

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

# Emergency Readiness FOR FOOD WORKERS

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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			

