



WHEN THE INTERNET GOES DOWN

A 10-part offline guide: water, food, power, radios, first aid and finding your way.

Sources: CDC, EPA, FEMA/Ready.gov, American Red Cross, FCC, NOAA, USGS, GPS.gov, FoodSafety.gov
General information, not medical advice. In an emergency, call 911.



PART 1 OF 10

Making water safe to drink

- Boil clear water at a rolling boil for 1 minute, then let it cool (CDC, EPA).
- No way to boil? Plain, unscented bleach per gallon of clear water: 8 drops of 6% or 6 drops of 8.25% (EPA).
- Cloudy water: let it settle, strain it through a clean cloth or coffee filter, then double the bleach.
- Stir and wait at least 30 minutes. It should smell slightly of chlorine.
- Filters: 0.3 micron or smaller removes bacteria; 1 micron or smaller removes parasites (CDC).

1 min

rolling boil kills germs. Above 5,000 ft, boil 3 minutes.

D O N ' T

- Scented, color-safe or splash-less bleach
- Drinking before the 30 minutes are up
- Expecting boiling or bleach to remove fuel or chemicals



PART 2 OF 10

Storing water and food

- Store extra for pregnant women, sick people, pets and hot weather.
- Don't ration water unless officials say so. Drink what you need today.
- Self-filled water: food-grade containers, labeled and dated, replaced every 6 months.
- Keep it at 50 to 70°F, out of the sun, away from fuel and chemicals (CDC).
- Food: ready-to-eat cans, bars, cereal, peanut butter, dried fruit, shelf-stable milk.

1 gal

of water per person, per day. At least 3 days; 2 weeks if you can.

D O N ' T

- Reusing containers that held chemicals
- Forgetting a manual can opener
- Storing supplies in heat or next to fuel



Finding your way without internet

- GPS is free worldwide. Your phone only listens to satellites; it doesn't need service.
- At least 24 GPS satellites; 4 or more are visible from almost anywhere (GPS.gov).
- Accuracy drops near tall buildings, under trees, and indoors.
- Download offline maps before you need them, and keep a paper map.
- A compass points to magnetic north; the gap to true north (declination) varies by place (NOAA).

≈16 ft

typical phone GPS accuracy under open sky. GPS needs no cell data.

D O N ' T

- Assuming your map app works offline without downloading first
- One phone, low battery, no paper backup
- Trusting the dot blindly between buildings



Reading and sharing coordinates

- Latitude first (0° at the equator to 90°), then longitude (0° to 180° east or west).
- 1 degree = 60 minutes. 1 minute = 60 seconds.
- Same spot, three ways: 40.75, -80.75 · N $40^\circ 45.000'$, W $80^\circ 45.000'$ · N $40^\circ 45' 00''$, W $80^\circ 45' 00''$.
- In decimal degrees, west longitude is negative (a minus sign). Other formats use W.
- Near 38° N, 1 second of latitude is about 101 feet (USGS).

5

decimal places to share (about 3.6 ft).
Two places can be off by half a mile.

D O N ' T

- Giving longitude first
- Dropping the minus sign or the W
- Reading $40^\circ 45'$ as 40.45 (it's 40.75)



Keeping phones and laptops powered

- Charge phones, laptops and power banks before a storm hits (FCC/FEMA).
- Keep extra batteries, a solar charger and a car charger.
- Dim the screen and keep calls short to save battery.
- Put a battery-backup carbon monoxide detector near every sleeping area. CO has no color or smell.
- Internet-based home phones won't work in an outage without a backup battery (FCC).

20 ft

minimum from a generator to any window, door or vent. Outdoors only.

D O N ' T

- Running a generator, grill or camp stove indoors or in a garage
- Running a car in an attached garage to charge
- Waiting for the storm to charge things



Talking when cell service is down

- Text instead of calling for non-emergencies. Wait 10 seconds before redialing.
- Text-to-911 works only in some areas. Call 911 by voice if you can (FCC).
- FRS: no license, 22 channels. GMRS: FCC license, age 18+, covers your family.
- Ham radio: pass a written exam (Technician: 35 questions, 26 to pass).
- NOAA Weather Radio: 24/7 alerts on 7 frequencies; a SAME radio alerts for your county.

Ch 9

the CB channel reserved for emergencies.
FRS radios need no license.

D O N ' T

- Using GMRS or ham frequencies without a license
- Long calls and rapid redialing
- Counting on text-to-911 where it isn't offered



First aid basics until help arrives

- CHECK the scene and the person, CALL 911, then give CARE (Red Cross).
- Not breathing or only gasping: call 911, get an AED, start CPR. Keep going until help takes over.
- Heavy bleeding: firm, steady pressure on the wound. Add gauze on top; don't remove the first layer.
- Poison Help: 1-800-222-1222, 24/7. Suspected carbon monoxide: get outside and call 911.
- Take a hands-on first aid and CPR class. This slide is not medical advice.

100–120

chest compressions a minute, at least 2 inches deep (hands-only CPR).

D O N ' T

- Waiting to call 911
- Pushing too shallow or too slow
- Removing blood-soaked gauze



Cooking and food safety without power

- Keep thermometers in the fridge (40°F or below) and freezer (0°F or below).
- Throw out fridge perishables after 4 hours without power.
- Frozen food with ice crystals, or at 40°F or below, can be refrozen or cooked.
- Cook poultry to 165°F, ground meat 160°F, fish 145°F, leftovers 165°F.
- Grills and camp stoves are outdoor only. Never heat your home with a gas oven (CDC).

4 hrs

a closed fridge keeps food safe. A full freezer: about 48 hours.

D O N ' T

- Cooking indoors with a grill or camp stove
- Tasting food to check if it's safe
- Opening the fridge again and again



A family emergency plan and go-bag

- Pick an out-of-area contact; long-distance texts may get through when local lines jam.
- Go-bag: 3 days of water and food; 2 weeks at home (Red Cross).
- 7-day supply of medicine, plus glasses, baby supplies and pet food.
- Flashlight, batteries, first aid kit, whistle, radio, can opener, copies of documents, cash.
- Practice evacuating twice a year and drive your route.

2

meeting places: one right outside your home, one outside your neighborhood.

D O N ' T

- Phone numbers only in your phone
- An emergency contact who lives nearby
- Forgetting medicine, glasses and pet supplies



Keeping key information offline

- Keep copies of ID, insurance and bank records in a waterproof, portable container.
- Copies to keep: medicine list, proof of address, lease or deed, passports, birth certificates.
- Store originals somewhere safe away from home.
- Photograph your home and belongings for insurance.
- Keep some cash in small bills; cards and ATMs may not work.

Paper

write down key phone numbers. Your contact list can die with your battery.

D O N ' T

- Documents only in online accounts
- All originals in one place at home
- Out-of-date medicine lists and numbers

Where this comes from

Water	epa.gov emergency disinfection ; cdc.gov water emergency
Storage	cdc.gov emergency water supply ; ready.gov/water , /food
GPS and maps	gps.gov ; usgs.gov topo maps ; ngdc.noaa.gov declination
Coordinates	oceanservice.noaa.gov latitude/longitude ; usgs.gov FAQ
Power	cdc.gov carbon monoxide ; FCC/FEMA communication tips
Radios	fcc.gov FRS , GMRS , CB , amateur radio ; weather.gov/nwr
First aid	redcross.org first aid steps , hands-only CPR , bleeding ; poisonhelp.hrsa.gov
Food safety	foodsafety.gov power outage charts ; cdc.gov food after emergency
Plan and go-bag	ready.gov/kit ; redcross.org make a plan , survival kit
Documents	ready.gov financial preparedness ; FCC/FEMA tips

Keep this offline

1

Save it on your phone and laptop

It opens with no internet.

2

Print the pages you'd need first

Water, first aid, your plan.

3

Check it twice a year

Rotate water, update numbers and medicine.

In an emergency, call 911.