

Emergency Handbook FOR FOOD MANAGERS

APC
Advanced Practice Centers

This Emergency Handbook was developed as a quick reference guide to provide step-by-step emergency information to food managers and other supervisory personnel at food service establishments. The handbook:

- Addresses both naturally occurring and man-made emergencies.
- Provides prompts for whom to call, first steps to take and subsequent recovery actions to follow after an emergency happens.
- Contains tips on managing longer-term emergencies caused by disruption of utilities and municipal services.
- Offers ongoing food security and emergency preparedness advice.

Large-scale, widespread and catastrophic emergencies will require expert assessment and advice tailored in real time to the specific situation. In such instances, emergency alert systems, news outlets and emergency responders will supplement this handbook as crucial sources of information.

Day in and day out, it is the responsibility of food managers to maintain food safety in their establishments. Food service operations should immediately be discontinued whenever food safety is compromised by an emergency incident. The operation should remain closed until the local health authority grants approval to reopen.

Most food managers will, at some point, encounter the challenges presented by natural disasters and the subsequent emergencies they can cause - power outages, wind damage, flooding and burst pipes, among them. Accidental chemical releases from nearby industries and transportation routes should also be anticipated. In today's atmosphere of heightened homeland security, the potential threats of biological, radiological and chemical terrorism need also be given serious consideration.

This handbook offers practical guidance to food managers in all of these areas.

Bottom line: It's all about keeping our food supply safe.

Much of the information contained in this handbook and accompanying educational materials was obtained from information offered by the American Red Cross, Federal Emergency Management Agency, Massachusetts Department of Public Health, Michigan Department of Agriculture, Minnesota Department of Agriculture, Minnesota Department of Health and Santa Clara County Advanced Practice Center.

Special thanks to Twin Cities metropolitan area food service managers who participated in focus groups and provided input to improve the content of this handbook.

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*A project of the
Twin Cities Metro Advanced Practice Center (APC)
supported by funding from the
National Association of County and City Health Officials (NACCHO):*

*Hennepin County Public Health Protection
Saint Paul-Ramsey County Department of Public Health
City of Minneapolis Environmental Management & Safety*

www.naccho.org/EQUIPh/

First printing, September 2005

DO THIS FIRST!

- **Close the facility.**
It's not safe to operate without lights, refrigeration, ventilation or hot water.
- **Write down the TIME when the power outage occurred.**
Your food safety "time clock" starts ticking when the power goes out.
- **Begin taking regular food TEMPERATURE readings.**
 - Have a food thermometer at-the-ready at all times.
 - Check hot foods every hour and cold foods every two hours.
 - Keep a time/temperature record for every item checked in every unit.
(Note: Make copies of Food Temperature Log, Page 21, and use to keep records.)

FOOD SAFETY FACTORS

Watch these four food conditions carefully:

- A. **Foods being cooked when power went off.**
 - Do not serve any partially cooked food.
 - If power outage is brief (under 1 hour), re-cook food to 165°F when power returns.
 - If power is out for more than 1 hour, discard all partially cooked food.
- B. **Foods being held hot (e.g., 140°F or above in a warmer)**
 - Once food is below 140°F for more than four hours, discard it.
 - If food is below 140°F for less than four hours, rapidly reheat it to 165°F on stove or in oven before serving.
- C. **Foods being held cold (e.g., 41°F or below in a refrigerator)**
 - Write down time when food rises above 41°F.
 - If food cannot be re-chilled to 41°F within four hours, discard it.
- D. **Frozen foods that thaw out**
 - If thawed food does not exceed 41°F for more than four hours, it may be refrozen.
(Note: Refreezing can make some foods watery or mushy).



ROAD TO RECOVERY

After the power comes back on...

1. Decide which foods to discard and which to salvage. Use time/temperature records and food safety factors described here. *(Note: Make copies of Food Temperature Log, Page 21, and use to keep records.)*
2. Verify electrical breakers, utilities and all equipment are in working order.
3. Make sure hot water is being heated adequately for hand and ware washing.
4. Clean and sanitize food equipment and utensils as needed.
5. Call your local health department before reopening.

READY TO REOPEN?

You're ready to reopen only after making sure the food you are serving is safe.

POTENTIALLY HAZARDOUS FOODS (PHF)

Foods to be most concerned about during a power outage include various egg, milk and meat products, cut melons and other perishables. Harmful microorganisms can grow in these foods and cause illnesses when between 41°F and 140°F. Examples:

- Meat and meat dishes
- Mixed dishes (soups, stews, casseroles, pasta/rice)
- Dairy and egg products (milk, eggs, cream sauces, soft cheeses)
- Cut melons, cooked vegetables (cut watermelon, honeydew, cooked peas)
- Some desserts (pumpkin pie, custard-filled pastry, cheesecake, meringue, chiffon)



NON-POTENTIALLY HAZARDOUS FOODS (non-PHF)

These foods may be kept at room temperature. Harmful microorganisms usually do not grow on these foods and do not cause illnesses. Discard these foods if quality deteriorates or mold grows on them. Examples:

- Breads, dry flour, dry pasta, dry rice, sugar
- Vinegar-based dressings, ketchup, relish, mustard, condiments
- High-sugar foods (jellies, fruit pies, dried fruit, juices)
- Hard cheeses, solid butter, whole fresh fruits/vegetables

KEEPING COLD FOOD COLD LONGER

- Keep refrigerator doors closed, except while checking temperatures every two hours.
- Cover open coolers with tarps or blankets.
- Avoid adding hot foods to refrigerators.
- Group chilled foods together to reduce warming.

(Note: A closed refrigerator can keep food cold for up to four hours; a closed freezer for up to two days. A half-filled freezer will warm up twice as fast as a full one.)

HELPFUL HINTS

Reduce the impact of a power outage by:

- Canceling incoming food supply shipments.
- Transferring food to off-site cold storage facilities.
- Placing dry ice blocks in refrigerators/freezers. A 25-pound block of dry ice can keep a 10-cubic-foot freezer cold for up to four days.

(Note: Dry ice produces carbon dioxide gas that should be ventilated.)

DO THIS FIRST!■ **DECIDE: Stay open or close?**

- Stay open – if flooding or sewage back-up is contained and can be quickly corrected.
- Close – if any food storage, prep or service area is at risk of contamination.

Note: Flood waters and sewage can contain rotting food, feces, chemicals and disease-causing organisms which will contaminate the operation and easily cause food-borne illnesses. If flooding or sewage back-up can not immediately be contained and cleaned up, the facility should be closed until it can.

■ **GET HELP**

If facility has been flooded:

- Call the city building inspector (to determine safety of structure).
- Call utility companies (to assure safety of gas, electric and telephone).
- Call a sewage-pumping contractor (if septic tank is flooded).
- Call a well contractor (for disinfection of contaminated well water).
- Call your property insurance company (to file a possible claim).
- Call local health department (for response and clean-up advice).

(Note: Keep these contact numbers in the front pocket of this binder)

If sewer has backed up:

- Call a licensed plumber to remove blockages in drain lines.
- Call a sewage-pumping contractor if septic tank is overfilled.
- Call local health department (for response and clean-up advice).

FOOD SAFETY FACTORS

Discard all food that has been in direct contact with flood water or sewage and anything that cannot be washed and disinfected. **WHEN IN DOUBT, THROW IT OUT!**

Discard:

- Foods in porous paper, plastic or cellophane packaging that became wet (e.g. boxes or bags of flour, cereal, mixes, rice, salt).
- Exposed bulk foods, fresh produce, meat, poultry, fish and eggs.
- Containers with screw tops, corks, crowns, caps or pull tabs that became wet (e.g. glass/plastic containers of ketchup, dressings, milk, mayonnaise, sauces, beverages).
- Rusted, pitted, dented, swollen or leaking canned goods.
- Refrigerated or frozen foods that have been over 41°F and hot foods that have been under 140°F for four or more hours.
- Contaminated single-service items.

**Salvage:**

- All foods not exposed to flood or sewage water
- Undamaged canned goods that have been sanitized
 1. Paper label removed
 2. Washed with soap and water, then rinsed
 3. Sanitized with sanitizing solution, then air dried
 4. Relabeled with permanent marker.

(Note: See Discard/Salvage Guidelines, Page 19)



ROAD TO RECOVERY

Consult professional companies for clean-up services after a flood or sewage back-up inside a building. If restaurant employees are involved in the clean-up work, the following guidelines are important to protect their safety and health.

- Wear eye protection, rubber boots and gloves and outer protective clothing (coveralls or long-sleeve shirts and long pants) when handling items contaminated with flood or sewer water.
- If mold problems are identified, wear a properly fitted filtration mask that carries the N-95 designation from NIOSH.
- Do not walk between contaminated areas and other areas of the establishment without removing protective gloves, footwear and clothing.
- Wash your hands thoroughly after working in the contaminated area.



General cleaning - hard, non-porous surfaces (floors, walls, equipment)

- Remove all sewage, mud, silt or other solids and then remove excess water.
- Use a stiff brush, water, detergent, and disinfectant to scrub floors followed by a clean water rinse. Repeat wash and sanitize steps to prevent mold growth.
- Use fans, heaters, air conditioners or dehumidifiers to help the drying process.
- Clean all hard surfaces (equipment, ice machine, counters, furniture) with hot water and detergent; rinse with water; then disinfect with sanitizing solution.

Wash or discard - linens, mops, apparel (contaminated by event or during clean-up)

- Wash all contaminated items such as linens and clothing used in the clean-up in detergent and hot water.
- Launder or discard mops and any cleaning aids that contacted flood or sewer water.

Discard - porous, soft, absorbent and other uncleanable items

- Discard all damaged food equipment, utensils and linens.
- Discard all soft, porous materials because they are not cleanable, such as:
 - ♦ Contaminated drywall, insulation and paneling.
 - ♦ Contaminated furnishings, carpets, pillows, wall coverings, paper.
 - ♦ Contaminated books, paperwork, menus.
- Discard any exposed item that cannot be effectively disinfected (e.g., toaster).

READY TO REOPEN?

- Call your local health department for a pre-opening inspection.

HELPFUL HINTS

Use CAUTION tape to isolate a small flooded or sewage back-up area to keep customers and employees from walking through, getting exposed to, and spreading contamination.

SANITIZING SOLUTION

Use 1 tablespoon of household bleach (without additives) per gallon of water.

DO THIS FIRST!

- **Uncontrolled fire: Evacuate facility! CALL 911!**
- **Confined fire: Extinguish with on-site extinguisher. Call health department.**

Customer and employee safety is the first priority. Even a small, contained fire can temporarily cause unsafe food service conditions.

- Close the facility, if even temporarily, until food safety can be assured.
- Reopen only after taking necessary recovery steps.

FOOD SAFETY FACTORS

After a fire, many foods may no longer be safe to serve.

- **Discard:**
 - Food in opened containers.
 - Food in paper or cardboard containers.
 - Disposables in opened sleeves or liners.
 - Any food or disposable that shows water or heat damage.
 - Food in screw-type lids.
 - Refrigerated or frozen foods that have been above 41°F for more than 4 hours.
 - Ice in ice bins.
 - Cans that are dented or rusty.
 - Any food that appears damaged. *(Note: See Discard/Salvage Guidelines, Page 19)*
- **Call your local health department for an inspection and assessment.**



ROAD TO RECOVERY

- | | |
|--|--|
| <ul style="list-style-type: none"> ■ Assess impacts on: <ul style="list-style-type: none"> • electrical service • physical facilities • equipment • offensive odors and chemical residues • natural gas ■ Call: <ul style="list-style-type: none"> • local building official
(to determine building safety) • your building insurance company | <ul style="list-style-type: none"> ■ Equipment: <ul style="list-style-type: none"> • evaluate condition • clean and repair • remove unusable equipment • follow all fire, building and health department instructions ■ Clean Up: <ul style="list-style-type: none"> • clean all surfaces • sanitize all food containers and food-contact surfaces |
|--|--|

READY TO REOPEN?

- Check refrigerators (below 41°F) and freezers (below 0°F) before taking new food deliveries.
- Call your local health department for a pre-opening inspection.

HELPFUL HINT

Use a camera or camcorder to document discarded goods for insurance purposes.

DO THIS FIRST!

■ CLOSE THE FACILITY!

Without adequate and clean hot and cold water you should not continue to operate.

FOOD SAFETY FACTORS

Water service interruption:

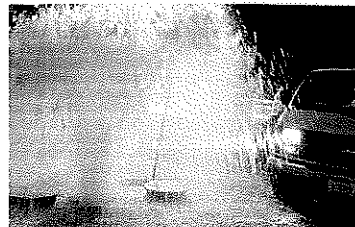
- A broken main water line, malfunctioning well or worn-out water heater can each create unsafe conditions for food establishments.
- Without adequate clean water, employees cannot wash their hands, cook and prepare foods and clean equipment appropriately.
- Rest rooms quickly become health hazards without running water.

Water service contamination:

- A contaminated water supply may contain chemicals, toxins, bacteria, viruses, parasites and other harmful microorganisms that cause human illnesses and can result in death.
- Safe water is essential to operate a safe food business.
- Local health authorities will need to determine the nature and type of the contamination and prescribe appropriate abatement procedures.

ROAD TO RECOVERY

- A food establishment closed because of an interrupted water supply must not reopen until safe water service is restored and the local health department approves reopening.
- Contact your local health department to discuss water system and food facility decontamination procedures.



READY TO REOPEN?

After safe water service has been restored:

- Flush pipes and faucets; run cold water faucets for at least five minutes.
- Make sure equipment with water line connections (filters, post-mix beverage machines, spray misters, coffee/tea urns, ice machines, glass washers, dishwashers, etc.) is flushed, cleaned and sanitized according to manufacturers' instructions.
- Run water softeners through a regeneration cycle.
- Flush drinking fountains by running water continuously for at least five minutes.
- Contact your local health department for a pre-reopening inspection.

HELPFUL HINTS

Document the time when a water service disruption occurs or contamination is suspected, then immediately notify the local water utility and health department. Be prepared to provide information, if known, on the cause of the problem.

DO THIS FIRST!

- During a tornado warning - A tornado has been sighted.
 - Close facility. Help customers and employees find shelter - away from windows and, ideally, in an enclosed area at the lowest level. Stay away from chimneys and large, unattached items such as refrigerators. Turn on a weather radio or local TV for emergency advisories.
- During high-wind situations - Damaging high-velocity winds have been reported in the area.
 - Potential risks include downed live power lines, flying debris, wind-blown broken glass and heavy objects. Close facility and assist customers and employees as you would during a tornado warning (above).
- During a tornado watch - The potential for tornadoes is considered imminent,
 - Turn on a weather radio or local TV for emergency advisories. Continue normal operations but remain attentive to changing weather conditions.
- Before re-entering a storm-damaged building:
 - Call 911 if a power line is down.
 - Call city building department (to determine safety of structure).
 - Call utility companies (to verify status of gas, electric & telephone).
 - Call local health department (for food safety guidance).
 - Call your insurance company (to begin claim process).
 - Call local emergency management agency (for disaster relief).

(Note: Keep these contact numbers in the front pocket of this booklet's binder.)

FOOD SAFETY FACTORS

Broken glass blown by high winds is a significant food safety concern.

- Carefully examine area for glass fragments that may have impaled food packaging or embedded food, even if not clearly visible. All suspect foods and service items must be discarded.
- In particular, be especially cautious with:
 - ♦ any open or un packaged food, including ice and beverages
 - ♦ porous food packaged in fabric, plastic or paper bags or cardboard cartons
 - ♦ fruits and vegetables
 - ♦ disposable dishware and utensils
 - ♦ filters, purifiers, and beverage cartridges attached to equipment.

ROAD TO RECOVERY

- Wear eye, hand and limb protection to guard against injury from debris.
- Remove debris and place in dumpster.
- Thoroughly vacuum floors and seating areas to ensure removal of hard-to-see glass shards. Double-bag vacuumed waste before discarding.
- Wash and rinse all food contact surfaces, work stations, furniture, utensils, dishes, silverware, glassware, and floors.
- Sanitize all food contact surfaces, work stations, utensils, dishes, silverware, and glassware.

READY TO REOPEN?

- Are utilities restored?
- Is clean-up complete?
- Contact your local health department for a pre-opening inspection.

HELPFUL HINTS

Use a camera or camcorder to document discarded goods for insurance purposes.

WHAT IS IT?

Biological tampering or terrorism involves the deliberate use of a biological agent to spread disease-producing microorganisms or toxins in food, water or the atmosphere. These agents can be powders, liquids or in other forms. A biological agent will almost never cause immediate symptoms, as it takes time for the biological agent to grow or cause its toxic effects.

Anthrax, cholera, plague, smallpox and viral encephalitis are just a few examples of potential bioterrorist-introduced diseases. Botulinum and ricin are two examples of toxins that bioterrorists might choose to use.

Because deliberate contamination of the nation's food supply can happen anywhere along the food supply stream, food managers and workers play key roles in minimizing these potential threats.

DO THIS FIRST!

- Call 911 to report any activity or delivery that seems suspicious.
- Call your local health department if unusual illnesses occur.

FOOD SAFETY FACTORS

Preparedness paves the way to prevention. Develop a good food security system!

- Maintain a current list of local emergency contacts (*See card in binder, front pocket.*)
- Eliminate unauthorized access where food is open, vulnerable and easily targeted.
- Inspect incoming shipments for suspicious items (tampering, unusual powder or liquid).
- Keep precise inventory records.
- Report all unusual activity to the authorities (unauthorized vehicles, people, theft, sabotage, vandalism).
- Assign specific staff to monitor public access to buffet lines, food carts and any open food areas, ensuring foods are safe.

ROAD TO RECOVERY

Clean-up after biological tampering will depend on the biological agent, its form (powder or liquid) and how it was spread (food, air or water) and is determined on a case-by-case basis.

- Keep foods in their original places and seek further guidance from law enforcement and health authorities.
- Follow special instructions on how to safely dispose of items contaminated by biologic agents.

READY TO REOPEN?

- Call your local health department for a pre-opening inspection.

HELPFUL HINTS

Early warning signs may help you recognize a threat:

- Are large numbers of employees or customers becoming ill?
(*Note: Make copies and use Employee Illness Log, Page 20, to track employee illnesses.*)
- Do foods not look, feel or smell right?
- Have unauthorized people been caught doing suspicious things in food preparation areas?
- Have you seen unusual powders or liquids in shipments of food or delivery vehicles?

WHAT IS IT?

A "dirty" bomb is a conventional bomb mixed with a radioactive material. It is not a nuclear weapon. Exposure to radioactive dust discharged by a dirty bomb does not mean a person will develop cancer or other radiation-related diseases. The radiological health risk from the bomb may be very small, but its fear-inducing impact on the public may be very large.

DO THIS FIRST!

- If a dirty bomb explodes in or next to your facility
 - Stop operations immediately.
 - Evacuate the building, taking the following precautions:
 - Cover mouths and noses with wet cloths to prevent inhalation of dust or ash while walking to a safe location.
 - Leave the blast site on foot. Walk to a nearby building and call 911 for help.
 - Avoid taking public transit to minimize contamination and exposure to others.
 - Leave door unlocked for emergency personnel. (*Note: Lock registers and take key with you.*)
 - Follow directions of emergency responders.

- If a dirty bomb explodes several blocks away from your facility
 - Everyone inside building should stay inside building.
 - Close all windows. Turn off ventilation systems and stay near center of building. (*Note: This will minimize exposure to stray radiation, if there is any.*)
 - Turn on local TV or radio for emergency advisories.
 - Follow directions of local public health, fire and police officials.

FOOD SAFETY FACTORS

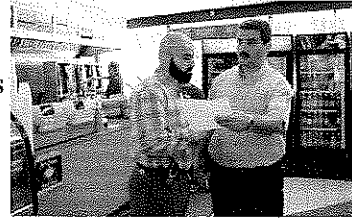
Focus on keeping people safe now; you can deal with food safety later.

If you are in the immediate blast and contamination zone, follow instructions from health and emergency response officials on procedures for decontamination of people and property. This may involve removing clothing, showering and other procedures.



ROAD TO RECOVERY

Clean-up, decontamination, salvaging food and reopening a food establishment will depend on the type of explosion plus the form and amount of radiation released. Wait for directions from health and emergency response officials on abatement and clean-up procedures. You should be provided answers to the following:



- Can the building be safely occupied?
- What foods can I salvage? How do I do it? What must I discard?
- How do I dispose of contaminated food/equipment?
- How do I clean the building, food equipment and linens?
- What safety equipment do I need when cleaning?

READY TO REOPEN?

- Call your local health department for a pre-opening inspection.

HELPFUL HINTS

Stay calm - The immediate danger from a dirty bomb is the initial explosion itself. The amount of radiation won't likely be enough to cause severe illnesses.

Distance - By moving away from the source of the blast, you lower your exposure to any radiation.

Shielding - Building materials provide some protection against radioactive dust. People near but not in the immediate area of a dirty bomb detonation are better off staying indoors, right where they are, and taking shelter there rather than trying to evacuate.

Time - Minimize time spent exposed to radiation to reduce risk.

WHAT IS IT?

Any release of a hazardous chemical that threatens public health, contaminates food or water or does harm to the environment is a chemical incident. Examples include a tanker truck rollover and spill, an industrial facility release, or an act of terror in which chemical agents are intentionally released. If these incidents occur at or near your facility, your employees and customers can immediately be endangered.

DO THIS FIRST!

- If a chemical release occurs inside your building:
 - Stop operations immediately.
 - Cover mouths and noses with wet cloths to prevent inhalation of chemicals.
 - Evacuate the building immediately.
 - Call 911 to report the release and any terrorist or suspicious activity.
 - Follow directions of emergency responders.
- If a chemical release occurs in the vicinity of your building:
 - Everyone inside building should stay inside building.
 - Close all windows. Turn off ventilation systems and stay near center of building.
(Note: This will minimize exposure to wind-carried chemical vapor, if there is any.)
 - Call 911 to report the release and any terrorist or suspicious activity.
 - Follow directions of local public health, fire and police officials.
 - Turn on local TV or radio for emergency advisories.
 - Stop all food and beverage service - foods and beverages may be contaminated.

FOOD SAFETY FACTORS

- First, protect customers and employees from the direct effects of the chemical release.
- Do not attempt clean-up until chemical-specific guidance is provided by the health department. (Wiping up, in some instances, can do more harm than good.)

ROAD TO RECOVERY

- If you are in the contamination (or "hot") zone, emergency responders or health authorities will provide chemical-specific instructions on how to go about decontamination. This may involve removing clothes, showering, and other procedures.
- Clean-up, decontamination, salvaging food and reopening a food establishment will depend on the type of chemical released. Wait for directions from health and emergency response officials on clean-up procedures. You should be provided answers to the following:
 - ♦ Can the building be safely occupied?
 - ♦ What foods can I salvage? How do I do it? What must I discard?
 - ♦ How do I dispose of contaminated food/equipment?
 - ♦ How do I clean the building, food equipment and linens?
 - ♦ What safety equipment do I need when cleaning?

READY TO REOPEN?

Call your local health department for help and approval to reopen.

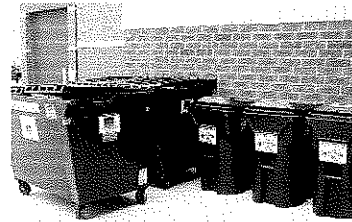
- All contaminated food needs to be disposed of in a permitted landfill.
- All discarded food must be documented (also useful for insurance purposes).

HELPFUL HINTS

- Never taste food to determine its safety.
- If a person eats or drinks anything chemically contaminated, call 911.
- If a chemical gets in a person's eyes, call 911.

SANITATION IN AN EMERGENCY

- Natural or man-made disaster?
 - ◊ Waste collection and disposal facilities may both be inoperative.
 - ◊ You may be forced to store solid waste on-site until disaster is resolved.
 - ◊ Proper waste storage can help prevent public health hazards.
- Sanitation workers' strike?
 - ◊ Waste disposal facilities may continue to operate.
 - ◊ You may be able to bring solid wastes to the disposal facility yourself.
 - ◊ Plan to transport garbage to disposal facility every three to seven days.



FOOD SAFETY FACTORS

- Make sure solid waste continues to be taken from all indoor food storage, preparation and service areas and moved to locations away from those sanitary food areas.
- Solid waste left outdoors without proper security precautions will attract disease-spreading scavengers (insects and other animals).
- Guard against homeless and other transient people trying to salvage garbage containing unsafe food.

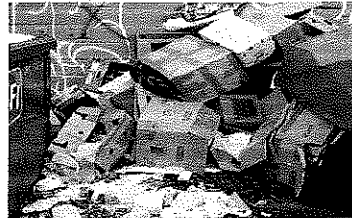
SORT AND SEPARATE WASTE

- Separate "spoilables" (food waste, perishables) from "non-spoilables" (empty containers).
- Separate cooking grease from food waste for appropriate disposal.
- Separate all hazardous materials and chemicals for appropriate disposal

(Note: Contact local government for hazardous waste disposal assistance).

STORE WASTE CLEANLY AND SECURELY

- Regularly wash food waste containers.
- Put all food waste in plastic bags; avoid overfilling.
- Tie bag tops to prevent spillage, control odors and prevent insect invasion.
- Put tied bags in dumpsters or trash cans with secure lids to prevent rodent invasion.
- Avoid accumulation of loose trash on ground outside of dumpsters and cans.



CHECK WASTE STORAGE AREAS DAILY

- Watch for spills, leakage and pests daily.
- Make sure containers stay closed and clean.

WHAT'S THE PROBLEM?

Pests often become a problem during other emergency events. Floods, storms, and other disasters can dislocate snakes, rodents, insects and other pests from their normal habitats. Standing water becomes a breeding site for insects and vermin (e.g., mosquitoes). Dead animals become food for other pests (e.g., rodents, flies). Sewage and flood contamination can lead to flies and rodents carrying diseases. Lack of garbage pickup can also provide food for insects, rodents and vermin. They can damage food, supplies and buildings, repel customers and cause food-borne illnesses.

HOW DO I EXCLUDE PESTS?

It's all about closing off every access point.

- Keep doors closed. Install door closers and bottom door sweeps.
- Keep dock doors closed and seal gaps around them.
- Keep windows closed and put screens on windows when possible.
- Seal all holes, cracks and crevices in the building walls, foundation and roof.
- Seal around pipes and install screens over ventilation pipes and ducts on roof.
- Train employees to be alert about these access points and to spot pests.
- Inspect all incoming shipments of goods and delivery vehicles for pests.
- If you find pests in food, reject the shipment or discard the food.
- If you find pests in your building, contact a licensed pest control company to eliminate them immediately; then clean the area.

HOW DO I AVOID ATTRACTING PESTS?

Remove sources of food and habitat, and clean and maintain the facility.

- Eliminate food sources inside the building (clean often, clean right away).
- Eliminate food sources outside the building (especially around dumpster).
- Eliminate habitat inside the building (keep floors cleaned, items off ground).
- Eliminate habitat outside the building (mow grass often, remove leaves, nests, weeds and debris, especially that which is very close to the building).
- Eliminate water sources around the building (ditches, pails, pools, cracks).
- Keep trash cans and dumpsters closed and keep the dumpster area clean.
- Remove old, rotting fruit and vegetables inside building to eliminate breeding sites.

WHERE CAN I GET EXPERT ASSISTANCE?

Seek outside help so you can use all the tools available to control pests.

- Consider an overall plan, called Integrated Pest Management (IPM), that looks at all pests, food, habitat, breeding cycles, pesticides and traps.
- Pest control companies can help in the following areas:
 - ◊ Traps (live traps, glue boards, mechanical traps, monitoring traps, etc.).
 - ◊ Bait to attract and eliminate pests.
 - ◊ Assessing building integrity, food sources and habitat elimination.
 - ◊ Pesticides, tracking powders and the proper use of these chemicals.
 - ◊ University Extension Services and health departments also have IPM information.

(Note: Pesticide use in food establishments is highly regulated. Only specified pesticides may be used; many may be applied by licensed, trained applicators only. Always read pesticide labels.)

ROAD TO RECOVERY

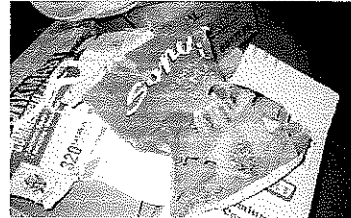
After a disaster is over, you will want to keep close watch over pest activity.

- Immediately after a disaster, pest activity often peaks, then gradually diminishes.
- Even in non-disaster times, you will encounter some pest activity. It is good business to always monitor pest activity in your operation to prevent problems.
- Do not rely solely on pesticides to solve your pest problems. Practice IPM.
- Prevention and early warnings are the keys to solving pest problems.

HELPFUL HINTS

Implement a cleaning program

- Create a master cleaning schedule.
- What - Clean all surfaces, equipment, tools.
- Who - Assign each task.
- When - Daily during shift; at night at end of shift.
- How - Use specific cleaning instructions.
- Monitor cleaning - Is it getting done? Correctly?



Deny pests access

Pests come in through two main routes:

- Brought in with contaminated deliveries or delivery vehicles
- Through openings in building, windows, doors
 - ♦ Mice, rats, insects use drain pipes like highways going through a facility.
 - ♦ Rodents burrow through degrading masonry.
 - ♦ Rats can squeeze through a hole the size of a quarter; mice through one the size of a dime.

Why pests should concern you

- Rodents chewing electrical wires set many fires.
- Flies spread dysentery, typhoid and cholera.
- Rodents spread salmonellosis and rat-bite fever.
- Mosquitoes spread malaria, encephalitis, yellow fever, West Nile virus and more.

When you seal holes & cracks

- Make sure the seals are tight.
- Use durable materials to seal holes, such as concrete or sheet metal, as rodents will chew through soft materials. Steel wool can serve as a temporary seal.

DO THIS FIRST!■ **DECIDE:** Close or stay open?

- Close if the safety of the food or facility cannot be maintained.
- Stay open if the safety of the food and facility can both be maintained.

(Note: By staying open, your business can help bring some order to the uncertainties faced by employees and customers - so long as you can continue to provide safe food and a safe place to serve it.)

■ **GET HELP**

- Call local building officials for help determining building safety.
- Call local health department to answer any food safety questions.

FOOD SAFETY FACTORS

- **Food workers**
 - ◊ All food workers must practice strict hand washing, maintain good hygiene and be without boils, sores, cuts, or any communicable disease.
 - ◊ Maintain employee illness logs (*see page 20*).
 - ◊ Report customer illness complaints to health department.
 - ◊ Train employees on any changes in procedure due to the emergency to ensure public health protection.
- **Food and storage**
 - ◊ Use water only from a safe and approved source.
 - ◊ Carefully examine all sealed food containers and utensils before using. If perishable foods become warm - do not use. If canned foods are damaged, puffed or leaking - do not use.
 - ◊ Do not accept food or water from unapproved (i.e., home prepared) or unknown sources where quality control cannot be assured. Inspect all incoming items to detect spoilage or contamination.
 - ◊ Store fruits, vegetables, cooked foods, prepared foods and ready-to-eat items above raw meat to prevent cross contamination.
 - ◊ Store all items at least six inches off the ground in insect- and rodent-proof containers.
 - ◊ Keep all chemicals away from food and utensils. Label all chemical containers.
- **Food preparation**
 - ◊ Provide hand washing stations with soap, paper towels, and nail brush.
 - ◊ Eliminate bare-hand contact with ready-to-eat food items (provide gloves, tongs, scoops).
 - ◊ Separate areas should be set up for hand washing, food preparation, and washing and sanitizing utensils.
 - ◊ Prepare quantities sufficient for immediate use. Leftovers must be avoided if refrigeration is inadequate.
 - ◊ Use single-service eating and drinking utensils when possible. Avoid customer self-service.
- **Temperature controls**
 - ◊ Cook all foods thoroughly - meat, fish, poultry should be well done.
 - ◊ Keep hot foods hot at 140°F or above. Quickly reheat all foods to 165°F or hotter.
 - ◊ Keep cold foods cold at 41°F or below.
 - ◊ Limit food items being cooled. Follow the food code closely for fast and safe cooling.
- **Cleaning and sanitation**
 - ◊ All food preparation and serving areas should be cleaned and sanitized. (*Sanitizing solution, see page 5.*)
 - ◊ Properly wash (clean water & detergent), rinse, and sanitize (sanitizing solution) all utensils and equipment.
 - ◊ Wash and sanitize cutting boards, knives, and other utensils after each use to prevent cross contamination.
 - ◊ Use test strips to monitor sanitizer concentrations.
 - ◊ Properly dispose of all solid and liquid waste - frequently.
 - ◊ Control insects and rodents in all food-related areas. Use only approved pesticides and control measures.
 - ◊ Maintain sanitation and regularly clean inside and outside the establishment.

DO THIS FIRST!

- **DECIDE: Is building safe to enter and reoccupy?**
 - Call: city building department (to determine safety of structure)
 - Call: utility companies (gas, electric & telephone)
 - Call: local health department
 - Call: your insurance company

(Note: Keep these contact numbers in the front pocket of this booklet's binder)

FOOD SAFETY FACTORS

- **Contaminated foods that must be discarded:**
 - ♦ Any open or un packaged food, including ice and beverages
 - ♦ Porous foods
 - ♦ Uncleanable packaged food, including:
 - Crown-cap bottles & jars (require opener to remove top)
 - Cork-top bottle & jars
 - Screw-top bottles & jars
 - ♦ Food in fabric, plastic or paper bags
 - ♦ Food in cardboard cartons
 - ♦ Produce, fruits and vegetables if contaminated
 - ♦ Potentially hazardous foods held between 41° - 140°F for more than 4 hours. *(See page 3.)*
- **Foods that may be salvaged:**
 - ♦ Unopened cans if:
 - Labels are intact. However, labels must be removed and then the can re-labeled with a permanent marker prior to cleaning and sanitizing
 - Cans are not dented along any seam.
 - Cans do not show any signs of swelling, leaking or loss of vacuum.
 - Cans are not rusty.
- **Non-food items:**
 - ♦ Discard contaminated disposable dishes, paper products, utensils, etc.
 - ♦ Discard filters, purifiers, and beverage cartridges attached to equipment.



(Note: Refer to Discard/Salvage Guidelines, Page 19.)

ROAD TO RECOVERY

- Place all discarded foods in plastic bags.
- Tie bags securely to contain food waste, control odors and prevent insect infiltration.
- Place secured bags in dumpsters or trash cans with tight fitting lids.
- Remove disaster debris and place in dumpster.
- Flush all water and equipment drain lines (use bleach).
- Wash, rinse and sanitize all food contact surfaces, work stations, utensils, dishes, silverware, glassware, and walls. *(Sanitizing solution, see page 5.)*
- Disinfect floors, floor-sinks, furniture, and walls as necessary. (Wash, rinse and sanitize with bleach solution.) *(Sanitizing solution, see page 5.)*
- Are utilities safely back on?
- Is clean-up complete?
- Has all damaged or suspect food been removed from the site?
- Are toilets and hand-wash stations equipped with soap, nailbrush and paper towels?
- Are refrigeration units maintaining food temperatures at or below 41°F?
- Are hot holding units maintaining food temperatures at or above 140°F?

READY TO REOPEN?

Call your local health department for help and approval to reopen.

MANAGEMENT

- The food facility has a food security plan.
- A record is kept of employee illness reports.
- Personnel have received food security training.
- Personnel know what to do if they encounter a product tampering incident.
- In case of an emergency, personnel know whom to contact:
 - Internal: Person in Charge
 - Police (911)
 - Fire (911)
 - Local Public Health Department

PERSONNEL

- Employment applications are required.
- Employment references are checked.
- Personnel receive food security training when they are hired.
- Food preparation areas are restricted to authorized personnel.
- Employees are not allowed to bring personal items into food preparation areas.
- Employee sick leave policy encourages individuals to report illnesses and not work when they have gastrointestinal symptoms or a communicable disease.
- Customers are restricted to public areas.
- Contractors are restricted to their work required areas.
- Contractors and vendors are monitored while they are at the food facility.

PRODUCTS

- Products are purchased from reputable, commercial suppliers.
- Purchase records are maintained for product trace back and recalls.
- Products arrive at the food facility in clean and secure transport vehicles.
- Products are never left unsupervised on the loading dock.
- Products are inspected for tampering prior to preparation or service.
- The facility has guidelines for handling product tampering incidents.
- Food items are prepared by personnel trained in food safety and food security procedures.
- Drinkable water is used for rinsing and for preparing food items.
- Salad bars and self-serve carts are closely monitored by staff to prevent contamination and product tampering.

PROPERTY

- Doors opening onto the loading dock are kept locked when not in use.
- All truck shipments (incoming and out going) are monitored by food service employees.
- Products are inspected upon delivery.
- There is good lighting for all high-risk areas at the facility.
- Hazardous chemicals including any pesticides are kept locked in a secure area.
- High-risk areas are marked "employees only" and access is limited to employees who work in the area.
- There is a key control system for store keys.
- Consider operating security cameras, as appropriate, in high-risk and high-traffic areas.

Discard	Salvage
<p>Any food or service item that has been contaminated or come in contact with water, sewage, smoke, fumes or chemicals. This includes:</p> <ul style="list-style-type: none"> • Fresh perishables - produce, meat, poultry, fish, dairy products and eggs. • Opened containers and packages • Vulnerable containers with peel-off, waxed cardboard, cork or screw tops or paraffin seals such as glass or plastic containers of catsup, dressing, milk, horseradish, mayonnaise, pop, beer, sauces, etc. • Soft, porous packaging - food in cardboard boxes, paper, foil, plastic, and cellophane such as boxes or bags of food, cereal, flour, sugar, rice, salt, etc. • Dry goods - spices, seasoning and extracts, flour, sugar and other staples in canisters. • Single service items - plates, cups, utensils, lids, etc. 	<p>Frozen foods if stored in a sealed walk-in or cabinet freezer (no water, smoke, fumes or chemical infiltration) and where ambient temperature has remained below 41°F.</p>
<p>Canned and bottled items should be discarded:</p> <ul style="list-style-type: none"> • If charred or near the heat of the fire. • If rusted, pitted, dented, swollen or leaking. 	<p>Disinfect undamaged cans and bottles that have no heat or water damage and are free from dents, bulging, leaks or rust.</p> <ul style="list-style-type: none"> • Paper label removed • Washed with soap and water, then rinsed • Sanitized with sanitizing solution, then air dried (<i>Solution, see page 5.</i>) • Relabeled with permanent marker.
<p>Refrigerated or frozen food must be discarded if:</p> <ul style="list-style-type: none"> • In contact with sewage, water, smoke, fumes or chemical seepage. • Above 41°F for four hours or more. • Frozen and then thawed for four or more hours. • Deteriorated in quality or has an unusual appearance, color or odor. 	<p>If fire, flood or sewage back-up has been effectively contained:</p> <ul style="list-style-type: none"> • Food in areas unaffected by smoke, fumes, water, heat, fire suppression chemicals, floodwater or sewage back-up may be salvaged. • Seek the advice of your local health inspector.
<p>Potentially Hazardous Food (PHF) must be discarded if it has been in the "Temperature Danger Zone" (41°F - 140°F) for more than 4 hours. PHFs include:</p> <p>Meat and mixed dishes</p> <ul style="list-style-type: none"> • Beef, veal, lamb, pork, poultry, fish, seafood, luncheon meats, hot dogs, hams, etc. • Soups, stews, casseroles or similar dishes containing meats, pasta, rice, eggs or cheeses <p>Eggs and dairy products</p> <ul style="list-style-type: none"> • Eggs or egg products, ice cream, yogurt • Milk, cream, buttermilk, cream-based foods or soups • Soft cheeses such as cream, ricotta, brie, etc. <p>Desserts - Pies, cakes and pastries containing custard, cheese, chiffon, meringue or pumpkin</p> <p>Cut Melons & Cooked Vegetables - Watermelon, musk or honeydew melons, cooked peas or corn or beans</p>	<p>Non-PHFs may be kept at room temperature, though quality may deteriorate, including:</p> <ul style="list-style-type: none"> • Bread, rolls, muffins, dry cakes • Solid butter or margarine • Hard cheese - cheddar, parmesan, etc. • Fresh, uncut fruits & vegetables • Fruit or vegetable juices, dried fruit, fruit pies • Canned goods • Dry foods - flour, pasta, rice, etc. • High sugar foods - honey, jellies • Acid-based condiments - ketchup, mustard
<p>Partially cooked food must be discarded if without power for more than one hour.</p>	<p>Partially cooked food may be quickly reheated to 165°F if without power for less than one hour. When in doubt, throw it out.</p>

Other than food: Discard

Discard any exposed materials that cannot be effectively cleaned and sanitized, including toasters and other food equipment, linens, furnishings, carpets, etc.

Developed by: the Twin Cities Metro Advanced Practice Center

