

Chugach Census Area, AK

Risk-assessment baseline packet

County FIPS: 02063 Release: 2026-10 Data as of: 2026-09-30 Storm Events data through: 2026-06-30

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

Summary

Plan status as of 2026-09-30: No county-level plan row in FEMA data.

Highest expected annual loss (FEMA National Risk Index, modeled total; see B1-a): Avalanche (\$4,936,670 a year), Earthquake (\$2,691,253) and Cold Wave (\$1,094,368).

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; 02063 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 4
- 6. B1-c: hazard extent, page 5
- 7. B1-d: previous occurrences, page 8
- 8. B1-e: probability of future events, page 14
- 9. B1-f: hazards that vary across jurisdictions, page 16
- 10. B2-a and B2-b: vulnerability and potential impacts, page 17
- 11. B2-a: vulnerability (county context), page 19
- 12. B2-c: repetitive loss properties, page 19
- 13. Sources, what the plan adds, disclaimer and citation, page 20

Plan clock

No county-level plan row in FEMA data

What changed since your last plan

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

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

Plan status for every jurisdiction listed in this county

Source: 1

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Notes
Cordova city	City	Approved, expires 2031-05-21	Cordova LHMP (FEMA plan 110098)	2026-05-22	2031-05-21	1,694	this jurisdiction approved 2026-05-27
Valdez city	City	Expired on 2024-03-11	Valdez HMP (FEMA plan 105200)	2019-03-12	2024-03-11	-933	
Whittier city	City	Approved, expires 2027-08-23	Whittier HMP (FEMA plan 108297)	2022-08-24	2027-08-23	327	

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

Supports FEMA checklist item B1-a: hazard identification

Hazards NRI does not cover (local data needed)

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

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

Sources: 5, 6

Rank by EAL	Hazard	NRI risk rating	EAL rating	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL total (see note) <i>modeled dollars per year</i>	Storm Events records, 1996 to 2026-06-30 <i>count</i>	Storm Events coverage note
1	Avalanche	Very High	Relatively High	\$9,544	n/a	\$4,927,126	\$4,936,670	21	
2	Earthquake	Relatively Low	Relatively Low	\$1,715,394	n/a	\$975,859	\$2,691,253		Storm Events does not record earthquakes.
3	Cold Wave	Relatively Low	Relatively Moderate	\$1,966	\$0	\$1,092,402	\$1,094,368	11	
4	Landslide	Relatively Moderate	Relatively Moderate	\$8,510	n/a	\$387,184	\$395,694	0	Declared 3 times; no Storm Events record of this type.
5	Tsunami	Very Low	Very Low	\$306,656	n/a	\$0	\$306,656	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
6	Inland Flooding	Very Low	Very Low	\$266,075	\$0	\$17	\$266,092	25	
7	Winter Weather	Relatively Low	Relatively Low	\$8,300	\$0	\$33,035	\$41,335	289	
8	Lightning	Very Low	Very Low	\$170	n/a	\$6,142	\$6,311	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
9	Wildfire	Very Low	Very Low	\$644	\$0	\$51	\$694	5	
10	Coastal Flooding	Very Low	Very Low	\$478	n/a	\$80	\$558	1	
11	Ice Storm	Very Low	Very Low	\$25	n/a	\$478	\$504	18	
12	Hail	Very Low	Very Low	\$13	\$0	\$3	\$16	2	
13	Tornado	Very Low	Very Low	under \$1	\$0	under \$1	under \$1	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
14	Drought	No Rating	No Expected Annual Losses	n/a	\$0	n/a	\$0	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).

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
15	Strong Wind	No Rating	No Expected Annual Losses	\$0	\$0	\$0	\$0	287	Includes 287 High Wind records (a NOAA non-thunderstorm wind type, outside NRI's Strong Wind definition).
16	Volcanic Activity	No Rating	No Expected Annual Losses	\$0	n/a	\$0	\$0	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
	Heat Wave	Insufficient Data	Insufficient Data	n/a	n/a	n/a	n/a	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).

Total = buildings + agriculture + population equivalence; FEMA values each expected death (or 10 injuries) at \$13.7 million (2024 dollars).
NRI risk rating combines expected annual loss with social vulnerability and community resilience; EAL rating rates expected annual loss alone. Both compare this county with all U.S. counties.
Local data needed: state and local landslide, tsunami, lightning, volcanic activity and heat wave 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: hurricane. 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.

Coastal Flooding and 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 2 (Relatively High, 93.8); tract 3 (Relatively High, 93.6)
Earthquake	tract 3 (Relatively High, 94.4); tract 2 (Relatively High, 90.1)
Landslide	tract 2 (Relatively High, 99.8); tract 3 (Relatively High, 99.5)
Tornado	tract 3 (Very Low, 0.2); tract 2 (Very Low, 0.2)
Tsunami	tract 3 (Relatively Low, 78.7); tract 2 (Relatively Low, 71.5)
Volcanic Activity	no tract has a National Risk Index rating for this hazard
Wildfire	tract 3 (Very Low, 55.7); tract 2 (Very Low, 52.6)

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 2 is Census Tract 2). 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)	21 records, 2001 to 2024 (21 zone-level)		Avalanche, 2001-01-19, \$10,000 property; crops not reported (2001 dollars); NWS zone AKZ125		Countywide (zone-level records).	
Coastal Flood, Storm Surge/Tide	none in data (flood depth: FIRM)	1 record, 2018 (1 zone-level)		Storm Surge/Tide, 2018-10-23, \$77,000 property; \$0 crops (2018 dollars); NWS zone AKZ125		Countywide (zone-level records).	Flood depth: see the FEMA Flood Insurance Rate Map.
Cold/Wind Chill, Extreme Cold/Wind Chill	wind chill	11 records, 2006 to 2022 (11 zone-level)	1 day to 16 days (median 2.5 days); 6 with a recorded value	16 consecutive days, 2008-12-27 to 2009-01-11, zone-level		Countywide (zone-level records).	
Frost/Freeze (outside NRI's Cold Wave definition)	crop damage	0					
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)	2 records, 2004 to 2007 (2 zone-level)		No hail record can stand as this county's largest: the 2 records with a recorded size reached this county only through an NWS zone that covers more than one county, so the hail may have occurred outside this county (zone-level); they are counted as occurrences.		Countywide (zone-level records).	
Excessive Heat, Heat	heat index (in event narratives)	0					

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
Ice Storm	Sperry-Piltz ice scale (local data)	18 records, 2002 to 2015 (18 zone-level)		Ice Storm, 2007-10-30, \$5,000 property; \$0 crops (2007 dollars); NWS zone AKZ141		Countywide (zone-level records).	
Flash Flood, Flood, Lakeshore Flood	damage and flood days (flood depth: FIRM)	25 records, 2001 to 2024 (25 zone-level)		Flood, 2006-10-10, \$10,000,000 property; \$0 crops (2006 dollars); NWS zone AKZ141		Countywide (zone-level 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					
Lightning	annualized frequency (the measure FEMA's Local Mitigation Planning Handbook names)	0					Storm Events lists lightning with damage or casualties.
High Wind and Strong Wind (outside NRI's Strong Wind definition)	wind speed (kt and mph)	287 records, 2000 to 2026 (287 zone-level)	43 kt (49 mph) to 119 kt (137 mph) (median 69 kt (79 mph)); 287 with a recorded value	119 kt (137 mph) measured gust, High Wind, 2008-02-02; NWS zone AKZ131	High Wind, 2011-03-02, \$203,000 property; \$0 crops (zone total, 2011 dollars)	Countywide (zone-level records).	
Thunderstorm Wind	wind speed (kt and mph)	0					
Tornado	Enhanced Fujita (Fujita before Feb 2007)	0					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).
Tsunami	none (count and damage only)	0					
Volcanic Ash, Volcanic Ashfall	Volcanic Explosivity Index (local data)	0					

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
Wildfire	acres burned (local data)	5 records, 2004 to 2023 (5 zone-level)		Wildfire, 2004-08-01, \$270,000 property; crops not reported (2004 dollars); NWS zone AKZ224		Countywide (zone-level records).	
Winter Storm, Heavy Snow, Blizzard, Lake- Effect Snow, Winter Weather, Sleet	none in data (snowfall: local data)	289 records, 2000 to 2026 (289 zone- level)		Heavy Snow, 2000-12-28, \$5,000 property; crops not reported (2000 dollars); NWS zone AKZ125		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, tsunami 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: 9 declarations covering 7 separate hazard incidents counted in this packet (declarations for the same incident count once; non-natural and evacuation-only declarations are not counted).

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

Federal disaster declarations for this county

Sources: 1, 2, 3

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance <i>federal share obligated, nominal dollars</i>	Notes
2020-04-09	2020-01-20	DR-4533-AK	Major disaster	COVID-19 Pandemic	Non-natural, not counted	\$1,181,512.22	Valdez-Cordova CA AK split into Chugach CA and Copper River CA 2019-01-02; list on both
2020-03-13	2020-01-20	EM-3446-AK	Emergency	COVID-19	Non-natural, not counted	no Public Assistance recorded	same incident as DR-4533; part of county; Valdez-Cordova CA AK split into Chugach CA and Copper River CA 2019-01-02; list on both
2012-11-27	2012-09-15	DR-4094-AK	Major disaster	Severe Storm, Straight-Line Winds, Flooding, and Landslides	Inland Flooding; Landslide; Strong Wind	no Public Assistance recorded	part of county; Valdez-Cordova CA AK split into Chugach CA and Copper River CA 2019-01-02; list on both
2006-12-08	2006-10-08	DR-1669-AK	Major disaster	Severe Storms, Flooding, Landslides, and Mudslides	Inland Flooding; Landslide	\$128,215.34	part of county; Valdez-Cordova CA AK split into Chugach CA and Copper River CA 2019-01-02; list on both

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance <i>federal share obligated, nominal dollars</i>	Notes
2006-10-16	2006-08-15	DR-1663-AK	Major disaster	Severe Storms, Flooding, Landslides, and Mudslides	Inland Flooding; Landslide	\$1,556.77	part of county; Valdez-Cordova CA AK split into Chugach CA and Copper River CA 2019-01-02; list on both
2002-11-08	2002-11-03	DR-1440-AK	Major disaster	Earthquake	Earthquake	none placed in this county by FEMA's record; \$271,766.56 for this declaration is not placed in any county (see the state page)	Valdez-Cordova CA AK split into Chugach CA and Copper River CA 2019-01-02; list on both
2000-02-17	1999-12-21	DR-1316-AK	Major disaster	Severe Winter Storms and Avalanches	Winter Weather	\$215,977.24	Valdez-Cordova CA AK split into Chugach CA and Copper River CA 2019-01-02; list on both
1989-05-10	1989-01-15	DR-826-AK	Major disaster	Severe Freezing	Cold Wave	no Public Assistance recorded	Valdez-Cordova CA AK split into Chugach CA and Copper River CA 2019-01-02; list on both
1986-10-27	1986-10-10	DR-782-AK	Major disaster	Severe Storms & Flooding	Inland Flooding	no Public Assistance recorded	Valdez-Cordova CA AK split into Chugach CA and Copper River CA 2019-01-02; list on both

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
1964-03-28	1964-03-28	DR-168-AK	Major disaster	Earthquake	Earthquake
1955-12-22	1955-12-22	DR-46-AK	Major disaster	Severe Hardship	Other, not an NRI hazard; not counted
1954-11-10	1954-11-10	DR-31-AK	Major disaster	Severe Hardship	Other, not an NRI hazard; not counted
1953-10-30	1953-10-30	DR-13-AK	Major disaster	Severe Hardship	Other, not an NRI hazard; not counted

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.

7 Fire Management declarations (1970-06-26 to 1996-06-05) FEMA filed as Statewide with no county; each names one local fire. Listed on the state page.

Public Assistance not placed in any Alaska county: 40 rows, \$21,127,378.43; listed on the Alaska 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
Avalanche	21			2	0		1996 to 2026-06-30	
Coastal Flooding	1			0	0		1996 to 2026-06-30	
Cold Wave	11			5	1		1996 to 2026-06-30	
Drought	0			0	0		1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Earthquake	0			0	1			Storm Events does not record earthquakes; the USGS earthquake catalog is the source.
Hail	2			0	0		1955 to 2026-06-30	
Heat Wave	0			0	0		1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Ice Storm	18			0	0		1996 to 2026-06-30	
Inland Flooding	25			5	4		1996 to 2026-06-30	
Landslide	0			0	3		1996 to 2026-06-30	No Storm Events records of this type; 3 federal declared incidents (see declarations table)
Lightning	0			0	0		1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events

Hazard	Storm Events records, all years on file <i>(years in the Period column)</i>	Since plan approval <i>records</i>	In the 12 months before plan approval <i>records</i>	Last 5 years <i>records</i>	Declared incidents, all years <i>separate disasters</i>	Declared since approval <i>separate disasters</i>	Period	Statement
Strong Wind	287			12	1		1955 to 2026-06-30	Includes 287 High Wind records.
Tornado	0			0	0		1950 to 2026-06-30	No recorded events, 1950 to 2026-06-30, NOAA NCEI Storm Events
Tsunami	0			0	0		1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Volcanic Activity	0			0	0		1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Wildfire	5			2	0		1996 to 2026-06-30	
Winter Weather	289			69	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	Why listed
2018-10-23	Storm Surge/Tide		\$77,000 property; \$0 crops (zone total, 2018 dollars)	0, 0	NWS zone AKZ125 (WRN P.W. SND & KENAI MTNS), zone-level	B1-c worst recorded: Coastal Flood, Storm Surge/Tide
2011-03-02	High Wind	63 kt (72 mph) measured gust	\$203,000 property; \$0 crops (zone total, 2011 dollars)	0, 0	NWS zone AKZ131 (NERN P.W. SND), zone-level	B1-c most damaging: High Wind and Strong Wind
2008-12-27	Extreme Cold/ Wind Chill		\$0 property; \$0 crops (zone total, 2008 dollars)	0, 0	NWS zone AKZ224 (UPR TANANA VLY FORTYMILE), zone-level	B1-c worst recorded: Cold/Wind Chill, Extreme Cold/Wind Chill
2008-02-02	High Wind	119 kt (137 mph) measured gust	\$0 property; \$0 crops (zone total, 2008 dollars)	0, 0	NWS zone AKZ131 (NERN P.W. SND), zone-level	B1-c worst recorded: High Wind and Strong Wind
2007-10-30	Ice Storm		\$5,000 property; \$0 crops (zone total, 2007 dollars)	0, 0	NWS zone AKZ141 (COPPER RIVER BASIN), zone-level	B1-c worst recorded: Ice Storm
2006-10-10	Flood		\$10,000,000 property; \$0 crops (zone total, 2006 dollars)	0, 0	NWS zone AKZ141 (COPPER RIVER BASIN), zone-level	B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
2004-08-01	Wildfire		\$270,000 property; crops not reported (zone total, 2004 dollars)	0, 0	NWS zone AKZ224 (UPR TANANA VLY FORTYMILE), zone-level	B1-c worst recorded: Wildfire
2002-01-12	Avalanche		\$6,000 property; crops not reported (zone total, 2002 dollars)	2, 1	NWS zone AKZ141 (COPPER RIVER BASIN), zone-level	deaths or injuries recorded
2001-12-12	Avalanche		damage not reported	1, 1	NWS zone AKZ135 (SERN P.W. SND), zone-level	deaths or injuries recorded
2001-03-18	Avalanche		damage not reported	1, 1	NWS zone AKZ141 (COPPER RIVER BASIN), zone-level	deaths or injuries recorded
2001-01-19	Avalanche		\$10,000 property; crops not reported (zone total, 2001 dollars)	0, 0	NWS zone AKZ125 (WRN P.W. SND & KENAI MTNS), zone-level	B1-c worst recorded: Avalanche
2000-12-28	Heavy Snow		\$5,000 property; crops not reported (zone total, 2000 dollars)	0, 0	NWS zone AKZ125 (WRN P.W. SND & KENAI MTNS), zone-level	B1-c worst recorded: Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet

The full list is in the Excel file, sheet "B1-d Storm Events history" (659 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	0.767	events per year	about 0.77 per year	Likely	FEMA annualized frequency (modeled)	23	1994 to 2023 (30 years)	see B1-f	
Coastal Flooding	0.012	events per year at a location (modeled)	about 0.012 per year at a given location in the county	Possible	Storm Events records in 1 of 30 years, 1996 to 2025 (3.33%)	not shown	modeled	see B1-f	
Cold Wave	1.64	event-days per year	about 1.64 days per year	Likely	Storm Events event-days in 5 of 30 years, 1996 to 2025 (16.7%)	19.9	2005-11-12 to 2024-11-12 (19 years)	countywide	
Drought	0	event-days per year	none modeled		Storm Events event-days in 0 of 30 years, 1996 to 2025 (0%)	0	2000 to 2025 (25.25 years; D3 and D4 only)	countywide	No Storm Events drought record, 1996 to 2025
Earthquake	0.132	annual probability at a location	chance a given location in the county has at least minor-damage shaking in a year: 13.2%			not shown	modeled	see B1-f	No descriptor (Storm Events does not record earthquakes).
Hail	0.00145	events per year	about 1 in 689 years	Unlikely	FEMA annualized frequency (modeled)	0.1 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave		event-days per year			Storm Events event-days in 0 of 30 years, 1996 to 2025 (0%)		2005-11-12 to 2024-11-12 (19 years)	countywide	No Storm Events heat wave record, 1996 to 2025
Ice Storm	0.0149	event-days per year	about 0.0149 days per year	Likely	Storm Events event-days in 8 of 30 years, 1996 to 2025 (26.7%)	0	1946-12-31 to 2014-02-12 (67 years)	countywide	
Inland Flooding	0.01	event-days per year	about 0.01 days per year	Likely	Storm Events event-days in 10 of 30 years, 1996 to 2025 (33.3%)	0	1996 to 2023 (28 years)	see B1-f	
Landslide	76.5	events per year (modeled)	about 76.5 per year	Highly likely	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Lightning	4.46	days per year with a strike	about 4.46 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	countywide	
Strong Wind	0	events per year	none modeled	Unlikely	FEMA annualized frequency (modeled)	0	1986 to 2023 (38 years)	countywide	
Tornado	0.00000947	events per year	about 1 in 105,600 years	Unlikely	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
Tsunami	0.304	annual probability at the most exposed location (used in place of a county value)	chance at the county's most exposed location in a year: 30.4%		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
Volcanic Activity	0.0105	annual probability	about 1 in 95 years	Possible	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Wildfire	0.0000102	annual probability at a location	chance a given location in the county burns in a year: 0.00102%	Possible	Storm Events records in 2 of 30 years, 1996 to 2025 (6.67%)	not shown	modeled	see B1-f	
Winter Weather	7.51	event-days per year	about 7.51 days per year	Likely	Storm Events event- days in 26 of 30 years, 1996 to 2025 (86.7%)	95.7	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	0	30	0
Hail	2.00 in+	1996 to 2025	0	30	0
Thunderstorm Wind (counted as NRI Strong Wind)	50-64 kt	1996 to 2025	0	30	0
Thunderstorm Wind (counted as NRI Strong Wind)	65 kt+	1996 to 2025	0	30	0
Thunderstorm Wind (counted as NRI Strong Wind)	unmeasured or below 50 kt	1996 to 2025	0	30	0
Tornado	EF0-1	1996 to 2025	0	30	0
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	2 of 2	93.6	93.7	93.8	Relatively High 2
Coastal Flooding	2 of 2	72.3	74.2	76.1	Very Low 2
Cold Wave	2 of 2	16.0	57.4	98.9	Very High 1, Very Low 1
Drought	0 of 2				No Rating 2
Earthquake	2 of 2	90.1	92.3	94.4	Relatively High 2
Hail	2 of 2	0.1	0.6	1.0	Very Low 2
Heat Wave	0 of 2				Insufficient Data 2
Ice Storm	2 of 2	2.3	2.8	3.2	Very Low 2
Inland Flooding	2 of 2	1.9	3.4	4.9	Very Low 2
Landslide	2 of 2	99.5	99.7	99.8	Relatively High 2
Lightning	2 of 2	11.5	18.0	24.5	Relatively Low 1, Very Low 1

Hazard	Tracts <i>rated of all</i>	NRI risk score, 0 to 100			Tracts by rating
		Min	Median	Max	
Strong Wind	0 of 2				No Rating 2
Tornado	2 of 2	0.2	0.2	0.2	Very Low 2
Tsunami	2 of 2	71.5	75.1	78.7	Relatively Low 2
Volcanic Activity	0 of 2				No Rating 2
Wildfire	2 of 2	52.6	54.1	55.7	Very Low 2
Winter Weather	2 of 2	34.2	65.6	97.1	Very High 1, Relatively Low 1

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, hail, ice storm, lightning 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.

This county has 2 census tracts; the minimum, median and maximum come from those 2.

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
Cordova city	City	Approved, expires 2031-05-21	FMA RL 0, SRL 0; any 0	\$564,526.50	0 total; 0 since its plan	Includes \$267,678.57 for declarations not counted as hazard incidents (DR-4533-AK).
Valdez city	City	Expired on 2024-03-11	FMA RL 0, SRL 0; any 0	\$825,458.96	0 total; 0 since its plan	Includes \$825,458.96 for declarations not counted as hazard incidents (DR-4533-AK).
Whittier city	City	Approved, expires 2027-08-23	FMA RL 0, SRL 0; any 0	\$108,421.44	0 total; 0 since its plan	Includes \$88,374.69 for declarations not counted as hazard incidents (DR-4533-AK).

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.

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

- Critical facilities and lifelines per hazard
- A problem statement per jurisdiction per hazard

- Changes in development in hazard-prone areas since the last approval, or a statement of none (E1-a)
- Future assets

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

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

Hazard	Building exposure <i>modeled dollars</i>	Agriculture exposure <i>modeled dollars</i>	Population exposed <i>people</i>	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since plan <i>county-coded records, property plus crops, nominal dollars</i>	Zone-level damage since plan <i>property plus crops, reported for the zone</i>	Public Assistance since plan <i>nominal dollars; see note</i>	Note
Avalanche	\$3,681,397	n/a	10	\$9,544	n/a	\$4,927,126	0.259%				
Coastal Flooding	\$36,388,348	n/a	251	\$478	n/a	\$80	0.00131%				
Cold Wave	\$532,486,286	\$0	3,975	\$1,966	\$0	\$1,092,402	0.000369%				
Drought	n/a	\$0	n/a	n/a	\$0	n/a					agriculture exposure is 0 in NRI
Earthquake	\$1,501,505,819	n/a	7,102	\$1,715,394	n/a	\$975,859	0.114%				
Hail	\$945,499,448	\$0	7,011	\$13	\$0	\$3	under 0.0001%				
Heat Wave	n/a	n/a	n/a	n/a	n/a	n/a					NRI publishes no building exposure for this county
Ice Storm	\$945,499,448	n/a	7,011	\$25	n/a	\$478	under 0.0001%				
Inland Flooding	\$938,580,078	\$0	193	\$266,075	\$0	\$17	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	\$70,688,775	n/a	481	\$8,510	n/a	\$387,184	0.012%				
Lightning	\$945,499,448	n/a	7,011	\$170	n/a	\$6,142	under 0.0001%				
Strong Wind	\$945,499,448	\$0	7,011	\$0	\$0	\$0	0%				
Tornado	\$945,499,448	\$0	7,011	under \$1	\$0	under \$1	under 0.0001%				
Tsunami	\$614,122,421	n/a	1,177	\$306,656	n/a	\$0	0.0499%				
Volcanic Activity	\$0	n/a	0	\$0	n/a	\$0					building exposure is 0 in NRI
Wildfire	\$214,517,803	\$0	1,778	\$644	\$0	\$51	0.0003%				
Winter Weather	\$945,499,448	\$0	7,011	\$8,300	\$0	\$33,035	0.000878%				

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

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

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

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

County context

Source: 5

Measure	Value
Population	7,011
Building value (total, not at risk)	\$945,499,448
Agriculture value (total, not at risk)	\$0
NRI risk rating (all hazards)	Very Low
Expected annual loss, buildings and agriculture, all hazards	\$2,317,774
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)	\$7,422,378
Social vulnerability rating	Very 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)	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 total and NFIP communities

Sources: 1, 4

Scope	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
County total	0	0	0	0	0	0	0

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>
Cordova city	020037	0	0	0	0	0	0	0
Valdez city	020094	0	0	0	0	0	0	0
Whittier city	020097	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):

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_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_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/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). Chugach Census Area, AK: risk-assessment baseline packet, release 2026-10 (data as of 2026-09-30; County FIPS 02063). Automated baseline. <https://hazardplain.org/ak/02063/> 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