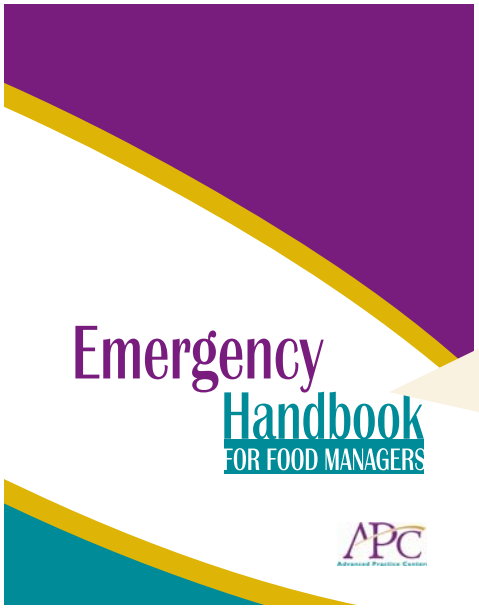
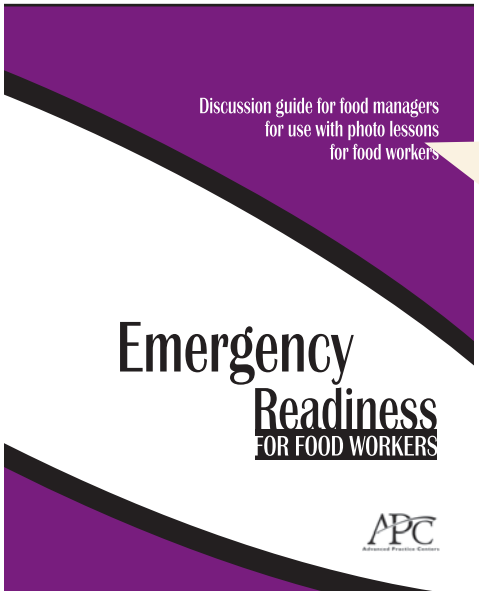
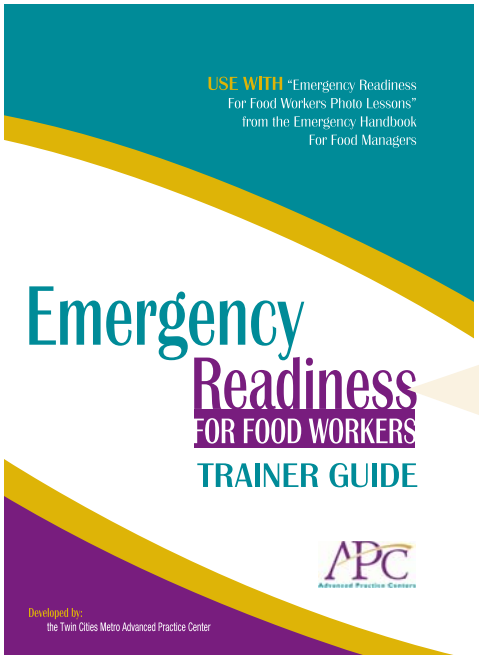


Emergency Handbook FOR FOOD MANAGERS



Discussion guide for food managers for use with photo lessons for food workers



Emergency Readiness FOR FOOD WORKERS TRAINER GUIDE

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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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

- **Assess impacts on:**
  - electrical service
  - physical facilities
  - equipment
  - offensive odors and chemical residues
  - natural gas
- **Call:**
  - local building official (to determine building safety)
  - your building insurance company
- **Equipment:**
  - evaluate condition
  - clean and repair
  - remove unusable equipment
  - follow all fire, building and health department instructions
- **Clean Up:**
  - 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 unpackaged 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 intructions 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 "spoilers" (food waste, perishables) from "non-spoilers" (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 are 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 though 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 unpackaged 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
Any food or service item that has been contaminated or come in contact with water, sewage, smoke, fumes or chemicals. This includes: • **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.	**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.**
Canned and bottled items should be discarded: • If charred or near the heat of the fire. • If rusted, pitted, dented, swollen or leaking.	**Disinfect undamaged cans and bottles** that have no heat or water damage and are free from dents, bulging, leaks or rust. • Paper label removed • Washed with soap and water, then rinsed • Sanitized with sanitizing solution, then air dried *(Solution, see page 5.)* • Relabeled with permanent marker.
Refrigerated or frozen food must be discarded if: • 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.	**If fire, flood or sewage back-up has been effectively contained:** • 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.
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: **Meat and mixed dishes** • 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 **Eggs and dairy products** • Eggs or egg products, ice cream, yogurt • Milk, cream, buttermilk, cream-based foods or soups • Soft cheeses such as cream, ricotta, brie, etc. **Desserts** - Pies, cakes and pastries containing custard, cheese, chiffon, meringue or pumpkin **Cut Melons & Cooked Vegetables** - Watermelon, musk or honeydew melons, cooked peas or corn or beans	**Non-PHFs** may be kept at room temperature, though quality may deteriorate, including: • 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
Partially cooked food must be discarded if without power for more than one hour.	**Partially cooked food** may be quickly reheated to 165°F if without power for less than one hour. When in doubt, throw it out.

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.

Employee illness log

(Photocopy and use this form to monitor employee illnesses.)

Food code requirements for employee health:

1. Food employees who are ill with vomiting or diarrhea should be excluded from working in the establishment.
2. Complete this log when employees have vomiting or diarrhea.
3. Restrict food employees who are ill with *Salmonella, Shigella, E. coli* or Hepatitis A from working with food. Clean equipment, utensils, linens, or single-use items until the Public Health Department has evaluated the potential for food-borne disease transmission.
4. Call your local health department if an employee is diagnosed with:
   - *Salmonella*
   - *Shigella*
   - *E. coli*
   - Hepatitis A
5. Call your local health department if a customer complains of diarrhea or vomiting; or being infected with *Salmonella, Shigella, E. coli,* or Hepatitis A.

Date missed work	Employee name	Symptoms/ illness	Diarrhea or vomiting?	Was doctor seen?	Date return to work

Food temperature log

(Photocopy and use this form to monitor food temperatures during an emergency.)

Required temperatures:

- Hot: 140°F or above
- Cold: 41°F or below
- Reheat to: 165°F or above

Date	Monitor's initials	Hot held or refrigerated?	Food item	Time	Temp.	Corrective action

Developed by: the Twin Cities Metro Advanced Practice Center

Discussion guide for food managers
for use with photo lessons
for food workers

Emergency Readiness
FOR FOOD WORKERS

APC
Advanced Practice Centers

TABLE OF CONTENTS

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EMERGENCY READINESS

TRAINING MATERIALS FOR FOOD WORKERS

Emergency Readiness for Food Workers provides food managers at food service establishments with easy-to-use materials to educate food workers about emergency preparedness and response.

Emergency Readiness includes a discussion guide for food managers covering each lesson along with the photo lessons on emergency topics for food workers. This emergency guide and lesson set is intended for food managers to use – one lesson at a time – at "pre-shift" or other regular meetings with staff. The discussion guide will help food managers lead employees in discussing each lesson and learning the basics of emergency preparedness and response.

The photo lessons also may be used in the event of an emergency and during recovery afterward. Basic steps to take in the event of an emergency are described for emergencies from power outages to biological terrorism, whether the cause is natural or deliberate. Food security basics are addressed, such as responding to a suspicious delivery or keeping doors locked to prevent tampering. Lessons give tips in the event of a longer-term emergency and steps for recovery after an emergency.

In general it is the responsibility of food managers to keep food safe and, in the event of an imminent health hazard, immediately discontinue operation and remain closed until the local health authority grants approval to reopen.

This lesson set offers practical, relatively simple and low-cost steps that can be taken to tighten food security, keep food safe and otherwise reduce the negative impacts of a variety of emergencies.

POWER OUTAGE

LOOKING AT THE PHOTOS, what steps do you see being taken to keep people safe?

1 Close the establishment.

- It is dangerous to operate without lights, ventilation, dishwashing machine and water heater. Stop operating until power is restored.
- Write down the time of onset of a power outage.

2 Have needed equipment on hand.

- A thermometer to determine whether food is safe for eating.
- Other useful items in a power outage include:
  - a flashlight to prevent accidents and for light to record temperatures.
  - a pen and clipboard notebook for time and temperature recording.
  - blankets or tarps to cover open coolers.

3-6 Determine if food temperature is safe for consumption.

- Stop cooking, and don't serve food that's been only partially cooked.
- Begin recording time and food temperatures immediately after the power goes out.
- Check and record temperatures every hour for hot-held food and at least every two hours for cold food, always noting the time each temperature is taken.
- Calculate how long food remains in the Temperature Danger Zone - between 41°F to 140°F.

7 Keep refrigerated food cold.

- Cover open freezers with blankets or tarps, and keep refrigerator doors closed.
- Don't add hot food into refrigerated food storage (it will raise the temperature).

8 Discard food that is unsafe to eat.

- Partially cooked food must be discarded if without power for more than an hour.
- Hot-held food must be discarded if its temperature is below 140°F for 4 hours.
- Cold food must be discarded if its temperature is above 41°F for 4 hours.

GROUP DISCUSSION

- Do we have the necessary equipment on hand for a power outage, and does everyone know where it is kept?
- Do we need a procedure to keep a record of food that must be discarded for food safety and insurance purposes?

POWER OUTAGE CONCERNS...

A power outage is unsafe for the operation and threatens food safety. Without proper lighting, movement is not safe. Without power, food cannot be cooked nor cooled and equipment including dishwashers and air cooling and heating will not run. Once power is restored, food that has sat for too long in the temperature danger zone is unsafe and must be discarded.

FLOOD OR SEWAGE BACK-UP

LOOKING AT THE PHOTOS, what steps do you see being taken to keep people safe?

1 Stop serving food and beverages.

- Close down operation. Floodwater and sewage carry contaminants that threaten food safety and public health. Flooding can damage a building, making it unsafe to occupy.

2a If sewage is backing up, contain the contamination and call for help.

- Take the affected sink, drain, toilet or machine out of service. Block any use.
- Keep foot traffic away from the area. Barricade the area if necessary.
- Unblock sewage drain lines. Call a plumber for repair.

2b In a flood, make sure building structure is safe.

- Discuss building safety with your manager.

3-6 After the flood or sewage spill, clean and sanitize the building.

- Use of a professional cleaning company is recommended. Workers involved in cleanup should wear protective gear for eyes and skin and an N-95 filter mask for mold protection.
- Wear protective outer clothing and rubber boots that can be removed and bagged for washing and sanitizing before you leave the spill area.
- Thoroughly clean spill area with a detergent solution followed by a sanitizer solution.
- Double hand wash immediately. Use a cleaning compound for at least 20 seconds and thoroughly rinse with clean water. Repeat.
- Discard any exposed materials that cannot be effectively cleaned and sanitized, including toasters and other food equipment, linens, furnishings, carpets, single service items and anything that cannot be washed and disinfected.
- Clean all hard equipment surfaces with soap; rinse and then sanitize.
- Discard porous building materials including sheetrock or other wall coverings if water damaged and uncleanable.

7 Discard food that is unsafe to eat.

- Discard any food or food packaging that has been in contact with floodwater or sewage. Discard food products with lids or pull-tab tops (e.g. ketchup, milk and other beverages), foods in glass jars and any food packaged in paper, plastic, cloth or fiber.
- Discard dry foods (e.g. flour, sugar).
- Discard cardboard boxes even if the contents seem dry.
- Discard canned foods that are dented, leaking, bulging or rusted.

TIP...

Photo documentation of flood or sewage damage and discarded goods can be useful for insurance purposes.

FLOOD & SEWAGE CONCERNS...

Floodwater may carry silt, raw sewage, oil or chemicals that can make storm-damaged foods unsafe to eat if packaging is contaminated. Sewage waste contains human and animal feces that may carry a range of disease-causing organisms including viruses, bacteria and eggs of parasites. Very few food or beverage items can be saved after being exposed to flooding or sewage. Any food that may have come into direct contact with the floodwater or sewage must be discarded.

FIRE

LOOKING AT THE PHOTOS, what steps do you see being taken to keep people safe?

1-3 Call 911 and close down the operation for any fire that's not quickly controlled.

- Have a clearly posted evacuation plan showing how customers and workers can safely and quickly get out of the building. It's important to quickly move away from the building; smoke and fumes from a fire can be debilitating and even deadly.
- Follow all instructions from fire fighters.

4-6 After the fire: discard all unsafe food.

- With help from your local health department, discard any food that may be affected by heat, smoke, fire or chemicals used to put out the fire.
- Most food supplies are seldom salvageable, unless frozen foods are stored in a working and completely sealed, walk-in or cabinet freezer.
- Clean and sanitize all food-contact surfaces, utensils and equipment. Throw out any utensils and equipment that cannot be completely sanitized, e.g., a toaster.

GROUP DISCUSSION

- ***Let's review our emergency plan and equipment on hand in the event of a fire:***
  - Evacuation plan for workers and customers that workers are familiar with.
  - Routine checks to ensure exits are not blocked and back-up lighting is working.
  - Fire drills are practiced at least each year.
  - Fire extinguishers serviced annually and food workers know how to use them.

TIP...

Photo documentation of fire damage and discarded goods can be useful for insurance purposes.

FIRE CONCERNS...

Typically food and single-service utensils cannot be salvaged after a fire. Smoke, toxic fumes and the use of high-pressure fire suppression equipment and chemicals may penetrate all kinds of food packaging and contaminate stored food. Even foods in cans, jars, bottles, wraps or cardboard packaging that were close to the heat of the fire are not safe to eat. Equipment that cannot be fully sanitized must be replaced.

WATER SERVICE DISRUPTION OR CONTAMINATION

LOOKING AT THE PHOTOS, what steps do you see being taken to keep people safe?

1 Notify your local health department and water supply utility.

- Your manager needs to inform the water supply utility of the problem and may be able to learn information about the problem. In the event of contaminated water, the utility will want to identify the contaminant as quickly as possible.
- Your local health department can provide information on how to address various contaminants, whether boiled water can be used and on alternative water supply sources.

2 Stop serving food and beverages.

- Safe water is essential for safe food. It is needed to cook and prepare foods, prepare beverages, wash hands and clean equipment.

3-4 Once safe running water is restored:

- Follow health department instructions for recovery from water that is contaminated.
- Flush pipes and faucets, and drinking fountains for at least 5 minutes.
- Change out any in-line water filters.
- Equipment with waterline connections must be flushed, cleaned and sanitized according to the manufacturer's instructions. Examples include post-mix beverage machines, spray misters, coffee or tea urns, ice machines, glass and dishwashers, water softener tank and filters.

GROUP DISCUSSION

- What equipment do we operate that is hooked up to water lines? Do we have any in-line water filters?

WATER SERVICE CONCERNS...

Interruption of potable water service can occur when a main water line breaks, pipes freeze, or a well pump or water heater malfunctions. Drinking water also may be contaminated by accidental or deliberate introduction of chemicals, bacteria, viruses and other microorganisms which can cause flu-like symptoms, skin rash or other illnesses.

BIOLOGICAL TAMPERING AND TERRORISM

LOOKING AT THE PHOTOS, what steps do you see being taken to keep people safe?

1 ***Be on the lookout for any suspicious activity.***
- Monitor salad bar, buffet or food cart activities to prevent tampering.
- Watch for suspicious powder or liquid on food, product or package deliveries.
- Inspect all deliveries for any sign of tampering.
- People in areas where they don't belong, especially in food preparation and storage areas.

1 ***Report employee illness as an early warning of tampering.***
- Many illnesses of customers and employees may be an early warning sign that tampering with food has occurred. Flu-like symptoms, skin rash or other employee illnesses must be reported to the person in charge

2 ***Restrict unauthorized access to food areas and business records.***
- Unauthorized individuals should not be allowed into food preparation or storage areas or into office areas where food records are kept.
- Visitors or vendors in kitchen should check in before entry or wear an identifying badge.

3-4 ***Report suspicious activity or tampering to the manager or authorities.***
- Report suspicious activities in food areas or involving deliveries - call 911.

5 ***Close operation if biological contamination has occurred.***
- Stop serving food and water to prevent further illnesses.

6-8 ***Ask health department for advice on how to clean after a biological incident.***
- Do not clean food areas or salvage food without expert advice. Wiping food service areas may actually spread the contamination.

GROUP DISCUSSION

- Are we regularly recording employee illnesses? What is our procedure for this?

BIOLOGICAL CONCERNS...

Biological tampering or terrorism involves the deliberate use of a biological agent of infectious viruses or bacteria or a device to spread disease-producing microorganisms or toxins in food, water or the air. Biological agents that may be used to intentionally contaminate food include salmonella, anthrax, ricin toxin, among others.

DIRTY BOMB

EXPLOSIONS & DIRTY BOMBS...

The cause of an explosion and whether it was accidental or deliberate will often not be immediately evident. Regardless, a blast can damage the structural integrity of buildings so it is important to leave the area near a blast. Emergency responders will be able to measure levels of air contaminants and assess the likely causes.

A dirty bomb is a terrorist device that combines a conventional explosive, such as dynamite, with radioactive material. Its primary purpose is to generate fear and panic. While a dirty bomb is designed to contaminate a small area with radiation, that contamination likely will not be great enough to kill or cause severe illness in people. Even so, radioactive particles in the air can contaminate several city blocks and require costly cleanup.

LOOKING AT THE PHOTOS, what steps do you see being taken to keep people safe?

1 ***If you're in the immediate area of a blast, leave immediately.***

- Cover your mouth and nose with a wet cloth to prevent breathing in dust or ash in a smoky area.
- Leave the area on foot. Go inside the nearest building beyond the blast area, which will reduce exposure to radioactive particles.

2 ***Report the blast***

- Call 911 to report an explosion.

3-5 ***Once away from the blast area, stay inside and seek out health protection information***

- Turn on local radio, TV or computer news sources for emergency response and health messages. If radioactive material was released, local news broadcasts will advise people where to report for radiation monitoring and other tests, decontamination protocols to protect health and measures to prevent the spread of contamination.
- Stop all food and beverage service. Contaminants from a dirty bomb carried in the air and water can contaminate food and water.

6-8 ***Get expert advice on appropriate clean-up from the health department***

- Do not clean food areas or salvage food without expert advice from the health department. How to clean depends on the type of contaminant, and some substances will only be spread further by conventional cleaning.

CHEMICAL INCIDENT

A chemical incident is caused by accidental or deliberate releases of a hazardous chemical into the environment, e.g., a tanker truck accident or industrial facility release that poses a threat to public health and may contaminate air, land, food, water and food preparation surfaces within the impact area of the release.

In a deliberate release such as an act of terrorism, chemical agents may be used intentionally to threaten public health, safety and the physical environment, causing damage and fear.

Warning signs of a chemical release include:

- Unexplained odor that is completely out of character with surroundings. A fading of a chemical odor may just mean the chemical has dulled your sense of smell.
- Unusual numbers of health problems in people, including nausea, disorientation, difficulty in breathing and convulsions.
- Eye or skin irritation or burning.
- Unusual incidence of dead birds, insects or other animals.

LOOKING AT THE PHOTOS, what steps do you see being taken to keep people safe?

1 ***Report the chemical incident or likely signs of chemical exposure.***

- Call 911 and the Minnesota Duty Officer at 1-800-422-0798.
- Tune in to local radio or TV news sources for further information.

2 ***Limit exposure to people. Evacuate the chemical exposure area.***

- Cover mouths and noses with wet cloths to prevent chemical exposure.

3 ***Stop serving food and water.***

- Discontinue all food and beverage service. A chemical agent carried in the air and water can contaminate food and water.

4. Seek expert advice about clean-up.

- Do not clean or salvage food without expert advice from the health department. How to clean depends on the type of chemical agent.

5 ***Use cleaning and other chemicals safely.***

- Even everyday chemical agents used for cleaning and sanitizing can become toxic if used or stored improperly. Never mix chemical cleaners, solvents or degreasers. Make sure you are trained in the proper use and storage of chemicals at work.

CHEMICAL CONCERNS...

Chemicals can contaminate the air we breathe, water we drink, the food supply or surfaces that people contact. Appropriate clean-up requires expert assessment and advice. Chemical events include industrial or transportation accidents releasing toxic chemicals (e.g., chlorine or ammonia) and deliberate acts of chemical terrorism.

SOLID WASTE COLLECTION DISRUPTION AND PEST CONTROL

LOOKING AT THE PHOTOS, what steps do you see being taken to keep people safe?

1 Separate food waste and perishables from other trash.

- Food waste and other perishables create odor problems and attract insects and rodents. If solid waste collection service is disrupted, sort these into separate waste containers to save space and best manage waste.

2 Keep hazardous materials separate from other waste items.

- Hazardous materials such as chemicals or cleaning solvents need to be stored in a designated container and delivered to an approved management facility.

3-4 Securely store garbage

- Place all food waste in plastic trash bags. Do not overfill.
- Securely tie the bag opening to prevent spillage, control odors and prevent insects from entering.
- Keep garbage as far away as possible from food service areas.
- Place garbage bags into dumpsters or trash cans with tight fitting lids to keep rodents out. Do not allow food waste to accumulate outside of garbage receptacles.

5 Monitor garbage storage area

- Monitor daily for pests and leakage.
- Keep people from salvaging garbage containing spoiled, unsafe food.
- If pick-up service is disrupted, but waste disposal facilities are still operating, garbage should be transported to a waste facility every 3-7 days.

6 Keep used cooking oil separate

- Do not mix used cooking oil from fryers with food wastes.
- Use sealed buckets or a grease container for used cooking oil.

7-12 Control pests such as rodents and insects.

- Clean up any possible nesting spaces for pests. Outside the building, remove brush, leaves, or debris that pests can hide and build nests in. Indoors, store food and equipment neatly, off the floor.
- Use traps, such as glue boards, to detect and monitor pest activity.
- Inspect incoming shipments for signs of insect infestation, such as insect eggs on packages or insects on produce.
- Get rid of standing water outdoors to reduce insect breeding grounds, such as an open bucket of water or garbage container lid filled with rain water.

SOLID WASTE & PEST CONCERNS...

In a disaster that interrupts garbage pick up, pests can pose problems. Garbage provides food for insects and rodents. Pests can spread disease and cause food-borne illnesses. They can damage food, supplies and buildings, as well as scare off customers.

MAINTAINING FOOD SAFETY IN A DISASTER

IN A DISASTER...

In the panic of a disaster, equipment, regular schedules of employees, usual services and the community may be impacted. A group review of food safety basics can help keep food workers focused and reduce food-borne illness that can arise when normal operation is upset.

LOOKING AT THE PHOTOS, what steps do you see being taken to keep people safe?

1-4 Help keep food safe amidst the disarray of an emergency.

- Clean and sanitize food preparation areas using water from a safe and approved source.
- Practice strict hand washing procedures as the best way to prevent the spread of disease.
- Do not accept home-prepared foods, or food and water from unknown or unapproved sources, even in a disaster. These items have not been quality controlled for the general public, proper transport temperatures cannot be assured, they may have been tampered with and may make people sick. Carefully examine sealed and canned foods to detect spoilage, contamination or other damage.

5-6 Make sure foods do not sit in the Temperature Danger Zone.

- Keep cold foods at or below 41°F. Use a food thermometer regularly to check and log temperatures of iced and refrigerated foods. At higher temperatures, disease-causing bacteria can develop.
- Keep hot foods at or above 140°F, using a food thermometer regularly to check and log temperatures of hot held foods.
- Store cooked foods for refrigeration in shallow containers to allow safe cooling. Foods that are not properly cooled permit the growth of disease-causing bacteria.

◆ ***Wash hands frequently.***

1. Roll up sleeves and wet hands with warm water.
2. Using soap, work up a soapy lather that covers hands and forearms.
3. The 20-second rule: Rub hands together for at least 20 seconds. Make sure to wash palms, back of hands, between fingers and forearms. Use a fingernail brush to clean under fingernails and between fingers.
4. Rinse hands and forearms in warm water. Keep fingertips pointed down while rinsing.
5. Dry hands with single-use paper towels, cloth roller towel or blow dryer.
6. Use towel to turn off faucet.

FOOD SAFETY & HAND WASHING CONCERNS...

In the panic of an emergency, sticking to food safety basics can reduce food-borne illness. Washing your hands frequently and thoroughly is one of the most important ways to protect public health. The skin on our hands holds millions of tiny bacteria and viruses that can be passed to food and other people. Proper hand washing can reduce these microorganisms by 100 to 1,000 times. If everybody washed their hands before touching and eating food and after using the restroom, nearly half of all food-borne illness outbreaks could be avoided.

AFTER-INCIDENT CLEAN-UP: DISCARD OR SALVAGE?

LOOKING AT THE TABLES, what steps are described to keep people safe?

- ***Discard food that is too long in the Temperature Danger Zone.***
  - Partly cooked food must be discarded if without power for more than an hour.
  - Hot-held food must be discarded if temperature is below 140°F for 4 hours.
  - Cold food must be discarded if temperature is above 41°F for 4 hours.

- ***Discard food damaged by fire.***
  - Discard any food that may be affected by heat, smoke, fire, fire suppression chemicals or pressurized water.

- ***Discard food damaged by flooding.***
  - Discard food products with lids or pull-tab tops (e.g., ketchup or milk and other beverages), foods in glass jars and any food packaged in paper, plastic, cloth or fiber.
  - Discard dry foods, like flour and sugar.
  - Discard cardboard boxes even if the contents seem dry.
  - Discard canned foods that are dented, leaking, swollen or rusted. To reuse intact canned foods: remove labels, scrub the surface with hot and soapy water, rinse in clean water and then soak them in a sanitizing solution (1 tablespoon bleach per gallon of water) for 90 seconds or more. After drying, mark contents on can with a permanent marker.

- ***Discard food and damaged materials exposed to a sewage back-up.***
  - Discard any food or food packaging that has been in contact with sewage.
  - Discard any exposed materials that cannot be effectively cleaned and sanitized, including toasters and other food equipment, linens, furnishings, carpets, etc.

GROUP DISCUSSION

- Are there items on the discard list that surprise you? Discuss why it is important to discard them. For more information, refer to the lessons on Power Outage, Fire, Flood and Sewage Back Up, or ask your health inspector.

FOOD SECURITY

LOOKING AT THE PHOTOS, what steps do you see being taken to keep people safe?

1-2 Limit unauthorized access to food areas and business records.

- Restrict customer passage at openings to kitchen
- Visitor or vendor in kitchen should check in before entry or wear an authorized visitor badge. Be aware of and monitor any unauthorized persons in food preparation and storage areas.
- Post signs prohibiting access, such as "Employees Only."

3 Ensure food safety at salad bar or buffet.

- Closely monitor salad bars and self-service carts to prevent tampering and food contamination.
- Report any suspicious activity to the Person in Charge.

4 Inspect deliveries for signs of tampering or unexpected packages.

- Make sure products received are only what was ordered and are properly sealed with no physical signs of tampering.
- Verify delivery person if unknown to you. Check their worker identification, and call the authorized supplier to verify identity if needed.
- Check deliveries for suspicious powders or liquids that could be a sign of contamination of food or other packages.

5 Report any suspicious activity to the Person in Charge.

- Call the police at 911 following the guidelines of your food establishment.

6 Adequately light and lock doors and other points of entry.

- Keep doors opening onto the loading area locked when not in use.
- Install and replace lighting so that points of possible entry remain well lit.
- Keep hazardous chemicals including pesticides locked in a secure area.

7 Report employee illness as an early warning of tampering.

- Flu-like symptoms, skin rash or other employee illnesses must be recorded and may be an early warning sign in the event that tampering with food has occurred.
- The Person in Charge keeps a log of employee illnesses.

GROUP DISCUSSION

- What steps are we already taking to keep food secure? How could someone with malicious intent get around our existing security, and how could we tighten security?
- Let's agree on steps to take if you notice a suspicious person, activity or delivery that may have been tampered with (i.e., report it to the person in charge, and report suspicious activity or delivery with evidence of tampering or visible powder /contamination to the police at 911).
- At the salad bar, buffet or other self-service cart (if applicable), how do we prevent food tampering and is our monitoring adequate?

WHY FOOD SECURITY IS IMPORTANT...

A food security program will help protect customers and employees from vulnerability to terrorist threats and criminal acts of food tampering. Food has been used to spread biological agents (e.g., deliberate salmonella poisoning at a salad bar in Washington). Improving food security may reduce threats to public health, business liability and can prevent food tampering that may result in serious economic consequences for a business.

EMERGENCY READINESS: STAFF TRAINING RECORD

(Photocopy and use this form to track staff training.)

LESSON	DATE OF TRAINING	WHO ATTENDED	INSTRUCTOR INITIALS
1 Power outage			
2 Flood or sewage back up			
3 Fire			
4 Water service disruption or contamination			
5 Biological tampering and terrorism			
6 Dirty bomb			
7 Chemical incident			
8 Solid waste collection disruption and pest control			
9 Maintaining food safety in a disaster			
10 After-incident clean-up: discard or salvage?			
11 Food security			

Developed by: the Twin Cities Metro Advanced Practice Center

Power Outage

1. Stop serving food and beverages.

- Notify customers.

2. Do two things immediately:

1. Write down the time power went off.
2. Check food temperatures with a thermometer and write them down.

3. Keep good temperature records while the power is out.

- Check hot food hourly and cold food every 2 hours for each unit.
- Write down times & temperatures.

4. Do not serve partially cooked food.

- If power returns within 1 hour, rapidly reheat food to 165 F.
- If power is off more than 1 hour, discard food.

Power Outage

5. Food being held cold:

- Discard all cold food that has been above 41 F for more than 4 hours.

6. Food being held hot:

- Discard all hot food that has been below 140 F for more than 4 hours.

7. Refrigerator tips:

- Keep refrigerator doors closed.
- Cover open units with a tarp.
- Don't add hot food to units.

8. Recovery when the power returns:

- Review temperature records.
- Discard food as required.
- Reset all breakers, equipment, etc.

Flood or Sewage Back-Up

1. Stop serving food and beverages.

- Notify customers.

2a. If a sewage back-up occurs, then sewage lines are blocked.

- Don't track sewage around facility.
- Call plumber to clear sewage drain lines.

2b. If a flood occurs, do damage assessment first.

- Is building safe to occupy?
- Ask manager if building is safe.

3. Clean the building - safely!

- Wear rubber boots, gloves, goggles and coveralls.
- Wear an N-95 filter mask for mold protection.

Flood or Sewage Back-Up

4 Clean the building - floors and walls.

- Remove sewage, solids, water.
- Scrub with brush, soap.
- Rinse and then sanitize floors, walls.
- Dry quickly with fans.

5 Clean all food equipment.

- Clean all hard equipment surfaces with soap and water.
- Rinse and sanitize before use.
- Mixers, ice machines, etc.

6 Discard damaged building items.

- Discard all porous, contaminated items that cannot be cleaned.

7 Salvage food and reopen for business.

- Discard any food contaminated by sewage or floodwaters.
- Discard all porous food packages that cannot be cleaned (bags of flour, salt, bottles or cans with screw tops, corks or EZ-open tops).
- Call your health department to review cleaning and salvage.

Fire

1. Call for help.

2. Assess the severity of the situation.

3. Follow fire department instructions.

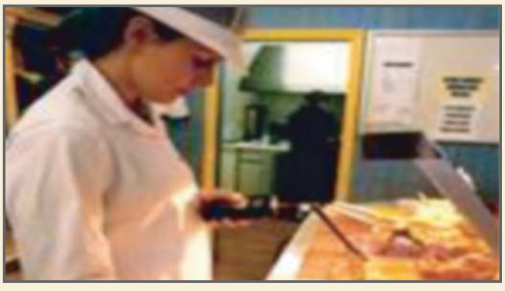
4. Afterward, discard unsafe food.

5. Repair or replace damaged equipment.

6. Get food safety inspection before reopening.


Contained


Significant



Water Service Disruption or Contamination

1. Call the health department and the water utility.

2. Stop serving food and beverages.

3. Are we ready to reopen?
   - Do we have safe water?
   - Call local health department.

4. Recovery and clean up:
   - Follow instructions from local health department regarding contaminated water.
   - Clean and sanitize as needed.

Biological Tampering and Terrorism

1. Be on the lookout for suspicious activities and unusual items.

- Many ill customers & employees
- Foods that do not seem right
- Suspicious powders or liquids
- Unauthorized persons

2. Restrict access of non-employees.

- Verify ID of visitors.
- Have delivery persons check in.
- Check with manager if unsure.

3. Report suspicious activities to the person in charge.

4. Manager or person in charge may need to call 911.

Biological Tampering and Terrorism

5. Close establishment if there is a biological contamination incident.

- Alert customers.
- Stop serving food.

6. Salvaging food & cleaning the establishment: W A R N I N G!

- DO NOT try to salvage food or clean up until you have expert advice from the health department.
- How to clean things will vary with the type of biological contaminant.

7. Clean up - safely!

- It is dangerous to clean without the proper safety equipment.
- Talk with the health department about what is required.

8. Be safe! Talk with your manager before you act.

- A biological incident is not a normal situation.

Dirty Bomb

1. If the establishment IS in the immediate area of the blast:

- See manager for directions.
- Leave the immediate area on foot.
- Cover your mouth/nose with a wet cloth to prevent breathing in dust.

2. If the establishment IS NOT in the immediate area of the blast, stay in the building:

- See manager for directions.
- Call 911 to report an explosion.

3. Turn on local television, radio and computers for emergency information.

- Is your location safe?
- If not, where do I go?
- Decontamination sites?

4. The biggest danger from a dirty bomb is the blast itself.

- Stay inside.
- Buildings will provide some shielding from radiation.
- Minimize time spent exposed to the radiation.

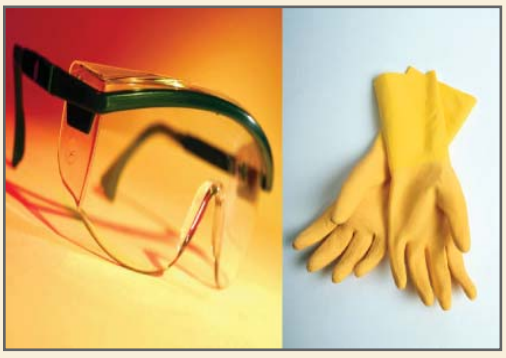
Dirty Bomb

5. Stop operations if there is a dirty bomb attack.

- Alert customers.
- Stop serving food.

6. Salvaging food & cleaning the establishment: W A R N I N G!

- DO NOT try to salvage food or clean up until you have expert advice from the health department.
- How to clean things will vary with the type of dirty bomb.



7. Cleaning up-safely!

- It is dangerous to clean without the proper safety equipment.
- Consult with the health department on what is required.

8. Be safe! Talk with your manager before you act.

- A dirty bomb incident is not a normal situation.
- Discuss everything with your manager BEFORE you act!

Chemical Incident

1. Call 911 and the state duty officer.

2. Cover mouth and nose with a wet cloth to prevent exposure.

3. Discontinue food and beverage service to the general public.

4. Seek expert advice about clean-up.
   - Call local health department.

5. Employee safety training:
   - Proper use of chemicals stored on-site.

Solid Waste Collection Disruption and Pest Control

1. Separate food waste from empty boxes and cans.

2. Separate hazardous materials for appropriate disposal.

3. Place food waste in plastic bags and tie securely.

4. Place tied bags into containers with tight-fitting lids.

5. Food waste outside of trash containers attracts pests!

6. Put used cooking oil from fryers in sealed buckets or a grease container.
   - Do not mix with food waste.

Solid Waste Collection Disruption and Pest Control

7. Eliminate nesting spaces outside - remove brush, debris, etc.

8. Eliminate nesting spaces inside - store food and equipment neatly, off the floor.

9 Use traps to detect and monitor pest activity.

10. Inspect incoming shipments.

11. Keep waste containers closed and the ground around them clean.

12. Eliminate standing water.

Maintaining Food Safety in a Disaster

1. Practice food safety basics in a disaster.

2. Clean and sanitize food preparation areas before use.

3. Hand washing is one of the most important ways to keep food safe.

4. Home-prepared foods cannot be used, even in a disaster.

5. Monitor cold foods to keep them at or below 41 F.

6. Monitor hot foods to keep them at or above 140 F.

LESSON 9

Maintaining Food Safety in a Disaster

Wash Hands Frequently!

1. Roll up sleeves and wet hands with warm water.

2. Use soap. Work up lather that covers hands and forearms.

3. Wash well for 20 seconds.

4. Rinse hands and forearms.

5. Dry hands using clean towel.

6. Use towel to turn off faucet.

Discard or Salvage?

Discard

Any food or service item that has been contaminated or come in contact with water, sewage, smoke, fumes or chemicals. This includes:

- **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.

Canned and bottled items should be discarded:

- If charred or near the heat of the fire.
- If rusted, pitted, dented, swollen or leaking.

Refrigerated or frozen food must be discarded if:

- 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.

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:

Meat and mixed dishes

- 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

Eggs and dairy products

- Eggs or egg products, ice cream, yogurt
- Milk, cream, buttermilk, cream-based foods or soups
- Soft cheeses such as cream, ricotta, brie, etc.

Desserts - Pies, cakes and pastries containing custard, cheese, chiffon, meringue or pumpkin

Cut Melons & Cooked Vegetables - Watermelon, musk or honeydew melons, cooked peas or corn or beans

Partially cooked food must be discarded if without power for more than one hour.

Salvage

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.**

Disinfect undamaged cans and bottles that have no heat or water damage and are free from dents, bulging, leaks or rust.

- Paper label removed
- Washed with soap and water, then rinsed
- Sanitized with sanitizing solution, then air dried
- Relabeled with permanent marker.

If fire, flood or sewage back-up has been effectively contained:

- 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.

Non-PHFs may be kept at room temperature, though quality may deteriorate, including:

- 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

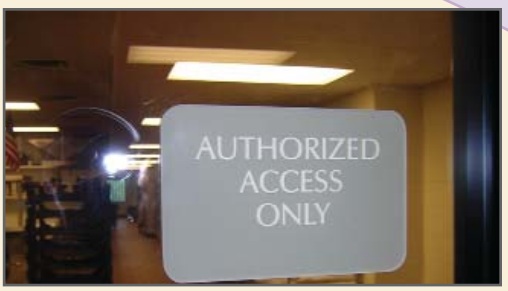
Partially cooked food may be quickly reheated to 165°F if without power for less than one hour. When in doubt, throw it out.

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.

Food Security

1. Restrict customer and supplier access from non-public spaces.



2. Be on the lookout for suspicious and out-of-the-ordinary activities.
   - Many people becoming ill
   - Suspicious powders or liquids
   - Unauthorized persons

3. Keep food safe at buffet tables and on food carts.

4. Inspect deliveries from suppliers.
   - Suspicious powders or liquids
   - Unauthorized delivery or unfamiliar supplier

5. Report suspicious activity or delivery to person in charge.

6. Keep loading dock and food storage areas locked.

Food Security

7. Illnesses should be tracked on an employee illness log.

Employee illness log

Food code requirements for employee health:

1. Food employees who are ill with vomiting or diarrhea should be excluded from working in the establishment.
2. Complete this log when employees have vomiting or diarrhea.
3. Restrict food employees who are ill with *Salmonella, Shigella, E. coli* or Hepatitis A from working with food. Clean equipment, utensils, linens, or single-use items until the Public Health Department has evaluated the potential for food-borne disease transmission.
4. Call your local health department if an employee is diagnosed with:
   - *Salmonella*
   - *Shigella*
   - *E. coli*
   - Hepatitis A
5. Call your local health department if a customer complains of diarrhea or vomiting; or being infected with *Salmonella, Shigella, E. coli,* or Hepatitis A.

Date missed work	Employee name	Symptoms/ illness	Diarrhea or vomiting?	Was doctor seen?	Date return to work

USE WITH "Emergency Readiness For Food Workers Photo Lessons" from the Emergency Handbook For Food Managers

Emergency Readiness FOR FOOD WORKERS

Trainer Guide

APC
Advanced Practice Centers

Developed by:
the Twin Cities Metro Advanced Practice Center

Emergency Readiness

For Food Workers

Trainer Guide

Approved for Food Manager Certification credits at two credit hours (2 CEUs) by the Minnesota Department of Health (MDH) on July 17, 2006

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www.naccho.org/EQUIPh/

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Contents

Goals & Preparation

The *Emergency Readiness For Food Workers Trainer Guide* offers a short, two-hour course to acquaint food service workers with the basics of emergency preparedness.

The Trainer Guide is intended for food trainers to instill a familiarity with the fundamentals that will help food workers to prevent or mitigate impacts to the safety of food and people in the mayhem of an emergency. Each lesson begins with a page overview for a trainer that includes length, the lesson concepts, objectives and where applicable, materials needed. The overview is immediately followed by the lesson with a script and answer keys for a trainer.

Recent global events have taught us that emergency preparedness is now an essential element of food safety in our changing world. Integration of food safety, food security and emergency preparedness are becoming key components for equipping food establishments to meet the comprehensive needs of the communities they serve. The community expectation is that their food supply will continue uninterrupted and safe regardless of current events.

"Emergency Readiness Photo Lessons For Food Workers" from the *Emergency Handbook For Food Managers*[1] serve as the basis for this training. The photo lessons are meant to be referred to and used by food workers as a guide in the event of an actual emergency. Participants should leave this training having referred to several topics in the "Emergency Readiness Photo Lessons" for answers, ensuring that they will be comfortable utilizing this resource in an emergency once back at work.

The Trainer Guide has been developed for a two-hour course at the request of food managers familiar with what is workable for staff training. They felt that a longer staff training session would be prohibitively long for many food establishments. The level of course material is geared for food service staff, but the emergency fundamentals are appropriate as well for food managers.

Course Goals

The main goals of this training are to:

1. Familiarize participants with the fundamentals of emergency readiness, and
2. Familiarize participants with the "Emergency Readiness Photo Lessons for Food Workers" contained within the *Emergency Handbook For Food Managers* (Twin Cities Metro Advanced Practice Center, Sept. 2005).

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[1] "Emergency Readiness For Food Workers" is contained within the *Emergency Handbook For Food Managers*, published by the Twin Cities Metro Advanced Practice Center with funding from the National Association of County & City Health Officials (Sept. 2005). Available at http://www.naccho.org/EQUIPh/detail.cfm?id=268.

Materials You Will Need

- ✓ "Emergency Readiness Photo Lessons for Food Workers" contained within the Emergency Handbook for Food Managers (9/05), available at http://www.naccho.org/EQUIPh/detail.cfm?id=268). Prior to the training event, know your audience. Check with participants for which language versions are needed (available: English, Spanish, Chinese, Arabic, Hmong and Somali).
- ✓ Course certificates of completion for participants (template at Appendix A).
- ✓ Copies of the Pre- and Post-Quizzes for participants (see Appendix B for quiz originals).
- ✓ Additional course materials (provided at Appendix B).

For Lesson Activities You Will Also Need:

- ✓ 20-second hand washing technique for Lesson 2 (*Hand Washing Song* available at Appendix B).
- ✓ Visual illustration for Lesson 3 of a thermometer showing the Temperature Danger Zone.
- ✓ Props for the emergency scenario exercise at Lesson 7, including a thermometer, flashlight, "Closed" sign, and a menu of foods at various stages of preparation to fit the Situation Description.

Course Outline

Lessons	Subjects & Activities	Photo Lesson
Lesson 1 Introduction to Emergency Readiness 10 mn.	• Pre-training quiz • Introductory lecture – scope • Activity: If lights go out at dinner time	
Lesson 2 Stop the Spread 20 mn.	• Importance of knowing how to stop the spread of contaminants in a range of emergency situations • Contaminant info by emergency situation • What to do to stop the spread by type of emergency (sewage, fire, chemical, bio tampering, etc.) • Importance of hand washing with activity	
Lesson 3 Temperature Danger Zone 10 mn.	• Food temperature danger in a power outage • 4-hour rule & when to log with activity • Refrigerated food • Partially cooked food • Let's Review	1
Lesson 4 Food Security 10 mn.	• Food security definition & risk reduction • Activity: Steps to stop criminal tampering • Activity: Assess measures at your establishment	11
Lesson 5 Stay Safe 15 mn.	• Chemical incident story with activity • Activity: Identify symptoms to exposure • Causes & expert advice to clean • Cover mouth & nose • Exit plan • Protective gear with activity	7 2
Lesson 6 After: Discard & Sanitize 15 mn.	• Importance of cleanup & recovery to keep food safe • What to discard & why with activity • Wash, rinse then sanitize • Hand wash twice	
Lesson 7 Scenario Exercise 30 mn.	• Group exercise to practice fundamentals: Power outage scenario with several situation descriptions, 4 roles, with questions to address (other scenarios may be substituted)	1, 10
Lesson 8 Wrap Up 10 mn.	• Wrap up: emergency preparedness & training back at work • Post-training quiz	

Lesson 1: Pre-Training Quiz & Introduction to Emergency Readiness

Lesson Time: 10 minutes

Evaluate Participant Learning

The completed pre-training quizzes will serve as a baseline measurement of participant understanding for use in conjunction with the post-quiz administered at the end of the course to evaluate participant learning.

Lesson Concepts

This lesson introduces the scope of emergencies that pose a threat to food safety and public health.

Food safety concerns, business consequences and the additional problems that can arise in a disaster are presented. A disaster is an emergency that is widespread and /or has long-term impacts (days or longer).

The following three fundamentals will help to keep food safe in the mayhem of an emergency:

1 Stick to the basic principles of food safety
2 Stop the spread of any contamination
3 Check in with the person in charge to report information and for direction

Learning Objectives for Participants

1 Demonstrate awareness of emergencies that pose a threat to food safety and public health (the scope of this Emergency Readiness training).

2 Describe how reducing threats in an emergency can help keep employees and customers safe, prevent illness and reduce the likelihood of costly liability for a food establishment.

3 Identify sticking to the basic principles of food safety, ways to stop the spread of contamination and the importance of clear communication through the person in charge as fundamental steps for ensuring food safety in an emergency.

4 Define “disaster” as an emergency that is widespread with longer term impacts, and understand that extraordinary problems arise in a disaster.

Pre-Quiz

1 If a floor drain in one of the bathrooms at work is backed up creating a pool of sewage-contaminated water, what should you do?

A Alert your manager to close down the restaurant
B Try to repair the problem
C Plug the drain with absorbent towels or rags
D Close and lock that rest room, and alert your manager to call a plumber

2 For food security, why would you need to monitor food and condiment carts or buffets?

A To replace spoiling food
B To keep food containers filled
C To notice a customer adding a powder
D To fill ice containers so they won't run low

3 If a noxious chemical were released into the air from a nearby accident, it would be a good idea to:

A Place a wet cloth over your mouth and nose
B Boil water before using it for cooking
C Offer customers plenty of drinking water
D Call the American Red Cross

Lesson 1

Teaching Points Introduction to Emergency Readiness

When the power went out over several states and Canada in the Northeast blackout of August 2003, 50 million people were left in the dark. In New York City, thousands of commuters without transport headed for the nearest bar or restaurant. Of course, those food establishments were without power and in the dark too.

Power outages often happen during storms that bring other emergency problems such as flooding, wind damage, sewage backup and, as occurred in the damage caused by Hurricane Katrina in 2005 along the gulf coast, chemical contamination of the water supply.

All of these emergency events pose threats to food safety and public health at food establishments. Damage and food-borne illnesses that can result from unsafe practices in an emergency can be crippling to a food establishment in liability and loss of business. In the panic and disruption of an emergency, it is important to:

1 Stick to the basic principles of food safety
2 Stop the spread of any contamination to keep food safe
3 Check in with the person in charge, for clear communication and direction to stay safe

Food emergencies are sometimes caused deliberately, by tampering or by acts of terror.

- In a small Oregon town in 1984, local cult members spiked buffet food with Salmonella bacteria at 10 area restaurants on purpose. About 750 people suffered food poisoning as a result, and the fear that spread through town drained the economy of the local businesses.[2]

- In 2003 Kamel Bourgass, an Al Queda operative, was captured in London. When they raided his home they found recipes, with ingredients and equipment to produce poisons such as ricin, botulism, cyanide and other poisons, all possible food-borne contaminants. As a result of his capture a real and deadly threat was avoided. Yet another reminder that we need to be vigilant concerning the security of our food supply.[3]

At some point, food establishments everywhere are faced with the challenges of keeping food and people safe in emergencies, whether natural or deliberate. If an emergency lasts for days or longer, or if it is widespread affecting many establishments, it becomes a disaster.

In 1998 a tornado damaged much of the town in St. Peter, Minnesota, introducing extraordinary challenges to food establishments. In a disaster such as this, you may face supply and service shortages, makeshift operation, loss of regular municipal services or unusual pest problems.

Today's training will familiarize you with the fundamentals of emergency readiness for food service, and introduce you to Emergency Readiness For Food Workers, a photo lesson tool to keep on hand and refer to when you are back at work.

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[2] *Oregon Town Never Recovered From Scare*, Glaccus, Gillian, The Associated Press release, 10/19/2001.
[3] *Asylum Chaos Left Al-Qa'eda Man Free To Plot Ricin Terror In Britain*, Steele, John and Bunyan, Nigel, The Telegraph UK release, 04/14/2005.

Activity

Ask

You are at work around dinner time and the lights go out, appliances stop working, the heat or air conditioning has gone out, and it is difficult to see in the dark. What would you do?
(Seek 5 or so responses from the participants.)

Ask as Prompts if Needed

- How would you assist customers?
- What would you do with the food that is being prepared or had been being held hot?
- The refrigerator is full of food and no longer operating. Is there anything you can do?

Responses to Review

- **Stop operating until power is restored.** It is dangerous to operate without lights, ventilation, dishwashing machine and water heater.
- **Notify customers and employees, and assist them to safety.** Prevent tripping and accidents.
- **Locate a flashlight, food thermometer and note the time the power outage started.** Keeping track of time and food temperatures is the only way to know whether food has sat for too long at unsafe temperatures that could make people sick.
- **BONUS POINTS if a participant refers to the first Photo Lesson on Power Outage.**

Lesson 2: Stop the Spread

Lesson Time: 20 minutes

Lesson Concepts

In an emergency, it is important to contain contamination and stop the spread of bacterial, viral, radiological or chemical contaminants, even when normal conditions are disrupted. Three fundamentals that underscore this lesson are:

1 How to stop the spread of germs or other contaminants in a range of emergency situations
2 Stick to the basic principles of food safety as a way to stop the spread of contaminants
3 Monitor for suspicious substances or activities to prevent tampering

Introduce participants to practices they can use to stop the spread of contamination, and thus mitigate the impacts of an emergency to public health. Reinforce the importance of thorough and frequent hand washing to stop the spread of contamination.

Learning Objectives for Participants

1 Know how to stop the spread of germs or other contaminants to keep food and people safe in an emergency.

2 Know to stop food and beverage service and to alert the manager if there is a contamination risk to a food preparation, storage or service area.

3 Know NOT to wipe up and clean in the event of biological, chemical or radiological agents until direction from health officials has been given, as wiping may spread the contamination further.

4 Know to report suspicious substances, activity or unusual illnesses to the manager as indicators of possible spread of contaminants by food tampering.

5 Demonstrate how to wash hands properly to stop the spread of germs or other contaminants as a critical way to keep food safe in an emergency.

Materials Needed

✓ Song or other technique for teaching 20-second hand washing
(the *Hand Washing Song* is available at Appendix B)

Lesson 2

Teaching Points

In an emergency, it is important to stop the spread of food contaminants, such as germs, chemicals, and any other contamination that may make people sick. In this lesson, we will examine a variety of emergency situations and identify how to stop the spread of contamination.

Activity with Teaching Points

Teaching Points

Sewage Back Up

Sewage contains human and animal wastes that may carry a range of disease-causing germs and eggs of parasites. Illnesses such as hepatitis and norovirus are transmitted in sewage. Similarly, floodwater can carry raw sewage, silt, oil or chemicals that can make storm-damaged foods unsafe to eat.

Ask

What could you do to stop the spread of disease if sewage backed up?

- **Take the problem sink, drain, toilet or machine out of service**.
- **Keep food workers and customers away** from the contaminated area to stop the spread. Block any use and barricade the area if needed to keep foot traffic out of the area. Alert your manager.
- **Remove any soiled clothing for cleaning and sanitizing** so that you do not spread germs.
- **Hand wash twice** so that you do not spread germs or viruses.
- **Alert your manager** if any food storage, prep or service area is at risk of contamination from raw sewage, because it is unsafe to operate.

Teaching Points

Fire

Keeping people safe from smoke and toxic fumes in a fire is the first priority. If it is safe to do so for a small, contained fire, it may be possible to turn off the fuel to the fire such as the gas valve and to put out the flames.

The smoke, heat, toxic fumes and chemicals used in putting out a fire can seep into and contaminate food, food packaging and equipment that are exposed. Contaminated food, packaging and equipment must be discarded to keep people safe.

Even food in cans, jars or cardboard boxes that were close to the heat of the fire are not safe to eat. Equipment that cannot be fully sanitized must be replaced. Your local health department can help the person in charge on a safe cleanup after a fire.

Ask

What could you do to stop the spread in a fire?

- If safe to do so, turn off any gas valves and use a fire extinguisher or suppression system to put out a small, contained fire.
- Assist customers and fellow workers in a safe and orderly exit of the building. Once fire fighters are called to the scene, there is not much more that can be done by you. After a fire, you can stop the spread of disease during clean up, by discarding contaminated and exposed food and by sanitizing.

Teaching Points

Release of a Hazardous Chemical

Chemicals released to the air and water can contaminate food and surfaces that people contact. Chemical releases can occur from industrial accidents, train or truck spills, a deliberate release in an act of terror or from improper storage or mixing of chemicals at work.

Symptoms of toxic chemical exposure may include eye or skin irritation or burning, nausea, disorientation, difficulty breathing and convulsions. If you are working with cleaning or other chemicals on the job, you should be trained in the proper use, labeling and storage of them.

If contamination is caused by a chemical, biological or radioactive agent, wiping food service areas may actually spread the contamination.

If you leave the area without waiting for agent-specific directions from health officials on personal clean-up procedures, you may be spreading the contamination.

Ask

What could you do to stop the spread if a chemical were released nearby?

- **Stop serving food and water, and alert your manager** to report the spill to officials. Food and water can become contaminated by the airborne chemical.
- **Stop cleaning food areas or equipment.** Depending on the type of chemical substance, you may only be spreading the contamination. Wait for direction from health officials.
- **Cover mouth and nose with a wet cloth** while exiting the impacted area to help reduce the spread of the chemical to the lungs.
- **Follow chemical-specific directions from health officials on personal clean-up** procedures to stop any further spread. This may involve removing clothes, showering and other decontamination procedures.

Teaching Points

A wet cloth over the mouth and nose will help to stop the spread of a chemical into the lungs. In an explosion or a fire, this will also help to stop smoke, ash or other debris from being breathed into your lungs.

Teaching Points

Suspicious Powder or Liquid on Food

Food tampering or an act of terror can spread a biological agent of infectious viruses, bacteria or toxins in food, water or the air. Being alert to suspicious deliveries and activities can help prevent acts of tampering with food and the illness this may cause in people.

Biological agents that may be used to contaminate food include *Salmonella*, Anthrax, and Ricin Toxin among others.

Ask

What could you do to stop the spread of a suspicious powder or liquid on a food delivery?

- **Be on the lookout for signs of tampering in food deliveries**. If you spot a suspicious powder or liquid, or a package that has been opened, tampered with or came unexpected, report it to your manager.

- **Report sudden illnesses of employees and customers to your manager** as they may be an early warning sign that food tampering has occurred.

Hand Washing to Stop the Spread

Ask

What Is the Best Thing You Can Do to Stop the Spread of Contaminants?

Hint

You all know the answer.

- **Wash your hands well and often!** You don't want to be the cause of spreading germs or other contamination..

- **Wash your hands and forearms well for 20 seconds working up a lather with soap** that covers your hands and forearms:
  - Wet hands and forearms with warm water.
  - Lather with soap and rub hands vigorously for 20 seconds.
  - Make sure to wash palms, back of hands, under fingernails using nail brush and between fingers.
  - Rinse with clean water.
  - Dry vigorously with a clean towel.

Teaching Points

The skin on our hands and forearms holds millions of tiny bacteria, viruses and other contaminants that can be passed to food and other people. According to the Minnesota Department of Health, if everybody washed their hands before touching food and after using the restroom, nearly half of all food-borne illness outbreaks could be avoided.

In an emergency where normal routines are disrupted and contamination already puts food safety at a higher risk, it is very important to wash well and often to keep food and people safe.

Ask

What techniques do you use to make sure you wash well for a full 20 seconds? [Teach one technique unless the group of participants is already well versed in one (have them demonstrate if so).]

- ♪ HAND WASHING SONG (see Appendix B), or
- ♪ HAPPY BIRTHDAY SUNG TWICE, or
- ♪ Recite the ABCs, or
- ♪ Other technique

Let's Review

In an emergency when normal conditions are disrupted:

1. **Stop the spread** of germs or other contamination
2. **Stick to food safety basics**, including frequent hand washing
3. **Be on the lookout for suspicious substances or activities** to help prevent the deliberate and malicious spread of contaminants

Additional Activity

Select a photo lesson from *Emergency Readiness For Food Workers*, and ask participants to identify at least three ways they can see to help stop the spread of food contamination.

Lesson 3: Temperature Danger Zone

Lesson Time: 10 minutes

Lesson Concepts

A power outage is probably the most common emergency that food establishments face, putting hot and cold food safety at risk.

The dangers of food-borne illnesses from potentially hazardous foods (PHFs) that sit too long in the Temperature Danger Zone are addressed in use of the 4-hour rule, ways to keep refrigerated food cold longer and how to deal with partially-cooked food. Convey the importance of:

- Recording time of outage onset
- Monitoring food temperatures in a power outage and applying the 4-hour rule
- Steps that can be taken to help keep food and people safe during a power outage

Note to Trainer: The temperature limits of the Danger Zone represent current requirements of state law where this was written, which differ from the 2005 FDA regulations. Check the required Temperature Danger Zone limits of your jurisdiction.

Learning Objectives for Participants

1 Stop serving food and beverages.

2 Write down the time power is lost, and the temperatures of food.

3 Check and log temperatures every hour for hot food, every 2 hours for cold food.

4 Afterward, throw out hot and cold foods if they've sat in the Danger Zone for more than 4 hours. If in doubt, throw the food out.

Materials Needed

✓ Thermometer showing the Temperature Danger Zone

Lesson 3

Teaching Points

Losing power puts hot and cold food at risk of sitting too long in the Temperature Danger Zone. We know from food safety training and experience that hot and cold foods are in the Danger Zone if food temperature is within the range of 41˚F to 140˚F.

Show Visual

Thermometer Illustration of the Danger Zone

If foods remain in the Danger Zone – that is, if hot foods are not kept hot and cold foods are not kept cold, disease-causing organisms grow. Bacteria thrive and multiply on food left in the Temperature Danger Zone, into colonies. Colonies of bacteria multiply rapidly to harmful levels that cause food poisoning and make people sick.

Activity

Ask

How many of you have worked when a power outage occurred?
Is there anything you would do differently if it happens again?

Ask

In a power outage, how long do you think food can sit in the Temperature Danger Zone before it must be thrown out as too dangerous to allow the public to eat?

- **4 hours. Follow the 4-Hour Rule**, and 'if in doubt, throw it out.'

Ask

If the power is out for 3 hours 50 minutes and you return an item of cold-held food to refrigeration within 4 hours, is the food safe to eat?

- **It depends** on how long it takes once the power is back on to cool the food to at least 41 ˚F. Remember, the 4-Hour Rule means the length of time food sits within the Temperature Danger Zone.

Ask

After a power outage, how do you know whether hot and cold foods are safe to eat?

- Once the power goes out:
  - **Write down the time of onset**, and
  - **Log food temperatures**.
    Continue to take regular time and temperature readings:
    - **Hot** food temperatures **every hour**
    - **Cold** food temperatures **every 2 hours**
      (less frequently to help keep food cold)
- **When power returns, use the log** to figure out how long each food was in the Temperature Danger Zone, and discard all food in the Danger Zone for longer than 4 hours.
- **If in doubt, throw it out**.

Teaching Points

Refrigerated Food

A challenge in a power outage is to keep cold foods that are stored in refrigerators chilled for as long as possible. You want to keep the cold inside, since refrigeration units are insulated storage boxes. Steps you can take to help keep refrigerated foods cold longer are:

- **Keep refrigerator doors closed** except for taking temperatures every 2 hours.
- **Do not add any hot foods** into the refrigeration unit, and cancel food shipments.
- **Cover open freezers with a tarp** or blanket.
- **Keep an offsite cold storage contact on hand** (e.g., a refrigerated warehouse or truck).

Teaching Points

Partially Cooked Food

For food that is being cooked when the power goes out, here is the rule of thumb:

- If power is out for **longer than ONE HOUR, the food must be discarded.**
- If power returns **within one hour, rapidly reheat the food to 165 ˚F.**

Let's Review

Open your *Emergency Readiness* Photo Lessons to Lesson 1 for a summary of what you have just learned. If the power goes out, what should you do?:

1 **Stop serving food and beverages**

2 **Write down the time power is lost, and the temperatures of food**

3 **Check and log temperatures** every hour for hot food, every 2 hours for cold food.

4 **Afterward, use your logs to determine which foods meet the 4-hour rule,** and if in doubt throw it out.

Additional Activity

Power outage problems of refrigerated foods for group solution – ask "What action should you take if:

1 The power is off for 2 hours. Refrigerated food never got above 41˚F. [Food is safe for serving.]

2 The power is off for 3 hours. Refrigerated food was above 41˚F for 3 hours while the power was off. Then when power returned it took 2 more hours for food to cool back down to 41˚F." [Discard food because 5 hours is more than 4-hour limit.]

Lesson 4: Food Security

Lesson Time: 10 minutes

Lesson Concepts

Food Security (also referred to as Food Defense and Food Protection) are preventative measures taken to minimize the risk that food will be subject to tampering or other malicious criminal or terrorist acts. These measures are also taken to increase the chance of discovering and reporting malicious criminal or terrorist acts.[4]

A food security program is emergency prevention that will help protect customers and employees from criminal acts of food tampering or terror. Food has been used to spread food poisoning in the past, and agencies including the FDA, WHO and USDA have pointed out the vulnerability of food to tampering from 'the farm to the fork.'

In a global food system, food workers and managers are at the front line of detection and prevention of intentional acts of food tampering. Improving food security can prevent food tampering, thereby helping to keep food safe. It can reduce deliberate threats to public health, business liability and serious economic consequences for a business.

Workers should become familiar with food security measures, know how to be on the lookout for suspicious substances or activities and know when to report any suspicious activity or illnesses to the person in charge.

Learning Objectives for Participants

1 Understand a working definition of food security, that reporting suspicious substances, activities or unusual illnesses to the manager can prevent or detect possible food tampering.

2 Identify these three food security basics:
- Restrict visitor, vendor and customer access to business records and to food preparation and storage areas.
- Keep doors locked into loading, kitchen and storage areas.
- Check for identification of any vendor or supplier who is unknown to you.

3 Routinely check deliveries for suspicious powders or liquids, or packages that were not ordered as these may be signs of tampering.

4 Routinely monitor buffet tables and food carts to prevent food tampering.

Materials Needed

✓ *Emergency Readiness* Photo Lesson 11, "Food Security"

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[4] *The Emergency Handbook For Food Managers* (Twin Cities Metro APC, 2005) contains a Food Security Self-Inspection Checklist for food service establishments, updated and in ten languages at: http://www.naccho.org/topics/demonstration/APC/documents/FoodSecurityChecklist-Translations.pdf

Lesson 4

Teaching Points

Food security is about preventing criminal acts of tampering with food to make people sick and to do damage to a business. By building simple steps into your daily routine and staying alert, acts of tampering can be prevented.

Tampering with food to cause harm is done by contaminating foods with biological or chemical agents. These agents may be in liquid or powder form.

An unusual number or type of flu-like illnesses, skin rash, slurred speech or vision problems may be early warning signs that food has been tampered with. The person in charge is required to record employee illnesses, and reporting illnesses may help detect tampering sooner if it has occurred.

A criminal who wants to tamper with food will usually learn the layout and routines of a business, and may try to steal business records, keys or visitor badges. To keep food secure, be on the lookout for these suspicious activities.

Where tampering has occurred and resulted in food illnesses, establishments have lost business afterward due to customer fear. Prevention and early detection will help safeguard your business.

Activity

Trainer Note

Summarize and discuss participant responses to the three discussion prompts, and add points as needed to teach each of the following food security basics.

Ask

What examples or steps do you think would keep food secure from criminal or terrorist tampering?

- **Restrict access** to food areas, business records (i.e., "Employees Only," visitor badges, locked storage areas, etc.)
- **Check for identification** of any vendor or supplier who is unknown to you
- **Inspect deliveries for signs of tampering**, such as an unexpected package, opened jars or boxes, or suspicious liquid or powder residue
- **Monitor buffets and food carts** for suspicious activity and any tampering with food
- **Adequately light passageways outside and in**, to prevent dark access ways
- **Keep doors locked** and have a system for key or keyless code management
- **Report suspicious activity or illnesses to your manager**, and take appropriate action as directed. Management needs all information from all employees to have the full picture

Instruction Open to Photo Lesson 11 on Food Security.

Ask What food security measures does your establishment take that compare to those you see in the photos?

Ask Where do you see vulnerability at your establishment, where a person with bad intent could get around security (whether pictured or not)?

Additional Activity

Facilitate the group to formulate the steps it will take and protocol it will establish to develop a food security program.

A one-page Food Security Checklist appears at Section 13 of the *Emergency Handbook For Food Managers* (Twin Cities Metro APC, Sept. 2005), and is kept updated and available in 10 languages at http://www.naccho.org/Equiph/detail.cfm?id=282.

Lesson 5: Stay Safe

Lesson Time: 15 minutes

Lesson Concepts

This lesson introduces steps to protect workers and customers in an emergency. A chemical release to the air is described through storytelling with instructional Q&A, addressing symptoms of exposure, and safety steps to take. Through analogies, clean up and steps for responding to a dirty bomb and biological tampering are identified as well.

Exit planning is introduced with discussion on participant awareness of the protocols and practices in place, or that need to be in place, at their place of work.

Personal safety gear is identified so that workers will know to wear protective gear if they are asked to perform cleanup in the recovery phase of an emergency.

Learning Objectives for Participants

1 Familiarity with safety steps for a chemical incident and a dirty bomb.

2 Know to cover mouth and nose with a damp cloth to protect against breathing in a chemical release, smoke, ash, or other particles.

3 Know to keep passageways clear and to have an exit plan.

4 Identify protective gear to wear for clean up after an emergency.

Materials Needed

✓ *Emergency Readiness For Food Workers* Photo Lessons 2, "Flood or Sewage Back-Up," and 7, "Chemical Incident"

Lesson 5

Tell A Chemical Incidence Story

Several kitchen employees at a catering business became dizzy and nauseous over a 20-minute period (true story). The crew wondered what could be wrong. The employees grew more ill, and headed outdoors to get some air.

Activity

Ask

What could be causing this illness?

[Give participants a chance to come up with several ideas, e.g., they drank or ate something spoiled. If nobody suggests the correct answer, but they do suggest contamination by a chemical or other agent, acknowledge their answer as getting warm.]

Hint

A cleaning crew had been in the night before.

- **Natural gas leak**. The cleaning crew the night before had accidentally caused the gas leak. When they pulled the range out for cleaning, the range coupling disconnected from the gas line, leaving an open gas line into the room.

Teaching Points

Story In the End

The crew at first wondered if they had eaten or drank something bad, but upon reflection, rejected that notion. One of the crew called 9-1-1 when the workers grew sicker and headed outdoors for air.

The fire department and paramedics responded. Upon taking air measurements the fire department discovered the gas leak behind the range.

All workers evacuated until the leak was repaired. The sick workers were treated and recovered.

Activity

Symptoms of Exposure to Airborne Releases

Ask

What are some symptoms of exposure to chemicals.
[Three have been mentioned in the story above.]

- **Unusual number or type of illnesses,** including flu-like symptoms of:
  - **Nausea**
  - **Dizziness**
  - **Disorientation**
  - **Difficulty in breathing**
  - **Convulsions**
- **Eye or skin irritation or burning** sensation
- **Unusual incidence of dead birds, insects or other animals**
- **Unexplained odor** that is out of character with surroundings. An odor may falsely seem to fade because chemicals can dull one's sense of smell

Teaching Points

Unusual occurrences of flu-like illness or skin rash can also be early warning signs of food that has been tampered with by deliberately contaminating the food with a disease-inducing biological agent.

Reporting illnesses to the person in charge can help to detect chemical contamination or food tampering.

Teaching Points

Seek Expert Advice Before Cleaning

If chemical, biological or radioactive agents are involved in contamination of your food and place of business, be forewarned. You do NOT want to clean up surfaces or salvage food until you have expert advice on how to clean from the health department.

Cleanup may only spread the contamination around, and how to clean things will vary with the type of agent that was used.

Instruction

Turn to Photo Lesson 7 on "Chemical Incident."

Ask

What two potential causes of chemical incidents do you see in the pictures?

- **Tanker truck accident** causing a chemical release to the air
- **Improper use or storage of chemicals used in food establishments**, such as cleaning and sanitizing products (proper storage is pictured).

Teaching Points

Cover Mouth & Nose

Look again at the second photograph. When the tank truck releases a chemical to the air, you see someone leaving the nearby restaurant with a wet cloth covering their mouth and nose.

Covering the mouth and nose with a wet cloth can prevent or reduce the amount of chemicals, smoke, ash, or particles that are breathed into your lungs.

On average, adults breathe air into their lungs about 20 times every minute. So using a wet cloth to capture contaminants before they ever reach your lungs is a simple and good idea!

Teaching Points

Have An Exit Plan

If employees and customers need to evacuate to a safe place, for example, in a fire, flood or a tornado warning, you will want:

1 Exit passageways to be clear

2 To assist customers on where to go, according to your establishment's exit plans

Activity

Ask

Do you know what the exit plan where you work is, if there is a tornado warning?

[If not, suggest talking with their manager to develop and communicate an exit plan.]

Ask

Do you have a daily maintenance protocol to keep passageways clear?

Ask

Do you know where emergency equipment is kept, such as a flashlight, a radio for public advisories and working batteries?

Teaching Points

Having exit procedures in place and equipment on hand for an emergency can help keep workers and customers safe in an emergency.

Teaching Points

Protective Gear For Recovery After An Emergency

Staying safe is important *after* an emergency too, when the clean up and recovery begins. We have already talked about when to discard food that has sat for too long in the temperature Danger Zone, and how to stop the spread after handling contaminated food or after exposure to other contaminants.

Flood, fire, wind storms or explosions can cause structural damage to your building, shattering of glass, and can dislodge gas piping and electrical wiring inside. Before entering your work place after a destructive emergency, you will want to check with your manager to find out if the building has been inspected by the local Building Inspector and if it is safe to occupy.

Now we want to focus on your personal safety. Consulting a professional company for cleanup service after a significant emergency is recommended, but if you are involved in a cleanup protect your safety first.

Instruction

Turn to Lesson 2 in your *Emergency Readiness* Photo Lessons, at the bottom of the page.

Ask

During cleanup after an emergency, what personal safety equipment do you see, or do you think may be needed? What do you think it will protect you from?

- **Rubber gloves** – to protect your skin from germs and other contaminants or raw sewage, and from sharp objects in debris. Remove gloves to stop the spread before you leave
- **Goggles** – to protect your eyes from dust, germs and allergens, chemicals and sharp objects in debris
- **Face mask** – to protect your lungs from dust, germs or mold. If mold is a problem, a fitted filter mask rated N-95 or higher will keep the mold out

- **Coveralls** – if you are cleaning up in an area contaminated with flood waters, smoke and ash, fire suppression or other chemicals, etc., you will want to protect your skin and clothing and remove the coveralls before you leave to stop the spread

- **Rubber boots** – to protect you and your clothes from contaminants, and because they can be easily sanitized after clean up.
  Remove boots before you leave to stop the spread

Let's Review

To stay safe in an emergency and in recovery *after* an emergency:

1 **Be alert to symptoms of chemical exposure or biological contamination**, such as unexplained illnesses or skin irritation or rash.

2 **Cover mouth and nose with a damp cloth** to protect your lungs in a chemical release, or from smoke, ash, or other particles.

3 **Know the exit route and where emergency equipment is kept** to keep workers and customers safe in an emergency.

4 **Wear personal safety equipment** if you are cleaning up after an emergency to reduce your exposure to contamination.

Additional Activity

1 Form Small Groups of Participants. Instruct the groups to open to Photo Lesson 7, "Chemical Incident."

Ask: Each group to come up with a response plan of procedures in the event of a chemical incidence using Photo Lesson 7.

Present Plans of Each Group for Group Discussion: Discuss thoroughness of plans based on Photo Lesson 7 concepts.

2 Facilitate development of a facility-specific exit strategy.
Elements of an exit strategy should include:

- Having a family emergency plan at home so that workers have assurance that loved ones at home know what steps to take. (The American Red Cross has a form for home planning at www.redcross.org.)

- Agreement on where customers and workers will exit to in the event of the following emergencies, which should be sufficient for other emergencies as well:
  - Fire
  - Tornado warning
  - Explosion or chemical release: address both sheltering in place and walking to a building just beyond the area of impact;

- Protocol for daily maintenance to keep passageways clear.

- Protocol for having emergency equipment on hand (see fact sheet: "In An Emergency: Equipment & Supplies List For Food Service," Twin Cities Metro APC, Winter 2006 at www.naccho.org/EQUIPH.

3. Practice a fire drill.

Lesson 6: After -- Discard & Sanitize

Lesson Time: 15 minutes

Lesson Concepts

Cleanup that sanitizes after an emergency is an essential part of stopping the spread of germs and other contaminants that can cause illnesses. A food establishment that can quickly and safely clean up and rebuild will stand a better chance of recovering after an emergency.

Participants should become familiar with recovery basics, including the rationale for deciding when to discard food and equipment, and the importance of washing and disinfecting food contact surfaces, utensils and equipment. Since the costs of recovery can be a severe business impact, suggest the practice of recording items that are discarded for property insurance purposes (a video camera is one easy way to do this).

Reinforce the importance of wearing personal safety gear (from Lesson 5) during cleanup.

Learning Objectives for Participants

1 Become familiar with what needs to be discarded after an emergency, and why.

2 Know to first wash and rinse food contact surfaces, then to sanitize thoroughly to disinfect surfaces after an emergency.

Materials Needed

- ✓ Easel Pad with three "Discard Categories" charted for recording participant Activity responses
- ✓ For Alternative Small Group Activity: Recovery Puzzle (in Appendix B)

Trainer Note on Preparation: The activity can be done as a puzzle for small groups to solve (see "Recovery Puzzle" at Appendix B), or as described here, a full group activity which will be accessible for workers with limited English reading proficiency. The purpose of the activity is to familiarize participants with what must be discarded and the food safety reasons why.

For the full group activity, you will need to post or chart the following three headings, leaving room to write in group answers. One at a time, read off the "Activity" items listed alphabetically in the lesson below, and ask participants to decide which of the three posted discard categories that each item falls within. Record their answers, affirming or pointing out a different reason to consider in their rationale. The three discard categories are:

1 Too Long In Temperature Danger Zone
2 Damaged By Or Exposed To Heat, Smoke, Flooding, Sewage, Fumes Or Chemicals
3 Cannot Be Fully Washed & Disinfected

Lesson 6

Teaching Points

Cleanup and recovery after an emergency are critical for keeping food safe and becoming fully operational again.

We have already talked about the damage to food in a power outage, and the need for expert advice before cleaning up after contamination by biologic or chemical agents. Think for a moment of the impact of how other emergencies can cause contamination of food, equipment, walls and furnishings.

Floodwater may carry silt, raw sewage, oil or chemicals that make storm-damaged foods, where packaging is contaminated, unsafe to eat. Sewage waste contains human and animal feces carrying a range of disease-causing organisms.

Any food, or furnishings that cannot be sanitized, in direct contact with floodwater must be discarded.

In a fire, smoke, toxic fumes, the chemicals used to put out the fire and the pressurized water used to douse flames can penetrate all kinds of food packaging and contaminate food.

Even foods in cans, jars, bottles, wraps or cardboard packaging that were near the heat of the fire are not safe to eat. Equipment that cannot be fully sanitized must be replaced.

Deciding what food must be discarded after an emergency is key for preventing food-borne illnesses.

While use of a professional cleaner is recommended, if you find yourself involved in the cleanup during or after an emergency, wear personal safety gear to protect yourself.

Activity

Teaching Points

What to Discard & Why

A first step after an emergency is to sort through and discard all food, utensils, equipment and furnishings that could make people sick. Your food establishment will want to document the items that are discarded for insurance purposes.

I am going to name items that you might likely come across in cleanup after an emergency. For each item, tell me which one of the following three reasons is why the item needs to be discarded:

- **Discard food too long in temperature danger zone**

  Answers: C, I, and M

- **Discard food and packaged utensils damaged by or exposed to heat, smoke, flooding, sewage, fumes or chemicals**

  Answers: A, D, E, G, H, J, K and N

- **Discard anything that cannot be fully washed and disinfected**

  Answers: B, F and L

List of Items To Read For Group Answer on Each:

A Cardboard food boxes even if contents seems dry

B Damaged carpeting

C Hot-held food below 140 °F for 4 hours and 5 minutes

D Food packaged in paper, plastic, cloth or fiber

E Dry foods, like flour and sugar

F Toaster

G Plastic forks wrapped in cellophane

H Food products with lids or pull-tab tops like ketchup, milk, or cans of soda pop

I Cold food above 41°F for 4 hours

J Foods in glass jars

K Canned foods that are dented, leaking, swollen or rusted

L Damaged fabric on seating

M Partly cooked food without power for more than an hour

N Food not sealed off from a chemical release

Teaching Points

Wash & Rinse, Then Sanitize

Before the health department approves restarting food operations after an emergency, you will need to clean and sanitize all food contact surfaces, utensils & equipment.

You are not only cleaning away soot or residue of flooding or other contamination, but you are disinfecting to get rid of the organisms too small to see that can make people sick.

FIRST scrub and wash the building -- the floors, the walls and furnishings -- using soap. Rinse with clean water. Then sanitize to disinfect.

SECOND wash and rinse all food contact surfaces, including utensils and equipment. Then sanitize to disinfect.

Ask What do you think is third?

THIRD discard all exposed items that cannot be cleaned. Launder all clothing and cleaning aids (e.g., cloths and mop heads) used in the cleanup with detergent and hot water.

Ask What do you think is last, what you need to do after any cleanup?

Hint You all know the answer.

FOURTH & FINALLY hand wash twice immediately after cleanup. Use soap or, if directed by health officials, other cleaning compound for at least 20 seconds and thoroughly rinse with clean water. Then do it again..

Let's Review

1 **Discard food, equipment or furnishings** damaged in an emergency **if**:

- a **Sat Too long in Temperature Danger Zone**
- b **Damaged Or Exposed** by or to heat, smoke, flooding, sewage, fumes or chemicals
- c **Cannot be fully washed & disinfected**

2 **If in doubt, throw it out!**

3 **During cleanup, wash and rinse; then sanitize** to disinfect.

Lesson 7: Emergency Scenario Exercise

Lesson Time: 30 minutes

Lesson Concepts

This is a group exercise to put emergency fundamentals learning into practice within the context of a mock emergency scenario.

Power outage will be used as the scenario, although others from the *Emergency Handbook For Food Managers* may be substituted. The exercise is written for a group of four, with roles of a cook, a server, a customer and a manager.

Provide each small group(s) of four with a setting, props, and a situation description that offers clues for emergency decision making (three situation descriptions are included in this lesson). You may alternatively want to use these situation descriptors to prompt groups during the exercise.

Where more than one group practices the exercise, vary the situation information given to each group to explore differing emergency circumstances.

Exercise Outline:

- Prepare beforehand
- 3-5 minutes set-up
- 10 minutes group
- 5 minutes report back to full group
- 5 minutes questions & wrap

Learning Objectives for Participants

1 Discuss procedures needed and resources to have on hand for an emergency.

2 Know the importance of record keeping in an emergency (in this case time of onset and a temperature log).

3 Become familiar with food safety and food handling guidelines to prevent food illness in an emergency.

4 Decide whether food is safe to keep or must be discarded after an emergency.

5 Become familiar with fundamentals for keeping customers and workers safe in an emergency.

Materials Needed

- ✓ Beforehand, decide on set-up, props, handouts and format for the exercise
- ✓ Situation Description – copies for each role player (also at Appendix B)
- ✓ *Emergency Readiness* Photo Lesson 1 on "Power Outage"
- ✓ "Discard or Salvage?" guide at *Emergency Readiness* Photo Lesson 10
- ✓ Flashlight
- ✓ "Closed" sign (make one)
- ✓ Temperature Log (form at Appendix B; also at *Emergency Handbook For Food Managers*, Appendix C)
- ✓ Thermometer
- ✓ Foods in various stages of preparation to fit the Situation Description (alternatively, ask breakout groups to list foods on their menu)

Instructions for Exercise

"Lights Out" Exercise

A **Beforehand**, decide on set-up, props, handouts and format for the exercise.

- Situation Description with questions to address (at Appendix B)
- Discard or Salvage guide
- Provide or have participants develop props (see "Materials Needed" above)

B Form one or more small group(s) of four to practice the exercise. Remaining participants may be assigned as "Observers" to report at the end.

C Assign or instruct each group to self-assign the four roles to participants. Provide each with the handout of their Situation Description and provide their initial instructions to prepare for the exercise. The four roles for assignment are:

1 Cook
2 Server
3 Customer
4 Manager

D Have group(s) act out or answer these questions:

1 What tools do you need to deal with the situation?
2 What procedures should be followed?
3 What records need to be referred to or kept?
4 How should these foods be handled?:
   - Cold foods, refrigerated and being held cold
   - Hot foods being hot held
   - Partially prepared foods
   - Frozen foods
5 Which foods can be kept? Which should be discarded?
6 Discuss customer safety and discuss worker safety

Situations For Exercise

Situation 1

The power fails at 11:45 am.

- Restaurant opened at 11:00 am.
- Ten customers are in the restaurant.
- Expect a noon rush of 80 customers.
- Lunch service includes a buffet with both hot and cold held food.
- Some lights are on, some lights are off.
- The building next door has power.

Situation 2

Thunderstorm knocks out power at dinner rush.

- Power is off in the whole neighborhood.
- Restaurant is full of customers.
- No phone service.
- Meals are being prepared in the kitchen.
- Power comes back on within 2 hours.

Situation 3

Opening cook finds no power.

- Cook starts at 9:00 am.
- Kitchen clock reads 3:00 am.
- Temperature of chicken salad prepared yesterday is at 60˚ F.
- Milk in dispenser is at 50˚ F.
- Ice cream in freezer is soft.
- Restaurant opens at 11:00 am.

Group Discussion At Exercise End

Ask

1 What steps did you see taken that are emergency fundamentals from today's lessons?

2 What additional steps might have been taken to help with this emergency situation?

3 What procedures and tools did you need to deal with the situation?

4 What records needed to be referred to or kept?

5 How were foods handled?:

- A Cold foods, refrigerated or being held cold
- B Hot-held foods
- C Partially prepared foods
- D Frozen foods

6 Which foods were kept? Which were discarded?

7 How did you address customer and worker safety?

Lesson 8: Wrap Up & Post-Training Quiz

Lesson Time: 10 minutes

Evaluate Participant Learning

The completed post-training quizzes serve as measurement for evaluation of participant learning upon completion of this training, in conjunction with the baseline, pre-training quiz administered at the start of the training.

Lesson Concepts

Emergency readiness calls for periodic review and practice of plans and fundamentals. A wrap-up discussion of how participating food establishments could incorporate emergency readiness training for new staff and periodic refresher training for existing staff will help prepare participants over time. Refresher training is recommended at least once a year. The "Emergency Readiness Discussion Guide and Photo Lessons" contained within the *Emergency Handbook For Food Managers* may be used for refresher training.

If you have multicultural course participants requiring photo lessons in languages other than English, encourage participants to place their set of "Emergency Readiness Photo Lessons" into the *Emergency Handbook For Food Managers* notebook at their work place, in a known location where they can refer to it in the event of an emergency.

Completion of the post-training quiz will conclude the training session.

Learning Objectives for Participants

1 Leave with *Emergency Readiness For Food Workers* Photo Lessons, for emergency reference once back at work.

2 Review materials with new staff, and periodically with existing staff (at least once a year).

3 Exhibit learning in answering the post-quiz questions.

Materials Needed

- ✓ Post-Quiz (in Appendix B)
- ✓ Certificates of completion (template at Appendix A)

Post-Quiz

1 If a floor drain in one of the bathrooms at work is backed up creating a pool of sewage-contaminated water, what should you do?

A Alert your manager to close down the restaurant
B Try to repair the problem
C Plug the drain with absorbent towels or rags
D Close and lock that rest room, and alert your manager to call a plumber

2 For food security, why would you need to monitor food and condiment carts or buffets?

A To replace spoiling food
B To keep food containers filled
C To notice a customer adding a powder
D To fill ice containers so they won't run low

3 If a noxious chemical were released into the air from a nearby accident, it would be a good idea to:

A Place a wet cloth over your mouth and nose
B Boil water before using it for cooking
C Offer customers plenty of drinking water
D Call the American Red Cross

Appendix A

Certificate of Completion

This certificate certifies completion of the two-hour training

Emergency Readiness For Food Service Workers

_____

Participant Name

has completed this readiness training covering emergencies that pose a threat to food safety and public health, food security, response and recovery afterward.

_____

Date

_____

Trainer:

In association with the Twin Cities Metro Advanced Practice Center
Funded by the National Association of County and City Health Officials (NACCHO)

APC
Advanced Practice Centers

Appendix B

Course Materials

Pre-Quiz

1 If a floor drain in one of the bathrooms at work is backed up creating a pool of sewage-contaminated water, what should you do?

A Alert your manager to close down the restaurant
B Try to repair the problem
C Plug the drain with absorbent towels or rags
D Close and lock that rest room, and alert your manager to call a plumber

2 For food security, why would you need to monitor food and condiment carts or buffets?

A To replace spoiling food
B To keep food containers filled
C To notice a customer adding a powder
D To fill ice containers so they won't run low

3 If a noxious chemical were released into the air from a nearby accident, it would be a good idea to:

A Place a wet cloth over your mouth and nose
B Boil water before using it for cooking
C Offer customers plenty of drinking water
D Call the American Red Cross

Post-Quiz

1 If a floor drain in one of the bathrooms at work is backed up creating a pool of sewage-contaminated water, what should you do?

A Alert your manager to close down the restaurant
B Try to repair the problem
C Plug the drain with absorbent towels or rags
D Close and lock that rest room, and alert your manager to call a plumber

2 For food security, why would you need to monitor food and condiment carts or buffets?

A To replace spoiling food
B To keep food containers filled
C To notice a customer adding a powder
D To fill ice containers so they won't run low

3 If a noxious chemical were released into the air from a nearby accident, it would be a good idea to:

A Place a wet cloth over your mouth and nose
B Boil water before using it for cooking
C Offer customers plenty of drinking water
D Call the American Red Cross

Hand Washing Song

(to tune of “Sound Off”; Spanish version to tune of “Macarena”)

Palms	Back and Forth until there’s bubbles Repeat
Back of Hands	On the back of the hands with lots of bubbles Repeat
Between the Fingers	Between the fingers until they’re clean Repeat twice
Thumb	Thumb, Thumb, clean that Thumb Repeat
Nails	Scrub, Scrub, Scrub, Scrub those nails Repeat three times
Wrists	To the wrists, lather, lather, lather-up those wrists Repeat

Recovery Puzzle

Lesson 6

Sort through and discard items that can make people sick.

For items A-N, pick the reason 1, 2 or 3.

1 Discard food too long in temperature danger zone

2 Discard food damaged by or exposed to heat, smoke, flooding, sewage, fumes or chemicals

3 Discard anything that cannot be fully washed and disinfected

A Cardboard boxes even if contents seems dry

B Damaged carpeting

C Hot-held food below 140 °F for 4 hours and 5 minutes

D Food packaged in paper, plastic, cloth or fiber

E Dry foods, like flour and sugar

F Toaster

G Food affected by smoke, fire, fire suppression chemicals or pressurized water

H Food products with lids or pull-tab tops (e.g., ketchup, milk, beverages)

I Cold food above 41°F for 4 hours

J Foods in glass jars

K Canned foods that are dented, leaking, swollen or rusted

L Damaged fabric on seating

M Partly cooked food without power for more than an hour

N Food not sealed off from a chemical release

Situation Description One For Exercise

Lesson 7

Situation 1

The power fails at 11:45 am.

Restaurant opened at 11:00 am.

Ten customers are in the restaurant.

Expect a noon rush of 80 customers.

Lunch service includes a buffet with both hot and cold held food.

Some lights are on, some lights are off.

The building next door has power.

Address the following:

1 What tools do you need to deal with the situation?

2 What procedures should be followed?

3 What records need to be referred to or kept?

4 How should these foods be handled?:
   A Cold foods, refrigerated and being held cold
   B Hot foods being hot held
   C Partially prepared foods
   D Frozen foods

5 Which foods can be kept? Which should be discarded?

6 Customer and worker safety

Situation Description Two For Exercise

Lesson 7

Situation 2

Thunderstorm knocks out power at dinner rush.

Power is off in the whole neighborhood.

Restaurant is full of customers.

No phone service.

Meals are being prepared in the kitchen.

Power comes back on within 2 hours.

Address the following:

1 What tools do you need to deal with the situation?

2 What procedures should be followed?

3 What records need to be referred to or kept?

4 How should these foods be handled?:
- A Cold foods, refrigerated and being held cold
- B Hot foods being hot held
- C Partially prepared foods
- D Frozen foods

5 Which foods can be kept? Which should be discarded?

6 Customer and worker safety

Situation Description Three For Exercise

Lesson 7

Situation 3

Opening cook finds no power.

Cook starts at 9:00 am.

Kitchen clock reads 3:00 am.

Temperature of chicken salad prepared yesterday is at 60˚ F.

Milk in dispenser is at 50˚ F.

Ice cream in freezer is soft.

Restaurant opens at 11:00 am.

Address the following:

1 What tools do you need to deal with the situation?

2 What procedures should be followed?

3 What records need to be referred to or kept?

4 How should these foods be handled?:
- A Cold foods, refrigerated and being held cold
- B Hot foods being hot held
- C Partially prepared foods
- D Frozen foods

5 Which foods can be kept? Which should be discarded?

6 Customer and worker safety

Food Temperature Log

Required temperatures:

- Hot: 140° F or above
- Cold: 41° F or below
- Reheat to: 165° F or above

Date	Monitor's initials	Hot held or refrigerated?	Food item	Time	Temp.	Corrective action

Appendix C

Resources

Resources

Advanced Practice Centers (APCs)

National Association for County & City Health Officials (NACCHO) Advanced Practice Centers (APCs) web sites http://www.naccho.org/EQUIPh/; http://www.naccho.org/pubs/pub_list.cfm

Montgomery County, Maryland Emergency Preparedness Checklist for Nursing Homes http://www.naccho.org/EQUIPh/detail.cfm?id=135

Twin Cities Metro Advanced Practice Center (APC) resources for food industry:

- ***Emergency Handbook for Food Managers***, released 9/05; available at http://www.naccho.org/topics/environmental/foodsafety/EmergencyHandbookFSManagersFoodSafety.cfm

- **Food Security Self Inspection Checklist** and related tools available in 10 languages at http://www.naccho.org/equiph/detail.cfm?id=282

- **In An Emergency Info Sheets:** Discard or Salvage; Equipment & Supplies List For Food Service (10 languages) available at http://www.naccho.org/equiph/detail.cfm?id=283

Federal Government

USDA Food Security & Emergency Preparedness web site http://www.fsis.usda.gov/Food_Security_&_Emergency_Preparedness/index.asp

USDA Food Safety & Inspection Service web site http://www.fsis.usda.gov/Home/index.asp

Federal government food safety information web site http://www.foodsafety.gov/~fsg/fsgnews.html

FDA Center for Food Safety & Nutrition web site http://vm.cfsan.fda.gov/list.html

FDA Food Defense & Terrorism web site http://www.cfsan.fda.gov/~dms/fsterr.html

CDC Emergency Preparedness & Response web site http://www.bt.cdc.gov

FEMA *Are You Ready? An In-depth Guide to Citizen Preparedness* (IS-22) is FEMA's most comprehensive source on individual, family, and community preparedness, at web site http://www.fema.gov/areyouready/

US Department of Homeland Security Ready Business web site http://www.ready.gov/business/index.html

State Government

Massachusetts Department of Health Food Security web site at http:www.mass.gov?pageID=eohhs2terminal&L=4&L0=Home&L1=Provider&L2=Guidance+for+Businesses&L3=Food+Safety&sid=Eeohhs2&b=terminalcontent&f=dph_environmental_foodsafety_p_food_security&csid=Eeohhs2

Michigan Department of Agriculture, *Flip Chart of Emergency Procedures: Retail Food Establishments*, Michigan Retail Food Security Working Group of Michigan Grocers Association, Michigan Department of Agriculture, Michigan Association of Local Public Health Administrators, et al. web site at http://www.michigan.gov/documents/MDA_FSPR_EmergencyFlipChart_Jan06_148793_7.pdf

Minnesota Department of Health (MDH) Terrorism & Natural Disasters web site http://www.health.state.mn.us/terrorism.html

Minnesota Department of Health (MDH) Safety Center web site http://www.health.state.mn.us/foodsafety/

Minnesota Department of Health (MDH) Family and Personal Emergency Preparedness web site, includes an Emergency Kit Checklist, medical information and more, at http://www.health.state.mn.us/emergency/index.html

Organizations & Academic Centers

American Red Cross web site http://www.redcross.org/

Centers for Public Health Preparedness Resource Center web site http://www.asph.org/acphp/phprc.cfm

University of Minnesota Center for Public Health Preparedness web site http://www.sph.umn.edu/umncphp/

Yale New Haven Center for Emergency Preparedness & Disaster Response offers a tool, “Peace of Mind” that will assist with developing and maintaining your personal preparedness plan at web site http://www.ynhhs.org/emergency/progsvcs/pdffiles/PEACE_Checklist_English.pdf