Severe storms and hurricanes can lead to power outages and flooding. This can lead to unsafe food and drinking water. Prior planning can help you weather the storm with safe food and water. For more information, contact your local Cooperative Extension office by calling 1-800-ASK-UGA1.

AFTER THE STORM...

Salvaging Stored Foods

- Do not eat any food that may have come in contact with flood waters.
- Discard food not in a waterproof container if you suspect it may have come in contact with flood waters (including containers with screw-caps, snap lids, pull tops and crimped caps.)
- Home canned foods, boxes and bags of food and cardboard boxes containing juice, milk and baby formula should also be discarded if they come in contact with flood waters.
- Discard commercially canned food in metal cans if damaged. Examine the can for evidence of swelling, leakage, extensive rusting or severe dents. If these conditions are present, discard the product.
- Remove labels from undamaged cans, and wash the cans well with soap and hot water. Rinse with water safe for drinking. Place cans for 15 minutes in a mixture of 1 tablespoon chlorine bleach per gallon of water suitable for drinking. Allow cans to air-dry at least 1 hour before using or storing.

AFTER THE STORM...

Safety of Drinking Water

- When the safety of drinking water supplies are in question, use bottled water that has not been exposed to flood waters.
- If bottled water is not available, treat water to destroy disease-causing organisms that could be present.
- Filter cloudy water through clean cloth. Boil the water for one minute. After cooling for at least one minute, store the water in clean containers with lids.
- If boiling is not an option, disinfect the water using unscented chlorine bleach. Add 1/8 teaspoon (8 drops) for each gallon of water and let stand for 30 minutes. Some disease-causing organisms are resistant to chlorine, but chlorine treatment alone will certainly reduce risk in an emergency situation.

Judy A. Harrison, Ph.D., Extension Foods Specialist
FDNS – E-165 Revised 2016

The University of Georgia and Ft. Valley State University, the U.S. Department of Agriculture and counties of the state cooperating. Cooperative Extension, the University of Georgia Colleges of Agricultural and Environmental Sciences and Family and Consumer Sciences, offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, gender or disability.

An Equal Opportunity Employer/Affirmative Action Organization
Committed to a Diverse Work Force
BEFORE THE STORM...

- Place a refrigerator/freezer thermometer in your refrigerator and freezer before losing power.
- Make sure the temperature of your refrigerator is at 40 degrees F or colder and your freezer is at 0 degrees F or colder.
- Freeze containers of water for ice to help keep food cold in the refrigerator, freezer or coolers once the power goes out.
- Purchasing blocks of ice may be an option. Look for sources of block ice in the telephone directory.
- Dry ice (which is a solid form of carbon dioxide) can also be used. Look for sources of dry ice in the telephone directory.
- Keep the refrigerator and freezer doors closed as much as possible when the power is off. This will help them stay cold inside.

AFTER THE STORM...

- Discard perishable refrigerated foods like meats, poultry, fish, soft cheeses, milk, eggs, leftovers and deli items if the power stays off for more than 4 hours.
- If power has been out several days, check the thermometer in the freezer. If the temperature is 40 degrees F or colder or if the food still contains ice crystals, then it can be safely used. How long can you keep the food at 40 and still use it? Think about how long you would have been able to keep it in your refrigerator.
- When in doubt, throw it out!

BEFORE THE STORM...

- A refrigerator will keep food safely cold for about 4 hours if the door remains closed.
- Have coolers available to keep refrigerated foods cold if power is out for more than 4 hours.
- Freeze refrigerated foods like leftovers, milk and fresh meat that you may not need immediately.
- Group foods together in the freezer to help them stay cold longer.
- A full freezer will hold the temperature for about 48 hours, while a freezer that is half full will only maintain its temperature for about 24 hours if the door stays closed.
- Store boxed and canned foods and bottled water on high shelves to keep them away from contaminated water in case of flooding.
- Have a supply of plain, unscented chlorine bleach on hand that can be used for cleaning, sanitizing and treating drinking water.

BEFORE THE STORM...

- Have coolers available to keep refrigerated foods cold if power is out for more than 4 hours.
- Freeze refrigerated foods like leftovers, milk and fresh meat that you may not need immediately.
- Group foods together in the freezer to help them stay cold longer.
- A full freezer will hold the temperature for about 48 hours, while a freezer that is half full will only maintain its temperature for about 24 hours if the door stays closed.
- Store boxed and canned foods and bottled water on high shelves to keep them away from contaminated water in case of flooding.
- Have a supply of plain, unscented chlorine bleach on hand that can be used for cleaning, sanitizing and treating drinking water.
Food Safety During An Emergency

Did you know that a flood, fire, national disaster, or the loss of power from high winds, snow, or ice could jeopardize the safety of your food? Knowing how to determine if food is safe and how to keep food safe will help minimize the potential loss of food and reduce the risk of food-borne illness. This Consumer’s Guide will help you make the right decisions for keeping your family safe during an emergency.

Power Outages

We practice basic safe food handling in our daily lives, but obtaining and storing food safely becomes more challenging during a power outage or natural disasters such as hurricanes and floods.

STEPS TO FOLLOW TO PREPARE FOR A POSSIBLE WEATHER EMERGENCY:

Keep an appliance thermometer in the refrigerator and freezer. An appliance thermometer will indicate the temperature in the refrigerator and freezer in case of a power outage and help determine the safety of the food.

- Make sure the freezer is at 0 °F (Fahrenheit) or below and the refrigerator is at 40 °F or below.
- Freeze containers of water for ice to help keep food cold in the freezer, refrigerator, or coolers after the power is out.
- Freeze refrigerated items such as leftovers, milk, and fresh meat and poultry that you may not need immediately—this helps keep them at a safe temperature longer.
- Plan ahead and know where dry ice and block ice can be purchased.
- Store food on shelves that will be safely out of the way of contaminated water in case of flooding.
- Have coolers on hand to keep refrigerator food cold if the power will be out for more than 4 hours. Purchase or make ice cubes and store in the freezer for use in the refrigerator or in a cooler. Freeze gel packs ahead of time for use in coolers.
- Group food together in the freezer—this helps the food stay cold longer.
A Consumer's Guide To Food Safety

STEPs to Follow During and After the Weather Emergency:

- Never taste a food to determine its safety!

- Keep the refrigerator and freezer doors closed as much as possible to maintain the cold temperature.

- The refrigerator will keep food safely cold for about 4 hours if it is unopened. A full freezer will hold the temperature for approximately 48 hours (24 hours if it is half full and the door remains closed).

- Food may be safely refrozen if it still contains ice crystals or is at 40 °F or below.

- Obtain block ice or dry ice to keep your refrigerator and freezer as cold as possible if the power is going to be out for a prolonged period of time. Fifty pounds of dry ice should hold an 18-cubic-foot full freezer for 2 days.

- If the power has been out for several days, then check the temperature of the freezer with an appliance thermometer or food thermometer. If the food still contains ice crystals or is at 40 °F or below, the food is safe.

- If a thermometer has not been kept in the freezer, then check each package of food to determine its safety. If the food still contains ice crystals, the food is safe.

- Discard refrigerated perishable food such as meat, poultry, fish, soft cheeses, milk, eggs, leftovers, and deli items after 4 hours without power.

- When in Doubt, Throw it Out!
HOW TO DETERMINE WHAT FOOD TO KEEP OR DISCARD

- Do not eat any food that may have come into contact with flood water.

- Discard any food that is not in a waterproof container if there is any chance that it has come into contact with flood water. Food containers that are not waterproof include those with screw-caps, snap lids, pull tops, and crimped caps. Also, discard cardboard juice/milk/baby formula boxes and home canned foods if they have come in contact with flood water, because they cannot be effectively cleaned and sanitized.

- Inspect canned foods and discard any food in damaged cans. Can damage is shown by swelling, leakage, punctures, holes, fractures, extensive deep rusting, or crushing/denting severe enough to prevent normal stacking or opening with a manual, wheel-type can opener.

POTS, PANS, DISHES, AND UTENSILS:

- Thoroughly wash metal pans, ceramic dishes, and utensils (including can openers) with soap and water, using hot water if available. Rinse and then sanitize them by boiling in clean water or immersing them for 15 minutes in a solution of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available).

COUNTERTOPS:

- Thoroughly wash countertops with soap and water, using hot water if available. Rinse and then sanitize them by applying a solution of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available). Allow to air-dry.
STEPS TO SALVAGE ALL-METAL CANS AND RETORT POUCHES

Undamaged, commercially prepared foods in all-metal cans and retort pouches (for example, flexible, shelf-stable juice or seafood pouches) can be saved if you do the following:

- Remove the labels, if they are the removable kind, since they can harbor dirt and bacteria.
- Thoroughly wash the cans or retort pouches with soap and water, using hot water if it is available.
- Brush or wipe away any dirt or silt.
- Rinse the cans or retort pouches with water that is safe for drinking, if available, since dirt or residual soap will reduce the effectiveness of chlorine sanitation.
- Then, sanitize them by immersion in one of the two following ways:
  - Place in water and allow the water to come to a boil and continue boiling for 2 minutes, or
  - Place in a freshly made solution consisting of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available) for 15 minutes.
- Air-dry cans or retort pouches for a minimum of 1 hour before opening or storing.
- If the labels were removable, then re-label your cans or retort pouches, including the expiration date (if available), with a marker.
- Food in reconditioned cans or retort pouches should be used as soon as possible, thereafter.
- Any concentrated baby formula in reconditioned, all-metal containers must be diluted with clean, drinking water.
SAFETY OF DRINKING WATER IF FLOODING OCCURS

- Use bottled water that has not been exposed to flood waters if it is available.

- If you don’t have bottled water, you should boil water to make it safe. Boiling water will kill most types of disease-causing organisms that may be present. If the water is cloudy, filter it through clean cloths or allow it to settle, and draw off the clear water for boiling. Boil the water for one minute, let it cool, and store it in clean containers with covers.

- If you can’t boil water, you can disinfect it using household bleach. Bleach will kill some, but not all, types of disease-causing organisms that may be in the water. If the water is cloudy, filter it through clean cloths or allow it to settle, and draw off the clear water for disinfection. Add 1/8 teaspoon (or 8 drops) of regular, unscented, liquid household bleach for each gallon of water, stir it well and let it stand for 30 minutes before you use it. Store disinfected water in clean containers with covers.

- If you have a well that has been flooded, the water should be tested and disinfected after flood waters recede. If you suspect that your well may be contaminated, contact your local or State health department or agriculture extension agent for specific advice.
Food Safety: Removing Odors from Refrigerators & Freezers

Refrigerators and freezers are two of the most important pieces of equipment in the kitchen for keeping food safe. We are instantly reminded of their importance when the power goes off, flooding occurs, or the unit fails, causing food to become unsafe and spoil. The odors that develop when food spoils can be difficult to remove. Use this information to learn how to remove odors from units or how to safely discard an affected unit.

TO REMOVE ODORS FROM REFRIGERATORS AND FREEZERS

If food has spoiled in a refrigerator or freezer and odors from the food remain, they may be difficult to remove. The following procedures may help but may have to be repeated several times.

- Dispose of any spoiled or questionable food.
- Remove shelves, crispers, and ice trays. Wash them thoroughly with hot water and detergent. Then rinse with a sanitizing solution (1 tablespoon unscented, liquid chlorine bleach per gallon of water).
- Wash the interior of the refrigerator and freezer, including the door and gasket, with hot water and baking soda. Rinse with sanitizing solution as above.
- Leave the door open for about 15 minutes to allow free air circulation.
- If odor remains, try any or all of the following:
  - Wipe inside of unit with equal parts vinegar and water. Vinegar provides acid which destroys mildew.
  - Leave the door open and allow to air out for several days.
  - Stuff both the refrigerator and freezer with rolled newspapers. Close the door and leave for several days. Remove paper and clean with vinegar and water.
  - Sprinkle fresh coffee grounds or baking soda loosely in a large, shallow container in the bottom of the refrigerator and freezer.
  - Place a cotton swab soaked with vanilla inside the refrigerator and freezer. Close door for 24 hours. Check for odors.
  - Use a commercial product available at hardware and housewares stores. Follow the manufacturer’s instructions.
IF ODORS REMAIN

If odors cannot be removed, then the refrigerator or freezer may need to be discarded. If you need to discard the refrigerator or freezer, discard it in a safe manner:

- “Childproof” old refrigerators or freezers so children do not get trapped inside. The surest way is to take the door off.
- If the door will not come off, chain and padlock the door permanently and close tightly, or remove or disable the latch completely so the door will no longer lock when closed.

It is unlawful in many jurisdictions to discard old refrigerators or freezers without first removing the door.

Depending on where you live, your appliance will be picked up by your solid waste provider, a recycler, a retailer (if you buy a new unit), or program sponsored by local or regional utilities.

Refrigerator Foods

WHEN TO SAVE AND WHEN TO THROW IT OUT

<table>
<thead>
<tr>
<th>FOOD</th>
<th>Held above 40 °F for over 2 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEAT, POULTRY, SEAFOOD</td>
<td></td>
</tr>
<tr>
<td>Raw or leftover cooked meat, poultry, fish, or seafood; soy meat substitutes</td>
<td>Discard</td>
</tr>
<tr>
<td>Thawing meat or poultry</td>
<td>Discard</td>
</tr>
<tr>
<td>Meat, tuna, shrimp, chicken, or egg salad</td>
<td>Discard</td>
</tr>
<tr>
<td>Gravy, stuffing, broth</td>
<td>Discard</td>
</tr>
<tr>
<td>Lunchmeats, hot dogs, bacon, sausage, dried beef</td>
<td>Discard</td>
</tr>
<tr>
<td>Pizza – with any topping</td>
<td>Discard</td>
</tr>
<tr>
<td>Canned hams labeled “Keep Refrigerated”</td>
<td>Discard</td>
</tr>
<tr>
<td>Canned meats and fish, opened</td>
<td>Discard</td>
</tr>
<tr>
<td>CHEESE</td>
<td></td>
</tr>
<tr>
<td>Soft Cheeses: blue/bleu, Roquefort, Brie, Camembert, cottage, cream, Edam, Monterey Jack, ricotta, mozzarella, Muenster, Neufchatel, queso blanco, queso fresco</td>
<td>Discard</td>
</tr>
<tr>
<td>Hard Cheeses: Cheddar, Colby, Swiss, Parmesan, provolone, Romano</td>
<td>Safe</td>
</tr>
<tr>
<td>Processed Cheeses</td>
<td>Safe</td>
</tr>
<tr>
<td>FOOD</td>
<td>Held above 40 °F for over 2 hours</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td><strong>FOOD</strong></td>
<td></td>
</tr>
<tr>
<td>Shredded Cheeses</td>
<td>Discard</td>
</tr>
<tr>
<td>Low-fat Cheeses</td>
<td>Discard</td>
</tr>
<tr>
<td>Grated Parmesan, Romano, or combination (in can or jar)</td>
<td>Safe</td>
</tr>
<tr>
<td><strong>DAIRY</strong></td>
<td></td>
</tr>
<tr>
<td>Milk, cream, sour cream, buttermilk, evaporated milk, yogurt, eggnog, soy milk</td>
<td>Discard</td>
</tr>
<tr>
<td>Butter, margarine</td>
<td>Safe</td>
</tr>
<tr>
<td>Baby formula, opened</td>
<td>Discard</td>
</tr>
<tr>
<td><strong>EGGS</strong></td>
<td></td>
</tr>
<tr>
<td>Fresh eggs, hard-cooked in shell, egg dishes, egg products</td>
<td>Discard</td>
</tr>
<tr>
<td>Custards and puddings</td>
<td>Discard</td>
</tr>
<tr>
<td><strong>CASSEROLES, SOUPS, STEWS</strong></td>
<td></td>
</tr>
<tr>
<td>Discard</td>
<td></td>
</tr>
<tr>
<td><strong>FRUITS</strong></td>
<td></td>
</tr>
<tr>
<td>Fresh fruits, cut</td>
<td>Discard</td>
</tr>
<tr>
<td>Fruit juices, opened</td>
<td>Discard</td>
</tr>
<tr>
<td>Canned fruits, opened</td>
<td>Safe</td>
</tr>
<tr>
<td>Fresh fruits, coconut, raisins, dried fruits, candied fruits, dates</td>
<td>Safe</td>
</tr>
<tr>
<td><strong>SAUCES, SPREADS, JAMS</strong></td>
<td></td>
</tr>
<tr>
<td>Opened mayonnaise, tartar sauce, horseradish</td>
<td>Discard if above 50 °F for over 8 hrs.</td>
</tr>
<tr>
<td>Peanut butter</td>
<td>Safe</td>
</tr>
<tr>
<td>Jelly, relish, taco sauce, mustard, catsup, olives, pickles</td>
<td>Safe</td>
</tr>
<tr>
<td>Worcestershire, soy, barbecue, Hoisin sauces</td>
<td>Safe</td>
</tr>
<tr>
<td>Fish sauces (oyster sauce)</td>
<td>Discard</td>
</tr>
<tr>
<td>Opened vinegar-based dressings</td>
<td>Safe</td>
</tr>
<tr>
<td>Opened creamy-based dressings</td>
<td>Discard</td>
</tr>
<tr>
<td>Spaghetti sauce, opened jar</td>
<td>Discard</td>
</tr>
<tr>
<td><strong>BREAD, CAKES, COOKIES, PASTA, GRAINS</strong></td>
<td></td>
</tr>
<tr>
<td>Bread, rolls, cakes, muffins, quick breads, tortillas</td>
<td>Safe</td>
</tr>
<tr>
<td>Refrigerator biscuits, rolls, cookie dough</td>
<td>Discard</td>
</tr>
<tr>
<td>Cooked pasta, rice, potatoes</td>
<td>Discard</td>
</tr>
<tr>
<td>Pasta salads with mayonnaise or vinaigrette</td>
<td>Discard</td>
</tr>
<tr>
<td>Fresh pasta</td>
<td>Discard</td>
</tr>
<tr>
<td>Cheesecake</td>
<td>Discard</td>
</tr>
<tr>
<td>Breakfast foods –waffles, pancakes, bagels</td>
<td>Safe</td>
</tr>
<tr>
<td><strong>PIES, PASTRY</strong></td>
<td></td>
</tr>
<tr>
<td>Pastries, cream filled</td>
<td>Discard</td>
</tr>
<tr>
<td>Pies – custard, cheese filled, or chiffon; quiche</td>
<td>Discard</td>
</tr>
<tr>
<td>Pies, fruit</td>
<td>Safe</td>
</tr>
<tr>
<td><strong>VEGETABLES</strong></td>
<td></td>
</tr>
<tr>
<td>Fresh mushrooms, herbs, spices</td>
<td>Safe</td>
</tr>
<tr>
<td>Greens, pre-cut, pre-washed, packaged</td>
<td>Discard</td>
</tr>
<tr>
<td>Vegetables, raw</td>
<td>Safe</td>
</tr>
<tr>
<td>Vegetables, cooked; tofu</td>
<td>Discard</td>
</tr>
<tr>
<td>Vegetable juice, opened</td>
<td>Discard</td>
</tr>
<tr>
<td>Baked potatoes</td>
<td>Discard</td>
</tr>
<tr>
<td>Commercial garlic in oil</td>
<td>Discard</td>
</tr>
<tr>
<td>Potato Salad</td>
<td>Discard</td>
</tr>
</tbody>
</table>
# Frozen Food

## WHEN TO SAVE AND WHEN TO THROW IT OUT

<table>
<thead>
<tr>
<th>FOOD</th>
<th>Still contains ice crystals and feels as cold as if refrigerated</th>
<th>Thawed Held above 40 ºF for over 2 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MEAT, POULTRY, SEAFOOD</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beef, veal, lamb, pork, and ground meats</td>
<td>Refreeze</td>
<td>Discard</td>
</tr>
<tr>
<td>Poultry and ground poultry</td>
<td>Refreeze</td>
<td>Discard</td>
</tr>
<tr>
<td>Variety meats (liver, kidney, heart, chitterlings)</td>
<td>Refreeze</td>
<td>Discard</td>
</tr>
<tr>
<td>Casseroles, stews, soups</td>
<td>Refreeze</td>
<td>Discard</td>
</tr>
<tr>
<td>Fish, shellfish, breaded seafood products</td>
<td>Refreeze</td>
<td>Discard</td>
</tr>
<tr>
<td></td>
<td>However, there will be some texture and flavor loss</td>
<td></td>
</tr>
<tr>
<td><strong>DAIRY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>Refreeze</td>
<td>Discard</td>
</tr>
<tr>
<td></td>
<td>May lose some texture</td>
<td></td>
</tr>
<tr>
<td>Eggs (out of shell) and egg products</td>
<td>Refreeze</td>
<td>Discard</td>
</tr>
<tr>
<td>Ice cream, frozen yogurt</td>
<td>Refreeze</td>
<td>Discard</td>
</tr>
<tr>
<td>Cheese (soft and semi-soft)</td>
<td>Refreeze</td>
<td>Discard</td>
</tr>
<tr>
<td></td>
<td>May lose some texture</td>
<td></td>
</tr>
<tr>
<td>Hard cheeses</td>
<td>Refreeze</td>
<td>Refreeze</td>
</tr>
<tr>
<td>Shredded cheeses</td>
<td>Refreeze</td>
<td>Discard</td>
</tr>
<tr>
<td>Casseroles containing milk, cream, eggs, soft cheeses</td>
<td>Refreeze</td>
<td>Discard</td>
</tr>
<tr>
<td>Cheesecake</td>
<td>Refreeze</td>
<td>Discard</td>
</tr>
<tr>
<td><strong>FRUITS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Juices</td>
<td>Refreeze</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refreeze. Discard if mold, yeasty smell, or sliminess develops</td>
<td></td>
</tr>
<tr>
<td>Home or commercially packaged</td>
<td>Refreeze</td>
<td>Refreeze. Discard if mold, yeasty smell, or sliminess develops</td>
</tr>
<tr>
<td></td>
<td>Will change texture and flavor</td>
<td></td>
</tr>
<tr>
<td><strong>VEGETABLES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Juices</td>
<td>Refreeze</td>
<td>Discard after held above 40 ºF for 6 hours</td>
</tr>
<tr>
<td></td>
<td>Refreeze. Discard after held above 40 ºF for 6 hours</td>
<td></td>
</tr>
<tr>
<td>Home or commercially packaged or blanched</td>
<td>Refreeze</td>
<td>Discard after held above 40 ºF for 6 hours</td>
</tr>
<tr>
<td></td>
<td>Refreeze</td>
<td>Discard after held above 40 ºF for 6 hours</td>
</tr>
<tr>
<td></td>
<td>May suffer texture and flavor loss</td>
<td></td>
</tr>
<tr>
<td><strong>BREADS, PASTRIES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breads, rolls, muffins, cakes (without custard fillings)</td>
<td>Refreeze</td>
<td>Refreeze</td>
</tr>
<tr>
<td>Cakes, pies, pastries with custard or cheese filling</td>
<td>Refreeze</td>
<td>Discard</td>
</tr>
<tr>
<td>FOOD</td>
<td>Still contains ice crystals and feels as cold as if refrigerated</td>
<td>Thawed Held above 40 °F for over 2 hours</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>BREADS, PASTRIES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pie crusts, commercial and homemade bread dough</td>
<td>Refreeze</td>
<td>Refreeze</td>
</tr>
<tr>
<td></td>
<td>Some quality loss may occur</td>
<td>Quality loss is considerable</td>
</tr>
<tr>
<td>OTHER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casseroles – pasta, rice based</td>
<td>Refreeze</td>
<td>Discard</td>
</tr>
<tr>
<td>Flour, cornmeal, nuts</td>
<td>Refreeze</td>
<td>Refreeze</td>
</tr>
<tr>
<td>Breakfast items – waffles, pancakes, bagels</td>
<td>Refreeze</td>
<td>Refreeze</td>
</tr>
<tr>
<td>Frozen meal, entree, specialty items</td>
<td>Refreeze</td>
<td>Discard</td>
</tr>
<tr>
<td>(pizza, sausage and biscuit, meat pie, convenience foods)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Food Safety Contacts for Areas Affected by Severe Storms and Hurricanes

**FSIS**

**USDA’s Food Safety and Inspection Service**

Consumers with food safety questions can phone the toll-free **USDA Meat and Poultry Hotline** at **1-888-MPHotline** (1-888-674-6854); TTY, 1-800-256-7072.

The Hotline is available in English and Spanish and can be reached from 10 a.m. to 4 p.m. (ET) Monday through Friday. Recorded food safety messages are available 24 hours a day.

Consumers can also ask safe food handling questions by logging on to FSIS’ online automated response system called “Ask Karen,” on the Food Safety and Inspection Service’s Web site: [www.fsis.usda.gov](http://www.fsis.usda.gov)

E-mail inquiries can be directed to MPHotline.fsis@usda.gov.

Additional information about USDA’s food safety efforts can be accessed on the FSIS Web site at [www.fsis.usda.gov](http://www.fsis.usda.gov).

---

**CDC**

Centers for Disease Control and Prevention

- Call 1-800-CDC-INFO or 1-800-232-4636, TTY 1-888-232-6348, for information on hazards, safe clean up, and preventing illness and injury. Available in English and Spanish, 24 hours a day, 7 days a week. [www.cdc.gov](http://www.cdc.gov)

---

**FDA**

Food and Drug Administration

- For information on safe food handling for foods other than meat, poultry, or egg products, call FDA’s toll-free information line at 1-888-SAFEFOOD or 1-888-723-3366. [www.cfsan.fda.gov](http://www.cfsan.fda.gov)
- FDA emergency number, staffed 24 hours a day, 1-866-300-4374.

---

**OTHER**

Environmental Protection Agency

EPA’s Safe Drinking Water Hotline:

- 1-800-426-4791
- [www.epa.gov](http://www.epa.gov)

**Federal Emergency Management Agency (FEMA)**

Food and Water in an Emergency

- [www.fema.gov](http://www.fema.gov)

General Disaster Assistance Site: [www.foodsafety.gov](http://www.foodsafety.gov)

The U.S. Department of Agriculture prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual’s income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA’s Target Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Ave., SW, Washington, DC 20250-9410, or call (800) 795-3272 (voice) or (202) 795-3372 (TDD). USDA is an equal opportunity provider and employer.
Food and Water Safety During Power Outages and Floods

Emergencies can happen, especially with extreme weather conditions. When they do, the best strategy is to already have a plan in place. This includes knowing the proper food safety precautions to take before, during, and after a power outage — and being prepared to safely handle food and water in the event that flooding occurs.

Prepare Yourself Before Power Emergencies

1. Make sure you have appliance thermometers in your refrigerator and freezer.
   - Check to ensure that the freezer temperature is at or below 0° F, and the refrigerator is at or below 40° F.
   - In case of a power outage, the appliance thermometers will indicate the temperatures in the refrigerator and freezer to help you determine if the food is safe.

2. Freeze containers of water for ice to help keep food cold in the freezer, refrigerator, or coolers in case the power goes out. If your normal water supply is contaminated or unavailable, the melting ice will also supply drinking water.

3. Freeze refrigerated items such as leftovers, milk, and fresh meat and poultry that you may not need immediately. This helps keep them at a safe temperature longer.

4. Group food together in the freezer. This helps the food stay cold longer.

5. Have coolers on hand to keep refrigerated food cold if the power will be out for more than 4 hours.

6. Purchase or make ice cubes in advance, and freeze gel packs ahead of time. Store all of these in the freezer for future use in the refrigerator or in coolers.

7. Check out local sources to know where dry ice and block ice can be purchased, in case it should be needed.

8. Store food on shelves that will be safely out of the way of contaminated water in case of flooding.

9. Make sure to have a supply of bottled water stored where it will be as safe as possible from flooding. If your bottled water has an odor, do not drink or use it. Instead, dispose of it, or if applicable, call your bottled water provider to make arrangements to get a replacement.

During an emergency, if you use food or beverage containers to hold non-food substances like gasoline, dispose of them after use and do not recycle them.
**Power Outages: Before and After**

### If the Power Goes Out . . .

Follow these basic tips to keep food safe:

1. **Keep the refrigerator and freezer doors closed** as much as possible to maintain the cold temperature.
   - The refrigerator will keep food cold for about 4 hours if it is unopened.
   - A full freezer will keep the temperature for approximately 48 hours (24 hours if it is half full) if the door remains closed.

2. **Buy dry or block ice** to keep the refrigerator as cold as possible if the power is going to be out for a prolonged period of time. Fifty pounds of dry ice should keep an 18 cubic foot, fully stocked freezer cold for two days.

3. If you plan to eat refrigerated or frozen meat, poultry, fish, or eggs while they are still at safe temperatures, it is important that each item is **thoroughly cooked to a safe minimum internal temperature** to ensure that any foodborne bacteria that may be present are destroyed. However, if at any point the food was above 40º F for 2 hours or more (or 1 hour if temperatures are above 90 º F) — **discard it**.

### Once Power Is Restored . . .

Determine the safety of your food:

1. If an appliance thermometer was kept in the freezer, **check the temperature** when the power comes back on. If the freezer thermometer reads 40º F or below, the food is safe and may be refrozen.

2. If a thermometer has not been kept in the freezer, **check each package** of food to determine its safety. You can’t rely on appearance or odor. If the food **still contains ice crystals** or is 40º F or below, it is safe to refreeze or cook.

3. Refrigerated food should be safe as long as the power was out for no more than 4 hours and the refrigerator door was kept shut. Discard any perishable food (such as meat, poultry, fish, eggs, or leftovers) that has been at temperatures above 40º F for 2 hours or more (or 1 hour if temperatures are above 90º F).

Perishable food such as meat, poultry, seafood, milk, and eggs that are not kept adequately refrigerated or frozen may cause illness if consumed, even when they are thoroughly cooked.

---

### If Flooding Occurs

**Keep Water Safe**

Follow these steps to keep your WATER SAFE during and after flood conditions.

1. **Only use water from a safe source** for drinking and washing or preparing food.
2. **Use bottled water** that has not been exposed to flood waters, if it is available.
3. If you don’t have bottled water, you should **boil or disinfect water** to make it safe. (see steps below)
4. If you have a **well** that has been flooded, the water should be **tested and disinfected** after flood waters recede. If you suspect that your well may be contaminated, contact your local or state health department or agricultural extension agent for specific advice.

Be prepared to safely handle food and water in the event that flooding occurs.
**How to Boil or Disinfect Water To Make It Safe**

If the water is cloudy, first filter it through clean cloths, or allow it to settle and then draw off the clear water for boiling/disinfecting. Then, follow one of these two procedures:

<table>
<thead>
<tr>
<th>Boiling</th>
<th>Disinfecting with Bleach</th>
</tr>
</thead>
</table>
| Boiling water will kill most types of disease-causing organisms that may be present.  
1. Boil the water for 1 minute.  
2. Let it cool, and store it in clean containers with covers. | Bleach will kill some, but not all, types of disease-causing organisms that may be in the water.  
1. Acid 1/8 teaspoon (or 8 drops) of unscented, liquid chlorine bleach per gallon of water.  
2. Stir it well and let it stand for at least 30 minutes before you use it.  
3. Store disinfected water in clean containers with covers. |

**Keep Food Safe**

Follow these steps to keep your FOOD SAFE during and after flood conditions.

1. **Do not eat** any food that may have come into contact with flood water.

2. **Discard any food and beverage that is not in a waterproof container** if there is any chance that it has come into contact with flood water.  
   - Food containers that are waterproof include undamaged, commercially prepared foods in all-metal cans and “retort pouches” (like flexible, shelf-stable juice or seafood pouches).  
   - Food containers that are not waterproof include those with screw-caps, snap lids, pull tops, and crimped caps.  
   - Also discard cardboard juice/milk/baby formula boxes and home canned foods if they have come in contact with flood water, because they cannot be effectively cleaned and sanitized.

3. **Discard any food in damaged cans.** Damaged cans are those with swelling, leakage, punctures, holes, fractures, extensive deep rusting, or crushing/denting that is severe enough to prevent normal stacking or opening with a manual, wheel-type can opener. See box on next page for steps to clean/save undamaged packages.

4. **Thoroughly wash metal pans, ceramic dishes, and utensils** (including can openers) with soap and water, using hot water if available. Rinse and then sanitize them by boiling in clean water or immersing them for 15 minutes in a solution of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available).

5. **Thoroughly wash countertops** with soap and water, using hot water if available. Rinse and then sanitize by applying a solution of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available). Allow to air dry.
How To Save Undamaged Food Packages Exposed to Flood Water

Undamaged, commercially prepared foods in all-metal cans and “retort pouches” (like flexible, shelf-stable juice or seafood pouches) can be saved if you follow this procedure.

1. Remove the labels, if they are the removable kind, since they can harbor dirt and bacteria.
2. Brush or wipe away any dirt or silt.
3. Thoroughly wash the cans or retort pouches with soap and water, using hot water if it is available.
4. Rinse the cans or retort pouches with water that is safe for drinking, if available, since dirt or residual soap will reduce the effectiveness of chlorine sanitation.
5. Sanitize cans and retort pouches by immersion in one of the two following ways:
   • Place in water and allow the water to come to a boil and continue boiling for 2 minutes.
   • Place in a freshly made solution consisting of 1 tablespoon of unscented liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available) for 15 minutes.
6. Air dry cans or retort pouches for a minimum of 1 hour before opening or storing.
7. If the labels were removable, then re-label your cans or retort pouches, including the expiration date (if available), with a permanent marking pen.

Food in reconditioned cans or retort pouches should be used as soon as possible thereafter.

Baby Formula Tip
For infants, try to use prepared, canned baby formula that requires no added water. Otherwise, dilute any concentrated baby formula in reconditioned, all-metal containers with clean drinking water.

About Foodborne Illness

Know the Symptoms
Consuming dangerous foodborne bacteria will usually cause illness within 1 to 3 days of eating the contaminated food. However, sickness can also occur within 20 minutes or up to 6 weeks later. Although most people will recover from a foodborne illness within a short period of time, some can develop chronic, severe, or even life-threatening health problems.

Foodborne illness can sometimes be confused with other illnesses that have similar symptoms. The symptoms of foodborne illness can include:
• Vomiting, diarrhea, and abdominal pain
• Flu-like symptoms, such as fever, headache, and body ache

Take Action
If you think that you or a family member has a foodborne illness, contact your healthcare provider immediately. Also, report the suspected foodborne illness to FDA in either of these ways:
• Contact the Consumer Complaint Coordinator in your area. Locate a coordinator here: http://www.fda.gov/Safety/ReportaProblem/ConsumerComplaintCoordinators
• Contact MedWatch, FDA’s Safety Information and Adverse Event Reporting Program:
  By Phone: 1-800-FDA-1088
  Online: File a voluntary report at http://www.fda.gov/medwatch
FOOD SAFETY BEFORE, DURING AND AFTER A POWER OUTAGE

Know how to keep food safe before during and after emergencies. Hurricanes, tornadoes, winter weather and other events may cause power outages. Follow these tips to help minimize food loss and reduce your risk of foodborne illness.

BEFORE PLAN AHEAD (IF YOU CAN)...

- Put appliance thermometers in your refrigerator and freezer.
- Keep freezer at 0°F or below.
- Freeze containers of water and gel packs to help keep food cold if the power goes out.
- Refrigerator at 40°F or below.
- Group foods together in the freezer to help food stay colder longer.
- Freeze refrigerated items such as leftovers, milk, and fresh meat and poultry that you do not need immediately.
- If you think power will be out for an extended period of time, buy dry or block ice to keep the fridge or freezer cold.
- Store nonperishable foods on higher shelves to avoid flood water.

DURING WHILE THE POWER IS OUT...

- Keep the refrigerator and freezer doors closed to maintain cold temperature.
- If doors stay closed...
  - a full freezer will hold its temperature for 48 HOURS
  - a half-full freezer will hold its temperature for 24 HOURS
  - a fridge will keep food safe for 4 HOURS

WHEN IN DOUBT, THROW IT OUT!

- Check the temperature inside of your refrigerator and freezer. If they’re still at safe temperatures, your food should be fine.
- Never taste food to determine its safety!

WHAT CAN I KEEP?

The following foods are safe if held above 40°F for more than 2 hours:

- Hard cheeses (Cheddar, Colby, Swiss, Parmesan, Romano, Asiago)
- Grated Parmesan, Romano, or combination (in can or jar)
- Butter or margarine
- Opened fruit juices
- Opened canned fruits
- Jelly, relish, taco sauce, mustard, ketchup, olives, pickles
- Worcestershire, soy, barbecue, and Italian sauces
- Potted meat
- Bread, rolls, cakes, muffins, quick breads, tortillas
- Breakfast foods (waffles, pancakes, bagels)
- Fresh mushrooms, herbs, and spices
- Uncut raw vegetables and fruit

WHAT SHOULD I THROW OUT?

- Meat, poultry or seafood products
- Soft cheeses and shredded cheeses
- Milk, cream, yogurt, and other dairy products
- Opened baby formula
- Eggs and egg products
- Dough, cooked pasta
- Opened meats
- Cooked or cut produce
- Refrigerated foods

FOLLOW THESE STEPS AFTER A FLOOD:

- DO NOT EAT any food that may have touched flood water.
- DISCARD FOOD not in waterproof containers; screw-caps, snap lids, pull tabs, and crimped tops are not waterproof.
- DISCARD cardboard juice/milk/baby formula boxes and home canned foods
- DISCARD any damaged cans that have swelling, leakage, punctures, holes, fractures, extensive depth rusting, or crushing/denting severe enough to prevent normal stacking or opening.

SANITIZE

1 tbsp bleach + 1 gallon water

Pots, pans, dishes and utensils

Undamaged all-metal cans after removing labels

For more food safety tips, go to

FoodSafety.gov