



# Ottawa County Health Department

THE COUNTY OF OTTAWA DECLARED A “LOCAL STATE OF EMERGENCY” WITHIN OTTAWA COUNTY. PERSONS AND BUSINESSES SUSTAINING DAMAGES AS A RESULT OF THE RECENT THUNDERSTORMS, HIGH WINDS AND HEAVY RAINS ARE ENCOURAGED TO CONTACT THE LOCAL (TOWNSHIP OR CITY) GOVERNMENT ASSESSOR’S OFFICE TO REPORT THE AMOUNT AND EXTENT OF PROPERTY DAMAGES. THIS INFORMATION MAY BE USED TO DEMONSTRATE THE NEED FOR STATE AND FEDERAL RELIEF, SHOULD SUCH FUNDING BE AVAILABLE.

## Septic Systems - What to Do after the Flood

### Do I pump my tank during flooded or saturated drainfield conditions?

No! At best, pumping the tank is only a temporary solution. Under worst conditions, pumping it out could cause the tank to try to float out of the ground and may damage the inlet and outlet pipes. The best solution is to plug all drains in the basement and drastically reduce water use in the house.

### What do I do with my septic system after the flood?

Once floodwaters have receded, there are several things homeowners should remember:

- Do not drink well water until it is tested.
- Do not use the sewage system until water in the soil absorption field is lower than the water level around the house.
- Have your septic tank professionally inspected and serviced if you suspect damage. Signs of damage include settling or an inability to accept water. Most septic tanks are not damaged by flooding since they are below ground and completely covered. However, septic tanks and pump chambers can fill with silt and debris, and must be professionally cleaned. If the soil absorption field is clogged with silt, a new system may have to be installed.
- Only trained specialists should clean or repair septic tanks because tanks may contain dangerous gases.
- If sewage has backed up into the basement, clean the area and disinfect the floor. Use a chlorine solution of a half cup of chlorine bleach to each gallon of water to disinfect the area thoroughly.
- Pump the septic system as soon as possible after the flood. Be sure to pump both the tank and lift station. This will remove silt and debris that may have washed into the system. Do not pump the tank during flooded or saturated drainfield conditions.
- Do not compact the soil over the soil absorption field by driving or operating equipment in the area. Saturated soil is especially susceptible to compaction, which can reduce the soil absorption field's ability to treat wastewater and lead to system failure.
- Examine all electrical connections for damage before restoring electricity.
- Be sure the septic tank's manhole cover is secure and that inspection ports have not been blocked or damaged.
- Check the vegetation over your septic tank and soil absorption field. Repair erosion damage and sod or reseed areas as necessary to provide turf grass cover.

**Remember: Whenever the water table is high or your sewage system is threatened by flooding there is a risk that sewage will back up into your home. The only way to prevent this backup is to relieve pressure on the system by using it less.**

1. If possible, don't use the system if the soil is saturated and flooded. The wastewater will not be treated and will become a source of pollution. Conserve water as much as possible while the system restores itself and the water table falls.
2. Do not open the septic tank for pumping while the soil is still saturated. Mud and silt may enter the tank and end up in the drainfield. Do not dig into the tank or drainfield area while the soil is still wet or flooded.

Locate any electrical or mechanical devices the system may have that could be flooded to avoid contact with them until they are dry and clean.

## **Water Wells: What to Do After the Flood**

Drilled, driven or bored wells are best disinfected by a well or pump contractor, because it is difficult for the private owner to thoroughly disinfect these wells. If you suspect that your well may be contaminated, contact your local or state health department or agriculture extension agent for specific advice on disinfecting your well. The suggestions below are intended to supplement flood precautions issued by State and local health authorities.

### **Well and Pump Inspection**

Flood Conditions at the Well - Swiftly moving flood water can carry large debris that could loosen well hardware, dislodge well construction materials or distort casing. Coarse sediment in the flood waters could erode pump components. If the well is not tightly capped, sediment and flood water could enter the well and contaminate it. Wells that are more than 10 years old or less than 50 feet deep are likely to be contaminated, even if there is no apparent damage. Floods may cause some wells to collapse.

Electrical System - After flood waters have receded and the pump and electrical system have dried, do not turn on the equipment until the wiring system has been checked by a qualified electrician, well contractor, or pump contractor. If the pump's control box was submerged during the flood all electrical components must be dry before electrical service can be restored. Get assistance in turning the pump on from a well or pump contractor.

Pump Operation - All pumps and their electrical components can be damaged by sediment and flood water. The pump including the valves and gears will need to be cleaned of silt and sand. If pumps are not cleaned and properly lubricated they can burn out. Get assistance from a well or pump contractor who will be able to clean, repair or maintain different types of pumps.

### **Sampling and Testing the Well Water**

Contact the local health department to have well water sampled and tested for contamination.

The health department issues sterile bottles for the private well owner to collect water samples, follow all instructions for the use of these bottles. After the pump is back in operation, test the water at regular intervals.

## Reentering Your Flooded Home

When returning to a home that's been flooded after natural disasters such as hurricanes, tornadoes, and floods, be aware that your house may be contaminated with mold or sewage, which can cause health risks for your family.

### When You First Reenter Your Home

- If you have standing water in your home and can turn off the main power from a dry location, then go ahead and turn off the power, even if it delays cleaning. If you must enter standing water to access the main power switch, then call an electrician to turn it off. **NEVER turn power on or off yourself or use an electric tool or appliance while standing in water.**
- Have an electrician check the house's electrical system before turning the power on again.
- If the house has been closed up for several days, enter briefly to open doors and windows to let the house air out for at least 30 minutes before you stay for any length of time.
- If your home has been flooded and has been closed up for several days, presume your home has been contaminated with mold.
- If your home has been flooded, it also may be contaminated with sewage

### Dry Out Your House

If flood or storm water has entered your home, dry it out as soon as possible. Follow these steps:

- If you have electricity and an electrician has determined that it's safe to turn it on, use a "wet-dry" shop vacuum, an electric-powered water transfer pump, or sump pump to remove standing water. If you are operating equipment in wet areas, be sure to wear rubber boots.
- If you do not have electricity, or it is not safe to turn it on, you can use a portable generator to power equipment to remove standing water. **Note: If you must use a gasoline-powered pump, generator, pressure washer, or any other gasoline-powered tools to clean your home, never operate the gasoline engine inside a home, basement, garage, carport, porch, or other enclosed or partially enclosed structures, even if the windows and doors are open. Such improper use can create dangerously high levels of carbon monoxide and cause carbon monoxide poisoning.**
- If weather permits, open windows and doors of the house to aid in the drying-out process.
- Use fans and dehumidifiers to remove excess moisture. Fans should be placed at a window or door to blow the air outwards rather than inwards, so not to spread the mold.
- Have your home heating, ventilating, and air-conditioning (HVAC) system checked and cleaned by a maintenance or service professional who is experienced in mold clean-up **before you turn it on.** If the HVAC system was flooded with water, turning on the mold-contaminated HVAC will spread mold throughout the house. Professional cleaning will kill the mold and prevent later mold growth. When the service determines that your system is clean and if it is safe to do so, you can turn it on and use it to help remove excess moisture from your home.

- Prevent water outdoors from reentering your home. For example, rain water from gutters or the roof should drain away from the house; the ground around the house should slope away from the house to keep basements and crawl spaces dry.
- Ensure that crawl spaces in basements have proper drainage to limit water seepage. Ventilate to allow the area to dry out.

### **After a Hurricane or Flood: Cleanup of Flood Water**

When returning to your home after a flood, be aware that flood water may contain sewage. Protect yourself and your family by following these steps:

#### **Inside the Home**

- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Remove and discard items that cannot be washed and disinfected (such as, mattresses, carpeting, carpet padding, rugs, upholstered furniture, cosmetics, stuffed animals, baby toys, pillows, foam-rubber items, books, wall coverings, and most paper products).
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks, and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process by using fans, air conditioning units, and dehumidifiers.
- After completing the cleanup, wash your hands with soap and warm water.
- Wash all clothes worn during the cleanup in hot water and detergent. These clothes should be washed separately from uncontaminated clothes and linens.
- Wash clothes contaminated with flood or sewage water in hot water and detergent. It is recommended that a laundromat be used for washing large quantities of clothes and linens until your onsite waste-water system has been professionally inspected and serviced.
- Seek immediate medical attention if you become injured or ill.

#### **Outside the Home**

- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Have your onsite waste-water system professionally inspected and serviced if you suspect damage.
- Wash all clothes worn during the cleanup in hot water and detergent. These clothes should be washed separately from uncontaminated clothes and linens.
- After completing the cleanup, wash your hands with soap and warm water.
- Seek immediate medical attention if you become injured or ill.

### **How to Protect Yourself and Others from Electrical Hazards Following a Natural Disaster**

After a hurricane, flood or other natural disaster you need to be careful to avoid electrical hazards both in your home and elsewhere.

- *Never* touch a fallen power line. Call the power company to report fallen power lines.
- Avoid contact with overhead power lines during cleanup and other activities.

- Do not drive through standing water if downed powerlines are in the water.
- If a powerline falls across your car while you are driving, stay inside the vehicle and continue to drive away from the line. If the engine stalls, do not turn off the ignition. Warn people not to touch the car or the line. Call or ask someone to call the local utility company and emergency services. Do not allow anyone other than emergency personnel to approach your vehicle.
- If electrical circuits and electrical equipment have gotten wet or are in or near water, turn off the power at the main breaker or fuse on the service panel. Do not enter standing water to access the main power switch. Call an electrician to turn it off.
- Never turn power on or off yourself or use an electric tool or appliance while standing in water. Do not turn the power back on until electrical equipment has been inspected by a qualified electrician. All electrical equipment and appliances must be completely dry before returning them to service. Have a certified electrician check these items if there is any question.
- If you see frayed wiring or sparks when you restore power, or if there is an odor of something burning but no visible fire, you should immediately shut off the electrical system at the main circuit breaker.
- Consult your utility company about using electrical equipment, including power generators. Do not connect generators to your home's electrical circuits without the approved, automatic-interrupt devices. If a generator is on line when electrical service is restored, it can become a major fire hazard and it may endanger line workers helping to restore power in your area.

## **Other Concerns about Flood Waters**

Flood waters may contain fecal material from overflowing sewage systems, and agricultural and industrial byproducts. Although skin contact with flood water does not, by itself, pose a serious health risk, there is some risk of disease from eating or drinking anything contaminated with flood water. If you have any open cuts or sores that will be exposed to flood water, keep them as clean as possible by washing well with soap to control infection. If a wound develops redness, swelling, or drainage, seek immediate medical attention.

In addition, parents need to help children avoid waterborne illness. Do not allow children to play in flood water areas, wash children's hands frequently (always before meals), and do not allow children to play with flood-water contaminated toys that have not been disinfected. You can disinfect toys using a solution of one cup of bleach in 5 gallons of water.

## **Food Safety During Power Outages and Floods**

If the power is out for less than 2 hours, then the food in your refrigerator and freezer will be safe to consume. While the power is out, keep the refrigerator and freezer doors closed as much as possible to keep food cold for longer.

If the power is out for longer than 2 hours, follow the guidelines below:

- For the Freezer section: A freezer that is half full will hold food safely for up to 24 hours. A full freezer will hold food safely for 48 hours. Do not open the freezer door if you can avoid it.

- For the Refrigerated section: Pack milk, other dairy products, meat, fish, eggs, gravy, and spoilable leftovers into a cooler surrounded by ice. Inexpensive Styrofoam coolers are fine for this purpose.
- Use a food thermometer to check the temperature of your food right before you cook or eat it. Throw away any food that has a temperature of more than 40 degrees Fahrenheit.

### **Identify and throw away food that may not be safe to eat.**

- Throw away food that may have come in contact with flood or storm water.
- Throw away food that has an unusual odor, color, or texture.
- Throw away perishable foods (including meat, poultry, fish, eggs and leftovers) that have been above 40 degrees Fahrenheit (F) for 2 hours or more.
- Thawed food that contains ice crystals or is 40 degree F or below can be refrozen or cooked.
- Throw away canned foods that are bulging, opened, or damaged.
- Food containers with screw-caps, snap-lids, crimped caps (soda pop bottles), twist caps, flip tops, snap-open, and home canned foods should be discarded if they have come into contact with floodwater because they cannot be disinfected.
- If cans have come in contact with floodwater or storm water, remove the labels, wash the cans, and dip them in a solution of 1 cup of bleach in 5 gallons of water. Relabel the cans with a marker. Include the expiration date.
- Do not use contaminated water to wash dishes, brush your teeth, wash and prepare food, wash your hands, make ice, or make baby formula.

### **Feeding Infants and Young Children**

- Breastfed infants should continue breastfeeding. For formula-fed infants, use ready-to-feed formula if possible. If using ready-to-feed formula is not possible, it is best to use bottled water to prepare powdered or concentrated formula. If bottled water is not available, use boiled water. Use treated water to prepare formula only if you do not have bottled or boiled water.
- If you prepare formula with boiled water, let the formula cool sufficiently before giving it to an infant.
- Clean feeding bottles and nipples with bottled, boiled, or treated water before each use.
- Wash your hands before preparing formula and before feeding an infant. You can use alcohol-based hand sanitizer for washing your hands if the water supply is limited

### **Clean and sanitize food-contact surfaces.**

CDC recommends discarding wooden cutting boards, baby bottle nipples, and pacifiers . These items cannot be properly sanitized if they have come into contact with contaminated flood waters. Clean and sanitize food-contact surfaces in a four-step process:

1. Wash with soap and warm, clean water.
2. Rinse with clean water.
3. Sanitize by immersing for 1 minute in a solution of 1 teaspoon of chlorine bleach (5.25%, unscented) per gallon of clean water.
4. Allow to air dry.