

RESOURCE TOOLKIT FOR FLOODING GENERAL

This toolkit includes:

- Be Prepared for a Flood
- Driving Safety During Flooding
- DANGER: Generator Safety
- DANGER: Generator Safety, Spanish
- Food Safety After Flooding
- Clean-up Safety After Flooding
- Clean-up Safety After Flooding, Spanish
- Homeowners and Renter's Guide to Mold Cleanup After Disasters

ADDITIONAL RESOURCES:

How To Prepare For A Flood

https://www.fema.gov/media-library-data/1409002852888-3c5d1f64f12df02aa801901cc7c311ca/how_to_prepare_flood_033014_508.pdf

FEMA Be Prepared For A Flood

<https://www.ready.gov/floods>

CDC Disinfection of Drilled or Driven Wells After a Disaster

<https://www.cdc.gov/disasters/wellsdisinfect.html>

CDC Disinfection of Bored or Dug Wells After an Emergency

<https://www.cdc.gov/healthywater/emergency/drinking/disinfection-wells-bored.html>

CO Poisoning After a Disaster- Multiple CO Safety links

<https://www.cdc.gov/disasters/carbonmonoxide.html>

CDC Clean Up Safety After a Disaster- Safety, Mold, Hygiene and Preventing Disease, Potential Hazards

<https://www.cdc.gov/disasters/cleanup/facts.html>

CDC Cleaning and Sanitizing with Bleach after an Emergency

<https://www.cdc.gov/disasters/bleach.html>

TANEY COUNTY HEALTH DEPARTMENT
417-334-4544

Taney County Health Department is continuously creating additional resources that can be found on our website (www.taneycohealth.org), Facebook page, Twitter, and on Instagram.

Please visit these sites for resources and like and share our posts.



BE PREPARED FOR A FLOOD



Failing to evacuate flooded areas, entering flood waters, or remaining after a flood has passed can result in injury or death.



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FEMA V-1005/ March 2018

Flooding is a temporary overflow of water onto land that is normally dry. It is the most common natural disaster in the U.S.



Results from rain, snow, coastal storms, storm surge, and overflows of dams and other water systems



Develops slowly or quickly. Flash floods can come with no warning



Causes outages, disrupt transportation, damage buildings, create landslides

IF YOU ARE UNDER A FLOOD WARNING, FIND SAFE SHELTER RIGHT AWAY

Do not walk, swim, or drive through flood waters.



Stay off bridges over fast-moving water.



Determine your best protection based on the type of flooding.



Evacuate if told to do so.



Move to higher ground or a higher floor.



Stay where you are.

HOW TO STAY SAFE

WHEN A FLOOD THREATENS

Prepare NOW

Know your area's type of flood risk. Visit FEMA's Flood Map Service Center at <https://msc.fema.gov/> portal for information.

Sign up for your community's warning system. The Emergency Alert System (EAS) and National Oceanic and Atmospheric Administration (NOAA) Weather Radio also provide emergency alerts.

If flash flooding is a risk in your location, monitor potential signs such as heavy rain.

Learn and practice evacuation routes, shelter plans, and flash flood response.

Gather supplies in case you have to leave immediately or if services are cut off. Keep in mind each person's specific needs, including medication. Don't forget the needs of pets. Obtain extra batteries and charging devices for phones and other critical equipment.

Obtain flood insurance. Homeowner's policies do not cover flooding. Get flood coverage under the National Flood Insurance Program (NFIP).

Keep important documents in a waterproof container. Create password-protected digital copies.

Protect your property. Move valued items to higher levels. Declutter drains and gutters. Install check valves. Consider a sump pump with a battery.

Survive DURING

Depending on where you are, and the impact and the warning time of flooding, go to the safe location that you have identified.

If told to evacuate, do so immediately. Never drive around barricades. Local responders use them to safely direct traffic out of flooded areas.

Listen to EAS, NOAA Weather Radio, or local alerting systems for current emergency information and instructions.

Do not walk, swim, or drive through flood waters. Turn Around. Don't Drown.® Just six inches of fast-moving water can knock you down, and one foot of moving water can sweep your vehicle away.

Stay off of bridges over fast-moving water. Fast-moving water can wash bridges away without warning.

If your vehicle is trapped in rapidly moving water, stay inside. If water is rising inside the vehicle, seek refuge on the roof.

If trapped in a building, go to its highest level. Do not climb into a closed attic. You may become trapped by rising floodwater. Go on the roof only if necessary. Signal for help.



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Be Safe AFTER

Listen to authorities for information and instructions.

Avoid driving, except in emergencies.

Be aware that snakes and other animals may be in your house. Wear heavy gloves and boots during clean up.

Avoid wading in floodwater, which can contain dangerous debris and be contaminated. Underground or downed power lines can also electrically charge the water.

Use a generator or other gasoline-powered machinery **ONLY** outdoors and away from windows.

Be aware of the risk of electrocution. Do not touch electrical equipment if it is wet or if you are standing in water. If it is safe to do so, turn off the electricity to prevent electric shock.

Take an Active Role in Your Safety

Go to **ready.gov** and search for **flood**. Download the **FEMA app** to get more information about preparing for a **flood**. Find Emergency Safety Tips under Prepare.

Follow These Safety Rules

Monitor the NOAA Weather Radio All Hazards, or your favorite news source for vital weather related information.

If flooding occurs, get to higher ground. Get out of areas subject to flooding. These include dips, low spots, canyons, and normally dry washes.

Avoid roads already flooded.

Road may be washed out under flood waters. Turn Around Don't Drown™ when you encounter a flooded road.

If heavy rain is forecast or occurring, move your camp site and vehicle away from streams and washes.

Be especially cautious when driving at night when it is harder to recognize flood dangers.

For more information:
 Turn Around Don't Drown™ online Toolbox - <http://www.weather.gov/os/water/tadd/>
FLASH – <http://flash.org/video.php>

Partners

American Association of Motor Vehicle Administration
 Federal Alliance for Safe Homes



When flooded...



Photo: Marvin Nauman, FEMA

Turn Around Don't Drown!



American Association of Motor Vehicle Administrators

Turn Around Don't Drown™ is a National Oceanic and Atmospheric Administration trademark.

Turn Around Don't Drown™

In direct response to so many unnecessary vehicular-related flood deaths, the National Weather Service developed a national campaign called, “**Turn Around Don't Drown™**.” The campaign aims to educate motorists of the dangers of driving across flooded roads.

Dangerous Water

“I urge all Texans to realize the dangers of crossing flooded roadways and respect the barricades put in place by officials to protect Texans' lives. Remember these words: **Turn around don't drown,**” (Governor Rick Perry, Press Release, July 7, 2010).

Words to live by for all motorists. On average, nearly 100 people drown every year in floods-more than half are caused by motorists trying to drive through flooded roads. Too often, motorists across the nation find themselves in trouble:

Indiana--a pregnant woman and her 7-year-old daughter were rescued when their vehicle became stranded on a flooded road.

Georgia--a 39-year-old woman drowned in her minivan when flash flooding trapped her in her vehicle.

Arizona--a swift water team rescued a man from a car stranded in a wash after he drove past a “Flood Area” sign.

Forces on Vehicles Crossing Streams

The car will be carried when:
Buoyancy force **Greater Than** Vehicle Weight

Vehicle Weight ↓
Buoyancy Force ↑
Friction Force ←
Stream Force →

There is no friction force once the vehicle is lifted off the road

Nearly half of all flood fatalities are vehicle related

including SUVs, in just six inches of water, while 18-24 inches of moving water will force a vehicle off the road. The menace is buoyant force. When the buoyant force is greater than the vehicle's weight, the vehicle will move with the moving water. Besides the buoyant force, erosion is another significant



concern. Moving water is very powerful and can undermine the integrity of a road. A motorist will be unaware he is driving into a scoured out section of the road.

Warning and Incident Road Signs

The National Weather Service worked closely with the Department of Transportation Federal Highway Administration to develop two officially sanctioned road signs. Local officials are encouraged to use **Turn Around Don't Drown™** (TADD) signs to mitigate the loss of life and property.



Warning Signs

Warning signs are permanent signs alerting drivers to existing or potentially hazardous road conditions. The TADD warning signs are used in locations where the risk for flooding is high, flooding happens very quickly, and/or where flooding occurs in isolated locations when emergency officials don't have time to post an incident sign.



Incident Signs

Incident signs are temporary signs posted on an as-needed basis. Incident signs should be deployed when a natural disaster (flood or flash flood) or other unplanned event impedes the normal flow of traffic.

The Manual on Uniform Traffic Control contains provisions for traffic control devices, including size of the sign, color, and shape. Standards for both incident and warning signs can be found at: <http://mutcd.fhwa.dot.gov>

Information for developing **Turn Around Don't Drown™** signs can be found at the National Weather Service **Turn Around Don't Drown™** Toolbox: <http://www.weather.gov/os/water/tadd/>

DANGER

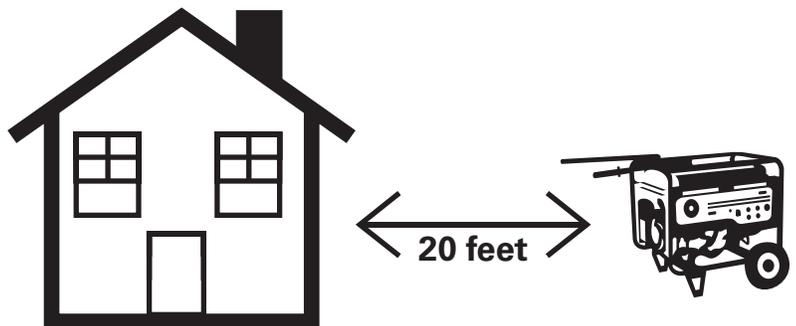
POISON GAS - POISON GAS - POISON GAS CARBON MONOXIDE HAZARD

Using a generator indoors
WILL KILL YOU IN MINUTES.
Exhaust contains a poison gas
you cannot see or smell.



Never use a generator indoors, in garages, or carports.

ALWAYS use a generator outdoors, and at least **20 feet** from windows or doors.



U.S. Department of
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Centers for Disease
Control and Prevention

¡ADVERTENCIA!

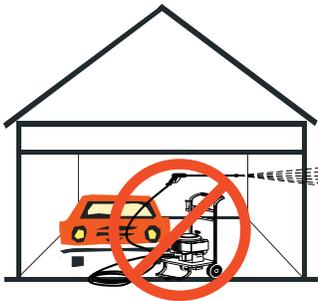
PELIGRO DE INTOXICACIÓN POR MONÓXIDO DE CARBONO

Los vapores del monóxido de carbono pueden ser dañinos o mortales.

Este gas no puede verse ni olerse.



NUNCA use una máquina de lavado a presión adentro.



NUNCA use una máquina de lavado a presión en el garaje, la cochera, ni en otro espacio interior.



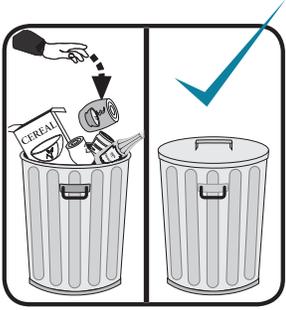
NUNCA use una máquina de lavado a presión cerca de ventanas, puertas o conductos de ventilación abiertos.



**U.S. Department of
Health and Human Services**
Centers for Disease
Control and Prevention

CS 283548

Eat Safe Food



After a flood or power outage, some food may not be safe to eat and must be thrown out.

Read and follow the directions below carefully.

Throw out perishable food (such as meat, fish, eggs, milk, and leftovers) in your refrigerator when the power has been off for 4 hours or more.

Thawed frozen food that still contains ice crystals can be refrozen or cooked. If not, throw it away.

Do the following with food and containers that may have had contact with flood or storm water.

Throw out these foods:

- Food with unusual odor, color, or texture
- Cans or food containers that are bulging, open, or dented
- Food not in waterproof containers or cans
- Food canned at home
- Food in cardboard containers (including juice, milk, and baby formula)
- Food in containers with screw caps, snap lids, crimped caps, twist caps, flip tops, and snap-tops

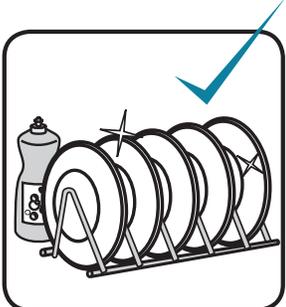
Throw out these things:

- Wooden cutting boards
- Baby bottle nipples and pacifiers

Clean and sanitize things that touch food in a four-step process:

1. Wash with soap and clean water.
2. Rinse with clean water.
3. Sanitize by immersing for 1 minute in a solution of 1 cup (8 ounces or 240 milliliters) of chlorine bleach in 5 gallons of clean water.
4. Allow to air dry.

When in doubt, throw it out.



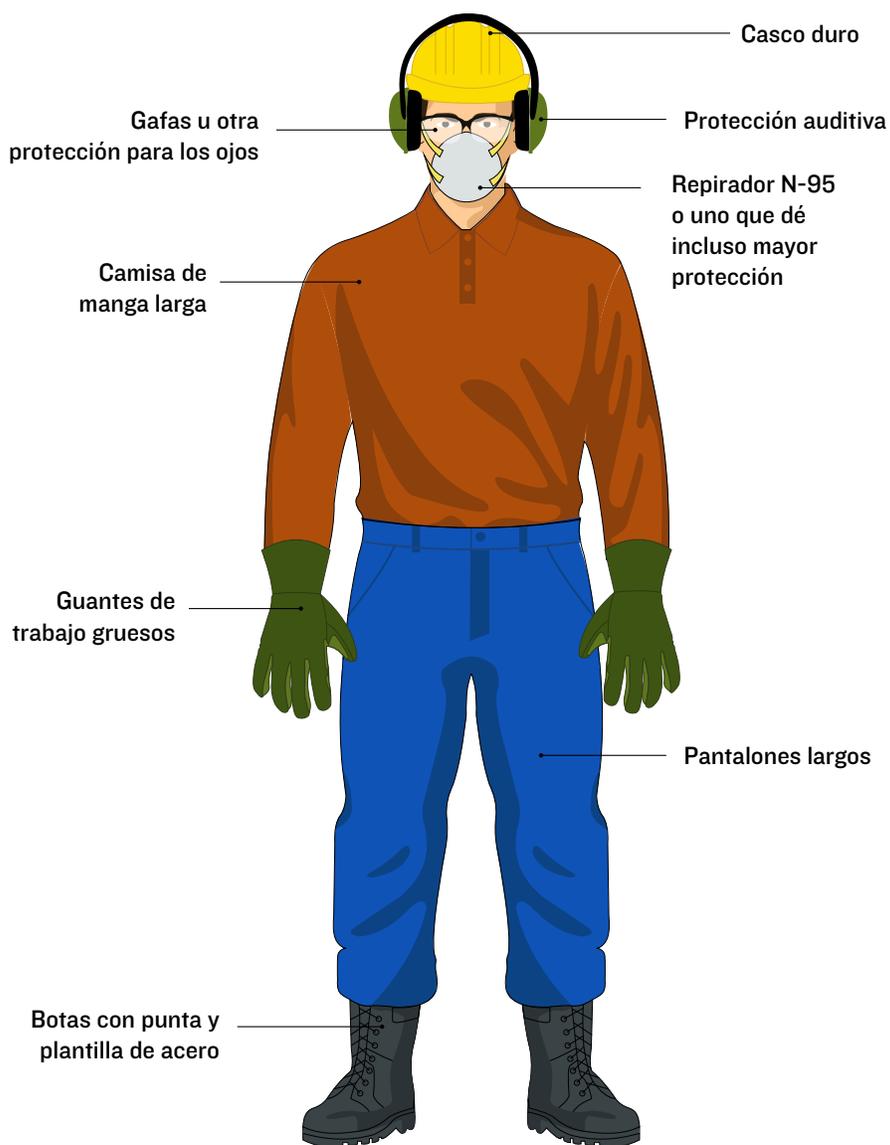
For more information on safe food and water after a natural disaster, please visit:

www.cdc.gov/disasters/foodwater/facts.html



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Qué ponerse para limpiar escombros y basura después de un desastre

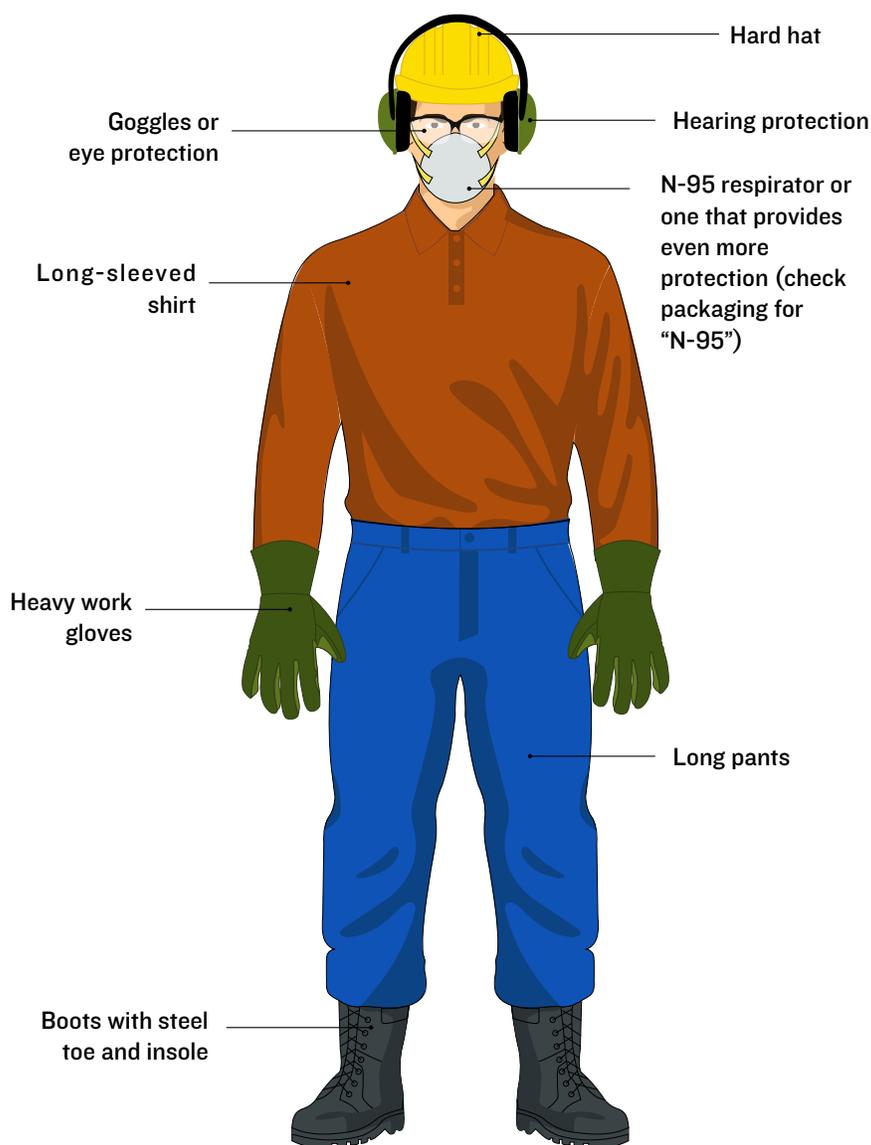


¡CUIDADO!

- Proteja las heridas y los cortes con curitas o vendajes a prueba de agua
- Evite el estrés por calor tomando descansos frecuentes y bebiendo agua segura
- ¿Va a limpiar aguas de alcantarillado? Use botas y guantes de goma y gafas de protección
- Preste atención a sus alrededores: evite los cables del tendido eléctrico, los insectos, los animales silvestres o callejeros, y pasar largos periodos al sol.
- Lávese las manos con agua y jabón antes de comer. Si no hay agua disponible, use un desinfectante de manos (que contenga como mínimo un 60% de alcohol).

WHAT TO WEAR

WHEN CLEANING UP DEBRIS AND HOUSEHOLD WASTE AFTER A DISASTER



CAUTION!

- Protect wounds and cuts with waterproof bandage.
- Avoid heat stress by taking frequent breaks and drinking safe water.
- Cleaning up sewage? Wear rubber boots, rubber gloves, and goggles.
- Be aware of your surroundings-avoid electrical lines, insects, wild or stray animals, and long periods under the sun.
- Wash your hands with soap and water before eating. If water is not available, use hand sanitizer (containing at least 60% alcohol).

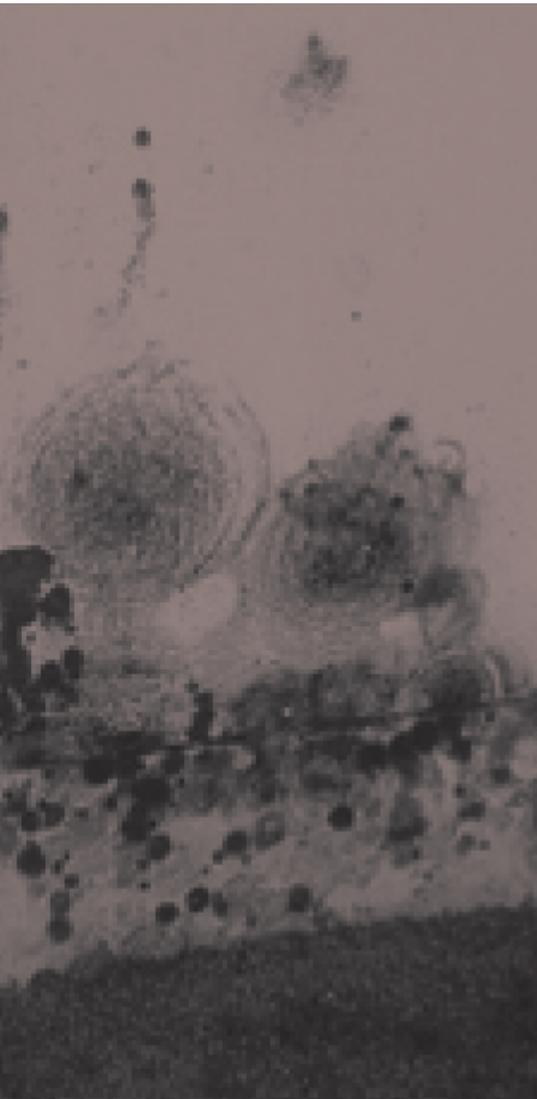


FEMA



National Institutes
of Health

HOMEOWNER'S AND RENTER'S GUIDE TO MOLD CLEANUP AFTER DISASTERS



Cleaning up after a flood can pose health risks. You and your family should wait to re-enter your home until professionals tell you it is safe, with no structural, electrical or other hazards.

Before you start cleanup activities, contact your insurance company and take pictures of the home and your belongings. Remember – drying your home and removing water-damaged items is your most important step for preventing mold damage.

IS THERE A PROBLEM?

Was your home flooded? If so, and you were not able to dry your home (including furniture and other items) within 24-48 hours, you should assume you have mold growth. You need to *completely* dry everything, clean up the mold, and make sure you don't still have a moisture problem.

You may see or smell mold on clothing, drywall, furniture, cardboard boxes, or books, but it may also be hidden under or behind items like carpet, cushions, or walls.

MOLD BASICS: HOW MOLDS CAN AFFECT YOUR HEALTH

Exposure to mold can lead to asthma attacks, eye and skin irritation, and allergic reactions. It can lead to severe infections in people with weakened immune systems. Avoid contaminated buildings and contaminated water as much as you can.

KEY MESSAGES

- Wear personal protective equipment. Wear an N-95 respirator at a minimum, goggles, and protective gloves.
- Use portable generators carefully, outside and away from the home, to avoid carbon monoxide poisoning and fires.
- Ensure the mold cleanup is complete before reoccupying your home.

Flood water may have carried sewage or chemicals into your home. This could expose you or your family to viruses, bacteria, disease carriers (such as mosquitos), and parasites, as well as mold. To learn more about cleaning and disinfection go to: www.cdc.gov/healthywater/emergency/flood/standing.html

You can protect yourself and your family from mold exposure by following these steps.

BEFORE YOU ENTER ANY MOLDY SITE:

- **Protect yourself and loved ones against hazards.** People with breathing problems like asthma or who have weakened immune systems should stay away from moldy sites. Children should not take part in disaster cleanup work. Check for loose power lines or gas leaks. Make sure the electricity and gas are turned off. Look for sagging ceilings or floors or other structural problems. Watch out for wet, muddy, or slippery floors.
- **Protect your mouth and nose** against breathing in mold: wear at least an N-95 respirator. If you plan to spend a lot of time removing moldy belongings or doing work like ripping out moldy drywall, wear a half-face or full-face respirator. Basic information on using it is in [OSHA's general respiratory protection guidance](#).
- **Protect your skin.** Wear protective gloves (non-latex, vinyl, nitrile, or rubber). Do not touch mold or moldy items with bare hands.
- **Protect your eyes.** Wear goggles that provide *complete* eye protection. Choose goggles designed to keep out dust and small particles. Safety glasses or goggles that have open vent holes will not protect you against dust and small particles.



AFTER YOU LEAVE A MOLD SITE:

- **Protect yourself and loved ones.** Shower and change your clothes. This will help you avoid carrying mold and other hazards back to your current living quarters.

SHOULD I DO THIS MYSELF?

This job may be too difficult or dangerous for you. It may be best to get help from experienced and qualified professionals if you can. Hire a mold inspection or remediation professional affiliated with or certified by the National Environmental Health Association (NEHA), the American Industrial Hygiene Association (AIHA), the Institute of

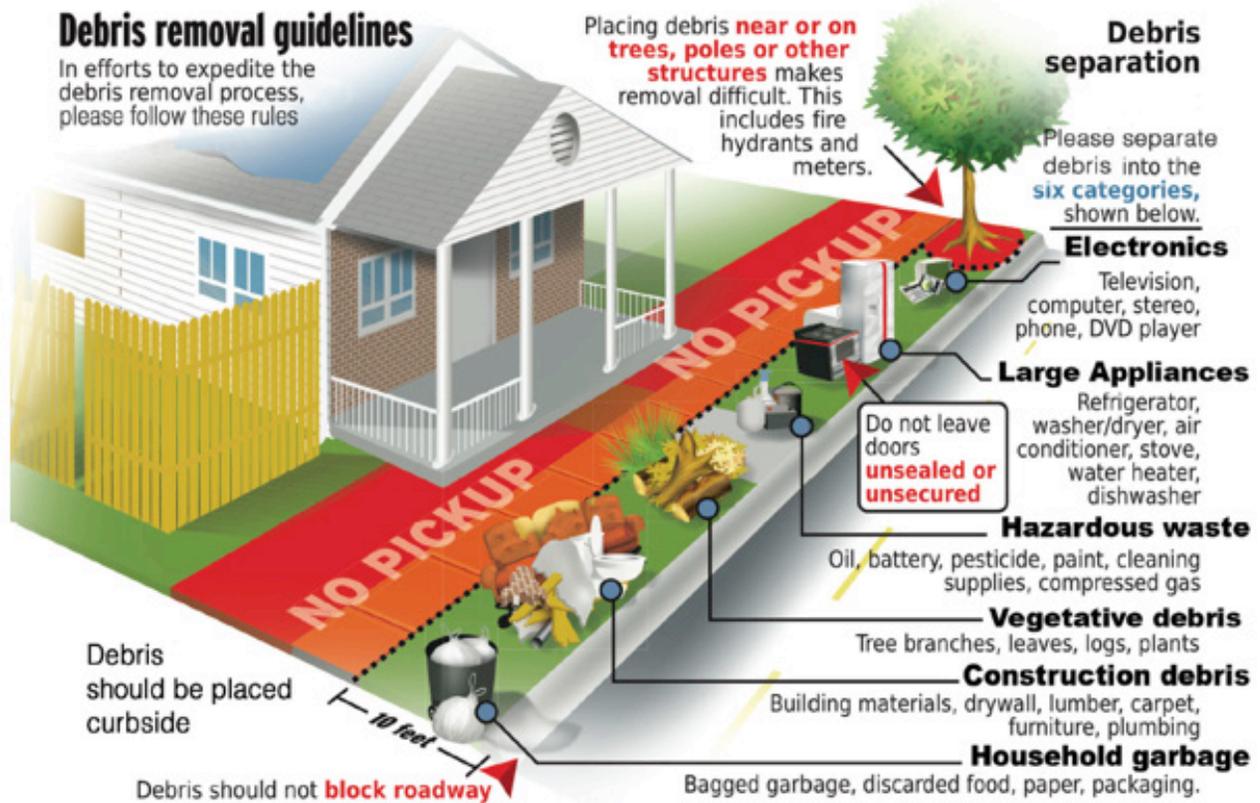
Inspection, Cleaning and Restoration Certification (IICRC), or American Council for Accredited Certification (ACAC) to inspect, repair, and restore the damaged parts of your home. Your state also may regulate mold remediation.

Sampling for mold is not usually recommended. Understanding the results can be difficult, and no matter what kind of mold is in your home, you need to clean it up and fix the moisture problem.

IF I MUST DO THIS MYSELF, HOW CAN I DO IT SAFELY?

Follow these steps:

1. Put on the personal protective equipment described above to protect your eyes, nose, mouth, and skin.
2. Remove standing water and wet materials. Use a wet vacuum to remove water from floors, carpets, and hard surfaces. Dry your home and everything in it as quickly as you can – within 24 to 48 hours if you can.
3. Open all doors and windows when you are working and leave as many open as is safe when you leave.
 - o Open inside doors, especially closets and interior rooms, to let air flow to all areas. Take doors off their hinges if you need to.
 - o Open kitchen cabinets and bathroom vanity doors; remove drawers, wipe them clean, and stack them to dry.
 - o Open the attic access to let air flow to the attic. Before you open the attic door, make sure nothing will fall on you.
4. When electricity is safe to use, use fans and dehumidifiers to remove moisture. Do not use fans if mold has already started to grow, because the fans may spread the mold.
5. Clean with water and a detergent. Remove all mold you can see. Dry right away.
6. If you use cleaning products, do not mix cleaning products together. DO NOT mix bleach and ammonia because it can create toxic vapors.
7. Painting or caulking over mold will not prevent mold from growing. Fix the water problem completely and clean up all the mold before you paint or caulk.
8. Throw away items that can't be cleaned and dried. Throw away anything that was wet with flood water and can't be cleaned and dried completely within 24 to 48 hours. If you have precious items that you want to preserve, follow these guidelines from the Smithsonian Institute: https://www.si.edu/mci/english/learn_more/taking_care/mnm.html



SAFETY TIPS ON USING PORTABLE GENERATORS

If you use a portable generator for electricity use CAUTION to avoid carbon monoxide poisoning and fires.

- Use portable generators OUTSIDE and at least 20 feet away from buildings.
- Do not use portable generators inside your house or garage.
- Do not put portable generators on balconies or near doors, vents, or windows.
- Do not use portable generators near where you or your children are sleeping.
- Never refuel a generator while it is hot.
- For more information, go to: www.osha.gov/OshDoc/data/Hurricane_Facts/portable_generator_safety.pdf

AM I DONE?

- If you still see or smell mold, you have more work to do. After a remediation, there should be no signs of water damage or mold growth.
- You may need to ask a mold remediation professional to know whether your mold problem is completely fixed. As noted in the “Should I do this myself?” section, sampling for mold is not usually recommended; instead, a careful inspection of the work area for completion of the cleanup and absence of mold-related odors is usually appropriate.
- If you have health problems that get worse when you return home, like asthma or allergy attacks or skin or eye irritation, you may still have some mold.

LOCAL CONTACT INFO: