

Puerto Rico: Overview

Everything in the main manual and the skill guides applies in Puerto Rico exactly as written. What's different here is the specific hazard profile and a legal framework that runs on civil law, not the English common law every state's page on this site is built on, which changes water rights and several other legal questions in ways worth understanding before assuming a state-page answer transfers over. This page is the starting point; the other three pages under Puerto Rico go deeper on laws, local resources, and the data behind the risks named here.

Hurricane Maria: the longest blackout in U.S. history

Hurricane Maria made landfall near Yabucoa on September 20, 2017, as a high-end Category 4 storm with sustained winds of 155 mph. The island's power grid didn't come back for 328 days, nearly 11 months, the longest blackout in U.S. history and the second-largest in world history; the last home reconnected was in rural Ponce. The human toll took over a year to actually settle: Puerto Rico's government initially reported 64 deaths, but a government-commissioned George Washington University study released in August 2018 put excess mortality at 2,975 in the months after landfall, the figure the territorial government then formally adopted, while an independent Harvard study estimated as many as 4,645 using a different methodology. Total damage ran approximately \$90 billion, almost entirely borne by Puerto Rico itself, and a month after landfall roughly 29% of the island, close to a million people, still had no running water. See the Risks page for the full data.

The grid never really recovered, and it's still failing island-wide

The power system that took 328 days to rebuild after Maria hasn't stabilized since. On December 31, 2024, a failed line at the Costa Sur plant cascaded into an island-wide failure that cut power to roughly 1.2 of Puerto Rico's 1.47 million customers. On April 16, 2025, a single transmission line brought down by overgrown vegetation, a line that had already failed 23 separate times in the prior year, took out power for 1.4 million customers and water service for over 400,000 more as a direct knock-on effect. The utility's own 2023 reliability numbers explain why: PREPA/LUMA's distribution grid averaged roughly 1,022 outage-minutes per customer per year against 4.7 separate outage events, three to six times worse than typical mainland utilities on both measures, while the utility's operator has fallen well short of its own contracted improvement targets. PREPA itself remains in unresolved federal bankruptcy proceedings as of this writing. See the Risks page for the full data.

What this means for how you use the rest of this manual

The manual's Tier structure and the skill guides apply without modification, but Tier 3, "no more fuel deliveries, no grid to return to," isn't the distant edge case here that it is in most of this manual's coverage area: it's the documented, lived experience of a large share of Puerto Rico's population for the better part of a year after Maria, and island-wide outages have recurred since on a multi-month cycle rather than a multi-decade one. Households here have a real reason to treat Tier 3 energy and water planning as a near-term possibility, not a remote contingency. Puerto Rico also experienced a serious earthquake sequence in January 2020 (a magnitude 6.4 mainshock left thousands displaced and damaged a power plant supplying over a quarter of the island's electricity), a reminder that the grid's fragility isn't only a hurricane problem. And because Puerto Rico's legal system runs on civil law rather than the common-law framework every state page on this site assumes, the Laws page below is worth reading even for household preparedness questions (like water rights) that seem purely practical rather than legal.

Sources

- Hurricane Maria landfall, wind speed, and grid restoration timeline: Wikipedia; NPR
- Maria death toll (GWU excess-mortality study): George Washington University
- Maria death toll (Harvard independent estimate): New England Journal of Medicine
- Maria damage cost and water-service disruption: Wikipedia
- December 2024 island-wide outage: CBS News
- April 2025 island-wide outage: U.S. News
- PREPA/LUMA reliability statistics: POWER Magazine; LUMA Q4 report
- January 2020 earthquake sequence: Wikipedia

Puerto Rico: Laws & Legal Considerations

Rainwater harvesting: legal, code-recognized, and, on paper, government-mandated

Rainwater harvesting is legal in Puerto Rico for both non-potable and potable use, common enough that cisterns are sold at local hardware stores, and it’s directly written into the building and plumbing codes rather than left as an unaddressed gray area.

Rule	Puerto Rico
Source water	Rooftop or other catchment, for non-potable or potable use
Governing code	Puerto Rico Plumbing Code, Chapter 13 ("Nonpotable Water Systems", §1301); Puerto Rico Building Code, Chapter 29 (§P2901.1)
Distribution marking	Code requires purple piping to identify rainwater, graywater, and reclaimed-water lines
2024 public policy	Law 91-2024 establishes rainwater harvesting as public policy and requires government agencies themselves to collect rainwater to reduce consumption

A 2024 law with compliance still in question

Law 91-2024 requires Puerto Rico’s own government agencies to collect rainwater, not just permits it for households. As of an August 2025 investigative report, compliance with that mandate was largely unverified, and legislators had filed a resolution to investigate why it hadn’t been implemented. The underlying legal right to harvest rainwater as a household isn’t in question; whether the government is actually following its own 2024 mandate is a separate, still-open question.

Water rights: public domain under civil law, not riparian rights

Puerto Rico’s water law starts from a fundamentally different premise than any state covered on this site: water isn’t privately owned alongside the land it touches.

Concept	How it works in Puerto Rico
Basic framework	Puerto Rico Civil Code, Title 31, Subtitle 2, Part IV ("Waters"), Chapter 153 §1311: rainwater, streams, and most surface and ground water belong to the public domain of the Commonwealth, held in trust for the population
Comprehensive statute	Act No. 136 of June 3, 1976, the Puerto Rico Water Resources Act, governs development and use, prioritizing domestic and human consumption above other uses
Administering agency	Department of Natural and Environmental Resources (DRNA), which issues permits and franchises for water development
Retail utility	PRASA (Puerto Rico Aqueduct and Sewer Authority, "AAA" in Spanish), created in 1945, serves roughly 97% of the population with water and 59% with sewer

Not riparian rights, and a live constitutional question about reliability

Every state’s water-law page on this site describes some form of riparian or prior-appropriation doctrine, private rights tied to land ownership or use history. Puerto Rico’s civil-code framework starts from the opposite premise: the water itself belongs to the public, held in trust, not to whoever owns the adjacent land. Separately, and directly relevant to a preparedness plan: a federal court ruled in October 2025 that PRASA’s failure to reliably provide water violates constitutional rights, a live legal finding about the same utility most households depend on for their primary water supply.

Concealed carry: a 2019 reform moved Puerto Rico from restrictive may-issue to shall-issue

Puerto Rico’s Act No. 168 of 2019, the “Puerto Rico Weapons Act of 2020,” took effect January 1, 2020, converting the territory from a may-issue system, where a license reportedly cost around \$1,500 and was rarely granted to an ordinary applicant, to shall-issue.

Requirement	Detail
Standard	Shall-issue since Act No. 168 (2019), effective January 1, 2020
License structure	A single unified license covers both firearm possession and carry, rather than two separate licenses
Processing	The Puerto Rico Police Bureau must approve or deny an application within 30 days if statutory criteria are met
Minimum age / requirements	21+; background and criminal-record check; fingerprints; a certified firearms training course leading to a required Use and Management Certificate
Cost	\$200 license fee (5-year term); \$100 renewal
Still restrictive relative to mainland shall-issue states	No open carry; mandatory firearm registration remains in place

A 2019 reform, not a response to Bruen

Act 168 took effect in January 2020, more than two years before the U.S. Supreme Court’s 2022 Bruen decision reshaped concealed carry law nationally. Puerto Rico’s shift to shall-issue was a local legislative reform, not a court-driven response, worth getting right since the timing is easy to mix up with the broader post-Bruen wave of changes in other jurisdictions.

Sources

- Puerto Rico rainwater harvesting code and Law 91-2024: Plenitud PR; NotiCel
- Puerto Rico Civil Code water provisions: Justia
- Puerto Rico Water Resources Act (Act 136 of 1976): FAO Lex
- PRASA structure and service coverage: AAFAF
- October 2025 federal court ruling on PRASA water reliability: Circle of Blue
- Act No. 168 of 2019 (Puerto Rico Weapons Act of 2020): Official text; Buckeye Firearms Association; Wikipedia

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Puerto Rico: Local Resources

Negociado para el Manejo de Emergencias y Administración de Desastres (NMEAD)

NMEAD, the Puerto Rico Emergency Management Bureau, leads territorial emergency management and disaster response under the Department of Public Safety. The agency in its current form dates to a 2023 reorganization law that restructured the prior Agencia Estatal para el Manejo de Emergencias y Administración de Desastres (AEMEAD) into NMEAD.

Use the Department of Public Safety mirror if NMEAD's own site won't load

NMEAD's own domain has had an expired SSL certificate; browsers may refuse to load it or show a security warning. The Department of Public Safety hosts a working mirror page with the same agency information if that happens.

Where to find it: dsp.pr.gov (NMEAD page).

CERT: active island-wide through NMEAD

NMEAD runs an active Community Emergency Response Team program, training volunteers in disaster preparedness, fire safety, light search and rescue, team organization, and disaster medical operations, the same core CERT curriculum used across the states, adapted to the island's own hazard profile.

University of Puerto Rico: Agricultural Extension Service Master Gardener Program

UPR-Mayagüez, Puerto Rico's land-grant institution, runs an Extension Master Gardener program through its Agricultural Extension Service, developed with financial and technical assistance from the U.S. Forest Service's International Institute of Tropical Forestry.

- **Extension Master Gardener Program:** a 12-module curriculum taught by agronomists from Extension Service regions across the island, including the municipal islands of Culebra and Vieques, covering plant anatomy, pathology, entomology, soils, community-garden management, wildlife management, and sustainable gardening practices, with field trips to sites like the Río Piedras Botanical Garden and El Yunque National Forest.

Where to find it: the UPR-Mayagüez Agricultural Extension Service, Box 787, Río Grande, PR 00745; (787) 887-2275; mgppr@uprm.edu.

Sources

- NMEAD structure, mission, and 2023 reorganization: DSP Puerto Rico; Microjuris
- NMEAD CERT program: NMEAD
- UPR Extension Master Gardener Program structure: USDA Forest Service

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Puerto Rico: Risks & Trends

Same standard as every other page on this site: every figure below is independently sourced, and figures that vary across sources, or measure genuinely different things, are flagged as such rather than collapsed into one number that looks more precise than the underlying data actually supports.

Hurricane Maria (2017)

Metric	Figure
Landfall	September 20, 2017, near Yabucoa, high-end Category 4, 155 mph sustained winds
Grid restoration	328 days (nearly 11 months) to full restoration; longest blackout in U.S. history
Death toll	64 (initial official count); 2,975 (GWU excess-mortality study, later adopted as PR's official figure); up to 4,645 (independent Harvard estimate, wide confidence interval)
Damage	~\$90 billion, almost entirely borne by Puerto Rico
Housing	Estimates range from ~166,000 to ~472,000 residential units destroyed or majorly damaged, depending on source and criteria
Water access, 1 month out	~29% of the island, roughly 1 million people, still without running water

Three different death tolls, and why that's not a red flag

A death toll that changes by a factor of 45 (64 to 2,975) sounds like a cover-up; it’s actually a methodology difference. The initial 64 counted only deaths directly, immediately attributable to the storm itself. The GWU and Harvard studies instead measured excess mortality, how many more people died in the months after Maria than would have died in a normal period, capturing deaths from lost medical care, heat, and infrastructure failure that a direct-cause count misses entirely. Puerto Rico’s government formally adopted the GWU figure (2,975) as its official toll; the Harvard estimate runs higher because it used a different survey methodology with a wider uncertainty range. All three numbers are real; they’re answering different questions.

The grid since Maria: recurring island-wide failures, not a one-time crisis

Metric	Figure
December 31, 2024 outage	~1.2 of 1.47 million customers (82%) lost power in a cascading failure originating at the Costa Sur plant; ~98% restored within a day
April 16, 2025 outage	1.4 million customers lost power; over 400,000 also lost water service; traced to a single transmission line that had already failed 23 times in the prior year
Distribution SAIDI, 2023	~1,022 outage-minutes per customer per year
Distribution SAIFI, 2023	~4.7 outage events per customer per year
Comparison to mainland utilities	Roughly 3-6x more outage-minutes and 2-3x more interruptions than typical mainland utilities cited for comparison
Generation availability	On average, only about 53% of total generation capacity available at any given time

Still in bankruptcy, still unresolved

PREPA remains in unresolved Title III federal bankruptcy proceedings as of this writing, the last major case of its kind still open. The utility’s operator has also fallen well short of its own contracted reliability-improvement targets. None of this is a settled, recovering situation; it’s an ongoing one, worth checking for current status rather than assuming it’s been resolved by the time you’re reading this.

The January 2020 earthquake sequence

Metric	Figure
Mainshock	January 7, 2020, magnitude 6.4, epicenter near Guayanilla in southwestern Puerto Rico
Deaths/injuries	At least 1 confirmed initially, rising to a commonly cited total of 4 dead and 9 injured across the sequence
Damage	~\$3.1 billion
Displacement	8,000+ homeless island-wide within a week; roughly 40,000 people camping outside their homes in Ponce alone
Emergency shelter response	28 government shelters across 14 municipalities, plus 5 tent cities with a combined capacity of ~3,200
Power infrastructure	A power plant supplying more than a quarter of the island's electricity was badly damaged, with repairs estimated to take a year or more

Sources

- Hurricane Maria landfall, wind speed, and grid restoration: Wikipedia; NPR
- Maria death toll, GWU study: George Washington University
- Maria death toll, Harvard estimate: New England Journal of Medicine
- Maria damage, housing, and water-access figures: Wikipedia; Wikipedia
- December 2024 outage: CBS News
- April 2025 outage: U.S. News
- PREPA/LUMA reliability statistics and bankruptcy status: POWER Magazine; LUMA Q4 report; PR Oversight Board
- January 2020 earthquake sequence: Wikipedia