

# ATTACHMENT I: FOOD DEFENSE

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DRAFT

*This attachment is part of Annex F of the State of Oregon Emergency Management Plan and should be used in conjunction with the other attachments and appendices. It is not a stand-alone plan.*

# 1 INTRODUCTION

Public health's responsibility during incidents that affect the food supply is detecting, confirming, and investigating outbreaks of foodborne illness and inspecting restaurants and other food preparation locations. This attachment describes how the Oregon Public Health Division (OPHD) will assist restaurants and other food preparation facilities<sup>1</sup> respond to and recover from a large-scale intentional or unintentional contamination of food. The federal Department of Homeland Security refers to the preparation for and response to food contamination incidents as "food defense." This attachment outlines key assumptions, roles, and responsibilities for a public health response to a food-related incident.

This attachment is part of the OPHD Emergency Support Function 8 (ESF-8) Annex F to the State of Oregon Emergency Management (OEM) Plan and is meant to be used in conjunction with the rest of Annex F. Annex F can be found on the Health Alert Network (HAN) Web site (<https://www.oregonhan.org>) or can be requested by contacting the Public Health Emergency Preparedness (PHEP) program (971-673-1308).

## 2 PURPOSE AND AUTHORITIES

### 2.1 Purpose

The purpose of the OPHD Food Defense plan is to lessen the human health impact of intentional or unintentional contamination of the food supply resulting from natural disasters, accidents, acts of terrorism, or sabotage. This attachment focuses on the actions, objectives and procedures that OPHD will follow for preparedness, response and recovery activities, including:

- Ensuring safe food is available in restaurants.
- Advising the public and industry on methods to ensure safe food during storage, preparation and service.
- Communicating with other governmental agencies and the private sector.
- Reestablishing availability of safe food to existing or temporary restaurants after a food-related incident.

### 2.2 Authorities

**Oregon Department of Agriculture (ODA) is the lead agency for food defense in Oregon**, in part because it is responsible for most of the food production system. OPHD,

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<sup>1</sup> In this plan, "restaurant" means any establishment in which food or drink is prepared for consumption by the public. In Oregon, these establishments include bars, bed and breakfast facilities, cafeterias, temporary restaurants at fairs and carnivals, mobile food units, and vending machines, among others. See ORS 624.100 for an exact list of the types of food preparation facilities regulated by the Department of Human Services.

whose food defense responsibility is for restaurants and other food preparation facilities, has a support role in assisting ODA and local health departments (LHDs) during response and recovery actions and communication with the public.

Legal authorities for public health food defense are listed below. OPHD’s primary authority is the Food Service Facilities Statute. The administrative rules are listed in Table 1. The complete text of the Food Service Facilities Statute and the administrative rules can be found at <http://oregon.gov/DHS/ph/foodsafety/regs.shtml>.

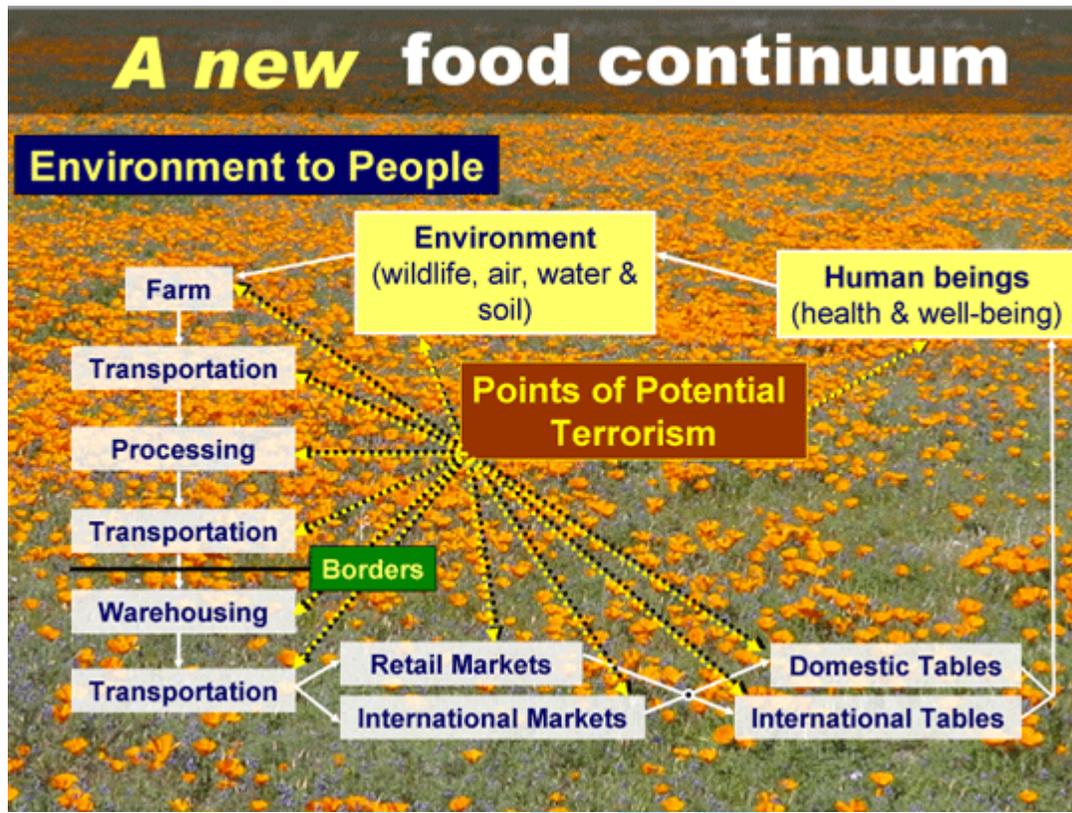
**Table 1: Selected Legal Authorities**

Oregon Rules and Statutes	Title
ORS 624.100	Food Service Facilities Statute
OAR 333 Div 12	Procedural Rules
OAR 333 Div 39	Outdoors Mass Gathering
OAR 333 Div 150	Food Sanitation Rules
OAR 333 Div 157	Inspections & Licensing Procedures
OAR 333 Div 158	Combination Food Facilities
OAR 333 Div 160	Destruction of Food Unfit for Human Consumption
OAR 333 Div 162	Mobile Food Rules
OAR 333 Div 170	Bed & Breakfast Facilities
OAR 333 Div 175	Food Handler’s Rules

### 3 SITUATION AND ASSUMPTIONS

#### 3.1 Situation

“Farm to table” and other descriptors are used to describe the complex process of the production of food (on the farm) through processing and preparation (to the table). The model below (Figure 1) illustrates this process known as the “food continuum.” As can be seen, there are numerous points where food can become contaminated and transmitted downstream.

**Figure 1: Food Continuum**

Reference: <http://wifss.ucdavis.edu/>

The food industry is very important to Oregon's economy. All economic activity associated with agriculture in Oregon, including inputs and transportation, warehousing, food processing, marketing, equipment manufacturing and sales, and related activities, creates over 140,000 jobs in the state, which accounts for about one in every 12 jobs and an overall payroll of over \$2.3 billion. Adding the economic output from food processing, restaurants, retail food establishments, and related activities creates \$21.7 billion in economic output in Oregon, or >10% of the gross state product. Oregon's restaurant industry has approximately 9,000 establishments and a total economic impact of \$9.7 billion in 2004. Oregon's restaurants are the state's largest private sector employer.

In Oregon, no one public agency is responsible for the farm-to-table food continuum. As Table 2 indicates, even for the restaurant and retail food segment, the responsible state agencies are numerous. Because of the diverse oversight, gaps in the system may exist. Unless collaborative and consultative processes among state and local agencies and the restaurant and retail food industry are in place and on-going, such gaps may render the restaurant and retail food safety system vulnerable to intentional or unintentional contamination.

**Table 2: State Agencies Responsible for Retail Food Safety**

This agency...	Regulates these food establishments...
Department of Human Services, Public Health Division	Restaurants (including mobile units, commissaries, vending machines, and temporary food events such as fairs)
Department of Human Services, Client Care Monitoring Unit	Assisted living facilities, nursing homes
Department of Agriculture	Grocery stores, delis
Department of Corrections	State correctional institutions
Department of Education	School cafeterias
Department of Employment	Child care centers

Normally, food contamination is suspected only after food is consumed and illness is detected. Thus, OPHD plays another important role in food defense by tracking food contamination through its Acute and Communicable Disease Program (ACDP). See Hazard Appendix 2 for more detail on ACDP’s roles and responsibilities generally in disease surveillance.

### 3.2 Assumptions

- ODA is the primary responding agency for food-related incidents.
- Except for a credible threat of intentional contamination, OPHD is the state agency most likely to discover an incident has occurred after an illness is reported through active epidemiological or routine laboratory surveillance.
- A large-scale incident involving any part of the food continuum will require a response by OPHD.
- Threats to the food system can come from naturally occurring incidents (e.g., shellfish bed contamination), inappropriate handling of food, or human-caused sources (e.g., unintentional or intentional contamination).
- Prevention activities taken by local, state and federal agencies and restaurants are effective.
- The farm-to-table food industry will make every effort to ensure a safe product during the manufacture, production, distribution, transportation and service of food.
- During a large-scale food-related incident for which both OPHD and ODA have statutory responsibility, the agencies will coordinate their response and recovery activities using a Unified Command.
- Though emergency response is primarily a local responsibility, many state and federal agencies and the restaurant and retail food industry will become involved in the response and recovery phases of the incident.

- During a large-scale food-related incident, the restaurant and retail food industry will work cooperatively for a rapid and smooth coordination of OPHD response and recovery operations.

## **4 CONCEPT OF OPERATIONS**

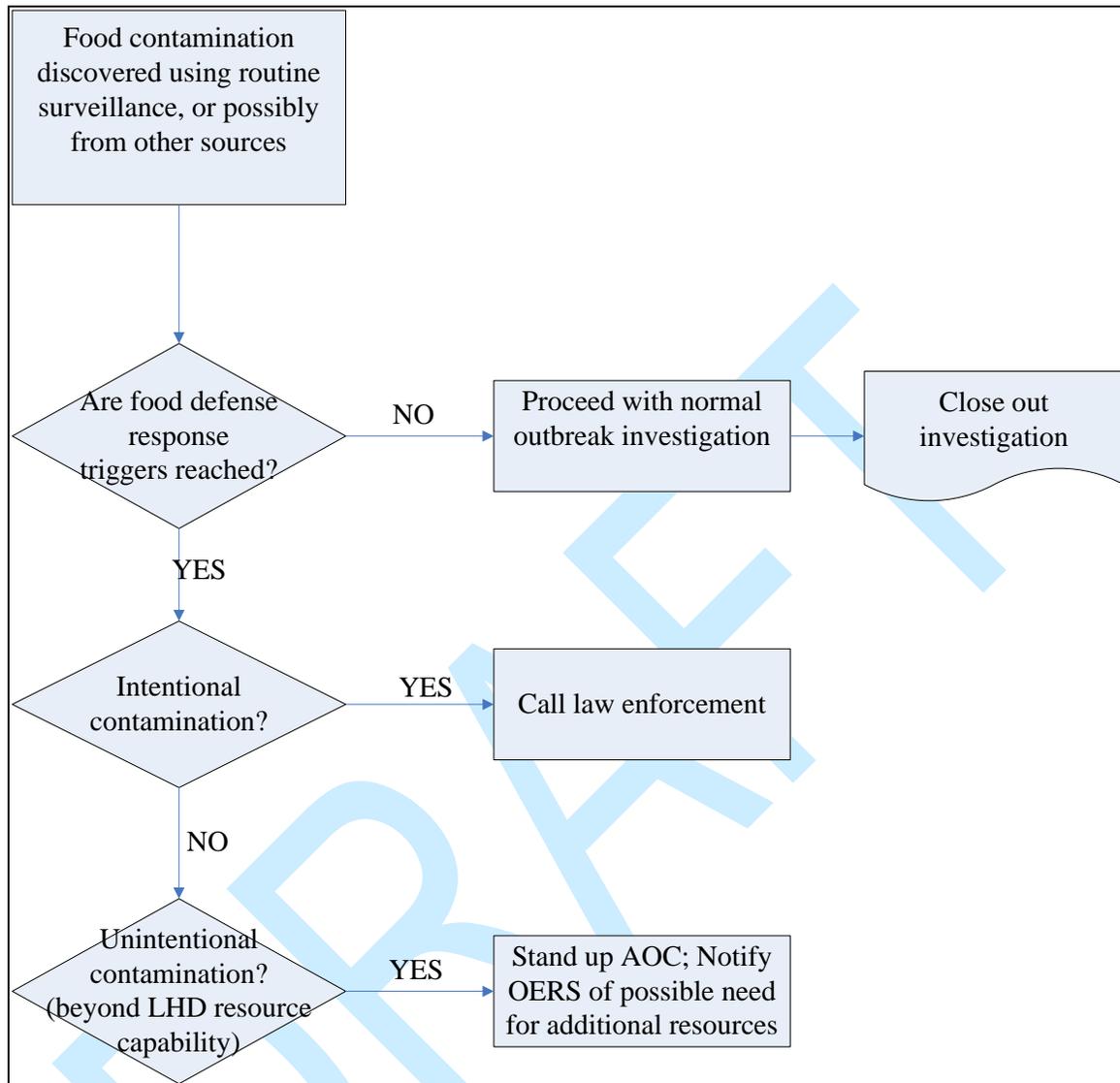
OPHD is responsible for the identification and control of foodborne disease outbreaks, environmental health inspections of restaurants, and consultation with other state agencies with food safety responsibilities.

The Foodborne Illness Prevention Program (FBIPP) is OPHD's primary responder in a food-related incident and has the primary responsibility to carry out the response and recovery activities described in this attachment. Additionally, ACDP provides epidemiological expertise and PHEP provides emergency management.

### **4.1 Notification**

Notification of a large-scale intentional or unintentional food contamination will likely come from routine monitoring conducted by ACDP. In contrast to other emergencies, the Oregon Emergency Response System (OERS), which is managed by the Office of Emergency Management, is an unlikely source of notification for a food-related incident, unless a terrorist group announces a credible threat. Figure 2 outlines the notification decision chart for public health.

**Figure 2: Notification of a Food-Related Incident**



## 4.2 Activation of the OPHD Emergency Management Organization

Some threats to food safety represent an obvious problem that warrants an immediate response. Others may appear less urgent and therefore become subject to credibility assessment and further investigation. Events that may dictate activation of the public health emergency management organization include:

- Discovery of some physical characteristic of a food product that suggests possible deliberate contamination with a biological or chemical agent.
- Reports of unusual patterns or types of illness presumably related to a food product.
- Observation of suspicious behavior or activity around food products.

- A significant security breach in the food continuum.
- Receipt of a threat (via a telephone call or piece of mail) indicating that a food product has been or will be contaminated.
- When a food-related incident is large enough that it exceeds the capacity of local public health emergency response resources.
- When public health communications among local or regional state health departments during a large scale food-related incident must be coordinated.
- Two or more of these events occurring simultaneously.

The operational priorities for OPHD in response to a food-related incident are:

- Mitigate the health effects from an incident arising out of contamination of products in restaurants.
- Provide information regarding the scope and health effects of the contamination in restaurants to local, state and federal agencies, and the Incident Commander and Public Information Officer.
- Coordinate with ODA and other appropriate state agencies on threat assessment and resource needs.
- Act as the public health point of contact with OERS, ODA, and other appropriate state agencies.
- Assist LHDs in field assessments and investigations involving restaurants.

OPHD will participate with local and federal agencies in a unified command or area command, in accordance with the National Incident Management System (NIMS) as implemented by OEM.

## **5 BUSINESS CONTINUITY**

See the Department of Human Services business continuity plan.

## **6 ROLES AND RESPONSIBILITIES**

This section outlines the roles and responsibilities of the federal, state and local agencies and the private sector in a response to a large-scale food incident.

### **6.1 Federal**

Numerous federal agencies may provide assistance to supplement state and local resources in food incident.

## 6.1.1 Centers for Disease Control and Prevention

The Centers for Disease Control & Prevention (CDC) has primary health-related responsibility for the federal response to food incidents.

### Preparedness

- Provide public health guidelines, support, and technical assistance to local and state public health agencies as they develop coordinated preparedness plans and response protocols.
- Maintain a voluntary foodborne illness reporting system called the Electronic Foodborne Outbreak Reporting System (EFORS) where states can report foodborne illness.
- Through the Environmental Health Specialist Network (EHS-Net), conduct research on the environmental health aspects of foodborne diseases.
- Maintain a nationwide system of foodborne disease surveillance that:
  - Designs and puts into place rapid, electronic systems for reporting foodborne infections.
  - Works with other federal and state agencies to monitor rates of and trends in foodborne disease outbreaks across states.
- Develop state-of-the-art techniques for rapid identification of foodborne pathogens at the state and local levels.
- Develop and advocate public health policies to prevent foodborne diseases.
- Conduct research to help prevent foodborne illness.
- Train local and state food safety personnel.

### Response

- Monitor the impact of foodborne diseases and identify sources of specific foodborne diseases.
- If requested by a state health agency, deploy response teams to investigate unexplained or suspicious illnesses or unusual etiologic agents and provide on-site consultation regarding medical management and disease control.
- In conjunction with other federal agencies, implement an emergency communication plan that ensures rapid dissemination of health information to the public during actual, threatened or suspected acts during a food-related incident.
- Conduct rapid identification and molecular subtyping of foodborne pathogens at the request of state and local authorities.

## 6.1.2 Food and Drug Administration

The FDA monitors the production, processing, movement and storage of domestic and imported food. It also works closely with state and local authorities to identify any problem with the food supply, investigate the problem, and remove the contaminated products from the market quickly.

### Preparedness

- Provides information on food defense preventive measures.
- Provides guidance for conducting routine food safety inspections.
- Requires registration of all food facilities, as mandated by the Bioterrorism Response Preparedness Act of 2002.
- Trains Food Emergency Response Network (FERN) laboratory partners in analytical methodologies.
- Requires record keeping of firms' suppliers and purchasers, including transporters.
- Works with local/state agencies to ensure a safe food supply.

### Response

- Investigates illness or injury reports, threats, and incidents related to food products and other FDA-regulated products.
- With other government partners, identifies implicated products.
- Requests that an FDA-regulated firm recall implicated or potentially unsafe product.
- Exercises administrative detention of an implicated product.
- In coordination with OPHD, issues press information, such as consumer advisories or the results of product traceback investigations.
- Coordinates the testing for threat agents in food at the local, state and federal levels through FERN.
- Coordinates investigations with federal, state, and local partners.

## 6.1.3 Food Emergency Response Network

FERN is a network of state and federal laboratories that analyze food samples in the event of a biological, chemical or radiological terrorist attack. FERN's federal partners are the FDA, United States Department of Agriculture (USDA), CDC, and Environmental Protection Agency (EPA). The biological section of FERN has some overlap with the CDC's Laboratory Response Network (LRN).

## 6.1.4 Federal Bureau of Investigation

The FBI is responsible for determining whether a credible threat to the food supply exists. If so, it is the lead federal agency for investigating suspected acts of terrorism directed at the nation's food supply.

## 6.1.5 United States Department of Agriculture

The USDA provides leadership on food, agriculture, natural resources, and related issues. One of the primary responsibilities to the American public is to enhance food safety by taking steps to reduce the prevalence of foodborne hazards from farm to table. There are two USDA organizations that have specific responsibilities for food defense—the Animal Plant Health Inspection Service (APHIS) and the Food Safety Inspection Service (FSIS).

### Preparedness

- Safeguards agricultural resources from exotic invasive pests and diseases.
- Monitors and manages pests and diseases existing in the U.S.
- Resolves trade issues related to animal and plant health.
- Ensures the humane care and treatment of animals.
- Protects the nation's food supply by providing inspectors and veterinarians in meat, poultry, and egg product plants and at ports-of-entry.
- Develops and maintains the infrastructure for biosecurity.
- Assists state and local authorities in disease eradication activities and/or foodborne illness emergency investigations.
- Defines training requirements for casual employees or support agencies involved in emergency response operations.

### Response

- Assists in disease eradication and food defense activities including quarantine, evaluation, slaughter, disposal, cleaning and disinfecting, epidemiology, traceback, vector control, and transportation-permitting arrangements.
- Consults with state and local authorities regarding eradication and food safety threat proceedings.
- Collects, analyzes and disseminates technical and logistical information.
- Issues a declaration of extraordinary emergency.
- Defines the infected area and control zones.
- Prepares information for dissemination to the public, producers, processors and other concerned groups.
- Informs the public about meat, poultry and egg product food safety issues.
- Allocates funding for compensation to the owners of culled animals.
- Defines restrictions on interstate commerce.

## **6.1.6 Department of Homeland Security: Science and Technology (S&T) Directorate**

As the main research and development arm of Department of Homeland Security, S&T directs efforts to enhance scientific and technological capabilities, such as the development of vaccines, antidotes, and therapies against biological and chemical agents, to prevent or mitigate the effects of large-scale terrorism. Since its inception in March 2003, S&T's efforts to enhance food and agricultural biosecurity have focused on:

### **Preparedness**

- Assessing the epidemiological and economic implications of high-consequence terrorism scenarios.
- Developing key technologies for rapid detection of specific biological and chemical agents.
- Coordinating emergency preparedness plans in response to agroterrorist events.
- Developing advanced detection and surveillance systems, e.g., the BioWatch program, to permit early detection of the intentional release of human and agricultural pathogens.
- Developing detection and surveillance systems to identify potential security threats at critical nodes in food processing/production.
- Engaging the academic community in support of S&T's mission, including two Homeland Security Centers of Excellence to conduct multidisciplinary research and to develop innovative educational programs in food and agriculture security.

## **6.1.7 Department of Homeland Security: Information Analysis and Infrastructure Protection (IAIP) Directorate**

Food and agriculture security is included in IAIP's critical infrastructure protection authority, based on provisions outlined in the National Strategy for the Physical Protection of Critical Infrastructure and Key Assets. Specific activities regarding food and agriculture currently include:

### **Preparedness**

- Convenes sector-wide workshops focused on:
  - Developing a framework for information sharing, in coordination with USDA, Department of Health and Human Services (HHS), and private sector representatives.
  - Identifying security gaps and strategies for addressing these gaps.

## 6.1.8 Environmental Protection Agency

The EPA's homeland security activities focus on the use of pesticides, contamination of drinking water, and other multidisciplinary actions.

### Preparedness

- Prevents the use of agricultural materials such as hazardous pesticides, including the equipment used in their application, as terrorist weapons.
- Protects the security of drinking water and wastewater systems using emergency response tools and vulnerability assessments.
- Shares information on water security through the online Water Information Sharing and Analysis Center (WaterISAC) at <http://www.waterisac.org/>.
- Helps protect food from biological, chemical and radiological contamination due to acts of terrorism through participation in PrepNet and in federal preparedness exercises.
- Performs research and development on methods for detecting, treating, and containing biological and chemical warfare agents and bulk industrial chemicals that could be intentionally introduced into drinking water systems.

## 6.2 State

### 6.2.1 Oregon Public Health Division

OPHD's responsibility in food defense is detecting, confirming, and investigating outbreaks of foodborne illness and inspecting restaurants and other food preparation locations. During a food-related incident, OPHD will provide the human health effects information to county health officials, other local responders, state, federal agencies, and the Incident Commander. In addition, OPHD will assist with field investigations as required and collaborate with other state agencies with statutory food defense responsibilities.

#### 6.2.1.1 Foodborne Illness Prevention Program

The FBIPP, a program within Oregon Environmental Public Health (OEPH), has primary responsibility for developing, implementing and enforcing the standards pertaining to food safety services in restaurants in Oregon.

### Preparedness

- Conducts food defense planning and exercises.
- Identifies and publishes food safety information.
- Develops and maintains list of restaurants.
- Develops and maintains an equipment supply list for restaurants (see Tab I-1).

- Develops and updates restaurant response and recovery fact sheets related to disasters (chemical, power outage, flood, etc.). (See Tab I-2 through Tab I-7.)
- Develops and maintains restaurant self-inspection checklists (see Tab I-8).
- Coordinates surveillance activities with ACDP.
- Maintains an outbreak investigation kit and provides information to LHDs on the components needed for an outbreak investigation kit (see Tab I-11).
- Provides public health training on managing food defense to LHDs, restaurants, first responders, emergency medical personnel, and other personnel involved in food defense, response or recovery.
- Works with the Oregon Restaurant Association and food safety certifying institutions in the state and Oregon's educational institutions to provide food safety education.
- Reviews existing procedures to be sure they include the appropriate activation triggers. Activation triggers include the following:
  - When a routine foodborne investigation is large enough that it exceeds the capacity of local public health resources to respond. Collaboration between PHEP, FBIPP, and ACDP is required to activate this trigger.
  - When an unusually large number of people are affected by what appears to be intentional or suspicious contamination.
  - When there is a rare and potentially serious organism or incident (e.g., botulism).
  - When there is significant federal involvement.
  - When complex coordination with other agencies and public messaging are needed.
- Assists LHDs in locating resources to aid in the purchase and provision of appropriate environmental health investigative and emergency equipment.
- Maintains Oregon's Food Safety Standards consistent with federal and state guidelines.

### **Response**

- Conducts situation (disaster) assessment of restaurants (see the Branch Director position description in Tab I-10).
- When requested, assists LHDs by providing technical advice and by supporting field assessments and outbreak investigation of restaurants using the relevant inspection form (see Tab I-11).
- When requested, assists ODA in field assessment and outbreak investigation of ODA-regulated facilities
- Collects information relating to food products and possible contamination points within or between restaurants relevant to the incident.
- Assists in ongoing surveillance activities with ACDP.
- Provides scientifically-based guidance concerning the disposition of food that may have been damaged by refrigeration failure during a food-related incident (see Tab I-12).

- Produces accurate and timely food safety information for public information's distribution to responders, clinicians, health care providers, and the public concerning the human health impact related to a food incident.

### **Recovery**

- Conducts restaurant review and analysis of incident (see Tab I-11).
- Identifies the impact of the incident on restaurants and the ability of these establishments to recover.
- Assists LHDs in conducting restaurant salvage operations and potential methods of providing recovery in the most effective and equitable manner (see Tab I-9).
- Works with EHS-Net and ACDP in determining the contributing factors of foodborne illness.

## **6.2.1.2 Acute and Communicable Disease Program**

ACDP, a program within Communicable Disease Prevention and Epidemiology, provides epidemiological expertise for all food contamination incidents. All clusters of illness are reportable, regardless of etiology.

### **Preparedness**

- Participates in the Foodborne Diseases Active Surveillance Network (FoodNet), which performs active surveillance for foodborne diseases and related epidemiological studies designed to help public health officials better understand the epidemiology of foodborne diseases.

### **Response**

- Provides technical assistance to LHDs in the investigation of outbreaks.
- Collaborates with the ODA and the FDA when commercial sources of outbreaks are implicated.
- Maintains two-person strike teams available 24/7 to take the lead in food contamination epidemiology investigations as necessary.

## **6.2.1.3 Office of Family Health**

### **Preparedness**

- Provides LHDs with emergency checklists regarding food, water and other necessary supplies at home for emergency uses with the recommendation that they be shared with clients.

### **Response**

- Assists FBIPP and ACDP in identifying members of the public that are exhibiting gastrointestinal symptoms.
- Assists OEPH and LHDs in monitoring members of the public in their preparation and serving of preserved food.

## Recovery

- Assists OEPH, ACDP, and LHDs in monitoring members of the public for signs/symptoms of foodborne illness.

### 6.2.1.4 Public Health Emergency Preparedness Program

PHEP provides overall direction, command, and control during a food-related emergency. For additional response and recovery operations see the State of Oregon Emergency Management Plan, Annex F.

If a credible threat to the Oregon food supply is detected, the public health Public Information Officer (PIO), in coordination with incident command, subject matter experts, the ODA PIO, and law enforcement officials (FBI), will determine whether a media briefing or media release is appropriate. The media statement or release should advise that potential contamination of the food supply has been detected, and that OPHD is awaiting confirmatory tests. It should also include:

- Information about the process being used to confirm or rule out contamination of the food supply.
- When and where the presumed incident took place.
- When additional information will be available.
- The precautions being taken to prevent additional contamination.
- The precautions being taken to care for those who may have been exposed.
- Instructions for members of the public who may have been exposed, including the following:
  - If exposed and ill or becoming ill, phone clinician for advice.
  - Report possible exposure to local law enforcement or public health authorities.

### 6.2.1.5 Oregon State Public Health Laboratory

The OSPHL provides laboratory testing to support OPHD.

#### Preparedness

- Participates in the National Antimicrobial Resistance Monitoring System by sending selected samples to the CDC to be tested for resistance to antimicrobial agents (antibiotics).
- Screen meat and poultry samples that are collected monthly for selected pathogens and indicator bacteria.

#### Response

- Subtype *Escherichia* (*E. coli*) O157, *Salmonella*, and *Shigella* isolates by Pulse Field Gel Electrophoresis.

## 6.2.2 Oregon Department of Agriculture

The ODA has a threefold mission: ensure food safety and provide consumer protection, protect agricultural natural resources, and promote economic development in the agricultural industry. ODA, through its Food Safety Division, is the lead state agency in response to a food-related emergency. Four of the divisions (Food Safety Division, Animal Health and Identification Division, Pesticides Division, and Plant Division) and Laboratory Services have specific responsibilities for emergency response. The divisions provide inspectors throughout the state who can respond to and investigate food-related incidents.

For ODA's emergency plan, see State of Oregon Emergency Management Plan, Annex I, Oregon Department of Agriculture All Hazards Plan. ODA is responsible for Emergency Support Function 11 - Food and Agriculture.

A summary of ODA's responsibilities, especially where they intersect with OPHD, is below:

### Preparedness

- Licenses and inspects all facets of the food distribution system after harvest, except restaurants, to ensure that food is safe for consumption.
- Performs environmental health inspections of retail food markets, food processors, dairy farms and plants, retail and custom meat establishments, and shellfish harvesting.
- Monitors shellfish water quality and dairy production from the farm through the distribution system.
- Consults with federal, state and local authorities regarding threats to food safety.
- Controls and eradicates animal diseases, including those transmissible to humans.
- Educates and trains people within the animal industry about health issues, provides technical assistance in disease control, tests for epizootic and zoonotic diseases as required by state, federal and international regulations, and enforces regulations, as necessary.
- Regulates the sale and use of pesticides.
- Provides testing and licensing of all users of restricted-use pesticides.
- Registers fertilizer.

### Response

- In consultation with state and local health departments, investigates foodborne illnesses resulting from a food incident in ODA-licensed facilities.
- Informs OPHD of the recall of food products involving ODA-licensed facilities.
- Directs or assists the USDA or the FDA in disease eradication and food defense activities including quarantine, embargo, product recall, evaluation, slaughter, disposal, cleaning and disinfecting, trace-back investigations, vector control, and transportation-permitting arrangements.
- Consults with federal, state and local authorities regarding eradication and food safety threat proceedings.

- Assists appropriate state and federal authorities in the design of the infected area control zone in which disease eradication activities take place.
- Investigates cases of marine intoxications (paralytic shellfish poisoning).
- Investigates incidents of pesticide misuse.
- Authorizes the embargo of crops contaminated with pesticide.
- Provides expertise in the support of the timely and accurate investigation of pesticide incidents.
- With the Department of Environmental Quality, provides analytical services for the detection of pesticide residues in environmental and food samples in response to field investigations.
- Provides testing of shellfish for toxins.
- Provides highly specialized tests, unavailable anywhere else within the state, for detection of diseases of zoonotic impact and those essential in meeting regulatory requirements
- Allocates funding for compensation to the owners of culled animals.
- Defines restrictions on interstate commerce.

#### **Recovery**

- Ensures that ODA facilities meet minimum food safety standards before resuming operations.

## **6.3 Local Health Departments**

LHDs are responsible for “on the ground” work.

#### **Preparedness**

- Provide community education in collaboration with OPHD.
- Conduct case investigations using ACDP forms and guidelines.
- Facilitate cooperation and collaboration regarding food defense activities among all local involved parties (e.g., government officials, emergency responders, health experts, business, food service industry, and the public).
- Maintain Oregon’s Food Safety Standards consistent with federal and state guidelines.
- Review existing food safety operational procedures for conformance to appropriate state and federal food safety agencies guidelines.
- Develop and maintain list of equipment needed for outbreak investigations (for FBIPP’s suggestions, see Tab I-11).
- Prepare and update basic fact sheets, key messages, and other informational materials for distribution to partners, stakeholders and the public through appropriate established channels before, during, and after a food-related incident.

**Response**

- Identify and report food contamination points in affected restaurants.
- Conduct foodborne outbreak surveillance in collaboration with OPHD.
- Provide appropriate food safety information to the public.
- Coordinate food safety information to the food service industry as necessary.
- Contact the state Emergency Coordination Center (ECC) through the county Emergency Operations Center (EOC) when resources capacity is exceeded, defined as a lack of environmental health specialists to conduct response operations.
- Conduct food outbreak investigations of restaurants (for suggested investigative guidelines from FBIPP, see Tab I-11).
- Work with EHS-Net in determining the contributing factors of foodborne illness.

**Recovery**

- Assist in the restoration and salvage operations of restaurants in the affected area.

## 6.4 Hospitals and Health Care Systems

Health care facilities will be stressed during a food-related incident of any severity. Public health at all levels will assist health care providers and facilities to maximize access of the population to quality health care. Hospitals and health care systems are expected to perform the following tasks:

**Preparedness**

- Develop planning and decision-making structures for food-related emergencies, including the availability of safe food for people in hospitals.
- Develop plans for feeding staff, patients and their families, as well as other non-patients who may turn to the hospital as a source of food during an emergency.
- Ensure safety of the food supply to hospitalized patients and staff.

## 6.5 Private Sector

The farm-to-table food industry is responsible for the safe manufacture, production, distribution, transportation, and service of food products.

### 6.5.1 Restaurants

In addition to taking steps to prevent food contamination, restaurant operators should have in place policies, procedures, and protocols to detect and evaluate potential threats to the safety of food in their facilities.

### **Preparedness**

- Develop protocols for contacting local authorities (law enforcement, regulatory, or public health) in the event of a food-related emergency, including maintenance of key contact information (e.g., name, telephone number, fax number, e-mail address, 24-hour availability information) for each agency
- Develop procedures for handling and recording consumer complaints so that any illnesses possibly associated with a food product can be rapidly assessed, evaluated, and reported
- Develop protocols for inspecting and tracking incoming ingredients, packaging, labels, and product returns to detect tampering or counterfeiting
- Develop mechanisms for tracking hazardous chemicals or laboratory reagents and appropriate controls, as well as protocols to investigate missing items or other irregularities
- Develop protocols for internal reporting and management of potential food threats, by type of incident.
- Ensure that security patrols and/or video surveillance of facility, if deemed necessary, are available to detect suspicious behavior or unusual events.
- Provide mechanisms to identify and track certain illnesses in employees that may indicate product or plant contamination.
- Develop protocols for tracking finished product if a recall becomes necessary.
- Conduct random inspections of storage facilities, vehicles, and vessels to detect potential security breaches.

### **Response**

- Report incident to local authorities.
- Provide product expertise.

### **Recovery**

- Work with OSPHD, LHDs, and other federal and state food safety agencies to ensure that restaurants in the affected area are providing safe food prior to resuming operations.

## **6.5.2 Associations That Support Restaurants**

- Provide subject matter expertise.
- Coordinate communication for members.
- Maintain member contact list for communications.

## **7 VULNERABLE POPULATIONS**

Food that pose health risks to adults in the general population, pose a significantly higher risk to segments of special populations such as the young and the elderly. Because of the potential for pre-existing medical conditions, susceptibility to foodborne disease and the likelihood of not understanding what they need to do during disaster response.

The young and the elderly should be given the highest priority for evaluation, due to the probability that these individuals exposure to foodborne illnesses result in greater harm without immediate attention.

Children and the elderly are especially at risk of harm from foodborne illnesses:

- Children and the elderly are more at risk of rapid dehydration due to vomiting or diarrhea.
- Children and he elderly are more at risk of shock or death from even small amounts of blood loss resulting from foodborne illness in which blood loss is significant thus harmful.
- Children and the elderly need special considerations for medical treatment.

## **8 PLAN MAINTENANCE**

OPHD and the Food Services Advisory Committee developed this attachment with representation from local, state, and federal agencies and food and hospitality industries. This attachment will be reviewed at least every other year and revised if necessary, with specific attention given to comments from the previous year exercises or emergencies.

## **9 TRAINING AND EXERCISES**

### **9.1 Training**

Regional food defense training for LHDs will be conducted during the next year.

### **9.2 Exercises**

In coordination with the OPHD Exercise Design Team, the Office of Environmental Public Health through its Food Services Advisory Committee/Food Defense Workgroup will design and conduct exercises based on the Homeland Security Exercise & Evaluation Program.

## 10 WEB SITES

The links in this section were correct as of January 2007.

### U.S. Department of Homeland Security

National Incident Management System: [www.fema.gov/nims/](http://www.fema.gov/nims/)

### Oregon Department of Human Services

Oregon Health Alert Network: <https://www.oregonhan.org>

(Note that the HAN Web site requires a user account and password.)

Office of Environmental Public Health, Foodborne Illness Prevention Program:

<http://oregon.gov/DHS/ph/foodsafety/eprep.shtml>

Office of Communicable Disease Prevention & Epidemiology, Acute and Communicable Disease Program:

<http://oregon.gov/DHS/ph/acd/index.shtml>

### State of Oregon

Oregon Emergency Management Plan:

[www.oregon.gov/OOHS/OEM/docs/library/or\\_emp\\_volum\\_2\\_emerg\\_oper.pdf](http://www.oregon.gov/OOHS/OEM/docs/library/or_emp_volum_2_emerg_oper.pdf)

Oregon Revised Statutes: [www.leg.state.or.us/ors/](http://www.leg.state.or.us/ors/)

### Centers for Disease Control and Prevention

Emergency and Terrorism Preparedness for Environmental Health Practitioners:

<http://www.cdc.gov/nceh/ehs/etp/food.htm>

Environmental Health Specialists Network:

<http://www.cdc.gov/nceh/ehs/EHSNet/default.htm>

### Food & Drug Administration

Center for Food Safety & Applied Nutrition:

<http://www.cfsan.fda.gov/~dms/defterr.html>

<http://www.recalls.gov/food.html>

### United State Department of Agriculture

Food Safety Inspection Services (FSIS):

[http://www.fsis.usda.gov/Food\\_Security\\_&\\_Emergency\\_Preparedness/index.asp](http://www.fsis.usda.gov/Food_Security_&_Emergency_Preparedness/index.asp)

### U.S. Department of Homeland Security

National Incident Management System: [www.fema.gov/nims/](http://www.fema.gov/nims/)

### The Food Safety Network

<http://www.foodsafetynetwork.ca/en/>

## 11 REFERENCES

Oregon State University, Western Plant Diagnostic Network, services for plant disease diagnosis, plant identification, and insect/pest identification. (<http://www.wpdn.org>)

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## 12 ACRONYMS AND GLOSSARY

### 12.1 Acronyms

ACDP	Acute and Communicable Disease Prevention
AOC	Agency Operations Center
APHIS	Animal and Plant Health Inspection Service
CDC	Centers for Disease Control and Prevention
DHS	Department of Human Services (Oregon)
DHHS	Department of Health & Human Services (Federal)
ECC	Emergency Coordination Center
EFORS	Electronic Foodborne Reporting System
EHS-NET	Environmental Health Specialist Network
EOC	Emergency Operations Center
ESF	Emergency Support Functions
FBI	Federal Bureau of Investigation
FBIPP	Foodborne Illness Prevention Program
FDA	Food & Drug Administration
FERN	Food Emergency Response Network
FSIS	Food Safety Inspection Service
HAN	Health Alert Network
IAIP	Information Analysis and Infrastructure Protection
ICS	Incident Command System
LHD	Local Health Department
LRN	Laboratory Response Network
NIMS	National Incident Management System
OAR	Oregon Administrative Rules
ODA	Oregon Department of Agriculture
OEM	Office of Emergency Management
OEPH	Office of Environmental Public Health

OERS	Oregon Emergency Response System
OPHD	Oregon Public Health Division
OSPHL	Oregon State Public Health Laboratory
ORS	Oregon Revised Statutes
PHEP	Public Health Emergency Preparedness Program
PIO	Public Information Officer
S&T	Science and Technology
SOP	standard operating procedure
USDA	United State Department of Agriculture

## 12.2 Glossary

**Administrative detention.** A process by which a potentially contaminated item of food can be temporarily detained at a specific location until it can be determined whether the item presents a threat of serious adverse health consequences or death to humans or animals.

**Electronic Foodborne Outbreak Reporting System (EFORS).** A Web-based surveillance system that provides comprehensive, timely, reliable data on outbreaks of enteric illnesses and provides analysis tools so health officials can learn about hazards and assess their importance.

**Epidemiology.** The study of the distribution and determinants of disease in populations, and the application of this to the control of health problems.

**Environmental Health Specialists Network (EHS-Net).** A network of environmental health specialists whose mission is to conduct research studying the underlying (root) causes of foodborne illness. The research is being conducted in nine different geographic areas around the U.S. including Oregon.

**Epizootic.** An epidemic outbreak of disease in an animal population, often with the implication that it may extend to humans.

**Etiology.** The causes or origin of a disease or disorder.

**Foodborne Diseases Active Surveillance Network (FoodNet).** The principal foodborne disease component of CDC's Emerging Infections Program (EIP). It consists of active surveillance for foodborne diseases and related epidemiologic studies to help public health officials better understand the epidemiology of foodborne diseases in the United States.

**Food Emergency Response Network (FERN).** Food-testing laboratories throughout the nation whose primary mission is the detection of threat agents in food at the local, state, and federal levels.

**Laboratory Response Network (LRN).** An integrated network of local, state, federal, military and international laboratories organized by the CDC.

**Pathogen.** Any disease-producing microorganism.

**Surveillance.** The collection, analysis, and dissemination of data about a disease.

**Traceback investigation.** An investigation to determine the production and distribution chain of a food item implicated in a foodborne illness outbreak.

**Water Information Sharing and Analysis Center (WaterISAC).** A Web site with security information for America's drinking water and wastewater utilities.

**Zoonosis.** A disease that can be transmitted from animals to humans.

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## 13 RECORD OF CHANGES

Date	Summary of Change	Initials
3/7/07	Initial release	

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# **TAB I-1**

## **IN AN EMERGENCY: EQUIPMENT AND SUPPLIES LIST**

The following equipment list was developed and translated by the Twin Cities Metro Advanced Practice Center. For more information, visit their Web site at <http://www.naccho.org/topics/demonstration/APC/MN.cfm>

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# In An Emergency: Equipment & Supplies List For Food Service

An emergency, from power outages to terrorist attacks, may leave your establishment without basic necessities. Recommended items for an emergency supply kit are presented below.

In an emergency, seek information from local officials (i.e., fire, building inspector, health, police, etc.). They can help you to determine whether it is safe to enter your building, approximately how long services will be interrupted, and what resources are available to you.

## ❖ **First Aid Kit**

## ❖ **Bottled Water**

## ❖ **Equipment and Supplies:**

- ✓ **Flashlight**
- ✓ **Battery-operated radio /TV and batteries**
- ✓ **Garbage bags**
- ✓ **Notebook with pen/pencil:** to document time of onset, food temperatures, illnesses and injuries
- ✓ **Duct tape** for use to block ventilation around doors or openings and to restrict areas in the event of contamination.
- ✓ **Camera or camcorder** to record damaged and discarded goods for insurance purposes
- ✓ **Sanitizer for hands and bleach** for dishware, equipment, floors, etc.
- ✓ **Tool kit** (eg., hammer, nails, screws, staple gun, screw driver, utility knife, crowbar)

## ❖ **Protective Wear:**

- ✓ **Eye protection**
- ✓ **Rubber boots**
- ✓ **Rubber gloves**
- ✓ **Fitted dust mask** with NIOSH rating of N-95 or better for mold
- ✓ **Protective clothing** such as coveralls
- ✓ **Wash cloths** to cover mouth with wet cloth in event of an explosion or chemical incident

## ❖ **Cold Storage Options:**

- ✓ **Blankets or tarps** to cover and insulate open freezers
- ✓ **Dry ice options**— keep ventilated to prevent toxic CO<sub>2</sub> gas buildup. A 25-lb. block keeps a 10 cubic foot freezer cold for 3-4 days
- ✓ **Offsite cold storage options** (contact info for truck, warehouse)

# В случае экстремальной ситуации: Список оборудования и материалов для работы с продуктами питания

В случае экстремальной ситуации, если на вашем предприятии не будет электричества, воды, или будут другие повреждения, данный список оборудования и материалов поможет вам выйти из трудной ситуации. Этот список также поможет вашему предприятию подготовить все необходимые запасы на случай непредвиденной экстремальной ситуации.

В случае экстремальной ситуации обратитесь за информацией к местным властям (например, к инспектору по пожарной безопасности, инспектору службы гостехнадзора, органам здравоохранения, полиции и т.д.), чтобы узнать, не опасно ли входить в помещение, на какое время приблизительно будут остановлены работы, и какие ресурсы муниципалитет планирует предложить вам в этот промежуток времени.

## ❖ Варианты заморозки:

- ✓ Одежда и брезент для изоляции и закрытия открытых морозильных камер.
- ✓ Сухой лёд – проветривайте, чтобы предотвратить скопление токсичного газа CO<sub>2</sub>. Блок льда размером в 25 фунтов помогает в течение 3-4 дней сохранить холод в морозильной камере размером в 10 кубических футов.
- ✓ Отправьте продукты в холодильное хранилище за территорией предприятия (рефрижератор, склад).

## ❖ Защитная одежда:

- ✓ Защита для глаз.
- ✓ Резиновые боты.
- ✓ Резиновые перчатки.
- ✓ Для помещений с плесенью – плотно прилегающие маски от пыли с показателем NIOSH N-95 или выше.
- ✓ Защитная одежда типа комбинезона или спец. одежды.
- ✓ Тряпичные салфетки и вода в бутылках, чтобы закрыть рот влажной тканью в случае взрыва или химической аварии.
- ✓ Дезинфицирующее средство для рук.

## ❖ Комплект для оказания первой помощи

## ❖ Вода в бутылках

## ❖ Другое оборудование и материалы:

- ✓ Фонарик.
- ✓ Записная книжка с ручкой/карандашом для регистрации времени начала инцидента, температур продуктов, заболеваний и травм.
- ✓ Изоляционная лента для заклеивания отверстий вокруг дверных проёмов или других мест попадания воздуха на случай загрязнения, или для изоляции людей от антисанитарных и зараженных участков.
- ✓ Радио/ТВ, работающие на батарейках.
- ✓ Фотоаппарат или видеокамера для регистрации поврежденных и уничтоженных товаров для страховой компании.
- ✓ Мешки для мусора.
- ✓ Дезинфицирующее средство для рук, отбеливатель для посудомоечной машины, оборудования, полов и т.д..
- ✓ Пневматический пистолет для скрепок для организации временных укрытий и барьеров (например, для окон или для преграждения доступа).

# En caso de emergencia: Lista de equipos y suministros para la industria de servicio de alimentos



En caso de una emergencia en la que su establecimiento se encuentre posiblemente sin electricidad o agua, o tal vez haya sufrido daños, esta lista de equipos y suministros puede ayudarlo a comenzar a recuperarse. La lista también es un recurso para ayudarlo a preparar un juego de suministros de emergencia que pueda estar listo en la instalación en caso de emergencia.

En caso de una emergencia, infórmese con los funcionarios locales (es decir, bomberos, inspector de edificios, sanidad, policía, etc.) sobre si es seguro regresar a su edificio, aproximadamente por cuánto tiempo estarán interrumpidos los servicios y qué recursos planea proporcionar su municipalidad mientras tanto.

## ❖ Opciones de refrigeración:

- ✓ Mantas, frazadas o lonas para cubrir e insular los congeladores abiertos
- ✓ Hielo seco - manténgalo ventilado para evitar la acumulación de gas tóxico CO<sub>2</sub>.  
Un bloque de 25-lb. mantiene frío un congelador de 10 pies cúbicos por 3 ó 4 días
- ✓ Mueva los alimentos a un lugar refrigerado fuera de la instalación (camión, almacén)

## ❖ Atuendo de protección:

- ✓ Protección para los ojos
- ✓ Botas de goma
- ✓ Guantes de goma
- ✓ Si hay problemas de moho, mascarilla ajustada para polvo con clasificación NIOSH de N-95 o mejor
- ✓ Ropa de protección, como mamelucos
- ✓ Toallas pequeñas y agua embotellada para cubrirse la boca con un trapo húmedo en caso de una explosión o incidente relacionado con sustancias químicas
- ✓ Desinfectante para las manos

## ❖ Botiquín de primeros auxilios

## ❖ Agua embotellada

## ❖ Otros equipos y suministros:

- ✓ Linterna
- ✓ Libreta con bolígrafo o lápiz para documentar la hora del acontecimiento, las temperaturas de los alimentos, enfermedades y lesiones
- ✓ Cinta adhesiva para conductos para sellar alrededor de las puertas y otras rendijas en caso de contaminación, o para separar y mantener a las personas fuera de áreas no sanitarias o contaminadas
- ✓ Radio o televisor operado por baterías y baterías
- ✓ Cámara fotográfica o de vídeo para documentar artículos dañados y desechados para propósitos del seguro
- ✓ Bolsas para la basura
- ✓ Desinfectante para las manos y blanqueador con cloro para los platos, el equipo, los pisos, etc.
- ✓ Engrapadora neumática para cubiertas y barreras provisionales (es decir, sellar ventanas o para restringir el acceso)

**TAB I-2**  
**EMERGENCY RESPONSE FACT SHEET—**  
**FLOODING**

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## Foodborne Illness Prevention Program Emergency Response Fact Sheet for Licensed Facilities

### **FLOODING**

Foods that have come into contact with floodwater can be a serious health hazard. Floodwaters can be contaminated with sewage, dirt, oil or other toxic substances. Floodwater may have covered, dripped on, or seeped into foods. If power is interrupted in the facility, please refer to the DHS fact sheet on power outages as well.

#### **UPON RE-ENTERING FACILITY**

Watch for loose ceilings or fixtures that could fall when entering the facility, in addition to holes in the floor or protruding nails. Until the building has aired out, use a flashlight to avoid igniting lingering gasses.

- Let the building air for several minutes to remove foul odors or escaped gas
- Do not smoke or use open flame until you are sure that it is safe
- Turn off gas at meter or tank
- Do not turn on an electrical system; call an electrician immediately to check the entire wiring system and equipment for any short circuits
- Disconnect all appliances
- Do not operate equipment until each piece is inspected by a competent service person

#### **FOOD**

Foods that have come into contact with floodwater can be a serious health hazard. The only flood-damaged goods entirely safe for salvage are those in hermetically sealed cans if they are scrubbed clean, rinsed and sanitized prior to use.

Be sure to remove the labels and any encrusted silt from the surface of cans and wash in warm soapy water. Rinse thoroughly. Soak the containers in a 50 to 100 ppm chlorine sanitizing solution for one minute. This solution can be made by adding one to two teaspoons of household bleach per gallon of clean water. Be sure to re-label the cans with a permanent marker before storage. Bulging or leaking cans should be discarded.

Foods to save:

- ❑ Food in undamaged, sealed cans

Foods to discard:

- ❑ Open containers and packages of food
- ❑ Unopened jars with paper seals under the lid (mayonnaise, salad dressing)
- ❑ All containers with screw-caps, snap lids, twist caps, flip-top lids and similar type closures that have been submerged in flood waters
- ❑ Spices, seasonings, flavorings, and extracts
- ❑ Food in canisters (flour, salt, sugar)
- ❑ Sealed glass containers and preserves sealed with paraffin (jam, jelly)
- ❑ Fresh meat, fish and poultry
- ❑ Fresh fruits and vegetables
- ❑ Containers with non-sealed fitted lids (cocoa, baking powder)
- ❑ Food in paper, foil, cellophane, or cardboard containers (cereal, pasta, rice, cookies)
- ❑ Bottled carbonated beverages with encrusted silt in the lid
- ❑ Containers with cork or cork-lined lids or caps

## **EQUIPMENT**

Equipment and utensils affected by floodwater should be cleaned and sanitized prior to being used. Refrigerators and freezers should be left open to air dry after cleaning. Use activated charcoal to remove persistent odors in these units.

- ❑ Contact a qualified service professional about salvaging or discarding equipment including, but not limited to, refrigeration and freezer units, cooking and hot holding units, stoves units, ice machines, pop dispensers, salad bars, mixers, and other food processing or mechanical equipment
- ❑ All filters on equipment should be removed and replaced if not designed to be cleaned in place
- ❑ After replacing filters, flush water lines (including steam and ice water lines) for 10-15 minutes
- ❑ Discard all ice in ice machine, clean and sanitize the interior surfaces, run the ice through 3 cycles and discard after each cycle
- ❑ Clean and sanitize equipment, utensils and surfaces with 100-200 ppm chlorine solution
- ❑ Discard paper, plastic, cardboard, foil and wooden single service items
- ❑ Run the empty dishwasher through its cycle three times to flush the lines before use
- ❑ Verify that all cold holding units will keep food below 41F; freezer units will keep frozen food below 0F
- ❑ Verify that all hot holding units will hold food above 140F

## **WATER SUPPLY**

The water supply may be contaminated by floodwater making it unsafe for human consumption. The water supply should not be used until it has been tested and cleared by the Drinking Water Section at 971-673-0405. A facility that is served by an individual well should have the well and distribution system disinfected and tested prior to being put back into service.

- ❑ Only potable water should be used for handwashing
- ❑ Only potable water should be used for cleaning food contact surfaces

## **SEWAGE SYSTEM**

Flooding may cause the septic system or sanitary sewer to fail. If the septic system is flooded, discontinue using it until waters have receded and the system has been checked for structural integrity. Persons may have to improvise portable sewage disposal systems using buckets or other similar containers. If this is necessary, ensure some type of lid is provided for safety. Disposal should be done in as sanitary a manner as possible. Burial is the best option.

## **PHYSICAL FACILITY**

Foundations, walls, doors and windows may be damaged and need repair. Repairing any damage immediately will help prevent further damage and wear in the future.

- ❑ Replace or repair damaged surfaces (floors, walls and ceilings)
- ❑ Scrub and sanitize all floors, walls and ceilings with a 100 to 200ppm chlorine solution
- ❑ Water damaged ventilation systems that cannot be thoroughly cleaned and sanitized should be removed and replaced. In all cases, replace all ventilation air filters.

## **RODENTS AND INSECTS**

Floodwaters may also force rodents and insects inside the facility. Remove any dead pests and sanitize any food contact surfaces that have come into contact with pests.

- ❑ Remove accumulated debris and garbage
- ❑ Seal all openings into the facility to prevent entry of rodents and insects

# **TAB I-3**

## **EMERGENCY RESPONSE FACT SHEET—POWER OUTAGE**

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## Foodborne Illness Prevention Program Emergency Response Fact Sheet for Licensed Facilities

### POWER OUTAGE

A power outage can potentially affect a restaurant in the following ways:

1. Refrigeration will not be functional
2. Cooking, hot holding, mechanical dishwashing, and equipment that require power for operation may not be functional
3. Hot water may not be available
4. The facility may not have water service if it is supplied by a well with an electric pump

**In most cases of power failure, the restaurant should be closed.** Operators should close voluntarily. However, some facilities may have backup power generation or gas-powered appliances, such as stoves or hot water heaters, and could possibly continue to operate.

Facilities remaining open need access to large amounts of ice for cooling foods and maintaining product temperatures. In these situations, the facility must implement alternative procedures to continue to meet the requirements of the Food Sanitation Rules. Some facilities will have to be limited to the sale of non-potentially hazardous foods or foods that require little or no preparation. Ultimately, the local health inspector will have to determine if each facility can continue to operate in a safe and sanitary manner. Some guidelines for salvaging foods are:

#### Refrigerated Foods

Potentially hazardous foods must be evaluated to determine whether proper storage temperatures have been maintained.

If it is known how long the power has been out:

- ❑ If the power has been out for less than 4 hours and the power is expected back on shortly, then the refrigerator should be kept closed. When the power comes back on, the temperature of potentially hazardous foods should be taken to make sure they are at 41F or below. Foods above 41F should be cooled to 41F or below in ice and placed back into refrigeration
- ❑ If the power has been out for less than 4 hours and the power is not expected to return shortly, potentially hazardous foods should be iced to keep them cold
- ❑ If the power has been out for more than 4 hours, food temperatures should be taken. Potentially hazardous foods with temperatures of 41F or less should be iced immediately
- ❑ Consider discarding potentially hazardous foods at temperatures greater than 41F

If it is not known how long the power has been out:

- ❑ Potentially hazardous food temperatures should be taken immediately. Foods with temperatures of 41F or less should be iced immediately to maintain the temperatures
- ❑ Consider discarding potentially hazardous foods at temperatures greater than 41F

## **Frozen Foods**

Foods stored in freezers will generally stay frozen or below 41F for a day or two during a power outage. The actual time the food will remain frozen or cold, however, depends on the size and type of the freezer, the types and amounts of food stored in the unit, the temperature of the frozen food, and whether or not the unit is well insulated.

Full or well-insulated freezers will keep food frozen longer than partially full or poorly insulated ones, and larger freezers will keep food frozen longer than smaller units. Foods such as meat and poultry will stay frozen longer than baked goods.

All frozen foods should be moved to a functional freezer if one is available. Make sure the food is insulated and protected from contamination during transportation. If the food cannot be moved, leave it in the freezer and cover the unit with blankets or newspapers to insulate the unit. Foods should be grouped together to try to keep foods colder longer. Meat and poultry should be stored below and away from other foods (in case they begin to thaw) to prevent cross contamination from dripping juices. If it is available, dry ice can be used in the unit to keep foods cold.

Frozen foods that have been thawed:

- ❑ Potentially hazardous foods that have thawed or are partially thawed need to be checked to see if they are still safe to keep or refreeze when the power is restored
- ❑ If the power has been out long enough for foods to thaw, then product temperatures should be taken
- ❑ Consider discarding potentially hazardous foods at temperatures greater than 41F
- ❑ Potentially hazardous foods at 41F or less should be iced and maintained at that temperature until power is restored

## **Hot Foods**

Foods that are being cooked or are in a hot holding device when the power goes out should be immediately cooled in an ice bath to 41F or below, and kept iced until the power is restored and the food can be placed under refrigeration. If there is not enough ice to cool hot foods then they should be discarded. There may be instances when a facility that has gas appliances can keep food hot in ovens or hot holding devices, assuming they are still functional.

**If you have any questions regarding this document, please contact your local public health authority and ask to speak to the health inspector for your area.**

**TAB I-4**  
**EMERGENCY RESPONSE FACT SHEET—**  
**CONTAMINATED WATER**

DRAFT



## Foodborne Illness Prevention Program Emergency Response Fact Sheet for Licensed Facilities

### **BIOLOGICALLY CONTAMINATED WATER SUPPLY**

Occasionally a community water system serving one or more licensed food service facilities will become contaminated with bacterial or viral organisms. This has the potential of putting the patrons of those facilities at risk. The local public health authority must address the following considerations if this circumstance occurs:

1. Confirm with the Drinking Water Section 971-673-0405 that the community water system is contaminated; determine the nature of the contamination, and how long the problem is expected to remain in effect.
2. Identify all the licensed food service facilities that are served by the contaminated community water system and assure street addresses and telephone numbers are current.
3. Develop an action plan in collaboration with the Drinking Water Section and Foodborne Illness Prevention Program, with alternative procedures for those facilities being served by the community water system. The action plan should include:
  - a. Posting of a public notice at each facility in public view. The notice should include the specific problem, the length of time the problem is expected to exist, and a statement that the restaurant has implemented alternative procedures that allow the restaurant to operate in a safe manner. A health department contact number should also be included.
  - b. Discontinuing the service of the contaminated water. Alternative sources of water must be provided for drinking purposes, washing of food and food contact surfaces, and for cooking.

#### **For Surface Water Contamination:**

Boiled water can be used. Water should come to a rolling boil for at least one minute prior to use. Water chemically disinfected in the facility is not allowed.

#### **For Ground Water Contamination:**

Boiled or disinfected water can be used.

- c. Shutting off drinking fountains and posting signs in restrooms to indicate that the water is non-potable.
- d. Eliminating ice making and using ice from an approved source.
- e. Post-mix soda machines can be used. However, pre-mix soda machines and coffee machines that do not boil the water as part of the brewing process cannot be used.
- f. Contaminated water may be used to flush toilets and to clean floors, walls, or ceilings.

- g. Encouraging operators to use disposable dishware and flatware. The appropriateness of using the contaminated water for dishwashing depends upon the method the restaurant uses, and the type of contamination:

**Surface Water Contamination:**

High temperature dishwashing machines that are working correctly can be used.

Low temperature dishwashing machines **cannot** be used for dishwashing. The three-compartment sink method can be used if potable water from an uncontaminated source or boiled water is used for **all three steps**.

**Ground Water Contamination:**

All three dishwashing methods are acceptable as long as they are done properly.

- h. Handwashing must be performed with potable water from an uncontaminated source or boiled water. A temporary arrangement for handwashing should be set up using a 5-gallon food grade container for water storage, which has a valve that provides a constant flow of water. A waste container should be provided for wastewater or the water container should drain into an appropriate sink
  - i. Encouraging operators to minimize their menu items and to focus on those items that do not require a great deal of water for preparation.
- 4. Contact each of the facilities by phone or in person to counsel them regarding the action plan and alternative procedures:
    - a. Encourage operators that may have difficulty meeting the actions and alternatives to close voluntarily.
    - b. Require operators that cannot meet the conditions of the action plan to close their facilities until the water system's contamination is eliminated.
    - c. Document all contacts with facilities regarding the implementation of the alternative procedures. Also document whether the operator agreed to implement the alternative procedures in lieu of closure.
  - 5. Spot check a sample of the facilities to assess how well the action plans and alternative procedures have been implemented. Be prepared to close those facilities not using alternative methods.
  - 6. Coordinate with the water system operator and the Drinking Water Section to assure that the supply is adequately sanitized after the system is repaired and before water is served to the public.

If water is hauled in and stored at the facility, make sure that this is done in a safe and sanitary manner. Point of use or point of entry treatment devices may be an acceptable interim measure, depending upon the contaminant of concern. A list of approved devices can be obtained from the Drinking Water Section if this is an option.



Foodborne Illness Prevention Program  
 Emergency Response Fact Sheet for Licensed Facilities

**CONTAMINATED WATER SUPPLY**

<b>Activity</b>	<b>Surface Water Contamination</b>	<b>Ground Water Contamination</b>
Cooking	Boiled or potable water only	Boiled or potable water only
Cleaning food contact surfaces	Boiled or potable water only	Boiled, potable or disinfected water OK
Dishwashing	High temp machines or 3-compartment sink with boiled or potable water only	All dishwashing methods acceptable if done properly
Handwashing	Boiled or potable water only	Boiled or potable water only
Ice making	Turn off machine until potable water is available	Turn off machine until potable water is available
Post-mix soda machines (in bulk, packaged in kegs or bag-in-box and ready to use)	Acceptable to use	Acceptable to use
Pre-mix soda machines (boxes of syrup and CO2, using the facility water source)	Turn off until potable water is available	Turn off until potable water is available
Coffee machines	If water is boiled as part of the brewing process, acceptable to use	If water is boiled as part of the brewing process, acceptable to use

- It is recommended to use disposable dishes and flatware
- Contaminated water can be used for flushing toilets and cleaning floors, walls and ceilings

**Operator must close their facility if they cannot use the alternatives listed above**

## **TAB I-5**

# **APC FOOD RECOVERY FACTS—BIOLOGICAL TAMPERING AND TERRORISM**

The following information is from the *Emergency Handbook for Food Managers*, developed by the Twin Cities Metro Advanced Practice Center. The complete text of the handbook can be found at

[http://www.naccho.org/pubs/documents/na100\\_emergencyhandbook.pdf](http://www.naccho.org/pubs/documents/na100_emergencyhandbook.pdf)

DRAFT

**WHAT IS IT?**

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

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

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

**DO THIS FIRST!**

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

**FOOD SAFETY FACTORS**

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

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

**ROAD TO RECOVERY**

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

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

**READY TO REOPEN?**

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

**HELPFUL HINTS**

Early warning signs may help you recognize a threat:

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

## **TAB I-6**

# **APC FOOD RECOVERY FACTS—DIRTY BOMB**

The following information is from the *Emergency Handbook for Food Managers*, developed by the Twin Cities Metro Advanced Practice Center. The complete text of the handbook can be found at

[http://www.naccho.org/pubs/documents/na100\\_emergencyhandbook.pdf](http://www.naccho.org/pubs/documents/na100_emergencyhandbook.pdf)

DRAFT

## 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.



# **TAB I-7**

## **APC FOOD RECOVERY FACTS—CHEMICAL**

The following information is from the *Emergency Handbook for Food Managers*, developed by the Twin Cities Metro Advanced Practice Center. The complete text of the handbook can be found at

[http://www.naccho.org/pubs/documents/na100\\_emergencyhandbook.pdf](http://www.naccho.org/pubs/documents/na100_emergencyhandbook.pdf)

DRAFT

## 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.

# **TAB I-8**

## **SELF-INSPECTION CHECKLIST**

The following information is from the *Emergency Handbook for Food Managers*, developed by the Twin Cities Metro Advanced Practice Center. The complete text of the handbook can be found at

[http://www.naccho.org/pubs/documents/na100\\_emergencyhandbook.pdf](http://www.naccho.org/pubs/documents/na100_emergencyhandbook.pdf)

DRAFT

# Food Safety Self Inspection Checklist

Self-Inspection Date: \_\_\_\_\_ Initials: \_\_\_\_\_

OK Note

## When Employees Are Ill: Excluded or Restricted Duties

- 1. Update illness log.
- 2. Create and train current managers on illness policy.
- 3. Implement an excluded or restricted duty procedure for illness.

## Good Hygienic Practices

- 4. Restrict eating, drinking, or tobacco use in food areas.
- 5. Prevent discharge from eyes, nose, or mouth in food areas.

## Preventing Contamination by Hands

- 6. Check that hands are clean & properly washed.
- 7. Restrict bare hand contact with ready-to-eat and ready-to-serve foods.
- 8. Supply adequate hand-washing facilities and hand protection.

## Approved Source

- 9. Purchase food from approved sources, and no homemade foods.
- 10. Receive food at proper temperatures and temperatures are logged.
- 11. Inspect that food is in good condition, safe, and no signs of tampering.
- 12. Maintain itemized supplier records onsite that are readily available.

## Protection from Contamination

- 13. Protect and separate food to protect against cross contamination.
- 14. Cleaned & sanitize all food preparation areas.
- 15. Segregate or discard damaged food or returned food.

## Potentially Hazardous Food: Time & Temperature

- 16. Log temperatures of cooking time & temperature.
- 17. Calibrate thermometers for accuracy.
- 18. Maintain proper hot hold heating temperatures.
- 19. Log cooling time & temperature.
- 20. Log hot holding temperature.
- 21. Log cold holding temperature.
- 22. Maintain correct food temperatures at all time.
- 23. Date mark & dispose of food if date has expired.



# Перечень контрольных вопросов для самопроверки при работе с продуктами питания



Дата проверки: \_\_\_\_\_ Инициалы: \_\_\_\_\_

Да  Обратить  
Внимание

## В случае болезни работников: полное или частичное освобождение от работы

- 1 Регулярно ли ведутся записи о болезнях работников?
- 2 Существуют ли нормативы, и знают ли о них менеджеры?
- 3 Действуют ли нормативы о полном или частичном освобождении от работы на случай болезни работника?

## Правила гигиены

- 4 Нет ли приёма пищи, напитков, а также курения в помещениях, где находятся продукты?
- 5 Нет ли у работника выделений из носа, глаз или рта в помещениях, где находятся продукты?

## Правила по предотвращению загрязнения невымытыми руками

- 6 Тщательно ли вымыты руки?
- 7 Есть ли запрет на прикосновение к готовым к сервировке продуктам голыми руками?
- 8 Есть ли доступ к необходимым местам для мытья рук и к средствам защиты рук от загрязнения?

## Соответствие поставок стандарту

- 9 Получены ли продукты от разрешённых поставщиков, нет ли продуктов, изготовленных в домашних условиях?
- 10 Получены ли продукты в условиях необходимых температур, зафиксированы ли необходимые температуры?
- 11 Находятся ли продукты в хорошем состоянии, нет ли признаков вскрытия?
- 12 Есть ли на предприятии подробный список от поставщика, есть ли к нему доступ?

## Защита от загрязнения

- 13 Раздельно ли хранятся продукты, и нет ли угрозы загрязнения путём их соприкосновения друг с другом?
- 14 Регулярно ли моются и дезинфицируются поверхности, соприкасающиеся с продуктами?
- 15 Отделяются ли и списываются ли поврежденные продукты или продукты, предназначенные для возврата?

## Потенциально опасные продукты: время и температуры

- 16 Есть ли записи температур о градусе и необходимом времени готовки?
- 17 Есть ли точные термометры?

# Перечень контрольных вопросов для самопроверки при работе с продуктами питания

- 18 Подогрев: используются ли необходимые процедуры повторного разогрева?
- 19 Записаны ли температура и время остывания?
- 20 Записаны ли температуры подогрева?
- 21 Записаны ли поддерживающие температуры для холодных продуктов?
- 22 Соблюдаются ли необходимые температуры?
- 23 Есть ли на продуктах сроки годности, и выбрасываются ли продукты с истёкшим сроком годности?

## Химикаты

- 24 Есть ли на токсичных веществах соответствующие наклейки, хранятся ли они должным образом и используются ли по назначению?
- 25 Знают ли работники об опасности этих токсичных веществ?

## Помещения

- 26 Поддерживаем ли мы помещения регулярно в должной чистоте и порядке?
- 27 Есть ли в помещениях горячая и холодная вода?
- 28 Запрещён ли посторонним лицам вход в помещения, где идёт работа с продуктами?
- 29 Нет ли в помещениях насекомых, грызунов или животных?

## Другое

- 30
- 
- 
- 

**За чем следует проследить (напишите номер пункта #)**

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# Lista de autoverificación de la seguridad de los alimentos



Fecha de la inspección: \_\_\_\_\_ Iniciales: \_\_\_\_\_

OK Nota

## Quando los empleados están enfermos: Exclusión o restricción de deberes

- |                          |                          |   |   |
|--------------------------|--------------------------|---|---|
| <input type="checkbox"/> | <input type="checkbox"/> | 1 | ¿Está al día el registro de enfermedad?   |
| <input type="checkbox"/> | <input type="checkbox"/> | 2 | ¿Existe una política y están los gerentes al tanto de ella?                         |
| <input type="checkbox"/> | <input type="checkbox"/> | 3 | ¿Se practica un procedimiento de exclusión o restricción de deberes por enfermedad? |

## Buenas prácticas de higiene

- |                          |                          |   |  |
|--------------------------|--------------------------|---|--|
| <input type="checkbox"/> | <input type="checkbox"/> | 4 | ¿No se come, bebe ni usa tabaco en las áreas de alimentos?                                       |
| <input type="checkbox"/> | <input type="checkbox"/> | 5 | ¿Nadie que tenga secreciones de los ojos, la nariz o la boca presente en las áreas de alimentos? |

## Prevención de la contaminación por las manos

- |                          |                          |   |  |
|--------------------------|--------------------------|---|--|
| <input type="checkbox"/> | <input type="checkbox"/> | 6 | ¿Están las manos debidamente limpias y lavadas?  |
| <input type="checkbox"/> | <input type="checkbox"/> | 7 | ¿Se prohíbe el contacto por manos descubiertas con alimentos listos para comer y listos para servir?       |
| <input type="checkbox"/> | <input type="checkbox"/> | 8 | ¿Se proveen y están accesibles las instalaciones adecuadas de lavado de manos y protección para las manos? |

## Fuentes aprobadas

- |                          |                          |    |  |
|--------------------------|--------------------------|----|--|
| <input type="checkbox"/> | <input type="checkbox"/> | 9  | ¿Se obtienen los alimentos de fuentes aprobadas y sin alimentos preparados en casa?                |
| <input type="checkbox"/> | <input type="checkbox"/> | 10 | ¿Se reciben los alimentos a las temperaturas aprobadas y se registran dichas temperaturas?         |
| <input type="checkbox"/> | <input type="checkbox"/> | 11 | ¿Están los alimentos en buenas condiciones, seguros y sin señales de alteración?                   |
| <input type="checkbox"/> | <input type="checkbox"/> | 12 | ¿Hay en la instalación y se pueden encontrar fácilmente expedientes detallados de los proveedores? |

## Protección contra la contaminación

- |                          |                          |    |   |
|--------------------------|--------------------------|----|---|
| <input type="checkbox"/> | <input type="checkbox"/> | 13 | ¿Se separan y se protegen los alimentos para evitar la contaminación cruzada?         |
| <input type="checkbox"/> | <input type="checkbox"/> | 14 | ¿Se limpian y desinfectan regularmente las superficies de contacto con los alimentos? |
| <input type="checkbox"/> | <input type="checkbox"/> | 15 | ¿Se separan o se desechan los alimentos dañados o destinados a devolución?            |

## Alimentos potencialmente peligrosos: Tiempo y temperatura

- |                          |                          |    |   |
|--------------------------|--------------------------|----|---|
| <input type="checkbox"/> | <input type="checkbox"/> | 16 | ¿Se mantienen registros de los debidos tiempos y temperaturas de cocción? |
| <input type="checkbox"/> | <input type="checkbox"/> | 17 | ¿Se proporcionan termómetros y son éstos precisos?                        |

# Lista de autoverificación de la seguridad de los alimentos

- 18 Mantenimiento de calor: ¿Existen los debidos procedimientos de recalentamiento?
- 19 ¿Se registran los tiempos y la temperatura de enfriamiento?
- 20 ¿Se registran las temperaturas de mantenimiento del calor?
- 21 ¿Se registran las temperaturas de mantenimiento del frío?
- 22 ¿Alcanzamos las temperaturas correctas?
- 23 ¿Se marcan los alimentos con fecha y se desechan si la fecha ha caducado?

## Sustancias químicas

- 24 ¿Se rotulan, almacenan y usan apropiadamente las sustancias tóxicas?
- 25 ¿Están los empleados informados de los peligros de esas sustancias tóxicas?

## Instalaciones físicas

- 26 ¿Limpiamos rutinariamente y mantenemos adecuadamente las instalaciones físicas?
- 27 ¿Hay disponible agua caliente y fría?
- 28 ¿No se permiten personas no autorizadas en las áreas de alimentos?
- 29 ¿No hay presentes insectos, roedores u otras sabandijas?

## Otros

- 30
- 
- 
- 

**Asuntos que necesitan seguimiento (Favor de anotar el número)**

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# **TAB I-9**

## **APC: DISCARD OR SALVAGE FACT SHEET**

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Discard	Salvage
<p><b>Any food or service item that has been contaminated or come in contact with water, sewage, smoke, fumes or chemicals.</b> This includes:</p> <ul style="list-style-type: none"> <li>• <b>Fresh perishables</b> - produce, meat, poultry, fish, dairy products and eggs.</li> <li>• <b>Opened containers and packages</b></li> <li>• <b>Vulnerable containers</b> 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.</li> <li>• <b>Soft, porous packaging</b> - food in cardboard boxes, paper, foil, plastic, and cellophane such as boxes or bags of food, cereal, flour, sugar, rice, salt, etc.</li> <li>• <b>Dry goods</b> - spices, seasoning and extracts, flour, sugar and other staples in canisters.</li> <li>• <b>Single service items</b> - plates, cups, utensils, lids, etc.</li> </ul>	<p><b>Frozen foods if stored in a sealed walk-in or cabinet freezer</b> (<i>no water, smoke, fumes or chemical infiltration</i>) <b>and where ambient temperature has remained below 41°F.</b></p>
<p><b>Canned and bottled items should be discarded:</b></p> <ul style="list-style-type: none"> <li>• If charred or near the heat of the fire.</li> <li>• If rusted, pitted, dented, swollen or leaking.</li> </ul>	<p><b>Disinfect undamaged cans and bottles</b> that have no heat or water damage and are free from dents, bulging, leaks or rust.</p> <ul style="list-style-type: none"> <li>• Paper label removed</li> <li>• Washed with soap and water, then rinsed</li> <li>• Sanitized with sanitizing solution, then air dried (<i>Solution, see page 5.</i>)</li> <li>• Relabeled with permanent marker.</li> </ul>
<p><b>Refrigerated or frozen food</b> must be discarded if:</p> <ul style="list-style-type: none"> <li>• In contact with sewage, water, smoke, fumes or chemical seepage.</li> <li>• Above 41°F for four hours or more.</li> <li>• Frozen and then thawed for four or more hours.</li> <li>• Deteriorated in quality or has an unusual appearance, color or odor.</li> </ul>	<p><b>If fire, flood or sewage back-up has been effectively contained:</b></p> <ul style="list-style-type: none"> <li>• Food in areas unaffected by smoke, fumes, water, heat, fire suppression chemicals, floodwater or sewage back-up may be salvaged.</li> <li>• Seek the advice of your local health inspector.</li> </ul>
<p><b>Potentially Hazardous Food (PHF)</b> must be discarded if it has been in the "Temperature Danger Zone" (41°F - 140°F) for more than 4 hours. PHFs include:</p> <p><b>Meat and mixed dishes</b></p> <ul style="list-style-type: none"> <li>• Beef, veal, lamb, pork, poultry, fish, seafood, luncheon meats, hot dogs, hams, etc.</li> <li>• Soups, stews, casseroles or similar dishes containing meats, pasta, rice, eggs or cheeses</li> </ul> <p><b>Eggs and dairy products</b></p> <ul style="list-style-type: none"> <li>• Eggs or egg products, ice cream, yogurt</li> <li>• Milk, cream, buttermilk, cream-based foods or soups</li> <li>• Soft cheeses such as cream, ricotta, brie, etc.</li> </ul> <p><b>Desserts</b> - Pies, cakes and pastries containing custard, cheese, chiffon, meringue or pumpkin</p> <p><b>Cut Melons &amp; Cooked Vegetables</b> - Watermelon, musk or honeydew melons, cooked peas or corn or beans</p>	<p><b>Non-PHF</b>s may be kept at room temperature, though quality may deteriorate, including:</p> <ul style="list-style-type: none"> <li>• Bread, rolls, muffins, dry cakes</li> <li>• Solid butter or margarine</li> <li>• Hard cheese - cheddar, parmesan, etc.</li> <li>• Fresh, uncut fruits &amp; vegetables</li> <li>• Fruit or vegetable juices, dried fruit, fruit pies</li> <li>• Canned goods</li> <li>• Dry foods - flour, pasta, rice, etc.</li> <li>• High sugar foods - honey, jellies</li> <li>• Acid-based condiments - ketchup, mustard</li> </ul>
<p><b>Partially cooked food</b> must be discarded if without power for more than one hour.</p>	<p><b>Partially cooked food</b> may be quickly reheated to 165°F if without power for less than one hour. When in doubt, throw it out.</p>
Other than food: Discard	
<p>Discard any exposed materials that cannot be effectively cleaned and sanitized, including toasters and other food equipment, linens, furnishings, carpets, etc.</p>	

**TAB I-10**  
**FOOD DEFENSE BRANCH DIRECTOR POSITION**  
**DESCRIPTION AND CHECKLIST**

DRAFT



**ICS Section: Operations**  
**Food Defense Branch**  
**Reports to: Operations Section Chief**  
**Location: DHS AOC**

## **Food Defense Branch Director**

**\*\*\*\*Read This Entire Position Checklist Before Taking Action\*\*\*\***

### **REMEMBER – SAFETY FIRST**

#### **Job Description**

The Food Defense Branch Chief serves as food defense expert and advisor to the Operations Chief for food-related incidents relevant to public health by providing up-to-date information about the food continuum, food agents, food flow, and epidemiological associations.

#### **Position Checklist**

##### **Activation Phase**

- Check in with the Incident Manager upon arrival at the AOC.
- Report to the Operations Section Chief, or other assigned supervisor, and receive or confirm position and duties.
- Set up workstation and review position responsibilities.
- Establish and maintain a unit log that chronologically describes actions taken during the shift.
- Determine resource needs, such as a computer, phone, plan copies, and other reference documents.

##### **Operational Phase**

- Assess the magnitude of the incident and its impact on restaurants and food preparation facilities as well as the environment. Assess and report on the following areas:
  - Restaurants affected by the incident (location and size)
  - Number of people affected by the incident
  - Mortality and morbidity rates
  - Types of injuries and illnesses in restaurants
  - Characteristics and condition of the affected restaurants

- Groups within the restaurant population that may be disproportionately affected or require special attention.
- Emergency medical, health, nutritional, water, and sanitation situation in restaurants
- Level of continuing or emerging threats (natural/human-caused)
- Damage to infrastructure and critical facilities in restaurants
- Damage to economic resources and social organization of restaurants
- Vulnerability of the restaurants to continuing or expanding impacts of the incident over the coming weeks and months, and whether vulnerability varies among different food establishments
- Level of response by the affected county and internal capacities to cope with the incident
- Potential constraints or roadblocks to assistance efforts
- Level and nature of ongoing or anticipated response from state/federal resources, if applicable
- Provide food defense information to reduce the human health effects associated with exposure to foodborne diseases and/or agents.
- Provide advice on etiologic agents to help reduce the effects of chemicals to the environment.
- Make recommendations regarding management of risks arising from exposure to contaminated food substances in the environment.
- Act as public health food defense spokesperson regarding food-related incidents.
- Interpret and evaluate literature related to environmental health, and risk assessment for food agents.
- Coordinate and oversee the food defense branch.
- Manage the FPLH&S Unit, the ACDP Unit, and the Oregon Poison Control Center Unit.
- Provide for all required technical public health aspects of food defense not assigned to other staffed positions.
- If another person is relieving you, ensure they are thoroughly briefed before you leave your workstation.
- Ensure that all logs, lists, and paper work are complete and passed on.
- Do not leave until a qualified person relieves you and the Incident Manager dismisses you.

### **Demobilization Phase**

- Deactivate your assigned position and close out logs when authorized by the Incident Manager.

- Complete all required forms, reports, and other documentation. All forms should be submitted through your supervisor to the Planning/Intelligence Section, as appropriate, prior to your departure.
- Be prepared to provide input to the after-action report.
- Clean up your work area before you leave.
- Leave a forwarding phone number where you can be reached.

# **TAB I-11**

## **FOODBORNE OUTBREAK SITE ASSESSMENT**

### **GUIDELINES**

DRAFT



# Environmental Health Food-borne Outbreak Onsite Assessment Guidelines

## Environmental Health On-Site Assessment Introduction

### A. Purpose of the Onsite Assessment

1. To communicate effectively with local and state Communicable Disease Personnel and Epidemiologists.
2. To identify implicated ingredient(s) and/or food item(s).
3. To identify the flow of food through the establishment.
4. To interview food workers and managers.
5. To provide necessary information as part of the epidemiological investigation.
6. To ask questions about and observe practices regarding hand washing, temperature controls and hygiene during receiving, storage, cooking and holding.
7. To correct food-preparation practices that allow conditions to thrive that lead to FBD.
8. To assess conditions in facilities that might have led to the outbreak (*Outbreak investigations are not inspections*).

### B. Onsite Assessment Definitions

1. ***Complex-*** a process that requires a kill step followed by any combination of holding, cooling, re-heating, and freezing (steps following the kill step can occur in any order.)
2. ***Complex Establishment-*** An establishment where at least one food item requires a kill step and one or more of the following processes: holding, cooling, re-heating, and freezing. The menu may include any combination of prep/serve, cook/serve and complex food items.
3. ***Cook/Serve-*** A process where the food item is prepared for same day service, and involves a kill step.
4. ***Cook/Serve Establishment-*** An establishment where at least one food item is prepared for same day service and involves a kill step. The menu may include prep/serve items or have some food on the menu that is commercially prepared and heated for service.
5. ***Cooking-*** Any thermalization process that involves a kill step.

6. ***Cooking/Heating***- Any thermalization process involved in preparing a food item for consumption or for preparation. It may or may not include a kill step. Cooking signifies a kill step; heating signifies no kill step.
7. ***Food Flow***- Describes the flow of the food through the system from receiving to service. One food flow is completed for each food item evaluated. It captures observational data about food handling practices and food worker behaviors in a food preparation process.
8. ***Kill Step***- a step in a food preparation process where *raw or under-cooked animal products* undergo a thermalization process that reduces pathogens to a level unable to cause adverse health effects.
9. ***Major Ingredients***- Essential ingredients needed to compose the food item evaluated, and any additional items that are known to be associated with a risk of foodborne illness, such as sprouts, melons, parsley, etc.
10. ***Minor Ingredients***- Ingredients used in small quantities that are not likely to be potentially hazardous, such as salt, pepper, spices, oil, garnishes, etc.
11. ***Outbreak Evaluations***- May include restaurants, institutional food service, food carts, mobile food units, temporary food stands, restaurants in supermarkets, catered events or other situations where food is prepared and eaten outside the home.
12. ***Outbreak Scenarios***- Outbreaks result in one of four scenarios (it is not uncommon for the scenario to change as information is gathered).
  - A vehicle is identified, but no agent is identified
  - An agent is identified, but no vehicle is identified
  - No vehicle is identified, no agent is identified
  - Both an agent and vehicle are identified
13. ***Prep/Serve***- A process where the food item is prepared and served without a kill step. It may include heating commercially prepared foods for service.
14. ***Re-heating***- any process that involves thermalization of a product that has been cooked (kill), cooled and/or cold held in the establishment. Re-heating includes heating for immediate service and for hot holding of foods that have gone through a cook (kill) in the *establishment*. Re-heating does not include heating of commercially prepared products.
15. ***Restaurant***- An establishment that prepares and serves food to customers. Restaurants do not include institutions, food carts, mobile food units, temporary food stands, restaurants in supermarkets and caterers. Establishments that serve individual customers AND cater events are included; establishments that ONLY do catering is excluded.

## Preparing for the Onsite Assessment

### A. Take the following steps before arrival at the establishment to confirm the outbreak and identify agent and/or vehicle.

1. Examine food-borne outbreak report
2. Coordinate activities with County Communicable Disease Staff or State ACDP to find\*:

- symptoms
- duration of symptoms
- preliminary data on food vehicles

*\*This information will determine what food processes should be investigated.*

3. With the help of the County Communicable Disease Staff or State ACDP assisting with the assessment, make a best guess about the FBD agent.

## 3. The Onsite Assessment

### A. At the Establishment

1. Get a complete list of all the people who attended the same function or had a meal at the same restaurant, etc.; (at the direction of County Communicable Disease or State ACDP). Lists can be obtained from the host/hostess or event organizer, from credit card receipts or from reservation lists.
2. Obtain a copy of the menu or other list of foods and send to your County Communicable Disease or State ACDP to develop a questionnaire.
3. Conduct a Manager & Staff Interview.
4. Follow the Food Flow Process: based on the suspected agent and vehicle of the outbreak.

### B. Manager & Staff Interview

Obtain at a minimum the following information from management and/or staff:

1. What is the establishment's source of potable water?
2. What is the establishment's sewage disposal method?
3. How would you describe the ownership of this establishment?
4. Approximately how many meals are served there daily?
5. Are foods prepared or partially prepared at a commissary?
6. How many kitchen managers do you have?
7. What language do the kitchen manager(s) speak?
8. Has the kitchen manager(s) received food manager certification training?
9. Do any kitchen managers receive paid sick leave?

10. How many food workers do you have?
11. What language do the food workers speak?
12. Do all food workers have food handler cards?
13. Do food workers receive paid sick leave?
14. Are management personnel familiar with HACCP and are HACCP principles used in this establishment?

### C. Preparation for the Food Flow Process:

15. Identify the food preparation process (es) of the establishment:

- **Prep/Serve: Does NOT involve a kill step. It may include heating commercially prepared foods for service. (examples: ready to eat salad, a premade pizza heated in the microwave.)**
- **Cook/Serve: Involves a kill step and is prepared for same day service. (example: hamburger made of raw beef made to order)**
- **Complex: Involves a kill step, followed by holding beyond same day service. (example: raw chicken cooked and held for next day)**

16. Follow Food Flow Process (es) based on the outbreak scenario

- **If a vehicle is identified; no agent is identified conduct a food flow for each of the food preparation process types found on the menu (prep/serve, cook/serve, complex).**
- **If a vehicle is identified; an agent is identified conduct a food flow for the implicated vehicle.**
- **If no vehicle is identified; no agent is identified conduct a food flow for one food item from each of the food preparation process types found on the menu.**
- **If no vehicle is identified; an agent is identified conduct a food flow for each of the food preparation process types found.**

**D. The Food Flow Process**

17. Ask the manager and/or staff to describe the Flow of Food from receiving to plate for service. Example of the Food Flow Process (steps will vary depending on complexity of the product).

**Ham Sandwich**

**Receiving: Ham (H), Bread (B) Lettuce (L)**

**Storage: Cooler (H) & Dry Storage (B)**

**Preparation: Slice (H)**

**Holding: (H)**

**Preparation: Make Sandwich**

**Plate for Service**

6. Observe or have manager and/or staff describe each food item through the food flow process (as applicable):

- Receiving
- Storage
- Preparation
- Cooking/heating
- Holding
- Cooling
- Reheating
- Freezing

#### 4. Observations to make during the Food Flow Process

**Receiving**  
Major ingredients  
Date received  
Source  
From

Employee  
Time to complete  
Final cook temp.  
Was temp. measured

Cross-contamination  
Hand/Glove contact  
Barriers to sink  
Equipment sanitized  
Capacity adequate

**Storage**  
Major ingredients  
Where stored  
Capacity adequate  
Ambient temp  
Ingredient temp  
Raw/RTE separation

**Holding**  
Major ingredients  
Minor ingredients  
Process  
Employee  
Maximum time held  
Holding temp.  
How long held  
Was temp. measured  
Hand washing  
Barriers to sink  
Hand/Glove contact  
Cross-contamination  
Equipment sanitized  
Capacity adequate  
Equip. maintained

**Reheating**  
Major ingredients  
Minor ingredients  
Employee  
Time to reheat  
Temp. at completion  
Was temp. measured  
Hand washing  
Barriers to sink  
Cross-contamination  
Hand/Glove contact  
Equipment sanitized  
Capacity adequate

**Preparation**  
Major/minor  
Ingredients  
Process  
Employee  
Product/ingredient  
Temp.  
Was temp. measured  
Hand washing  
Barriers to sink  
Cross-contamination  
Hand/glove contact  
Equipment sanitized

**Cooling**  
Major ingredients  
Minor ingredients  
Employee  
Cooling method  
Time cooled  
Temp after 2 hr  
Was temp measured  
Hand washing  
Barriers to sink

**Freezing**  
Major ingredients  
Employee

**Cooking/Heating**  
Major ingredients  
Minor ingredients  
Process  
Thawing

#### 5. After the Onsite Assessment

9. Recommend control measures based on findings of interview/ food flow and the hypothesized FBD agent, the usual vehicles for this agent and food-handling malpractices that permitted or facilitated transmission of the agent.

**10. More than one Onsite Assessment may be necessary to confirm agent(s) and vehicle(s) and collect necessary interview and food flow information.**

**11. Maintain active communication and a working relationship with local and state Communicable Disease Personnel and Epidemiologists.**

**References**

**12. Oregon Health Division Food-borne Outbreak Investigative Guidelines**

**13. Center for Disease Control & Prevention, National Center of Environmental Health, EHS-Net Project**

## **Foodborne Outbreak Investigation Kit/Equipment List**

- Cooler with blue ice packs
- Containers for non-cooled products
- Sterile sample containers, e.g., whirlpack bags or snap-top containers
- Sterile sample bags with sodium thiosulfate (when sampling chlorinated water)
- Sterile gloves
- Environmental sampling sponges (with neutralizing buffer for disinfected surfaces)
- Permanent marking pens (waterproof) for labeling samples
- Digital camera (photograph observations and locations of environmental samples)
- Notebook (to record details of samples taken)
- Lab submission forms
- Thermocouple thermometer
- Free chlorine test kit
- PH meter
- ORP meter
- Ozone test kit
- Pipettes, graduated cylinders, volumetric flasks or premeasured dilution bottles
- Extra batteries
- Flashlight
- Black light
- Clean white lab coat
- Tape measure
- Portable water activity meter
- Sterile sampling instruments (spoons, scoops, beakers, swabs, etc.)



# LICENSED FACILITY INSPECTION REPORT

Establishment \_\_\_\_\_ Inspection Date \_\_\_\_\_

Street Address \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_

County \_\_\_\_\_ Licensee \_\_\_\_\_ Seats/Units/Rooms \_\_\_\_\_

Score (if applicable): \_\_\_\_\_  Complied  Failed to Comply

Inspection Type:

- Semi-annual  Annual  Biannual  Complaint  Pre-opening  Re-inspection  Complete

Facility Type:

- Food Service/Vending/Commissary (OAR 333-150)  Mobile Unit (OAR 333-162)  
 Traveler's Accommodation (OAR 333-029)  Organizational Camp (OAR 333-030)  
 RV Park (OAR 333-031)  Bed and Breakfast (OAR 333-170)

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*This is a notification of violations found during a sanitation evaluation of your facility. Such violations may result in denial, suspension or revocation of your license. Closure of the facility may result from uncorrected violations. You may obtain a hearing for any denial, suspension, revocation, or closure by contacting the licensing agency. Such hearings are in accordance with ORS Chapter 183.*

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OAR#	Specific Problem	Correction & Time Limit
Operator _____ Sanitarian _____ Phone _____		

# **TAB I-12**

## **GUIDE TO THE SALVAGE OF CHILLED/FROZEN FOODS EXPOSED TO REFRIGERATION FAILURE**

The following guide was developed through research conducted by the U.S. Army Soldier Systems Command, Natick Research, Development and Engineering Center, Sustainability Directorate.

DRAFT

***GUIDE TO THE SALVAGE OF  
CHILLED/FROZEN FOODS  
EXPOSED TO REFRIGERATION FAILURE***

BY  
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CW3 R. WORFEL

UNITED STATES ARMY  
SOLDIER SYSTEMS COMMAND  
NATICK RESEARCH DEVELOPMENT AND  
ENGINEERING CENTER  
SUSTAINABILITY DIRECTORATE

(Edited for USAF Adoption, December 1997)

**GUIDE TO THE SALVAGE OF CHILLED/FROZEN FOODS EXPOSED TO  
REFRIGERATION FAILURE**

1. This guide provides procedures for the inspection of temperature abused food products. The guide was developed through research conducted at US Army Soldier Systems Command, Natick Research Development and Engineering Center, Sustainability Directorate. CW3 Richard Worfel and Dr. R.V. Lachica are the researchers responsible for this document, and their dedicated efforts are sincerely appreciated. Minor editing for USAF-specific changes was accomplished by the Food Safety Team at the USAF School of Aerospace Medicine.

2. Medical food inspectors must be prepared and responsive to refrigeration failures to ensure safe, wholesome food is provided for issue and/or resale. The major goal of this new guide is to reduce waste by replacing the practice of *when in doubt, throw it out*. The objectives of the new guide are to provide scientific-based guidelines concerning food safety when making disposition decisions on temperature stressed foods and to furnish a more user-friendly guide than currently exists. This guide is different from previous ones developed in that it takes into account the risk of emerging bacteria that are capable of growing at refrigeration (chill) temperatures. The scientific basis for the guide, is available from the USAF School of Aerospace Medicine Food Safety Team. The guide does not go beyond the temperature of 25<sup>0</sup>C/77<sup>0</sup>F and three-day exposure time from the onset of the refrigeration failure. It is emphasized that the guide's focus is microbial safety. The classification, *MELT* has been eliminated enabling the retailer a wide latitude for making quality judgements concerning thawed *SAFE* foods.

3. There are five basic steps involved in making disposition decisions of food items exposed to refrigeration failures. The five steps are:

a. Step 1 - Determine the length of time the food has been stressed at an ambient temperature of 6<sup>0</sup>C/42<sup>0</sup>F or greater.

b. Step 2 - Classify the temperature stressed food item as *SAFE*, *RISK 1*, *RISK 2*, or *RISK 3* based on Table 1 and Figure 2.

c. Step 3 - Determine the product temperature.

d. Step 4 - Determine if the food item has exceeded its Time-Temperature Limit based on Table 2.

e. Step 5 - Make disposition decision.

#### 4. **STEP 1 - ESTIMATING THE TIME OF EXPOSURE**

a. The estimation of exposure time is for the ambient temperature and not the product temperature. This is a conservative safety factor that has been designed into the system. Refrigeration units should be equipped with electronic warning devices that not only trigger an alarm but also record the time when refrigeration failure occurs. When such devices are unavailable, one should assume the worst case scenario of refrigeration failure occurring which would be shortly after the last person has left the store (not including cleaning personnel).

b. The time of refrigeration failure may be deduced from the stoppage of an electric clock or if it was a general blackout, by an inquiry of the electric company. Time-Temperature Indicators have been developed that can provide a good indication of the time that temperatures have exceeded the requirements. Record the estimated time of exposure on the Refrigeration Failure Form (sample form at the end of this guide).

#### 5. **STEP 2 - CLASSIFICATION OF FOODS**

a. Stressed foods will be classified as either *SAFE* or *RISK* food items. Determine if the food item is listed as a *SAFE* food by reviewing Table 1. For *SAFE* items, refrigeration is used to maintain quality, not control pathogen growth. Factors contributing to reduced microbial risk include low pH (acidic) and/or  $a_w$  (reduced availability of water.) All items that have remained frozen are included in the *SAFE* list. Resale decisions concerning temperature stressed *SAFE* foods will be made by the retailer. Mark, tag, separate or remove the *SAFE* foods.

b. If the food is not listed as *SAFE* in Table 1, then go to Figure 2, *Flow Chart for Classifying Foods Exposed to Refrigeration Failure* to determine the risk level. Record *RISK* foods and their risk level on the Refrigeration Failure Form.

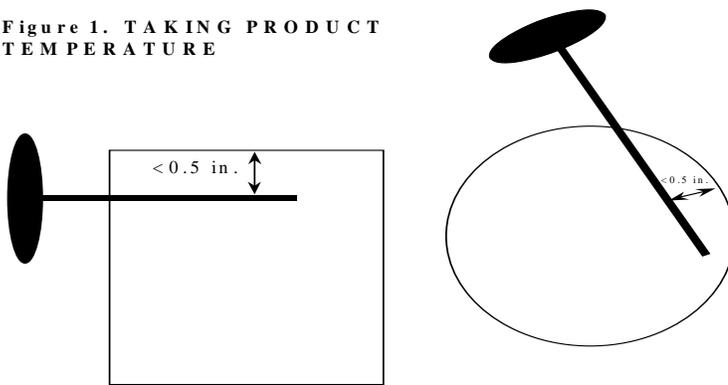
#### 6. **STEP 3 - DETERMINE PRODUCT TEMPERATURE**

a. Determine whether the refrigeration failure was due to a power outage or mechanical breakdown and note it on the Refrigeration Failure Form. In a power outage, all electrical systems are off, a temperature gradient emerges with the bottom layer being the coldest. During a mechanical breakdown, when the fans and compressor are still working, the middle layer is the coldest portion of a lot. Place priority on frozen items if the refrigeration failure total time is greater than 24 hours. Care must be taken to avoid cross-contamination between risk and

safe foods.

b. Locate the warmest portions of a lot, which are usually the outer corners of the corner packages of the top layer; an exception is the occurrence of a mechanical failure in which the fans continually circulate the air around the lot. Take two temperature readings from the top layer and note the higher reading and time on the *Refrigeration Failure Form*. Thermometer penetration should be parallel to the surface of the sample but will not exceed 0.5 inch below the parallel surface (see Fig 1).

**Figure 1. TAKING PRODUCT TEMPERATURE**



\*Internal product temperatures will be taken, do not take the temperature between boxes. Do not allow the sensing portion of the thermometer to penetrate deeper than 0.5 inches parallel to the product surface.

**7. STEP 4 - DETERMINE IF THE FOOD HAS EXCEEDED THE TIME-TEMPERATURE LIMITS**

Compare exposure times with the time-temperature limits (Table 2). The first column in Table 2 is the actual temperature of the RISK item and the next three columns are time limits for exposure to a refrigeration failure. If temperatures are taken in Fahrenheit and the temperature readings are between the temperatures in column 1, use the next highest reading. These provide the guideposts for deciding the disposition of RISK foods. Once the temperature has been determined, simply match (horizontally) that temperature with the appropriate RISK column to determine if the RISK item has exceeded the time limits.

**8. STEP 5 - MAKE DISPOSITION DECISION**

a. If the exposure times are within the time-temperature limits during a mechanical or power failure, then accept the whole lot for salvage. If the exposure times exceed the time-temperature limits during a mechanical failure when fans are on, then reject the top and bottom layers and take the temperatures of the second layer. Continue this procedure until all layers have been rejected or time-temperature limits are complied with. When a layer is found within the time-temperature limits, accept the remaining lot. If the exposure times exceed the time-temperature limits when fans are not on, then reject and remove the top layer and continue to take temperatures of the new top layer (working from the top to bottom) until the lot is rejected or time-temperature limits are in compliance.

b. Reject all RISK items that have exceeded the time-temperature limits. Reject all RISK 3 items if exposed to  $\geq 6^{\circ}\text{C}/42^{\circ}\text{F}$  for four hours or more, unless these are raw flesh food (chilled or frozen), or unopened pasteurized dairy/egg products and do not show signs of spoilage. These products can be displayed under refrigeration (chilled/frozen) for a period of up to 24 hours. The packaging should include a highly visible label stating: **WARNING: POTENTIALLY HAZARDOUS IF NOT HANDLED PROPERLY**. Instructions should also be placed at the display case explaining proper handling (keep refrigerated, wash hands and utensils after contact with them, avoid contact of item with cooked foods, **COOK THOROUGHLY** the same day of purchase).

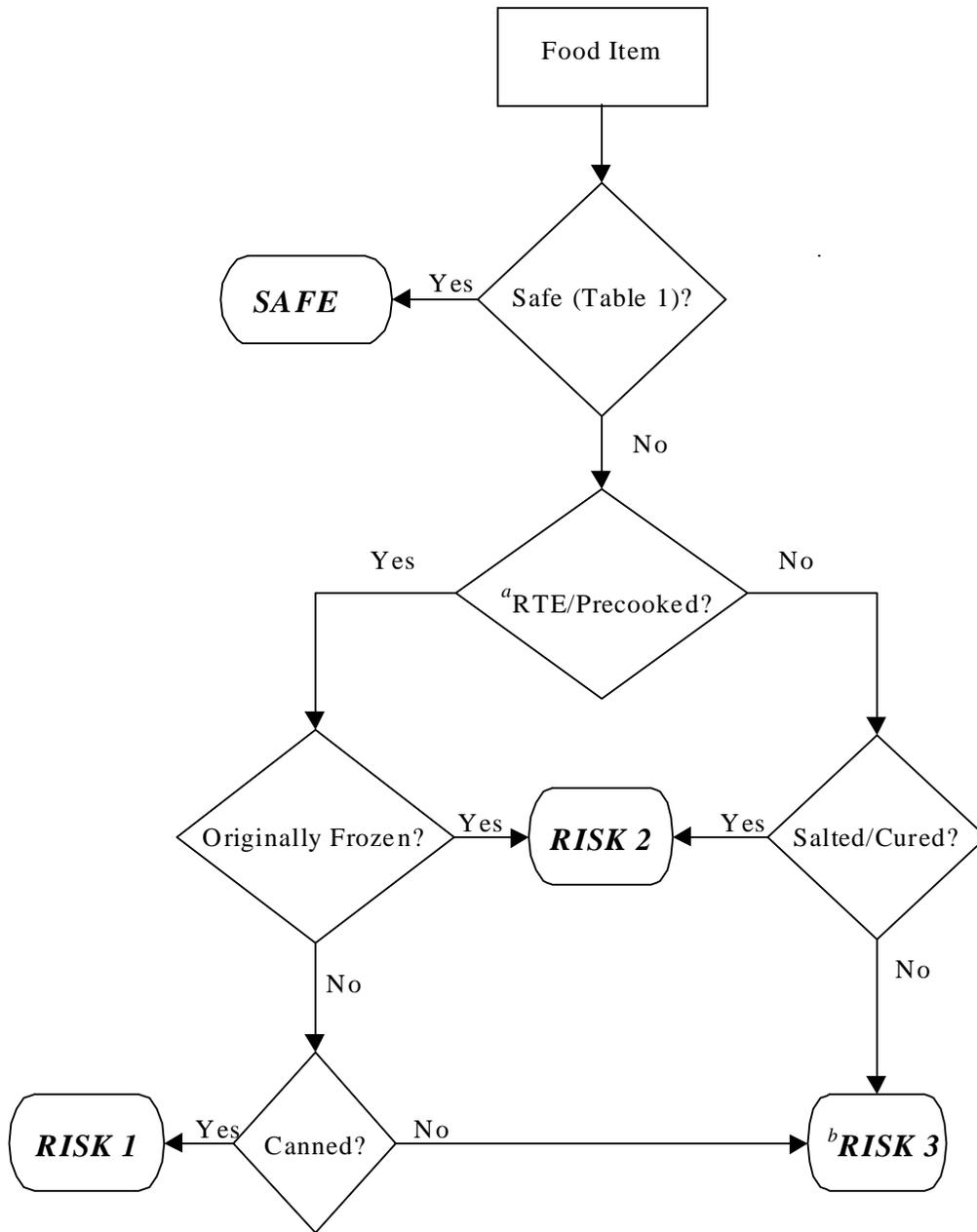
**Table 1. LIST OF SAFE FOODS**

<b><i>Miscellaneous items</i></b>	<b><i>Fruits and Vegetables</i></b>
Dough, ready-to-bake	Fruit, cut-up or sliced (except melons)
Pastries, without cream, custard or meat fillings	Fruit salad
Pie crust	Fruit in syrup
Popcorn	Fruit juices, concentrates, drinks
Pizza, cheese, pepperoni, anchovy	Horseradish sauce
Tortilla	Salad dressing
Yeast, bakers	Salsa
Frozen items not defrosted	Sauerkraut
<b><i>Dairy Display Items<sup>2</sup></i></b>	Vegetables, raw, chilled or frozen, excluding cut-up products and bean sprouts
Butter	
Cheese, processed	
Cheese, ripened, hard or semihard <sup>1</sup>	<b><i>Meat items<sup>2</sup></i></b>
Cream cheese	Bacon, dry cured
Dips, sour cream base	Bacon bits (refrigerate after opening)
Pickled herring, shrimp	Ham, canned (refrigerate after opening)
Lard	Pepperoni
Margarine	Salami, hard
Sour cream	Sausages, fermented
Yogurt	Fish, dried/salted

1. Soft and semisoft cheeses are not considered "safe foods." Soft/semisoft cheeses include Brie, Camembert, Feta, Hand, Neufchatel, Ricotta, Cambridge, Convalli, Little Dutch, Port du Salut, Bel Paese, Bondon, Coulommiers, Gerome, Petit Suisse, Romadur, Cottage cheese, and Liptau.

2. See paragraph 8.b. for disposition of pasteurized dairy/egg products and raw flesh foods.

Figure 2. FLOW CHART FOR CLASSIFYING FOODS EXPOSED TO REFRIGERATION FAILURES



*a* - RTE - Ready to Eat

*b* - See paragraph 8.b. for disposition of pasteurized dairy/egg products and raw flesh foods.

**Table 2. TIME-TEMPERATURE LIMITS**

TIME-TEMP LIMITS	RISK 1	RISK 2	RISK 3
<sup>0</sup> C/ <sup>0</sup> F	HOURS	HOURS	HOURS
6/42	72	72	4
7/44	72	72	4
8/45	72	48	4
9/47	72	29	4
10/50	72	24	4
11/52	59	18	4
12/54	47	15	4
13/55	39	12	4
14/57	31	11	4
15/59	29	9	4
16/61	26	7	4
17/63	24	7	4
18/64	21	6	4
19/66	19	5	4
20/68	17	5	4
21/70	15	4	4
22/72	13	4	4
23/73	11	3	4
24/75	9	3	4
25/77	7	2	4

9. Knowledge of the properties of various refrigerated foods, along with the knowledge of behavior of pertinent foodborne pathogens, provides a framework to assess the type of health risks that are likely to be encountered in the event of a refrigeration failure. Therefore, the ecology of the four food groups are briefly reviewed.

a. Flesh Foods. Raw meat, poultry and seafoods are the most perishable of foods since they contain an abundance of nutrients and moisture content required for growth of bacteria, yeasts and molds. Because of their high growth rate, bacteria are the primary spoilage organisms and health risks. Vacuum packaging of chilled meats increase their shelf life by the reduction in oxygen content and a concomitant increase in carbon dioxide. This set of conditions is especially effective in inhibiting the growth of the primary spoilage organisms, the pseudomonads. The addition of salt, which reduces  $a_w$ , also prevents the proliferation of spoilage organisms. Yeasts and other bacteria are not as affected on some food items, such as sausage and bacon, and will eventually spoil these chilled foods. Lowering the pH of meats, as in fermented sausages, is effective in controlling the growth of spoilage organisms and some pathogens.

b. Fruits and Vegetables. Although adequate in nutrients and moisture content, raw, unprocessed vegetables are attacked by only a few bacteria. Cooking and cutting destroy their resistance to microbial attack. The lack of B vitamins in fruits, and their low pH, prevent the growth of most microorganisms except the molds and yeasts. Exceptions to the general acidity of fruits are the melons, that due to their lower acidity levels, allow enteric pathogens to grow.

c. Dairy Products. Milk is an excellent growth medium for all types of microorganisms. Raw milk generally contains various species of microorganisms, but pasteurization temperatures eliminate all but the sporeformers, and a few thermotolerants, such as the lactics. Post-pasteurization contamination may result in the growth of gram negative bacteria and reduction of shelf life. The low  $a_w$  and pH of most ripened cheeses results in a long shelf life. However, certain soft cheeses, especially the surface of mold-ripened cheeses, have a high enough  $a_w$  and pH to permit growth of pathogens.

d. Bakery Products. The baking process destroys all but the sporeformers in bread and cakes. The low  $a_w$  of the products inhibit most microorganisms except molds that eventually would spoil these products. Of course, baked goods with meat or cream fillings would facilitate the growth of bacterial pathogens. Spoilage of fresh, refrigerated dough products is caused mainly

by lactic acid bacteria.

## 10. Classification of Foods based on Microbial Risks.

a. In terms of public health risks, the FDA classifies foods into two broad categories: those that support the growth of pathogens (potentially hazardous foods) and those that do not. The former are defined as those with pH values of  $>4.6$  and  $a_w$  of  $>0.85$ . This guide extends the utility of the FDA's definition of potentially hazardous foods, in order to facilitate the salvage of foods exposed to refrigeration failures.

b. The guide provides a detailed listing and classification of chilled and frozen products to identify those products of no risk, and therefore can be salvaged. Thus, a classification scheme and products are listed and classified into two main groups, SAFE and RISK. Products under the category of SAFE foods do not allow growth of pathogens, but their degree of stability varies widely in terms of quality. These may include shelf-stable products that are displayed under refrigeration e.g. hard salami and canned ham labeled *refrigerate after opening*. Yogurt developed originally for its stability at room temperature is kept refrigerated to maintain its quality. The guide does not extend beyond the public health risk to the consumer. The retailer or commissary officer should be given wide latitude in deciding the quality or marketability of the SAFE foods.

c. Food exposed to refrigeration failures in the RISK category support the growth of pathogens and are divided into two groups based on whether or not they are precooked and/or ready-to-eat. Those that are ready-to-eat (RTE) are considered of higher microbial risk because of the absence of cooking (intervention step) immediately before consumption. Cold-tolerant bacteria cease to grow at freezing temperatures, one can readily obtain a conservative estimation of risk from *L. monocytogenes* with foods categorized as RISK-2. Chilled canned ham is the only product classified as RISK-1. Because of heat processing and the absence of recontamination, only sporeforming *C. botulinum* and *B. cereus* are potential hazards. Items that have the highest potential microbial risk are ready-to-eat, chilled products (RISK-3). Because of the capability of certain pathogens such as *L. monocytogenes* to grow at refrigeration temperatures, it is not possible to determine at what point in time they have started to grow in RISK-3 items, exposed to refrigeration failures.

d. The preparation or cooking of raw RISK foods right before consumption greatly reduces microbial hazards as long as proper sanitary practices are followed, and the food is fully cooked. Two subsets are identified among these raw flesh foods

according to whether or not they are salted and/or cured. The main concern for products that are salted/cured (RISK-2) is the potential of *S. aureus* to grow and produce enterotoxins that are impervious to heat. In the absence of salting/curing (RISK-3), *S. aureus* has difficulty in competing with the normal flora of raw flesh foods as discussed previously. For the sake of simplicity, the latter are included as a subgroup of RISK 3 category; The chilled salted/cured uncooked items are classified as a subgroup of RISK 2.

#### **11. Time-Temperature Limits (T.T.L.) Concept**

The concept of T.T.L. estimates the level of exposure to refrigeration failures that one can allow before RISK foods become a *microbial* health risk. The FDA specifies only one T.T.L.: to regard all potentially hazardous (RISK) foods as unacceptable if they reach above 5<sup>0</sup>C/41<sup>0</sup>F for over 4 hours. The FDA's guidance is stringent in that its implementation would result in the rejection of many items that would still be wholesome; however, is retained for RISK-3 category (chilled- ready-to-eat) items for reasons previously stated. The T.T.L. concept is a more flexible guide in that it takes into consideration the following: (i) the various types of RISK foods involved and (ii) the relationship of time and temperature in the growth response of pertinent pathogens in these RISK foods.



**TAB I-13**  
**BACTERIAL, CHEMICAL AND VIROLOGIC**  
**AGENTS INVOLVED IN FOODBORNE OUTBREAKS**

DRAFT

## Bacterial, Chemical & Virologic Agents Involved in Foodborne Outbreaks

Agent	Usual Incubation Period (Range)	Symptom Profile	Duration of Illness	Period of Communicability	Characteristic Foods
Bacillus cereus (“emetic” variety)	2-4 hours (1-6 hours)	Vomiting, with nausea and diarrhea (abrupt onset)	24 hours	Not communicable (preformed enterotoxin)	Fried rice, meats, vegetables
Bacillus cereus “diarrheal” variety	6-24 hours	Cramps and diarrhea	24-48 hours	Not communicable enterotoxin formed in vivo	Fried rice, meats, vegetables
Campylobacter jejuni	48 hours-5 days (24 hours-10 days)	Cramps and diarrhea (sometimes bloody), with vomiting and fever	48 hours-10 days	2-7 weeks	Raw milk, poultry, water
Escherichia coli enterohemorrhagic (E. coli O157:H7 & others)	48 hours-8 days (24 hours-10 days)	Bloody diarrhea, with cramps, vomiting, fever; hemolytic uremic syndrome (2-7% of cases)	5-10 days	1-4 weeks	Beef, venison, raw milk, water, produce

<b>Agent</b>	<b>Usual Incubation Period (Range)</b>	<b>Symptom Profile</b>	<b>Duration of Illness</b>	<b>Period of Communicability</b>	<b>Characteristic Foods</b>
Norwalk virus and other caliciviruses	24-48 hours (10-72 hours)	Vomiting, with diarrhea, headache and myalgia	24-72 hours	Duration of vomiting and diarrhea	Shellfish, water, salads, frosting, "handled" foods
Salmonella (non-typhoid)	12-36 hours (6 hours-10 days)	Cramps and diarrhea, with vomiting and fever	4-7 days	Several days to several years, depending on type	Poultry, eggs, meat, raw milk (cross-contamination important)
Vibrio parahaemolyticus	Vibrio parahaemolyticus	Cramps watery, diarrhea, with nausea, vomiting, and fever	2-5 days	Not communicable	Seafood, especially crabs and oysters

## **TAB I-14**

# **KEEPING FOOD SAFE DURING AN EMERGENCY**

The following publications were created by the U.S. Department of Agriculture Food Safety and Inspection Services and by Oregon State University.

DRAFT

# Food, Water, and Sanitation After a Disaster

EM 8866-E • August 2004

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## Food storage

The American Red Cross recommends a 72-hour supply of nonperishable food for each family member. By having a supply of food, you can reduce the stress of locating food during a disaster.

The kind and specific amount of food will depend on the ages and food preferences of everyone in the family. Convenience may be the highest priority, since fuel sources for cooking may not be available. Nutrition also should be a concern since disasters and emergencies put extra stress on people.

Regularly rotate food stored as a part of an emergency preparedness kit to maintain freshness and maximum nutritional value.

The online document, *Food Storage for Emergencies* (see “Resources”), provides specifics on what to consider when assembling a supply of nonperishable foods.

## Water storage

Store a 72-hour supply of water for each family member during an emergency. This means storing 1 gallon of water for each person per day for drinking, food preparation, and personal hygiene.

Keep supplies on hand for treating water in the event of an extended disaster or emergency. The online document, *Water Storage for Emergency Use* (see “Resources”), has more information. The options depend on the method(s) of storage and/or collection:

- Unscented, liquid household bleach (5% sodium hypochlorite)
- Dropper to measure bleach
- Containers for treating and storing water
- Food-grade container for dipping or collection
- Food-grade filtering material (cheese cloth, kitchen dish-towels, coffee filters)

## Private wells

Floodwaters can compromise private wells. It is necessary to disinfect a well and water system after flood water recedes. Visit with your local office of the OSU Extension Service for information.

## Sanitation

For a number of reasons, such as a treated water supply and sanitary toilets, families may decide to stay in a campground rather than an emergency shelter. If, however, there is not a treated water supply at the campground, sanitation and human waste pose greater challenges. Drinking or using untreated water increases the risk of contracting diseases.

To reduce the risk of contracting microscopic, protozoan parasites that cause health problems in humans and some animals, boil water before using it for drinking, or for washing hands and washing dishes and utensils. Use 1 to 2 drops of chlorine bleach per gallon of boiled water.

If there are no sanitary toilets and disposal of human waste is permitted:

- Identify a toilet area at least 200 feet from any lake, stream, or spring; avoid gullies where rapid runoff is likely.
- Dig a small hole and deposit feces. Cover with soil and leaves to enable slow decomposition (do not cover with a rock).
- Use biodegradable toilet paper or burn used toilet paper.

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*Adapted for use in Oregon from The Disaster Handbook, 1998 National Edition, Institute of Food and Agricultural Sciences, University of Florida Cooperative Extension Service.*

## Resources

**OSU Extension Service.** The Extension Service has materials on related topics. To locate the local office of the OSU Extension Service, go to “County Government” in your telephone book.

Publications and videos are available for viewing on the OSU Extension website ([extension.oregonstate.edu](http://extension.oregonstate.edu), then “Publications”). You may order copies by fax (541-737-0817), e-mail ([puborders@oregonstate.edu](mailto:puborders@oregonstate.edu)), or phone (541-737-2513).

Available only online:

SP 50-833, *Food Storage for Emergencies*  
([extension.oregonstate.edu/fcd/foodsafety/pdf/foodstorage.pdf](http://extension.oregonstate.edu/fcd/foodsafety/pdf/foodstorage.pdf))

SP 50-835, *Water Storage for Emergencies*  
([extension.oregonstate.edu/fcd/foodsafety/pdf/waterstorage.pdf](http://extension.oregonstate.edu/fcd/foodsafety/pdf/waterstorage.pdf)),

**American Red Cross.** The alphabetical listing in local phone books will point you to a local chapter of the American Red Cross. The agency’s website includes information and materials in English and Spanish ([www.redcross.org](http://www.redcross.org)).

**Emergency Management.** The “County Government” section in local phone books lists each county’s emergency management unit. Listings vary by county (look under Sheriff or Health departments, Emergency Management services, Civil Defense, Public Works, or related units).

**Extension Disaster Education Network (EDEN).** This website provides a list of resources developed in other states about floods; drought; snow, ice, and wind damage; animal emergencies; and general disaster ([www.agctr.lsu.edu/eden](http://www.agctr.lsu.edu/eden),

then “Extension websites” and “Other on-line sources”).

**Emergency Animal Rescue Service (EARS).** This site provides tips for animal owners and links to emergency shopping lists for owners of dogs, cats, birds, horses, reptiles, and amphibians ([www.uan.org/ears/index.html](http://www.uan.org/ears/index.html)).

**Environmental Protection Agency (EPA).** The federal website includes the publication, EPA-813-F-93-001, *Private Wells: Guidance for What to Do After the Flood* ([www.epa.gov/safewater/consumer/whatdo.htm](http://www.epa.gov/safewater/consumer/whatdo.htm)).

**Federal Emergency Management Agency (FEMA).** The online library offers publications and videos in English and Spanish and includes materials specifically developed for children ([www.fema.gov](http://www.fema.gov)).

**Oregon Emergency Management (OEM).** Affiliated with the Oregon State Police, the OEM website offers emergency-related information on earthquakes and tsunamis, and provides disaster recovery resources ([www.osp.state.or.us/oem](http://www.osp.state.or.us/oem)).

**Social Security Online.** The official site of the Social Security Administration, this site links to hundreds of publications in 21 languages and provides information on survivor benefits and programs ([www.ssa.gov](http://www.ssa.gov)).



United States Department of Agriculture  
Food Safety and Inspection Service

## Food Safety Information



# Keeping Food Safe During an Emergency

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

### ABCD's of Keeping Food Safe in an Emergency

Always keep meat, poultry, fish, and eggs refrigerated at or below 40 °F and frozen food at or below 0 °F. This may be difficult when the power is out.

Keep the refrigerator and freezer doors closed as much as possible to maintain the cold temperature. The refrigerator will keep food safely cold for about 4 hours if it is unopened. A full freezer will hold the temperature for approximately 48 hours (24 hours if it is half full) if the door remains closed. Obtain dry or block ice to keep your refrigerator as cold as possible if the power is going to be out for a prolonged period of time. Fifty pounds of dry ice should hold an 18-cubic foot full freezer for 2 days. Plan ahead and know where dry ice and block ice can be purchased.

### Be prepared for an emergency...

...by having items on hand that don't require refrigeration and can be eaten cold or heated on the outdoor grill. Shelf-stable food, boxed or canned milk, water, and canned goods should be part of a planned emergency food supply. Make sure you have ready-to-use baby formula for infants and pet food. Remember to use these items and replace them from time to time. Be sure to keep a hand-held can opener for an emergency.

Consider what you can do ahead of time to store your food safely in an emergency. If you live in a location that could be affected by a flood, plan your food storage on shelves that will be safely out of the way of contaminated water. Coolers are a great help

for keeping food cold if the power will be out for more than 4 hours-have a couple on hand along with frozen gel packs. When your freezer is not full, keep items close together-this helps the food stay cold longer.

Digital, dial, or instant-read food thermometers and appliance thermometers will help you know if the food is at safe temperatures. Keep appliance thermometers in the refrigerator and freezer at all times. When the power is out, an appliance thermometer will always indicate the temperature in the refrigerator and freezer no matter how long the power has been out. The refrigerator temperature should be 40 °F or below; the freezer, 0 °F or lower. If you're not sure a particular food is cold enough, take its temperature with a food thermometer.

### Frequently Asked Questions:

**Q** Flood waters covered our food stored on shelves and in cabinets. What can I keep and what should I throw out?

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

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

The Food Safety and Inspection Service (FSIS) is the public health agency in the U.S. Department of Agriculture responsible for ensuring that the nation's commercial supply of meat, poultry, and egg products is safe, wholesome, and correctly labeled and packaged.

**USDA Meat & Poultry Hotline**  
**1-888-MPHotline**  
**(888-674-6854)**

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

### Steps to Salvage All-Metal Cans and Retort Pouches

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

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

### Q How should I clean my pots, pans, dishes, and utensils?

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

### Q How should I clean my countertops?

**A** Thoroughly wash countertops with soap and water, using hot water if available. Rinse and then sanitize them by applying a solution of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available). Allow to air-dry.

### Q My home was flooded and I am worried about the safety of the drinking water. What should I do?

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

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

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

- If you have a well that has been flooded, the water should be tested and disinfected after flood waters recede. If you suspect that your well may be contaminated, contact your local or state health department or agriculture extension agent for specific advice.

**Q** We had a fire in our home and I am worried about what food I can keep and what to throw away.

**A** Discard food that has been near a fire. Food exposed to fire can be damaged by the heat of the fire, smoke fumes, and chemicals used to fight the fire. Food in cans or jars may appear to be okay, but the heat from a fire can activate food spoilage bacteria. If the heat is extreme, the cans or jars themselves can split or rupture, rendering the food unsafe.

One of the most dangerous elements of a fire is sometimes not the fire itself, but toxic fumes released from burning materials. Discard any raw food or food in permeable packaging-cardboard, plastic wrap, screw-topped jars, bottles, etc.-stored outside the refrigerator. Food stored in refrigerators or freezers can also become contaminated by fumes. The refrigerator seal isn't airtight and fumes can get inside. Chemicals used to fight the fire contain toxic materials and can contaminate food and cookware. Food that is exposed to chemicals should be thrown away-the chemicals cannot be washed off the food. This includes food stored at room temperature, such as fruits and vegetables, as well as food stored in permeable containers like cardboard and screw-topped jars and bottles. Cookware exposed to fire-fighting chemicals can be decontaminated by washing in soap and hot water. Then submerge for 15 minutes in a solution of 1 tablespoon unscented, liquid chlorine bleach per gallon of water.

**Q** A snowstorm knocked down the power lines, can I put the food from the refrigerator and freezer out in the snow?

**A** No, frozen food can thaw if it is exposed to the sun's rays even when the temperature is very cold. Refrigerated food may become too warm and foodborne bacteria could grow. The outside temperature could vary hour by hour and the temperature outside will not protect refrigerated and frozen food. Additionally, perishable items could be exposed to unsanitary conditions or to animals. Animals may harbor bacteria or disease; never consume food that has come in contact with an animal. Rather than putting the food outside, consider taking advantage of the cold temperatures by making ice. Fill buckets, empty milk cartons or cans with water and leave them outside to freeze. Then put the homemade ice in your refrigerator, freezer, or coolers.

**Q** Some of my food in the freezer started to thaw or had thawed when the power came back on. Is the food safe? How long will the food in the refrigerator be safe with the power off?

**A** Never taste food to determine its safety! You will have to evaluate each item separately. If an appliance thermometer was kept in the freezer, read the temperature when the power comes back on. If the appliance thermometer stored in the freezer reads 40 °F or below, the food is safe and may be refrozen. If a thermometer has not been kept in the freezer, check each package of food to determine the safety. Remember you can't rely on appearance or odor. If the food still contains ice crystals or is 40 °F or below, it is safe to refreeze. Refrigerated food should be safe as long as power is out no more than 4 hours. Keep the door closed as much as possible. Discard any perishable food (such as meat, poultry, fish, eggs, and leftovers) that have been above 40 °F for 2 hours.

**Q** May I refreeze the food in the freezer if it thawed or partially thawed?

**A** Yes, the food may be safely refrozen if the food still contains ice crystals or is at 40 °F or below. You will have to evaluate each item separately. Be sure to discard any items in either the freezer or the refrigerator that have come into contact with raw meat juices. Partial thawing and refreezing may reduce the quality of some food, but the food will remain safe to eat. See the attached charts for specific recommendations.

## REFRIGERATOR FOODS

*When to Save and When to Throw It Out*

FOOD	Held above 40 °F for over 2 hours
<b>MEAT, POULTRY, SEAFOOD</b>	
Raw or leftover cooked meat, poultry, fish, or seafood; soy meat substitutes	Discard
Thawing meat or poultry	Discard
Meat, tuna, shrimp, chicken, or egg salad	Discard
Gravy, stuffing, broth	Discard
Lunchmeats, hot dogs, bacon, sausage, dried beef	Discard
Pizza – with any topping	Discard
Canned hams labeled “Keep Refrigerated”	Discard
Canned meats and fish, opened	Discard
<b>CHEESE</b>	
Soft Cheeses: blue/bleu, Roquefort, Brie, Camembert, cottage, cream, Edam, Monterey Jack, ricotta, mozzarella, Muenster, Neufchatel, queso blanco, queso fresco	Discard
Hard Cheeses: Cheddar, Colby, Swiss, Parmesan, provolone, Romano	Safe
Processed Cheeses	Safe
Shredded Cheeses	Discard
Low-fat Cheeses	Discard
Grated Parmesan, Romano, or combination (in can or jar)	Safe
<b>DAIRY</b>	
Milk, cream, sour cream, buttermilk, evaporated milk, yogurt, eggnog, soy milk	Discard
Butter, margarine	Safe
Baby formula, opened	Discard
<b>EGGS</b>	
Fresh eggs, hard-cooked in shell, egg dishes, egg products	Discard
Custards and puddings	Discard
<b>CASSEROLES, SOUPS, STEWS</b>	Discard
<b>FRUITS</b>	
Fresh fruits, cut	Discard
Fruit juices, opened	Safe
Canned fruits, opened	Safe
Fresh fruits, coconut, raisins, dried fruits, candied fruits, dates	Safe

FOOD	Held above 40 °F for over 2 hours
<b>SAUCES, SPREADS, JAMS</b> Opened mayonnaise, tartar sauce, horseradish	Discard if above 50 °F for over 8 hrs.
Peanut butter	Safe
Jelly, relish, taco sauce, mustard, catsup, olives, pickles	Safe
Worcestershire, soy, barbecue sauces, Hoisin sauce	Safe
Fish sauces (oyster sauce)	Discard
Opened vinegar-based dressings	Safe
Opened creamy-based dressings	Discard
Spaghetti sauce, opened jar	Discard
<b>BREAD, CAKES, COOKIES, PASTA, GRAINS</b> Bread, rolls, cakes, muffins, quick breads, tortillas	Safe
Refrigerator biscuits, rolls, cookie dough	Discard
Cooked pasta, rice, potatoes	Discard
Pasta salads with mayonnaise or vinaigrette	Discard
Fresh pasta	Discard
Cheesecake	Discard
Breakfast foods –waffles, pancakes, bagels	Safe
<b>PIES, PASTRY</b> Pastries, cream filled	Discard
Pies – custard, cheese filled, or chiffon; quiche	Discard
Pies, fruit	Safe
<b>VEGETABLES</b> Fresh mushrooms, herbs, spices	Safe
Greens, pre-cut, pre-washed, packaged	Discard
Vegetables, raw	Safe
Vegetables, cooked; tofu	Discard
Vegetable juice, opened	Discard
Baked potatoes	Discard
Commercial garlic in oil	Discard
Potato Salad	Discard

## FROZEN FOOD

*When to Save and When to Throw It Out*

FOOD	Still contains ice crystals and feels as cold as if refrigerated	Thawed. Held above 40 °F for over 2 hours
<b>MEAT, POULTRY, SEAFOOD</b>		
Beef, veal, lamb, pork, and ground meat	Refreeze	Discard
Poultry and ground poultry	Refreeze	Discard
Variety meats (liver, kidney, heart, chitterlings)	Refreeze	Discard
Casseroles, stews, soups	Refreeze	Discard
Fish, shellfish, breaded seafood products	Refreeze. However, there will be some texture and flavor loss.	Discard
<b>DAIRY</b>		
Milk	Refreeze. May lose some texture.	Discard
Eggs (out of shell) and egg products	Refreeze	Discard
Ice cream, frozen yogurt	Discard	Discard
Cheese (soft and semi-soft)	Refreeze. May lose some texture.	Discard
Hard cheeses	Refreeze	Refreeze
Shredded cheeses	Refreeze	Discard
Casseroles containing milk, cream, eggs, soft cheeses	Refreeze	Discard
Cheesecake	Refreeze	Discard
<b>FRUITS</b>		
Juices	Refreeze	Refreeze. Discard if mold, yeasty smell, or sliminess develops.
Home or commercially packaged	Refreeze. Will change texture and flavor.	Refreeze. Discard if mold, yeasty smell, or sliminess develops.
<b>VEGETABLES</b>		
Juices	Refreeze	Discard after held above 40 °F for 6 hours.
Home or commercially packaged or blanched	Refreeze. May suffer texture and flavor loss.	Discard after held above 40 °F for 6 hours.

## FROZEN FOOD

*When to Save and When to Throw It Out*

FOOD	Still contains ice crystals and feels as cold as if refrigerated	Thawed. Held above 40 °F for over 2 hours
<b>BREADS, PASTRIES</b>		
Breads, rolls, muffins, cakes (without custard fillings)	Refreeze	Refreeze
Cakes, pies, pastries with custard or cheese filling	Refreeze	Discard
Pie crusts, commercial and homemade bread dough	Refreeze. Some quality loss can occur.	Refreeze. Quality loss is considerable.
<b>OTHER</b>		
Casseroles – pasta, rice based	Refreeze	Discard
Flour, cornmeal, nuts	Refreeze	Refreeze
Breakfast items –waffles, pancakes, bagels	Refreeze	Refreeze
Frozen meal, entree, specialty items (pizza, sausage and biscuit, meat pie, convenience foods)	Refreeze	Discard

## Food Safety Questions?

### Call the USDA Meat & Poultry Hotline

If you have a question about meat, poultry or egg products, call the USDA Meat and Poultry Hotline toll free at **1-888-MPHotline** or **1-888-674-6854**, TTY: 1-800-256-7072.



The hotline is open year-round Monday through Friday

from 10 a.m. to 4 p.m. EST (English or Spanish).

Listen to timely recorded food safety messages at the same number 24 hours a day. Check out the FSIS Web site at [www.fsis.usda.gov](http://www.fsis.usda.gov).

Send e-mail questions to [MPHotline.fsis@usda.gov](mailto:MPHotline.fsis@usda.gov).

### Ask Karen!

FSIS' automated response system can provide food safety information 24/7



[www.fsis.usda.gov](http://www.fsis.usda.gov)

# **TAB I-15**

## **HANDWASHING FACT SHEET**

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# Handwashing Facts for the Public

## For More Information:

### Oregon Public Health Hotline:

1-800-978-3040, Toll-Free  
503-872-6900, Portland-metro

### Oregon Poison Center:

1-800-222-1222, Toll-Free

### Centers for Disease Control & Prevention, Toll-Free:

1-800-CDC-INFO (232-4636)

1-888-232-6348 TTY

E-mail: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)

You can also visit the following  
Web site:

### **Centers for Disease Control and Prevention:**

<http://www.cdc.gov/cleanhands/>

**If you have a  
disability and need  
this document in an  
alternate format, call  
(971) 673-1222  
(971) 673-0372 TTY**

02-07-07

## Introduction

- Keeping your hands clean is one of the best ways to keep from getting sick and spreading illnesses.
- Cleaning your hands gets rid of germs you pick up from other people, from the surfaces you touch, and from the animals you come in contact with.
- Washing your hands with soap and water is the best way to clean your hands. If soap and water are not available, you can use an alcohol-based product, such as a gel or liquid sanitizer.

## When to wash your hands

- Before eating.
- Before preparing food.
- After you use the bathroom.
- After changing a diaper or cleaning up a child who has gone to the bathroom.
- Before and after caring for someone who is sick.
- After handling uncooked foods, especially raw meat, poultry or fish.
- After blowing your nose, coughing or sneezing.
- After handling an animal, their toys, leashes, or waste.
- After handling garbage.
- Before and after treating a cut or wound.
- Whenever your hands look dirty.

## Washing with soap and water

- Wet your hands and apply liquid, bar, or powder soap. Use warm water if possible.
- Rub your hands together vigorously to make a lather.
- Wash your wrists, palm, backs of hands, fingers, and under the fingernails.
- Continue rubbing your hands for 20 seconds. It takes that long to remove stubborn germs. To time yourself, imagine singing "Happy Birthday" all the way through—twice.
- Rinse your hands under running water.
- Dry your hands well using a clean towel or air dryer. Using a towel helps remove germs.
- If possible, use a paper towel to turn off the faucet, and then throw it in the trash.

## Using alcohol-based products

- Using soap and water is the best way to wash your hands. If soap and water are not available, you can use alcohol-based products that are made for cleaning hands.
  - Pour the product into the palm of one hand and rub hands together.
  - Make sure all parts of your hands and fingers are covered with a generous amount of product.
  - Continue rubbing until your hands are dry.

## **TAB I-16**

### **FOODBORNE DISEASE FACT SHEETS**

<b>Fact Sheet Title</b>	<b>Status</b>
Botulism	Completed
Campylobacter	In process
E. coli	In process
Lysteria	In process
Salmonella	Completed
Shigella	In process

# Botulism Facts

## For More Information:

### Oregon Public Health Hotline

1-800-978-3040, Toll-Free  
503-872-6900, Portland-metro

### Centers for Disease Control & Prevention, Toll-Free:

1-800-CDC-INFO (232-4636)  
1-888-232-6348 TTY  
E-mail: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)

Clinician Info:  
877-554-4625

You can also visit the following  
Web sites for information on  
Botulism:

### **Oregon Department of Human Services:**

[http://oregon.gov/DHS/ph/  
acd/diseases/botulism/  
botulism.shtml](http://oregon.gov/DHS/ph/acd/diseases/botulism/botulism.shtml)

### **Centers for Disease Control & Prevention:**

[www.bt.cdc.gov/agent/  
botulism/index.asp](http://www.bt.cdc.gov/agent/botulism/index.asp)

## Introduction

- Botulism is a muscle-paralyzing disease caused by a toxin made by a group of bacteria commonly found in soil. The bacteria form spores, which allow them to survive in a dormant state until exposed to conditions that can support their growth.
- There are three main kinds of botulism, foodborne, infant botulism and wound botulism.
- **Foodborne botulism** is caused by eating foods that contain the botulism toxin and is often associated with home-canned foods that have been improperly processed. Ingesting botulism toxin can lead to illness within a few hours to days.
- Foodborne botulism has often been from home-canned foods with low acid content, such as asparagus, green beans, beets and corn. However, outbreaks of botulism have also occurred from more unusual sources, such as chopped garlic in oil, chili peppers, tomatoes, improperly handled baked potatoes wrapped in aluminum foil, and home-canned or fermented fish.
- **Wound botulism** is caused by toxin produced from a wound infected with the bacterium.
- **Infant botulism** is caused by consuming the spores of the botulinum bacteria, which then grow in the intestines and release toxin. Honey can contain spores of the botulinum bacteria and has been a source of infection for infants.
- All forms of botulism can be fatal and are considered medical emergencies. Foodborne botulism can be especially dangerous because a contaminated food can poison many people.

## Risks

- In the United States an average of 110 cases of botulism are reported each year.
- Of these, approximately 25 percent are foodborne, 72 percent are infant botulism, and the rest are wound botulism.
- Outbreaks of foodborne botulism involving two or more persons occur most years and are usually caused by eating contaminated home-canned foods.
- The number of cases of foodborne and infant botulism has changed little in recent years, but wound botulism has increased because of the use of black-tar heroin.
- In Oregon, since 1994, there have been only one to seven cases per year of all types of botulism combined.
- Botulism can result in death due to respiratory failure. However, in the past 50 years the proportion of patients with botulism who die has fallen from about 50 percent to eight percent.
- Botulism is not spread from one person to another. Foodborne botulism can occur in all age groups.

### **Local Health Departments**

Baker .....	541-523-8211
Benton .....	541-766-6255
Clackamas.....	503-655-8411
Clatsop .....	503-325-8500
Columbia .....	503-397-4651
.....	ext. 213
Coos .....	541-756-2020
.....	ext. 526
Crook.....	541-447-5165
Curry.....	541-247-3300
.....	ext. 3268
Deschutes .....	541-322-7418
Douglas .....	541-440-3571
Gilliam .....	541-384-2061
Grant .....	541-575-0429
Harney.....	541-573-2271
Hood River .....	541-386-1115
Jackson .....	541-774-8211
Jefferson.....	541-475-4456
Josephine .....	541-474-5325
Klamath .....	541-882-8846
Lake.....	541-947-6045
Lane .....	541-682-4013
Lincoln .....	541-265-4112
Linn.....	541-967-3888
.....	ext. 2488
Malheur .....	541-889-7279
.....	ext. 285
Marion .....	503-588-5342
Morrow .....	541-676-5421
Multnomah.....	503-988-3406
Polk .....	503-623-8175
Sherman.....	541-506-2600
Tillamook .....	503-842-3912
Umatilla .....	541-278-5432
Union .....	541-962-8865
Wallowa.....	541-426-4848
Wasco .....	541-506-2600
Washington .....	503-846-3594
Wheeler .....	541-763-2725
Yamhill.....	503-434-7483

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12/21/06

### **Symptoms**

- The classic symptoms of botulism include double vision, blurred vision, drooping eyelids, slurred speech, difficulty swallowing, dry mouth and muscle weakness.
- These are all symptoms of the muscle paralysis caused by the bacterial toxin. If untreated, these symptoms may progress to cause paralysis of the arms, legs, trunk and breathing muscles.
- Paralysis of breathing muscles can cause a person to stop breathing and die, unless assistance with breathing (mechanical ventilation) is provided.
- In food-borne botulism, symptoms generally begin 12 to 36 hours after eating a contaminated food, but they can occur as early as six hours or as late as two weeks later.
- Infants with botulism appear lethargic, feed poorly, are constipated, and have a weak cry and poor muscle tone.

### **Treatment**

- Good supportive care in a hospital is the mainstay of therapy for all forms of botulism.
- If diagnosed early, food-borne and wound botulism can be treated with an antitoxin, which blocks the action of toxin circulating in the blood. Prompt administration of antitoxin can prevent patients from worsening, but recovery still takes many weeks. Currently, antitoxin is not routinely given for treatment of infant botulism.
- If food-borne botulism is detected early enough, physicians may try to remove contaminated food still in the gut by inducing vomiting or by using enemas.
- Wounds should be treated, usually surgically, to remove the source of the toxin-producing bacteria.
- The respiratory failure and paralysis that occur with severe botulism may require a patient to be on a breathing machine (ventilator) for weeks, along with intensive medical and nursing care.
- Patients who survive an episode of botulism poisoning may have fatigue and shortness of breath for years and long-term therapy may be needed to aid recovery.

### **Prevention**

- Botulism can be prevented. Persons who do home canning should follow strict hygienic procedures to reduce contamination of foods.
- Oils infused with garlic or herbs should be refrigerated.
- Potatoes that have been baked while wrapped in aluminum foil should be kept hot until served or refrigerated.
- High temperatures destroy the botulism toxin, so persons who eat home-canned foods should consider boiling the food for 10 minutes before eating it to ensure safety.
- Instructions on safe home canning can be obtained from county extension services or from the U.S. Department of Agriculture.
- Because honey can contain spores of botulism bacteria, children less than 12 months old should not be fed honey. Honey is safe for persons 1 year of age and older.
- Wound botulism can be prevented by promptly seeking medical care for infected wounds and by not using injectable street drugs.

# Salmonella Facts

## For More Information:

### **Centers for Disease Control & Prevention, Toll-Free:**

1-800-CDC-INFO (232-4636)

1-888-232-6348 TTY

E-mail: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)

Clinician Info:

1-877-554-4625

You can also visit the following  
Web sites for information on  
salmonella:

### **Oregon Department of Human Services:**

[http://oregon.gov/DHS/ph/  
acd/diseases/salmonella/  
salmonella.shtml](http://oregon.gov/DHS/ph/acd/diseases/salmonella/salmonella.shtml)

### **Centers for Disease Control & Prevention:**

[www.cdc.gov/ncidod/  
diseases/submenus/sub  
\\_salmonella.htm](http://www.cdc.gov/ncidod/diseases/submenus/sub_salmonella.htm)

## Introduction

- Salmonella is a bacteria that causes salmonellosis infection, which is a common cause of diarrhea (frequent and watery bowel movements) in people.
- Every year, about 40,000 people in the US become ill from salmonella bacteria, and about 600 people die. Because many mild cases are not diagnosed or reported, the actual number of infections may be much greater.
- Young children, the elderly, the persons with weakened immune systems due to medical conditions are the most likely to have a bad infection.

## Risks

- Salmonella bacteria are spread by eating or drinking food or water contaminated with the bacteria, or by direct contact with people or animals with the disease.
- Salmonella live in the guts of humans and other animals, including birds, and are passed through their bowel movements. Many raw foods from animals have Salmonella, but by cooking it, the Salmonella is killed.
- People may also get the bacteria from an infected food handler who did not wash his or her hands with soap and water after using the bathroom.
- An infected person can carry Salmonella several days to many months. Persons who have been treated with oral antibiotics tend to carry Salmonella longer than others.
- Hard-to-clean raw foods have also been known to have Salmonella on them (e.g., sprouts, clover, etc).
- Salmonella may also be found in the solid waste of some pets, especially those with diarrhea. People can then get infected if they do not wash their hands after contact with the waste itself.
- Reptiles are particularly likely to carry Salmonella, and people should always wash their hands right away after handling a reptile, even if the reptile is healthy.
- Adults should make sure that children wash their hands after handling a reptile.

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Wallowa.....	541-426-4848
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### **Symptoms**

- Most persons infected with Salmonella develop diarrhea, fever, and stomach cramps 12 to 72 hours after contact is made.
- The illness usually lasts four to seven days, and most persons recover without treatment.
- However, in some persons the diarrhea may be so bad that the patient needs to be hospitalized. In these patients, the Salmonella infection may spread from the gut to the blood, and then to other sites in the body, and can cause death unless the person is treated right away with prescription medications.

### **Controlling the Spread of Disease**

- Wash your hands after contact with animals or their waste.
- Wash your hands after handling any birds or reptiles.
- Cook chicken, ground beef and eggs thoroughly before eating.
- Do not drink raw (unpasteurized) milk or other unpasteurized dairy products.
- Do not eat food with raw eggs or raw (unpasteurized) milk in it.
- Wash all fruits and vegetables thoroughly before eating. Keep uncooked meats separate from produce and other foods.
- Wash your hands thoroughly before and after food preparation.
- Refrigerate foods right away—don't let them sit at room temperature.
- If you are diagnosed with salmonellosis, do not prepare food, or serve food or beverages for others until you are no longer carrying the bacteria.
- Wash your hands frequently. Use waterless alcohol-based hand gels when soap and water are not available and when hands are not visibly soiled.

### **Treatment**

- Most people with salmonellosis will recover on their own. Some may need fluids to prevent dehydration (drying up of bodily fluids).
- Antibiotics and antidiarrheal drugs are generally not recommended for typical cases of salmonellosis, since treating with antibiotics may lengthen the time a person can carry the disease.
- If you think you may have Salmonella it is a good idea to contact your doctor or health clinic for information on where you can get tested.
- If you can't afford a doctor and/or are not currently on a health plan or insurance, call 1-800-SAFENET (723-3638) for information on low-cost clinics near you.