What-to-do manual: Hurricane

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A hurricane is the only major disaster you can see coming days ahead. That should be an advantage, and often it isn't, because people decide based on category —which only measures wind— when what usually kills is water. Here is how to read the official alerts and what to decide at each stage.

Before the crisis

Category does not measure the full danger

The National Hurricane Center says it explicitly: the Saffir-Simpson scale **only measures wind speed** and **does not account for storm surge, rainfall flooding, and tornadoes**. Deciding whether to evacuate by looking only at the category is the most expensive mistake you can make with a hurricane.

The first thing is to know whether you live in an evacuation zone. The National Weather Service lists this as step one of the family plan: find out from your local emergency management agency *now*, not once a warning is out. That answer changes everything else.

The two official alerts and what they mean. They are not interchangeable, and the difference is hours of lead time:

Hurricane watch — conditions are POSSIBLE

Issued about **48 hours before** the anticipated onset of tropical-storm-force winds, per NOAA. This is the time to fill the gas tank, bring in the yard furniture, charge everything, and decide where you would go. There is still time to move calmly.

Hurricane warning — conditions are EXPECTED

Issued about **36 hours before** those same winds. At this point you no longer prepare: you carry out what you already decided. If you are in an evacuation zone, you leave now, because the window closes fast and the roads fill up.

- Put together a kit with water and food for several days, medicine, flashlights and batteries. The CDC adds something people forget: **check your carbon monoxide detectors**, because generator days are coming.
- Install permanent impact protection on windows —storm shutters or panels—, the measure the NWS recommends over last-minute improvising.
- Review your insurance policy **before** the season: most have waiting periods and can't be bought once a hurricane is bearing down.
- Keep cash in small bills: without power there are no card terminals.
- Save your important documents to a phone and a drive, and upload a copy to the cloud.
- Agree with your family on how to get in touch and where to go. The NWS lists this as part of the plan, not an extra.

Source: NWS — National Weather Service (U.S.) — Hurricane safety plan. https://www.weather.gov/safety/hurricane-plan
Source: NOAA Ocean Service — What is the difference between a watch and a warning?. https://oceanservice.noaa.gov/facts/watch-warning.html
Source: CDC — Centers for Disease Control and Prevention (U.S.) — Hurricane safety. https://www.cdc.gov/hurricanes/safety/index.html
Source: NHC — National Hurricane Center (NOAA) — Saffir-Simpson Hurricane Wind Scale. https://www.nhc.noaa.gov/aboutsshws.php

During the crisis

Stay inside, even if it looks like it has passed
The CDC's instruction is literal: **"Stay indoors. Even if it looks calm, don't go outside."** The center of the hurricane —the eye— brings a deceptive calm lasting minutes or hours, and then the wind comes back **from the opposite direction**, which is when whatever was already damaged comes down. Take shelter in an interior room with no windows.

- Stay away from windows and glass doors, even with protection installed.
- Keep a battery-powered radio on: it's what keeps working once power and cell signal go down.
- Fill the bathtub and containers with water before the worst arrives: there can be days without service.
- Avoid candles if you can. Use a flashlight, always.
- If water starts coming in, move to a higher level, but **do not go up into an attic with no way out to the roof**: the water can keep rising and trap you.

Never drive through water.
The CDC puts it with a number: **"Cars and other vehicles can be swept away or stall in as little as 6 inches —about 15 cm— of moving water."** The National Weather Service uses a somewhat higher threshold for sweeping away most cars —about 12 inches, roughly 30 cm— and also warns that **6 inches of moving water is enough to knock an adult off their feet**. Both figures say the same thing in practice: don't cross it. The official campaign is called "Turn Around, Don't Drown."

Source: CDC — Centers for Disease Control and Prevention (U.S.) — Hurricane safety. https://www.cdc.gov/hurricanes/safety/index.html
Source: NHC — National Hurricane Center (NOAA) — Saffir-Simpson Hurricane Wind Scale. https://www.nhc.noaa.gov/aboutsshws.php

After the crisis

The CDC stresses a point that people forget in the rush: **wait for authorities to give the all-clear before returning**. Going back early means walking into an area with no power, downed lines, no safe drinking water, and emergency crews still working.

- **Avoid standing water.** It may be electrified by a downed line, contaminated by sewage, or hide sharp debris and open manholes.
- Treat every **downed power line** as live, and report it.
- Don't drink tap water until authorities confirm it's safe. If there's a boil-water notice, follow it or use bottled water.
- If you use a generator, read the safety rules first: the power outage kills more people through carbon monoxide than the hurricane itself does through wind.
- Photograph all damage before moving or cleaning anything, for insurance and public assistance.
- Throw out refrigerated food that has gone more than 4 hours without cooling. Never taste it to decide.

Source: CDC — Centers for Disease Control and Prevention (U.S.) — Hurricane safety. https://www.cdc.gov/hurricanes/safety/index.html

Family plan

The hurricane family plan has one thing the others don't: **there is time, and that time gets wasted deciding**. These decisions get made in the off-season, not with the forecast cone on the screen.

1. Do we leave or do we stay?
Decided ahead of time based on whether you live in an evacuation zone, not on the hurricane's category. If you're in an evacuation zone, the answer is already set.

2. Where exactly?
A specific address: a relative's home further inland, an official shelter, a booked hotel. "North" is not a destination.

3. Who takes whom?
Older adults, children, anyone with limited mobility, pets. Shelters may not accept animals: work that out beforehand.

4. How do we stay in touch if there's no signal?
A contact outside the affected area everyone can check in with, and a physical meeting point in case phones don't work.

Source: NWS — National Weather Service (U.S.) — Hurricane safety plan. https://www.weather.gov/safety/hurricane-plan

Food and water

The water number you need to memorize

The CDC sets it without ambiguity: **at least 1 gallon (3.8 liters) per person per day, for 3 days**. Ready.gov adds the nuances that save whoever heeds them: **"children, nursing mothers, and sick people may need more"**, and **"with very high temperatures, water needs can double"**. If someone in your home is pregnant, sick, or you live in a hot climate, that number is a floor, not a target.

How to store it so it works when you need it

The CDC calls for **approved food-grade containers** with a tight-fitting lid, made of a sturdy, unbreakable material —**never glass**— and with a narrow mouth for pouring. An explicit warning: **never use a container that has held toxic chemicals** such as bleach or pesticides. And what almost everyone forgets: **stored water should be replaced every 6 months**. To disinfect the container before filling it, use a teaspoon of unscented household bleach per liter of water, wait 30 seconds, and pour it out.

What food to keep on hand

Ready.gov recommends **several days of non-perishable food** and gives a concrete list: ready-to-eat canned meats, fruits, and vegetables **—and a can opener—**, protein or fruit bars, dry cereal or granola, peanut butter, dried fruit, canned juices, and pasteurized long-life milk. The rule when putting it together is simple: food your family will actually eat, that needs no cooking, and that you can rotate before it expires.

No power, the food clock is running: 4 hours and 48 hours

The official figures come from FoodSafety.gov, part of the USDA: **a refrigerator keeps food safe for up to 4 hours** if you do not open it, and **a full freezer holds for about 48 hours (24 if half full)**. The discard threshold: any perishable food —meat, poultry, fish, eggs, leftovers— that has been **at 4 °C (40 °F) or above for 2 hours or more must be thrown out**. A full freezer holds twice as long as a half-full one, so filling the empty space with bottles of water before a forecast storm is money saved. And the line every agency closes with: **"when in doubt, throw it out"**. Do not taste it to find out.

- Keep the refrigerator and freezer **closed**: every time you open one, you waste hours of stored cold.
- **Throw out any food that has touched floodwater**, even if the container looks intact. This is an explicit Ready.gov instruction.
- Keep a manual can opener. It is the item people forget most, and without it your pantry is useless.
- If you buy bottled water, keep it **sealed in its original container**, in a cool, dark place.

Source: CDC — Centers for Disease Control and Prevention (U.S.) — How to Create and Store an Emergency Water Supply. https://www.cdc.gov/water-emergency/about/how-to-create-and-store-an-emergency-water-supply.html
Source: Ready.gov · FEMA (U.S.) — Water. https://www.ready.gov/water

Source: FoodSafety.gov · USDA and HHS (U.S.) — Food Safety During a Power Outage. https://www.foodsafety.gov/food-safety-charts/food-safety-during-power-outage
Source: Ready.gov · FEMA (U.S.) — Food. https://www.ready.gov/food

Power and communications

The generator rule: 6 meters, no negotiating

The CPSC does not soften it: **"using a generator indoors CAN KILL YOU IN MINUTES"**, because **"generator exhaust contains carbon monoxide, a poison you cannot see or smell"**. The official distance, repeated by the CDC and CPSC: **only outdoors, more than 20 feet (6.1 meters) from any window, door, or vent**. The same goes for pressure washers, charcoal grills, and camp stoves. A battery-powered carbon monoxide detector is cheap and the only thing that warns you in time.

When the cell network is overloaded: text, do not call

The joint FCC and FEMA guide explains why: **"text messages may get through when your call does not"**, even if delivery is delayed when the network is congested. And it asks for something almost no one does: **"limit non-emergency calls"**, because every call takes up space that emergency communications need. Also save a contact under the name **"ICE"** (In Case of Emergency), the convention rescue personnel look for on someone else's phone.

How to stretch your battery

The same guide recommends **lowering screen brightness and turning off apps** to conserve charge. In an emergency your phone stops being entertainment and becomes your only line to the outside world: treat it like your water supply.

The battery-powered radio is still irreplaceable

The FCC and FEMA recommend **a battery-powered radio or a portable television** to follow emergency bulletins during power outages. It is the only channel that depends on neither your electricity nor the cell network.

The alerts you already have and did not know about

In the United States, **Wireless Emergency Alerts** are free messages that go straight to your phone for severe weather, AMBER alerts, and threats to safety in your area. Two things worth knowing: **you do not need to sign up —phones have supported them since 2012— and they are not affected by network congestion**, so they get through when calls no longer do. Find out what the equivalent system is in your country, and do not mute it.

- Have at least one light source that does not depend on the grid: a battery-powered or hand-crank flashlight, or a rechargeable lamp.
- Charge phones and backup batteries **before** the forecast event arrives, not after the power is already out.
- Keep a list of important phone numbers **on paper**: if your phone dies, your contacts die with it.
- Agree with your family that after an emergency **everyone texts the same contact** instead of calling each other.

Source: CPSC — Consumer Product Safety Commission (U.S.) — What to Know About Portable Generators and Carbon Monoxide. https://www.cpsc.gov/s3fs-public/468-WhattoKnowGenerators_2022.pdf
Source: FCC and FEMA (U.S.) — Tips for Communicating During an Emergency. https://www.fcc.gov/sites/default/files/fcc-fema_tips_for_communicating_during_an_emergency.pdf
Source: FEMA (U.S.) — Wireless Emergency Alerts (fact sheet). https://www.ready.gov/sites/default/files/2020-08/wea-fact-sheet.pdf

Health and special needs

This is the section that decides who has a hard time and who has a dangerously hard time. An emergency does not suspend diabetes, high blood pressure, pregnancy, or dependence on an oxygen concentrator: **what gets cut off is access to the pharmacy, the clinic, and electricity**. Everything that follows needs to be prepared beforehand, because once the emergency hits, there is no more room.

1. Keep a reserve of your medications, and know which ones hold up
Ready.gov calls for **a several-day supply of prescription medications**. For those that need refrigeration, the CDC is blunt: **once the power has been out for a day or more, discard any medication that requires refrigeration**, unless its label says otherwise.

2. The insulin exception, worth knowing word for word
The FDA documents that insulin in the manufacturer's original vials or cartridges —opened or unopened— **can stay unrefrigerated between 15 and 30 °C (59 and 86 °F) for up to 28 days and still work**. It loses effectiveness at extreme temperatures, and the longer the exposure, the less effective it becomes. In an emergency **"you may still need to use insulin that was stored above 30 °C"** —that is better than not using it at all— but as soon as proper storage is available again, those vials **should be discarded and replaced**.

3. If someone depends on electric medical equipment, there is one step almost no one takes
Ready.gov says it explicitly: you can **ask your power company to put you on a priority list for service restoration**. That step is free, can be done on any ordinary day, and changes the order in which you get reconnected. Add a backup battery for an electric wheelchair and for any assistive device, and talk with your doctor about how to keep the equipment running during a power outage.

4. Keep a copy of medical information, not just the pills
A list of medications with dosages, allergies, diagnoses, doctors' contact information, and —for infants— the vaccination record. A prescription bottle cannot always be refilled at a pharmacy in another city; a written list can solve that.

Pregnancy and newborns
The CDC calls for **prenatal vitamins and other medications** in the kit, plus supplies in case delivery happens without being able to reach a hospital: clean towels, clean sharp scissors, a bulb syringe, gloves, two clean white shoelaces to tie the cord, clean sheets, sanitary pads, soap or alcohol, and garbage bags. For infants: diapers, wipes, ointment, bottles, and formula. One detail that matters: **ready-to-feed formula is the safest option in an emergency**, because it does not need to be mixed with water and comes in sterile, single-use containers.

Disability, reduced mobility, and older adults
Ready.gov stresses **planning accessible transportation in advance** for evacuating or getting around, and including a service or support animal with its food, water, and supplies. That plan should be worked out with specific, named neighbors, not left vague.

The blow that comes later: mental health
The CDC names the normal reactions after a disaster —**fear, anger, sadness, worry, numbness, frustration, trouble sleeping, or nightmares**— and recommends taking care of your body, staying in touch with other people, and taking breaks from the news. In the United States and its territories, the **Disaster Distress Helpline is available 24 hours a day: 1-800-985-5990**, with service in Spanish. Asking for help here is not weakness: it is part of recovery, just like repairing the roof.

Source: Ready.gov · FEMA (U.S.) — People with Disabilities. https://www.ready.gov/es/discapacidad
Source: CDC — Centers for Disease Control and Prevention (U.S.) — What to Do to Protect Yourself During a Power Outage. https://www.cdc.gov/natural-disasters/response/what-to-do-protect-yourself-during-a-power-outage.html
Source: FDA — U.S. Food and Drug Administration — Information Regarding Insulin Storage and Switching Between Products in an Emergency. https://www.fda.gov/drugs/emergency-preparedness-drugs/information-regarding-insulin-storage-and-switching-between-products-emergency
Source: CDC — Centers for Disease Control and Prevention (U.S.) — Emergency Kit Checklist: Pregnant Women, Infants, and Children. https://www.cdc.gov/children-and-school-preparedness/resources/emergency-kit-checklist-pregnant-women-infants-and-children.html
Source: CDC — Centers for Disease Control and Prevention (U.S.) — Coping With Disaster or Traumatic Event. https://www.cdc.gov/natural-disasters/media/pdfs/2024/08/coping_with_disaster_2_english.pdf

Home and belongings

Photograph before you throw anything away. It is the rule that recovers the most money

The official insurance instruction is literal: **"photograph and video the interior and exterior of your property, taken before you throw anything away"**. After that, you need to **report the loss to your insurer right away**, and **keep receipts, statements, and contractor invoices**, which is what ensures your claim payment arrives on time. Cleaning up before documenting is, in practice, giving up your claim.

1. Before you go back in: look, smell, and listen from outside

The CDC lays it out this way: **if you smell gas or suspect a leak, shut off the main valve, open all the windows, and get out immediately**. If there is standing water inside and you can cut the power from a dry spot, do it. And one simple warning that prevents explosions and fires: **use battery-powered flashlights, not candles, gas lanterns, or torches**.

2. Ventilate before you settle in

The CDC recommends going in briefly to open doors and windows, and **letting the house air out for at least 30 minutes** before staying inside.

3. Shutting off utilities: when to do it, and the mistake you cannot make

Gas has a rule with no exceptions: if you shut it off for any reason, **only a qualified professional can turn it back on. Never turn it back on yourself**. **Electricity** is shut off by switching off the individual circuits first and the main breaker last —the order matters, because an electrical spark can ignite gas if there is a leak—. **Water** should be shut off if pipes may have cracked, because that contaminates the house supply, and should not be turned back on until authorities confirm it is safe to drink.

4. Go back only when authorities say it is safe

It sounds obvious, and it is the instruction people break most often: **go back home only when authorities say it is safe**. Structural damage is not always visible from the street.

- Make a photo inventory of what is in each room today: it takes twenty minutes and is worth its weight in gold for a claim.
- Keep that inventory and your policies **outside the house** —in the cloud or with a family member— because a file that gets soaked along with the house is useless.
- If you have to leave, take your documents with you, not your furniture.
- Do not sign anything with a contractor while you are in shock: check the money section for the warning signs of fraud.

Source: FEMA · NFIP (U.S.) — Starting Your Recovery (National Flood Insurance Program fact sheet).
https://agents.floodsmart.gov/sites/default/files/media/document/2025-07/fema-nfip-starting-your-recovery_fact-sheet-10-2021.pdf
Source: CDC — Centers for Disease Control and Prevention (U.S.) — Safety Guide for Reentering a Flooded Home.
https://cdc.gov/floods/safety/reentering-your-flooded-home-safety.html
Source: Hawaii Department of Human Services (U.S.) — Utility Shutoff and Safety (official emergency preparedness guide).
https://humanservices.hawaii.gov/communications/are-you-ready/utility/

Money and income

Cash in small bills: the detail people discover too late

Ready.gov recommends it for a concrete reason: **"it is important to keep small bills on hand because ATMs and credit cards may not work during a disaster"**, right when you need to buy supplies, fuel, or food. No power means no card reader, and without a card reader a large bill is useless if no one has change.

The documents you need to protect today
The official recommendation is to keep insurance policies, deeds, property records, and other important papers **in a safe place outside the house**. FEMA publishes the **Emergency Financial First Aid Kit** for this, organized into four sections: household identification, financial and legal documentation, medical information, and contacts. Its rule for paper: **a fireproof and waterproof box or safe**, a bank safe-deposit box, or in the hands of someone you trust. For digital files: **password-protected files** on an external drive or in secure storage outside the home. And if you pay everything online, print your account records periodically.

An emergency fund, even a small one
The CFPB avoids magic formulas: **"the amount you need depends on your situation"**, but **"even a small amount can provide some financial security"**. Its underlying argument is the one that matters: without that cushion, a single unexpected expense **can grow far larger than the original bill through interest and fees**, because it forces you to rely on credit.

After the disaster come the people who rob you with paperwork
The CFPB describes the exact pattern: **"be wary of contractors who go door to door and of people who offer unsolicited 'opportunities' or use high-pressure tactics to force you to decide on the spot"**. Its concrete rules: **never pay by wire transfer, gift card, cryptocurrency, or cash**, because that makes it harder to get your money back; **do not make the final payment until the work is finished to your satisfaction**; and always ask **"can you show me your ID and your contractor's license?"** and **"can you give me three recent references from this area?"**. One fact that cuts off many scams at the root: **no FEMA worker or federal or state official ever asks for or accepts money**. Scammers pose as government employees, insurance adjusters, police officers, or bank employees.

Source: Ready.gov · FEMA (U.S.) — Financial Preparedness. https://www.ready.gov/financial-preparedness
Source: FEMA · Operation Hope (U.S.) — Emergency Financial First Aid Kit (EFFAK). https://www.fema.gov/sites/default/files/documents/fema_effak-toolkit.pdf
Source: CFPB — Consumer Financial Protection Bureau (U.S.) — How to Avoid Scams and Fraud After a Disaster. https://www.consumerfinance.gov/ask-cfpb/how-do-i-avoid-scams-and-fraud-after-a-disaster-en-1529/

What you can sell

A hurricane is one of the few disasters that **announces itself days in advance**, and that splits demand into two distinct markets: the three days before it hits, and the weeks after.

- **Before:** window protection (plywood, tape, shutters), securing rooftop tanks and antennas, preventive tree trimming, and moving furniture to upper floors.
- **Before:** water, ice, batteries, safety candles, rechargeable lamps, and battery-powered radios.
- **After:** removing fallen trees and branches, clearing drains, and cleaning up mud.
- **After:** drying out interiors, removing wet carpet and drywall, and mold control.
- **After:** roof, siding, and window repair; tarps and temporary sealing while the permanent repair arrives.
- **All the time:** prepared food, laundry, and device charging for those left without services.

Raising prices because people are desperate can be illegal

When a state of emergency is declared, many countries limit by law how much the price of basic goods can rise. In **California**, the limit is **10% above the pre-emergency price** for 30 days —and **180 days for repair and cleanup services**—, with penalties of up to one year in jail and a $10,000 fine. **Texas** does not set a fixed percentage but penalizes "exorbitant" pricing with fines of up to $20,000 per violation. In **Mexico**, the Ley Federal de Protección al Consumidor (Federal Consumer Protection Law) requires sellers to honor the price offered and any maximum prices set by authorities, and PROFECO can impose fines. In **Brazil**, the Código de Defesa do Consumidor (Consumer Defense Code) prohibits "raising a price without just cause." Charging a fair price for hard work is legitimate; taking advantage of desperation is not.

Source: ILO — International Labour Organization — Labour Overview of Latin America and the Caribbean 2025 (executive summary). https://www.ilo.org/sites/default/files/2025-12/Executive%20Summary_Labour%20Overview%202025_LAC_ILO.pdf

Source: PROFECO — Federal Consumer Protection Agency (Mexico) — Ley Federal de Protección al Consumidor (Federal Consumer Protection Law), articles 7, 8, and 128. https://www.profeco.gob.mx/juridico/pdf/Ley_fed_protec_consum.pdf

Source: California Attorney General (USA) — Price gouging during declared emergencies. https://oag.ca.gov/consumers/pricegougingduringdisasters

Source: Presidency of the Republic (Brazil) — Código de Defesa do Consumidor (Consumer Defense Code), art. 39, X (raising prices without just cause). https://www.planalto.gov.br/ccivil_03/leis/l8078compilado.htm

Businesses and self-employment

It helps to start with one figure to size up what we're talking about: according to the ILO, informality **affects nearly half of the employed population of Latin America and the Caribbean, around 47%**, with huge differences between countries — under 30% in Uruguay and Chile, over 70% in Bolivia and Peru. For millions of families in the region, "looking for a job" and "starting something on your own" are the same sentence. What follows is not a promise of income: it is a map of what people actually do when a crisis hits, with the requirements and the risks laid out plainly.

Window protection and securing, in the run-up

It's a 48-hour business that repeats every season. With plywood, a drill, screws, rope, and zip ties, you can handle several houses a day. The trick is having the material **bought before** a storm is announced: by the time people start looking, the hardware stores are already picked clean. It's worth offering the later removal too, which most people forget to quote.

Drying, wet-material removal, and mold control

NIOSH sets the clock precisely: you need to **remove or dry water-damaged material within 24 to 48 hours** to keep mold from growing. That figure is both your sales pitch and your limit: the EPA considers that above **10 square feet** of mold, or if the water came from sewage, the job is for an experienced professional. An honest service handles what's below that threshold and refers out the rest.

Removal of fallen trees

It pays well and it's where the most people get hurt. NIOSH is explicit that **only someone trained should operate a chainsaw**, recommends keeping 30 feet between workers when cutting and twice the tree's height when felling it, and OSHA warns about chainsaw kickback. If you don't have that training, there's plenty of work in hauling and chipping, which doesn't require running the saw.

Three jobs you should NOT improvise

Mold: the EPA sets the threshold at **10 square feet (about 3 ft × 3 ft)**; above that, or if the water came from sewage, it recommends hiring an experienced professional. Even below that threshold, you need an **N-95** respirator, long gloves, and non-vented goggles. **Chainsaw:** NIOSH is unequivocal that only a trained person should use one, and OSHA warns about kickback from the tip. **Electrical and gas lines:** OSHA instructs you to assume *every* downed line is energized, and NIOSH advises staying **10 feet (3 meters)** away from them. That work belongs to certified personnel, not on-the-job learning.

United States — SBA disaster loans
For areas with a declared disaster. The **Economic Injury Disaster Loan (EIDL)** provides working capital for affected small businesses and nonprofit organizations; the **physical damage loan** covers losses not covered by insurance. Combined cap of **$2 million**, interest **not exceeding 4%** if you cannot obtain credit elsewhere, terms of up to 30 years, and the first payment deferred 12 months. There is also a line for homeowners (up to $500,000) and for renters for personal property (up to $100,000).

Mexico — what actually exists today
FONDEN stopped taking on new commitments on January 1, 2021. What operates today in emergencies is **PAEAN**, run by Civil Protection, and it is worth knowing exactly what it is and is not: it delivers **relief supplies** — food kits, water, blankets, roofing sheets, cleaning materials — when a state's own capacity is overwhelmed. **It is not a reconstruction fund or a loan for your business.** For capital, look at state, municipal, or development-bank programs, always verifying on the official website: fraud schemes that use its name circulate around these programs.

Brazil — Pronampe for micro and small businesses
A credit line for **microenterprises** (annual revenue up to 360,000 reais) and **small businesses** (from 360,000 to 4.8 million). The amount can reach up to **60% of the previous year's gross revenue** for businesses with more than one year in operation, and up to 50% for new ones. The maximum rate is the SELIC rate plus up to 6% per year.

Source: EPA — Environmental Protection Agency (USA) — Mold Cleanup in Your Home (10-square-foot threshold).
https://www.epa.gov/mold/mold-cleanup-your-home
Source: OSHA — Occupational Safety and Health Administration (USA) — Keeping Workers Safe during Disaster Cleanup and Recovery (FS-3698).
https://www.osha.gov/sites/default/files/publications/OSHA_FS-3698.pdf
Source: NIOSH — National Institute for Occupational Safety and Health (USA) — Hurricane and Flood Key Messages (Publication 2025-106).
https://www.cdc.gov/niosh/docs/2025-106/pdfs/2025-106.pdf
Source: SBA — Small Business Administration (USA) — Economic Injury Disaster Loans.
https://www.sba.gov/funding-programs/disaster-assistance/economic-injury-disaster-loans
Source: SSPC — National Civil Protection Coordination (Mexico) — Guidelines for the Program for Emergency Response to Natural Hazards (PAEAN).
https://sidof.segob.gob.mx/notas/docFuente/5626632
Source: Federal Government (Brazil) — Novo Pronampe — credit for micro and small businesses.
https://www.gov.br/memp/pt-br/programa-acredita/novo-desenrola-brasil/novo-pronampe

Related articles

The Saffir-Simpson scale, category by category, with the exact wind speeds the National Hurricane Center publishes:

Category 1 — 74-95 mph (119 to 153 km/h)
Roof damage, fallen trees, and power line cuts.

Category 2 — 96-110 mph (154 to 177 km/h)
Extensive damage. The NHC warns of possible power loss lasting days to weeks.

Category 3 — 111-129 mph (178 to 208 km/h)
Now a major hurricane. Devastating damage.

Category 4 — 130-156 mph (209 to 251 km/h)
Catastrophic damage. Areas isolated for weeks or months.

Category 5 — 157+ mph (252 km/h or higher)
Catastrophic damage, with near-total destruction of homes.

Two hurricanes, two lessons that changed how people prepare.

Katrina, August 29, 2005 — help may not arrive in time
Made landfall at Buras, Louisiana, as a strong Category 3. The NHC's official report counts **1,392 deaths** —520 direct, 565 indirect, and 307 undetermined— and a cost of **$125 billion in 2005 dollars**, roughly $186.3 billion in 2022 dollars. **The lesson:** the official White House report identified 17 critical failures in the response —no unified command, destroyed communications, no prior plan for mass evacuation. Preparing isn't only about surviving the wind: it's about assuming that in the first days you may be on your own.

Otis, October 25, 2023 — the warning window can fall short
Made landfall at Acapulco as a **Category 5**. The NHC documents **52 confirmed deaths and 32 missing**, and warns in the report itself that the true toll "could be much higher." The cost, between **$12 billion and $16 billion**, makes it the costliest cyclone on record for Mexico. **The lesson:** Otis intensified by **90 knots in 21 hours**, the second-fastest rate on record in the eastern Pacific since 1988. It went from tropical storm to Category 5 in under a day. When rapid intensification like that happens, the 36- or 48-hour window the alerts give simply doesn't exist: that's why preparation happens during the season, not once the hurricane is in sight.

Two myths university extension research debunks
Taping windows doesn't work. A survey cited by the University of Florida's extension service found that 54% of Americans believe tape protects against damage; it does not keep glass from breaking. The same source notes that **permanent storm shutters are the best protection** against flying debris and wind. **And you don't evacuate by category:** most evacuation orders are based not on wind speed but on flood and storm surge risk.

Related guides on this site:

- Flooding — what actually causes most of the deaths.
- Power outage — the days without electricity that follow.
- Severe storms and extreme rain — dangerous wind without a name.
- Supply shortages — when the truck doesn't show up.

Source: NHC — National Hurricane Center (NOAA) — Saffir-Simpson Hurricane Wind Scale. https://www.nhc.noaa.gov/aboutsshws.php
Source: NHC — National Hurricane Center (NOAA) — Tropical cyclone report: Hurricane Katrina (2005). https://www.nhc.noaa.gov/data/tcr/AL122005_Katrina.pdf
Source: NHC — National Hurricane Center (NOAA) — Tropical cyclone report: Hurricane Otis (2023). https://www.nhc.noaa.gov/data/tcr/EP182023_Otis.pdf
Source: The White House (official U.S. archive) — The federal response to Hurricane Katrina: lessons learned. https://georgewbush-whitehouse.archives.gov/reports/katrina-lessons-learned/chapter5.html
Source: UF/IFAS Extension — University of Florida — Busting hurricane myths. https://blogs.ifas.ufl.edu/stjohnsco/2020/06/12/busting-hurricane-myths

Frequently asked questions

What is the difference between a hurricane watch and a hurricane warning?
According to NOAA, a hurricane watch means hurricane conditions are possible and is issued about 48 hours before the anticipated onset of tropical-storm-force winds. A hurricane warning means those conditions are expected and is issued about 36 hours before. The watch is for preparing; the warning is for carrying out what you already decided.

How much water should you store per person for an emergency?
The CDC recommends at least 1 gallon (3.8 liters) per person per day for 3 days. Ready.gov warns that children, nursing mothers, and sick people may need more, and that with very high temperatures water needs can double. Stored water should be replaced every 6 months.

How long does food last in the refrigerator during a power outage?
According to FoodSafety.gov, part of the USDA, a refrigerator keeps food safe for up to 4 hours if it stays closed, and a full freezer for about 48 hours (24 hours if half full). Any perishable food that has been at 4 °C or above for 2 hours or more should be discarded. The official rule is: when in doubt, throw it out.

How far from the house should a portable generator be placed?
Only outdoors, more than 20 feet (6.1 meters) from any window, door, or vent, according to the CDC and CPSC. The CPSC warns that using a generator indoors can kill in minutes, because its exhaust contains carbon monoxide, a poison you cannot see or smell. The same rule applies to pressure washers, charcoal grills, and camp stoves.

Is it better to call or text during an emergency?
Text. The joint FCC and FEMA guide explains that text messages may get through when a call does not, even if there is a delay when the network is congested, and it asks people to limit non-emergency calls so they do not tie up the network that emergency services need.

Does insulin go bad if the power goes out?
Not right away. The FDA documents that insulin in the manufacturer's original vials or cartridges, opened or unopened, can stay unrefrigerated between 15 and 30 °C for up to 28 days and still work, though it loses effectiveness at extreme temperatures. In an emergency it is better to use it than to go without, but as soon as proper storage is available again, those vials should be discarded and replaced.

What should you do if someone at home depends on medical equipment that needs electricity?
Ready.gov recommends asking the power company to put your address on a priority list for service restoration, keeping a backup battery for electric wheelchairs and assistive devices, and talking with your doctor about how to keep the equipment running during a power outage. This is something to arrange beforehand, not during the emergency.

Can you start cleaning your house after a disaster?
Before you throw anything away or clean anything, you need to photograph and video the interior and exterior of the property and report the loss to your insurer right away, according to the official guide from FEMA's National Flood Insurance Program. You should also keep receipts, statements, and contractor invoices. Cleaning before documenting usually means losing the claim.

Can you turn the gas back on yourself?
No. The official emergency preparedness guide is explicit: if you shut off the gas for any reason, only a qualified professional can turn it back on. Also, when shutting off electricity, switch off the individual circuits first and the main breaker last, because an electrical spark can ignite gas if there is a leak.

Why should you keep cash on hand for an emergency?
Because ATMs and card readers depend on electricity and network access, and they tend to stop working right when you need to buy water, fuel, or food. Ready.gov recommends keeping a small amount of cash at home, in a safe place and in small bills, since change may not be available during an emergency.

How can you tell if a contractor offering to repair your house is a scam?
The CFPB flags as red flags going door to door, offering unsolicited opportunities, or pressuring you to decide on the spot. It recommends never paying by wire transfer, gift card, cryptocurrency, or cash, not making the final payment until the work is finished to your satisfaction, and asking for ID, a contractor's license, and three recent references from the area. Also, no FEMA worker or federal or state official ever asks for or accepts money.

Does taping windows before a hurricane actually help?
No. According to the University of Florida's extension service, tape does not keep glass from breaking, even though 54% of survey respondents believe it does. Effective protection against flying debris and wind comes from storm shutters or permanent impact-protection panels, installed before the season starts.