

Tulsa County, OK

Risk-assessment baseline packet

County FIPS: 40143 Release: 2026-10 Data as of: 2026-09-30 Storm Events data through: 2026-06-30

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

Summary

Plan status as of 2026-09-30: Expired on 2026-06-13. Plan: Tulsa County (FEMA plan 106590), approved 2021-06-14.

Since the plan was approved on 2021-06-14: 2 new hazard declarations (2 incidents): DR-4657-OK (Severe Storms, Tornadoes, and Flooding), DR-4721-OK (Severe Storms, Straight-Line Winds, and Tornadoes).

NOAA Storm Events records since that date: 451 records (data through 2026-06-30).

Highest expected annual loss (FEMA National Risk Index, modeled total; see B1-a): Inland Flooding (\$137,895,309 a year), Heat Wave (\$75,514,343) and Tornado (\$37,149,562).

Repetitive-loss flood properties now: FMA RL 13, SRL 33 (44 CFR 77.2); any definition: 161.

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; 40143 is this area.

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

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

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

CFR: Code of Federal Regulations.

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

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

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Plan clock

Status:	Expired on 2026-06-13	Plan:	Tulsa County (FEMA plan 106590)
Approved:	2021-06-14	Days since expiry:	109
Update underway:	none recorded in FEMA's plan tracker		

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

What changed since your last plan (approved 2021-06-14)

New federal declarations:	2 new hazard declarations (2 incidents): DR-4657-OK (Severe Storms, Tornadoes, and Flooding), DR-4721-OK (Severe Storms, Straight-Line Winds, and Tornadoes)	Storm Events records since approval:	451 records (data through 2026-06-30)
Repetitive loss now:	FMA RL 13, SRL 33 (44 CFR 77.2); any definition: 161	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: 24 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
Tulsa County	County	Expired on 2026-06-13	Tulsa County (FEMA plan 106590)	2021-06-14	2026-06-13	-109		this jurisdiction approved 2021-06-16
Bixby city	City	Expired on 2026-06-13	Tulsa County (FEMA plan 106590)	2021-06-14	2026-06-13	-109		this jurisdiction approved 2021-06-16
Broken Arrow city	City	Approved, expires 2028-03-05	Broken Arrow (FEMA plan 108662)	2023-03-06	2028-03-05	522		
Collinsville city	City	Expired on 2026-06-13	Tulsa County (FEMA plan 106590)	2021-06-14	2026-06-13	-109		
Jenks city	City	Expired on 2026-06-13	Tulsa County (FEMA plan 106590)	2021-06-14	2026-06-13	-109		this jurisdiction approved 2021-09-16
Owasso city	City	No approved plan on record	none	none	none		FEMA tracker shows a plan in review	
Sand Springs city	City	Expired on 2019-10-20	Sand Springs (FEMA plan 100229)	2014-10-20	2019-10-20	-2,537		
Sapulpa city	City	Approved, expires 2028-04-03	Creek County (FEMA plan 106486)	2023-04-04	2028-04-03	551		this jurisdiction approved 2023-10-13
Skiatook city	Town	No approved plan on record	none	none	none		FEMA tracker shows a plan in review	
Sperry town	Town	Expired on 2026-06-13	Tulsa County (FEMA plan 106590)	2021-06-14	2026-06-13	-109		this jurisdiction approved 2021-06-16
Tulsa city	City	Approved, expires 2029-12-11	Tulsa (FEMA plan 110187)	2024-12-12	2029-12-11	1,168		
Berryhill Public Schools	School/School District	Expired on 2026-06-13	Tulsa County (FEMA plan 106590)	2021-06-14	2026-06-13	-109		this jurisdiction approved 2021-09-16
Bixby Public Schools	School/School District	Expired on 2026-06-13	Tulsa County (FEMA plan 106590)	2021-06-14	2026-06-13	-109		this jurisdiction approved 2021-06-15
Broken Arrow Public Schools	School/School District	Approved, expires 2028-03-05	Broken Arrow (FEMA plan 108662)	2023-03-06	2028-03-05	522		
Jenks Public Schools	School/School District	Expired on 2026-06-13	Tulsa County (FEMA plan 106590)	2021-06-14	2026-06-13	-109		this jurisdiction approved 2021-06-15
Keystone Public School	School/School District	Expired on 2026-06-13	Tulsa County (FEMA plan 106590)	2021-06-14	2026-06-13	-109		this jurisdiction approved 2021-09-16

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
Liberty Public Schools	School/School District	Expired on 2026-06-13	Tulsa County (FEMA plan 106590)	2021-06-14	2026-06-13	-109		this jurisdiction approved 2021-09-16
Owasso Public Schools	School/School District	No approved plan on record	none	none	none		FEMA tracker shows a plan in review	
Sand Springs Public Schools	School/School District	Expired on 2019-10-20	Sand Springs (FEMA plan 100229)	2014-10-20	2019-10-20	-2,537		
Skiatook Public Schools	School/School District	No approved plan on record	none	none	none		FEMA tracker shows a plan in review	
Sperry Public Schools	School/School District	Expired on 2026-06-13	Tulsa County (FEMA plan 106590)	2021-06-14	2026-06-13	-109		this jurisdiction approved 2021-09-16
Union Public Schools	School/School District	Approved, expires 2028-03-05	Broken Arrow (FEMA plan 108662)	2023-03-06	2028-03-05	522		this jurisdiction approved 2023-03-10
Name not given in FEMA data (ID 200664)	School/School District	Expired on 2020-02-11	Liberty Public Schools (FEMA plan 100477)	2015-02-11	2020-02-11	-2,423		
Name not given in FEMA data (ID NM06_58536)	School/School District	Expired on 2017-12-17	Tulsa Public Schools (FEMA plan 58536)	2012-12-17	2017-12-17	-3,209		

FEMA plan data lists 2 school district rows with no name (FEMA IDs only) and 11 named school districts. FEMA files some districts under two ID schemes on different plans, so a named district's 'No approved plan on record' can sit beside an unnamed row that has a plan.

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	\$132,210,451	\$312,761	\$5,372,097	\$137,895,309	329	
2	Heat Wave	Relatively High	Relatively High	\$647	\$192	\$75,513,504	\$75,514,343	91	
3	Tornado	Very High	Relatively High	\$9,032,589	\$1,235	\$28,115,741	\$37,149,562	46	
4	Strong Wind	Very High	Very High	\$7,446,951	\$1,054	\$3,376,071	\$10,824,076	677	Includes 16 High Wind records (a NOAA non-thunderstorm wind type, outside NRI's Strong Wind definition).
5	Cold Wave	Relatively High	Relatively High	\$44,848	\$38,789	\$9,617,001	\$9,700,637	3	
6	Hail	Relatively High	Relatively High	\$6,623,057	\$338	\$133,494	\$6,756,889	854	
7	Ice Storm	Very High	Very High	\$4,454,151	n/a	\$1,389,360	\$5,843,511	9	
8	Earthquake	Relatively Low	Relatively Moderate	\$3,402,984	n/a	\$1,306,595	\$4,709,579		Storm Events does not record earthquakes.
9	Wildfire	Relatively Moderate	Relatively Moderate	\$1,107,405	\$280	\$378,721	\$1,486,406	7	
10	Lightning	Relatively High	Relatively High	\$208,051	n/a	\$1,024,920	\$1,232,972	19	
11	Drought	Relatively Moderate	Relatively Moderate	n/a	\$576,018	n/a	\$576,018	70	
12	Winter Weather	Relatively High	Relatively High	\$94,563	\$293	\$257,782	\$352,638	43	

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	\$44,602	\$1,506	\$800	\$46,908	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
14	Landslide	Relatively Low	Very Low	\$1,994	n/a	\$2,749	\$4,743	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 70 (Relatively Low, 76.9); tract 59 (Relatively Low, 75.7); tract 113 (Relatively Low, 75.6)
Hurricane	tract 59 (Very Low, 34.1); tract 113 (Very Low, 33.6); tract 25 (Very Low, 33.4)
Landslide	tract 95 (Relatively Low, 93.9); tract 66 (Relatively Low, 91.4); tract 93 (Relatively Low, 89.2)
Tornado	tract 90.06 (Very High, 95.1); tract 73.06 (Very High, 93.3); tract 16 (Relatively High, 92.5)
Wildfire	tract 95 (Relatively Moderate, 95.3); tract 78.04 (Relatively Moderate, 94.8); tract 55 (Relatively Moderate, 93.7)

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 70 is Census Tract 70). 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	3 records, 1998 to 1999 (2 zone-level)	1 day; 1 with a recorded value	1 consecutive day, 1998-04-27		No event record names a jurisdiction in the plan. Zone-level records (2) apply countywide.	Wind chill: in event narratives only (local data needed). Cold/Wind Chill records from May to September (a frost night, not a cold wave) are counted but not used for the longest run.
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)	70 records, 2005 to 2026 (70 zone-level)	80 days to 378 days (median 153 days); 11 with a recorded value	378 days (about 12.4 months), 2014-05-01 to 2015-05-13, a run of 13 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)	1,110 records, 1955 to 2026	0.75 in to 4.5 in (median 1 in); 1,108 with a recorded value	4.5 in hail, 1963-05-10	Hail, 2005-04-05, \$65,000,000 property; crops not reported (2005 dollars)	Event records naming jurisdictions in the plan: Tulsa city (282 records), Broken Arrow city (111 records), Owasso city (87 records), Bixby city (67 records), Sand Springs city (57 records), Jenks city (56 records), Collinsville city (42 records), Skiatook city (27 records), Sperry town (22 records), Sapulpa city (1 record).	
Excessive Heat, Heat	heat index (in event narratives)	91 records, 1998 to 2025 (91 zone-level)	1 day to 32 days (median 2 days); 81 with a recorded value	2011-07-09 to 2011-08-09 (2 records, 1 of them a monthly summary record), 3 direct deaths, zone-level		Countywide (zone-level records).	Heat index: in event narratives only (local data needed). Heat records from November to March (unseasonable warmth, not a heat wave) are counted but not used for the longest run.

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
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)	9 records, 1996 to 2024 (9 zone-level)		Ice Storm, 2007-12-08, \$101,000,000 property; \$0 crops (2007 dollars), 3 direct deaths (reported for the zone); NWS zone OKZ060		Countywide (zone-level records).	Ice thickness: in event narratives only (local data needed).
Flash Flood, Flood, Lakeshore Flood	damage and flood days (flood depth: FIRM)	329 records, 1996 to 2026 (22 zone-level)		Flash Flood, 2000-05-06, \$3,000,000 property; crops not reported (2000 dollars), 1 direct death		Event records naming jurisdictions in the plan: Tulsa city (52 records), Owasso city (30 records), Collinsville city (27 records), Sperry town (20 records), Bixby city (19 records), Broken Arrow city (18 records), Skiatook city (14 records), Jenks city (9 records), Sand Springs city (8 records). Zone-level records (22) 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)	19 records, 1998 to 2017		Lightning, 2005-07-23, damage not reported, 1 direct death, 1 direct injury	Lightning, 2006-06-12, \$2,000,000 property; crops not reported (2006 dollars)	Event records naming jurisdictions in the plan: Tulsa city (8 records), Broken Arrow city (3 records), Jenks city (2 records), Bixby city (1 record), Owasso city (1 record), Sand Springs 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)	16 records, 1998 to 2026 (16 zone-level)	39 kt (45 mph) to 61 kt (70 mph) (median 52 kt (60 mph)); 14 with a recorded value	61 kt (70 mph) estimated gust, High Wind, 2005-06-04; NWS zone OKZ060	High Wind, 2005-11-27, \$30,000 property; crops not reported, reported for the zone (2005 dollars)	Countywide (zone-level records).	
Thunderstorm Wind	wind speed (kt and mph)	878 records, 1955 to 2026	50 kt (58 mph) to 100 kt (115 mph) (median 56 kt (64 mph)); 723 with a recorded value	100 kt (115 mph), measurement type not recorded, Thunderstorm Wind, 1974-06-08	Thunderstorm Wind, 2023-06-17, \$160,000,000 property; \$0 crops (2023 dollars)	Event records naming jurisdictions in the plan: Tulsa city (206 records), Broken Arrow city (83 records), Bixby city (63 records), Owasso city (52 records), Collinsville city (37 records), Sand Springs city (31 records), Jenks city (25 records), Skiatook city (17 records), Sperry town (16 records).	Speeds under 20 kt (likely entry errors) are left out of the observed range.

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
Tornado	Enhanced Fujita (Fujita before Feb 2007)	97 records, 1950 to 2026	F/EF0 to F/EF4 (median F/EF1); 93 with a recorded value	F4 tornado, 1993-04-24, 5.5 mi path length (whole path, pre-1996), 250 yd wide, \$500,000 property; crops not recorded (1993 dollars), 7 direct deaths, 100 direct injuries	Tornado, 1981-04-19, \$250,000,000 property; crops not recorded (1981 dollars)	Event records naming jurisdictions in the plan: Broken Arrow city (7 records), Tulsa city (7 records), Bixby city (5 records), Owasso city (5 records), Collinsville city (3 records), Jenks city (1 record), Skiatook city (1 record), Sperry town (1 record).	Before 1996 a tornado is listed once, under the county where it began, with its whole path's rating and length; from 1996 on, each county lists its own segment. Length is not used to rank tornadoes (see Methods).
Wildfire	acres burned (local data)	7 records, 2005 to 2011 (7 zone-level)		Wildfire, 2011-08-02, \$1,750,000 property; \$0 crops (2011 dollars); NWS zone OKZ060		Countywide (zone-level records).	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)	43 records, 1996 to 2026 (43 zone-level)		Heavy Snow, 1999-03-13, \$5,000 property; crops not reported (1999 dollars); NWS zone OKZ060		Countywide (zone-level records).	Snow depth: in event narratives only (local data needed).

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

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

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

Supports FEMA checklist item B1-d: previous occurrences

Federal declarations for this county: 40 declarations covering 30 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
2023-07-19	2023-06-14	DR-4721-OK	Major disaster	Severe Storms, Straight-Line Winds, and Tornadoes	Strong Wind; Tornado	\$6,744,257.11	new since last plan; within last 5 years	
2022-06-29	2022-05-02	DR-4657-OK	Major disaster	Severe Storms, Tornadoes, and Flooding	Inland Flooding; Tornado	PA not declared for this county	new since last plan; within last 5 years	
2021-02-24	2021-02-08	DR-4587-OK	Major disaster	Severe Winter Storms	Ice Storm	\$405,489.73	in the 12 months before plan approval	

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance	Flags	Notes
						<i>federal share obligated, nominal dollars</i>		
2021-02-17	2021-02-08	EM-3555-OK	Emergency	Severe Winter Storm	Ice Storm	no Public Assistance recorded	in the 12 months before plan approval	same incident as DR-4587
2020-04-05	2020-01-20	DR-4530-OK	Major disaster	COVID-19 Pandemic	Non-natural, not counted	\$10,095,724.85		
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
2019-06-01	2019-05-07	DR-4438-OK	Major disaster	Severe Storms, Straight-Line Winds, Tornadoes, and Flooding	Inland Flooding; Strong Wind; Tornado	\$16,909,930.31		
2019-05-25	2019-05-07	EM-3411-OK	Emergency	Flooding	Inland Flooding	no Public Assistance recorded		same incident as DR-4438
2015-05-26	2015-05-05	DR-4222-OK	Major disaster	Severe Storms, Tornadoes, Straight-Line Winds, and Flooding	Inland Flooding; Strong Wind; Tornado	\$171,870.93		FEMA's declaration record does not list Public Assistance, but FEMA's PA project summaries show obligations for this county
2011-08-05	2011-08-05	FM-2946-OK	Fire management	265Th West Fire	Wildfire	no Public Assistance recorded		
2011-08-02	2011-08-02	FM-2944-OK	Fire management	Turley Fire	Wildfire	no Public Assistance recorded		
2011-05-13	2011-01-31	DR-1985-OK	Major disaster	Severe Winter Storm and Snowstorm	Winter Weather	\$998,531.14		
2011-02-02	2011-01-31	EM-3316-OK	Emergency	Severe Winter Storm	Winter Weather	no Public Assistance recorded		same incident as DR-1985
2010-02-25	2009-12-24	DR-1876-OK	Major disaster	Severe Winter Storm	Winter Weather	\$1,178,342.93		
2010-01-30	2010-01-28	EM-3308-OK	Emergency	Severe Winter Storm	Winter Weather	no Public Assistance recorded		
2007-12-18	2007-12-08	DR-1735-OK	Major disaster	Severe Winter Storms	Ice Storm	\$25,295,996.63		
2007-12-10	2007-12-08	EM-3280-OK	Emergency	Severe Winter Storms	Ice Storm	no Public Assistance recorded		same incident as DR-1735
2007-02-01	2007-01-12	DR-1678-OK	Major disaster	Severe Winter Storms	Winter Weather	\$2,122,473.96		
2007-01-14	2007-01-12	EM-3272-OK	Emergency	Severe Winter Storms and Flooding	Ice Storm	no Public Assistance recorded		same incident as DR-1678
2006-01-19	2006-01-15	FM-2628-OK	Fire management	Sperry Fire	Wildfire	no Public Assistance recorded		same incident as DR-1623
2006-01-10	2005-11-27	DR-1623-OK	Major disaster	Extreme Wildfire Threat	Wildfire	\$57,690.14		
2005-09-05	2005-08-29	EM-3219-OK	Emergency	Hurricane Katrina Evacuation	Hurricane: evacuation support, not a local hazard event; not counted	\$19,640.12		
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	\$1,505,021.46		
2000-12-28	2000-12-25	EM-3158-OK	Emergency	Severe Winter and Ice Storm	Ice Storm	no Public Assistance recorded		same incident as DR-1355
1999-05-04	1999-05-03	DR-1272-OK	Major disaster	Ok, Tornadoes 5/3/99	Tornado	\$81,018.50		
1996-02-27	1996-02-27	EM-3118-OK	Emergency	Extreme Fire Hazard	Wildfire	no Public Assistance recorded		
1993-05-12	1993-05-08	DR-991-OK	Major disaster	Severe Storms, Tornadoes & Flooding	Inland Flooding; Tornado	PA not declared for this county		

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance	Flags	Notes
						<i>federal share obligated, nominal dollars</i>		
1993-04-26	1993-04-24	DR-987-OK	Major disaster	Severe Storms & Tornadoes	Tornado	PA not declared for this county		
1986-10-14	1986-09-26	DR-778-OK	Major disaster	Severe Storms & Flooding	Inland Flooding	no Public Assistance recorded		
1984-05-31	1984-05-26	DR-709-OK	Major disaster	Severe Storms & Flooding	Inland Flooding	PA not declared for this county		
1984-05-03	1984-04-26	DR-704-OK	Major disaster	Severe Storms & Tornadoes	Tornado	PA not declared for this county		
1976-06-05	1976-06-05	DR-504-OK	Major disaster	Severe Storms & Flooding	Inland Flooding	no Public Assistance recorded		
1975-12-10	1975-12-10	DR-491-OK	Major disaster	Severe Storms & Tornadoes	Tornado	no Public Assistance recorded		
1974-11-26	1974-11-26	DR-453-OK	Major disaster	Severe Storms & Flooding	Inland Flooding	no Public Assistance recorded		
1974-06-10	1974-06-10	DR-441-OK	Major disaster	Severe Storms & Flooding	Inland Flooding	no Public Assistance recorded		
1974-03-22	1974-03-22	DR-419-OK	Major disaster	Heavy Rains & Flooding	Inland Flooding	no Public Assistance recorded		
1973-06-13	1973-06-13	DR-392-OK	Major disaster	Severe Storms, Flooding, & Tornadoes	Inland Flooding; Tornado	no Public Assistance recorded		
1972-01-14	1972-01-14	DR-317-OK	Major disaster	Severe Storms & Flooding	Inland Flooding	no Public Assistance recorded		
1971-09-28	1971-09-28	DR-314-OK	Major disaster	Heavy Rains & Floods	Inland Flooding	no Public Assistance recorded		

School districts and special districts in this county: \$374,355.26 (included in the county total above). Public Assistance matched by applicant name to the school districts and special districts FEMA lists as plan participants in this county. They have no row of their own in the jurisdiction table, so their total is listed here. These dollars are already included in the county PA column of the declarations table (the FEMA record places each applicant in this county), so this line is not added to it.

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.

Public Assistance filed under this county for declarations that do not list it: 1 row, \$69,354.45

Sources: 2, 3

FEMA number	Declared	Title	Applicant	PA obligated <i>federal share obligated, nominal dollars</i>
DR-4315-OK	2017-05-26	Severe Storms, Tornadoes, and Flooding	Tulsa, City of	\$69,354.45

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	3	0	0	0	0	0	1996 to 2026-06-30	
Drought	70	22	0	21	0	0	1996 to 2026-06-30	
Earthquake	0	0	0	0	0	0		Storm Events does not record earthquakes; the USGS earthquake catalog is the source.
Hail	1,110	212	3	212	0	0	1955 to 2026-06-30	
Heat Wave	91	28	2	23	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

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
Ice Storm	9	1	0	1	5	0	1996 to 2026-06-30	
Inland Flooding	329	37	8	32	13	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	19	0	0	0	0	0	1996 to 2026-06-30	
Strong Wind	894	136	15	129	3	1	1955 to 2026-06-30	Includes 16 High Wind records.
Tornado	97	9	0	9	10	2	1950 to 2026-06-30	
Wildfire	7	0	0	0	4	0	1996 to 2026-06-30	
Winter Weather	43	6	3	6	4	0	1996 to 2026-06-30	

Notable Storm Events records

Sources: 1, 6, 7

Date	Event type	Magnitude or extent	Damage <i>nominal dollars</i>	Deaths, injuries <i>direct only</i>	Location	Why listed
2014-05-01	Drought		\$0 property; \$0 crops, reported for the zone (2014 dollars)	0, 0	NWS zone OKZ060 (TULSA), zone-level	B1-c worst recorded: Drought
2011-08-02	Wildfire		\$1,750,000 property; \$0 crops, reported for the zone (2011 dollars)	0, 0	NWS zone OKZ060 (TULSA), zone-level	B1-c worst recorded: Wildfire
2011-07-09	Excessive Heat		\$0 property; \$0 crops, reported for the zone (2011 dollars)	2, 175	NWS zone OKZ060 (TULSA), zone-level	B1-c worst recorded: Excessive Heat, Heat
2007-12-08	Ice Storm		\$101,000,000 property; \$0 crops, reported for the zone (2007 dollars)	3, 0	NWS zone OKZ060 (TULSA), zone-level	deaths or injuries recorded
2005-07-23	Lightning		damage not reported	1, 1	BROKEN ARROW	B1-c worst recorded: Lightning
2005-06-04	High Wind	61 kt (70 mph) estimated gust	damage not reported	0, 0	NWS zone OKZ060 (TULSA), zone-level	B1-c worst recorded: High Wind and Strong Wind
2000-05-06	Flash Flood		\$3,000,000 property; crops not reported (2000 dollars)	1, 0	COUNTYWIDE	B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
1998-04-27	Cold/Wind Chill		damage not reported	0, 0	(TUL)TULSA INTL ARPT	B1-c worst recorded: Cold/Wind Chill, Extreme Cold/Wind Chill
1993-04-24	Tornado	F4, 5.5 mi path length (whole path, pre-1996), 250 yd wide	\$500,000 property; crops not recorded (1993 dollars)	7, 100	E Tulsa to 1 N to Catoosa	deaths or injuries recorded
1981-04-19	Tornado	F3, 9.9 mi path length (whole path, pre-1996), 880 yd wide	\$2,500,000 property; crops not recorded (1981 dollars)	5, 49	location not recorded	deaths or injuries recorded
1974-06-08	Thunderstorm Wind	100 kt (115 mph), measurement type not recorded	damage not recorded (pre-1996 record)	0, 0	location not recorded	B1-c worst recorded: Thunderstorm Wind
1963-05-10	Hail	4.5 in	damage not recorded (pre-1996 record)	0, 0	location not recorded	B1-c worst recorded: Hail

The full list is in the Excel file, sheet "B1-d Storm Events history" (2,672 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	1.68	event-days per year	about 1.68 days per year	Possible (from Storm Events: 2 of 30 years)	event-days in 2 of 30 years, 1996 to 2025 (6.67%)	32	2005-11-12 to 2024-11-12 (19 years)	countywide	
Drought	20.7	event-days per year	about 20.7 days per year	Likely (from Storm Events: 14 of 30 years)	event-days in 14 of 30 years, 1996 to 2025 (46.7%)	973	2000 to 2025 (25.25 years; D3 and D4 only)	countywide	
Earthquake	0.0012	annual probability at a location	chance a given location in the county has at least minor- damage shaking in a year: 0.12%			not shown	modeled	see B1-f	No descriptor (Storm Events does not record earthquakes).
Hail	8.99	events per year	about 8.99 per year	Highly likely	FEMA annualized frequency (modeled)	341.7 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave	26.3	event-days per year	about 26.3 days per year	Likely (from Storm Events: 23 of 30 years)	event-days in 23 of 30 years, 1996 to 2025 (76.7%)	309	2005-11-12 to 2024-11-12 (19 years)	countywide	
Hurricane	0.00898	events per year	about 1 in 111 years	Unlikely	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	1.28	event-days per year	about 1.28 days per year	Likely (from Storm Events: 8 of 30 years)	event-days in 8 of 30 years, 1996 to 2025 (26.7%)	86	1946-12-31 to 2014-02-12 (67 years)	countywide	
Inland Flooding	4.75	event-days per year	about 4.75 days per year	Highly likely (from Storm Events: 29 of 30 years)	event-days in 29 of 30 years, 1996 to 2025 (96.7%)	133	1996 to 2023 (28 years)	see B1-f	
Landslide	0.134	events per year (modeled)	about 1 in 7 years	Likely	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Lightning	54.1	days per year with a strike	about 54.1 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	countywide	
Strong Wind	6.75	events per year	about 6.75 per year	Highly likely	FEMA annualized frequency (modeled)	257	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	0.682	events per year	about 0.68 per year	Likely	FEMA annualized frequency (modeled)	not shown	1950 to 2023 (EF2+); 1986 to 2023 (EF0-1)	see B1-f	
Wildfire	0.00347	annual probability at a location	chance a given location in the county burns in a year: 0.347%	Likely (from Storm Events: 3 of 30 years)	Storm Events records in 3 of 30 years, 1996 to 2025 (10%)	not shown	modeled	see B1-f	Descriptor from Storm Events, not NRI.
Winter Weather	9.16	event-days per year	about 9.16 days per year	Likely (from Storm Events: 21 of 30 years)	event-days in 21 of 30 years, 1996 to 2025 (70%)	174	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	404	30	13.5
Hail	2.00 in+	1996 to 2025	36	30	1.2
Thunderstorm Wind (counted as NRI Strong Wind)	50-64 kt	1996 to 2025	507	30	16.9
Thunderstorm Wind (counted as NRI Strong Wind)	65 kt+	1996 to 2025	102	30	3.4
Thunderstorm Wind (counted as NRI Strong Wind)	unmeasured or below 50 kt	1996 to 2025	44	30	1.47
Tornado	EF0-1	1996 to 2025	38	30	1.27
Tornado	EF2-3	1996 to 2025	4	30	0.133
Tornado	EF4-5	1996 to 2025	0	30	0
Tornado	unrated (EFU)	1996 to 2025	1	30	0.0333

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	208 of 208	27.8	48.6	77.9	Relatively High 1, Relatively Moderate 115, Relatively Low 92
Drought	19 of 208	67.0	87.7	96.2	Relatively Moderate 6, Relatively Low 10, Very Low 3, No Rating 189
Earthquake	208 of 208	9.2	38.1	76.9	Relatively Low 90, Very Low 118
Hail	208 of 208	45.7	75.4	93.0	Relatively High 6, Relatively Moderate 162, Relatively Low 40
Heat Wave	208 of 208	83.2	95.7	99.4	Very High 59, Relatively High 148, Relatively Moderate 1
Hurricane	208 of 208	16.0	24.0	34.1	Very Low 208
Ice Storm	208 of 208	59.9	87.8	96.9	Relatively High 61, Relatively Moderate 144, Relatively Low 3
Inland Flooding	208 of 208	1.9	47.9	98.5	Very High 2, Relatively High 34, Relatively Moderate 65, Relatively Low 86, Very Low 21
Landslide	208 of 208	12.2	40.1	93.9	Relatively Low 9, Very Low 199
Lightning	208 of 208	12.4	32.7	64.5	Relatively Moderate 11, Relatively Low 176, Very Low 21
Strong Wind	208 of 208	45.3	78.9	96.2	Relatively High 67, Relatively Moderate 137, Relatively Low 4

Hazard	Tracts <i>rated of all</i>	NRI risk score, 0 to 100			Tracts by rating
		Min	Median	Max	
Tornado	208 of 208	48.0	71.7	95.1	Very High 2, Relatively High 82, Relatively Moderate 120, Relatively Low 4
Wildfire	112 of 208	18.8	73.3	95.3	Relatively Moderate 20, Relatively Low 41, Very Low 51, No Rating 96
Winter Weather	208 of 208	25.0	41.3	65.0	Relatively Moderate 37, Relatively Low 171

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 <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
Tulsa County	County	Expired on 2026-06-13	FMA RL 2, SRL 10; any 23	\$4,936,846.10	0 total; 0 since its plan	Includes \$1,292,688.11 for declarations not counted as hazard incidents (DR-4530-OK).
Bixby city	City	Expired on 2026-06-13	FMA RL 2, SRL 1; any 14	\$832,611.05	155 total; 24 since its plan	
Broken Arrow city	City	Approved, expires 2028-03-05	FMA RL 6, SRL 6; any 15	\$5,714,015.02	222 total; 41 since its plan	Whole community, including the part in Wagoner County; in-county portion (county table): FMA RL 0, FMA SRL 0, NFIP RL 1, NFIP SRL 0, any category 1.
Collinsville city	City	Expired on 2026-06-13	FMA RL 0, SRL 0; any 0	\$1,770,235.81	109 total; 22 since its plan	
Jenks city	City	Expired on 2026-06-13	FMA RL 0, SRL 0; any 0	\$880,000.84	93 total; 36 since its plan	
Owasso city	City	No approved plan on record	FMA RL 0, SRL 0; any 2	\$1,038,742.30	175 total; no approved plan	
Sand Springs city	City	Expired on 2019-10-20	FMA RL 8, SRL 10; any 25	\$3,558,964.70	97 total; 31 since its plan	
Sapulpa city	City	Approved, expires 2028-04-03	FMA RL 0, SRL 2; any 15	no Public Assistance recorded	1 total; 0 since its plan	Whole community, including the part in Creek County; none of its repeat-flood properties are in this county.
Skiatook city	Town	No approved plan on record	FMA RL 1, SRL 4; any 12	\$937,616.50	59 total; no approved plan	
Sperry town	Town	Expired on 2026-06-13	FMA RL 0, SRL 0; any 1	\$126,721.76	59 total; 3 since its plan	
Tulsa city	City	Approved, expires 2029-12-11	FMA RL 0, SRL 8; any 82	\$29,284,433.87	555 total; 32 since its plan	Whole community, including the part in Creek County, Osage County and Wagoner County; in-county portion (county table): FMA RL 0, FMA SRL 8, NFIP RL 74, NFIP SRL 3, any category 79. Includes \$614,856.86 for declarations not counted as hazard incidents (DR-4530-OK).

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

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

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 2021-06-14 <i>county-coded records, property plus crops, nominal dollars</i>	Zone-level damage since plan <i>property plus crops, reported for the zone</i>	Public Assistance since plan <i>nominal dollars; see note</i>	Note
Cold Wave	\$129,978,112,093	\$26,845,579	668,477	\$44,848	\$38,789	\$9,617,001	under 0.0001%				
Drought	n/a	\$18,996,486	n/a	n/a	\$576,018	n/a	3.03% (agriculture)		\$0		NRI has no building exposure for this hazard; agriculture shown
Earthquake	\$227,658,157,857	n/a	669,279	\$3,402,984	n/a	\$1,306,595	0.00149%				
Hail	\$129,978,499,875	\$26,845,579	668,481	\$6,623,057	\$338	\$133,494	0.0051%	\$4,065,000			
Heat Wave	\$129,978,112,093	\$26,845,579	668,477	\$647	\$192	\$75,513,504	under 0.0001%		\$0		
Hurricane	\$129,978,499,875	\$26,845,579	668,481	\$44,602	\$1,506	\$800	under 0.0001%				
Ice Storm	\$129,965,614,904	n/a	668,384	\$4,454,151	n/a	\$1,389,360	0.00343%		\$0		

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 2021-06-14 <i>county-coded records, property plus crops, nominal dollars</i>	Zone-level damage since plan <i>property plus crops, reported for the zone</i>	Public Assistance since plan <i>nominal dollars; see note</i>	Note
Inland Flooding	\$129,919,991,440	\$11,283,502	13,845	\$132,210,451	\$312,761	\$5,372,097	n/a (see note)	\$2,115,000		no Public Assistance recorded (1 declaration)	NRI counts the full building value of any census block with some flood loss; this is not the value of buildings in the floodplain. Use local FIRM overlays for B2-a/B2-b.
Landslide	\$942,794,899	n/a	4,123	\$1,994	n/a	\$2,749	0.000211%				
Lightning	\$129,978,499,875	n/a	668,481	\$208,051	n/a	\$1,024,920	0.00016%				
Strong Wind	\$129,978,499,875	\$26,845,579	668,481	\$7,446,951	\$1,054	\$3,376,071	0.00573%	\$160,695,000	\$55,000	\$6,744,257.11	Storm Events damage since the plan includes 3 zone-level High Wind records (\$55,000): a NOAA non-thunderstorm wind type, outside NRI's Strong Wind definition.
Tornado	\$129,978,499,875	\$26,845,579	668,481	\$9,032,589	\$1,235	\$28,115,741	0.00695%	\$7,885,000		\$6,744,257.11	
Wildfire	\$4,698,238,207	\$12,486,867	51,399	\$1,107,405	\$280	\$378,721	0.0236%				
Winter Weather	\$129,978,112,093	\$26,845,579	668,477	\$94,563	\$293	\$257,782	under 0.0001%		\$0		

Totals since 2021-06-14 (Storm Events through 2026-06-30): 390 county-coded records, 390 with a damage value recorded (including \$0), \$174,760,000; 61 zone-level records, 61 with a damage value recorded (including \$0), \$55,000 reported for the zone; Public Assistance: \$6,744,257.11 on 2 counted declarations, 1 of them with Public Assistance.

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	668,481
Building value (total, not at risk)	\$129,978,499,875
Agriculture value (total, not at risk)	\$26,845,579
NRI risk rating (all hazards)	Relatively High
Expected annual loss, buildings and agriculture, all hazards	\$165,604,756
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)	\$126,488,836
Social vulnerability rating	Relatively Moderate
Community resilience rating	Relatively Moderate
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)	13	Severe repetitive loss, FMA definition (44 CFR 77.2)	33
Repetitive loss, NFIP insurance definition	141	Severe repetitive loss, NFIP insurance definition	17

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	13	33	141	17	161	10	17
of which: Bixby city	2	1	11	0	14	2	1
of which: Glenpool city (community ID not in plan data)	0	0	4	0	4	0	2
of which: Owasso city	0	0	2	0	2	0	0
of which: Sand Springs city	8	10	19	6	25	1	7
of which: Skiatook town	1	4	9	1	12	1	0
of which: Sperry town	0	0	1	0	1	0	0
of which: Broken Arrow city	0	0	1	0	1	0	0
of which: Tulsa County (unincorporated area)	2	10	20	7	23	3	2
of which: Tulsa city	0	8	74	3	79	3	5

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>	Note
Tulsa County	400462	2	10	20	7	23	3	2	
Bixby city	400207	2	1	11	0	14	2	1	
Broken Arrow city	400236	6	6	14	6	15	0	4	Whole community, including the part in Wagoner County; in-county portion (county table): FMA RL 0, FMA SRL 0, NFIP RL 1, NFIP SRL 0, any category 1.
Collinsville city	400360	0	0	0	0	0	0	0	
Jenks city	400209	0	0	0	0	0	0	0	
Owasso city	400210	0	0	2	0	2	0	0	
Sand Springs city	400211	8	10	19	6	25	1	7	
Sapulpa city	400053	0	2	15	2	15	0	2	Whole community, including the part in Creek County; none of its repeat-flood properties are in this county.
Skiatook city	400212	1	4	9	1	12	1	0	
Sperry town	400213	0	0	1	0	1	0	0	
Tulsa city	405381	0	8	77	3	82	3	5	Whole community, including the part in Creek County, Osage County and Wagoner County; in-county portion (county table): FMA RL 0, FMA SRL 8, NFIP RL 74, NFIP SRL 3, any category 79.

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	13	25	91	14	106	6	15
2 to 4 unit residential	0	2	8	0	10	1	0
other residential	0	0	8	0	8	0	0
non-residential	0	6	34	3	37	3	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 7 properties are FMA repetitive loss but not NFIP repetitive loss, and 135 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). Tulsa County, OK: risk-assessment baseline packet, release 2026-10 (data as of 2026-09-30; County FIPS 40143). Automated baseline. <https://hazardplain.org/ok/40143/> 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.