

Canóvanas Municipio, PR

Risk-assessment baseline packet

Unit **County area 72029** 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.

OPENFEMA DISCLAIMER

This product uses the Federal Emergency Management Agency's OpenFEMA API, but is not endorsed by FEMA. The Federal Government or FEMA cannot vouch for the data or analyses derived from these data after the data have been retrieved from the Agency's website(s).

Plan clock

Status	Expired on 2026-08-09	Plan	Canóvanas 2021 (FEMA plan 107615)
Approved	2021-08-10	Expires	2026-08-09
As of	2026-09-28	Days	50 days since expiry
Update underway	FEMA tracker shows a plan in progress		

Generally not eligible for FEMA mitigation project grants (HMGP, FMA) until a new plan is approved, barring a 44 CFR 201.6(a)(3) exception. Planning grants are not affected.

What changed since your last plan (approved 2021-08-10)

New federal declarations	EM-3583-PR, DR-4671-PR, EM-3610-PR, DR-4850-PR (4 declaration rows; 2 counted incidents)	Storm Events records since approval	32 (data through 2026-06-30)
Repetitive loss now	FMA RL 0, SRL 0 (44 CFR 77.2); any definition: 0	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
Canóvanas Municipio	County	Expired on 2026-08-09	Canóvanas 2021 (FEMA plan 107615)	2021-08-10	2026-08-09	-50	FEMA tracker shows a plan in progress	

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.

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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	Hurricane	Insufficient Data	Relatively High	\$15,980,451	\$0	\$1,417,217	\$17,397,668	10		Includes 1 Tropical Depression record, event types the NRI definition of this hazard leaves out.
2	Earthquake	Insufficient Data	Relatively Moderate	\$3,157,776		\$4,039,111	\$7,196,887			Not in Storm Events. Storm Events coverage of this hazard is limited; absence is not evidence of low risk.
3	Inland Flooding	Insufficient Data	Very Low	\$3,187,397	\$0	\$49,286	\$3,236,683	118		
4	Landslide	Insufficient Data	Relatively High	\$2,255,109		\$63,179	\$2,318,288	15		
5	Lightning	Insufficient Data	Relatively Moderate	\$12,020		\$679,267	\$691,286	1		
6	Tornado	Insufficient Data	Very Low	\$4,254	\$0	\$6,336	\$10,590	0		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.
7	Coastal Flooding	Insufficient Data	Very Low	\$2,794		\$1,263	\$4,058	17		
8	Volcanic Activity	Insufficient Data	Very Low	\$2		\$1,013	\$1,015	5		

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>	EAL population equivalence <i>statistical value of life and injury, \$13.7M per life, not property damage</i>	EAL total (see note) <i>modeled dollars per year</i>	Storm Events records since 1996 <i>count</i>	Evidence for an omission <i>NRI Not Applicable, no declaration and no Storm Events record since 1996</i>	Storm Events coverage note
9	Hail	Insufficient Data	Very Low	\$60	\$0	\$594	\$654	0		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.
10	Strong Wind	Insufficient Data	Very Low	\$81	\$0	\$110	\$191	8		Includes 3 Strong Wind records, event types the NRI definition of this hazard leaves out.
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). Storm Events coverage of this hazard is limited; absence is not evidence of low risk.
12	Drought	Insufficient Data	No Expected Annual Losses		\$0		\$0	1		
13	Heat Wave	Insufficient Data	No Expected Annual Losses	\$0	\$0	\$0	\$0	8		
14	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). Storm Events coverage of this hazard is limited; absence is not evidence of low risk.
	Avalanche	Not Applicable	Not Applicable					0	NRI rates avalanche 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.
	Wildfire	Insufficient Data	Insufficient Data					1		

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 <i>rated of all tracts</i>
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.	0 of 12
Coastal 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.	0 of 12
Cold Wave	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	0 of 12
Drought	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	0 of 12
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.	0 of 12
Hail	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	0 of 12
Heat Wave	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	0 of 12
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.	0 of 12
Ice Storm	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	0 of 12
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.	0 of 12
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.	0 of 12
Lightning	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	0 of 12
Strong Wind	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	0 of 12
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.	0 of 12
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 12
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 12
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.	0 of 12
Winter Weather	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	0 of 12

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.

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Coastal Flood, Storm Surge/ Tide	none in data (FIRM for depth)	17, 2008 to 2026 (17 zone-level)		Coastal Flood, 2026-02-10, \$82,500 property; \$0 crops, reported for the zone (2026 dollars); NWS zone PRZ002 (NORTHEAST), zone-level: may include parts of neighboring counties		Zone-level records: applies countywide; national data do not locate these events within the county.	Flood depth: see the FEMA Flood Insurance Rate Map.
Cold/Wind Chill, Extreme Cold/Wind Chill	wind chill	0					Wind chill: in event narratives only; local data required.
Frost/Freeze (outside NRI Cold Wave definition)	crop damage	0					Temperature: in event narratives only; local data required.
Drought	US Drought Monitor D-scale	1, 2022 to 2022 (1 zone-level)	17 days; 1 with a recorded value	17 days, 2022-06-14 to 2022-06-30, 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)	0					
Excessive Heat, Heat	heat index (narratives)	8, 2023 to 2024 (8 zone-level)	1 day to 30 days (median 2 days); 5 with a recorded value	30 days, 2023-09-01 to 2023-09-30, from 1 monthly summary record (a monthly summary record covers most or all of a month; it does not count days at wave conditions), 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.

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Hurricane, Tropical Storm, Tropical Depression	Saffir-Simpson	10, 2000 to 2024 (10 zone-level)		Strongest recorded (records with damage, a wind speed or direct casualties first, then storm type, category and wind): Hurricane (Typhoon) record, 2000-08-22 to 2000-08-23, \$41,000 property; crops not reported, reported for the zone (2000 dollars); NWS zone PRZ002 (NORTHEAST), zone-level: may include parts of neighboring counties	Most damaging recorded: Tropical Storm, 2001-08-22, \$200,000 property; crops not reported, reported for the zone (2001 dollars)	Zone-level records: applies countywide; national data do not locate these events within the county.	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.
Flash Flood, Flood, Lakeshore Flood	damage and flood days (FIRM for depth)	118, 2000 to 2024 (99 zone-level)		Flash Flood, 2017-09-20, \$750,000,000 property; \$0 crops (2017 dollars)		No event record names a member place. Zone-level records (99) apply countywide.	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)	15, 2003 to 2024 (13 zone-level)		Debris Flow, 2024-08-14, \$3,000 property; \$0 crops (2024 dollars)		No event record names a member place. Zone-level records (13) apply countywide.	Physical measure: in event narratives only; local data required.
Lightning	annualized frequency (the measure FEMA's Local Mitigation Planning Handbook names)	1, 2006 to 2006 (1 zone-level)		Lightning, 2006-07-10, \$5,000 property; crops not reported, reported for the zone (2006 dollars); NWS zone PRZ002 (NORTHEAST), zone-level: may include parts of neighboring counties		Zone-level records: applies countywide; national data do not locate these events within the county.	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)	3, 2003 to 2026 (3 zone-level)	24 kt (28 mph) to 40 kt (46 mph) (median 40 kt (46 mph)); 3 with a recorded value	40 kt (46 mph) estimated gust, Strong Wind, 2005-05-09; same speed and measurement basis also recorded on 2003-10-10; NWS zone PRZ002 (NORTHEAST), zone-level: may include parts of neighboring counties	Strong Wind, 2003-10-10, \$15,000 property; crops not reported, reported for the zone (2003 dollars)	Zone-level records: applies countywide; national data do not locate these events within the county.	

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Thunderstorm Wind	wind speed (kt and mph)	5, 2002 to 2024 (3 zone- level)	30 kt (35 mph) to 52 kt (60 mph) (median 41 kt (47 mph)); 2 with a recorded value	52 kt (60 mph) estimated gust, Thunderstorm Wind, 2011-05-14		No event record names a member place. Zone-level records (3) apply countywide.	
Tornado	Enhanced Fujita (F before Feb 2007)	0					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)	5, 2001 to 2004 (5 zone- level)		No damage reported in 5 records.		Zone-level records: applies countywide; national data do not locate these events within the county.	Physical measure: in event narratives only; local data required.
Wildfire	acres burned (local data)	1, 2007 to 2007 (1 zone- level)		No damage reported in 1 records.		Zone-level records: applies countywide; national data do not locate these events within the county.	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)	0					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

28

Counted incidents

22

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
2024-11-27	2024-08-13	DR-4850-PR	Major disaster	TROPICAL STORM ERNESTO	Hurricane (primary); also designated: Inland Flooding, Landslide	\$73,898.07	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	none found	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	\$21,562,134.30	new since last plan; within last 5 years	
2022-09-18	2022-09-17	EM-3583-PR	Emergency	TROPICAL STORM FIONA	Hurricane	none found	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	none found	during plan review, check whether your last plan included it	
2020-07-29	2020-07-27	EM-3532-PR	Emergency	POTENTIAL TROPICAL CYCLONE NINE	Hurricane	none found		
2020-03-27	2020-01-20	DR-4493-PR	Major disaster	COVID-19 PANDEMIC	Non-natural, not counted	none found		
2020-03-13	2020-01-20	EM-3452-PR	Emergency	COVID-19	Non-natural, not counted	none found		same incident as DR-4493
2020-01-07	2019-12-28	EM-3426-PR	Emergency	EARTHQUAKES	Earthquake	none found		
2019-08-27	2019-08-26	EM-3417-PR	Emergency	TROPICAL STORM DORIAN	Hurricane	none found		
2017-09-20	2017-09-17	DR-4339-PR	Major disaster	HURRICANE MARIA	Hurricane	\$55,117,134.61		
2017-09-18	2017-09-17	EM-3391-PR	Emergency	HURRICANE MARIA	Hurricane	none found		same incident as DR-4339
2017-09-10	2017-09-05	DR-4336-PR	Major disaster	HURRICANE IRMA	Hurricane	\$59,611.26		
2011-08-27	2011-08-21	DR-4017-PR	Major disaster	HURRICANE IRENE	Hurricane	\$1,305,710.29		
2011-08-22	2011-08-21	EM-3326-PR	Emergency	HURRICANE IRENE	Hurricane	none found		same incident as DR-4017
2004-09-17	2004-09-14	DR-1552-PR	Major disaster	TROPICAL STORM JEANNE AND RESULTING LANDSLIDES AND MUDSLIDES	Hurricane; Landslide	\$80,282.78		
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		
1999-11-17	1999-11-17	EM-3151-PR	Emergency	HURRICANE LENNY	Hurricane	none found		

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance	Flags	Notes
						<i>federal share obligated, nominal dollars</i>		
1998-09-24	1998-09-20	DR-1247-PR	Major disaster	HURRICANE GEORGES - 18 SEP 98	Hurricane	none found		
1996-09-11	1996-09-09	DR-1136-PR	Major disaster	HURRICANE HORTENSE	Hurricane	none found		
1995-09-16	1995-09-15	DR-1068-PR	Major disaster	HURRICANE MARILYN	Hurricane	PA not declared for this county		
1992-01-22	1992-01-05	DR-931-PR	Major disaster	SEVERE STORMS & FLOODING	Inland Flooding	none found		
1989-09-21	1989-09-17	DR-842-PR	Major disaster	HURRICANE HUGO	Hurricane	none found		
1987-12-17	1987-11-24	DR-805-PR	Major disaster	SEVERE STORMS & FLOODING	Inland Flooding	none found		
1979-09-02	1979-09-02	DR-597-PR	Major disaster	HURRICANE DAVID	Hurricane	none found		
1975-09-19	1975-09-19	DR-483-PR	Major disaster	TROPICAL STORM ELIOISE	Inland Flooding (primary); also designated: Hurricane	none found		
1974-11-30	1974-11-30	DR-455-PR	Major disaster	FLOODING	Inland Flooding	none found		
1974-08-29	1974-08-29	EM-3002-PR	Emergency	IMPACT OF DROUGHT	Drought	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
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. Listed on every county page in the state; not counted with county rows.

SOURCE

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

Public Assistance filed under this county for declarations that do not list it: 1 row, \$180,659.38

FEMA number	Declared	Title	Applicant	PA obligated
				<i>federal share obligated, nominal dollars</i>
EM-3384-PR	2017-09-05	HURRICANE IRMA	Canovanas (Municipio)	\$180,659.38

FEMA's Public Assistance summaries file these applicants under this county, but FEMA's declaration rows for these disasters do not designate it (an electric cooperative or district serving several counties, for example). Not in any declaration row above and not counted.

SOURCES

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

FEMA, 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 records	During plan review records	Last 5 years records	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	17	10	2	10	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	1	1	0	1	1	0	1996 to 2026-06-30	
Earthquake	0	0	0	0	1	0		No Storm Events record; local data required (e.g., USGS).
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	8	8	0	8	0	0	1996 to 2026-06-30	
Hurricane	10	1	0	1	16	2	1996 to 2026-06-30	Includes 1 Tropical Depression record, event types the NRI definition of this hazard leaves out.
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	118	8	2	8	6	1	1996 to 2026-06-30	
Landslide	15	2	0	2	3	1	1996 to 2026-06-30	
Lightning	1	0	0	0	0	0	1996 to 2026-06-30	
Strong Wind	8	2	0	2	0	0	1955 to 2026-06-30	Includes 3 Strong Wind records, event types the NRI definition of this hazard leaves out.
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	5	0	0	0	0	0	1996 to 2026-06-30	
Wildfire	1	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

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)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>**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
2026-02-10	Coastal Flood		\$82,500 property; \$0 crops, reported for the zone (2026 dollars)	0, 0	NWS zone PRZ002 (NORTHEAST), zone-level: may include parts of neighboring counties	new since last plan; within last 5 years	B1-c worst recorded: Coastal Flood, Storm Surge/Tide
2024-08-14	Debris Flow		\$3,000 property; \$0 crops (2024 dollars)	0, 0	CANOVANAS	new since last plan; within last 5 years	B1-c worst recorded: Debris Flow
2023-09-01	Excessive Heat		\$0 property; \$0 crops, reported for the zone (2023 dollars)	0, 0	NWS zone PRZ002 (NORTHEAST), zone-level: may include parts of neighboring counties	new since last plan; within last 5 years	B1-c worst recorded: Excessive Heat, Heat
2022-06-14	Drought		\$0 property; \$0 crops, reported for the zone (2022 dollars)	0, 0	NWS zone PRZ002 (NORTHEAST), zone-level: may include parts of neighboring counties	new since last plan; within last 5 years	B1-c worst recorded: Drought
2017-09-20	Flash Flood		\$750,000,000 property; \$0 crops (2017 dollars)	0, 0	CANOVANAS		B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
2011-05-14	Thunderstorm Wind	52 kt (60 mph) estimated gust	\$150,000 property; \$0 crops (2011 dollars)	0, 0	CANOVANAS		B1-c worst recorded: Thunderstorm Wind
2008-09-01	Flash Flood		\$0 property; \$0 crops, reported for the zone (2008 dollars)	2, 0	NWS zone PRZ002 (NORTHEAST), zone-level: may include parts of neighboring counties		deaths or injuries recorded
2006-07-10	Lightning		\$5,000 property; crops not reported, reported for the zone (2006 dollars)	0, 0	NWS zone PRZ002 (NORTHEAST), zone-level: may include parts of neighboring counties		B1-c worst recorded: Lightning
2005-09-16	Flash Flood		damage not reported	1, 0	NWS zone PRZ002 (NORTHEAST), zone-level: may include parts of neighboring counties		deaths or injuries recorded
2005-05-09	Strong Wind	40 kt (46 mph) estimated gust	\$100 property; crops not reported, reported for the zone (2005 dollars)	0, 0	NWS zone PRZ002 (NORTHEAST), zone-level: may include parts of neighboring counties		B1-c worst recorded: High Wind and Strong Wind (outside NRI Strong Wind definition)
2003-04-17	Flash Flood		\$11,100,000 property; crops not reported, reported for the zone (2003 dollars)	2, 0	NWS zone PRZ002 (NORTHEAST), zone-level: may include parts of neighboring counties		deaths or injuries recorded
2000-08-22	Hurricane (Typhoon)		\$41,000 property; crops not reported, reported for the zone (2000 dollars)	0, 0	NWS zone PRZ002 (NORTHEAST), zone-level: may include parts of neighboring counties		B1-c worst recorded: Hurricane, Tropical Storm, Tropical Depression

The full list is in the XLSX file, sheet "B1-d Storm Events history" (184 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.

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

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		events per year					1994 to 2023 (30 years)	see B1-f	Not Applicable in NRI for this county; no descriptor.
Coastal Flooding	0.212	events per year at a location (modeled)	about 0.21 per year at a given location in the county	Likely	Storm Events records in 10 of 30 years, 1996 to 2025 (33.3%)	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.
Cold Wave	0	event-days per year	none modeled		event-days in 0 of 30 years, 1996 to 2025 (0%)	0	2005-11-12 to 2024-11-12 (19 years)	countywide	No recorded event-days, 1996 to 2025; descriptor not assigned. Frost/Freeze records are not counted in this descriptor: they record crop freezes, not cold waves.
Drought	1.89	event-days per year	about 1.89 days per year	Possible	event-days in 1 of 30 years, 1996 to 2025 (3.33%)	56	2000 to 2025 (25.25 years; D3 and D4 only)	countywide	NRI gives about 1.89 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 1 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	0.0436	annual probability at a location	chance a given location in the county has at least minor- damage shaking in a year: 4.36%			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	0.0266	events per year	about 1 in 38 years	Possible	FEMA annualized frequency (modeled)	1.0 (modeled)	1986 to 2023 (38 years)	countywide	

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
Heat Wave	0.00154	event-days per year	about 0.00154 days per year	Possible	event-days in 2 of 30 years, 1996 to 2025 (6.67%)	0.0292	2005-11-12 to 2024-11-12 (19 years)	countywide	
Hurricane	0.224	events per year	about 1 in 4 years	Likely	FEMA annualized frequency (modeled)	42	1851 to 2024 (Atlantic)	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	0.357	event-days per year	about 0.357 days per year	Likely	event-days in 16 of 30 years, 1996 to 2025 (53.3%)	10	1996 to 2023 (28 years)	see B1-f	
Landslide	6.63	events per year (modeled)	about 6.63 per year	Highly likely	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Lightning	70.5	days per year with a strike	about 70.5 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	0.00058	events per year	about 1 in 1,724 years	Unlikely	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	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		Possible	Storm Events records in 1 of 30 years, 1996 to 2025 (3.33%)	not shown	modeled	see B1-f	Descriptor from Storm Events, not NRI: the NRI value is the chance at a location in the county, not how often the hazard affects the county.

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
Winter Weather	0	event-days per year	none modeled		event-days in 0 of 30 years, 1996 to 2025 (0%)	0	2005-11-12 to 2024-11-12 (19 years)	countywide	No recorded event-days, 1996 to 2025; descriptor not assigned

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	0	30	0
Hail	2.00 in+	1996 to 2025	0	30	0
Strong Wind (Thunderstorm Wind records)	50-64 kt	1996 to 2025	1	30	0.0333
Strong Wind (Thunderstorm Wind records)	65 kt+	1996 to 2025	0	30	0
Strong Wind (Thunderstorm Wind records)	unmeasured or below 50 kt	1996 to 2025	1	30	0.0333
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

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	0 of 12				Not Applicable 12	
Coastal Flooding	0 of 12				Insufficient Data 12	
Cold Wave	0 of 12				Insufficient Data 12	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	0 of 12				Insufficient Data 12	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.
Earthquake	0 of 12				Insufficient Data 12	
Hail	0 of 12				Insufficient Data 12	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	0 of 12				Insufficient Data 12	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.

Hazard	Tracts <i>rated of all</i>	Risk score		Median	Max	Tracts by rating	Note
		min	NRI score, 0 to 100				
Hurricane	0 of 12					Insufficient Data 12	
Ice Storm	0 of 12					Not Applicable 12	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	0 of 12					Insufficient Data 12	
Landslide	0 of 12					Insufficient Data 12	
Lightning	0 of 12					Insufficient Data 12	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	0 of 12					Insufficient Data 12	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	0 of 12					Insufficient Data 12	
Tsunami	0 of 12					Not Applicable 12	
Volcanic Activity	0 of 12					Insufficient Data 12	
Wildfire	0 of 12					Insufficient Data 12	
Winter Weather	0 of 12					Insufficient Data 12	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	Public Assistance matched	Event records naming this place	Notes
			<i>FMA RL and SRL (44 CFR 77.2); repeat- flood, any definition</i>		<i>all years; since the member's plan</i>	
Canóvanas Municipio	County	Expired on 2026-08-09	FMA RL 0, SRL 0; any 0	\$77,472,522.95	0; 0	Puerto Rico commonwealth community (720000): this row counts only its properties in this municipio, as the county table does.

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.

SOURCES
FEMA, 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 2021-08-10 <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											Not Applicable in NRI for this county
Coastal Flooding	\$253,208,999		2,470	\$2,794		\$1,263	0.0011%		\$103,100		
Cold Wave	\$0	\$0	0	\$0	\$0	\$0					building exposure is 0 in NRI
Drought		\$0			\$0				\$0		agriculture exposure is 0 in NRI
Earthquake	\$7,731,570,386		42,337	\$3,157,776		\$4,039,111	0.0408%				
Hail	\$4,960,212,082	\$0	42,309	\$60	\$0	\$594	under 0.0001%				
Heat Wave	\$139,152,430	\$0	1,731	\$0	\$0	\$0	0%		\$0		
Hurricane	\$4,960,106,816	\$0	42,308	\$15,980,451	\$0	\$1,417,217	0.322%		\$0	\$21,636,032.37	
Ice Storm											Not Applicable in NRI for this county
Inland Flooding	\$4,952,101,026	\$0	5,486	\$3,187,397	\$0	\$49,286	n/a (see note)	\$22,400		\$73,898.07	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	\$922,910,509		8,816	\$2,255,109		\$63,179	0.244%	\$4,100		\$73,898.07	
Lightning	\$4,960,212,082		42,309	\$12,020		\$679,267	0.000242%				

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 2021-08-10 <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	\$4,960,212,082	\$0	42,309	\$81	\$0	\$110	under 0.0001%	\$20,000	\$6,000		Storm Events damage since the plan includes 1 zone-level Strong Wind record (\$6,000), an event type the NRI definition of this hazard leaves out.
Tornado	\$4,960,212,082	\$0	42,309	\$4,254	\$0	\$6,336	under 0.0001%				
Tsunami											Not Applicable in NRI for this county
Volcanic Activity	\$4,960,212,082		42,309	\$2		\$1,013	under 0.0001%				
Wildfire											NRI publishes no building exposure for this county
Winter Weather	\$0	\$0	0	\$0	\$0	\$0					building exposure is 0 in NRI

Totals since 2021-08-10 (Storm Events through 2026-06-30): 11 county-coded records, 11 with a damage value recorded (including \$0), \$46,500; 21 zone-level records, 21 with a damage value recorded (including \$0), \$109,100 reported for the zone; Public Assistance on counted declarations \$21,636,032.37 (4 declarations, 2 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	42,309
Building value (total, not at risk)	\$4,960,212,082
Agriculture value (total, not at risk)	\$0
NRI risk rating (all hazards)	Insufficient Data

Measure	Value
Expected annual loss, buildings and agriculture, all hazards	\$24,599,943
Expected annual loss, population equivalence, all hazards (NRI values each statistical life at \$13.7M; a modeled value of expected deaths and injuries, not property damage)	\$6,257,376
Social vulnerability rating	Data Unavailable
Community resilience rating	Data Unavailable
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)	0	Severe repetitive loss, FMA definition (44 CFR 77.2)	0
Repetitive loss, NFIP insurance definition	0	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	0	0	0	0	0	0	0
State level, not in this county: county not reported	54	165	1,572	158	1,574	0	38

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
Canóvanas 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.

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	0	0	0	0	0	0	0
2 to 4 unit residential	0	0	0	0	0	0	0
other residential	0	0	0	0	0	0	0
non-residential	0	0	0	0	0	0	0
not reported	0	0	0	0	0	0	0

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 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

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_cousubs_national.zip

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Cite this: Hazard Plain (2026). Canóvanas Municipio, PR: risk-assessment baseline packet, release 2026-10 (data as of 2026-09-28; County area 72029). Preview: automated baseline. Built from FEMA OpenFEMA, the FEMA National Risk Index and NOAA NCEI Storm Events; source versions in the packet's Sources list.

Corrections: to report an error, name the packet, the table and what your records show. Contact: 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_PR_72029. Preview: automated baseline.