

Arroyo Municipio, PR

Risk-assessment baseline packet

County FIPS: 72015 Release: 2026-10 Data as of: 2026-09-30 Storm Events data through: 2026-06-30

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Summary

Plan status as of 2026-09-30: Expired on 2025-10-05. Plan: Arroyo (FEMA plan 106719), approved 2020-10-06.
Update: FEMA tracker shows a plan in progress.
Since the plan was approved on 2020-10-06: 4 new hazard declarations (2 incidents) and 26 NOAA Storm Events records; details under "What changed since your last plan".
Highest expected annual loss (FEMA National Risk Index, modeled total; see B1-a): Hurricane (\$7,127,526 a year), Earthquake (\$2,787,087) and Tsunami (\$823,747).
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; 72015 is this area.
D0 to D4: U.S. Drought Monitor categories, from abnormally dry (D0) to exceptional drought (D4).
F/EF, EFU: Fujita and Enhanced Fujita tornado ratings; EFU is an unrated tornado.
kt, CONUS: knots (1 kt is about 1.15 mph); the contiguous United States.
CFR: Code of Federal Regulations.
A4-a, E1-a: other items of FEMA's Local Mitigation Plan Review Tool (sources, and changes since the last plan).
Dollars: nominal (as reported, labeled with the year), not adjusted for inflation.

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Plan clock

Status:	Expired on 2025-10-05	Plan:	Arroyo (FEMA plan 106719)
Approved:	2020-10-06	Days since expiry:	360
Update underway:	FEMA tracker shows a plan in progress		

Until a new plan is approved, FEMA mitigation project grants (HMGP, FMA) need a FEMA exception (44 CFR 201.6(a)(3)).

What changed since your last plan (approved 2020-10-06)

New federal declarations:4 new hazard declarations (2 incidents): EM-3583-PR (Tropical Storm Fiona), DR-4671-PR (Hurricane Fiona), EM-3610-PR (Tropical Storm Ernesto), DR-4850-PR (Tropical Storm Ernesto)

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

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

Storm Events records since approval:26 records (data through 2026-06-30)

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

Plan status for every jurisdiction listed in this county

Source: 1

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry negative = days since expiry	Update underway
Arroyo Municipio	County	Expired on 2025-10-05	Arroyo (FEMA plan 106719)	2020-10-06	2025-10-05	-360	FEMA tracker shows a plan in progress

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

Supports FEMA checklist item B1-a: hazard identification

Hazards NRI does not cover (local data needed)

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

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

Sources: 5, 6

Rank by EAL	Hazard	NRI risk rating	EAL rating	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL total (see note) <i>modeled dollars per year</i>	Storm Events records, 1996 to 2026-06-30 <i>count</i>	Storm Events coverage note
1	Hurricane	Insufficient Data	Relatively Moderate	\$6,638,392	\$0	\$489,134	\$7,127,526	10	Includes 1 Tropical Depression record (outside NRI's Hurricane definition).
2	Earthquake	Insufficient Data	Relatively Low	\$1,345,196	n/a	\$1,441,891	\$2,787,087		Storm Events does not record earthquakes.
3	Tsunami	Insufficient Data	Relatively Low	\$1,024	n/a	\$822,723	\$823,747	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
4	Inland Flooding	Insufficient Data	Very Low	\$799,909	\$0	\$9,547	\$809,456	53	
5	Landslide	Insufficient Data	Relatively Moderate	\$377,744	n/a	\$3,115	\$380,859	14	
6	Lightning	Insufficient Data	Relatively Low	\$4,336	n/a	\$287,611	\$291,947	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
7	Coastal Flooding	Insufficient Data	Very Low	\$8,280	n/a	\$3,154	\$11,434	3	
8	Tornado	Insufficient Data	Very Low	\$3,063	\$0	\$3,791	\$6,854	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
9	Hail	Insufficient Data	Very Low	\$27	\$0	\$222	\$249	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
10	Strong Wind	Insufficient Data	Very Low	\$40	\$0	\$49	\$89	3	Includes 2 Strong Wind records (a NOAA non-thunderstorm wind type, outside NRI's Strong Wind definition).
11	Cold Wave	Insufficient Data	No Expected Annual Losses	\$0	\$0	\$0	\$0	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
12	Drought	Insufficient Data	No Expected Annual Losses	n/a	\$0	n/a	\$0	7	

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
13	Heat Wave	Insufficient Data	No Expected Annual Losses	\$0	\$0	\$0	\$0	12	
14	Volcanic Activity	Insufficient Data	No Expected Annual Losses	\$0	n/a	\$0	\$0	4	
15	Winter Weather	Insufficient Data	No Expected Annual Losses	\$0	\$0	\$0	\$0	0	No recorded events in Storm Events since 1996 (data through 2026-06-30).
	Wildfire	Insufficient Data	Insufficient Data	n/a	n/a	n/a	n/a	11	

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 tsunamis, lightning, tornado, hail, cold wave and winter weather records (Storm Events records these hazards only in part).

Not applicable to this county per NRI, with no federal declaration and no Storm Events record since 1996: avalanche and ice storm. 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, 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>
Earthquake	no tract has a National Risk Index rating for this hazard
Hurricane	no tract has a National Risk Index rating for this hazard
Landslide	no tract has a National Risk Index rating for this hazard
Tornado	no tract has a National Risk Index rating for this hazard
Tsunami	no tract has a National Risk Index rating for this hazard
Volcanic Activity	no tract has a National Risk Index rating for this hazard
Wildfire	no tract has a National Risk Index rating for this hazard

Up to 3 census tracts per hazard, highest National Risk Index rating first, then highest score; a tract number is the Census tract number. 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
Coastal Flood, Storm Surge/ Tide	none in data (flood depth: FIRM)	3 records, 2012 to 2024 (3 zone-level)		Coastal Flood, 2024-07-02, \$4,000 property; \$0 crops (2024 dollars); NWS zone PRZ003		Countywide (zone-level records).	Flood depth: see the FEMA Flood Insurance Rate Map.
Cold/Wind Chill, Extreme Cold/Wind Chill	wind chill	0					
Frost/Freeze (outside NRI's Cold Wave definition)	crop damage	0					
Drought	U.S. Drought Monitor scale (D0 to D4)	7 records, 2005 to 2022 (7 zone-level)	30 days to 78 days (median 59 days); 3 with a recorded value	78 days (about 2.6 months), 2022-06-21 to 2022-09-06, a run of 4 consecutive Storm Events drought records, zone-level	Drought, 2005-03-01, \$1,000,000 property; crops not reported (zone total, 2005 dollars)	Countywide (zone-level records).	Storm Events enters a drought at D2 or worse east of the Rockies and D3 or worse from the Rockies west (NWS Instruction 10-1605); NRI drought counts D3 and D4 only.
Earthquake	Modified Mercalli (local data)	0					Storm Events does not record earthquakes; the USGS earthquake catalog is the source.
Hail	hail size (inches)	0					
Excessive Heat, Heat	heat index (in event narratives)	12 records, 2023 to 2024 (12 zone-level)	1 day to 30 days (median 1.5 days); 6 with a recorded value	September 2023 (1 monthly summary record), zone-level		Countywide (zone-level records).	
Hurricane, Tropical Storm, Tropical Depression	Saffir-Simpson	10 records, 2000 to 2024 (10 zone-level)		Strongest recorded: Hurricane record (NOAA event type 'Hurricane (Typhoon)'), 2000-08-22 to 2000-08-23, \$41,000 property; crops not reported (2000 dollars); NWS zone PRZ003	Most damaging recorded: Tropical Storm, 2004-09-14, property not reported; \$101,500,000 crops (zone total, 2004 dollars)	Countywide (zone-level records).	Storm Events files every zone of a storm's episode under the storm's type; flooding from the storm is filed as Flood or Flash Flood records.
Flash Flood, Flood, Lakeshore Flood	damage and flood days (flood depth: FIRM)	53 records, 2000 to 2023 (43 zone-level)		Flash Flood, 2017-09-20, \$750,000,000 property; \$0 crops (2017 dollars)		No event record names a jurisdiction in the plan. Zone-level records (43) apply countywide.	Flood depth: see the FEMA Flood Insurance Rate Map. Storm Events damage is often \$0 or blank for floods, major ones included; FEMA Public Assistance by declaration (B1-d) shows which floods cost the most.

Hazard	Scale	Records <i>count and years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to jurisdictions	Note
Debris Flow	none (count and damage only)	14 records, 2004 to 2012 (14 zone-level)		Debris Flow, 2012-05-05, \$55,000 property; \$0 crops (2012 dollars); NWS zone PRZ003		Countywide (zone-level records).	
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)	2 records, 2011 to 2018 (2 zone-level)	30 kt (35 mph) to 36 kt (41 mph) (median 33 kt (38 mph)); 2 with a recorded value	36 kt (41 mph) measured gust, Strong Wind, 2018-02-11; NWS zone PRZ003	Strong Wind, 2011-07-01, \$5,000 property; \$0 crops (zone total, 2011 dollars)	Countywide (zone-level records).	
Thunderstorm Wind	wind speed (kt and mph)	1 record, 2020	50 kt (58 mph); 1 with a recorded value	50 kt (58 mph) estimated gust, Thunderstorm Wind, 2020-07-30		No event record names a jurisdiction in the plan.	
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)	4 records, 2001 to 2004 (4 zone-level)		No damage reported in 4 records.		Countywide (zone-level records).	
Wildfire	acres burned (local data)	11 records, 2005 to 2014 (11 zone-level)		Wildfire, 2005-02-01, \$200,000 property; crops not reported (2005 dollars); NWS zone PRZ003		Countywide (zone-level records).	
Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet	none in data (snowfall: local data)	0					

In event narratives only (local data needed): wind chill, temperature, heat index, acres burned and snow depth; any physical measure of 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.

A monthly summary record covers most or all of a month; it does not count days at wave conditions.

Supports FEMA checklist item B1-d: previous occurrences

Federal declarations for this county: 28 declarations covering 22 separate hazard incidents counted in this packet (declarations for the same incident count once; non-natural and evacuation-only declarations are not counted).

Federal disaster declarations for this county

Sources: 1, 2, 3

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance <i>federal share obligated, nominal dollars</i>	Flags	Notes
2024-11-27	2024-08-13	DR-4850-PR	Major disaster	Tropical Storm Ernesto	Hurricane (primary); also designated: Inland Flooding, Landslide	\$58,435.58	new since last plan; within last 5 years	
2024-08-13	2024-08-13	EM-3610-PR	Emergency	Tropical Storm Ernesto	Hurricane; Inland Flooding; Landslide	no Public Assistance recorded	new since last plan; within last 5 years	same incident as DR-4850
2022-09-21	2022-09-17	DR-4671-PR	Major disaster	Hurricane Fiona	Hurricane	\$2,944,725.28	new since last plan; within last 5 years	
2022-09-18	2022-09-17	EM-3583-PR	Emergency	Tropical Storm Fiona	Hurricane	no Public Assistance recorded	new since last plan; within last 5 years	same incident as DR-4671
2020-08-22	2020-08-21	EM-3537-PR	Emergency	Tropical Storm Laura	Hurricane	no Public Assistance recorded	in the 12 months before plan approval	
2020-07-29	2020-07-27	EM-3532-PR	Emergency	Potential Tropical Cyclone Nine	Hurricane	no Public Assistance recorded	in the 12 months before plan approval	
2020-03-27	2020-01-20	DR-4493-PR	Major disaster	COVID-19 Pandemic	Non-natural, not counted	no Public Assistance recorded	in the 12 months before plan approval	
2020-03-13	2020-01-20	EM-3452-PR	Emergency	COVID-19	Non-natural, not counted	no Public Assistance recorded	in the 12 months before plan approval	same incident as DR-4493
2020-01-07	2019-12-28	EM-3426-PR	Emergency	Earthquakes	Earthquake	no Public Assistance recorded	in the 12 months before plan approval	
2019-08-27	2019-08-26	EM-3417-PR	Emergency	Tropical Storm Dorian	Hurricane	no Public Assistance recorded		
2017-09-20	2017-09-17	DR-4339-PR	Major disaster	Hurricane Maria	Hurricane	\$32,415,430.31		
2017-09-18	2017-09-17	EM-3391-PR	Emergency	Hurricane Maria	Hurricane	no Public Assistance recorded		same incident as DR-4339
2011-08-27	2011-08-21	DR-4017-PR	Major disaster	Hurricane Irene	Hurricane	\$181,567.44		
2011-08-22	2011-08-21	EM-3326-PR	Emergency	Hurricane Irene	Hurricane	no Public Assistance recorded		same incident as DR-4017
2008-10-01	2008-09-21	DR-1798-PR	Major disaster	Severe Storms and Flooding	Inland Flooding	\$1,155,910.45		
2004-09-17	2004-09-14	DR-1552-PR	Major disaster	Tropical Storm Jeanne and Resulting Landslides and Mudslides	Hurricane; Landslide	\$188,378.74		
2003-11-21	2003-11-10	DR-1501-PR	Major disaster	Severe Storms, Flooding, Mudslides, and Landslides	Inland Flooding; Landslide	PA not declared for this county		

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance	Flags	Notes
						<i>federal share obligated, nominal dollars</i>		
1999-11-17	1999-11-17	EM-3151-PR	Emergency	Hurricane Lenny	Hurricane	no Public Assistance recorded		
1998-09-24	1998-09-20	DR-1247-PR	Major disaster	Hurricane Georges - 18 Sep 98	Hurricane	no Public Assistance recorded		
1996-09-11	1996-09-09	DR-1136-PR	Major disaster	Hurricane Hortense	Hurricane	no Public Assistance recorded		
1992-01-22	1992-01-05	DR-931-PR	Major disaster	Severe Storms & Flooding	Inland Flooding	no Public Assistance recorded		
1989-09-21	1989-09-17	DR-842-PR	Major disaster	Hurricane Hugo	Hurricane	no Public Assistance recorded		
1985-10-10	1985-10-04	DR-746-PR	Major disaster	Severe Storms, Flooding & Mudslides	Inland Flooding (primary); also designated: Landslide	no Public Assistance recorded		
1979-09-02	1979-09-02	DR-597-PR	Major disaster	Hurricane David	Hurricane	no Public Assistance recorded		
1975-09-19	1975-09-19	DR-483-PR	Major disaster	Tropical Storm Elioise	Inland Flooding (primary); also designated: Hurricane	no Public Assistance recorded		
1974-11-30	1974-11-30	DR-455-PR	Major disaster	Flooding	Inland Flooding	no Public Assistance recorded		
1974-08-29	1974-08-29	EM-3002-PR	Emergency	Impact of Drought	Drought	no Public Assistance recorded		
1970-10-12	1970-10-12	DR-296-PR	Major disaster	Heavy Rains & Flooding	Inland Flooding	no Public Assistance recorded		

County Public Assistance: applicants the FEMA record places in this county, including any state agencies FEMA files there; statewide rows are listed on the state page; federal share obligated, nominal dollars.

Statewide declarations

Source: 2

Declared	Incident began	FEMA number	Type	Title	Mapped hazard
1998-09-21	1998-09-20	EM-3130-PR	Emergency	Hurricane Georges (Direct Federal Assist First 72 Hrs)	Hurricane
1964-05-26	1964-05-26	DR-170-PR	Major disaster	Extreme Drought Conditions	Drought
1956-08-18	1956-08-18	DR-62-PR	Major disaster	Hurricane	Hurricane (primary); also designated: Inland Flooding

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

Previous occurrences by hazard, with explicit no-event rows

Sources: 2, 6, 7

Hazard	Storm Events records, all years on file <i>(years in the Period column)</i>	Since plan approval <i>records</i>	In the 12 months before plan approval <i>records</i>	Last 5 years <i>records</i>	Declared incidents, all years <i>separate disasters</i>	Declared since approval <i>separate disasters</i>	Period	Statement
Coastal Flooding	3	1	0	1	0	0	1996 to 2026-06-30	
Cold Wave	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Drought	7	4	0	4	1	0	1996 to 2026-06-30	
Earthquake	0	0	0	0	1	0		Storm Events does not record earthquakes; the USGS earthquake catalog is the source.
Hail	0	0	0	0	0	0	1955 to 2026-06-30	No recorded events, 1955 to 2026-06-30, NOAA NCEI Storm Events
Heat Wave	12	12	0	12	0	0	1996 to 2026-06-30	
Hurricane	10	3	2	1	14	2	1996 to 2026-06-30	Includes 1 Tropical Depression record.
Inland Flooding	53	6	0	5	8	1	1996 to 2026-06-30	
Landslide	14	0	0	0	4	1	1996 to 2026-06-30	
Lightning	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Strong Wind	3	0	1	0	0	0	1955 to 2026-06-30	Includes 2 Strong Wind records.
Tornado	0	0	0	0	0	0	1950 to 2026-06-30	No recorded events, 1950 to 2026-06-30, NOAA NCEI Storm Events
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	4	0	0	0	0	0	1996 to 2026-06-30	
Wildfire	11	0	0	0	0	0	1996 to 2026-06-30	
Winter Weather	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events

Notable Storm Events records

Sources: 1, 6, 7

Date	Event type	Magnitude or extent	Damage <i>nominal dollars</i>	Deaths, injuries <i>direct only</i>	Location	Flags	Why listed
2024-07-02	Coastal Flood		\$4,000 property; \$0 crops (zone total, 2024 dollars)	0, 0	NWS zone PRZ003 (SOUTHEAST), zone-level	new since last plan; within last 5 years	B1-c worst recorded: Coastal Flood, Storm Surge/Tide
2023-09-01	Excessive Heat		\$0 property; \$0 crops (zone total, 2023 dollars)	0, 0	NWS zone PRZ003 (SOUTHEAST), zone-level	new since last plan; within last 5 years	B1-c worst recorded: Excessive Heat, Heat
2022-06-21	Drought		\$0 property; \$0 crops (zone total, 2022 dollars)	0, 0	NWS zone PRZ003 (SOUTHEAST), zone-level	new since last plan; within last 5 years	B1-c worst recorded: Drought
2020-07-30	Thunderstorm Wind	50 kt (58 mph) estimated gust	\$0 property; \$0 crops (2020 dollars)	0, 0	ARROYO	in the 12 months before plan approval	B1-c worst recorded: Thunderstorm Wind
2018-02-11	Strong Wind	36 kt (41 mph) measured gust	\$1,000 property; \$0 crops (zone total, 2018 dollars)	0, 0	NWS zone PRZ003 (SOUTHEAST), zone-level		B1-c worst recorded: High Wind and Strong Wind
2017-09-20	Flash Flood		\$750,000,000 property; \$0 crops (2017 dollars)	0, 0	ARROYO		B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
2012-05-05	Debris Flow		\$55,000 property; \$0 crops (zone total, 2012 dollars)	0, 0	NWS zone PRZ003 (SOUTHEAST), zone-level		B1-c worst recorded: Debris Flow
2011-07-01	Strong Wind	30 kt (35 mph) estimated gust	\$5,000 property; \$0 crops (zone total, 2011 dollars)	0, 0	NWS zone PRZ003 (SOUTHEAST), zone-level		B1-c most damaging: High Wind and Strong Wind
2005-02-01	Wildfire		\$200,000 property; crops not reported (zone total, 2005 dollars)	0, 0	NWS zone PRZ003 (SOUTHEAST), zone-level		B1-c worst recorded: Wildfire
2004-09-14	Tropical Storm		property not reported; \$101,500,000 crops (zone total, 2004 dollars)	1, 0	NWS zone PRZ003 (SOUTHEAST), zone-level		deaths or injuries recorded
2003-11-11	Flash Flood		damage not reported	0, 1	NWS zone PRZ003 (SOUTHEAST), zone-level		deaths or injuries recorded
2000-08-22	Hurricane (NOAA event type 'Hurricane (Typhoon)')		\$41,000 property; crops not reported (zone total, 2000 dollars)	0, 0	NWS zone PRZ003 (SOUTHEAST), zone-level		B1-c worst recorded: Hurricane, Tropical Storm, Tropical Depression

The full list is in the Excel file, sheet "B1-d Storm Events history" (117 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).

FEMA's declaration data list no tribal or special-area declarations for this state.

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
Coastal Flooding	0.252	events per year at a location (modeled)	about 0.25 per year at a given location in the county	Likely	Storm Events records in 3 of 30 years, 1996 to 2025 (10%)	not shown	modeled	see B1-f	
Cold Wave	0	event-days per year	none modeled		Storm Events event-days in 0 of 30 years, 1996 to 2025 (0%)	0	2005-11-12 to 2024-11-12 (19 years)	countywide	No Storm Events cold wave record, 1996 to 2025.
Drought	8.31	event-days per year	about 8.31 days per year	Likely	Storm Events event-days in 3 of 30 years, 1996 to 2025 (10%)	210	2000 to 2025 (25.25 years; D3 and D4 only)	countywide	
Earthquake	0.0339	annual probability at a location	chance a given location in the county has at least minor-damage shaking in a year: 3.39%			not shown	modeled	see B1-f	No descriptor (Storm Events does not record earthquakes).
Hail	0.0266	events per year	about 1 in 38 years	Possible	FEMA annualized frequency (modeled)	1.1 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave	0	event-days per year	none modeled	Possible	Storm Events event-days in 2 of 30 years, 1996 to 2025 (6.67%)	0	2005-11-12 to 2024-11-12 (19 years)	countywide	NRI models no heat wave event-days here (2005-11-12 to 2024-11-12, 19 years); Storm Events has a record in 2 of 30 years. The descriptor comes from Storm Events, which records events NRI's definition leaves out.
Hurricane	0.207	events per year	about 1 in 5 years	Likely	FEMA annualized frequency (modeled)	46	1851 to 2024 (Atlantic)	see B1-f	NRI counts hurricane and tropical storm tracks passing within storm-force wind range; federal declarations are in B1-d.
Inland Flooding	0.286	event-days per year	about 0.286 days per year	Likely	Storm Events event-days in 15 of 30 years, 1996 to 2025 (50%)	8	1996 to 2023 (28 years)	see B1-f	
Landslide	0.852	events per year (modeled)	about 0.85 per year	Likely	FEMA annualized frequency (modeled)	not shown	modeled	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
Lightning	62.5	days per year with a strike	about 62.5 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	countywide	
Strong Wind	0.00498	events per year	about 1 in 201 years	Unlikely	FEMA annualized frequency (modeled)	1	1986 to 2023 (38 years)	countywide	
Tornado	0.00099	events per year	about 1 in 1,010 years	Unlikely	FEMA annualized frequency (modeled)	not shown	1950 to 2023 (EF2+); 1986 to 2023 (EF0-1)	see B1-f	
Tsunami	0.0557	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: 5.57%		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	0.0101	annual probability	about 1 in 99 years	Possible	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Wildfire		annual probability at a location		Likely	Storm Events records in 5 of 30 years, 1996 to 2025 (16.7%)	not shown	modeled	see B1-f	
Winter Weather	0	event-days per year	none modeled		Storm Events event-days in 0 of 30 years, 1996 to 2025 (0%)	0	2005-11-12 to 2024-11-12 (19 years)	countywide	No Storm Events winter weather record, 1996 to 2025

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	1	30	0.0333
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	
Coastal Flooding	0 of 4				Insufficient Data 4
Cold Wave	0 of 4				Insufficient Data 4
Drought	0 of 4				Insufficient Data 4
Earthquake	0 of 4				Insufficient Data 4
Hail	0 of 4				Insufficient Data 4
Heat Wave	0 of 4				Insufficient Data 4
Hurricane	0 of 4				Insufficient Data 4
Inland Flooding	0 of 4				Insufficient Data 4
Landslide	0 of 4				Insufficient Data 4
Lightning	0 of 4				Insufficient Data 4
Strong Wind	0 of 4				Insufficient Data 4
Tornado	0 of 4				Insufficient Data 4
Tsunami	0 of 4				Not Applicable 2, Insufficient Data 2
Volcanic Activity	0 of 4				Insufficient Data 4
Wildfire	0 of 4				Insufficient Data 4
Winter Weather	0 of 4				Insufficient Data 4

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.

Each jurisdiction (starting figures from federal data)

Sources: 1, 3, 4, 6

Jurisdiction	Type	Plan status	Repetitive loss	Public Assistance to this jurisdiction	Event records naming this place	Notes
			<i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	<i>FEMA records matched by applicant name; federal share obligated, nominal dollars</i>	<i>all years; since its plan</i>	
Arroyo Municipio	County	Expired on 2025-10-05	FMA RL 0, SRL 0; any 0	\$36,528,133.17	0 total; 0 since its plan	Puerto Rico commonwealth community (720000): this row counts only its properties in this municipio, as the county table does.

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

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

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

Local data needed

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

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

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

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

Hazard	Building exposure <i>modeled dollars</i>	Agriculture exposure <i>modeled dollars</i>	Population exposed <i>people</i>	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since 2020-10-06 <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
Coastal Flooding	\$312,792,301	n/a	1,603	\$8,280	n/a	\$3,154	0.00265%		\$4,000		
Cold Wave	\$0	\$0	0	\$0	\$0	\$0					building exposure is 0 in NRI
Drought	n/a	\$0	n/a	n/a	\$0	n/a			\$0		agriculture exposure is 0 in NRI
Earthquake	\$3,541,493,837	n/a	15,843	\$1,345,196	n/a	\$1,441,891	0.038%				
Hail	\$2,232,473,659	\$0	15,822	\$27	\$0	\$222	under 0.0001%				
Heat Wave	\$0	\$0	0	\$0	\$0	\$0			\$0		building exposure is 0 in NRI
Hurricane	\$2,232,168,772	\$0	15,819	\$6,638,392	\$0	\$489,134	0.297%		\$0	\$3,003,160.86	
Inland Flooding	\$2,227,881,678	\$0	1,328	\$799,909	\$0	\$9,547	n/a (see note)	\$0		\$58,435.58	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	\$165,644,904	n/a	1,210	\$377,744	n/a	\$3,115	0.228%			\$58,435.58	
Lightning	\$2,232,473,659	n/a	15,822	\$4,336	n/a	\$287,611	0.000194%				
Strong Wind	\$2,232,473,659	\$0	15,822	\$40	\$0	\$49	under 0.0001%				
Tornado	\$2,232,473,659	\$0	15,822	\$3,063	\$0	\$3,791	0.000137%				
Tsunami	\$91,906,724	n/a	298	\$1,024	n/a	\$822,723	0.00111%				
Volcanic Activity	\$2,232,473,659	n/a	15,822	\$0	n/a	\$0	0%				

Hazard	Building exposure <i>modeled dollars</i>	Agriculture exposure <i>modeled dollars</i>	Population exposed <i>people</i>	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	Cost of expected deaths and injuries <i>FEMA's dollar value per year, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since 2020-10-06 <i>county-coded records, property plus crops, nominal dollars</i>	Zone-level damage since plan <i>property plus crops, reported for the zone</i>	Public Assistance since plan <i>nominal dollars; see note</i>	Note
Wildfire	n/a	n/a	n/a	n/a	n/a	n/a					NRI publishes no building exposure for this county
Winter Weather	\$0	\$0	0	\$0	\$0	\$0					building exposure is 0 in NRI

Totals since 2020-10-06 (Storm Events through 2026-06-30): 6 county-coded records, 6 with a damage value recorded (including \$0), \$0; 20 zone-level records, 20 with a damage value recorded (including \$0), \$4,000 reported for the zone; Public Assistance: \$3,003,160.86 on 4 counted declarations, 2 of them with Public Assistance.

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

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

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

County context

Source: 5

Measure	Value
Population	15,822
Building value (total, not at risk)	\$2,232,473,659
Agriculture value (total, not at risk)	\$0
NRI risk rating (all hazards)	Insufficient Data
Expected annual loss, buildings and agriculture, all hazards	\$9,178,012
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)	\$3,061,237
Social vulnerability rating	Data Unavailable
Community resilience rating	Data Unavailable
NRI version	December 2025

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

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

Supports FEMA checklist item B2-c: repetitive loss properties

Repetitive loss in this county, both definitions

Sources: 1, 4

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

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

Repeat-flood properties: county and state-level rows

Sources: 1, 4

Scope	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
County total	0	0	0	0	0	0	0
Statewide, no county in FEMA's file	54	165	1,572	158	1,574	0	38

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

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

Sources: 1, 4

Jurisdiction	NFIP community ID	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>	Note
Arroyo Municipio	720000	0	0	0	0	0	0	0	Puerto Rico commonwealth community (720000): this row counts only its properties in this municipio, as the county table does.

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

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

County repeat-flood properties by occupancy group: 0 in every occupancy group.

Sources: 1, 4

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

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

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

Exact counts; no count suppression.

Sources

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

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 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)
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 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_Gaz_cousubs_national.zip, https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_place_national.zip, https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_unsd_national.zip, https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_elsd_national.zip, https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_scscd_national.zip, https://www2.census.gov/geo/docs/reference/codes2020/national_place_by_county2020.txt, https://www2.census.gov/geo/docs/reference/ct_change/ct_cou_to_cousub_crosswalk.xlsx (used to match place names and codes; no table prints its values)
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What this packet is and what the plan adds

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

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Corrections: to report an error, name the packet, the table and what your records show. Contact: contact@hazardplain.org