

Crawford County, IA

Risk-assessment baseline packet

County FIPS: 19047 Release: 2026-10 Data as of: 2026-09-30 Storm Events data through: 2026-06-30

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Summary

Plan status as of 2026-09-30: Expired on 2025-09-10. Plan: Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802), approved 2020-09-10.

Since the plan was approved on 2020-09-10: 2 new hazard declarations (2 incidents) and 73 NOAA Storm Events records; details under "What changed since your last plan".

Highest expected annual loss (FEMA National Risk Index, modeled total; see B1-a): Inland Flooding (\$8,584,343 a year), Drought (\$5,974,609) and Tornado (\$4,768,837).

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; 19047 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 2025-09-10	Plan:	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)
Approved:	2020-09-10	Days since expiry:	385
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 2020-09-10)

New federal declarations:	2 new hazard declarations (2 incidents): DR-4779-IA (Severe Storms and Tornadoes), DR-4870-IA (Severe Winter Storm)	Storm Events records since approval:	73 records (data through 2026-06-30)
Repetitive loss now:	FMA RL 0, SRL 2 (44 CFR 77.2); any definition: 9	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: 23 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 negative = days since expiry	Notes
Crawford County	County	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Arion city	City	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Aspinwall city	City	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Buck Grove city	City	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Charter Oak city	City	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Deloit city	City	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Denison city	City	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Dow City city	City	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Kiron city	City	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Manilla city	City	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Ricketts city	City	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Schleswig city	City	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Vail city	City	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Westside city	City	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Ar-We-Va Community School District	School/School District	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Boyer Valley Community School District	School/School District	Approved, expires 2026-10-26	Harrison and Shelby Counties HMP (FEMA plan 107751)	2021-10-26	2026-10-26	26	this jurisdiction approved 2022-04-18
Charter Oak-Ute Community School District	School/School District	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Denison Community School District	School/School District	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Notes
East Sac County Community School District	School/School District	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
IKM-Manning Community School District	School/School District	Approved, expires 2026-10-26	Harrison and Shelby Counties HMP (FEMA plan 107751)	2021-10-26	2026-10-26	26	this jurisdiction approved 2022-04-18
Schleswig Community School District	School/School District	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
St. Rose of Lima Catholic School	School/School District	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	
Zion Lutheran School	School/School District	Expired on 2025-09-10	Crawford, Carroll, Greene and Sac Counties Multi-Jurisdictional Hazard Mitigation Plan (FEMA plan 106802)	2020-09-10	2025-09-10	-385	

Plan 106802 lists 33 other participants, named in the Excel file.

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 Low	Relatively Low	\$8,416,339	\$167,361	\$643	\$8,584,343	34	
2	Drought	Relatively High	Relatively High	n/a	\$5,974,609	n/a	\$5,974,609	35	
3	Tornado	Relatively Moderate	Relatively Moderate	\$1,942,547	\$14,972	\$2,811,319	\$4,768,837	24	

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
4	Cold Wave	Relatively Moderate	Relatively Moderate	\$2,878	\$396,865	\$1,548,279	\$1,948,023	27	Includes 9 Frost/Freeze records (outside NRI's Cold Wave definition; counted in this table and in B1-d, not in the B1-e descriptor).
5	Strong Wind	Relatively Moderate	Relatively Moderate	\$258,607	\$385,657	\$273,760	\$918,024	176	Includes 36 High Wind records (a NOAA non-thunderstorm wind type, outside NRI's Strong Wind definition).
6	Hail	Relatively Moderate	Relatively Moderate	\$213,324	\$425,077	\$163,027	\$801,428	124	
7	Ice Storm	Relatively Moderate	Relatively Moderate	\$159,771	n/a	\$11,400	\$171,171	11	
8	Heat Wave	Very Low	Very Low	\$7,098	\$9	\$145,004	\$152,110	4	
9	Lightning	Relatively Low	Relatively Low	\$8,121	n/a	\$96,000	\$104,121	2	
10	Winter Weather	Relatively Low	Relatively Low	\$31,558	\$723	\$32,173	\$64,454	65	
11	Wildfire	Very Low	Very Low	\$34,764	\$810	\$4,312	\$39,886	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
12	Landslide	Relatively Low	Relatively Low	\$1,884	n/a	\$14,526	\$16,409	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
13	Earthquake	Very Low	Very Low	\$8,959	n/a	\$1,447	\$10,406		Storm Events does not record earthquakes.
14	Hurricane	No Rating	No Expected Annual Losses	\$0	\$0	\$0	\$0	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).

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

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

Local data needed: state and local wildfire and landslide records (Storm Events records these hazards only in part).

Not applicable to this county per NRI, with no federal declaration and no Storm Events record since 1996: avalanche, coastal flooding, tsunami 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 702 (Very Low, 11.2); tract 705 (Very Low, 10.1); tract 704.01 (Very Low, 9.9)
Hurricane	no tract has a National Risk Index rating for this hazard
Landslide	tract 703 (Relatively Moderate, 97.6); tract 705 (Relatively Low, 94.8); tract 702 (Relatively Low, 93.9)
Tornado	tract 704.01 (Very High, 99.7); tract 704.02 (Very High, 99.7); tract 702 (Very High, 98.4)
Wildfire	tract 703 (Relatively Low, 86.0); tract 704.01 (Relatively Low, 82.9); tract 704.02 (Relatively Low, 79.2)

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 702 is Census Tract 702). 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	18 records, 1996 to 2025 (18 zone-level)	1 day to 4 days (median 2 days); 15 with a recorded value	4 consecutive days, 2024-01-13 to 2024-01-16, zone-level	Cold/Wind Chill, 1999-09-21, property not reported; \$294,117.65 crops (zone total, 1999 dollars)	Countywide (zone-level records).	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	9 records, 1996 to 2019 (9 zone-level)		Frost/Freeze, 2009-10-10, \$2,500,000 crop damage (2009 dollars); NWS zone IAZ044		Countywide (zone-level records).	
Drought	U.S. Drought Monitor scale (D0 to D4)	35 records, 2000 to 2024 (35 zone-level)	10 days to 288 days (median 31 days); 9 with a recorded value	288 days (about 9.5 months), 2023-06-13 to 2024-03-26, a run of 10 consecutive Storm Events drought records, zone-level	Drought, 2012-07-01, \$0 property; \$45,000,000 crops (zone total, 2012 dollars)	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.

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
Earthquake	Modified Mercalli (local data)	0					Storm Events does not record earthquakes; the USGS earthquake catalog is the source.
Hail	hail size (inches)	148 records, 1956 to 2024	0.75 in to 4.25 in (median 1 in); 148 with a recorded value	4.25 in hail, 2008-07-28	Hail, 2009-08-03, \$25,000 property; \$1,000,000 crops (2009 dollars)	Event records naming jurisdictions in the plan: Denison city (31 records), Dow City city (19 records), Charter Oak city (15 records), Vail city (13 records), Deloit city (10 records), Schleswig city (10 records), Kiron city (7 records), Westside city (6 records), Manilla city (5 records), Aspinwall city (3 records); and 2 more jurisdictions (see the Excel file).	
Excessive Heat, Heat	heat index (in event narratives)	4 records, 2001 to 2019 (4 zone-level)	1 day to 14 days (median 3.5 days); 4 with a recorded value	14 consecutive days, 2011-07-15 to 2011-07-28, 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)	11 records, 1996 to 2017 (11 zone-level)		Ice Storm, 2010-01-20, \$2,000,000 property; \$0 crops (2010 dollars); NWS zone IAZ044		Countywide (zone-level records).	
Flash Flood, Flood, Lakeshore Flood	damage and flood days (flood depth: FIRM)	34 records, 1996 to 2019 (5 zone-level)		Flood, 2010-06-12, \$0 property; \$20,000,000 crops (2010 dollars)		Event records naming jurisdictions in the plan: Denison city (13 records), Dow City city (6 records), Deloit city (4 records), Ricketts city (4 records), Charter Oak city (2 records), Kiron city (2 records), Schleswig city (1 record), Vail city (1 record), Westside city (1 record). Zone-level records (5) 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					
Lightning	annualized frequency (the measure FEMA's Local Mitigation Planning Handbook names)	2 records, 2007 to 2014		Lightning, 2007-08-07, \$75,000 property; \$0 crops (2007 dollars)		Event records naming jurisdictions in the plan: Denison city (1 record).	Storm Events lists lightning with damage or casualties.
High Wind and Strong Wind (outside NRI's Strong Wind definition)	wind speed (kt and mph)	36 records, 1996 to 2025 (36 zone-level)	35 kt (40 mph) to 61 kt (70 mph) (median 50 kt (58 mph)); 34 with a recorded value	61 kt (70 mph), measurement type not recorded, High Wind, 1998-11-10; NWS zone IAZ044		Countywide (zone-level records).	

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
Thunderstorm Wind	wind speed (kt and mph)	185 records, 1965 to 2025	50 kt (58 mph) to 76 kt (87 mph) (median 55 kt (63 mph)); 171 with a recorded value	76 kt (87 mph) measured gust, Thunderstorm Wind, 2016-05-26	Thunderstorm Wind, 2002-07-10, \$25,000 property; \$2,500,000 crops (2002 dollars)	Event records naming jurisdictions in the plan: Denison city (37 records), Dow City city (18 records), Schleswig city (14 records), Vail city (13 records), Manilla city (10 records), Charter Oak city (9 records), Deloit city (8 records), Ricketts city (7 records), Buck Grove city (6 records), Aspinwall city (5 records); and 2 more jurisdictions (see the Excel file).	
Tornado	Enhanced Fujita (Fujita before Feb 2007)	38 records, 1957 to 2024	F/EF0 to F/EF3 (median F/EF1); 35 with a recorded value	F3 tornado, 1992-06-16, 7 mi path length (whole path, pre-1996), 200 yd wide, \$2,500,000 property; crops not recorded (1992 dollars), 3 direct injuries		Event records naming jurisdictions in the plan: Denison city (5 records), Charter Oak city (4 records), Dow City city (4 records), Deloit city (3 records), Ricketts city (3 records), Vail city (3 records), Westside city (2 records), Aspinwall city (1 record), Buck Grove city (1 record), Manilla city (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)	0					
Winter Storm, Heavy Snow, Blizzard, Lake- Effect Snow, Winter Weather, Sleet	none in data (snowfall: local data)	65 records, 1996 to 2026 (65 zone-level)		Winter Storm, 2007-02-24, \$250,000 property; \$0 crops (2007 dollars); NWS zone IAZ044		Countywide (zone-level records).	

Where a hazard names more than 10 jurisdictions, the table lists the 10 with the most records; every one is in the Excel file, sheet "B1-c Extent".

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: 23 declarations covering 20 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
2025-05-21	2025-03-19	DR-4870-IA	Major disaster	Severe Winter Storm	Winter Weather	no Public Assistance recorded	new since last plan; within last 5 years	
2024-05-14	2024-04-26	DR-4779-IA	Major disaster	Severe Storms and Tornadoes	Tornado	\$202,108.91	new since last plan; within last 5 years	
2020-03-23	2020-01-20	DR-4483-IA	Major disaster	COVID-19 Pandemic	Non-natural, not counted	\$1,185,558.46	in the 12 months before plan approval	
2020-03-13	2020-01-20	EM-3480-IA	Emergency	COVID-19	Non-natural, not counted	no Public Assistance recorded	in the 12 months before plan approval	same incident as DR-4483
2019-03-23	2019-03-12	DR-4421-IA	Major disaster	Severe Storms and Flooding	Inland Flooding	\$1,071,235.68		
2014-08-05	2014-06-26	DR-4187-IA	Major disaster	Severe Storms, Tornadoes, Straight-Line Winds, and Flooding	Inland Flooding; Strong Wind; Tornado	\$548,473.07		
2013-07-02	2013-05-19	DR-4126-IA	Major disaster	Severe Storms, Tornadoes, and Flooding	Inland Flooding; Tornado	\$318,983.70		
2010-03-02	2010-01-19	DR-1880-IA	Major disaster	Severe Winter Storm	Winter Weather	\$164,885.31		
2010-02-25	2009-12-23	DR-1877-IA	Major disaster	Severe Winter Storms and Snowstorm	Winter Weather	\$118,646.09		
2008-05-27	2008-05-25	DR-1763-IA	Major disaster	Severe Storms, Tornadoes, and Flooding	Inland Flooding; Tornado	\$4,391,877.83		
2007-05-25	2007-05-05	DR-1705-IA	Major disaster	Severe Storms, Flooding, and Tornadoes	Inland Flooding; Tornado	\$745,677.65		
2007-03-30	2007-02-28	EM-3275-IA	Emergency	Snow	Winter Weather	\$106,799.75		
2005-09-10	2005-08-29	EM-3239-IA	Emergency	Hurricane Katrina Evacuation	Hurricane: evacuation support, not a local hazard event; not counted	no Public Assistance recorded		
1999-07-22	1999-07-02	DR-1282-IA	Major disaster	Severe Storms and Flooding	Inland Flooding	\$122,439.28		
1999-05-21	1999-05-16	DR-1277-IA	Major disaster	Severe Storms, Flooding, and Tornadoes	Inland Flooding; Tornado	PA not declared for this county		
1998-07-02	1998-06-13	DR-1230-IA	Major disaster	Severe Storms, Tornadoes and Flooding	Inland Flooding (primary); also designated: Tornado	PA not declared for this county		
1996-08-21	1996-06-15	DR-1133-IA	Major disaster	Severe Storms, and Flooding	Inland Flooding	no Public Assistance recorded		

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance	Flags	Notes
						<i>federal share obligated, nominal dollars</i>		
1993-07-09	1993-04-13	DR-996-IA	Major disaster	Severe Storms & Flooding	Inland Flooding	no Public Assistance recorded		
1990-05-26	1990-05-18	DR-868-IA	Major disaster	Severe Storms & Flooding	Inland Flooding	no Public Assistance recorded		
1974-06-24	1974-06-24	DR-443-IA	Major disaster	Severe Storms & Flooding	Inland Flooding	no Public Assistance recorded		
1972-09-26	1972-09-26	DR-354-IA	Major disaster	Severe Storms & Flooding	Inland Flooding	no Public Assistance recorded		
1969-04-25	1969-04-25	DR-259-IA	Major disaster	Flooding	Inland Flooding	no Public Assistance recorded		
1965-04-22	1965-04-22	DR-193-IA	Major disaster	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
1962-09-05	1962-09-05	DR-133-IA	Major disaster	Floods	Inland Flooding
1961-03-31	1961-03-31	DR-111-IA	Major disaster	Floods	Inland Flooding
1958-07-05	1958-07-05	DR-86-IA	Major disaster	Floods	Inland Flooding
1954-06-23	1954-06-23	DR-17-IA	Major disaster	Flood	Inland Flooding
1953-06-11	1953-06-11	DR-8-IA	Major disaster	Flood	Inland Flooding

FEMA recorded these with designated area Statewide and no county, so they are listed on every county page in the state and not counted with county rows. Local data needed: whether each one affected this county.

Public Assistance not placed in any Iowa county: 11 rows, \$7,881,708.52; listed on the Iowa state page.

Source: 3

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 records	In the 12 months before plan approval records	Last 5 years records	Declared incidents, all years <i>separate disasters</i>	Declared since approval <i>separate disasters</i>	Period	Statement
Cold Wave	27	4	2	3	0	0	1996 to 2026-06-30	Includes 9 Frost/Freeze records.
Drought	35	23	3	18	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.

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
Hail	148	9	0	8	0	0	1955 to 2026-06-30	
Heat Wave	4	0	0	0	0	0	1996 to 2026-06-30	
Hurricane	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Ice Storm	11	0	0	0	0	0	1996 to 2026-06-30	
Inland Flooding	34	0	0	0	15	0	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	2	0	0	0	0	0	1996 to 2026-06-30	
Strong Wind	221	20	5	16	1	0	1955 to 2026-06-30	Includes 36 High Wind records.
Tornado	38	5	0	5	7	1	1950 to 2026-06-30	
Wildfire	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Winter Weather	65	12	1	8	4	1	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
2024-01-13	Extreme Cold/ Wind Chill		\$0 property; \$0 crops (zone total, 2024 dollars)	0, 0	NWS zone IAZ044 (CRAWFORD), zone-level	new since last plan; within last 5 years	B1-c worst recorded: Cold/Wind Chill, Extreme Cold/Wind Chill
2023-06-13	Drought		\$0 property; \$0 crops (zone total, 2023 dollars)	0, 0	NWS zone IAZ044 (CRAWFORD), zone-level	new since last plan; within last 5 years	B1-c worst recorded: Drought
2016-05-26	Thunderstorm Wind	76 kt (87 mph) measured gust	\$15,000 property; \$0 crops (2016 dollars)	0, 0	DENISON MUNI ARPT		B1-c worst recorded: Thunderstorm Wind
2014-08-31	Lightning		\$0 property; \$0 crops (2014 dollars)	0, 1	DENISON MUNI ARPT		deaths or injuries recorded
2011-07-15	Excessive Heat		\$135,000 property; \$0 crops (zone total, 2011 dollars)	0, 0	NWS zone IAZ044 (CRAWFORD), zone-level		B1-c worst recorded: Excessive Heat, Heat
2010-06-12	Flood		\$0 property; \$20,000,000 crops (2010 dollars)	0, 0	RICKETTS to DOW CITY		B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
2010-01-20	Ice Storm		\$2,000,000 property; \$0 crops (zone total, 2010 dollars)	0, 0	NWS zone IAZ044 (CRAWFORD), zone-level		B1-c worst recorded: Ice Storm
2009-10-10	Frost/Freeze		\$0 property; \$2,500,000 crops (zone total, 2009 dollars)	0, 0	NWS zone IAZ044 (CRAWFORD), zone-level		B1-c worst recorded: Frost/Freeze
2008-07-28	Hail	4.25 in	\$50,000 property; \$10,000 crops (2008 dollars)	0, 0	KIRON		B1-c worst recorded: Hail
1998-11-10	High Wind	61 kt (70 mph), measurement type not recorded	\$300,000 property; \$5,100 crops (zone total, 1998 dollars)	0, 0	NWS zone IAZ044 (CRAWFORD), zone-level		B1-c worst recorded: High Wind and Strong Wind
1994-08-07	Thunderstorm Wind	50 kt (58 mph), measurement type not recorded	\$5,000 property; \$500 crops (1994 dollars)	0, 1	Schleswig		deaths or injuries recorded
1992-06-16	Tornado	F3, 7 mi path length (whole path, pre-1996), 200 yd wide	\$2,500,000 property; crops not recorded (1992 dollars)	0, 3	location not recorded		deaths or injuries recorded

The full list is in the Excel file, sheet "B1-d Storm Events history" (585 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	7	event-days per year	about 7 days per year	Likely	Storm Events event- days in 14 of 30 years, 1996 to 2025 (46.7%)	133	2005-11-12 to 2024-11-12 (19 years)	countywide	
Drought	9.58	event-days per year	about 9.58 days per year	Likely	Storm Events event- days in 10 of 30 years, 1996 to 2025 (33.3%)	315	2000 to 2025 (25.25 years; D3 and D4 only)	countywide	
Earthquake	0.000387	annual probability at a location	chance a given location in the county has at least minor-damage shaking in a year: 0.0387%			not shown	modeled	see B1-f	No descriptor (Storm Events does not record earthquakes).
Hail	5.79	events per year	about 5.79 per year	Highly likely	FEMA annualized frequency (modeled)	220.1 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave	5.68	event-days per year	about 5.68 days per year	Likely	Storm Events event- days in 4 of 30 years, 1996 to 2025 (13.3%)	85	2005-11-12 to 2024-11-12 (19 years)	countywide	
Hurricane	0	events per year	none modeled	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	0.754	event-days per year	about 0.754 days per year	Likely	Storm Events event- days in 10 of 30 years, 1996 to 2025 (33.3%)	51	1946-12-31 to 2014-02-12 (67 years)	countywide	
Inland Flooding	0.821	event-days per year	about 0.821 days per year	Likely	Storm Events event- days in 13 of 30 years, 1996 to 2025 (43.3%)	23	1996 to 2023 (28 years)	see B1-f	
Landslide	0.525	events per year (modeled)	about 0.53 per year	Likely	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Lightning	43.5	days per year with a strike	about 43.5 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	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
Strong Wind	4.34	events per year	about 4.34 per year	Highly likely	FEMA annualized frequency (modeled)	165	1986 to 2023 (38 years)	countywide	
Tornado	0.583	events per year	about 0.58 per year	Likely	FEMA annualized frequency (modeled)	not shown	1950 to 2023 (EF2+); 1986 to 2023 (EF0-1)	see B1-f	
Wildfire	0.000975	annual probability at a location	chance a given location in the county burns in a year: 0.0975%		Storm Events records in 0 of 30 years, 1996 to 2025 (0%)	not shown	modeled	see B1-f	No descriptor: no Storm Events record 1996 to 2025
Winter Weather	14.6	event-days per year	about 14.6 days per year	Highly likely	Storm Events event- days in 27 of 30 years, 1996 to 2025 (90%)	277	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	69	30	2.3
Hail	2.00 in+	1996 to 2025	8	30	0.267
Thunderstorm Wind (counted as NRI Strong Wind)	50-64 kt	1996 to 2025	129	30	4.3
Thunderstorm Wind (counted as NRI Strong Wind)	65 kt+	1996 to 2025	11	30	0.367
Thunderstorm Wind (counted as NRI Strong Wind)	unmeasured or below 50 kt	1996 to 2025	0	30	0
Tornado	EF0-1	1996 to 2025	18	30	0.6
Tornado	EF2-3	1996 to 2025	3	30	0.1
Tornado	EF4-5	1996 to 2025	0	30	0
Tornado	unrated (EFU)	1996 to 2025	3	30	0.1

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	6 of 6	84.5	90.1	95.4	Very High 1, Relatively High 5
Drought	6 of 6	92.8	99.6	99.7	Relatively High 4, Relatively Moderate 2
Earthquake	6 of 6	7.4	9.5	11.2	Very Low 6
Hail	6 of 6	90.0	93.7	95.8	Relatively High 6
Heat Wave	6 of 6	19.3	29.2	56.9	Relatively Moderate 1, Relatively Low 5
Hurricane	0 of 6				No Rating 6
Ice Storm	6 of 6	80.5	90.2	91.8	Relatively High 3, Relatively Moderate 3
Inland Flooding	6 of 6	79.9	90.4	93.1	Relatively High 6
Landslide	6 of 6	92.3	93.9	97.6	Relatively Moderate 1, Relatively Low 5
Lightning	6 of 6	44.1	56.3	81.8	Relatively High 2, Relatively Moderate 3, Relatively Low 1
Strong Wind	6 of 6	93.6	95.7	96.9	Very High 2, Relatively High 4

Hazard	Tracts <i>rated of all</i>	NRI risk score, 0 to 100			Tracts by rating
		Min	Median	Max	
Tornado	6 of 6	94.8	98.3	99.7	Very High 6
Wildfire	6 of 6	78.4	79.2	86.0	Relatively Low 6
Winter Weather	6 of 6	73.1	82.9	90.0	Relatively High 5, Relatively Moderate 1

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.

Hail: Agriculture is 53% 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
Crawford County	County	Expired on 2025-09-10	FMA RL 0, SRL 0; any 0	\$887,743.61	0 total; 0 since its plan	
Arion city	City	Expired on 2025-09-10	FMA RL 0, SRL 0; any 0	\$6,237.23	0 total; 0 since its plan	
Aspinwall city	City	Expired on 2025-09-10	FMA RL 0, SRL 0; any 0	\$2,585.10	9 total; 1 since its plan	
Buck Grove city	City	Expired on 2025-09-10	FMA RL 0, SRL 0; any 0	\$25,717.17	9 total; 0 since its plan	
Charter Oak city	City	Expired on 2025-09-10	FMA RL 0, SRL 0; any 0	\$36,589.14	30 total; 2 since its plan	
Deloit city	City	Expired on 2025-09-10	FMA RL 0, SRL 0; any 0	\$33,579.11	25 total; 2 since its plan	
Denison city	City	Expired on 2025-09-10	FMA RL 0, SRL 2; any 9	\$862,425.80	87 total; 2 since its plan	Includes \$5,448.38 for declarations not counted as hazard incidents (DR-4483-IA).
Dow City city	City	Expired on 2025-09-10	FMA RL 0, SRL 0; any 0	\$88,219.16	47 total; 2 since its plan	
Kiron city	City	Expired on 2025-09-10	FMA RL 0, SRL 0; any 0	\$6,490.62	12 total; 0 since its plan	
Manilla city	City	Expired on 2025-09-10	FMA RL 0, SRL 0; any 0	\$149,880.63	16 total; 2 since its plan	
Ricketts city	City	Expired on 2025-09-10	FMA RL 0, SRL 0; any 0	\$49,261.23	17 total; 0 since its plan	

			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
Jurisdiction	Type	Plan status				
Schleswig city	City	Expired on 2025-09-10	FMA RL 0, SRL 0; any 0	\$47,980.66	25 total; 1 since its plan	
Vail city	City	Expired on 2025-09-10	FMA RL 0, SRL 0; any 0	\$9,404.38	30 total; 5 since its plan	
Westside city	City	Expired on 2025-09-10	FMA RL 0, SRL 0; any 0	\$6,381.51	14 total; 3 since its plan	

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 2020-09-10 <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	\$6,618,504,933	\$515,367,476	16,525	\$2,878	\$396,865	\$1,548,279	under 0.0001%		\$0		
Drought	n/a	\$212,486,942	n/a	n/a	\$5,974,609	n/a	2.81% (agriculture)		\$0		NRI has no building exposure for this hazard; agriculture shown
Earthquake	\$11,353,102,625	n/a	16,525	\$8,959	n/a	\$1,447	under 0.0001%				
Hail	\$6,618,505,460	\$515,367,476	16,525	\$213,324	\$425,077	\$163,027	0.00322%	\$200,000			
Heat Wave	\$6,618,504,933	\$515,367,476	16,525	\$7,098	\$9	\$145,004	0.000107%				
Hurricane	\$6,618,505,460	\$515,367,476	16,525	\$0	\$0	\$0	0%				
Ice Storm	\$6,618,504,933	n/a	16,525	\$159,771	n/a	\$11,400	0.00241%				

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 2020-09-10 <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	\$6,615,592,120	\$17,496,910	128	\$8,416,339	\$167,361	\$643	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	\$227,458,528	n/a	668	\$1,884	n/a	\$14,526	0.000828%				
Lightning	\$6,618,505,460	n/a	16,525	\$8,121	n/a	\$96,000	0.000123%				
Strong Wind	\$6,618,505,460	\$515,367,476	16,525	\$258,607	\$385,657	\$273,760	0.00391%	\$11,000	\$0		
Tornado	\$6,618,505,460	\$515,367,476	16,525	\$1,942,547	\$14,972	\$2,811,319	0.0294%	\$80,000		\$202,108.91	
Wildfire	\$773,856,180	\$98,492,920	2,886	\$34,764	\$810	\$4,312	0.00449%				
Winter Weather	\$6,618,504,933	\$515,367,476	16,525	\$31,558	\$723	\$32,173	0.000477%		\$0	no Public Assistance recorded (1 declaration)	

Totals since 2020-09-10 (Storm Events through 2026-06-30): 27 county-coded records, 27 with a damage value recorded (including \$0), \$291,000; 46 zone-level records, 46 with a damage value recorded (including \$0), \$0 reported for the zone; Public Assistance: \$202,108.91 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	16,525
Building value (total, not at risk)	\$6,618,505,460
Agriculture value (total, not at risk)	\$515,367,476
NRI risk rating (all hazards)	Relatively Low
Expected annual loss, buildings and agriculture, all hazards	\$18,451,933
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)	\$5,101,890
Social vulnerability rating	Relatively Low
Community resilience rating	Relatively 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)	2
Repetitive loss, NFIP insurance definition	9	Severe repetitive loss, NFIP insurance definition	2

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

Repeat-flood properties: county and state-level rows

Sources: 1, 4

Scope	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
County total	0	2	9	2	9	0	2
of which: Denison city	0	2	9	2	9	0	2
Statewide, no county in FEMA's file	0	0	1	0	1	0	0

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

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

Sources: 1, 4

Jurisdiction	NFIP community ID	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
Crawford County	190091	0	0	0	0	0	0	0
Arion city	190092	0	0	0	0	0	0	0
Aspinwall city	195238	0	0	0	0	0	0	0
Buck Grove city	190093	0	0	0	0	0	0	0
Charter Oak city	190094	0	0	0	0	0	0	0
Deloit city	190095	0	0	0	0	0	0	0
Denison city	190096	0	2	9	2	9	0	2
Dow City city	190097	0	0	0	0	0	0	0
Kiron city	190098	0	0	0	0	0	0	0
Manilla city	190099	0	0	0	0	0	0	0
Ricketts city	190100	0	0	0	0	0	0	0
Schleswig city	190653	0	0	0	0	0	0	0
Vail city	190101	0	0	0	0	0	0	0
Westside city	190102	0	0	0	0	0	0	0

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

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

County repeat-flood properties by occupancy group

Sources: 1, 4

Occupancy group	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
single-family residential	0	0	0	0	0	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	2	9	2	9	0	2
not reported	0	0	0	0	0	0	0

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

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

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

In this county 0 properties are FMA repetitive loss but not NFIP repetitive loss, and 9 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)
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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)
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/>
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What this packet is and what the plan adds

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

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). Crawford County, IA: risk-assessment baseline packet, release 2026-10 (data as of 2026-09-30; County FIPS 19047). Automated baseline. <https://hazardplain.org/ia/19047/> 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