



Hurricane preparation and recovery tips

Public Health Information Brief

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Background and Summary

Hurricane season

Hurricane season is a period of several months, particularly warm weather months, during the year when conditions are conducive for the development of damaging hurricanes in regions in the Pacific and Atlantic Oceans, as well as the Caribbean Sea. In the Pacific, hurricane season runs from May 15 through November 30, while the Atlantic season is slightly shorter, June 1 to November 30.

Hurricane dangers and crisis management

Hurricanes can create powerful winds, excessive rains, and storm surges. These natural phenomena can damage structures, cause power outages, create flooding situations, as well as other storm-related issues. While the following tips can help you prepare for and recover from a hurricane, they are not a replacement for a tested crisis management plan.

Hurricane Preparation

Communication

A clearly outlined communications plan will keep you and your team functioning as a unit during a hurricane threat. Ensure that you have a contingency plan in place for deciding when to close or offer alternate operations (e.g., limited menu or changed shift schedule) and that all employees know their roles. Emergency numbers and contact lists should be available for employees and should include:

- Managers
- Red Cross
- Public health authorities
- Bottled/Potable water supplier
- Regional/Corporate offices
- Water and sewer facilities
- Other necessary government or municipal agencies
- Equipment rental, including refrigerator truck or equipment
- Police
- Gas utilities
- Plumber
- Fire department
- Electric company
- Dry ice supplier

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Supplies

Emergency preparedness supplies are a good idea to have on hand at all times. Hurricanes may necessitate further emergency supplies. Consider having the following items on hand if a hurricane is forecast.

- Flashlights
- First aid supplies
- Hand sanitizer or wipes
- Tarps, ropes, and plastic bags
- Battery-operated radio
- Pen and paper
- Non-perishable packaged or canned food
- Plywood for boarding windows
- Extra batteries
- Bottled water supplies
- Blankets and pillows

Facilities

In the event that your facility is advised to close, it is important that you, your employees and guests follow evacuation orders to protect your safety. A few additional steps may help you protect your facility and your food in the event of significant storm damage.

- If power outages are expected, avoid excessive opening and closing of freezers and refrigerators. Record product temperatures and time so that you can assess food safety following a power outage.
- If a hurricane is imminent or if your facility is evacuated, shut off the gas supply to any gas-powered equipment.
- Prepare for extended power outages by arranging for alternate food cooling and storage. Refrigerated storage and frozen back up are optimal but may be difficult to obtain during emergencies. Consider pre-ordering dry ice. A 50-pound block of dry ice for every 18 cubic feet will last approximately 2 days.
- Clear debris from gutters, drains and downspouts to allow for proper drainage from roof. This could help prevent roof damage and flooding in your facility.
- Board windows or protect with tape. Closing curtains and blinds may help offer some protection against broken glass.
- Secure any objects, both outdoor and indoor, that could be blown away by strong winds. Outdoors, this may include seating and tables, hostess stations, umbrellas, planters, signage and other decorative items. Inside, this includes kitchen items such as knives, cutting boards, pans, etc.
- Ensure all exits are clear in case a sudden evacuation becomes necessary.
- Have all company vehicles fueled in case evacuation or relocation is necessary. In addition, consider advising employees to have enough fuel in their cars to relocate to safer areas in case of evacuation.

Hurricane Preparation

Power Outages

One of the biggest dangers in a hurricane is the loss of power and how it affects food storage. Many Time/Temperature Control for Safety Foods (TCS Foods) may need to be destroyed if they go out of temperature range. Temperature abused foods can grow harmful bacteria and spoil, putting people at risk for foodborne illness.

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- As soon as possible after losing power, create ice baths for TCS Foods – eggs, meats, seafood, milk, cheese, prepared foods, cooked vegetables. This may help preserve TCS foods if the power outage is limited to a few hours.
- Monitor and document product temperatures as long as it is safe to remain in the building or if the power outage is confirmed to be brief.
- Avoid opening reach-in and walk-in cooler doors as much as possible to keep foods cold. A freezer in good condition may maintain its temperature for up to 24 hours if unopened.
- Discard any TCS Foods that have been above 41° F for more than 2 hours or if the time out of temperature control is unknown. Use a calibrated thermometer to test the temperature of foods.
- After a power outage, use your senses: Any food that smells off, looks off-color or has changed texture should be immediately discarded. Never taste suspect food items; if food has spoiled or been contaminated, you could make yourself sick.
- If power is expected to be out for an extended time, dry ice can help keep refrigeration temperatures at 41° F or below. Be cautious when using dry ice, as it can produce dangerous carbon dioxide gas in closed areas.
- Discard any thawed frozen items.

Floods

Flood water has the potential to significantly damage facilities, but it is also a significant food safety hazard. All flood water has the potential to be contaminated with sewage and agricultural waste. Therefore, if your facility has had flooding, even minor, take the following precautions.

- Before performing any flood clean up or entering an area where flood waters are still present, wear protective gear such as boots and coveralls. Avoid skin contact with the water.
- All of the following should be discarded if they have come into contact with flood waters:

– Foods	– Grains	– Foils and plastic wrap	– Wooden cutting boards
– Single service items	– Spices and seasonings	– Jars/bottles with screw caps, flip tops, snap tops, twist caps, etc.	
- Fabric furnishings and carpets must be discarded. Some equipment may need to be discarded if it cannot be disinfected or if it is not functional.
- Affected walls, floors, and surfaces must be washed, rinsed and disinfected. Use a disinfectant that is effective against norovirus or prepared a 1000 - 5000 ppm chlorine solution by adding 1/8 cup to 1 cup of concentrated household bleach (8.25%) to 1 gallon of potable water. It is essential to remember to use unscented bleach, wear gloves and make fresh bleach solutions daily. Metal, glass or ceramic pans, dishes, or utensils that contact flood waters must be washed, rinsed and disinfected before use. Food contact surfaces must be rinsed with potable water following the use of this disinfecting solution.
- Canned goods that have come into contact with flood water and are not damaged, dented or rusted may be salvaged. Remove labels, and relabel cans with the contents and expiration date using a permanent marker. After washing and rinsing, immerse cans for 15 minutes into the disinfecting solution as described above. Allow to drain and air dry.

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Water Supply

A clean water supply and sufficient plumbing are necessary for any food operation to conduct business. While your local health authority will have the most up-to-date information, the following steps may be necessary if water service is interrupted or becomes contaminated.

- If water is contaminated or a boil water advisory is in effect, use bottled water for drinking and cooking. Boiled water or a source of potable water must be used for all hand washing.
- In a disaster, drink only bottled water that has not come into contact with flood waters.
- A dish machine or dishwasher should only be used if 180° F or hotter rinse water is available. In the absence of a usable dish machine, use a three-compartment sink to wash wares with boiled water. Disposable dishes, cutlery and cups may be the best option if you are unsure of available water temperatures or unable to boil water.
- If water has been contaminated, do not use any ice from ice machines or soda fountains. Once water service is restored and before using the machine, discard the first cycle of ice, then clean and sanitize ice bins after flushing the ice machine system. Flush all water lines for a minimum of 5 minutes.
- Do not reopen foodservice facilities until there is a source of potable water for hand washing, cleaning and sanitizing, and cooking.
- Toilet facilities must be available to employees. A contingency plan may need to be developed if plumbing is disrupted.

Pest Issues

Flooding, rains, and winds associated with hurricanes can also create pest issues. Many pests are attracted to moisture and may gravitate to waterlogged facilities following a storm. Even minor flooding may displace pests and create pest issues unseen before a storm. Finally, standing water left behind by storms can attract pests, such as mosquitoes, that are potentially dangerous to people.

Following a storm, assess the following areas of concern:

- If your facility has flooded, remove and discard saturated carpets.
- Repair any structural damage as soon as possible. Holes, gaps and weakened structures can provide opportunities for rodents to enter your facility. Remember, rodents can fit through gaps as small as ¼-inch.
- Review exterior areas for standing water. This includes landscaping, parking lots, and the roof of your building, among others. You may need to contact outside resources to help remove standing water if it is not freely draining.
- Remove all debris from exterior areas. Pests will look for opportunities and may make their home or build nests in piles of leaves and other debris.
- Be vigilant about monitoring for pest issues in the days following a storm. Record any pest sightings and contact your pest management company immediately if you notice increased activity.

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Mosquito-borne illnesses are a very real threat in the weeks following hurricanes, as the presence of standing water increases mosquito breeding potential. West Nile virus is of particular concern in the United States, but other mosquito-borne illnesses are also of concern.

If your area has been impacted by a hurricane, consider mosquito treatments by a professional pest management provider. To protect yourself, your employees, and your family against mosquitoes, follow these six steps:

- Remove standing water. Prior to or following a hurricane or flooding event, these actions will be especially important. Empty and remove items that collect water such as tires, flower pots, children's toys, bird baths, etc. Clean out gutters and ensure they are free-flowing. Fix leaking outdoor faucets, clear puddles, and check that automatic sprinkler systems are functioning properly or turned off if heavy rains are anticipated.
- Use insect repellent. To be most effective, repellents should contain DEET, picaridin, or oil of lemon eucalyptus. Look for EPA approval on the bottle or container. Apply repellent to both exposed skin and clothing.
- Wear the right clothing. Wear long sleeves, long pants, and socks, especially if you are outside at dusk or dawn, near water, or heavily wooded areas.
- Avoid peak mosquito hours. Mosquitoes are most active in the hours at dusk and dawn. Take extra precautions if you're outside during this time.
- Install or repair screens. Screens can keep mosquitoes and other insect pests from invading structures. Be sure that mesh is small enough to keep insects out. Repair holes that may have been caused by flying debris or replace damaged screens altogether.
- Report dead birds. Certain species of birds are very susceptible to West Nile virus. By reporting dead birds to your local health authority, you may help prevent the spread of this dangerous mosquito-borne disease.

Government Resources

You may find additional helpful information regarding hurricane preparation and recovery on these government websites:

- FoodSafety.gov Emergency Preparedness Website
<http://www.foodsafety.gov/keep/emergency/>
- Department of Homeland Security Ready.gov Website
<https://www.ready.gov/hurricanes>
- Centers for Disease Control and Prevention Hurricane & Flood Recovery Website
<https://www.cdc.gov/disasters/hurricanes/>

Steritech Resources

Steritech can assist you with crisis management planning for post-hurricane clean up and recovery, as well as any questions you may have about food safety following a storm. Steritech's Customer Care Center is available 24 hours a day, 7 days a week at 800.868.0089 to assist you with any of your needs.

Steritech

Get in Touch.

Steritech.com

800.868.0089

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