

Logan County, CO

Risk-assessment baseline packet

County FIPS: 08075 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 2026-08-01. Plan: NE Colorado Regional Hazard Mitigation Plan 2021 (FEMA plan 107325), approved 2021-08-02. Since the plan was approved on 2021-08-02: 1 new hazard declaration (1 incident): DR-4731-CO (Severe Storms, Flooding, and Tornadoes). NOAA Storm Events records since that date: 192 records (data through 2026-06-30). Highest expected annual loss (FEMA National Risk Index, modeled total; see B1-a): Inland Flooding (\$5,314,981 a year), Cold Wave (\$3,199,218) and Tornado (\$2,499,836). Repetitive-loss flood properties now: FMA RL 0, SRL 0 (44 CFR 77.2); any definition: 0. 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; 08075 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 2026-08-01	Plan:	NE Colorado Regional Hazard Mitigation Plan 2021 (FEMA plan 107325)
Approved:	2021-08-02	Days since expiry:	60
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 2021-08-02)

New federal declarations:1 new hazard declaration (1 incident): DR-4731-CO (Severe Storms, Flooding, and Tornadoes)

Repetitive loss now:FMA RL 0, SRL 0 (44 CFR 77.2); any definition: 0

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

Storm Events records since approval:192 records (data through 2026-06-30)

Repeat-flood change:this release sets the baseline count.

Plan status for every jurisdiction listed in this county

Source: 1

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry negative = days since expiry
Logan County	County	Expired on 2026-08-01	NE Colorado Regional Hazard Mitigation Plan 2021 (FEMA plan 107325)	2021-08-02	2026-08-01	-60
Sterling city	City	Expired on 2026-08-01	NE Colorado Regional Hazard Mitigation Plan 2021 (FEMA plan 107325)	2021-08-02	2026-08-01	-60

Plan 107325 lists 14 other participants, named in the Excel file.

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

Supports FEMA checklist item B1-a: hazard identification

Hazards NRI does not cover (local data needed)

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

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

Sources: 5, 6

Rank by EAL	Hazard	NRI risk rating	EAL rating	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL total (see note) <i>modeled dollars per year</i>	Storm Events records, 1996 to 2026-06-30 <i>count</i>	Why this hazard can be left out <i>NRI Not Applicable, no declaration and no Storm Events record since 1996</i>	Storm Events coverage note
1	Inland Flooding	Relatively Low	Relatively Low	\$5,041,486	\$39,732	\$233,764	\$5,314,981	22		
2	Cold Wave	Relatively Moderate	Relatively Moderate	\$6,339	\$1,303,351	\$1,889,528	\$3,199,218	11		Includes 1 Frost/Freeze record (outside NRI's Cold Wave definition; counted in this table and in B1-d, not in the B1-e descriptor).
3	Tornado	Relatively Moderate	Relatively Moderate	\$1,113,276	\$61,494	\$1,325,066	\$2,499,836	67		
4	Hail	Relatively High	Relatively Moderate	\$668,645	\$1,696,358	\$69,696	\$2,434,699	467		
5	Strong Wind	Relatively High	Relatively High	\$163,706	\$56,152	\$1,888,641	\$2,108,499	271		Includes 90 High Wind and 1 Strong Wind records (NOAA non-thunderstorm wind types, outside NRI's Strong Wind definition).
6	Drought	Relatively Moderate	Relatively Moderate	n/a	\$1,461,760	n/a	\$1,461,760	4		
7	Ice Storm	Relatively Moderate	Relatively Moderate	\$6,992	n/a	\$376,118	\$383,111	0		No recorded events in Storm Events since 1996 (data through 2026-06-30).
8	Lightning	Relatively Low	Relatively Low	\$2,324	n/a	\$247,164	\$249,489	2		
9	Winter Weather	Relatively Moderate	Relatively Moderate	\$43,398	\$261	\$93,074	\$136,733	67		

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>	Why this hazard can be left out <i>NRI Not Applicable, no declaration and no Storm Events record since 1996</i>	Storm Events coverage note
10	Wildfire	Relatively Low	Relatively Low	\$91,533	\$970	\$4,597	\$97,100	2		
11	Earthquake	Very Low	Very Low	\$76,163	n/a	\$13,745	\$89,908			Storm Events does not record earthquakes.
12	Heat Wave	Very Low	Very Low	\$24	\$13,215	\$40,263	\$53,502	0		No recorded events in Storm Events since 1996 (data through 2026-06-30).
13	Landslide	Very Low	Very Low	\$38	n/a	\$7	\$45	0		Declared 3 times; no Storm Events record of this type.
	Hurricane	Not Applicable	Not Applicable					0	NRI rates hurricane Not Applicable for this county, and no counted federal declaration for this county names it (EM-3224-CO names it but is not counted as a local occurrence; see B1-d).	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, 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 9662 (Relatively Low, 49.7); tract 9661.02 (Relatively Low, 45.4); tract 9663 (Relatively Low, 44.3)
Hurricane	no tract has a National Risk Index rating for this hazard
Landslide	tract 9659 (Very Low, 70.6); tract 9664 (Very Low, 65.4); tract 9660 (Very Low, 47.8)
Tornado	tract 9664 (Very High, 96.4); tract 9661.02 (Very High, 96.3); tract 9663 (Very High, 96.2)
Wildfire	tract 9664 (Relatively Moderate, 89.7); tract 9659 (Relatively Moderate, 89.3); tract 9660 (Relatively Low, 88.3)

Up to 3 census tracts per hazard, highest National Risk Index rating first, then highest score; a tract number is the Census tract number (for example 9662 is Census Tract 9662). 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	10 records, 1996 to 2026 (10 zone-level)	2 days to 4 days (median 3.5 days); 8 with a recorded value	4 consecutive days, 2026-01-23 to 2026-01-26, zone-level		Countywide (zone-level records).	Wind chill: in event narratives only (local data needed).
Frost/Freeze (outside NRI's Cold Wave definition)	crop damage	1 record, 2014 (1 zone-level)		No crop damage reported in 1 record.		Countywide (zone-level records).	Temperature: in event narratives only (local data needed).
Drought	U.S. Drought Monitor scale (D0 to D4)	4 records, 2002 to 2021 (4 zone-level)	30 days to 61 days (median 31 days); 3 with a recorded value	61 days (2 months), 2021-11-01 to 2021-12-31, a run of 2 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.

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)	540 records, 1956 to 2026	0.5 in to 4.5 in (median 1.25 in); 540 with a recorded value	4.5 in hail, 2000-07-05	Hail, 2017-08-02, property not reported; \$200,000 crops (2017 dollars)	Event records naming jurisdictions in the plan: Sterling city (99 records).	
Excessive Heat, Heat	heat index (in event narratives)	0					Heat index: in event narratives only (local data needed).
Hurricane, Tropical Storm, Tropical Depression	Saffir-Simpson	0					Storm Events files every zone of a storm's episode under the storm's type; flooding from the storm is filed as Flood or Flash Flood records.
Ice Storm	Sperry-Piltz ice scale (local data)	0					Ice thickness: in event narratives only (local data needed).
Flash Flood, Flood, Lakeshore Flood	damage and flood days (flood depth: FIRM)	22 records, 1996 to 2024		Flash Flood, 1997-07-30, \$12,900,000 property; crops not reported (1997 dollars)		Event records naming jurisdictions in the plan: Sterling city (4 records).	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)	2 records, 2000 to 2002		Lightning, 2000-07-12, property not reported; \$0 crops (2000 dollars), 1 direct injury		Event records naming jurisdictions in the plan: Sterling city (2 records).	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)	91 records, 1996 to 2026 (91 zone-level)	35 kt (40 mph) to 85 kt (98 mph) (median 56 kt (64 mph)); 90 with a recorded value	85 kt (98 mph) measured, High Wind, 2002-02-09; NWS zone COZ048	High Wind, 2001-05-20, \$303,000 property; crops not reported, reported for the zone (2001 dollars)	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)	214 records, 1956 to 2026	50 kt (58 mph) to 87 kt (100 mph) (median 56 kt (64 mph)); 200 with a recorded value	87 kt (100 mph), measurement type not recorded, Thunderstorm Wind, 1980-06-30	Thunderstorm Wind, 2009-06-23, \$75,000 property; \$0 crops (2009 dollars)	Event records naming jurisdictions in the plan: Sterling city (39 records).	
Tornado	Enhanced Fujita (Fujita before Feb 2007)	105 records, 1958 to 2026	F/EF0 to F/EF3 (median F/EF0); 93 with a recorded value	F3 tornado, 2000-07-05, 6 mi within this county, 1,320 yd wide, \$750,000 property; crops not reported (2000 dollars), 2 direct injuries	Tornado, 2004-06-09, \$1,900,000 property; crops not reported (2004 dollars)	Event records naming jurisdictions in the plan: Sterling city (10 records).	Before 1996 a tornado is listed once, under the county where it began, with its whole path's rating and length; from 1996 on, each county lists its own segment. Length is not used to rank tornadoes (see Methods).
Wildfire	acres burned (local data)	2 records, 2017 to 2026 (2 zone-level)		Wildfire, 2017-03-06, \$1,000,000 property; crops not reported (2017 dollars); NWS zone COZ048		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)	67 records, 1996 to 2024 (67 zone-level)		No damage reported in 67 records.		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.

Supports FEMA checklist item B1-d: previous occurrences

Federal declarations for this county: 12 declarations covering 8 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
2023-08-25	2023-06-08	DR-4731-CO	Major disaster	Severe Storms, Flooding, and Tornadoes	Inland Flooding (primary); also designated: Tornado	\$394,749.08	new since last plan; within last 5 years	
2020-03-28	2020-01-20	DR-4498-CO	Major disaster	COVID-19 Pandemic	Non-natural, not counted	no Public Assistance recorded		
2020-03-13	2020-01-20	EM-3436-CO	Emergency	COVID-19	Non-natural, not counted	no Public Assistance recorded		same incident as DR-4498
2015-07-16	2015-05-04	DR-4229-CO	Major disaster	Severe Storms, Tornadoes, Flooding, Landslides, and Mudslides	Inland Flooding (primary); also designated: Landslide, Tornado	\$1,326,500.91		
2013-09-14	2013-09-11	DR-4145-CO	Major disaster	Severe Storms, Flooding, Landslides, and Mudslides	Inland Flooding (primary); also designated: Landslide	\$534,370.34		
2013-09-12	2013-09-11	EM-3365-CO	Emergency	Severe Storms, Flooding, Landslides, and Mudslides	Inland Flooding (primary); also designated: Landslide	no Public Assistance recorded		same incident as DR-4145
2005-09-05	2005-08-29	EM-3224-CO	Emergency	Hurricane Katrina Evacuation	Hurricane: evacuation support, not a local hazard event; not counted	no Public Assistance recorded		
2001-05-17	2001-04-11	DR-1374-CO	Major disaster	Severe Winter Storms	Winter Weather	no Public Assistance recorded		
1997-08-01	1997-07-28	DR-1186-CO	Major disaster	Severe Storms, Heavy Rain, Flash Floods, Flooding, Mudslides	Inland Flooding (primary); also designated: Landslide	no Public Assistance recorded		
1973-05-23	1973-05-23	DR-385-CO	Major disaster	Heavy Rains, Snowmelt and Flooding	Inland Flooding	no Public Assistance recorded		
1969-05-19	1969-05-19	DR-261-CO	Major disaster	Severe Storms & Flooding	Inland Flooding	no Public Assistance recorded		
1965-06-19	1965-06-19	DR-200-CO	Major disaster	Tornadoes, Severe Storms & Flooding	Tornado (primary); also designated: 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
1956-06-12	1956-06-12	DR-59-CO	Major disaster	Flood	Inland Flooding
1955-05-25	1955-05-25	DR-33-CO	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.

10 Fire Management declarations (1978-09-12 to 2016-07-10) FEMA filed as Statewide with no county; each names one local fire. Listed on the state page.

Previous occurrences by hazard, with explicit no-event rows

Sources: 2, 6, 7

Hazard	Storm Events records, all years on file <i>(years in the Period column)</i>	Since plan approval 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	11	6	0	6	0	0	1996 to 2026-06-30	Includes 1 Frost/Freeze record.
Drought	4	2	0	2	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	540	83	12	83	0	0	1955 to 2026-06-30	
Heat Wave	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Hurricane	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Ice Storm	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Inland Flooding	22	2	1	2	7	1	1996 to 2026-06-30	
Landslide	0	0	0	0	3	0	1996 to 2026-06-30	No Storm Events records of this type; 3 federal declared incidents (see declarations table)
Lightning	2	0	0	0	0	0	1996 to 2026-06-30	
Strong Wind	305	69	15	68	0	0	1955 to 2026-06-30	Includes 90 High Wind and 1 Strong Wind records.
Tornado	105	14	4	14	3	1	1950 to 2026-06-30	
Wildfire	2	1	0	1	0	0	1996 to 2026-06-30	
Winter Weather	67	15	1	15	1	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	Flags	Why listed
2026-01-23	Cold/Wind Chill		damage not reported	0, 0	NWS zone COZ048 (LOGAN COUNTY), zone-level	new since last plan; within last 5 years	B1-c worst recorded: Cold/Wind Chill, Extreme Cold/Wind Chill
2021-11-01	Drought		damage not reported	0, 0	NWS zone COZ048 (LOGAN COUNTY), zone-level	new since last plan; within last 5 years	B1-c worst recorded: Drought
2017-03-06	Wildfire		\$1,000,000 property; crops not reported, reported for the zone (2017 dollars)	0, 0	NWS zone COZ048 (LOGAN COUNTY), zone-level		B1-c worst recorded: Wildfire
2009-06-23	Thunderstorm Wind	70 kt (81 mph) estimated gust	\$75,000 property; \$0 crops (2009 dollars)	1, 2	MARCOTT		deaths or injuries recorded
2009-06-23	Thunderstorm Wind	70 kt (81 mph) estimated gust	damage not reported	1, 2	MARCOTT		deaths or injuries recorded
2004-06-09	Tornado	F1, 0.5 mi within this county, 75 yd wide	\$1,900,000 property; crops not reported (2004 dollars)	0, 2	STERLING		deaths or injuries recorded
2002-02-09	High Wind	85 kt (98 mph) measured	property not reported; \$0 crops, reported for the zone (2002 dollars)	0, 0	NWS zone COZ048 (LOGAN COUNTY), zone-level		B1-c worst recorded: High Wind and Strong Wind
2000-07-12	Lightning		property not reported; \$0 crops (2000 dollars)	0, 1	STERLING		B1-c worst recorded: Lightning
2000-07-05	Tornado	F3, 6 mi within this county, 1,320 yd wide	\$750,000 property; crops not reported (2000 dollars)	0, 2	DAILEY		B1-c worst recorded: Tornado
2000-07-05	Hail	4.5 in	damage not reported	0, 0	CROOK		B1-c worst recorded: Hail
1997-07-30	Flash Flood		\$12,900,000 property; crops not reported (1997 dollars)	0, 0	ATWOOD		B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
1980-06-30	Thunderstorm Wind	87 kt (100 mph), measurement type not recorded	damage not recorded (pre-1996 record)	0, 0	location not recorded		B1-c worst recorded: Thunderstorm Wind

The full list is in the Excel file, sheet "B1-d Storm Events history" (1,058 rows).

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

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

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

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

Probability: FEMA annualized frequency and descriptor per hazard

Sources: 5, 6

Hazard	FEMA annualized frequency (modeled) <i>unit per row</i>	Unit	In plain terms	Descriptor	Descriptor basis	NRI events or days in its record period (hail, wind and tornado are area-weighted, so can be fractional)	NRI period	Location	Note
Cold Wave	2.74	event-days per year	about 2.74 days per year	Likely (from Storm Events: 6 of 30 years)	event-days in 6 of 30 years, 1996 to 2025 (20%)	52	2005-11-12 to 2024-11-12 (19 years)	countywide	
Drought	52.9	event-days per year	about 52.9 days per year	Likely (from Storm Events: 3 of 30 years)	event-days in 3 of 30 years, 1996 to 2025 (10%)	1,533	2000 to 2025 (25.25 years; D3 and D4 only)	countywide	
Earthquake	0.000302	annual probability at a location	chance a given location in the county has at least minor-damage shaking in a year: 0.0302%			not shown	modeled	see B1-f	No descriptor (Storm Events does not record earthquakes).
Hail	6.34	events per year	about 6.34 per year	Highly likely	FEMA annualized frequency (modeled)	240.8 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave	0.579	event-days per year	about 0.579 days per year		event-days in 0 of 30 years, 1996 to 2025 (0%)	9	2005-11-12 to 2024-11-12 (19 years)	countywide	No Storm Events heat wave record, 1996 to 2025
Hurricane		events per year					1851 to 2024 (Atlantic)	see B1-f	Not Applicable in NRI for this county; no descriptor.
Ice Storm	0.149	event-days per year	about 0.149 days per year		event-days in 0 of 30 years, 1996 to 2025 (0%)	11	1946-12-31 to 2014-02-12 (67 years)	countywide	No Storm Events ice storm record, 1996 to 2025
Inland Flooding	0.714	event-days per year	about 0.714 days per year	Likely (from Storm Events: 16 of 30 years)	event-days in 16 of 30 years, 1996 to 2025 (53.3%)	20	1996 to 2023 (28 years)	see B1-f	
Landslide	0.242	events per year (modeled)	about 1 in 4 years	Likely	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Lightning	47.5	days per year with a strike	about 47.5 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	countywide	
Strong Wind	1.86	events per year	about 1.86 per year	Highly likely	FEMA annualized frequency (modeled)	71	1986 to 2023 (38 years)	countywide	
Tornado	1.82	events per year	about 1.82 per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1950 to 2023 (EF2+); 1986 to 2023 (EF0-1)	see B1-f	

Hazard	FEMA annualized frequency (modeled) <i>unit per row</i>	Unit	In plain terms	Descriptor	Descriptor basis	NRI events or days in its record period (hail, wind and tornado are area-weighted, so can be fractional)	NRI period	Location	Note
Wildfire	0.000614	annual probability at a location	chance a given location in the county burns in a year: 0.0614%	Possible (from Storm Events: 1 of 30 years)	Storm Events records in 1 of 30 years, 1996 to 2025 (3.33%)	not shown	modeled	see B1-f	Descriptor from Storm Events, not NRI.
Winter Weather	9.95	event-days per year	about 9.95 days per year	Likely (from Storm Events: 25 of 30 years)	event-days in 25 of 30 years, 1996 to 2025 (83.3%)	189	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	301	30	10
Hail	2.00 in+	1996 to 2025	60	30	2
Thunderstorm Wind (counted as NRI Strong Wind)	50-64 kt	1996 to 2025	142	30	4.73
Thunderstorm Wind (counted as NRI Strong Wind)	65 kt+	1996 to 2025	24	30	0.8
Thunderstorm Wind (counted as NRI Strong Wind)	unmeasured or below 50 kt	1996 to 2025	0	30	0
Tornado	EF0-1	1996 to 2025	51	30	1.7
Tornado	EF2-3	1996 to 2025	5	30	0.167
Tornado	EF4-5	1996 to 2025	0	30	0
Tornado	unrated (EFU)	1996 to 2025	7	30	0.233

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	7 of 7	86.0	93.7	99.4	Very High 3, Relatively High 4
Drought	7 of 7	87.4	90.6	99.1	Relatively High 2, Relatively Moderate 1, Relatively Low 4
Earthquake	7 of 7	19.0	31.9	49.7	Relatively Low 3, Very Low 4
Hail	7 of 7	92.4	95.1	99.8	Very High 2, Relatively High 5
Heat Wave	7 of 7	5.0	11.4	25.6	Relatively Low 1, Very Low 6
Hurricane	0 of 7				Not Applicable 7
Ice Storm	7 of 7	81.5	96.3	97.1	Relatively High 5, Relatively Moderate 2
Inland Flooding	7 of 7	40.1	62.6	85.0	Relatively High 3, Relatively Moderate 2, Relatively Low 2
Landslide	7 of 7	12.2	28.4	70.6	Very Low 7
Lightning	7 of 7	48.5	92.6	95.3	Relatively High 4, Relatively Moderate 2, Relatively Low 1
Strong Wind	7 of 7	93.0	99.5	99.6	Very High 5, Relatively High 2

Hazard	Tracts <i>rated of all</i>	NRI risk score, 0 to 100			Tracts by rating
		Min	Median	Max	
Tornado	7 of 7	70.7	95.7	96.4	Very High 4, Relatively High 2, Relatively Moderate 1
Wildfire	7 of 7	45.7	83.8	89.7	Relatively Moderate 2, Relatively Low 2, Very Low 3
Winter Weather	7 of 7	77.4	95.9	96.5	Very High 4, Relatively High 2, 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 70% of NRI's expected annual loss for this hazard in the county, so the tract range mostly reflects where crop and livestock value is.

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

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

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

Each jurisdiction (starting figures from federal data)

Sources: 1, 3, 4, 6

Jurisdiction	Type	Plan status	Repetitive loss	Public Assistance to this jurisdiction	Event records naming this place
			<i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	<i>FEMA records matched by applicant name; federal share obligated, nominal dollars</i>	<i>all years; since its plan</i>
Logan County	County	Expired on 2026-08-01	FMA RL 0, SRL 0; any 0	\$930,607.16	0 total; 0 since its plan
Sterling city	City	Expired on 2026-08-01	FMA RL 0, SRL 0; any 0	\$486,226.05	154 total; 31 since its plan

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

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

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

Local data needed

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

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

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

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

Hazard	Building exposure <i>modeled dollars</i>	Agriculture exposure <i>modeled dollars</i>	Population exposed <i>people</i>	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since 2021-08-02 <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	\$5,345,487,085	\$795,606,480	21,526	\$6,339	\$1,303,351	\$1,889,528	0.000119%		\$0		
Drought	n/a	\$77,688,768	n/a	n/a	\$1,461,760	n/a	1.88% (agriculture)				NRI has no building exposure for this hazard; agriculture shown
Earthquake	\$9,345,906,777	n/a	21,528	\$76,163	n/a	\$13,745	0.000815%				
Hail	\$5,345,487,085	\$795,606,480	21,526	\$668,645	\$1,696,358	\$69,696	0.0125%	\$0			
Heat Wave	\$5,345,487,085	\$795,606,480	21,526	\$24	\$13,215	\$40,263	under 0.0001%				
Hurricane											Not Applicable in NRI for this county
Ice Storm	\$5,345,176,356	n/a	21,526	\$6,992	n/a	\$376,118	0.000131%				
Inland Flooding	\$5,345,401,093	\$42,823,802	6,235	\$5,041,486	\$39,732	\$233,764	n/a (see note)	\$135,000		\$394,749.08	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	\$16,377,989	n/a	34	\$38	n/a	\$7	0.00023%				
Lightning	\$5,345,487,085	n/a	21,526	\$2,324	n/a	\$247,164	under 0.0001%				
Strong Wind	\$5,345,487,085	\$795,606,480	21,526	\$163,706	\$56,152	\$1,888,641	0.00306%	\$0	\$0		
Tornado	\$5,345,487,085	\$795,606,480	21,526	\$1,113,276	\$61,494	\$1,325,066	0.0208%	\$20,000		\$394,749.08	

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 2021-08-02 <i>county-coded records, property plus crops, nominal dollars</i>	Zone-level damage since plan <i>property plus crops, reported for the zone</i>	Public Assistance since plan <i>nominal dollars; see note</i>	Note
Wildfire	\$700,457,964	\$393,090,416	3,748	\$91,533	\$970	\$4,597	0.0131%		\$0		
Winter Weather	\$5,345,487,085	\$795,606,480	21,526	\$43,398	\$261	\$93,074	0.000812%		\$0		

Totals since 2021-08-02 (Storm Events through 2026-06-30): 146 county-coded records, 22 with a damage value recorded (including \$0), \$155,000; 46 zone-level records, 12 with a damage value recorded (including \$0), \$0 reported for the zone; Public Assistance: \$394,749.08 on 1 counted declaration.

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

NRI computes earthquake exposure on its own basis, so it exceeds the county building value in B2-a.

Supports FEMA checklist item B2-a: vulnerability (county context)

County context

Source: 5

Measure	Value
Population	21,526
Building value (total, not at risk)	\$5,345,487,085
Agriculture value (total, not at risk)	\$795,606,480
NRI risk rating (all hazards)	Relatively Low
Expected annual loss, buildings and agriculture, all hazards	\$11,847,217
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)	\$6,181,663
Social vulnerability rating	Relatively Moderate
Community resilience rating	Very Low
NRI version	December 2025

FEMA's all-hazard expected annual loss adds buildings, agriculture and population equivalence; this table gives the property part and the population-equivalence part as separate rows.

Social vulnerability: higher means people are more likely to be harmed and slower to recover. Community resilience: lower means the community is less able to recover. High social vulnerability and low resilience both raise the NRI risk rating.

Supports FEMA checklist item B2-c: repetitive loss properties

Repetitive loss in this county, both definitions

Sources: 1, 4

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

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

Repeat-flood properties: county 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	0	0	0	0	0	0
Statewide, no county in FEMA's file	0	0	8	0	8	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>
Logan County	080110	0	0	0	0	0	0	0
Sterling city	080294	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: 0 in every occupancy group.

Sources: 1, 4

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 0 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):

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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)
 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)
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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, 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.

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Reuse, citation and corrections

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Cite this: Hazard Plain (2026). Logan County, CO: risk-assessment baseline packet, release 2026-10 (data as of 2026-09-30; County FIPS 08075). Automated baseline. <https://hazardplain.org/co/08075/> 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.