3	0	0
Alpine township	260961	0	0	0	0	0	0	0
Bowne township	260962	0	0	0	0	0	0	0
Byron township	260963	0	0	0	0	0	0	0
Caledonia township	260693	0	0	2	0	2	0	1
Cannon township	260734	0	0	0	0	0	0	0
Cascade charter township	260814	0	0	0	0	0	0	0
Courtland township	260967	0	0	0	0	0	0	0
Gaines charter township	260990	0	0	0	0	0	0	0
Grand Rapids charter township	260968	0	0	0	0	0	0	0
Grattan township	260969	0	0	0	0	0	0	0
Lowell charter township	260972	0	0	0	0	0	0	0
Nelson township	260973	0	0	0	0	0	0	0
Oakfield township	260974	0	0	0	0	0	0	0
Plainfield charter township	260109	6	5	28	5	29	1	12
Solon township	261409	0	0	0	0	0	0	0
Sparta township	260741	0	0	0	0	0	0	0
Spencer township	260978	0	0	0	0	0	0	0
Tyrone township	260979	0	0	0	0	0	0	0
Vergennes township	260980	0	0	0	0	0	0	0

Counts by occupancy group for each jurisdiction are in the Excel file, sheet "B2-c Jurisdictions".

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

County repeat-flood properties by occupancy group

Sources: 1, 4

Occupancy group	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
single-family residential	9	11	63	10	65	1	24
2 to 4 unit residential	0	0	0	0	0	0	0
other residential	0	0	0	0	0	0	0
non-residential	0	1	8	1	8	0	2
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 1 property is FMA repetitive loss but not NFIP repetitive loss, and 63 properties are NFIP repetitive loss but not FMA repetitive loss.

Exact counts; no count suppression.

Sources

Tables cite these sources by number. The full list, for the plan's bibliography (FEMA review item A4-a):

1. FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-29T134039Z, pulled 2026-09-30, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)
2. FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-29T162832Z, pulled 2026-09-30, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)
3. FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-29T150754Z, pulled 2026-09-30, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)
4. FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-30, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)
5. FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-30, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)
6. NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-30, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>
7. NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-30, <https://www.weather.gov/gis/ZoneCounty>
8. U.S. Census Bureau, Census 2024 Gazetteer, 2020 place by county, CT county-to-cousub crosswalk, version 2024-gazetteer, pulled 2026-09-30, https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_counties_national.zip, [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_cousubs_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_cousubs_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_place_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_place_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_unsd_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_unsd_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_elsd_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_elsd_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_scsd_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_scsd_national.zip), https://www2.census.gov/geo/docs/reference/codes2020/national_place_by_county2020.txt, https://www2.census.gov/geo/docs/reference/ct_change/ct_cou_to_cousub_crosswalk.xlsx (used to match place names and codes; no table prints its values)

What this packet is and what the plan adds

This packet is the federal data for the plan's risk assessment, 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.

OpenFEMA disclaimer

This product uses the Federal Emergency Management Agency's OpenFEMA API, but is not endorsed by FEMA. The Federal Government or FEMA cannot vouch for the data or analyses derived from these data after the data have been retrieved from the Agency's website(s).

Reuse, citation and corrections

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Cite this: Hazard Plain (2026). Kent County, MI: risk-assessment baseline packet, release 2026-10 (data as of 2026-09-30; County FIPS 26081). Automated baseline. <https://hazardplain.org/mi/26081/> Built from FEMA OpenFEMA, the FEMA National Risk Index and NOAA NCEI Storm Events; source versions in the packet's Sources list.

Corrections: to report an error, name the packet, the table and what your records show. Contact: contact@hazardplain.org

Hazard Plain release 2026-10. As of 2026-09-30; Storm Events data through 2026-06-30. Automated baseline.