# Cleaning Up After the Flood: Extension Helps

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### Flood Watch vs Flood Warning

## **FLOOD** WARNING

A Flood Warning is issued when flooding is **happening** or will happen soon. Some roads will be **flooded**.

Move to higher ground. Never drive through flooded roads.

take action.

# FLOOD WATCH

A Flood Watch is issued when flooding is possible.

Stay tuned to radio/TV, follow weather.gov and be ready to seek higher ground.

Learn more at weather.gov/flood.

be prepared.

Weather.gov







TACO WATCH: We have all the ingredients to make tacos.

TACO WARNING: We're having tacos RIGHT NOW.

wtvq.com/severe-weather-awareness-week-watch-vs-warnings/



## **Alerts and Warnings**

- UK Alert System Sign up in MYUK
- Weather Alert App Scan QR code below or visit https://www.uky.edu/scahip/weatheralert



## Where to Find Information

- UK Extension Disaster Preparedness <u>https://anr.ca.uky.edu/extensionhelps</u>
- FEMA Ready.Gov
- National Weather Service <u>https://www.weather.gov/</u>
- UK Ag Weather Center <u>http://weather.uky.edu/</u>





## Floodwaters Are Dangerous

- Hides road and building damage.
- Causes mud or rock slides.
- Covers live wires.
- Contains:
  - Sewage,
  - Live animals,
  - Chemical contaminants like coal ash and industrial waste,
  - Sharp objects and debris.



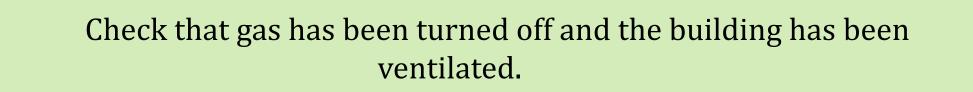


weather.gov 📐





## Before Cleaning Up: Check Gas Lines

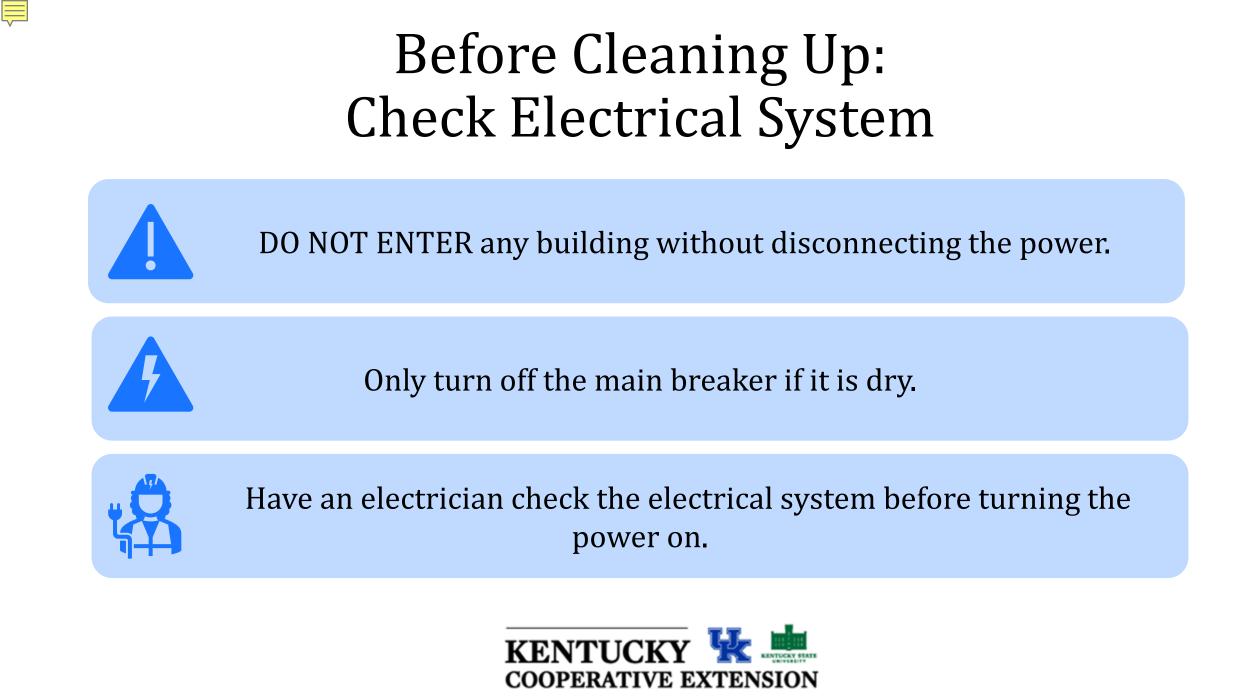


DO NOT use an open flame before completing your initial inspection.

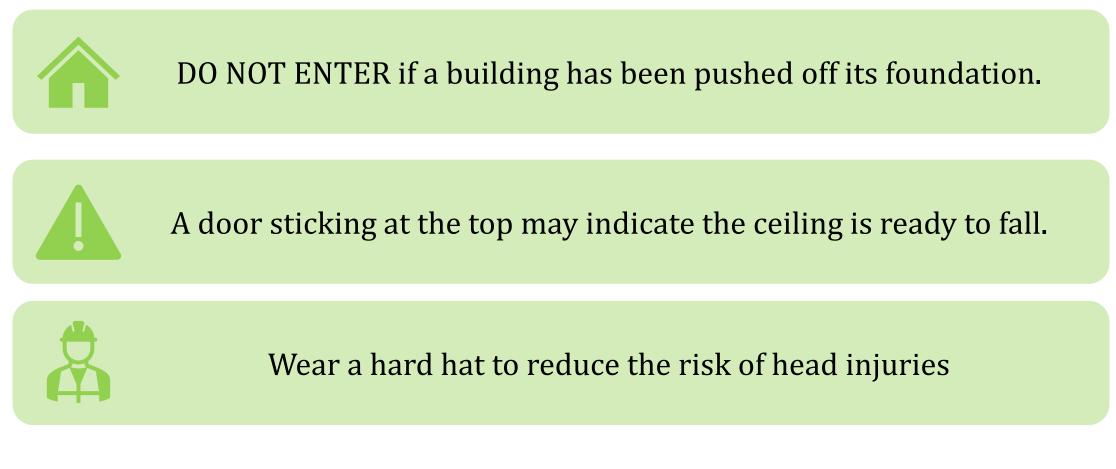


Contact local utilities or emergency responders for instructions or assistance.





### Before Cleaning Up: Assess the Structure





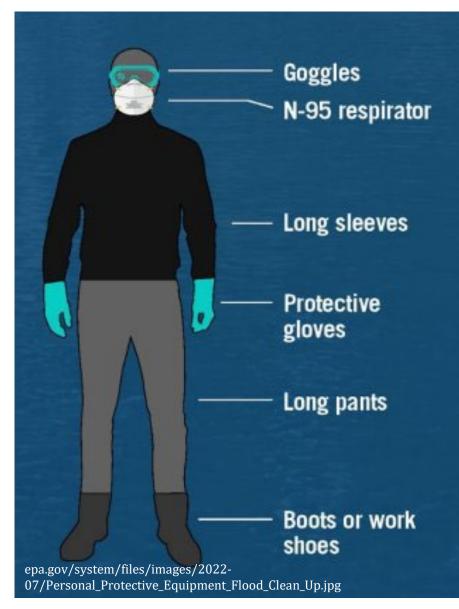
### Before Cleaning Up: Avoid Downed Power Lines





### Before Cleaning Up: Choose the Right Safety Gear

- Avoid direct contact with floodwaters.
- Clean yourself and your equipment after contact.
- Avoid breathing in dangerous substances, use an N95 mask and ventilate the area where you work.
- Mold grows rapidly after floods recede.
- Use cleaning chemicals in well ventilated areas.
- Take frequent breaks to breathe fresh air.





### KDPH Recommends Tdap Vaccines for Flood Cleanup

### The Tdap Vaccine and Flood Recovery:

The Tdap vaccine can prevent tetanus, diphtheria, and pertussis.

- During flood cleanup, it's important to ensure your tetanus vaccination is up-to-date.
- Adults should receive a Tdap (tetanus/diphtheria/pertussis) booster every 10 years.
- If you experience a wound, especially if it's contaminated with floodwater or mud, a tetanus booster may be necessary.



If you're unsure about your vaccination status, check your immunization records at: <u>chfs.ky.gov/KDPHMyVaxRecord</u>

Kentuckians can visit their healthcare provider, pharmacy or local health department to receive vaccines.





## Before Cleaning Up: Set Up Safety & Cleanup Areas

### Safety Area:

- First aid kit
- Fire extinguisher
- Eye wash station
- Emergency numbers
- Clean drinking water
- Extra PPE
- Wet hand wipes

### **Clean Up Area:**

- Heavy duty garbage bags
- Tarps or plastic sheeting
- Paper towels, rags, sponges, mop and mop heads
- Detergent
- Buckets
- Clean water supply



## **Cleaning Up: First Steps**

### PROTECT FROM FURTHER DAMAGE

- Stop water from coming in.
- Check for broken or leaking pipes.
- Get fresh air moving.

### GENERAL CLEANUP

- Remove debris.
- Remove any standing water.
- Dispose of contaminated materials safely.

### DISINFECT

- Clean hard surfaces with water and detergent.
- Disinfect all hard surfaces.

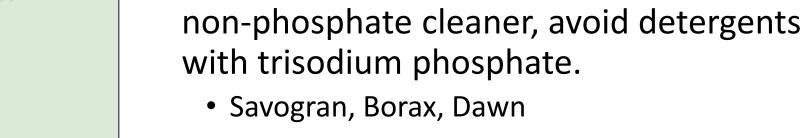


### THREE BUCKET CLEANING SYSTEM

- Pump sprayer contains detergent (do not use sprayer for bleach)
- 2. Rinse bucket ~ should be changed frequently
- 3. Squeeze wringer bucket for dirty water

2.

 32 oz mop head ~ clean or replace frequently



• Rinse well, change the water frequently.

Cleaning Up:

The Three Bucket System

• Wet clean non-porous surfaces with a

 Clean or replace the mop head, sponges, and brushes frequently; discard after cleanup.



huduser.gov/portal/Publications/pdf/FloodCleanupGuide\_NCHH.pdf

## **Cleaning Up: Disinfect Safely**

### WHEN IN DOUBT, THROW IT OUT

 Soft surfaces that cannot be submerged and washed in hot water cannot be cleaned.

### CLEAN BEFORE DISINFECTING

- Wash surfaces and remove visible mold.
- Dry materials before disinfecting.

### DISINFECT SAFELY

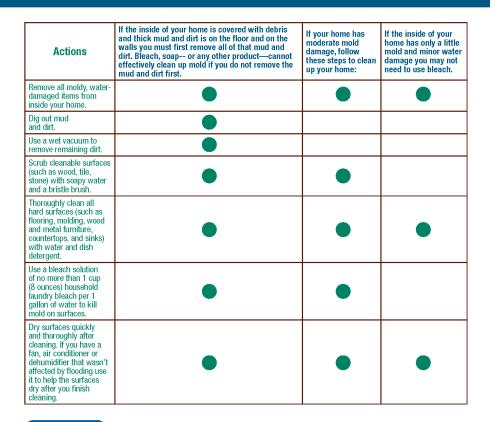
- DO NOT MIX cleaning chemicals.
- Consult a professional.



#### Mold Clean-Up After Disasters: When to Use Bleach

After a hurricane, flood or other major storm, "green" products can be difficult to find. Bleach and dish detergent might be the only things available in your area. Bleach and dish detergent, common household items, can be used to clean mold in your home after a storm.

The steps to take to clean up mold will depend on how much water damage your home suffered.



CS295513-A

August 31, 2018

## Cleaning Up: When to Use Bleach

Bleach and common dish soap may be the only products available in your area.

### Never mix bleach with ammonia.

- On surfaces that won't fade or damage color.
- On wood surfaces that are not decayed.
- When surfaces are fully dry and can be dried within 48 hours of being disinfected.



Centers for Disease Control and Preventio National Center for

vironmental Health

## Cleaning Up: Mold

Problems associated with mold:

- Medical issues with mold are common.
- Most at risk:
  - Infants & children,
  - The elderly,
  - Those with weakened immune systems, and
  - Those with chronic conditions like allergies, asthma, and COPD.

# Limit your exposure to mold and mold spores!

- Wear a well-fitting N 95 mask.
- Wear goggles with no ventilation holes.
- Wear long rubber gloves.
- Keep spare safety gear.



## Cleaning Up: Mold

# The Key to Mold Control Solution is Moisture Control

Mold... no one wants it in their home. Mold produces allergens and can cause health problems. Although mold is naturally found in the indoor environment, it won't grow without moisture.

#### Take steps to control mold and moisture indoors:



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Reduce humidity: use exhaust fans or open windows in kitchens and bathrooms, and use air conditioners or dehumidifiers as needed.

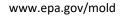
Prevent condensation



Prevent condensation by reducing humidity, increasing ventilation, or raising the indoor air temperature.

Completely dry any damp or wet surfaces within 24-48 hours, and fix the source of the water problem or leak.

- 1. Protect yourself.
- 2. Toss out anything that cannot be cleaned and dried in 48 hrs.
- 3. Air it out.
- 4. Use fans and dehumidifiers.
- 5. Scrub surfaces.
- 6. Don't cover it, remove it.
- 7. Dry everything thoroughly.





## **Cleaning Up: Remove Damaged Materials**



- Remove cabinets, interior doors, shelves, trim.
- Tear down drywall or plastered ceilings.
- Remove the bottom 4' of drywall.
- Remove insulation.
- Remove flooring, subflooring, and inspect the floor joists.



### After the Flood: Food and Water Safety

CHECK FOR BOIL WATER ADVISORY

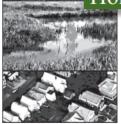
WHEN IN DOUBT, THROW IT OUT

DISINFECT





#### Home & Environment



#### Flood Conditions and Your Septic System

Brad D. Lee, Plant and Soil Sciences

that rely on septic systems. A flooded

private sewage system can be hazard-

ous for homeowners until saturated

Flooding risks include sewage back-

ing up in the home, contaminated

drinking water, and lack of sanita-

soils return to their normal state.

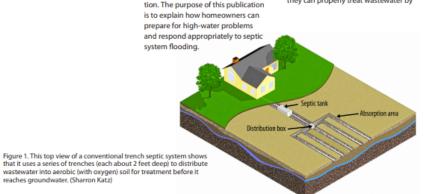
The most common septic systems used in the United States employ soil Treatment area to treat and disperse wastewater into the environment (see Figure 1). The soil treatment area consists of a network of perforated pipes within gravel-filled trenches. Under normal environmental conditions, well designed and managed septic systems work very well at dispersing wastewater and removing pathogens from the wastewater before they reach groundwater or surface waters.

### In this Publication How Problems Occur How to Prepare for a Flood

- How to Prepare for a Flood
- During the Flood
- After the Flood
  Reduce System Stress

#### Kentucky's large precipitation events occasionally flood residential areas

When there is flooding, or when soils are saturated for extended periods of time, septic systems cannot function properly. Proper septic system performance relies on the soil's ability to treat and disperse wastewater. Under normal conditions, soils are aerobic so they can properly treat wastewater by



UKAG Agriculture and Natural Resources - Family and Consumer Sciences - 4-H Youth Development - Community and Economic Deve

Water Safety: Septic Systems & Wells Well water can be contaminated during a flood.

• Avoid consuming or using water until wells are tested.

# Saturated soils cause septic malfunctions.

- Stop using private sewage until floodwaters are lower than the building.
- Get septic tank inspected.



publications.ca.uky.edu/sites/publications.ca.uky.edu/files/HENV507.pdf

HENV-507

### Ensuring SAFE PRIVATE WELL WATER

### for household use **AFTER A FLOOD**

REVISED BY UTTAM SAHA ORIGNIALLY WRITTEN BY UTTAM SAHA GARY L. HAWKINS LETICIA S. SONON

The quality of drinking water from wells may be compromised during a flood. Flooding around the well increases the risk of drinking water becoming contaminated with bacteria or any other contaminants, rendering it unsafe to drink and for washing food items. Furthermore, entry of foreign objects into the well could damage various components of the well system and create a personal injury risk.

This circular describes what you should do if your well has been contaminated by a flood.

In this publication, "flood" describes water from heavy rain, storms, or hurricanes that spills or seeps into a household drinking water well.



#### INSPECT THE WELL

Determine if one or more of the following unwanted situations have occurred:

- Large debris carried by moving floodwater struck the well head. This could loosen well hardware, displace well construction materials, and/or damage the casing.
- Sediment and/or flood water entered an improperly sealed well.
- Flood waters compromised the well structure by washing material from under the well pad. This could cause the well to collapse.

Note that shallow wells (less than 50 feet deep) and wells more than 10 years old are likely to have been contaminated despite the absence of visible damage. These wells are more likely to be under the influence of surface water, which can contain bacteria and other contaminants.

#### **CAUTION:**

DO NOT DRINK FROM, OR WASH FOOD ITEMS WITH, FLOOD-AFFECTED WELL WATER. This can make you very sick.

#### INSPECT THE ELECTRICAL SYSTEM

If the electrical system was flooded:

- Make sure the breaker from main power supply is in the "OFF" position.
- If you do not have a breaker, make sure that the electricity is disconnected from the pump control box, if you can do so safely.
- Before power is restored, inspect the pump's electrical box for visible moisture or water.
- Have the wiring system checked by a qualified electrician, well contractor, or pump installer. Get their assistance turning the pump on.

Note: If the pump's control box was submerged during the flood, make sure that all electrical components are dry before restoring electrical service.

#### **CAUTION:**

Do not turn on the pump without making sure that all electrical components are dry and checked by a licensed electrician, licensed water well contractor, or certified pump installer to avoid damage to your well system or pump. Check using the steps above to avoid ELECTRICAL SHOCK, PERSONAL INJURY, or EVEN DEATH.

## Water Safety: Wells

# Before drinking well water:

- Inspect the well.
- Inspect the electrical system and well pump.
- Test the water and decontaminate as needed.

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COOPERATIVE EXTENSION

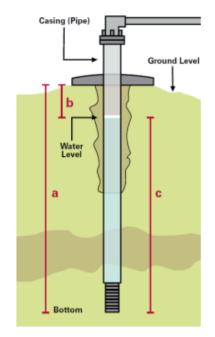


Figure 1. A diagram showing various distances ("a," "b," and "c") to be used to calculate the depth of water in a well.

## Water Safety: Water Treatment Options



### **Boiling Water**

- Boiling water kills bacteria and other microorganisms that might be present in the water.
- Bring all water to a boil and let it boil for one minute. Place in a covered container.

### **Bleach Method**

- Water can also be treated with unscented bleach that has been open less than 30 days.
- For clear water, add 1/8 teaspoon bleach per gallon.
- For cloudy water, add 1/4 teaspoon bleach per gallon.
- Allow to stand for 30 minutes before drinking or using.



## Food Safety

### Some food can be kept.

- Clean and sanitize foods in nonporous, waterproof packaging.
- Clean and sanitize any food that was in contact with floodwaters.

### **Toss any food that:**

•Has an unusual odor, color, or texture.

- •Is in packages that are not waterproof.
- •Is in cardboard or paperboard containers.
- •In in containers with screw caps, snap lids, crimped caps, twist caps, flip tops, snap tops.

•Is home-canned.





### **Disasters Increase Stress**

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### Stress is Common



Most people show signs of stress after a disaster.



These signs of stress are normal and will decrease over time.



## Know the Signs of Stress

### Stress has emotional, behavioral, and physical symptoms.

- Increased substance use.
- Mood changes.
- Increase in aches and pains, stomach aches, headaches.
- Changes in eating patterns.
- Changes in sleeping patterns.
- Avoidance.
- Shaken belief system.
- Relationship stress, increase in family violence.



### What's Your Stress Level?

Everyone has stress, and your stress level will change all the time. But too much stress can be unhealthy. Take a look at the chart below and see where you are right now—from green to orange.



## Monitor Your Stress Level

- Know the signs of stress in yourself and those around you.
- Listen and look for key behaviors, outsized reactions, unhealthy coping methods.
- Some may be at a greater risk for post disaster stress.



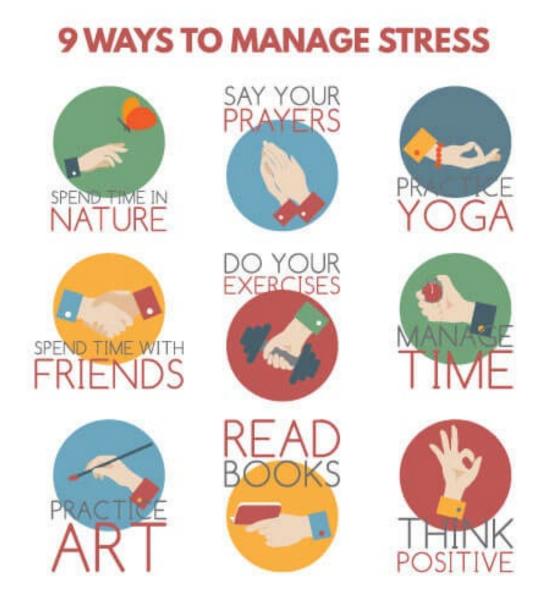
## Know When to Ask for Help

- You struggle with daily tasks.
- You feel hopeless.
- Loved ones or friends express concern.
- You are considering harming yourself or others.
- Your symptoms have lasted longer than a month.



Adapted from: Watson, P., Gist, R., Taylor, V. Evlander, E., Leto, F., Martin, R., Vaught, D., Nash, W.P., Westphal, R., & Litz, B. (2013). Stress First Aid for Firefighters and Emergency Services Personnel. National Fallen Firefighters Foundation.





## Managing Stress: Coping Skills

- Social support.
- Physical activity.
- Problem solving, helping others.
- Distraction.
- Relaxation activities.

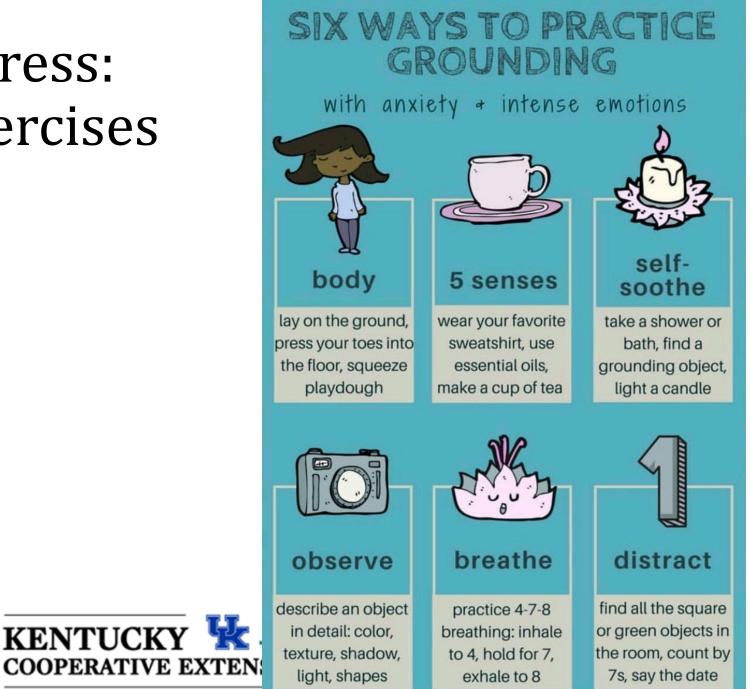
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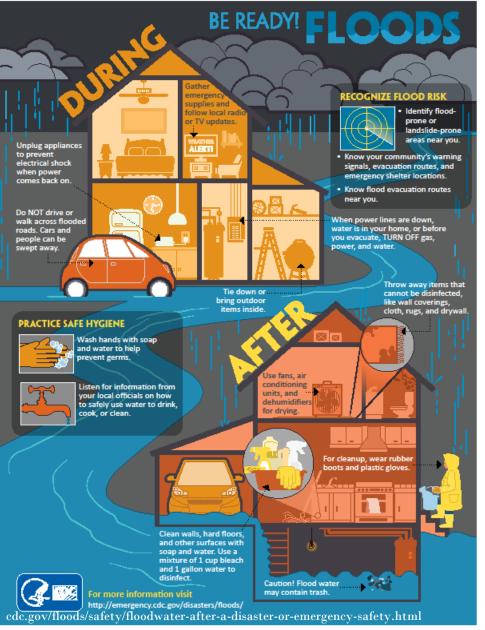
## Managing Stress: **Grounding Exercises**

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- Deep breathing.
- Visualization.
- Progressive muscle relaxation.
- Gentle movements.



aspirace.com/relaxation-techniques-for-mental-health/



### Help Your Community Prepare for the Next Flood

- Share flood maps at **msc.fema.gov**.
- Sign up for **Weather Alert**, an app from UK
- Connect with your local emergency management office for rapid updates.
- Hold preparedness planning programs.
  - In the Face of Disaster.



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