

Grant County, OR

Risk-assessment baseline packet

County FIPS: 41023 Release: 2026-10 Data as of: 2026-09-30 Storm Events data through: 2026-06-30

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

Summary

Plan status as of 2026-09-30: No approved plan on record.
Update: FEMA tracker shows a plan in progress.
Highest expected annual loss (FEMA National Risk Index, modeled total; see B1-a): Inland Flooding (\$4,846,075 a year), Wildfire (\$1,801,885) and Lightning (\$439,360).
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; 41023 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.

CONTENTS

1. Summary and terms used, page 1
2. Plan clock, page 2
3. What changed since your last plan, page 2
4. B1-a: hazard identification, page 3
5. B1-b: hazard location, page 5
6. B1-c: hazard extent, page 5
7. B1-d: previous occurrences, page 7
8. B1-e: probability of future events, page 11
9. B1-f: hazards that vary across jurisdictions, page 13
10. B2-a and B2-b: vulnerability and potential impacts, page 15
11. B2-a: vulnerability (county context), page 16
12. B2-c: repetitive loss properties, page 17
13. Sources, what the plan adds, disclaimer and citation, page 18

Plan clock

Status:	No approved plan on record	Plan:	none
Approved:	none	Expires:	none
Update underway:	FEMA tracker shows a plan in progress		

FEMA's plan status data lists no approved plan for this jurisdiction.

What changed since your last plan

Not available. No approved plan on record, so there is no approval date to count from.

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

Plan status for every jurisdiction listed in this county

Source: 1

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry negative = days since expiry	Update underway
Grant County	County	No approved plan on record	none	none	none		FEMA tracker shows a plan in progress
John Day city	City	No approved plan on record	none	none	none		FEMA tracker shows a plan in progress
Grant Education Service District	Special District	No approved plan on record	none	none	none		FEMA tracker shows a plan in progress
Grant Soil and Water Conservation District	Conservation District	No approved plan on record	none	none	none		FEMA tracker shows a plan in progress

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	\$4,839,931	\$2,757	\$3,387	\$4,846,075	13		
2	Wildfire	Relatively Moderate	Relatively Moderate	\$1,729,691	\$503	\$71,691	\$1,801,885	55		
3	Lightning	Relatively Moderate	Relatively Moderate	\$3,251	n/a	\$436,109	\$439,360	2		
4	Cold Wave	Very Low	Very Low	\$172	\$3,048	\$101,458	\$104,678	7		Includes 3 Frost/Freeze records (outside NRI's Cold Wave definition; counted in this table and in B1-d, not in the B1-e descriptor).
5	Heat Wave	Very Low	Very Low	\$34	\$3,317	\$89,815	\$93,166	8		
6	Winter Weather	Relatively Low	Relatively Low	\$554	\$283	\$45,514	\$46,351	81		
7	Hail	Very Low	Very Low	\$17,446	\$1,275	\$9,577	\$28,298	31		
8	Earthquake	Very Low	Very Low	\$23,493	n/a	\$3,704	\$27,198			Storm Events does not record earthquakes.
9	Strong Wind	Very Low	Very Low	\$1,984	\$42	\$24,222	\$26,247	28		Includes 14 High Wind and 1 Strong Wind records (NOAA non-thunderstorm wind types, outside NRI's Strong Wind definition).
10	Landslide	Relatively Low	Relatively Low	\$20,239	n/a	\$1,424	\$21,662	0		Declared 2 times; no Storm Events record of this type.
11	Ice Storm	Very Low	Very Low	\$2,070	n/a	\$4,892	\$6,962	2		

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
12	Avalanche	Relatively Low	Very Low	\$3	n/a	\$5,523	\$5,525	0		No recorded events in Storm Events since 1996 (data through 2026-06-30).
13	Tornado	Very Low	Very Low	\$1,688	\$73	\$1,144	\$2,906	3		
14	Drought	Very Low	Very Low	n/a	\$146	n/a	\$146	0		Declared 1 time; no Storm Events record of this type.
15	Volcanic Activity	Very Low	Very Low	under \$1	n/a	\$12	\$12	0		No recorded events in Storm Events since 1996 (data through 2026-06-30).
	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-3228-OR 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 and volcanic activity 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: coastal flooding and tsunami. 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>
Avalanche	tract 9601 (Very Low, 65.1); tract 9602.02 (Very Low, 64.8); tract 9602.01 (Very Low, 63.8)
Earthquake	tract 9602.02 (Very Low, 37.4); tract 9601 (Very Low, 36.2); tract 9602.01 (Very Low, 16.3)
Hurricane	no tract has a National Risk Index rating for this hazard
Landslide	tract 9601 (Relatively Moderate, 98.6); tract 9602.01 (Relatively Moderate, 97.2); tract 9602.02 (Relatively Moderate, 95.7)
Tornado	tract 9602.02 (Very Low, 4.3); tract 9601 (Very Low, 3.8); tract 9602.01 (Very Low, 2.3)
Volcanic Activity	tract 9602.02 (Very Low, 81.6); tract 9601 (Very Low, 79.5); tract 9602.01 (Very Low, 79.2)
Wildfire	tract 9601 (Very High, 99.2); tract 9602.02 (Relatively High, 98.4); tract 9602.01 (Relatively High, 97.9)

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 9601 is Census Tract 9601). 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
Avalanche	none (count and damage only)	0					
Cold/Wind Chill, Extreme Cold/Wind Chill	wind chill	4 records, 2010 to 2025 (4 zone-level)	1 day to 2 days (median 2 days); 3 with a recorded value	2 consecutive days, 2013-12-07 to 2013-12-08, zone-level		Countywide (zone-level records).	
Frost/Freeze (outside NRI's Cold Wave definition)	crop damage	3 records, 2022 to 2024 (3 zone-level)		No crop damage reported in 3 records.		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
Drought	U.S. Drought Monitor scale (D0 to D4)	0					Storm Events enters a drought at D2 or worse east of the Rockies and D3 or worse from the Rockies west (NWS Instruction 10-1605); NRI drought counts D3 and D4 only.
Earthquake	Modified Mercalli (local data)	0					Storm Events does not record earthquakes; the USGS earthquake catalog is the source.
Hail	hail size (inches)	33 records, 1982 to 2023	0.75 in to 2.5 in (median 1 in); 33 with a recorded value	2.5 in hail, 1998-07-02	Hail, 2004-07-19, \$50,000 property; crops not reported (2004 dollars)	Event records naming jurisdictions in the plan: John Day city (1 record).	
Excessive Heat, Heat	heat index (in event narratives)	8 records, 2006 to 2022 (8 zone-level)	2 days to 7 days (median 3.5 days); 6 with a recorded value	7 consecutive days, 2022-07-25 to 2022-07-31, 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)	2 records, 2014 to 2017 (2 zone-level)		No damage reported in 2 records.		Countywide (zone-level records).	
Flash Flood, Flood, Lakeshore Flood	damage and flood days (flood depth: FIRM)	13 records, 1998 to 2025		Flood, 2019-04-08, \$1,400,000 property; \$0 crops (2019 dollars)		Event records naming jurisdictions in the plan: John Day city (1 record).	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, 2000 to 2001		No damage or casualties reported in 2 records.		Event records naming jurisdictions in the plan: John Day 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)	15 records, 2006 to 2022 (15 zone-level)	48 kt (55 mph) to 74 kt (85 mph) (median 61 kt (70 mph)); 15 with a recorded value	74 kt (85 mph) measured gust, High Wind, 2012-12-20; NWS zone ORZ503	Strong Wind, 2012-05-26, \$500 property; \$0 crops (zone total, 2012 dollars)	Countywide (zone-level records).	
Thunderstorm Wind	wind speed (kt and mph)	18 records, 1982 to 2024	41 kt (47 mph) to 83 kt (96 mph) (median 53.5 kt (62 mph)); 16 with a recorded value	83 kt (96 mph), measurement type not recorded, Thunderstorm Wind, 1982-07-13; same speed and measurement basis also recorded on 1982-07-13	Thunderstorm Wind, 2001-07-11, \$15,000 property; \$0 crops (2001 dollars)	Event records naming jurisdictions in the plan: John Day city (3 records).	

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
Tornado	Enhanced Fujita (Fujita before Feb 2007)	3 records, 2003 to 2023	F/EF0 to F/EF1 (median F/EF0); 3 with a recorded value	F1 tornado, 2004-07-19, 2.2 mi within this county, 100 yd wide, \$0 property; crops not reported (2004 dollars)		No event record names a jurisdiction in the plan.	Before 1996 a tornado is listed once, under the county where it began, with its whole path's rating and length; from 1996 on, each county lists its own segment. Length is not used to rank tornadoes (see Methods).
Volcanic Ash, Volcanic Ashfall	Volcanic Explosivity Index (local data)	0					
Wildfire	acres burned (local data)	55 records, 2002 to 2018 (48 zone-level)		No damage reported in 55 records.		No event record names a jurisdiction in the plan. Zone-level records (48) apply countywide.	
Winter Storm, Heavy Snow, Blizzard, Lake- Effect Snow, Winter Weather, Sleet	none in data (snowfall: local data)	81 records, 2005 to 2025 (81 zone-level)		No damage reported in 81 records.		Countywide (zone-level records).	

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

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

No approved plan on record, so there is no approval date to count from.

Federal disaster declarations for this county

Sources: 1, 2, 3

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance <i>federal share obligated, nominal dollars</i>	Flags	Notes
2025-01-01	2024-07-10	DR-4854-OR	Major disaster	Wildfires	Wildfire	\$79,351.24	within last 5 years	
2024-09-07	2024-09-02	FM-5534-OR	Fire management	Rail Ridge Fire	Wildfire	no Public Assistance recorded	within last 5 years	
2024-07-21	2024-07-21	FM-5514-OR	Fire management	Battle Mountain Fire Complex	Wildfire	no Public Assistance recorded	within last 5 years	same incident as DR-4854
2024-07-21	2024-07-20	FM-5513-OR	Fire management	Boneyard Fire	Wildfire	no Public Assistance recorded	within last 5 years	same incident as DR-4854

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance		
						<i>federal share obligated, nominal dollars</i>	Flags	Notes
2024-07-18	2024-07-18	FM-5512-OR	Fire management	Falls Fire	Wildfire	no Public Assistance recorded	within last 5 years	same incident as DR-4854
2020-03-28	2020-01-20	DR-4499-OR	Major disaster	COVID-19 Pandemic	Non-natural, not counted	\$5,611,557.48		
2020-03-13	2020-01-20	EM-3429-OR	Emergency	COVID-19	Non-natural, not counted	no Public Assistance recorded		same incident as DR-4499
2019-07-09	2019-04-06	DR-4452-OR	Major disaster	Severe Storms, Flooding, Landslides, and Mudslides	Inland Flooding (primary); also designated: Landslide	\$1,145,168.63		
2015-08-15	2015-08-14	FM-5102-OR	Fire management	Canyon Creek Fire Complex	Wildfire	no Public Assistance recorded		
2005-09-07	2005-08-29	EM-3228-OR	Emergency	Hurricane Katrina Evacuation	Hurricane: evacuation support, not a local hazard event; not counted	no Public Assistance recorded		
2004-02-19	2003-12-26	DR-1510-OR	Major disaster	Severe Winter Storms	Winter Weather	\$17,930.66		
2002-07-19	2002-07-18	FM-2448-OR	Fire management	Or - Flagtail Fire - 07/19/02	Wildfire	no Public Assistance recorded		
1997-01-23	1996-12-25	DR-1160-OR	Major disaster	Severe Winter Storms, Land and Mudslides, Flooding	Inland Flooding; Landslide; Winter Weather	no Public Assistance recorded		
1977-04-29	1977-04-29	EM-3039-OR	Emergency	Drought	Drought	no Public Assistance recorded		
1964-12-24	1964-12-24	DR-184-OR	Major disaster	Heavy Rains & 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
1963-02-25	1963-02-25	DR-144-OR	Major disaster	Floods	Inland Flooding
1962-10-16	1962-10-16	DR-136-OR	Major disaster	Severe Storms	Hazard not mapped (severe storm title names no single hazard); not counted
1957-03-01	1957-03-01	DR-69-OR	Major disaster	Flood	Inland Flooding
1956-07-20	1956-07-20	DR-60-OR	Major disaster	Storm & Flood	Inland Flooding
1955-12-29	1955-12-29	DR-49-OR	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.

27 Fire Management declarations (1973-08-17 to 2001-08-17) FEMA filed as Statewide with no county; each names one local fire. Listed on the state page.

Public Assistance not placed in any Oregon county: 1 row, \$479,867.27; listed on the Oregon 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 <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
Avalanche	0			0	0		1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Cold Wave	7			4	0		1996 to 2026-06-30	Includes 3 Frost/Freeze records.
Drought	0			0	1		1996 to 2026-06-30	No Storm Events records of this type; 1 federal declared incident (see declarations table)
Earthquake	0			0	0			Storm Events does not record earthquakes; the USGS earthquake catalog is the source.
Hail	33			2	0		1955 to 2026-06-30	
Heat Wave	8			4	0		1996 to 2026-06-30	
Hurricane	0			0	0		1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Ice Storm	2			0	0		1996 to 2026-06-30	
Inland Flooding	13			1	3		1996 to 2026-06-30	
Landslide	0			0	2		1996 to 2026-06-30	No Storm Events records of this type; 2 federal declared incidents (see declarations table)
Lightning	2			0	0		1996 to 2026-06-30	
Strong Wind	33			3	0		1955 to 2026-06-30	Includes 14 High Wind and 1 Strong Wind records.
Tornado	3			1	0		1950 to 2026-06-30	
Volcanic Activity	0			0	0		1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Wildfire	55			0	4		1996 to 2026-06-30	
Winter Weather	81			14	2		1996 to 2026-06-30	

Notable Storm Events records

Sources: 1, 6, 7

Date	Event type	Magnitude or extent	Damage <i>nominal dollars</i>	Deaths, injuries <i>direct only</i>	Location	Flags	Why listed
2022-07-25	Excessive Heat		\$0 property; \$0 crops (zone total, 2022 dollars)	0, 0	NWS zone ORZ506 (OCHOCO-JOHN DAY HIGHLANDS), zone-level	within last 5 years	B1-c worst recorded: Excessive Heat, Heat
2020-09-07	High Wind	52 kt (60 mph) estimated gust	\$0 property; \$0 crops (zone total, 2020 dollars)	1, 0	NWS zone ORZ506 (OCHOCO-JOHN DAY HIGHLANDS), zone-level		deaths or injuries recorded
2019-04-08	Flood		\$1,400,000 property; \$0 crops (2019 dollars)	0, 0	MONUMENT ARPT to DALE		B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
2013-12-07	Extreme Cold/Wind Chill		\$0 property; \$0 crops (zone total, 2013 dollars)	0, 0	NWS zone ORZ503 (SOUTHERN BLUE MOUNTAINS), zone-level		B1-c worst recorded: Cold/Wind Chill, Extreme Cold/Wind Chill
2012-12-20	High Wind	74 kt (85 mph) measured gust	\$0 property; \$0 crops (zone total, 2012 dollars)	0, 0	NWS zone ORZ503 (SOUTHERN BLUE MOUNTAINS), zone-level		B1-c worst recorded: High Wind and Strong Wind
2012-05-26	Strong Wind	48 kt (55 mph) estimated gust	\$500 property; \$0 crops (zone total, 2012 dollars)	0, 0	NWS zone ORZ505 (JOHN DAY BASIN), zone-level		B1-c most damaging: High Wind and Strong Wind
2011-05-15	Flood		\$688,000 property; \$0 crops (2011 dollars)	0, 0	CANYON CITY to DAYVILLE		large reported damage
2004-07-19	Tornado	F1, 2.2 mi within this county, 100 yd wide	\$0 property; crops not reported (2004 dollars)	0, 0	RITTER		B1-c worst recorded: Tornado
2004-07-19	Hail	1.75 in	\$50,000 property; crops not reported (2004 dollars)	0, 0	RITTER		B1-c most damaging: Hail
2001-07-11	Thunderstorm Wind	speed not recorded	\$15,000 property; \$0 crops (2001 dollars)	0, 0	MONUMENT		B1-c most damaging: Thunderstorm Wind
1998-07-02	Hail	2.5 in	damage not reported	0, 0	CANYON CITY to GRANITE		B1-c worst recorded: Hail
1982-07-13	Thunderstorm Wind	83 kt (96 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" (237 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
Avalanche	0.01	events per year	about 1 in 100 years	Possible	FEMA annualized frequency (modeled)	0	1994 to 2023 (30 years)	see B1-f	0.01 is NRI's minimum avalanche frequency for a county in an avalanche susceptibility zone; NRI records no avalanche here, so the descriptor reflects the floor, not local events.
Cold Wave	0.122	event-days per year	about 0.122 days per year	Likely	Storm Events event-days in 3 of 30 years, 1996 to 2025 (10%)	2.31	2005-11-12 to 2024-11-12 (19 years)	countywide	
Drought	73.3	event-days per year	about 73.3 days per year		Storm Events event-days in 0 of 30 years, 1996 to 2025 (0%)	2,128	2000 to 2025 (25.25 years; D3 and D4 only)	countywide	No Storm Events drought record, 1996 to 2025
Earthquake	0.00366	annual probability at a location	chance a given location in the county has at least minor-damage shaking in a year: 0.366%			not shown	modeled	see B1-f	No descriptor (Storm Events does not record earthquakes).
Hail	0.207	events per year	about 1 in 5 years	Likely	FEMA annualized frequency (modeled)	7.9 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave	2.91	event-days per year	about 2.91 days per year	Likely	Storm Events event-days in 4 of 30 years, 1996 to 2025 (13.3%)	29.9	2005-11-12 to 2024-11-12 (19 years)	countywide	
Hurricane		events per year					1851 to 2024 (Atlantic); 1949 to 2024 (Pacific)	see B1-f	Not Applicable in NRI for this county; no descriptor.
Ice Storm	0.0149	event-days per year	about 0.0149 days per year	Possible	Storm Events event-days in 2 of 30 years, 1996 to 2025 (6.67%)	0	1946-12-31 to 2014-02-12 (67 years)	countywide	
Inland Flooding	0.357	event-days per year	about 0.357 days per year	Likely	Storm Events event-days in 10 of 30 years, 1996 to 2025 (33.3%)	10	1996 to 2023 (28 years)	see B1-f	
Landslide	2.33	events per year (modeled)	about 2.33 per year	Highly likely	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	

Hazard	FEMA annualized frequency (modeled)	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
	<i>unit per row</i>								
Lightning	19.7	days per year with a strike	about 19.7 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	countywide	
Strong Wind	0.0811	events per year	about 1 in 12 years	Possible	FEMA annualized frequency (modeled)	4	1986 to 2023 (38 years)	countywide	
Tornado	0.0724	events per year	about 1 in 14 years	Possible	FEMA annualized frequency (modeled)	not shown	1950 to 2023 (EF2+); 1986 to 2023 (EF0-1)	see B1-f	
Volcanic Activity	0.0026	annual probability	about 1 in 385 years	Unlikely	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Wildfire	0.00718	annual probability at a location	chance a given location in the county burns in a year: 0.718%	Likely	Storm Events records in 14 of 30 years, 1996 to 2025 (46.7%)	not shown	modeled	see B1-f	
Winter Weather	14.8	event-days per year	about 14.8 days per year	Likely	Storm Events event- days in 21 of 30 years, 1996 to 2025 (70%)	282	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	16	30	0.533
Hail	2.00 in+	1996 to 2025	2	30	0.0667
Thunderstorm Wind (counted as NRI Strong Wind)	50-64 kt	1996 to 2025	9	30	0.3
Thunderstorm Wind (counted as NRI Strong Wind)	65 kt+	1996 to 2025	1	30	0.0333
Thunderstorm Wind (counted as NRI Strong Wind)	unmeasured or below 50 kt	1996 to 2025	3	30	0.1
Tornado	EF0-1	1996 to 2025	3	30	0.1
Tornado	EF2-3	1996 to 2025	0	30	0
Tornado	EF4-5	1996 to 2025	0	30	0
Tornado	unrated (EFU)	1996 to 2025	0	30	0

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

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

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

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

Range of census tract risk within the county

Source: 5

Hazard	Tracts <i>rated of all</i>	NRI risk score, 0 to 100			Tracts by rating
		Min	Median	Max	
Avalanche	3 of 3	63.8	64.8	65.1	Very Low 3
Cold Wave	3 of 3	34.3	40.9	61.0	Relatively Moderate 1, Relatively Low 2
Drought	3 of 3	68.2	72.7	72.7	Very Low 3
Earthquake	3 of 3	16.3	36.2	37.4	Very Low 3
Hail	3 of 3	42.3	63.7	68.0	Relatively Low 3
Heat Wave	3 of 3	30.8	46.1	68.1	Relatively Moderate 1, Relatively Low 2
Hurricane	0 of 3				Not Applicable 3
Ice Storm	3 of 3	21.6	37.8	48.5	Relatively Low 2, Very Low 1
Inland Flooding	3 of 3	82.0	95.0	98.3	Very High 1, Relatively High 2
Landslide	3 of 3	95.7	97.2	98.6	Relatively Moderate 3
Lightning	3 of 3	98.1	99.6	99.9	Very High 3

Hazard	Tracts <i>rated of all</i>	NRI risk score, 0 to 100			Tracts by rating
		Min	Median	Max	
Strong Wind	3 of 3	21.2	46.3	49.4	Relatively Low 3
Tornado	3 of 3	2.3	3.8	4.3	Very Low 3
Volcanic Activity	3 of 3	79.2	79.5	81.6	Very Low 3
Wildfire	3 of 3	97.9	98.4	99.2	Very High 1, Relatively High 2
Winter Weather	3 of 3	82.7	94.5	95.3	Relatively High 3

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

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

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

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

This county has 3 census tracts; the minimum, median and maximum come from those 3.

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>
Grant County	County	No approved plan on record	FMA RL 0, SRL 0; any 0	\$17,930.66	0 total; no approved plan
John Day city	City	No approved plan on record	FMA RL 0, SRL 0; any 1	\$1,145,168.63	6 total; no approved 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.

No approved plan on record, so there is no approval date to count from.

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

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

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

Hazard	Building exposure <i>modeled dollars</i>	Agriculture exposure <i>modeled dollars</i>	Population exposed <i>people</i>	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since plan <i>county-coded records, property plus crops, nominal dollars</i>	Zone-level damage since plan <i>property plus crops, reported for the zone</i>	Public Assistance since plan <i>nominal dollars; see note</i>	Note
Avalanche	\$68,037	n/a	1	\$3	n/a	\$5,523	0.00398%				
Cold Wave	\$2,296,890,217	\$31,066,944	7,203	\$172	\$3,048	\$101,458	under 0.0001%				
Drought	n/a	\$1,907,624	n/a	n/a	\$146	n/a	0.00767% (agriculture)				NRI has no building exposure for this hazard; agriculture shown
Earthquake	\$3,921,310,291	n/a	7,233	\$23,493	n/a	\$3,704	0.000599%				
Hail	\$2,296,890,217	\$31,066,944	7,203	\$17,446	\$1,275	\$9,577	0.00076%				
Heat Wave	\$2,296,890,217	\$31,066,944	7,203	\$34	\$3,317	\$89,815	under 0.0001%				
Hurricane											Not Applicable in NRI for this county
Ice Storm	\$2,296,890,217	n/a	7,203	\$2,070	n/a	\$4,892	under 0.0001%				
Inland Flooding	\$2,288,781,589	\$5,253,021	1,059	\$4,839,931	\$2,757	\$3,387	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	\$178,642,512	n/a	676	\$20,239	n/a	\$1,424	0.0113%				
Lightning	\$2,296,890,217	n/a	7,203	\$3,251	n/a	\$436,109	0.000142%				
Strong Wind	\$2,296,890,217	\$31,066,944	7,203	\$1,984	\$42	\$24,222	under 0.0001%				
Tornado	\$2,296,890,217	\$31,066,944	7,203	\$1,688	\$73	\$1,144	under 0.0001%				

Hazard	Building exposure <i>modeled dollars</i>	Agriculture exposure <i>modeled dollars</i>	Population exposed <i>people</i>	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since plan <i>county-coded records, property plus crops, nominal dollars</i>	Zone-level damage since plan <i>property plus crops, reported for the zone</i>	Public Assistance since plan <i>nominal dollars; see note</i>	Note
Volcanic Activity	\$2,296,890,217	n/a	7,203	under \$1	n/a	\$12	under 0.0001%				
Wildfire	\$955,587,409	\$23,541,830	4,315	\$1,729,691	\$503	\$71,691	0.181%				
Winter Weather	\$2,296,890,217	\$31,066,944	7,203	\$554	\$283	\$45,514	under 0.0001%				

Totals since the plan: not available. No approved plan on record, so there is no approval date to count from.

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

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

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

County context

Source: 5

Measure	Value
Population	7,203
Building value (total, not at risk)	\$2,296,890,217
Agriculture value (total, not at risk)	\$31,066,944
NRI risk rating (all hazards)	Very Low
Expected annual loss, buildings and agriculture, all hazards	\$6,651,999
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)	\$798,472
Social vulnerability rating	Relatively High
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)	0
Repetitive loss, NFIP insurance definition	1	Severe repetitive loss, NFIP insurance definition	0

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

Repeat-flood properties: county 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	1	0	1	0	0
of which: John Day city	0	0	1	0	1	0	0
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>
Grant County	410074	0	0	0	0	0	0	0
John Day city	410077	0	0	1	0	1	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	1	0	1	0	0
2 to 4 unit residential	0	0	0	0	0	0	0
other residential	0	0	0	0	0	0	0
non-residential	0	0	0	0	0	0	0
not reported	0	0	0	0	0	0	0

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

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

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

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

Exact counts; no count suppression.

Sources

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

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

What this packet is and what the plan adds

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

Reuse and citation: Hazard Plain text and tables are licensed under Creative Commons Attribution 4.0 International (CC BY 4.0, <https://creativecommons.org/licenses/by/4.0/>); credit Hazard Plain and the release. The underlying federal data are public domain; OpenFEMA data are also subject to the OpenFEMA terms and conditions.

Cite this: Hazard Plain (2026). Grant County, OR: risk-assessment baseline packet, release 2026-10 (data as of 2026-09-30; County FIPS 41023). Automated baseline. <https://hazardplain.org/or/41023/> 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