

Flood waters can be extremely dangerous. The force of six inches of swiftly moving water can knock people off their feet. The best protection during a flood is to leave the area and go to shelter on higher ground.

Flash flood waters move at very fast speeds and can roll boulders, tear out trees, destroy buildings, and obliterate bridges. Walls of water can reach heights of 10 to 20 feet and generally are accompanied by a deadly cargo of debris. The best response to any signs of flash flooding is to move immediately and quickly to higher ground.

Cars can be easily swept away in just 2 feet of moving water. If flood waters rise around a car, it should be abandoned. Passengers should climb to higher ground.

Floods are the most common and widespread of all natural disasters--except fire. Most communities in the United States can experience some kind of flooding after spring rains, heavy thunderstorms, or winter snow thaws. Floods can be slow, or fast rising but generally develop over a period of days.

Dam failures are potentially the worst flood events. A dam failure is usually the result of neglect, poor design, or structural damage caused by a major event such as an earthquake. When a dam fails, a gigantic quantity of water is suddenly let loose downstream, destroying anything in its path.

Flash floods usually result from intense storms dropping large amounts of rain within a brief period. Flash floods occur with little or no warning and can reach full peak in only a few minutes.

DID YOU KNOW...

- Individuals and business owners can protect themselves from flood losses by purchasing flood insurance through National Flood Insurance Program. Homeowner's policies do not cover flood damage. Information is available through local insurance agents and emergency management offices.
- Flooding has caused the deaths of more than 10,000 people since 1900. Property damage from flooding now totals more than \$1 billion each year in the United States.
- More than 2,200 lives were lost as a result of the Johnstown, Pennsylvania, flood of 1889. This flood was caused by an upstream dam failure.
- On July 31, 1976, the Big Thompson River near Denver overflowed after an extremely heavy storm. A wall of water 19 feet high roared down the Big Thompson Canyon where many people were camping. 140 people perished and millions of dollars of property were lost.

WHAT CAN YOU DO?

Nobody can stop a flood. But if you are faced with one, there are actions you can take to protect your family and minimize your property losses.

Mitigation helps! It lessens the damaging effects from flooding. Participating in the National Flood Insurance Program (NFIP) and enforcing sound floodplain management techniques are steps your community can undertake. Constructing barriers such as levees will also help reduce the amount of damage to your home and crops, while purchasing flood insurance reduces the financial burden should a flood or flash flood occur.

The most important thing is to make sure your family is safe.

Know the terms

Flood Watch:

Flooding is possible. Tune in to NOAA Weather Radio, commercial radio, or television for information.

Flash Flood Watch:

Flash flooding is possible. Be prepared to move to higher ground; listen to NOAA Weather Radio, commercial radio, or television for information.

Flood Warning:

Flooding is occurring or will occur soon; if advised to evacuate, do so immediately.

Flash Flood Warning:

A flash flood is occurring; seek higher ground on foot immediately.

Before a Flood

What is your flood risk? Your community officials or local emergency management office are your best resources to learn about the history of flooding for your region. Ask whether your property is in the floodplain and if it is above or below the flood stage water level. Flood Insurance Rate Maps (FIRMs) are used to determine your flood risk. FIRMs are found in several places for your convenience:

- Your local community map repository, usually, the building and planning departments.
- [FEMA Map Store](#) for maps, flood studies, and other products on-line or paper copies.
- Call a Map Specialist for specific questions about your flood zone at (877) 336-2627.

To prepare for a flood, you should:

- Avoid building in a floodplain unless you elevate and reinforce your home.
- Elevate the furnace, water heater, and electric panel if susceptible to flooding.
- Install "check valves" in sewer traps to prevent flood water from backing up into the drains of your home.
- Construct barriers (levees, beams, floodwalls) to stop floodwater from entering the building.
- Seal walls in basements with waterproofing compounds to avoid seepage.

Have disaster supplies on hand.

- Flashlights and extra batteries
- Portable, battery-operated radio and extra batteries tuned to a local station, and follow emergency instructions.
- First aid kit and manual
- Emergency food and bottled water
- Non-electric can opener
- Essential medicines
- Cash and credit cards
- Sturdy shoes

If you live in a frequently flooded area, take preventative measures and stockpile emergency building materials:

- Plywood, plastic sheeting, lumber, nails, hammer and saw, pry bar, shovels, and sandbags.
- Have check valves installed in building sewer traps to prevent flood waters from backing up in sewer drains.
- As a last resort, use large corks or stoppers to plug showers, tubs, or basins.

Plan and practice an evacuation route.

- Learn flood-warning signs and your community's alert signals
- Contact your local emergency management office or local American Red Cross chapter for a copy of the community flood evacuation plan.

- This plan should include information on the safest routes to shelters. Individuals living in flash flood areas should have several alternative routes. Request information on preparing for floods and flash floods.
- Develop an emergency communication plan.
 - In case family members are separated from one another during floods or flashfloods (a real possibility during the day when adults are at work and children are at school), have a plan for getting back together.
 - Ask an out-of-state relative or friend to serve as the "family contact." After a disaster, it's often easier to call long distance. Make sure everyone in the family knows the name, address, and phone number of the contact person.
 - Make sure that all family members know how to respond after a flood or flash flood.
- Teach all family members how and when to turn off gas, electricity, and water.
- Teach children how and when to call 9-1-1, police, fire department, and which radio station to tune to for emergency information.
- Be prepared to evacuate.

If a flood is likely in your area, you should:

- Listen to the radio or television for information.
- Be aware that flash flooding can occur. If there is any possibility of a flash flood, move immediately to higher ground. Do not wait for instructions to move.
- Be aware of streams, drainage channels, canyons, and other areas known to flood suddenly. Flash floods can occur in these areas with or without such typical warnings as rain clouds or heavy rain.

If time permits, here are other steps you can take before the flood waters come:

- Turn off all utilities at the main power switch and close the main gas valve if evacuation appears necessary. **Disconnect electrical appliances. Do not touch electrical equipment if you are wet or standing in water**
- Move valuables, such as papers, furs, jewelry, and clothing to upper floors or higher elevations.
- Fill bathtubs, sinks and plastic soda bottles with clean water. Sanitize the sinks and tubs first by using bleach. Rinse, then fill with clean water.
- Bring outdoor possessions, such as lawn furniture, grills and trash cans inside, or tie them down securely.

Once The Flood Arrives

If you have to leave your home, remember these evacuation tips:

- Do not walk through moving water. Six inches of moving water can make you fall. If you have to walk in water, walk where the water is not moving. Use a stick to check the firmness of the ground in front of you.
- Do not drive into flooded areas. If you come upon a flooded road, turn around and go another way. More people drown in their cars than anywhere else. Six inches of water will reach the bottom of most passenger cars causing loss of control and possible stalling. A foot of water will float many vehicles. Two feet of rushing water can carry away most vehicles including sport utility vehicles (SUV's) and pick-ups.
- If floodwaters rise around your car, abandon the car and move to higher ground if you can do so safely. You and the vehicle can be quickly swept away.
- If your car stalls, abandon it immediately and climb to higher ground. Many deaths have resulted from attempts to move stalled vehicles.

- Don't walk through flooded areas. As little as six inches of moving water can knock you off your feet.
- Stay away from downed power lines and electrical wires. Electrocutation is another major source of deaths in floods. Electric current passes easily through water.
- Look out for animals - especially snakes. Animals lose their homes in floods, too. They may seek shelter in yours.
- Take dry clothing, a flashlight and a portable radio with you. Then, wait for help.

If the waters start to rise inside your house before you have evacuated, retreat to the second floor, the attic, and if necessary, the roof. Take dry clothing, a flashlight and a portable radio with you. Then, wait for help. Don't try to swim to safety; wait for rescuers to come to you.

After The Flood

Flood dangers do not end when the water begins to recede.

- Listen for news reports to learn whether the community's water supply is safe to drink.
- Avoid floodwaters; water may be contaminated by oil, gasoline, or raw sewage. Water may also be electrically charged from underground or downed power lines.
- Avoid moving water.
- Be aware of areas where floodwaters have receded. Roads may have weakened and could collapse under the weight of a car.
- Stay away from downed power lines, and report them to the power company.
- Return home only when authorities indicate it is safe.
- Until local authorities proclaim your water supply to be safe, boil water for drinking and food preparation vigorously for five minutes before using.
- Stay out of any building if it is surrounded by floodwaters.
- Before entering a building, inspect foundations for cracks or other damage. Don't go in if there is any chance of the building collapsing.
- Upon entering the building, Don't use matches, cigarette lighters or any other open flames, since gas may be trapped inside. Instead, use a flashlight to light your way.
- Keep power off until an electrician has inspected your system for safety.
- Floodwaters pick up sewage and chemicals from roads, farms and factories. If your home has been flooded, protect your family's health by cleaning up your house right away. Throw out foods and medicines that may have met floodwater
- Service damaged septic tanks, cesspools, pits, and leaching systems as soon as possible. Damaged sewage systems are serious health hazards.
- Clean and disinfect everything that got wet. Mud left from floodwater can contain sewage and chemicals.
- Remember to help your neighbors who may require special assistance--infants, elderly people, and people with disabilities.
- Be careful walking around. After a flood, steps and floors are often slippery with mud and covered with debris, including nails and broken glass.
- If your home, apartment or business has suffered damage, call the insurance company or agent who handles your flood insurance policy right away to file a claim.
- Take steps to reduce your risk of future floods. Make sure to follow local building codes and ordinances when rebuilding, and use flood-resistant materials and techniques to protect yourself and your property from future flood damage.

One of the most important things that you can do to protect your home and family before a flood is to

purchase a flood insurance policy. You can obtain one through your insurance company or agent. Flood insurance is guaranteed through the [National Flood Insurance Program](#) (NFIP). Your homeowners insurance may not cover flood damage.

Don't wait until a flood is coming to purchase your policy. It normally takes 30 days after purchase for a flood insurance policy to go into effect.

Inspecting Utilities In A Damaged Home

Check for gas leaks. If you smell gas or hear blowing or hissing noise, open a window and quickly leave the building. Turn off the gas at the outside main valve if you can and call the gas company from a neighbor's home. If you turn off the gas for any reason, it must be turned back on by a professional.

Look for electrical system damage. If you see sparks or broken or frayed wires, or if you smell hot insulation, turn off the electricity at the main fuse box or circuit breaker. If you have to step in water to get to the fuse box or circuit breaker, call an electrician for advice.

Check for sewage and water line damage. If you suspect sewage lines are damaged avoid using the toilets and call a plumber. If water pipes are damaged, contact the water company and avoid the water from the tap. Melt ice cubes for safe drinking water.