

Pima County, AZ

Risk-assessment baseline packet

Unit **County area 04019** Release **2026-10** As of **2026-09-28** 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.

A starting point for the plan's risk assessment (FEMA Local Mitigation Plan Review Tool, Element B). It does not replace local data or FEMA review. Section headings say which FEMA review item each table supports; whether an item is satisfied is decided by the plan and its reviewers.

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Plan clock

Status	Approved, expires 2027-11-02	Plan	Pima County (FEMA plan 108527)
Approved	2022-11-03	Expires	2027-11-02
As of	2026-09-28	Days	400 days to expiry

What changed since your last plan (approved 2022-11-03)

New federal declarations	none (0 declaration rows; 0 counted incidents)	Storm Events records since approval	449 (data through 2026-06-30)
Repetitive loss now	FMA RL 1, SRL 0 (44 CFR 77.2); any definition: 20	Repeat-flood change	First release: no prior release to compare.

SOURCES: FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API); FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API); NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>; FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)

Plan status for every jurisdiction listed in this county

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
Pima County	County	Approved, expires 2027-11-02	Pima County (FEMA plan 108527)	2022-11-03	2027-11-02	400		
Marana town	Town	Approved, expires 2027-11-02	Pima County (FEMA plan 108527)	2022-11-03	2027-11-02	400		
Oro Valley town	Town	Approved, expires 2027-11-02	Pima County (FEMA plan 108527)	2022-11-03	2027-11-02	400		
Sahuarita town	Town	Approved, expires 2027-11-02	Pima County (FEMA plan 108527)	2022-11-03	2027-11-02	400		
Tucson city	City	Approved, expires 2027-11-02	Pima County (FEMA plan 108527)	2022-11-03	2027-11-02	400		

Plan 108527 also covers 1 other participant not listed on this page: Pascua Yaqui Tribe of Arizona.

SOURCE: FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

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

CONTENTS

1. Plan clock, page 1	7. Supports B1-e: probability, page 11
2. What changed since your last plan (approved 2022-11-03), page 1	8. Supports B1-f: variation across the planning area, page 14
3. Supports B1-a: hazards, page 2	9. Supports B2-a and B2-b: assets and impacts, page 16
4. Supports B1-b: location, page 3	10. Supports B2-a: context, page 17
5. Supports B1-c: extent, page 4	11. Supports B2-c: repetitive loss, page 18
6. Supports B1-d: previous occurrences, page 8	12. Sources and OpenFEMA disclaimer, page 19

Supports B1-a: hazards

Hazards NRI does not cover: check locally

- 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)

Rank by EAL	Hazard	NRI risk rating	EAL rating	EAL buildings modeled dollars per year	EAL agriculture modeled dollars per year	EAL population equivalence statistical value of life and injury, \$13.7M per life, not property damage	EAL total (see note) modeled dollars per year	Storm Events records since 1996 count	Evidence for an omission NRI Not Applicable, no declaration and no Storm Events record since 1996	Storm Events coverage note
1	Inland Flooding	Very High	Very High	\$338,405,471	\$10,447	\$8,941,158	\$347,357,076	568		
2	Heat Wave	Very High	Very High	\$2,924	\$23,752	\$133,094,568	\$133,121,244	309		
3	Wildfire	Relatively High	Relatively High	\$35,184,860	\$462	\$2,376,417	\$37,561,739	53		
4	Earthquake	Relatively Moderate	Relatively Moderate	\$4,176,398		\$2,147,342	\$6,323,740			Not in Storm Events. Storm Events coverage of this hazard is limited; absence is not evidence of low risk.
5	Lightning	Very High	Relatively High	\$63,406		\$2,446,429	\$2,509,835	78		
6	Hail	Relatively Moderate	Relatively Moderate	\$1,797,492	\$918	\$11,487	\$1,809,897	152		
7	Strong Wind	Relatively Moderate	Relatively Moderate	\$655,227	\$136	\$658,070	\$1,313,432	681		Includes 23 High Wind records and 16 Strong Wind records, event types the NRI definition of this hazard leaves out.
8	Tornado	Relatively Low	Relatively Low	\$504,567	\$277	\$183,502	\$688,346	13		
9	Drought	Relatively Moderate	Relatively Moderate		\$458,566		\$458,566	74		
10	Winter Weather	Relatively Moderate	Relatively Moderate	\$48,671	under \$1	\$151,295	\$199,966	38		

Rank by EAL	Hazard	NRI risk rating	EAL rating	EAL buildings modeled dollars per year	EAL agriculture modeled dollars per year	EAL population equivalence statistical value of life and injury, \$13.7M per life, not property damage	EAL total (see note) modeled dollars per year	Storm Events records since 1996 count	Evidence for an omission NRI Not Applicable, no declaration and no Storm Events record since 1996	Storm Events coverage note
11	Hurricane	Very Low	Very Low	\$4,174	\$596	under \$1	\$4,770	0		No recorded events in Storm Events since 1996 (data through 2026-06-30).
12	Landslide	Very Low	Very Low	\$1,602		\$632	\$2,235	8		
13	Avalanche	Very Low	Very Low	\$5		\$353	\$358	0		No recorded events in Storm Events since 1996 (data through 2026-06-30).
14	Cold Wave	Very Low	Very Low	\$9	\$0	\$141	\$150	21		Includes 4 Frost/Freeze records, event types the NRI definition of this hazard leaves out.
	Coastal Flooding	Not Applicable	Not Applicable					0	NRI rates coastal flooding Not Applicable for this county, and no federal declaration for this county names it.	No recorded events in Storm Events since 1996 (data through 2026-06-30).
	Ice Storm	Not Applicable	Not Applicable					0	NRI rates ice storm Not Applicable for this county, and no federal declaration for this county names it.	No recorded events in Storm Events since 1996 (data through 2026-06-30).
	Tsunami	Not Applicable	Not Applicable					0	NRI rates tsunami Not Applicable for this county, and no federal declaration for this county names it.	No recorded events in Storm Events since 1996 (data through 2026-06-30). Storm Events coverage of this hazard is limited; absence is not evidence of low risk.
	Volcanic Activity	Not Applicable	Not Applicable					0	NRI rates volcanic activity Not Applicable for this county, and no federal declaration for this county names it.	No recorded events in Storm Events since 1996 (data through 2026-06-30). Storm Events coverage of this hazard is limited; absence is not evidence of low risk.

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

SOURCES
FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, 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)
NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

Check your state hazard mitigation plan's hazard list for this county; explain any hazard you drop.

Supports B1-b: location

Where each hazard occurs

Hazard	Location	Census tracts rated rated of all tracts
Avalanche	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	14 of 270

Hazard	Location	Census tracts rated <i>rated of all tracts</i>
Coastal Flooding	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	0 of 270
Cold Wave	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	3 of 270
Drought	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	25 of 270
Earthquake	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	270 of 270
Hail	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	270 of 270
Heat Wave	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	270 of 270
Hurricane	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	270 of 270
Ice Storm	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	0 of 270
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.	270 of 270
Landslide	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	253 of 270
Lightning	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	270 of 270
Strong Wind	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	270 of 270
Tornado	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	270 of 270
Tsunami	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	0 of 270
Volcanic Activity	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	0 of 270
Wildfire	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	229 of 270
Winter Weather	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	270 of 270

SOURCE
FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, 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)

Supports B1-c: extent

Extent: scale, observed range and worst recorded event per hazard

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Avalanche	none (count and damage)	0					Physical measure: in event narratives only; local data required.
Coastal Flood, Storm Surge/ Tide	none in data (FIRM for depth)	0					Flood depth: see the FEMA Flood Insurance Rate Map.
Cold/Wind Chill, Extreme Cold/Wind Chill	wind chill	17, 2011 to 2026 (17 zone-level)	1 day to 2 days (median 1 day); 16 with a recorded value	2 consecutive days, 2023-02-16 to 2023-02-17, 2 direct deaths, zone-level		Zone-level records: applies countywide; national data do not locate these events within the county.	Wind chill: in event narratives only; local data required.

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Frost/Freeze (outside NRI Cold Wave definition)	crop damage	4, 2011 to 2015 (4 zone- level)		No crop damage reported in 4 records.	Frost/Freeze, 2011-02-02, \$1,000,000 property; \$0 crops, reported for the zone (2011 dollars)	Zone-level records: applies countywide; national data do not locate these events within the county.	Temperature: in event narratives only; local data required.
Drought	US Drought Monitor D- scale	74, 2011 to 2025 (74 zone- level)	71 days to 344 days (median 183 days); 9 with a recorded value	344 days (about 11.3 months), 2020-08-25 to 2021-08-03, a run of 14 consecutive Storm Events drought records, zone- level		Zone-level records: applies countywide; national data do not locate these events within the county.	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					No Storm Events record; local data required (e.g., USGS).
Hail	hail size (inches)	190, 1957 to 2026	0.5 in to 3 in (median 1 in); 190 with a recorded value	3 in hail, 2002-08-28	Hail, 2015-06-30, \$2,000,000 property; \$0 crops (2015 dollars)	Event records naming member places: Tucson city (45 records), Marana town (6 records), Sahuarita town (4 records).	
Excessive Heat, Heat	heat index (narratives)	309, 2011 to 2026 (309 zone-level)	1 day to 31 days (median 1 day); 170 with a recorded value	31 consecutive days, 2023-07-11 to 2023-08-10, 30 direct deaths, zone-level		Zone-level records: applies countywide; national data do not locate these events within the county.	Heat index: in event narratives only; local data required. Heat records from November to March (unseasonable warmth, not a heat wave) are counted but not used for the longest run.
Hurricane, Tropical Storm, Tropical Depression	Saffir-Simpson	0					Storm Events files every zone of a storm's episode under the storm's event type and category, so a Hurricane (Typhoon) record, especially an inland or remnant one, does not by itself mean hurricane-force winds here; read the damage and wind columns.
Ice Storm	Sperry-Piltz (local data)	0					Ice thickness: in event narratives only; local data required.

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Flash Flood, Flood, Lakeshore Flood	damage and flood days (FIRM for depth)	568, 1996 to 2026		Flash Flood, 1999-07-15, \$10,000,000 property; crops not reported (1999 dollars)		Event records naming member places: Tucson city (154 records), Marana town (16 records), Sahuarita town (14 records).	Flood depth: see the FEMA Flood Insurance Rate Map. Storm Events damage can be \$0 or blank even for a major flood, so the worst record here may not be the worst flood; compare FEMA Public Assistance by declaration in B1-d.
Debris Flow	none (count and damage)	8, 2020 to 2022		Debris Flow, 2022-07-28, \$10,000 property; \$0 crops (2022 dollars)		No event record names a member place.	Physical measure: in event narratives only; local data required.
Lightning	annualized frequency (the measure FEMA's Local Mitigation Planning Handbook names)	78, 1996 to 2025		Lightning, 2010-07-10, \$0 property; \$0 crops (2010 dollars), 1 direct death, 1 direct injury	Lightning, 2008-08-07, \$210,000 property; \$0 crops (2008 dollars)	Event records naming member places: Tucson city (22 records), Sahuarita town (3 records), Marana town (2 records).	Storm Events lists lightning with damage or casualties; physical measure in event narratives only; local data required.
High Wind and Strong Wind (outside NRI Strong Wind definition)	wind speed (kt and mph)	39, 2011 to 2026 (39 zone-level)	39 kt (45 mph) to 85 kt (98 mph) (median 52 kt (60 mph)); 39 with a recorded value	85 kt (98 mph) measured gust, High Wind, 2026-01-10; NWS zone AZZ503 (UPPER SANTA CRUZ RIVER AND ALTAR VALLEYS), zone-level: may include parts of neighboring counties	Strong Wind, 2011-05-09, \$11,200,000 property; \$0 crops, reported for the zone (2011 dollars)	Zone-level records: applies countywide; national data do not locate these events within the county.	
Thunderstorm Wind	wind speed (kt and mph)	803, 1955 to 2026	39 kt (45 mph) to 90 kt (104 mph) (median 52.5 kt (60 mph)); 700 with a recorded value	90 kt (104 mph), measurement type not recorded, Thunderstorm Wind, 1999-08-16	Thunderstorm Wind, 2024-07-14, \$25,000,000 property; \$0 crops (2024 dollars)	Event records naming member places: Tucson city (182 records), Marana town (16 records), Sahuarita town (15 records), Oro Valley town (1 record).	

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Tornado	Enhanced Fujita (F before Feb 2007)	30, 1954 to 2026	F/EF0 to F/EF2 (median F/EF0); 25 with a recorded value	F2 tornado, 1964-08-27, 33 yd wide, \$25,000 property; crops not recorded (1964 dollars), 2 direct deaths, 9 direct injuries	Tornado, 1992-07-06, \$2,500,000 property; crops not recorded (1992 dollars)	Event records naming member places: Marana town (2 records), Sahuarita town (2 records), Tucson city (2 records).	From 1996 on, tornado records are per-county segments and length is the path length within this county (NWS Instruction 10-1605); records before 1996 may give the whole path length, including the path outside this county, and before 1996 a tornado is listed once, under the county where it began, with the whole path's rating; counties farther along the path may not list it. Length is not used to rank tornadoes.
Tsunami	none (count and damage)	0					Physical measure: in event narratives only; local data required.
Volcanic Ash, Volcanic Ashfall	Volcanic Explosivity Index (local data)	0					Physical measure: in event narratives only; local data required.
Wildfire	acres burned (local data)	53, 2002 to 2025 (49 zone-level)		Wildfire, 2003-07-01, \$66,000,000 property; \$0 crops (2003 dollars)		No event record names a member place. Zone-level records (49) apply countywide.	Acres burned: in event narratives only; local data required.
Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet	none in data (snowfall local)	38, 2010 to 2024 (38 zone-level)		Winter Storm, 2017-01-20, \$100,000 property; \$0 crops, reported for the zone (2017 dollars); NWS zone AZZ514 (SANTA CATALINA AND RINCON MOUNTAINS), zone-level: may include parts of neighboring counties	Winter Weather, 2021-01-26, \$100,000 property; \$0 crops, reported for the zone (2021 dollars)	Zone-level records: applies countywide; national data do not locate these events within the county.	Snow depth: in event narratives only; local data required.

Storm Events records are more complete after 1996; before 1996 only Tornado (from 1950), Hail and Thunderstorm Wind (from 1955) exist. Zone-level records are placed with NWS zone-county files, which exist from 2020 on; an earlier record is placed by its zone number in the nearest later file only when its zone name matches that file, records from zones NWS renumbered are placed by name or left out, and a record whose zone is in no known file is left out of every count, so counts before 2020 can be low. Some current zones are also missing from the NWS files, so recent counts can be low too.

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

SOURCES

NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-28, <https://www.weather.gov/gis/ZoneCounty>

Supports B1-d: previous occurrences

Declaration rows 15 Counted incidents 11

Federal disaster declarations for this county

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance <i>federal share obligated, nominal dollars</i>	Flags	Notes
2020-06-11	2020-06-11	FM-5312-AZ	Fire management	BIG HORN FIRE	Wildfire	none found		
2020-04-04	2020-01-20	DR-4524-AZ	Major disaster	COVID-19 PANDEMIC	Non-natural, not counted	\$18,749,004.92		
2020-03-13	2020-01-20	EM-3442-AZ	Emergency	COVID-19	Non-natural, not counted	none found		same incident as DR-4524
2006-09-07	2006-07-25	DR-1660-AZ	Major disaster	SEVERE STORMS AND FLOODING	Inland Flooding	\$7,504,284.73		
2005-09-12	2005-08-29	EM-3241-AZ	Emergency	HURRICANE KATRINA EVACUATION	Hurricane: evacuation support, not a local hazard event; not counted	\$818,404.36		
2003-07-14	2003-06-17	DR-1477-AZ	Major disaster	ASPEN FIRE	Wildfire	\$4,753,977.91		
2003-06-18	2003-06-17	FM-2470-AZ	Fire management	ASPEN FIRE	Wildfire	none found		same incident as DR-1477
1993-01-19	1993-01-05	DR-977-AZ	Major disaster	SEVERE STORMS, TORNADOES & FLOODING	Inland Flooding (primary); also designated: Tornado	none found		
1990-12-06	1990-07-08	DR-884-AZ	Major disaster	SEVERE STORMS & FLOODING	Inland Flooding	none found		
1983-10-05	1983-09-23	DR-691-AZ	Major disaster	SEVERE STORMS & FLOODING	Inland Flooding	none found		
1978-12-21	1978-12-21	DR-570-AZ	Major disaster	SEVERE STORMS & FLOODING	Inland Flooding	none found		
1978-03-04	1978-03-04	DR-551-AZ	Major disaster	SEVERE STORMS & FLOODING	Inland Flooding	none found		
1977-11-04	1977-11-04	DR-540-AZ	Major disaster	SEVERE STORMS & FLOODING	Inland Flooding	none found		
1972-07-03	1972-07-03	DR-343-AZ	Major disaster	SEVERE STORMS & FLOODING	Inland Flooding	none found		
1966-04-30	1966-04-30	DR-217-AZ	Major disaster	FLOODING	Inland Flooding	none found		

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

SOURCES

FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)
FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-26T151157Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)
FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

Statewide declarations

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	Flags	Notes
2000-10-27	2000-10-21	DR-1347-AZ	Major disaster	SEVERE STORMS AND FLOODING	Inland Flooding		

FEMA recorded these with designated area Statewide and no county. Listed on every county page in the state; not counted with county rows.
15 Fire Management declarations (1990-06-27 to 1996-06-24) FEMA filed as Statewide with no county; each names one local fire. Listed on the state page.

SOURCEFEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)**Previous occurrences by hazard, with explicit no-event rows**

Hazard	Storm Events records <i>full period</i>	Since plan approval <i>records</i>	During plan review <i>records</i>	Last 5 years <i>records</i>	Declared incidents <i>distinct incidents</i>	Declared since approval <i>distinct incidents</i>	Period	Statement
Avalanche	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Coastal Flooding	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Cold Wave	21	13	1	14	0	0	1996 to 2026-06-30	Includes 4 Frost/Freeze records, event types the NRI definition of this hazard leaves out.
Drought	74	21	3	24	0	0	1996 to 2026-06-30	
Earthquake	0	0	0	0	0	0		No Storm Events record; local data required (e.g., USGS).
Hail	190	20	9	29	0	0	1955 to 2026-06-30	
Heat Wave	309	205	23	228	0	0	1996 to 2026-06-30	
Hurricane	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Ice Storm	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	568	52	37	89	9	0	1996 to 2026-06-30	
Landslide	8	0	6	6	0	0	1996 to 2026-06-30	
Lightning	78	8	2	10	0	0	1996 to 2026-06-30	
Strong Wind	842	101	30	132	0	0	1955 to 2026-06-30	Includes 23 High Wind records and 16 Strong Wind records, event types the NRI definition of this hazard leaves out.
Tornado	30	5	1	6	1	0	1950 to 2026-06-30	
Tsunami	0	0	0	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	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Wildfire	53	15	9	24	2	0	1996 to 2026-06-30	
Winter Weather	38	9	2	11	0	0	1996 to 2026-06-30	

SOURCESNOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)

Notable Storm Events records

Date	Event type	Magnitude or extent	Damage <i>nominal dollars</i>	Direct deaths, injuries <i>indirect not counted</i>	Location	Flags	Why listed
2026-01-10	High Wind	85 kt (98 mph) measured gust	\$0 property; \$0 crops, reported for the zone (2026 dollars)	0, 0	NWS zone AZZ503 (UPPER SANTA CRUZ RIVER AND ALTAR VALLEYS), zone-level: may include parts of neighboring counties	new since last plan; within last 5 years	B1-c worst recorded: High Wind and Strong Wind (outside NRI Strong Wind definition)
2023-08-07	Heat		\$0 property; \$0 crops, reported for the zone (2023 dollars)	7, 0	NWS zone AZZ504 (TUCSON METRO AREA), zone-level: may include parts of neighboring counties	new since last plan; within last 5 years	deaths or injuries recorded
2023-07-15	Excessive Heat		\$0 property; \$0 crops, reported for the zone (2023 dollars)	5, 0	NWS zone AZZ503 (UPPER SANTA CRUZ RIVER AND ALTAR VALLEYS), zone-level: may include parts of neighboring counties	new since last plan; within last 5 years	deaths or injuries recorded
2023-07-11	Heat		\$0 property; \$0 crops, reported for the zone (2023 dollars)	6, 0	NWS zone AZZ504 (TUCSON METRO AREA), zone-level: may include parts of neighboring counties	new since last plan; within last 5 years	deaths or injuries recorded
2020-08-25	Drought		\$0 property; crops not reported, reported for the zone (2020 dollars)	0, 0	NWS zone AZZ504 (TUCSON METRO AREA), zone-level: may include parts of neighboring counties		B1-c worst recorded: Drought
2017-01-20	Winter Storm		\$100,000 property; \$0 crops, reported for the zone (2017 dollars)	0, 0	NWS zone AZZ514 (SANTA CATALINA AND RINCON MOUNTAINS), zone-level: may include parts of neighboring counties		B1-c worst recorded: Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet
2010-07-10	Lightning		\$0 property; \$0 crops (2010 dollars)	1, 1	(DMA)DAVIS MONTHAN A		B1-c worst recorded: Lightning
2003-07-01	Wildfire		\$66,000,000 property; \$0 crops (2003 dollars)	0, 0	SUMMERHAVEN		B1-c worst recorded: Wildfire
2002-08-28	Hail	3 in	\$10,000 property; \$0 crops (2002 dollars)	0, 0	TUCSON		B1-c worst recorded: Hail
1999-08-16	Thunderstorm Wind	90 kt (104 mph), measurement type not recorded	damage not reported	0, 0	TUSCON RYAN FLD ARPT		B1-c worst recorded: Thunderstorm Wind
1999-07-15	Flash Flood		\$10,000,000 property; crops not reported (1999 dollars)	0, 0	TUCSON		B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
1964-08-27	Tornado	F2, 33 yd wide	\$25,000 property; crops not recorded (1964 dollars)	2, 9	location not recorded		B1-c worst recorded: Tornado

The full list is in the XLSX file, sheet "B1-d Storm Events history" (2,211 rows).

Storm Events records are more complete after 1996; before 1996 only Tornado (from 1950), Hail and Thunderstorm Wind (from 1955) exist. Zone-level records are placed with NWS zone-county files, which exist from 2020 on; an earlier record is placed by its zone number in the nearest later file only when its zone name matches that file, records from zones NWS renumbered are placed by name or left out, and a record whose zone is in no known file is left out of every count, so counts before 2020 can be low. Some current zones are also missing from the NWS files, so recent counts can be low too.

SOURCES

NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>
 NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-28, <https://www.weather.gov/gis/ZoneCounty>
 FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

State-declared emergencies are not in federal data. Add them from your state emergency management agency.

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

Supports B1-e: probability

Probability: FEMA annualized frequency and descriptor per hazard

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.
Coastal Flooding		events per year at a location (modeled)				not shown	modeled	see B1-f	Not Applicable in NRI for this county; no descriptor.
Cold Wave	0.00114	event-days per year	about 0.00114 days per year	Likely	event-days in 6 of 30 years, 1996 to 2025 (20%)	0.0217	2005-11-12 to 2024-11-12 (19 years)	countywide	Frost/Freeze records are not counted in this descriptor: they record crop freezes, not cold waves.
Drought	57.3	event-days per year	about 57.3 days per year	Likely	event-days in 11 of 30 years, 1996 to 2025 (36.7%)	2,821	2000 to 2025 (25.25 years; D3 and D4 only)	countywide	NRI gives about 57.3 drought event-days a year here (its annualized frequency over 25.25 years; not its event count divided by the years), but Storm Events has a record in only 11 of 30 years. NRI counts from a different source that records far more events than Storm Events, so this descriptor reads much lower than NRI's frequency; read the two together.
Earthquake	0.0148	annual probability at a location	chance a given location in the county has at least minor- damage shaking in a year: 1.48%			not shown	modeled	see B1-f	Descriptor not assigned: the NRI value is the chance at a location in the county, not how often the hazard affects the county, and Storm Events does not record earthquakes.
Hail	0.241	events per year	about 1 in 4 years	Likely	FEMA annualized frequency (modeled)	9.2 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave	8.09	event-days per year	about 8.09 days per year	Likely	event-days in 14 of 30 years, 1996 to 2025 (46.7%)	92.7	2005-11-12 to 2024-11-12 (19 years)	countywide	NRI gives about 8.09 heat wave event-days a year here (its annualized frequency over 19 years; not its event count divided by the years), but Storm Events has a record in only 14 of 30 years. NRI counts from a different source that records far more events than Storm Events, so this descriptor reads much lower than NRI's frequency; read the two together.

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
Hurricane	0.0165	events per year	about 1 in 61 years	Possible	FEMA annualized frequency (modeled)	9	1851 to 2024 (Atlantic); 1949 to 2024 (Pacific)	see B1-f	NRI counts hurricane and tropical storm tracks passing within storm-force wind range; federal declarations are counted separately in B1-d and need not match.
Ice Storm		event-days per year					1946-12-31 to 2014-02-12 (67 years)	countywide	Not Applicable in NRI for this county; no descriptor.
Inland Flooding	12.8	event-days per year	about 12.8 days per year	Highly likely	event-days in 30 of 30 years, 1996 to 2025 (100%)	359	1996 to 2023 (28 years)	see B1-f	
Landslide	2.14	events per year (modeled)	about 2.14 per year	Highly likely	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Lightning	42.8	days per year with a strike	about 42.8 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	countywide	
Strong Wind	0.795	events per year	about 0.79 per year	Likely	FEMA annualized frequency (modeled)	31	1986 to 2023 (38 years)	countywide	
Tornado	0.264	events per year	about 1 in 4 years	Likely	FEMA annualized frequency (modeled)	not shown	1950 to 2023 (EF2+); 1986 to 2023 (EF0-1)	see B1-f	
Tsunami		annual probability at the most exposed location (used in place of a county value)				not shown	modeled	see B1-f	Not Applicable in NRI for this county; no descriptor.
Volcanic Activity		annual probability				not shown	modeled	see B1-f	Not Applicable in NRI for this county; no descriptor.
Wildfire	0.00435	annual probability at a location	chance a given location in the county burns in a year: 0.435%	Likely	Storm Events records in 12 of 30 years, 1996 to 2025 (40%)	not shown	modeled	see B1-f	Descriptor from Storm Events, not NRI: the NRI value is the chance at a location in the county, not how often the hazard affects the county.
Winter Weather	1.8	event-days per year	about 1.8 days per year	Likely	event-days in 14 of 30 years, 1996 to 2025 (46.7%)	34.2	2005-11-12 to 2024-11-12 (19 years)	countywide	NRI gives about 1.8 winter weather event-days a year here (its annualized frequency over 19 years; not its event count divided by the years), but Storm Events has a record in only 14 of 30 years. NRI counts from a different source that records far more events than Storm Events, so this descriptor reads much lower than NRI's frequency; read the two together.

FEMA annualized frequency (modeled) comes from the National Risk Index v1.20 (December 2025). It is not recorded events divided by years, and what it measures depends on the hazard. For most hazards it estimates how often the hazard affects this county each year: it counts events or event-days (drought, heat wave, cold wave, winter weather, ice storm and inland flooding are in days per year; lightning is the number of days per year with a recorded cloud-to-ground strike, from the NOAA Storm Prediction Center daily lightning climatology); it may count events in the surrounding area (hail, strong wind, tornado, hurricane and ice storm use a 49 km grid and buffers) and is averaged over the county's area; and some hazards use a minimum value for places with no recorded event. Earthquake, wildfire and coastal flooding are different: FEMA computes them for each census block and averages them over the county, so the value is the chance (for coastal flooding, the modeled number of floods per year) at a location in the county, which is lower than the chance that the hazard strikes somewhere in the county. Earthquake is the chance of at least minor-damage shaking (U.S. Geological Survey model); wildfire is the chance that a location burns in a large fire (U.S. Forest Service burn probability); coastal flooding comes from FEMA flood zones and NOAA high-tide flooding, so it can be above 1 where high-tide flooding is frequent. Tsunami is the value at the county's most exposed location, from recorded events and modeled return periods. For these four hazards the packet gives no "1 in N years" and takes the descriptor from Storm Events (none for earthquake) unless the value is 1 or more a year. Landslide is a U.S. Geological Survey modeled county rate spread by slope susceptibility. Volcanic activity is the chance that a volcano affecting the county erupts in a year. Drought counts only extreme and exceptional drought (D3 and D4). Source: FEMA, National Risk Index Technical Documentation v1.20, sections 5.2.2 (Table 5), 5.2.3, 7.4, 10.4, 16.5, 17.1, 17.3.1, 17.5, 20.3.1, 21.4, 22.4 and 6 to 23.

SOURCES
FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, 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)
NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

Descriptor scale used in this packet (defined per unit)

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

SOURCES
FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, 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)
NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

Intensity bands: historical frequency (Storm Events)

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	87	30	2.9
Hail	2.00 in+	1996 to 2025	1	30	0.0333
Strong Wind (Thunderstorm Wind records)	50-64 kt	1996 to 2025	538	30	17.9
Strong Wind (Thunderstorm Wind records)	65 kt+	1996 to 2025	45	30	1.5
Strong Wind (Thunderstorm Wind records)	unmeasured or below 50 kt	1996 to 2025	54	30	1.8

Hazard	Band	Years	Events <i>county-coded records</i>	Years in period	Events per year <i>events / years</i>
Tornado	EF0-1	1996 to 2025	9	30	0.3
Tornado	EF2-3	1996 to 2025	0	30	0
Tornado	EF4-5	1996 to 2025	0	30	0
Tornado	unrated (EFU)	1996 to 2025	3	30	0.1

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.

SOURCE
NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

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.

Supports B1-f: variation across the planning area

Range of census tract risk within the county

Hazard	Tracts <i>rated of all</i>	Risk score min <i>NRI score, 0 to 100</i>	Median	Max	Tracts by rating	Note
Avalanche	14 of 270	27.5	32.1	38.5	Very Low 14, Not Applicable 256	
Coastal Flooding	0 of 270				Not Applicable 270	
Cold Wave	3 of 270	15.7	15.7	15.9	Very Low 3, No Rating 267	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Drought	25 of 270	69.8	85.9	96.3	Relatively Moderate 5, Relatively Low 12, Very Low 8, No Rating 245	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. Agriculture is all of NRI's expected annual loss for this hazard in the county, so the tract range above mostly reflects where crop and livestock value is, not where buildings and people are. Confirm locally.
Earthquake	270 of 270	1.1	38.5	79.7	Relatively Moderate 2, Relatively Low 120, Very Low 148	
Hail	270 of 270	1.4	48.6	71.9	Relatively Moderate 3, Relatively Low 234, Very Low 33	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Heat Wave	270 of 270	1.8	97.0	99.6	Very High 167, Relatively High 99, Relatively Moderate 1, Very Low 3	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Hurricane	270 of 270	9.3	13.2	20.6	Very Low 270	
Ice Storm	0 of 270				Not Applicable 270	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Inland Flooding	270 of 270	0.3	79.5	99.8	Very High 53, Relatively High 85, Relatively Moderate 75, Relatively Low 46, Very Low 11	

Hazard	Tracts <i>rated of all</i>	Risk score min <i>NRI score, 0 to 100</i>	Median	Max	Tracts by rating	Note
Landslide	253 of 270	8.6	11.1	90.2	Relatively Low 7, Very Low 246, No Rating 17	
Lightning	270 of 270	0.2	45.9	75.3	Relatively Moderate 106, Relatively Low 158, Very Low 6	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Strong Wind	270 of 270	0.3	22.8	45.7	Relatively Low 188, Very Low 82	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Tornado	270 of 270	0.3	5.9	19.9	Very Low 270	
Tsunami	0 of 270				Not Applicable 270	
Volcanic Activity	0 of 270				Not Applicable 270	
Wildfire	229 of 270	18.7	87.9	99.9	Very High 6, Relatively High 47, Relatively Moderate 59, Relatively Low 55, Very Low 62, No Rating 41	
Winter Weather	270 of 270	10.5	28.9	41.1	Relatively Low 265, Very Low 5	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.

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.

SOURCE

FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, 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)

Per-member block (Starter, confirm locally)

Member	Type	Plan status	Repetitive loss <i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	Public Assistance matched <i>federal share obligated, nominal dollars</i>	Event records naming this place <i>all years; since the member's plan</i>	Notes
Pima County	County	Approved, expires 2027-11-02	FMA RL 1, SRL 0; any 10	\$11,397,342.83	0; 0	Includes \$5,121,882.10 for declarations not counted as hazard incidents (DR-4524-AZ, EM-3241-AZ).
Marana town	Town	Approved, expires 2027-11-02	FMA RL 0, SRL 0; any 0	\$248,379.93	42; 4	Includes \$28,459.29 for declarations not counted as hazard incidents (DR-4524-AZ).
Oro Valley town	Town	Approved, expires 2027-11-02	FMA RL 0, SRL 0; any 1	\$1,081,127.89	1; 0	
Sahuarita town	Town	Approved, expires 2027-11-02	FMA RL 0, SRL 0; any 0	\$70,259.53	38; 4	Includes \$70,259.53 for declarations not counted as hazard incidents (DR-4524-AZ).
Tucson city	City	Approved, expires 2027-11-02	FMA RL 0, SRL 0; any 9	\$11,611,772.76	405; 20	Includes \$10,518,473.22 for declarations not counted as hazard incidents (DR-4524-AZ, EM-3241-AZ).

Member 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 member row, while the county table counts only its part in this county.

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

SOURCESFEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-26T151157Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>**Supports B2-a and B2-b: assets and impacts**

Local data required

County-level starter. The plan must describe impacts for each participant and its own assets.

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

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>	EAL population equivalence <i>statistical value of life and injury, \$13.7M per life, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since 2022-11-03 <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	\$6,878,098		1	\$5		\$353	under 0.0001%				
Coastal Flooding											Not Applicable in NRI for this county
Cold Wave	\$188,178,084	\$0	242	\$9	\$0	\$141	under 0.0001%		\$0		
Drought		\$58,574,345			\$458,566		0.783% (agriculture)		\$0		NRI has no building exposure for this hazard; agriculture shown
Earthquake	\$301,436,892,912		1,043,433	\$4,176,398		\$2,147,342	0.00139%				
Hail	\$177,785,184,675	\$97,169,496	1,042,716	\$1,797,492	\$918	\$11,487	0.00101%	\$140,000			
Heat Wave	\$177,785,184,675	\$97,169,496	1,042,716	\$2,924	\$23,752	\$133,094,568	under 0.0001%		\$0		
Hurricane	\$177,765,673,655	\$97,169,496	1,042,563	\$4,174	\$596	under \$1	under 0.0001%				
Ice Storm											Not Applicable in NRI for this county
Inland Flooding	\$177,781,790,670	\$63,344,811	25,840	\$338,405,471	\$10,447	\$8,941,158	n/a (see note)	\$423,500			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. EAL as % of exposure: n/a.
Landslide	\$2,415,022,942		9,608	\$1,602		\$632	under 0.0001%				
Lightning	\$177,785,184,675		1,042,716	\$63,406		\$2,446,429	under 0.0001%	\$15,000			

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>	EAL population equivalence <i>statistical value of life and injury, \$13.7M per life, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since 2022-11-03 <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
Strong Wind	\$177,785,184,675	\$97,169,496	1,042,716	\$655,227	\$136	\$658,070	0.000369%	\$27,937,500	\$52,000		Storm Events damage since the plan includes 3 zone-level High Wind records (\$49,000) and 1 zone-level Strong Wind record (\$3,000), event types the NRI definition of this hazard leaves out.
Tornado	\$177,785,184,675	\$97,169,496	1,042,716	\$504,567	\$277	\$183,502	0.000284%	\$50,000			
Tsunami											Not Applicable in NRI for this county
Volcanic Activity											Not Applicable in NRI for this county
Wildfire	\$27,786,791,930	\$37,631,514	240,900	\$35,184,860	\$462	\$2,376,417	0.127%		\$530,000		
Winter Weather	\$177,071,708,346	\$97,152,150	1,039,528	\$48,671	under \$1	\$151,295	under 0.0001%		\$20,000		

Totals since 2022-11-03 (Storm Events through 2026-06-30): 176 county-coded records, 176 with a damage value recorded (including \$0), \$28,566,000; 273 zone-level records, 273 with a damage value recorded (including \$0), \$602,000 reported for the zone; Public Assistance on counted declarations none found (0 declarations, 0 with PA).

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

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 must not be added up; the unit total counts each declaration once.

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

SOURCES

FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, 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)

NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-28, <https://www.weather.gov/gis/ZoneCounty>

FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)

FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-26T151157Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)

FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

Supports B2-a: context

County context

Measure	Value
Population	1,042,716
Building value (total, not at risk)	\$177,785,184,675
Agriculture value (total, not at risk)	\$97,169,496
NRI risk rating (all hazards)	Relatively High

Measure	Value
Expected annual loss, buildings and agriculture, all hazards	\$381,339,960
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)	\$150,011,393
Social vulnerability rating	Relatively Moderate
Community resilience rating	Relatively Low
NRI version	December 2025

FEMA's all-hazard expected annual loss total adds buildings, agriculture and population equivalence; the two parts are shown separately so the property figure is not read as including the statistical value of life.

SOURCE
FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, 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)

Supports B2-c: repetitive loss

Repetitive loss in this county, both definitions

Definition	Properties	Severe repetitive loss	Properties
Repetitive loss, FMA definition (44 CFR 77.2)	1	Severe repetitive loss, FMA definition (44 CFR 77.2)	0
Repetitive loss, NFIP insurance definition	19	Severe repetitive loss, NFIP insurance definition	0

Your state NFIP coordinator's list may use the NFIP insurance definition, so its counts can be higher.

SOURCES
FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)
FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

Repeat-flood properties: county and state-level rows

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	1	0	19	0	20	1	5
PIMA COUNTY *	1	0	9	0	10	1	2
TUCSON, CITY OF	0	0	9	0	9	0	3
ORO VALLEY, TOWN OF	0	0	1	0	1	0	0
State level, not in this county: county not reported	0	1	0	0	1	1	0

SOURCES
FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)
FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

Repeat-flood properties by plan member (NFIP community)

Member	NFIP community ID	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>	Note
Pima County	040073	1	0	9	0	10	1	2	
Marana town	040118	0	0	0	0	0	0	0	

Member	NFIP community ID	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>	Note
Oro Valley town	040109	0	0	1	0	1	0	0	
Sahuarita town	040137	0	0	0	0	0	0	0	
Tucson city	040076	0	0	9	0	9	0	3	

Per-member types: XLSX sheet 'B2-c Members'.

Member 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 member row, while the county table counts only its part in this county.

SOURCES

FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)

FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

County repeat-flood properties by occupancy group

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	1	0	14	0	15	1	4
2 to 4 unit residential	0	0	1	0	1	0	0
other residential	0	0	0	0	0	0	0
non-residential	0	0	4	0	4	0	1
not reported	0	0	0	0	0	0	0

Institutional properties cannot be separated in this data: FEMA's occupancy groups have no institutional class, so they fall in non-residential or other residential in the table by occupancy group.

SOURCES

FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)

FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

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; OpenFEMA's fmaRI field description omits the Increased Cost of Compliance clause of 44 CFR 77.2(i). NFIP repetitive loss (FEMA insurance definition, nfipRI) is 2 or more claims over \$1,000 in 10 years and can drop to false when a property is mitigated. Also shown: NFIP severe repetitive loss, any category, mitigated and currently insured.

Your state NFIP coordinator's list may use the NFIP insurance definition, so its counts can be higher.

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

Counts may differ from your state NFIP coordinator's list, which is the source the Handbook names.

In this county 1 property is FMA repetitive loss but not NFIP repetitive loss, and 19 properties are NFIP repetitive loss but not FMA repetitive loss.

Exact counts; no count suppression.

Sources

Every table above lists its own sources. The full list, for the plan's bibliography (FEMA review item A4-a):

1. FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)
2. FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)

3. FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-26T151157Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)
4. FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <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 2026-09-28, 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 2026-09-28, <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 2026-09-28, <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 2026-09-28, 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

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Corrections: to report an error, name the packet, the table and what your records show. Contact: to be added

Hazard Plain release 2026-10. As of 2026-09-28; Storm Events data through 2026-06-30. File hazard-plain_2026-10_AZ_04019. Preview: automated baseline.