

Nowata County, OK

Risk-assessment baseline packet

County FIPS: 40105 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: No county-level plan row in FEMA data.

Highest expected annual loss (FEMA National Risk Index, modeled total; see B1-a): Inland Flooding (\$2,197,754 a year), Strong Wind (\$1,747,981) and Tornado (\$1,328,278).

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; 40105 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

No county-level plan row in FEMA data

What changed since your last plan

Not available. No county-level plan row in FEMA data, so there is no approval date to count from.

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

Plan status for every jurisdiction listed in this county

Source: 1

						Days to expiry negative = days since expiry	Update underway	Notes
Jurisdiction	Type	Status	Plan	Approved	Expires			
Chelsea Public Schools	School/School District	Plan 110804 approved 2025-07-23, pending adoption here; not yet eligible	Rogers County (FEMA plan 110804), pending adoption here	2025-07-23 by FEMA; not yet adopted here	2030-07-22 once adopted		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.

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

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	Very Low	Very Low	\$1,996,060	\$162,660	\$39,035	\$2,197,754	63	
2	Strong Wind	Relatively High	Relatively High	\$220,621	\$10,574	\$1,516,786	\$1,747,981	153	Includes 4 High Wind records (a NOAA non-thunderstorm wind type, outside NRI's Strong Wind definition).
3	Tornado	Relatively Low	Relatively Low	\$302,771	\$3,056	\$1,022,450	\$1,328,278	22	
4	Cold Wave	Relatively Low	Relatively Moderate	\$26	\$147,681	\$934,761	\$1,082,468	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
5	Ice Storm	Relatively High	Relatively High	\$889,314	n/a	\$6,957	\$896,272	10	
6	Heat Wave	Relatively Low	Relatively Low	\$425	\$446	\$451,125	\$451,995	56	
7	Drought	Relatively Moderate	Relatively Low	n/a	\$296,728	n/a	\$296,728	67	
8	Lightning	Relatively Low	Very Low	\$4,444	n/a	\$63,175	\$67,619	1	
9	Earthquake	Very Low	Very Low	\$47,847	n/a	\$19,588	\$67,435		Storm Events does not record earthquakes.
10	Hail	Very Low	Very Low	\$42,098	\$8,385	\$7,869	\$58,352	103	
11	Wildfire	Very Low	Very Low	\$27,179	\$498	\$11,850	\$39,527	2	
12	Winter Weather	Relatively Low	Relatively Low	\$20,525	\$777	\$6,020	\$27,322	38	

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
13	Hurricane	Very Low	Very Low	\$3,221	\$3,136	\$24	\$6,381	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
14	Landslide	Very Low	Very Low	\$9	n/a	\$388	\$396	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 landslide records (Storm Events records this hazard 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 1724 (Relatively Low, 63.8); tract 1721 (Very Low, 36.9); tract 1723 (Very Low, 31.5)
Hurricane	tract 1722 (Very Low, 42.2); tract 1724 (Very Low, 41.5); tract 1723 (Very Low, 41.1)
Landslide	tract 1723 (Relatively Low, 88.1); tract 1722 (Relatively Low, 84.0); tract 1721 (Very Low, 76.0)
Tornado	tract 1724 (Very High, 99.0); tract 1723 (Relatively High, 89.6); tract 1721 (Relatively High, 88.1)
Wildfire	tract 1723 (Relatively Moderate, 89.6); tract 1722 (Relatively Low, 84.8); tract 1721 (Relatively Low, 83.3)

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 1724 is Census Tract 1724). 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	0					
Frost/Freeze (outside NRI's Cold Wave definition)	crop damage	0					
Drought	U.S. Drought Monitor scale (D0 to D4)	67 records, 2005 to 2026 (67 zone-level)	34 days to 498 days (median 114 days); 11 with a recorded value	498 days (about 16.4 months), 2022-07-19 to 2023-11-28, a run of 17 consecutive Storm Events drought records, zone-level		Countywide (zone-level records).	Storm Events enters a drought at D2 or worse east of the Rockies and D3 or worse from the Rockies west (NWS Instruction 10-1605); NRI drought counts D3 and D4 only.
Earthquake	Modified Mercalli (local data)	0					Storm Events does not record earthquakes; the USGS earthquake catalog is the source.
Hail	hail size (inches)	158 records, 1957 to 2025	0.75 in to 3 in (median 0.88 in); 157 with a recorded value	3 in hail, 2003-05-04	Hail, 2012-09-07, \$100,000 property; \$0 crops (2012 dollars)	No event record names a jurisdiction in the plan.	
Excessive Heat, Heat	heat index (in event narratives)	56 records, 2006 to 2025 (56 zone-level)	1 day to 26 days (median 2 days); 51 with a recorded value	26 consecutive days, 2011-07-14 to 2011-08-08, zone-level		Countywide (zone-level records).	
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)	10 records, 1996 to 2017 (10 zone-level)		Ice Storm, 2007-12-08, \$20,000,000 property; \$0 crops (2007 dollars); NWS zone OKZ056		Countywide (zone-level records).	
Flash Flood, Flood, Lakeshore Flood	damage and flood days (flood depth: FIRM)	63 records, 1996 to 2026 (1 zone-level)		Flood, 2007-07-01, \$250,000 property; \$0 crops (2007 dollars)		No event record names a jurisdiction in the plan. Zone-level records (1) 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					

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
Lightning	annualized frequency (the measure FEMA's Local Mitigation Planning Handbook names)	1 record, 1996		Lightning, 1996-05-26, \$5,000 property; crops not reported (1996 dollars)		No event record names a jurisdiction in the plan.	Storm Events lists lightning with damage or casualties.
High Wind and Strong Wind (outside NRI's Strong Wind definition)	wind speed (kt and mph)	4 records, 1998 to 2025 (4 zone-level)	50 kt (58 mph) to 52 kt (60 mph) (median 51 kt (59 mph)); 3 with a recorded value	52 kt (60 mph) measured gust, High Wind, 2005-11-27; NWS zone OKZ056		Countywide (zone-level records).	
Thunderstorm Wind	wind speed (kt and mph)	207 records, 1956 to 2026	50 kt (58 mph) to 87 kt (100 mph) (median 56 kt (64 mph)); 141 with a recorded value	87 kt (100 mph) estimated gust, Thunderstorm Wind, 2012-09-07, 3 direct deaths	Thunderstorm Wind, 2002-08-23, \$3,500,000 property; crops not reported (2002 dollars)	No event record names a jurisdiction in the plan.	Speeds under 20 kt (likely entry errors) are left out of the observed range.
Tornado	Enhanced Fujita (Fujita before Feb 2007)	43 records, 1956 to 2024	F/EF0 to F/EF3 (median F/EF1); 38 with a recorded value	F3 tornado, 1979-03-18, 4.1 mi path length (whole path, pre-1996), 30 yd wide, \$25,000 property; crops not recorded (1979 dollars)	Tornado, 1981-05-23, \$250,000 property; crops not recorded (1981 dollars)	No event record names a jurisdiction in the plan.	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).
Wildfire	acres burned (local data)	2 records, 2006 to 2015 (2 zone-level)		Wildfire, 2015-11-11, \$250,000 property; \$0 crops (2015 dollars); NWS zone OKZ056		Countywide (zone-level records).	
Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet	none in data (snowfall: local data)	38 records, 1996 to 2026 (38 zone-level)		No damage reported in 38 records.		Countywide (zone-level records).	

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

Storm Events records are more complete after 1996; before 1996 only Tornado (from 1950), Hail and Thunderstorm Wind (from 1955) exist. Zone-level records from zones that no NWS zone-county file places in this county (mostly before 2020) are not counted here (the Methods page explains the zone matching).

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

Supports FEMA checklist item B1-d: previous occurrences

Federal declarations for this county: 31 declarations covering 24 separate hazard incidents counted in this packet (declarations for the same incident count once; non-natural and evacuation-only declarations are not counted).

No county-level plan row in FEMA data, so there is no approval date to count from.

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
2024-04-30	2024-04-25	DR-4776-OK	Major disaster	Severe Storms, Straight-Line Winds, Tornadoes, and Flooding	Tornado (primary); also designated: Inland Flooding, Strong Wind	PA not declared for this county	within last 5 years	
2021-02-24	2021-02-08	DR-4587-OK	Major disaster	Severe Winter Storms	Ice Storm	no Public Assistance recorded		
2021-02-17	2021-02-08	EM-3555-OK	Emergency	Severe Winter Storm	Ice Storm	no Public Assistance recorded		same incident as DR-4587
2020-04-05	2020-01-20	DR-4530-OK	Major disaster	COVID-19 Pandemic	Non-natural, not counted	no Public Assistance recorded		
2020-03-13	2020-01-20	EM-3462-OK	Emergency	COVID-19	Non-natural, not counted	no Public Assistance recorded		same incident as DR-4530
2019-07-12	2019-04-30	DR-4453-OK	Major disaster	Severe Storms, Tornadoes, Straight-Line Winds, and Flooding	Inland Flooding; Strong Wind; Tornado	\$25,988.36		
2019-06-01	2019-05-07	DR-4438-OK	Major disaster	Severe Storms, Straight-Line Winds, Tornadoes, and Flooding	Inland Flooding; Strong Wind; Tornado	\$1,988,846.76		
2015-11-11	2015-11-11	FM-5117-OK	Fire management	Old Fire Complex	Wildfire	no Public Assistance recorded		
2015-05-26	2015-05-05	DR-4222-OK	Major disaster	Severe Storms, Tornadoes, Straight-Line Winds, and Flooding	Inland Flooding; Strong Wind; Tornado	\$98,428.81		
2013-05-20	2013-05-18	DR-4117-OK	Major disaster	Severe Storms, Tornadoes, and Flooding	Tornado (primary); also designated: Inland Flooding	\$146,200.61		
2012-06-14	2012-04-28	DR-4064-OK	Major disaster	Severe Storms, Tornadoes, Straight-Line Winds, and Flooding	Inland Flooding; Strong Wind; Tornado	\$48,208.49		
2011-06-06	2011-05-22	DR-1989-OK	Major disaster	Severe Storms, Tornadoes, Straight-Line Winds, and Flooding	Inland Flooding; Strong Wind; Tornado	\$52,943.05		
2011-05-13	2011-01-31	DR-1985-OK	Major disaster	Severe Winter Storm and Snowstorm	Winter Weather	\$53,206.20		
2011-02-02	2011-01-31	EM-3316-OK	Emergency	Severe Winter Storm	Winter Weather	no Public Assistance recorded		same incident as DR-1985
2010-03-05	2010-01-28	DR-1883-OK	Major disaster	Severe Winter Storm	Ice Storm	\$60,813.46		
2010-02-25	2009-12-24	DR-1876-OK	Major disaster	Severe Winter Storm	Winter Weather	\$132,743.26		
2010-01-30	2010-01-28	EM-3308-OK	Emergency	Severe Winter Storm	Winter Weather	no Public Assistance recorded		same incident as DR-1883
2008-07-09	2008-06-03	DR-1775-OK	Major disaster	Severe Storms and Flooding	Inland Flooding	\$320,420.15		

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance	Flags	Notes
						<i>federal share obligated, nominal dollars</i>		
2007-12-18	2007-12-08	DR-1735-OK	Major disaster	Severe Winter Storms	Ice Storm	\$423,988.75		
2007-12-10	2007-12-08	EM-3280-OK	Emergency	Severe Winter Storms	Ice Storm	no Public Assistance recorded		same incident as DR-1735
2007-07-07	2007-06-10	DR-1712-OK	Major disaster	Severe Storms, Flooding, and Tornadoes	Inland Flooding; Tornado	\$1,011,566.71		
2007-06-07	2007-05-04	DR-1707-OK	Major disaster	Severe Storms, Tornadoes and Flooding	Inland Flooding; Tornado	\$217,743.61		
2007-01-14	2007-01-12	EM-3272-OK	Emergency	Severe Winter Storms and Flooding	Ice Storm	\$3,549.05		
2006-01-10	2005-11-27	DR-1623-OK	Major disaster	Extreme Wildfire Threat	Wildfire	\$15,650.65		
2005-09-05	2005-08-29	EM-3219-OK	Emergency	Hurricane Katrina Evacuation	Hurricane: evacuation support, not a local hazard event; not counted	no Public Assistance recorded		
2003-05-10	2003-05-08	DR-1465-OK	Major disaster	Severe Storms and Tornadoes	Tornado	\$52,343.85		
2002-02-01	2002-01-30	DR-1401-OK	Major disaster	Severe Winter Ice Storm	Ice Storm	PA not declared for this county		
2001-01-05	2000-12-25	DR-1355-OK	Major disaster	Severe Winter Ice Storm	Ice Storm	\$637,222.98		
1995-06-26	1995-05-26	DR-1058-OK	Major disaster	Tornadoes, Severe Storms and Flooding	Tornado (primary); also designated: Inland Flooding	no Public Assistance recorded		
1993-05-12	1993-05-08	DR-991-OK	Major disaster	Severe Storms, Tornadoes & Flooding	Inland Flooding; Tornado	no Public Assistance recorded		
1986-10-14	1986-09-26	DR-778-OK	Major disaster	Severe Storms & Flooding	Inland Flooding	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
1995-04-19	1995-04-19	EM-3115-OK	Emergency	Explosion at Federal Courthouse in Oklahoma City	Non-natural, not counted
1960-07-15	1960-07-15	DR-104-OK	Major disaster	Heavy Rains, Hail, Floods & Tornadoes	Hail; Inland Flooding; Tornado
1959-11-09	1959-11-09	DR-95-OK	Major disaster	Heavy Rains & Floods	Inland Flooding
1959-07-08	1959-07-08	DR-92-OK	Major disaster	Flood	Inland Flooding
1957-05-18	1957-05-18	DR-74-OK	Major disaster	Flood	Inland Flooding
1956-04-07	1956-04-07	DR-54-OK	Major disaster	Tornadoes	Tornado
1955-06-01	1955-06-01	DR-35-OK	Major disaster	Flood & Tornado	Inland Flooding (primary); also designated: 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.

13 Fire Management declarations (1971-04-08 to 2012-07-30) FEMA filed as Statewide with no county; each names one local fire. Listed on the state page.

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	0			0	0		1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Drought	67			28	0		1996 to 2026-06-30	
Earthquake	0			0	0			Storm Events does not record earthquakes; the USGS earthquake catalog is the source.
Hail	158			4	0		1955 to 2026-06-30	
Heat Wave	56			23	0		1996 to 2026-06-30	
Hurricane	0			0	0		1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Ice Storm	10			0	6		1996 to 2026-06-30	
Inland Flooding	63			1	13		1996 to 2026-06-30	
Landslide	0			0	0		1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Lightning	1			0	0		1996 to 2026-06-30	
Strong Wind	211			10	6		1955 to 2026-06-30	Includes 4 High Wind records.
Tornado	43			2	12		1950 to 2026-06-30	
Wildfire	2			0	2		1996 to 2026-06-30	
Winter Weather	38			5	3		1996 to 2026-06-30	

Notable Storm Events records

Sources: 1, 6, 7

Date	Event type	Magnitude or extent	Damage <i>nominal dollars</i>	Deaths, injuries <i>direct only</i>	Location	Flags	Why listed
2022-07-19	Drought		\$0 property; \$0 crops (zone total, 2022 dollars)	0, 0	NWS zone OKZ056 (NOWATA), zone-level	within last 5 years	B1-c worst recorded: Drought
2015-11-11	Wildfire		\$250,000 property; \$0 crops (zone total, 2015 dollars)	0, 0	NWS zone OKZ056 (NOWATA), zone-level		B1-c worst recorded: Wildfire
2012-09-07	Thunderstorm Wind	87 kt (100 mph) estimated gust	\$250,000 property; \$0 crops (2012 dollars)	3, 0	NOWATA ARPT		deaths or injuries recorded
2011-07-14	Excessive Heat		\$0 property; \$0 crops (zone total, 2011 dollars)	0, 0	NWS zone OKZ056 (NOWATA), zone-level		B1-c worst recorded: Excessive Heat, Heat
2007-12-08	Ice Storm		\$20,000,000 property; \$0 crops (zone total, 2007 dollars)	0, 0	NWS zone OKZ056 (NOWATA), zone-level		B1-c worst recorded: Ice Storm
2007-07-01	Flood		\$250,000 property; \$0 crops (2007 dollars)	0, 0	LENAPAH		B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
2005-11-27	High Wind	52 kt (60 mph) measured gust	damage not reported	0, 0	NWS zone OKZ056 (NOWATA), zone-level		B1-c worst recorded: High Wind and Strong Wind
2003-05-04	Hail	3 in	damage not reported	0, 0	NOWATA		B1-c worst recorded: Hail
1996-05-26	Lightning		\$5,000 property; crops not reported (1996 dollars)	0, 0	NOWATA		B1-c worst recorded: Lightning
1981-05-23	Tornado	F2, 9.5 mi path length (whole path, pre-1996), 33 yd wide	damage not recorded (pre-1996 record)	0, 3	location not recorded		deaths or injuries recorded
1981-05-23	Tornado	F2, 4.5 mi path length (whole path, pre-1996), 100 yd wide	\$250,000 property; crops not recorded (1981 dollars)	0, 3	location not recorded		deaths or injuries recorded
1979-03-18	Tornado	F3, 4.1 mi path length (whole path, pre-1996), 30 yd wide	\$25,000 property; crops not recorded (1979 dollars)	0, 0	location not recorded		B1-c worst recorded: Tornado

The full list is in the Excel file, sheet "B1-d Storm Events history" (649 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	2	event-days per year	about 2 days per year		Storm Events event- days in 0 of 30 years, 1996 to 2025 (0%)	38	2005-11-12 to 2024-11-12 (19 years)	countywide	No Storm Events cold wave record, 1996 to 2025.
Drought	34.5	event-days per year	about 34.5 days per year	Likely	Storm Events event- days in 11 of 30 years, 1996 to 2025 (36.7%)	973	2000 to 2025 (25.25 years; D3 and D4 only)	countywide	
Earthquake	0.00123	annual probability at a location	chance a given location in the county has at least minor-damage shaking in a year: 0.123%			not shown	modeled	see B1-f	No descriptor (Storm Events does not record earthquakes).
Hail	8.15	events per year	about 8.15 per year	Highly likely	FEMA annualized frequency (modeled)	310.3 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave	23.5	event-days per year	about 23.5 days per year	Likely	Storm Events event- days in 18 of 30 years, 1996 to 2025 (60%)	314	2005-11-12 to 2024-11-12 (19 years)	countywide	
Hurricane	0.01	events per year	about 1 in 100 years	Possible	FEMA annualized frequency (modeled)	0	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	1.04	event-days per year	about 1.04 days per year	Likely	Storm Events event- days in 8 of 30 years, 1996 to 2025 (26.7%)	71	1946-12-31 to 2014-02-12 (67 years)	countywide	
Inland Flooding	1.82	event-days per year	about 1.82 days per year	Likely	Storm Events event- days in 21 of 30 years, 1996 to 2025 (70%)	51	1996 to 2023 (28 years)	see B1-f	
Landslide	0.104	events per year (modeled)	about 1 in 10 years	Likely	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Lightning	54.6	days per year with a strike	about 54.6 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	countywide	
Strong Wind	6.7	events per year	about 6.7 per year	Highly likely	FEMA annualized frequency (modeled)	255	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	0.557	events per year	about 0.56 per year	Likely	FEMA annualized frequency (modeled)	not shown	1950 to 2023 (EF2+); 1986 to 2023 (EF0-1)	see B1-f	
Wildfire	0.00171	annual probability at a location	chance a given location in the county burns in a year: 0.171%	Possible	Storm Events records in 2 of 30 years, 1996 to 2025 (6.67%)	not shown	modeled	see B1-f	
Winter Weather	9.37	event-days per year	about 9.37 days per year	Likely	Storm Events event- days in 22 of 30 years, 1996 to 2025 (73.3%)	178	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	36	30	1.2
Hail	2.00 in+	1996 to 2025	8	30	0.267
Thunderstorm Wind (counted as NRI Strong Wind)	50-64 kt	1996 to 2025	92	30	3.07
Thunderstorm Wind (counted as NRI Strong Wind)	65 kt+	1996 to 2025	22	30	0.733
Thunderstorm Wind (counted as NRI Strong Wind)	unmeasured or below 50 kt	1996 to 2025	32	30	1.07
Tornado	EF0-1	1996 to 2025	17	30	0.567
Tornado	EF2-3	1996 to 2025	1	30	0.0333
Tornado	EF4-5	1996 to 2025	0	30	0
Tornado	unrated (EFU)	1996 to 2025	4	30	0.133

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	4 of 4	88.6	90.9	96.9	Very High 1, Relatively High 3
Drought	4 of 4	75.0	94.8	97.6	Relatively Moderate 3, Very Low 1
Earthquake	4 of 4	28.6	34.2	63.8	Relatively Low 1, Very Low 3
Hail	4 of 4	63.9	65.3	78.2	Relatively Moderate 1, Relatively Low 3
Heat Wave	4 of 4	81.6	83.1	94.5	Relatively High 1, Relatively Moderate 3
Hurricane	4 of 4	38.8	41.3	42.2	Very Low 4
Ice Storm	4 of 4	98.4	99.3	99.9	Very High 4
Inland Flooding	4 of 4	50.9	65.8	73.5	Relatively Moderate 4
Landslide	4 of 4	66.1	80.0	88.1	Relatively Low 2, Very Low 2
Lightning	4 of 4	61.5	64.2	89.4	Relatively High 1, Relatively Moderate 3
Strong Wind	4 of 4	99.4	99.5	99.9	Very High 4

Hazard	Tracts <i>rated of all</i>	NRI risk score, 0 to 100			Tracts by rating
		Min	Median	Max	
Tornado	4 of 4	86.0	88.8	99.0	Very High 1, Relatively High 3
Wildfire	4 of 4	82.4	84.0	89.6	Relatively Moderate 1, Relatively Low 3
Winter Weather	4 of 4	70.6	75.4	91.3	Relatively High 1, Relatively Moderate 3

Drought: Agriculture is all of NRI's expected annual loss for this hazard in the county, so the tract range mostly reflects where crop and livestock value is.

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, drought, 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 (crop and livestock value where a line above names agriculture).

Each jurisdiction (starting figures from federal data)

Sources: 1, 3, 4, 6

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>	

No rows for this unit.

No city, town, township or county rows in FEMA plan data for this unit; same as county.

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

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.

No county-level plan row in FEMA data, so there is no approval date to count from.

- 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 plan <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	\$1,660,641,885	\$69,547,930	9,311	\$26	\$147,681	\$934,761	under 0.0001%				
Drought	n/a	\$5,030,503	n/a	n/a	\$296,728	n/a	5.9% (agriculture)				NRI has no building exposure for this hazard; agriculture shown
Earthquake	\$2,890,458,337	n/a	9,320	\$47,847	n/a	\$19,588	0.00166%				
Hail	\$1,660,641,885	\$69,547,930	9,311	\$42,098	\$8,385	\$7,869	0.00254%				
Heat Wave	\$1,660,641,885	\$69,547,930	9,311	\$425	\$446	\$451,125	under 0.0001%				
Hurricane	\$1,660,641,885	\$69,547,930	9,311	\$3,221	\$3,136	\$24	0.000194%				
Ice Storm	\$1,660,567,771	n/a	9,310	\$889,314	n/a	\$6,957	0.0536%				
Inland Flooding	\$1,659,724,173	\$6,861,505	322	\$1,996,060	\$162,660	\$39,035	n/a (see note)				NRI counts the full building value of any census block with some flood loss; this is not the value of buildings in the floodplain. Use local FIRM overlays for B2-a/B2-b.
Landslide	\$5,308,237	n/a	31	\$9	n/a	\$388	0.000164%				
Lightning	\$1,660,641,885	n/a	9,311	\$4,444	n/a	\$63,175	0.000268%				
Strong Wind	\$1,660,641,885	\$69,547,930	9,311	\$220,621	\$10,574	\$1,516,786	0.0133%				
Tornado	\$1,660,641,885	\$69,547,930	9,311	\$302,771	\$3,056	\$1,022,450	0.0182%				

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 plan <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
Wildfire	\$185,946,830	\$41,137,883	2,703	\$27,179	\$498	\$11,850	0.0146%				
Winter Weather	\$1,660,641,885	\$69,547,930	9,311	\$20,525	\$777	\$6,020	0.00124%				

Totals since the plan: not available. No county-level plan row in FEMA data, so there is no approval date to count from.

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	9,311
Building value (total, not at risk)	\$1,660,641,885
Agriculture value (total, not at risk)	\$69,547,930
NRI risk rating (all hazards)	Very Low
Expected annual loss, buildings and agriculture, all hazards	\$4,188,479
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)	\$4,080,028
Social vulnerability rating	Very High
Community resilience rating	Very Low
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)	0	Severe repetitive loss, FMA definition (44 CFR 77.2)	0
Repetitive loss, NFIP insurance definition	1	Severe repetitive loss, NFIP insurance definition	0

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

Repeat-flood properties: county total and NFIP communities

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	0	0	1	0	1	0	0
of which: Nowata city (community ID not in plan data)	0	0	1	0	1	0	0

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	0	0	1	0	1	0	0
2 to 4 unit residential	0	0	0	0	0	0	0
other residential	0	0	0	0	0	0	0
non-residential	0	0	0	0	0	0	0
not reported	0	0	0	0	0	0	0

FEMA's occupancy groups have no institutional class; institutional properties are counted in non-residential or other residential in the table by occupancy group.

FMA RL and FMA SRL are the Flood Mitigation Assistance definitions (44 CFR 77.2), the ones the FEMA Local Mitigation Planning Policy Guide cites. NFIP repetitive loss (the FEMA insurance definition) is 2 or more claims over \$1,000 in 10 years, and a property can leave that group once it is mitigated. Also shown: NFIP severe repetitive loss, any category, mitigated and currently insured. The Methods page gives the OpenFEMA field details.

Counts are aggregates of FEMA's public NFIP Multiple Loss Properties file (FEMA's data date 2026-08-02; file version 2026-08-04). No property is identified. County assignment is FEMA's geocode.

In this county 0 properties are FMA repetitive loss but not NFIP repetitive loss, and 1 property is 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):

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3. FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-29T150754Z, pulled 2026-09-30, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)
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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)
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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_scscd_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_scscd_national.zip), https://www2.census.gov/geo/docs/reference/codes2020/national_place_by_county2020.txt, https://www2.census.gov/geo/docs/reference/ct_change/ct_cou_to_cousub_crosswalk.xlsx (used to match place names and codes; no table prints its values)

What this packet is and what the plan adds

This packet is the federal data for the plan's risk assessment (the summary on page 1 says how it is organized); the plan and FEMA's review decide whether each item is met.

The plan adds what only the community has: local data on assets, critical facilities, development and each jurisdiction's impacts; local hazard history, including state-declared emergencies; the mitigation strategy; and adoption.

How the federal data are built: National Risk Index values are FEMA's model, not counts of events. Storm Events is more complete from 1996; zone-level records are placed by forecast zone, not by location in the county. Public Assistance for a jurisdiction is matched by applicant name. The Methods page gives every rule and the known edge cases.

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