NAHEMS GUIDELINES:
HEALTH AND SAFETY

FAD PReP
Foreign Animal Disease Preparedness & Response Plan

USDA

NAHEMS
National Animal Health Emergency Management System

the Center for
Food Security
& Public Health
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United States Department of Agriculture • Animal and Plant Health Inspection Service • Veterinary Services

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The Foreign Animal Disease Preparedness and Response Plan (FAD PReP)/National Animal Health Emergency Management System (NAHEMS) Guidelines provide a framework for use in dealing with an animal health emergency in the United States.

This FAD PReP/NAHEMS Guidelines was produced by the Center for Food Security and Public Health, Iowa State University of Science and Technology, College of Veterinary Medicine, in collaboration with the U.S. Department of Agriculture Animal and Plant Health Inspection Service through a cooperative agreement. This Guidelines document has undergone review by USDA Legislative and Public Affairs.

This FAD PReP/NAHEMS Guidelines reflects updates to the 2011 version, completed in December 2018. Please send questions or comments to:

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THE IMPERATIVE FOR FOREIGN ANIMAL DISEASE PREPAREDNESS AND RESPONSE

Why Foreign Animal Diseases Matter

Preparing for and responding to foreign animal diseases (FADs)—such as highly pathogenic avian influenza (HPAI) and foot-and-mouth disease (FMD)—are critical actions to safeguard the nation's animal health, food system, public health, environment, and economy. FAD PReP, or the *Foreign Animal Disease Preparedness and Response Plan,* prepares for such events and provides guidance for activities during a response.

Since 2014, three HPAI outbreaks in the United States have cost over $880 million, just for indemnity payments and response activities on premises. Studies have estimated a likely national welfare loss between $2.3–69 billion[1] for an FMD outbreak in California, depending on delay in diagnosing the disease.[2] The economic impact of an FAD outbreak results from lost international trade and disrupted interstate trade, as well as from costs directly associated with the eradication effort, such as depopulation, indemnity, disposal, and virus elimination. In addition, there are direct and indirect costs related to foregone production, unemployment, and losses in related businesses. The social and psychological impact on owners and growers can be significant. Diseases with zoonotic potential, such as HPAI and Nipah/Hendra, may also pose a threat to public health.

Challenges of Responding to an FAD Event

Responding to an FAD event—large or small—is complex and difficult, challenging all stakeholders involved. Response activities require significant prior preparation. There are imminent and problematic disruptions to interstate commerce and international trade.

A response effort must have the capability to be rapidly scaled up or down according to the needs of the specific incident. This involves many personnel, resources, and possibly veterinary countermeasures. Not all emergency responders have specific food and agriculture skills required in areas such as biosecurity, quarantine and movement control, epidemiological investigation, diagnostic testing, depopulation, disposal, and possibly emergency vaccination.

Establishing widely communicated and understood response goals and guidelines, as accomplished by the FAD PReP materials, helps to broaden awareness of common objectives as well as potential problems.

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[1] Carpenter TE, O'Brien JM, Hagerman AD, & McCarl BA. 2011. "Epidemic and economic impacts of delayed detection of foot-and-mouth disease: a case study of a simulated outbreak in California." *J Vet Diagn Invest.* 23:26-33.
[2] Estimates based on models may vary: Ekboir (1999) estimated a loss of between $8.5 and $13.5 billion for an FMD outbreak in California. Ekboir JM. 1999. "Potential Impact of Foot-and-Mouth Disease in California: the Role and Contribution of Animal Health Surveillance and Monitoring Services." *Agricultural Issues Center.* University of California, Davis.

Lessons Learned from Past FAD Outbreaks

The foundation of FAD PReP is the lessons learned from past FAD incidents. FAD PReP is based on the following:

- Achieving rapid FAD detection and tracing.
- Providing processes for emergency planning that respect local knowledge.
- Integrating State-Federal-Tribal-industry planning processes.
- Ensuring that there are clearly defined, obtainable, and unified goals for response.
- Having a unified Incident Command that can act with speed and certainty.
- Employing science- and risk-based management approaches to an FAD response.
- Ensuring that all guidelines, strategies, and procedures are communicated effectively to responders and stakeholders.
- Identifying trained personnel and resources that are required for an effective incident response.
- Trying to resolve competing interests prior to an outbreak and addressing them quickly during an outbreak.

FAD PReP Mission and Goals

The mission of FAD PReP is to raise awareness, expectations, and develop capabilities surrounding FAD preparedness and response. The goal of FAD PReP is to integrate, synchronize, and deconflict preparedness and response capabilities as much as possible before an outbreak by providing goals, guidelines, strategies, and procedures that are clear, comprehensive, easily readable, easily updated, and that comply with the National Incident Management System.

In the event of an FAD outbreak, the three key response goals are to: (*1) detect, control, and contain the FAD in animals as quickly as possible; (2) eradicate the FAD using strategies that seek to stabilize animal agriculture, the food supply, the economy, and to protect public health and the environment; and (3) provide science- and risk-based approaches and systems to facilitate continuity of business for non-infected animals and non-contaminated animal products.* Achieving these three goals will allow individual livestock facilities, States, Tribes, regions, and industries to resume normal production as quickly as possible. They will also allow the United States to regain FAD-free status without the response effort causing more disruption and damage than the disease outbreak itself.

FAD PReP Documents and Materials

FAD PReP is not just one, standalone FAD plan. Instead, it is a comprehensive U.S. preparedness and response strategy for FAD threats, both zoonotic and non-zoonotic. The following section provides examples of the different types of FAD PReP documents available.

- Strategic Plans—Concept of Operations
  - *APHIS Foreign Animal Disease Framework: Roles and Coordination* (FAD PReP Manual 1-0): This document provides an overall concept of operations for FAD preparedness and response for APHIS, explaining the framework of existing approaches, systems, and relationships.
  - *APHIS Foreign Animal Disease Framework: Response Strategies* (FAD PReP Manual 2-0): This document provides significant detail on response strategies that will be conducted in an FAD outbreak.
  - *Incident Information Management and Reporting* (FAD PReP Manual 3-0): This document explains how information is managed and reported during an animal health emergency.

- *FAD Investigation Manual* (FAD PReP Manual 4-0): This field-ready manual provides detailed information on completing an FAD investigation from start to finish.
- *A Partial List of FAD Stakeholders* (FAD PReP Manual 5-0): This guide identifies key stakeholders with whom the National Preparedness and Incident Coordination (NPIC) Center collaborates.

- NAHEMS Guidelines
  - These documents describe many of the critical preparedness and response activities, and can be considered as a competent veterinary authority for responders, planners, and policy-makers.

- Industry Manuals
  - These manuals describe the complexity of industry to emergency planners and responders and provide industry a window into emergency response.

- Disease Response Plans
  - Response plans are intended to provide disease-specific information about response strategies. They offer guidance to all stakeholders on capabilities and critical activities that would be required to respond to an FAD outbreak.

- Standard Operating Procedures (SOPs) for Critical Activities
  - For planners and responders, these SOPs provide details for conducting critical activities such as disposal, depopulation, cleaning and disinfection, and biosecurity that are essential to effective preparedness and response to an FAD outbreak. These SOPs provide operational details that are not discussed in depth in strategy documents or disease-specific response plans.

- Continuity of Business Plans (commodity specific plans developed by public-private-academic partnerships)
  - Known as the Secure Food Supply Plans, these materials use science- and risk-based information to facilitate market continuity for specific products in an outbreak.

- APHIS Emergency Management
  - APHIS Directives and Veterinary Services (VS) Memorandums provide important emergency management policy. These documents provide guidance on topics ranging from emergency mobilization, to FAD investigations, to protecting personnel from HPAI.

Most of these documents are available publicly, at http://www.aphis.usda.gov/fadprep.

PREFACE

The Foreign Animal Disease Preparedness and Response Plan (FAD PReP)/National Animal Health Emergency Response System (NAHEMS) Guidelines provide the foundation for a coordinated national, regional, state and local response in an emergency. As such, they are meant to complement non-Federal preparedness activities. These guidelines may be integrated into the preparedness plans of other Federal agencies, State and local agencies, Tribal Nations, and additional groups involved in animal health emergency management activities.

The Health and Safety Guidelines are a component of APHIS' FAD PReP/NAHEMS Guideline Series, and are designed for use by APHIS Veterinary Services (VS), and other official response personnel in the event of an animal health emergency, such as the natural occurrence or intentional introduction of a highly contagious foreign animal disease in the United States.

The Health and Safety Guidelines provide guidance for State and Federal responders on health and safety principles for animal health emergency deployments. The general principles discussed in this document are intended to serve as a basis for making sound decisions regarding health and safety. As always, it is important to evaluate each situation and adjust procedures to the risks present in the situation.

The FAD PReP/NAHEMS Guidelines are designed for use as a preparedness resource rather than as a comprehensive response document. During a deployment, all responders should look to their chain of command for specific guidance on all matters pertaining to health and safety. Health and Safety resources are included in the Appendix and in the references at the end of this document.

NOTE: This "FAD PReP/NAHEMS Guidelines: Health and Safety 2018" is the result of a content update to the FAD PReP/NAHEMS Guidelines: Health and Safety 2011.

Table of Contents

1. INTRODUCTION

In an animal health emergency, such as a foreign animal disease (FAD) outbreak, the U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) serves as the lead Federal agency for response. APHIS deploys personnel for response efforts in a unified Incident Command with the affected State. Many other stakeholders may assist with an animal health emergency response; for example, industry groups, academic experts, State or local officials, and contractors.

The *Foreign Animal Disease Preparedness and Response Plan (FAD PReP) National Animal Health Emergency Management System (NAHEMS) Guidelines*: *Health and Safety* focuses on health and safety issues responders might encounter while deployed to an animal health emergency. Its purpose is to prepare responders to recognize unsafe working situations and to report unsafe conditions and injuries. The Incident Command System (ICS) is used to manage any emergency response, and these Guidelines refer to the titles of officials and groups in terms of the ICS structure. Furthermore, these Guidelines were written under the assumption that a Health and Safety Plan (HASP) will be developed for the incident based on USDA APHIS guidance.
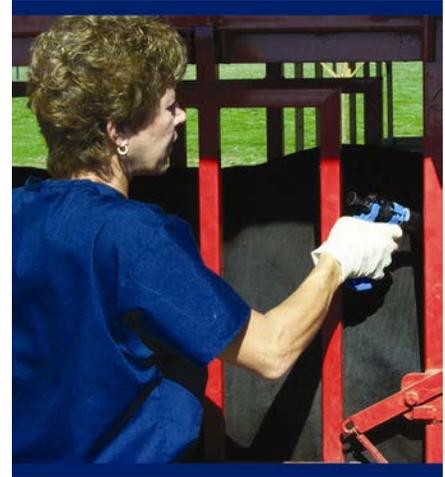
2. HEALTH AND SAFETY OVERVIEW

Protecting the health and safety of personnel assigned to emergency response activities is everyone's responsibility. From team members to the Incident Commander, all responders are responsible for maintaining safe working conditions. Individuals must be aware of their own health status and physical limits, follow safe work procedures, correctly use the prescribed personal protective equipment (PPE), report unsafe actions and conditions, and report all injuries to supervisors.

Supervisors are responsible for the health and safety of their team members and must be alerted to changes in the situation or working conditions which may affect employee health and safety. The Incident Commander and Safety Officer are responsible for the health and safety of all personnel assigned to an animal health emergency response.

2.1 Statutory Authority

The Occupational Safety and Health Act of 1970, Section 5(a)(1) states that "each employer shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees." Additional regulations pertaining to health and safety are in the Occupational Safety and Health Administration (OSHA) General Industry Regulations found in 29 CFR §1910.120; 1910.132; 1910.134

2.2 Health and Safety Responsibilities within the ICS

The ICS is used to organize the emergency response and efficiently manage people and resources. As seen in Figure 1, it utilizes a flexible command structure that can be modified and used for any type of incident.

Figure 1: Incident Command System

2.2.1 Incident Commander

The Incident Commander is responsible for all aspects of the response, including the health and safety of responders. The Incident Commander should be aware of any major health and safety concerns at all times during the incident. The Incident Commander, or designee, is also responsible for communicating with individuals at headquarters, in an Incident Coordination Group, or other organizational element about 1) major health and safety incidents that have occurred and 2) any significant resource needs from the Incident Command.
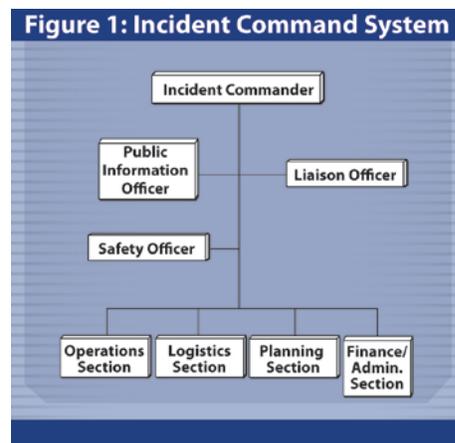
2.2.2 Safety Officer

The Incident Commander, or designee, assigns a Safety Officer who assumes responsibility to ensure the health and safety of responders. The Safety Officer has the authority to immediately stop an operation to correct safety or health hazards.

The Safety Officer operates out of the Incident Command Post and acts as an advisor to the Incident Commander. The Safety Officer eases the overall burden on the Incident Commander and ensures that at least one individual in command and general staff is attending to the health and safety of deployed personnel full-time. The Safety Officer does the following:

- Designs and oversees the implementation of the general incident HASP at the Incident Command Post.
- Supervises the development of site-specific HASPs at any other field/incident sites by Site Safety Officers, as appropriate, and facilitates the establishment of safe work procedures.
- Identifies hazards in the response at headquarters and field sites and seeks ways to minimize hazards.
- Performs inspections and ensures safe work procedures are followed.
- Assesses the need for PPE and assures proper use, cleaning, and maintenance.
- Provides communication pertaining to safety and health matters.
- Provides training prior to and during responders' activities on-site.
- Prepares reports and ensures that reports are filed in a timely and accurate manner.
- Ensures that safety related supplies are on hand.
- Briefs the Incident Commander on the status of health and safety on the deployment.

2.2.3 Site Safety Officer

Depending on the extent of the incident, the Safety Officer may designate Site Safety Officers to oversee efforts at individual premises or groups of premises. The Site Safety Officer also assists in the development of the site-specific HASP. The Site Safety Officer's role may be delegated to another trained responder in a management role; it is preferable that the Site Safety Officer has been appropriately trained per current APHIS guidance as a Safety Office

2.2.4 Safety Coordinators

The Site Safety Officer may also designate a Safety Coordinator to supervise efforts at individual premises/sites. The Safety Coordinator helps develop the site-specific HASP and ensures that safety procedures are followed by all responders, safety training has been conducted and documented, and unsafe conditions and injuries are reported to the Site Safety Officer.

2.2.5 Operations Section

The Operations Section manages field operations for the response. Since most hazardous activities occur in the field, the Operations Section must work closely with the Safety Officer to ensure safe working conditions for responders.

2.2.6 Logistics Section

The Logistics Section provides services and support to meet incident needs. It is responsible for providing medical and first aid supplies for use by personnel assigned to the incident.

2.2.7 Supervisors

Each supervisor is responsible for ensuring safety procedures are followed, particularly as defined in the HASPs, safety training has been conducted and documented, and unsafe conditions and injuries are reported to the Safety Officer.

2.2.8 Responders

Each responder is expected to follow safe work procedures, report unsafe conditions and actions, and report all injuries to his/her supervisor.

2.3 Worker Rights and Responsibilities

As with other employment situations, USDA is responsible for providing a safe and healthful workplace for its workers and responders. Likewise, it is the responsibility of responders to comply with established work rules and to properly use assigned PPE.

Responders must adhere to the following work rules:
- Follow all safety and health policies at all times.
- Wait to perform tasks until proper safety and health controls have been put in place.
- Follow supervisors' instructions and adhere to the chain of command.
- Follow personnel accountability instructions: check-in and check-out, buddy system.
- Obtain vaccinations in compliance with the employer's medical directions.
- Promptly report all injuries, accidents, and near misses. Seek medical attention as needed.
- Report all unsafe conditions. Do not perform tasks until proper safety and health controls have been put into place.
- Refuse to perform tasks that pose an imminent danger.
- Wear all PPE needed for the task.
- Maintain constant awareness of surroundings.

3. PRE-DEPLOYMENT PREPARATION

Because emergency situations arise quickly, personnel with emergency response duties should maintain a certain level of readiness.

3.1 Personal Health

3.1.1 Physical Health

Responders must be in physical condition to perform their assigned duties. Responders are encouraged to have regular physical examinations to assess their current health status. Prior to deployment, any vaccines should be administered (as appropriate). These may include a tetanus/diphtheria booster, seasonal influenza vaccine, pneumococcal vaccine (for persons over age 65 or those who are immunocompromised), and rabies vaccine (if needed, check titer first). Responders that want more information regarding vaccines should direct questions to their point of contact for health and safety matters in their organization.

Responders should discuss medical issues of concern with their personal physicians and supervisor, as appropriate. If a responder feels that a medical condition–such as chronic disease or pregnancy–may limit their activity in the field, other assignments may be available. These individuals should talk to their supervisor, as appropriate per any organizational regulation and guidance, to disclose any concerns or limitations prior to arrival at the Incident Command Post.

3.1.2 Mental Health

Responders may experience mental health issues associated with deployment before, during, or after an emergency. Disruption of regular work and family schedules, being away from home and family, harsh working conditions, working in an unfamiliar environment and with new people, and working in stressful emergencies can all contribute to mental health issues. It is important to recognize the signs of mental health distress and know where to seek support and assistance.

Psychological hazards are further discussed in section 4.3.3 of these Guidelines. The Department of Health and Human Services and the Centers for Disease Control and Prevention (CDC) has developed resources specifically for emergency responders, emergency planners, health professionals, and the general public. These documents can be accessed by web links provided in the For More Information section at the end of this document.

3.2 Personal Packing List

Preparation for deployment should begin prior to receiving a deployment notification. Emergency response personnel are expected to be self-sufficient with respect to personal supplies, equipment, and some PPE. PPE may also be provided at deployment based on hazard analysis. Many of these items can be assembled and stored in anticipation of a deployment.

Items to consider packing for deployment include the following:
- 30-day supply of prescription medicines
- Sunscreen
- *N,N*-diethyl-3-methylbenzamide (DEET) containing insect repellant
- Lip balm
- First aid kit
- Non-prescription medications (e.g., pain relievers, allergy medications, cold medication, anti-diarrheal medication, etc.)
- Clothing appropriate to climate, weather conditions (e.g., rain gear, gloves, hat, or cap), and PPE requirements
- Footwear and extra socks appropriate to climate, weather conditions and PPE requirements
- Alarm clock (not electric)
- Flashlight and extra batteries
- Cell phone charger and extra battery
- Extra glasses or contact lenses
- Sunglasses
- Sleep aids (e.g., ear plugs, eye shields, etc.)
- Personal medical and safety information
- Documentation of training (e.g., fire extinguisher training, driver's training, etc.)
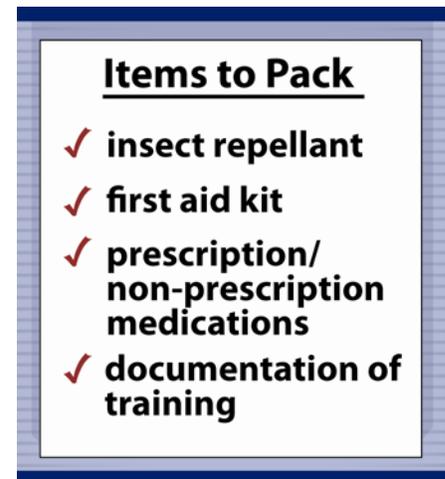
A comprehensive general packing list is provided in Appendix A: Pre-Deployment Checklist/What to Pack.

Emergency deployment worksites may be in remote locations or areas with limited access to facilities and amenities. Other conditions such as weather, terrain or the presence of biological, chemical, or radiological hazards may affect working and living conditions. Responders must be prepared to live and work in areas with limited access to electricity, running water, shelter, air conditioning, telephone, internet, or other services. Upon notification of deployment, responders will receive information identifying specific personal items and equipment, including PPE, they will need to bring to the site. Additional information is provided by the *FAD PReP/NAHEMS Guidelines: PPE.* To access this document and other FAD PReP resources, a web link to the FAD PReP web site is provided in the For More Information section at the end of this document.

3.3 Personal Safety

While traveling to and from a deployment site, responders should remain alert to their surroundings and use care to assure that they arrive safely at their destination. If driving, be sure to stay aware of road and weather conditions, take rest breaks, and do not drive when fatigued. All personnel driving government owned vehicles must obey all rules related to their usage (this includes not using a cell phone to text OR talk while driving). In addition, all responders must follow all local, State, and Federal laws and regulations.

3.4 Health and Safety Training

3.4.1 OSHA Training for Responders

Pursuant to the OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) Standard, 29 CFR 1910.120, personnel involved with emergency deployments are to be trained on certain items pertinent to health and safety. The type and level of training required is dependent on the role of the responder in the incident.

There are five categories of responder training.

1. **First Responder, awareness level:** Individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. This training is required of all responders regardless of their duties or function within the response. This training is available through the USDA learning management system: AgLearn (Course title: APHIS Basic HAZWOPER Awareness Course).

2. **First Responder, operations level:** Responds to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures. Training at this level requires awareness level training plus at least 8-hour HAZWOPER training.

3. **Hazardous materials technician:** Responds to releases or potential releases for the purpose of stopping the release. They assume a more aggressive role than a first responder at the operations level in that they will approach the point of release in order to plug, patch, or otherwise stop the release of a hazardous substance. Training at this level requires awareness level training plus at least 24-hour HAZWOPER training which includes one day actual field experience under the direct supervision of a trained and experienced supervisor. Specific competencies for this level are listed in the standard and known to trainers.

4. **Hazardous materials specialist:** Responds with and provides support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician; however, those duties require a more directed or specific knowledge of the various substances they may be called upon to contain. The hazardous materials specialist also acts as the liaison with Federal, state, local, and other government authorities with regards to site activities. Training at this level requires awareness level training plus at least 24-hour HAZWOPER training which includes one day actual field experience under the direct supervision of a trained and experienced supervisor. Specific competencies for this level are listed in the standard and are known to trainers.

5. **On-Scene Incident Commander:** Incident commanders who will assume control of the incident scene beyond the first responder awareness level shall receive 40-hour HAZWOPER training which includes three days of supervised field experience. Specific competencies for this level are listed in the standard and known to trainers. (Note that this training is above the level outlined in the standard.)

All training is valid for one year. A web link to the OSHA fact sheet on HAZWOPER is available in the For More Information section at the end of this document.

3.4.2 APHIS Training for Responders

The Emergency Management Safety and Security Division (EMSSD) leads APHIS safety and health initiatives. EMSSD manages APHIS' occupational safety and health program, including the industrial hygiene and biosafety components. To assure the health and safety of all APHIS team members and to assure compliance with 29 CFR 1910, all APHIS personnel working a deployment (including temporary employees) will receive training prior to deployment, typically including the following mandatory training:

- Hazard Communication
- How to Report an Injury
- Emergency Communication
- Evacuation Procedure
- Shelter in Place
- Relevant sections of the APHIS HASP Document (e.g., Medical Monitoring)

USDA and/or APHIS officials determine the mandatory training which APHIS employees must complete. The APHIS Emergency Deployment Generic HASP, a Deployment Work Plan, and other sources may be used to develop additional training or add to the curriculum. For example, personnel involved in fieldwork may require additional training including:

- Recognition of Permit Required Confined Spaces
- PPE Use (inspection, donning, doffing and disposal)
- Fire Extinguisher Use
- Defensive Driving
- Material Handling
- Job Task Training
- The personnel will also be trained on the Job Hazard Analysis (JHA) appropriate for their tasks and on specific site procedures.

In addition to the above, APHIS responders who investigate chemical contamination and who perform field activities associated with hazardous chemicals must have completed the initial 40-hour Hazardous Waste Operations training course (as required by OSHA regulations, 29 CFR 1910.120), and an annual 8-hour refresher course within the past 12 months.

APHIS Supervisors and Managers must also be trained on the following:

- The reporting of employee injuries (for Worker's Compensation)
- Managers and supervisors directly responsible for hazardous substance emergency activities must complete an 8-hour Supervisor Training course in addition to the 40-hour basic course and 8-hour refresher course.
- Any additional roles called for Supervisors in other sections of the HASP.

The Safety Officer, in coordination with APHIS officials and the Incident Commander, may decide when or if additional training is required for specific positions or personnel involved with the response. Training that is conducted should be documented appropriately; training does not need to be repeated if there is documentation of equivalent training in the past 12 months.

In addition, the Safety Officer conducts a health and safety briefing regarding the HASP plan and other site-specific plans, as appropriate, at the Incident Command Post. It is the responsibility of the Safety Officer, or designee (such as a Site Safety Officer) to ensure that responders are briefed prior to reporting for work. Training/briefings should be conducted as necessary as new employees are involved with the deployment.

APHIS has developed a generic HASP template that is available for APHIS safety and health personnel to use during an incident. This generic HASP helps the Safety Officer and support personnel quickly and accurately develop a site-specific HASP, which contains basic health and safety training requirements for a response.

Guidance, procedures, or recommendations provided by the Incident Commander should be followed and incorporated into the site-specific HASP as necessary. When incident management teams are rotated on and off of the incident, the HASP and site-specific HASP(s) should be provided to the incoming team at the time of transition. In addition, the outgoing Safety Officer should brief and provide any relevant documentation to the incoming Safety Officer to ensure continuity. For additional information on the HASP or APHIS Safety Officers, please contact the APHIS EMSSD for preferred procedures, guidance, and other protocols.

4. HEALTH AND SAFETY WHILE ON DEPLOYMENT

During a deployment, your incident supervisor and the Safety Officer are the best resources for health and safety information. Health and safety information is also documented in the Incident HASP, site-specific HASP(s),

SOPs, and the Incident Action Plan (IAP). If you have questions regarding health and safety while on deployment, immediately contact your incident supervisor

4.1 Work Settings and Shifts

4.1.1 Extended and Unusual Shifts

A usual work shift is considered to be a period of no more than eight consecutive hours during the day, five days a week, with at least an eight-hour rest period between shifts. Any shift incorporating more hours, more consecutive days, or work in the evening should be considered extended or unusual. During emergency response activities, extended or unusual shifts are often required.

Working extended or unusual shifts may be stressful physically, mentally, and emotionally. These shifts disrupt the body's regular schedule causing increased fatigue, stress, and reduced concentration, which may lead to an increased risk of operator error, injuries, and accidents. Acclimating to night shift work takes up to 10 days. Workers moving to a night shift may experience disrupted sleep patterns resulting in sleep deprivation.

Fatigue is caused by the body's need for rest. Without adequate rest, fatigue can progress to distress and debilitation. The physical and mental symptoms of fatigue vary from person to person and with the degree of fatigue.

Some signs of fatigue include:
- Weariness
- Sleepiness
- Irritability
- Reduced alertness, lack of concentration and memory
- Lack of motivation
- Increased susceptibility to illness
- Depression
- Headache
- Giddiness
- Loss of appetite and digestive problems

4.1.2 Managing Work and Rest Periods

Managing work and rest periods is important to maintaining a safe and productive work force. Supervisors must manage work and rest periods, assignment duration, and the length of shifts to ensure employee safety and productivity.

The following are typical guidelines for any given incident. For specific information related to an incident, please contact the Incident Commander, designee, or your supervisor to receive additional guidance.
- It is the supervisor's (in the incident chain of command) responsibility to see that employees are provided with adequate rest time. Supervisors should observe their employees for the physical and mental signs of fatigue, which indicate the need for additional time off.

- APHIS employees assigned on a continuous rotational basis (21 days) are *required* to take a minimum of one unpaid day off in the middle of the assignment; this day off is not optional and cannot be waived by the Incident Commander.
- Employees assigned for 30 days or more must take a minimum of two unpaid days off which must be taken within the 30 day period.
- These mandatory days off, for APHIS responders, cannot be at the very end of the deployment prior to traveling home; each State may have their own policies/procedures regarding mandatory days off.
- Supervisors have the discretion to require an individual to take additional unpaid days off if needed.

4.2 Know Your Limits

For some deployed responders, duty assignments involve a higher level of physical activity than their normal daily activities. Responders must be aware of their current fitness level and recognize that an increased activity level, working extended shifts, and reduced sleep may have an effect on their personal health and safety. Responders should work within their limits to avoid endangering themselves or their coworkers.

Responders may refuse to perform a task if they do not feel comfortable performing it.
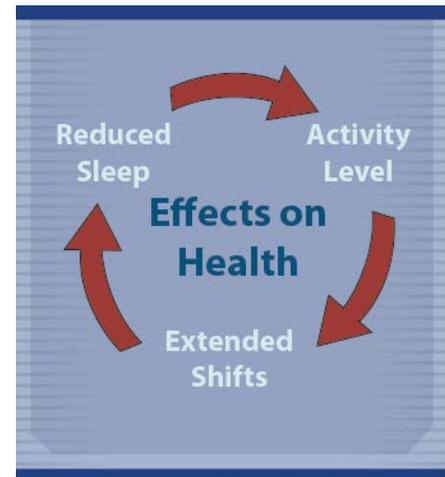

4.3 Specific Hazards

The types of hazards encountered during a response depend on the nature of the emergency (e.g., natural disaster, animal disease outbreak, terrorism incident) as well as the location of the disaster site, time of year, and weather conditions. The following section describes some hazards responders may encounter while on deployments. Responders should always refer to the Incident-Specific HASP and JHA prepared for the incident and the Safety Officer for details regarding hazards specific to the deployment site.

4.3.1 Physical Hazards

Lifting
Back injuries are one of the most common work-related injuries. When lifting, use proper techniques.
- Before lifting, assess the object to be moved. Is it too heavy or awkward for one person? If so, ask another person for help or use a mechanical device (e.g., dolly or hoist). How far does it have to be carried? How high does it have to be lifted? Will this be a regular part of the job?
- Check for tags on loads.
- Before lifting, always test the load for stability and weight.
- For loads that are unstable and/or heavy, follow management guidelines for:
  - Equipment use
  - Reducing the weight of the load
  - Repacking containers to increase stability
- Plan to lift.
  - Wear appropriate shoes to avoid slips, trips, or falls.
  - If you wear gloves, choose the size that fits properly. Depending on the material the gloves are made of and the number of pairs worn at once, more force may be needed to grasp and hold objects.
  - Lift only as much as you can safely handle by yourself.
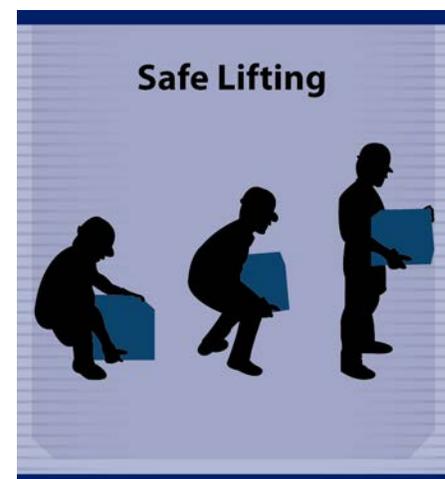
- Keep the lifts in your power zone (i.e., above the knees, below the shoulders, and close to the body), if possible.
- Use extra caution when lifting loads that may be unstable.
- Get close to the load.
- Keep yourself in an upright position while squatting to pick up the object.
- Tighten your stomach muscles.
- Lift with your legs.
- Pivot, don't twist. Turn with your feet, not your back.

Slips and Falls

Slips, trips, and falls may occur when walking on uneven, wet, muddy, or icy surfaces, or over rough terrain. Wearing PPE may limit your range of motion and vision or affect your balance. Use additional care when walking while wearing PPE.
- Watch for hoses, cables, or other items in your path.
- Clean up spills as quickly as possible.
- Ensure adequate lighting in work areas.
- Block or mark areas around known hazards such as holes, overhead hazards, and uneven surfaces.
- Keep electrical cables, hydraulic hoses, cords, and other lines out of walkways.

Sharps

Responders may work with needles or other sharp instruments. Needle sticks are one of the most common occupational injuries in veterinary practice. To reduce injuries, follow the practices listed below.
- Never recap a needle. Directly dispose of the needle into an approved sharps container without recapping.
- Do not use lightweight plastic containers (e.g., beverage containers) as sharps containers. Needles and scalpel blades can easily puncture these containers, injuring the handler. Rigid sharps disposal containers are available in a variety of shapes and sizes.
- Dispose of suture needles and single-use disposable scalpel blades in a rigid sharps container. Account for items before and after a procedure and prior to clean up to help prevent inadvertent injuries or hazards left behind.

Dogs

Dog bites are a serious threat. The following guidelines have been established when encountering dogs:
- As part of PPE, employees may be provided with a mechanism to protect themselves from dogs (please see the For More Information section for one such option).
- When approaching premises or entering yards, stay alert and stop to observe your surroundings.
- Do not enter premises alone. Always enter with another person.
- If you can hear a dog barking on the premises, but no animal is visible, do not enter the premises.
- Ask owners if dogs are present. Do not enter a work area where there are unrestrained dogs. Require owners to restrain or remove dogs or other potentially dangerous animals from the work area.
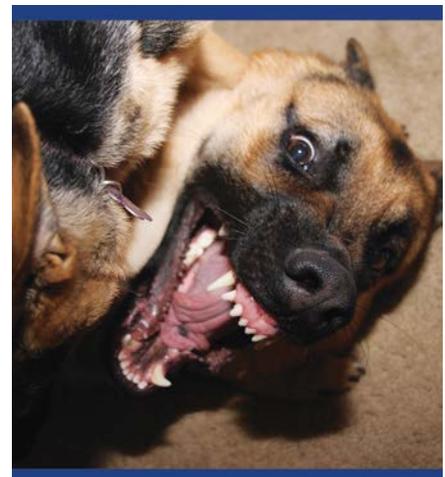
If the owner will not restrain or remove the dog, contact law enforcement or animal control.

- If confronted by a dog, do not stare into its eyes.
- If threatened by a dog, stop, back away slowly, and place a barrier (e.g., fence, or gate) between yourself and the dog. Do not turn and run away.
- If you fall or are knocked to the ground by a dog, curl into a ball, place your hands over your head and neck, and protect your face.
- If bitten by a dog, seek medical treatment for wounds. Secure and observe the offending dog. Report the incident to the Team Leader, Safety Officer, and local authorities. If unable to restrain the dog, provide a thorough description of the animal to aid in attempts to locate the animal. Consult with a physician regarding the need for post-exposure rabies prophylaxis.

Wildlife and Other Animals

Learn which wild animals may be present in the work area. Watch for wild animals. They can exhibit unpredictable or aggressive behavior. Inspect all areas for wild animals and nests before beginning work. Assume that all wild animals are rabid and all snakes are poisonous. If bitten, seek medical attention and consult a physician regarding the need for post-exposure rabies prophylaxis.

Bites and Stings

Ants, bees, wasps, mosquitoes, spiders, ticks, scorpions and other insects may be present at the work site.
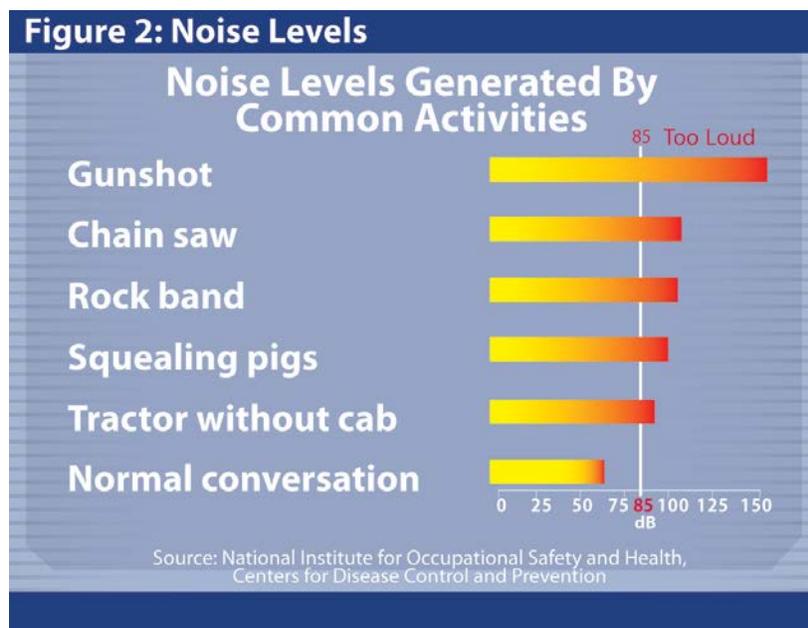
- Protect yourself against bites and stings by wearing a DEET-containing insect repellant on exposed skin.
- Wear long-sleeved shirts and long pants. Tuck pant legs into boot tops.
- Be cautious about where you place your hands and feet. Do not put hands into holes or under objects (lumber, scrap metal, etc.) without checking for insects, snakes, or other animals.
- Observe tick bites for signs of swelling and redness. Seek medical attention, if necessary.

4.3.2 Environmental Hazards

Hearing Protection

Noise is considered hazardous at levels of 85 dBA (decibels) or more for a period of eight hours; therefore, hearing protection must be worn when noise levels exceed 84 dBA.

For emergency situations where hearing protection is required, as with routine situations, the employee should have had a baseline audiogram and be enrolled in the Hearing Conservation program. Earmuffs and ear plugs, both disposable and reusable, are examples of PPE used to protect responders from noises above safe levels. A "rule of thumb" for determining noise level: if you cannot hold a conversation in a normal speaking voice with someone standing at arm's length (approximately three feet away), the noise level may be hazardous. Figure 2, Noise Levels, provides a few examples of various sounds with the decibel scale across the bottom for reference.

Figure 2: Noise Levels

Noise Levels Generated By Common Activities

Source: National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention

Heat-related Illnesses

High temperatures, high humidity, direct sun, direct heat, limited air movement, physical exertion, poor physical condition, medications, and a low tolerance for heat can all contribute to heat-induced illnesses. Certain types of PPE can also increase the risk for heat-related illnesses.

Responders need to be alert to the signs of heat-related illnesses and take quick action to avoid serious injury. To help prevent heat-related illnesses, drink plenty of fluids, replace salt and minerals, wear appropriate clothing and sunscreen, and monitor or limit outdoor activity.

Heat-related illnesses range from heat cramps to more severe illnesses such as heat stress, heat exhaustion, and heat stroke (a life-threatening condition). It is essential to treat any heat-related illness promptly to prevent the risk of further injury. Table 1 describes the types of heat-related illnesses.

Table 1. Heat-related Illness with Treatment

Illness	Cause	Symptoms	First Aid/Treatment
Heat Cramps	Heavy sweating and inadequate replacement of fluids and electrolytes.	Muscle spasms and pain in legs, arms and abdomen.	Stop all activity. Sit quietly in a cool place. Drink clear juice or a sports beverage. May resume activities a few hours after cramps subside, but use caution. **Seek Medical Attention:** If you have a heart condition or are on a low sodium diet, or if heat cramps persist for more than 1 hour.
Heat Stress	Body is unable to adequately cool itself.	Thirst, fatigue, feeling "hot", cramps, dizziness, headache, nausea, profuse sweating, or pale clammy skin.	Treat immediately to prevent progression into more severe heat-related illness. Rest in a shaded area. Drink liquids to replace lost fluids. **Seek Medical Attention:** If symptoms persist following a reasonable rest period.
Heat Exhaustion	Exposure to high temperatures, high humidity and strenuous physical activity.	Heavy sweating, paleness, muscle cramps, tiredness, weakness, headache, dizziness, lightheadedness or fainting, behavioral changes including irritability, confusion, nausea or vomiting, fast and weak pulse, fast and shallow breathing.	Move to a cool area (air conditioning), drink cool nonalcoholic beverages, take a cool shower, bath or sponge bath, wear lightweight clothing. **Seek Immediate Medical Attention:** If symptoms are severe, worsen or last longer than 1 hour.
Heat Stroke	Life-threatening condition occurs when the body is unable to regulate temperature. May occur if other heat-related conditions are not adequately treated. May be due to high temperature, high humidity, strenuous physical exercise or other conditions which raise body temperature	High body temperature (104 degrees F or above); cessation of sweating – hot and dry skin; mental confusion, loss of consciousness, seizures or convulsions, rapid heart rate, hyperventilation.	This is a life-threatening condition. **Call for Medical Assistance.** Begin cooling immediately: move to shade, immerse in water, spray with cool water, put in cool shower, monitor body temperature. If able to drink, give cool water until emergency medical personnel arrive. Do not attempt to give fluids to anyone with an altered level of consciousness. If Emergency Medical Responders are delayed, call for further emergency instructions.

Preventing heat-related illnesses:
- Know signs/symptoms of heat-related illnesses
- Self-monitor for signs/symptoms
- Monitor colleagues for signs of heat-related illness
- Block direct sun or other heat sources
- Use cooling fans/air conditioning
- Take regular breaks
- Drink adequate amounts of water
- Avoid alcohol, caffeinated drinks, or heavy meals

In addition, cooling vests can be worn under certain types of PPE to help keep responders cool in hot conditions. These vests help to keep core body temperature down while enabling personnel to continue working in PPE.

Cold Stress and Hypothermia
Extended exposure to cold, windy, and wet conditions without adequate clothing can lead to cold stress and hypothermia. Hypothermia occurs when the body loses more heat than it can produce.

Signs of hypothermia include shivering, loss of coordination, change in behavior, numbness in the extremities, slurred speech, lethargy, coma, and ultimately, death.

In cases of mild hypothermia, bring the victim indoors. Cover the victim with blankets and give warm drinks (no coffee, tea or alcohol). In cases of severe hypothermia, transport the victim to the nearest medical facility.

To prevent hypothermia
- Wear appropriate clothing, dress in layers with loose-fitting lightweight clothing and water resistant or repellent outer layers;
- Cover hands, head, face, and neck to prevent heat loss;
- Avoid overexertion which can cause perspiration and lead to damp clothing; and
- Stay dry.

Frostbite
Frostbite is a bodily injury caused by freezing. It results in loss of feeling and color in affected areas. Frostbite most often affects the nose, ears, cheeks, fingers, or toes. Frostbite can permanently damage the body and severe cases can lead to amputation. You may have a greater risk of developing frostbite if you are not properly dressed for extremely cold temperatures. At the first signs of redness or pain in any skin area, get out of the cold or protect any exposed skin. If you detect symptoms of frostbite, seek medical care.

Electricity
The risk of electrical shock exists wherever electricity is used. To prevent electrical injuries:
- Inspect the work area for downed conductors and do not come into contact with them.
- Assume that all downed power lines are energized.

- Inspect all electrical cords or cables for external defects or evidence of internal damage. Do not use damaged cords.
- Use extension cords approved for the intended use.
- Use caution working in wet areas.

Pit Gases

Pit gases are produced by anaerobic bacteria that decompose manure in storage facilities and are released either continuously or when the manure is stirred or agitated. Pit gases are a combination of hydrogen sulfide, ammonia, methane, and carbon dioxide, all of which are dangerous at high concentrations.

Pit gases may be produced in any manure storage facility and are very unpredictable. Ventilation fans that directly exhaust gas from the manure pit out of the building are essential to minimize toxic gas concentrations. Be aware of the potential for dangerous levels of gas in power outages.

The following precautions should be taken to help prevent pit gas accidents:
- Never enter a manure pit alone
- Wear appropriate PPE
- Use safety equipment, such as harnesses
- Fence off pits and keep gates locked to prevent entrance into the area
- Provide mechanical ventilation in closed buildings
- Keep workers and animals away from the pit and out of the building during and immediately after agitation
- Post warning signs at potential entry points of confined spaces where hazardous gas concentrations could occur
- Make sure that all manure pumping equipment can be quickly and easily removed and accessed for repairs
- Rule out harmful levels of gas by measuring air quality with monitoring equipment

4.3.3 Psychological Hazards

Emergency responders may be called on to provide assistance in a variety of capacities under many different situations. Some of these situations may expose responders to traumatic situations involving human suffering and animal death and suffering. Responders need to understand the psychological impact of emergency response activities; the effects such exposures may have on themselves, their colleagues, and disaster victims; and how to care for themselves and others.
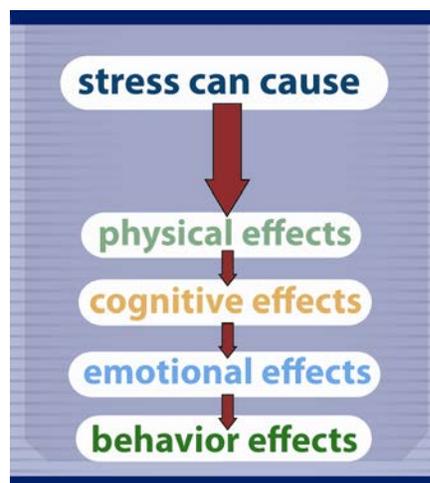
Traumatic events can produce strong emotional reactions which may interfere with an individual's normal response functions. The reactions can range from mild, transient distress to moderate psychological symptoms to a psychiatric illness or disorder.

Signs of Stress

Monitor yourself and others for signs of emotional stress. Always take appropriate self-care measures to reduce the effects of emotional stress and seek assistance and support when needed. This information is provided to help determine if and when professional treatment may be needed. Do not attempt to diagnose yourself or others.

Disaster stress and grief reactions are normal responses to an abnormal situation. Table 2 lists some of the common physical, cognitive, emotional, and behavioral symptoms following a traumatic event. Sometimes, the emotional effects of a traumatic event may be experienced weeks or months after the event, but should decrease over time.

More severe reactions to traumatic events can result in psychological disorders that persist over time. Disaster workers are at an increased risk of developing psychological disorders following a traumatic event. These disorders include acute stress disorder (ASD), post-traumatic stress disorder (PTSD), and depression, which are summarized in Table 3.

Table 2. Common Symptoms of Stress Following a Traumatic Event

Physical *	Cognitive	Emotional **	Behavioral
· Chest pain * · Difficulty breathing * · Shock symptoms * · Fatigue · Nausea/vomiting · Dizziness · Profuse sweating · Rapid heart rate · Thirst · Headaches · Visual difficulties · Clenching of jaw · Nonspecific aches and pains	· Confusion · Nightmares · Disorientation · Heightened or lowered alertness · Poor concentration · Memory Problems · Poor problem solving · Difficulty identifying familiar objects or people	· Anxiety · Guilt · Grief · Denial · Severe panic (rare) · Fear · Irritability · Loss of emotional control · Depression · Sense of failure · Feeling overwhelmed · Blaming oneself or others	· Intense anger · Withdrawal · Emotional outburst · Temporary loss or increase in appetite · Excessive alcohol consumption or substance abuse · Inability to rest, pacing · Change in sexual functioning

*Seek Medical Attention Immediately if you experience chest pain, difficulty breathing or symptoms of shock (shallow breathing, weak, rapid pulse, nausea, shivering, pale and moist skin, mental confusion, and dilated pupils).
**Seek Mental Health Support if your symptoms or distress continue for several weeks or interfere with your daily activities.

Table 3. Psychological Disorders Following a Traumatic Event

Psychological Disorder	Time Span	Characteristics
Acute Stress Disorder	• Within 2 days to 4 weeks following exposure to traumatic event	• Intense fear, helplessness, or horror in response to traumatic event • Sense of numbing, detachment, or absence of emotional responsiveness • Decreased awareness of surroundings • Derealization (perceiving people and things around you as unreal) • Depersonalization (feeling detached from oneself) • Dissociative amnesia (extensive memory loss of traumatic events/periods) • Persistent re-experiencing of traumatic event via images, thoughts, dreams, flashbacks, etc • Avoidance of stimuli that serve as reminders of event • Symptoms of anxiety and increased arousal
Posttraumatic Stress Disorder	• Longer than 4 weeks following exposure to traumatic event	• Intense fear, helplessness, or horror in response to traumatic event • Recurring and intrusive recollections or dreams of event • Feelings of repeatedly reliving the event via illusions, hallucinations, flashbacks • Psychological stress at exposure to reminders or cues of event • Persistent avoidance of stimuli associated with event • Detachment or estrangement from others • Increased arousal
Depression	• Depressive Episode: Days to weeks following stressor • Depressive Disorder: Persistence of depressive episodes consecutively over the course of 2 months	• Depressed mood on a daily basis • Loss of interest or pleasure in daily life • Significant weight loss or decrease in appetite • Sleep disturbances • Restlessness • Fatigue • Feelings of worthlessness or excessive, inappropriate guilt • Indecisiveness and inability to concentrate • Recurring thoughts of death and/or suicide

Individuals who feel that they are experiencing the signs of one of the above conditions should seek mental health support.

Sources of Stress
Sources of stress that may be encountered during or after an emergency response include the following:
- Lack of adequate preparation and/or poor management.
- Prolonged exposure to death, injury, and/or destruction.
- High levels of physically and emotionally draining work.
- Lack of team cohesion and/or command and control disputes.
- Separation from home and loved ones.
- Understaffing and/or lack of resources to match workload.
- Feeling responsible to meet the needs of victims over the needs of themselves.
- Lack of appreciation or understanding by the general population.
- Poor debriefing or reintegration following the response.

4.3.4 Mitigations for Psychological Hazards

Steps to Reduce Stress
The following are self-care and self-monitoring measures:

- Pace yourself. Rescue and recovery efforts may continue for days, weeks, or months.
- Take frequent rest breaks. Response and recovery efforts often occur in very dangerous environments. Mental fatigue due to extended shifts can greatly increase the risk of injury.
- Maintain vigilance for yourself and others. Co-workers may be focused on a particular task and may not notice a hazard. Exhausted, stressed, or distracted responders may place themselves or their co-workers at risk.
- Try to maintain as normal a schedule as possible with regular eating and sleeping times. Adhere to the team schedule and rotation.
- Drink plenty of fluids (water).
- Eat a variety of foods and increase your intake of complex carbohydrates (e.g., breads and muffins made with whole grains, granola bars, etc.).
- Take your breaks away from the work area. Eat and drink in clean areas only.
- Recognize and accept what you cannot change (e.g., chain of command, organizational structure, waiting, equipment failures, etc.).
- Choose your own comfort level when talking about the event and your emotional response to it.
- Give yourself permission to feel bad.
- Remember that recurring thoughts, dreams, or flashbacks are normal and will decrease over time.
- Communicate with loved ones at home as often as possible.
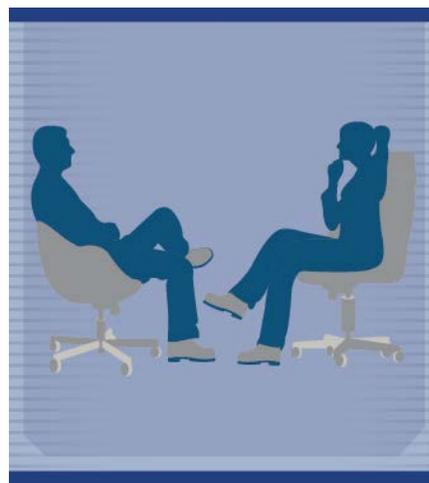
Over time, one's impressions and understanding of the experience will change. Each person's process is different. Regardless of the event or your reaction to it, the steps below will assist with the adjustment:
- Reach out – people really do care.
- Reconnect with family, spiritual and community supports.
- Consider keeping a journal.
- Avoid making any big life decisions.
- Make as many daily decisions as possible to have a sense of control over your life.
- Spend time with others or alone doing the things you enjoy to refresh and recharge.
- Understand that feeling fearful for family members is normal and will pass with time.
- "Getting back to normal" takes time. Reintroduce routines gradually. Allow others to carry more weight at home and work for a while.

- Family members of responders experience the disaster, too. Use patience, understanding, and communication.
- Avoid the use of caffeine. Do not overuse prescription drugs or alcohol and do not use illegal drugs.
- Get plenty of rest and normal exercise. Eat well-balanced, regular meals.

Employee Assistance Programs

Many employers offer formal mental health support in the form of an Employee Assistance Program (EAP). If available, take advantage of formal mental health support and encourage all deployed responders to consult these services if needed before, during, or after a response. For APHIS responders, this phone number is pictured at right. A link to the Federal EAP can be found in the For More Information section of this document; for non-Federal responders, please contact your Human Resources department or supervisor regarding resources that may be available to you during and after a response effort.

Additional information on coping with traumatic events can be found on the Substance Abuse and Mental Health Services Administration website (link provided in the For More Information section of this document).

This information has been included in this Guideline for the purpose of providing a resource for addressing personal mental health needs or those of your colleagues and others you may encounter on a deployment. **This information is NOT meant to take the place of professional psychological advice. If you or someone you know may be suffering from a psychological disorder, contact a health professional.**

4.4 Site Security and Safety

Maintaining security of the incident site is important for protecting the health and safety of both responders and the public. Security measures control access to the work site, prevent unauthorized persons from entering, limit the risk of spreading hazardous materials or disease agents beyond the control area, and prevent outside interference with response efforts. A site control section may be included in a HASP, but it should be an essential part of the site-specific HASP. The IAP may also have important information on site security and safety.

Site control personnel work with Incident Command, biosecurity, and other applicable units or groups to determine the boundaries for biosecure areas. These areas should be included in the site-specific HASP. More detailed descriptions of biosecure areas can be found in section 4.4.2 and in the *FAD PReP/NAHEMS Guidelines: Biosecurity* (a link is provided in the For More Information section at the end of this document).
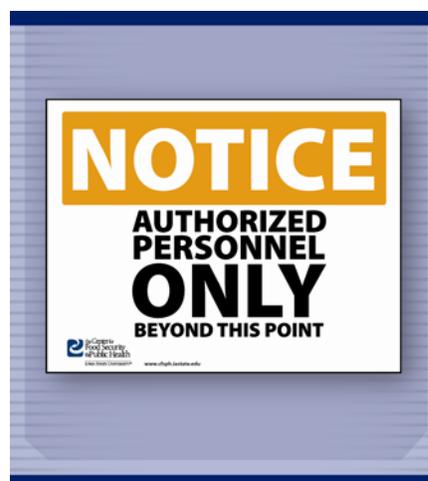
### 4.4.1 Unified Incident Command Role

The Operations Section Chief, with assistance the Security Manager, establishes and maintains security for the incident site(s). Additional security personnel may be needed/assigned depending on the size and scope of the incident. All personnel must adhere to the security procedures established for the incident. Personnel will receive information about on-site security procedures during their initial briefing. The Security Manager may create or enforce procedures related to the exit/entry of buildings and sites, establish personnel identification requirements, and assess any current or potential security threats to buildings, dwellings, or sites where responders are working.

4.4.2 Control of Work Zones

Within the incident site, work zones are established to control access and reduce the risk of the accidental spread of hazardous agents. Additionally, the establishment of work zones ensures

- Personnel entering the worksite are properly protected against hazards while working;
- Work activities and contamination are confined to certain areas; and
- Personnel can be located quickly and evacuated if necessary.

Work sites are divided into three major zones as illustrated in Figure 3:

Figure 3. Work Zones
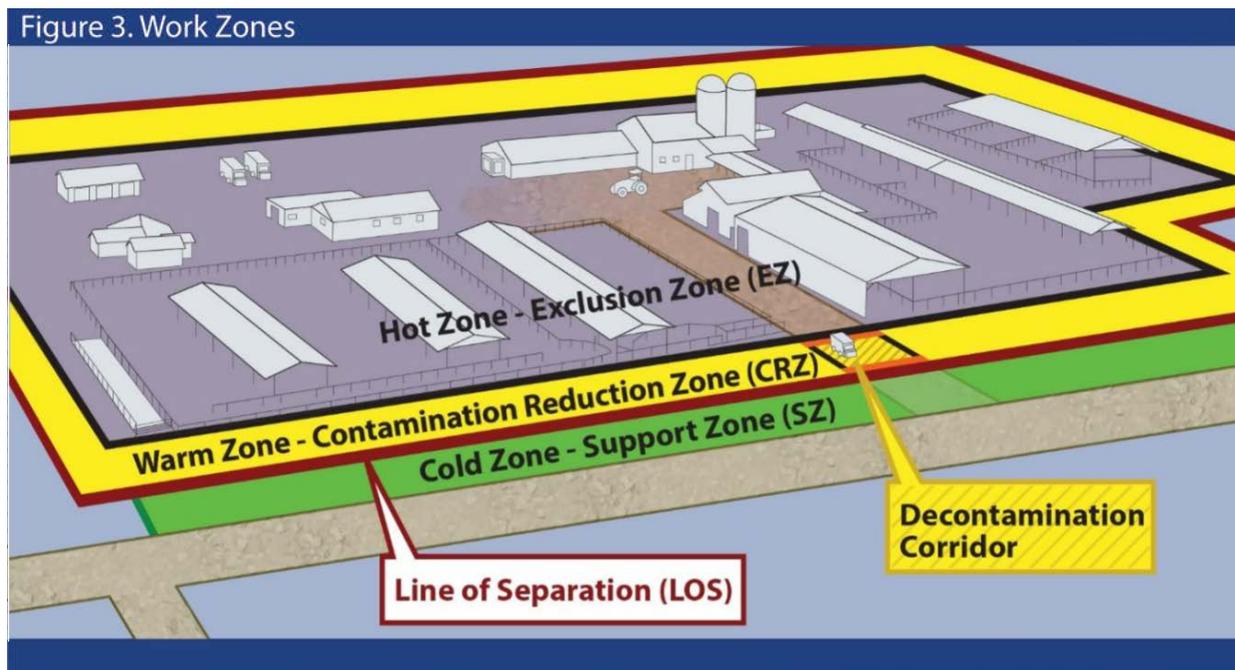
Once designated as a contaminated premises, usually the whole farm or operation is considered an infective risk. In this case, the Hot Zone - Exclusion Zone designates the dirty or contaminated premises associated with the infected herd or flock. The Cold Zone - Support Zone is the non-contaminated area outside the premises. The Warm Zone - Contamination Reduction Zone is regarded as having a reduced pathogen load in the environment and acts as a buffer further separating contaminated from non-contaminated. The Decontamination Corridor is within the Warm Zone-Contamination Reduction Zone. This corridor serves as access between the Hot and Cold Zones. It is the transition through which the pathogen load is reduced from Hot to Cold. Personnel, equipment and vehicles transition through the Decontamination Corridor before crossing the Line of Separation into the Cold Zone – Support Zone. The Decontamination Corridor is where biosecurity actions are taken to prevent the disease from "crossing the line" during necessary movements of people, equipment, and possibly vehicles.

Movement of workers from contaminated areas into clean areas is closely monitored, and cleaning and disinfection protocols must be followed. For additional information please refer to the *FAD PReP/NAHEMS Guidelines: Biosecurity, Cleaning and Disinfection, and Personal Protection Equipment (PPE),* as well as the *FAD PReP SOPs: Biosecurity and Cleaning and Disinfection* (links can be found in the For More Section at the end of this document). Refer also to the incident-specific HASP and site-specific information provided during briefings.

4.4.3 Accounting for Personnel during a Deployment

The location(s) of all personnel must be known at all times during a deployment. This includes personnel conducting site investigations and personnel working in confined and/or contaminated zones. The Security Manager will establish methods to ensure all personnel are accounted for at all times. Communication may be by cell phone, radio, hand signal or other method as assigned. Typically, an IAP may have additional information regarding communications and/or accountability for the incident.

Personnel must enter and exit the deployment facility through designated points and follow check-in and check-out procedures. Responders must follow their supervisor's guidance in their chain of command regarding leaving and entering sites, premises, or the Incident Command Post.

4.4.4 Buddy System

Personnel assigned to field work and working in the Hot Zone – Exclusion Zone will utilize the "buddy system" for safe and effective PPE use. Personnel will work in pairs in order to observe each other and quickly summon assistance in the event of an emergency. Consult the Incident HASP or the Safety Officer for details regarding incident-specific procedures.

Responders using the buddy system will
- Remain in close visual contact with their partner;
- Assist their partner as requested or needed;
- Observe their partner for signs of distress (e.g., heat stress or other difficulties);
- Periodically check the integrity of their partner's PPE (refer to the *FAD PReP/NAHEMS Guidelines: PPE* and briefing instructions for further details); and
- Notify the site manager or other site personnel if emergency assistance is needed.

4.4.5 Medical Monitoring

OSHA's HAZWOPER Standard, 29 CFR 1910.120, requires that all employees participating in emergency response activities participate in a medical surveillance program (Occupational Medical Monitoring Program). Medical monitoring is used to determine the risk of exposures to hazardous materials or other inordinate hazards.

The Occupational Medical Monitoring Program is designed to protect the health and welfare of APHIS employees exposed to hazardous chemical, biological, or radioactive materials and other hazards such as noise. Although monitoring does not replace the need to limit environmental exposures to hazardous materials, nor does it prevent illness or injury, it serves to safeguard health and may prevent exposure to hazards.

Participation in this program should not be used as a substitute for regular complete physical examinations performed by a physician. Furthermore, medical monitoring is not a substitute for consulting an industrial hygienist who can determine exposure levels and recommend methods of limiting exposures.

4.4.6 Influenza-Like Illness Monitoring

In incidents that involve highly pathogenic avian influenza, APHIS coordinates with the CDC as well as local and/or State public health agencies regarding monitoring responders for influenza-like illness. Responders to an incident of highly pathogenic avian influenza should adhere to any instructions from regarding monitoring for

influenza-like illness that you receive during and after your deployment from the unified Incident Command and/or their respective employers. Current guidance is available in the *Public Health Monitoring Plan for USDA/APHIS Responders to Detections of Avian Influenza Virus in Poultry*, which is linked in the For More Information section and available through the APHIS website.

5. COMMUNICATION OF HEALTH AND SAFETY INFORMATION

Conditions can change quickly during an incident. Responders need to make sure they have current information about changes in working conditions, policies, and procedures. Briefings will be held regularly, and responders must attend briefings to ensure they have the latest information about the response, including health and safety issues.

5.1 Mobilization Briefing

Upon deployment, responders will receive a mobilization briefing. The briefing may include information such as an assessment evaluating weather and climate challenges and the terrain; the local culture and sensitivities of the affected community; threats and security precautions or countermeasures; and specific information regarding equipment and PPE to bring to the deployment. Responders should use this information to aid in packing for the deployment.

5.2 Communicating During the Response

A pre-entry safety and health briefing is required pursuant to 29 CFR 1910.120(b)(4)(iii) before an employee begins work at the site. Additional briefings may be held at other times as necessary to ensure that personnel are aware of the safety plan and that the plan is being followed.

5.2.1 Arriving at the Incident Command Post

Upon arrival at the Incident Command Post or other location designated for check-in, responders receive orientation information and required equipment (such as PPE). All personnel must be oriented before beginning work. Responders that check in at other times must also receive relevant orientation information, such as the incident HASP and IAP.

5.2.2 Initial Briefing

Personnel must receive an initial briefing before beginning work. The initial briefing will include a health and safety briefing covering major items outlined in the Incident HASP and Work Plan. Personnel are expected to read and understand the Incident HASP prior to beginning work. Personnel will receive training in emergency procedures during the personnel training session. Depending on their roles and responsibilities in the response, some responders may require additional health and safety information (e.g., those conducting depopulation activities in the field versus those who stay at the Incident Command Post).

5.2.3 Training

Any relevant training will be conducted prior to job start up to ensure that employees have a thorough understanding of the HASP, and any applicable SOPs and hazards for the affected area. A collection of JHAs for specific jobs is included in the Incident HASP. Personnel should review the JHA for their assigned jobs.

5.2.4 Daily Safety Briefings

The Safety Officer, or designee, will provide a daily health and safety briefing to personnel prior to the beginning of the day's tasks. In incidents where there are a number of sites, daily safety briefings may be conducted by the Safety Officer or Site Safety Officer for the particular location of operational activities.

5.2.5 Team Leader Role

Team Leaders and Supervisors are responsible for ensuring that all personnel understand the incident-specific emergency signals and procedures. The Safety Officer will ensure that Supervisors receive training in these emergency signals and procedures.

Team Leaders should brief team members about any health and safety issues prior to beginning work and as necessary during the assignment.

5.3 Emergency Response/Contingency Plan

Even with precautions taken to assure the safety of workers during deployment, issues can arise which call for quick and decisive action. An emergency response/contingency plan should be developed within a HASP and site-specific HASP. This section can be adapted as determined necessary by the Safety Officer and Incident Commander and may include specific emergencies that were not immediately found in the JHA, such as weather emergencies and chemical spills. The IAP may also include important emergency response/contingency plans.

5.3.1 Emergency Response Preparations

- Prior to the start of operations on the site, the Safety Officer will establish an emergency medical assistance network. Local fire, police, and rescue authorities will be notified of potential emergency situations which may arise due to activity.
- In the event of an emergency, the Incident Commander is ultimately responsible for the evacuation, emergency treatment, and emergency transport of personnel as well as notifying emergency response units and appropriate management staff.
- The Safety Officer will prepare a Field Team Personal Emergency Contact Information List. The list will contain the location of emergency facilities with directions and a map. The list will be updated as needed. Team members will be instructed on how to obtain assistance.
- Each vehicle will be equipped with written directions and maps to the nearest emergency facilities, a copy of the Incident HASP and work plan, a first aid kit, an adequate supply of fresh water, and a portable emergency eyewash.
- A vehicle will be available at all times to transport injured personnel to emergency medical facilities. In the event of a severe injury, medical transport will be summoned.
- Each field team will be equipped with a cell phone or radio for communication. Satellite phones may be used in the event that communications are disabled.
- At the beginning of the deployment, the Safety Officer will determine the potential for a chemical release if materials are being used on deployment. The Safety Officer shall assure that appropriate spill response materials are available on-site.
- Whenever possible, field staff will work in pairs. For personnel working alone, a call-in schedule will be established.
- Each day before work begins, the Incident Commander, Safety Officer, Security Manager, and Operations Chief will evaluate the work areas to assess the adequacy of evacuation routes, procedures for dealing with hazards, and communication systems. Changes in emergency procedures will be communicated to personnel at the daily briefing.

- Each field team will have a list of emergency contact numbers (telephone numbers and radio call numbers, as appropriate). The numbers will be kept in an easily accessible location known by all team members and will be posted in each vehicle.

5.3.2 Evacuation Procedures

If an emergency evacuation is required, the Incident Commander, Safety Officer, or Operations Section Chief will sound a predetermined signal to alert personnel to the beginning of evacuation procedures. All personnel will evacuate and assemble at the pre-determined assembly site. Supervisors and/or members of APHIS Command staff will ensure that all personnel are accounted for at the assembly site.
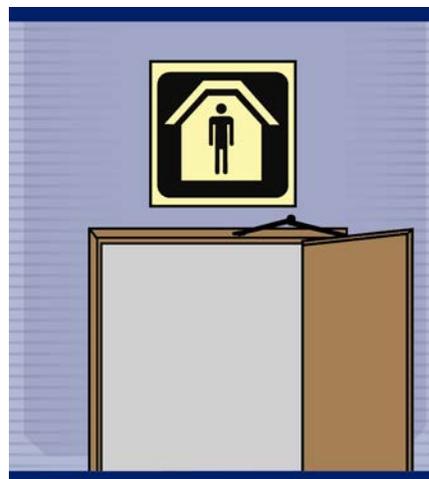
5.3.3 Shelter-in-Place Procedures

Under certain circumstances, teams may need to shelter in place. Local emergency personnel or the Incident Commander may issue a shelter-in-place order. The Safety Officer will identify locations in buildings to be used for sheltering in place.

When a shelter-in-place order is issued, the Incident Commander will notify personnel to seek shelter. Notification may be verbal and/or by radio or cell phone. Supervisors, Command Staff, and/or General Staff must take a head count of personnel in the shelter. Personnel will remain in the shelter until the "all clear" signal is given by Command Staff.

6. RESPONSES TO PARTICULAR EMERGENCIES

The following section addresses some of the emergency situations which may be encountered during a deployment. This is not an exhaustive list. Refer to the Incident HASP, JHA Sheets, IAP, and Safety Officer for information related to a specific incident.

6.1 Fire or Explosion

If it is safe to do so, first attempt to extinguish the fire with a Class A/B/C multipurpose extinguisher. A fire extinguisher will be kept in each vehicle.

If the fire is out of control, take the following steps:
- Sound the warning alarm.
- Evacuate personnel to a safe distance away from the fire.
- Verify that all team members are present.
- Notify the fire department and APHIS personnel.
- Remove all vehicles if it is possible to do safely.
- Remove all flammable field equipment if it is possible to do safely.
- Wait for fire-fighting personnel.

6.2 Dust Explosions

In the event of a dust explosion, evacuate the area. The initial explosion releases dust into the air, which can ignite causing secondary and tertiary explosions.

If forced to evacuate, notify your supervisor, the Operations Section Chief, or any Command Staff.

6.3 Hazardous Materials Release

Any number of chemical exposure hazards may be present. Be aware that animal waste gases, carbon monoxide from power tools, and aerosolized disinfectants may build to hazardous levels. Farm chemicals may be stored at the incident site. Remain vigilant of potential chemical exposures, especially when entering confined or enclosed places.

1. If a hazardous materials release occurs during field activities:
   - Report all hazardous materials releases to the Operations Section Chief and the IC.
   - Follow guidance provided in 29 CFR 1910.120 for response to hazardous materials release.
   - Most responders will not be trained or equipped to contain a release.
     – They should notify, control, contain (if trained and equipped), and protect.
   - If the release poses direct contact or inhalation hazards, do not attempt control measures unless proper PPE is available to prevent exposure of personnel.
2. If a hazardous or potentially dangerous situation is suspected, the Safety Officer and the local authorities will be notified. The IC or designee will dictate the response. The IC will provide local authorities with the following information:
   - Identity of the chemical or oil by name and/or U.S. Department of Transportation ID number
   - Chemical/oil hazard class
   - Cause of release
   - Quantity/concentration of release
   - Potential for fire
   - Potential for release evacuation (estimate of the effect of a chemical release on the surrounding area)
   - Injuries caused by the release
   - Actions taken
3. If a hazardous materials incident arises from a source not related to the APHIS activity, APHIS personnel will follow the guidance of the outside emergency response organization.

6.4 Severe Weather and Natural Disasters

In the event of severe weather conditions, the Operations Section Chief, with assistance from the Safety Officer, will determine whether fieldwork can continue without endangering the health and safety of field workers. Factors to consider include:
- Heavy precipitation
- Extreme heat and potential for heat stress
- Winter weather
- Potential for cold stress or cold-related injuries
- Treacherous weather-related working conditions
- Limited visibility
- Potential for electrical storms
- Potential for mudslides
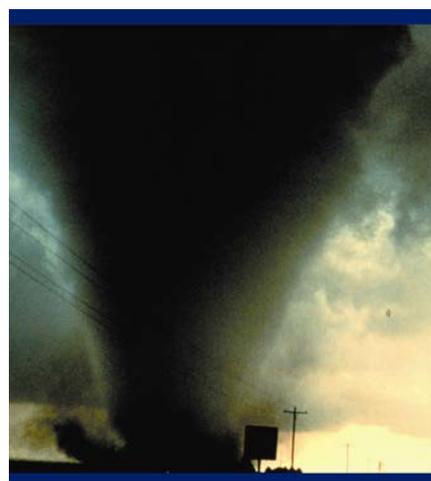
If a natural disaster occurs, the Operation Section Chief, with the assistance from the Safety Officer, will determine whether fieldwork can continue without endangering the health and safety of field worker or if additional assistance will be needed due to emergencies that may be declared due to the natural disaster. Natural disasters that may require additional support or change in field operations include:

- Tornadoes
- Floods
- Hurricanes
- Landslides
- Earthquakes
- Wildfires

CDC/NIOSH and OSHA provide more specific information on Health and Safety considerations and planning for responders during a natural disaster event (links can be found in the For More Information section at the end of this document).

6.5 Injuries

Injuries may occur ranging from minor to life threatening. Awkward postures, repetitive motions and the application of force can result in musculoskeletal injuries. Working outside in any season can expose skin to the risk of sunburn. Any animal health emergency will involve interactions with animals. These encounters can lead to injuries from kicks, crushing incidents, as well as bites or scratches.

In the event of an injury:
1. Stabilize the victim and provide first aid in a safe area free of contaminants if safe to do so.
2. In the event of possible spinal cord trauma, do not move the victim if it is safe to leave the victim and wait for trained emergency personnel.
3. Minor injuries (e.g., small lacerations, cuts, and strains) should be initially treated by a first-aid qualified field team member.
4. All major injuries should receive ambulance or hospital support.
5. All injuries, no matter how minor, should be reported to the employee's supervisor.
6. If personnel are transported for medical care, the Supervisor must notify the Section Chief and the Safety Officer. The Safety Officer will notify the Incident Commander.
7. If decontamination is required and it will not interfere with essential treatment, perform the following
   - Escort victim to the decontamination area.
   - Wash, rinse and remove protective material
   - Wash exposed body parts with potable water. Flush for 10 minutes or use disinfectant solution (suitable for contact with human skin).
   - Cover the victim with a blanket or, if the injury is not serious, dress the victim in clean clothing.
   - If necessary, transport the victim to the hospital or request ambulance support.
8. If decontamination cannot be performed:
   - Wrap the victim in blankets, plastic, or rubber to reduce contamination of other personnel;
   - Alert emergency and medical personnel of possible contamination and instruct them in decontamination procedures, if necessary;
   - Send along personnel familiar with the incident; and
   - Perform first aid if it will not endanger the safety of the responder.

It is your responsibility to report any injury, illness, or accident to your incident supervisor and the Safety Officer immediately. Certain types of injuries must be reported to OSHA within a very short time period. Notification of the Safety Officer fulfills the notification requirements; APHIS EMSSD notifies OSHA and/or provides required reports. Please see section 8.1 Incident Reporting for related information.

7. RECOGNIZING COMMON INCIDENT SAFETY ISSUES

7.1 Reporting Safety Concerns

Personnel who have safety concerns which make them uncomfortable about a particular duty or situation should speak to an appropriate person in the incident chain of command (e.g., Safety Officer, Group Supervisor or Team Leader).

7.2 PPE

The proper use of PPE is essential to prevent the spread of harmful agents, including zoonotic diseases, beyond the Control Area. However, there are important health and safety considerations for using PPE. For more information in the selection, types, and proper use of PPE, see *FAD PReP/NAHEMS Guidelines: PPE,* and *FAD PReP/NAHEMS Guidelines: Biosecurity).*

Certain types of PPE should only be worn for a specified length of time. Know the time limits for assigned PPE. Responders, especially those who are assigned to work extended hours, need to be aware of the limitations of protective equipment and the maximum allowable wearing time.

Responders working in hazardous environments must be aware of the safe levels of exposure to hazardous environments. Contact your Team Leader or Safety Officer with questions regarding exposures to hazardous materials.

Fatigue and heat-related illnesses are common problems associated with the use of PPE on work sites. Responders must monitor themselves and their team members for signs of fatigue and heat-related illnesses. General information regarding the signs of heat-related illnesses is found earlier in this Guidance document.

7.3 Driving and Vehicle Use

Responders using vehicles are responsible for their safe operation and condition. Persons violating the vehicle use protocols may be subject to disciplinary actions.

Vehicles will be issued only to personnel with valid driver's licenses. Have your driver's license in your possession when operating a vehicle. Make sure the vehicle registration information is in the vehicle. Government vehicles are only to be used to conduct official government business and specific activities that are within the scope of employment (e.g., transportation to and from hotels and meals while deployed). Vehicles may not be used for personal purposes. An emergency kit containing first aid materials, a flashlight, reflective triangles/cones/or flares, and other small tools should be made available for vehicles.

Response personnel operating vehicles including personal vehicles, government-owned vehicles, or rented vehicles must adhere to the following guidelines:

1. Take the 8-hour National Safety Council Defensive Driving Training for new employees with a 4-hour refresher course documented every three years.
2. Drivers will ensure that all personnel wear seatbelts at all times.
3. Be well rested before driving.
4. Obey all traffic laws, including speed limits. Speeding or other unsafe use of vehicles will not be tolerated.
5. Avoid taking depressant medications that induce drowsiness.

6. Set realistic goals for the number of miles driven in a day.
7. Do not operate a vehicle if impaired by alcohol or another drug.
8. Do not consume alcohol or carry alcohol in vehicles.
9. Do not smoke in vehicles.
10. Devote full attention to driving and avoid distractions such as talking on the phone, eating or drinking, or adjusting the radio or other controls.
11. Drivers will not use cell phones while the vehicle is in motion (includes texting or calling).
12. When driving, continually scan the road and be alert for situations which may require quick action.
13. Stop approximately every two hours for a break. Get out of the vehicle, stretch, and walk around.
14. Avoid aggressive driving by doing the following:
    - Don't take other drivers' actions personally
    - Plan routes in advance and allow plenty of travel time, avoiding crowded roadways and busy driving times if possible
   - Be patient and courteous to other drivers.

7.4 Motor Vehicle Accidents

The interior and exterior of all vehicles may be inspected for damage before and after each use. Personnel may be held personally responsible for damage to vehicles.

Procedures for vehicle accidents involving damage and/or personal injuries:
1. Follow the protocol for seeking treatment of personal injuries.
2. Contact the State Highway Patrol for any accident occurring on any road.
3. If a parked vehicle is hit, response personnel should contact the owner of the vehicle and exchange information. If possible, take pictures of the vehicles. The Highway Patrol does not need to be notified in the event of an accident involving a parked vehicle.
4. All motor vehicles assigned to the Agency should contain accident reporting kits (AD-651), found in the glove box. GSA vehicles are equipped with GSA Form 1627, "Motor Vehicle Accident Reporting Kit"; this form should be used in lieu of AD-651 for GSA vehicles.
5. Use Standard Form 91 (SF 91) "Operator's Report of Motor Vehicle Accident" to make an accident report.
6. State Personnel should know their procedures and policies for accident reporting, including required documentation.
7. Vehicle accidents due to recklessness or negligence will not be tolerated. Response personnel may be held personally responsible for damage to vehicles.
8. All damage to vehicles and/or accidents (no matter how minor) must be immediately reported to Ground Support and to supervisors and the Safety Officer.
9. Use AD-112, "Report of Unserviceable, Lost/Stolen, Damaged, or Destroyed Property" to report damage to a vehicle which is not the result of an accident (e.g., falling objects, fire, hailstones, floods, vandalism, or civil disturbances). This form is including in the AD-651 accident reporting kit.
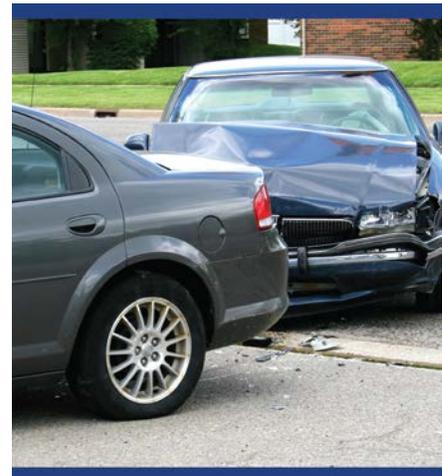
7.5 Operating Heavy Machinery

When is necessary for responders to operate heavy machinery, such as skid loaders or earth moving equipment, it is important to consider potential hazards and for personnel to be trained and physically fit to operate these machines. Some factors and guidelines to consider include:

- All vehicles must have, as applicable:
    - A service brake system, an emergency brake system, and a parking brake system
    - Working headlights, tail lights, and brake lights
    - An audible warning device (horn)
    - Intact windshield with working windshield wipers
- Operators must be trained on the equipment they will use.
- Vehicles must be checked at the beginning of each shift to ensure that the parts, equipment, and accessories are in safe operating condition. Repair or replace any defective parts or equipment prior to use.
- Do not operate vehicle in reverse with an obstructed rear view unless it has a reverse signal alarm capable of being heard above ambient noise levels or a signal observer indicates that it is safe to move.
- Vehicles loaded from the top (e.g., dump trucks) must have cab shields or canopies to protect the operator while loading.
- Equipment should have roll-over protection and protection from falling debris hazards as needed.
- Do not modify the equipment's capacity or safety features without the manufacturer's written approval.
- Where possible, do not allow debris collection work or other operations involving heavy equipment under overhead lines.

7.6 Interacting with Non-Cooperative Owners

During some incidents it will be necessary for personnel to gain access to private premises to undertake response duties. Owners may react to teams requesting entry onto their property in many different ways, depending on the nature of the incident (e.g., natural disaster, highly contagious foreign animal disease outbreak) and the work to be performed (e.g., examination and testing of animals, depopulation).

In interacting with owners, use the following guidelines:
1. All field personnel must travel in teams. No one should be in the field alone.
2. All field teams must have a cell phone and phone number list.
3. If a field team has a safety concern, they should leave the area, and, depending on the urgency of the situation, call their supervisor or Team Leader or the police.
4. Field teams must document all quarantine non-compliance and safety concerns.

7.7 Procedures for Encountering Belligerent/Threatening Persons

- Personal safety is the first priority.
- Avoid confrontation. A situation can escalate without warning.
- Depending on the threat, teams should remove themselves from the situation and/or call their supervisor or law enforcement.
- If requested, law enforcement can periodically check the area, or off-duty officers may be hired to help maintain the peace. Field teams should contact their supervisor if they feel law enforcement back up is necessary.

7.8 What to Do if Threatened

Situations may arise during a deployment where the actions, behavior, or language of an owner/occupant of a premises or another member of the public may cause concern for one's personal safety. If threatened, leave the premises immediately and contact a supervisor. Document these incidents and provide detailed information to the Safety Officer.

In the event that members of the public may attempt to intimidate or incite a reaction from response personnel, take the following action:
1. Remain calm.
2. Ask the person to step away.

Inform the person making the threat that by interfering with a government employee doing his/her job, they are in violation of Title 18 Section 111 of the U.S. Code and may be subject to fines or up to one year in prison, or both. The For More Information section of this document contains a link to Title 18 of the U.S. Code.

8. JOB-RELATED INJURIES

8.1 Incident Reporting

An incident (for reporting) is an accident, illness, or suspected or actual case of exposure. In the event an incident occurs, personnel should immediately notify their incident supervisor or next higher official of all incidents that occur while on official duty and/or on government property. Field team personnel will complete appropriate forms and comply with the instructions when submitting forms and/or medical information. Federal personnel must report incidents via telephone to the Safety, Health, and Environmental Protection Branch (in EMSSD) as soon as possible, but no later than two hours after the occurrence. Written incident reports must be made within five days of occurrence. Recommended hazard control measures will be discussed with the Incident Commander and others, as appropriate, who must approve of the control measure before it is implemented.

It is your responsibility (the responder) to report any injury, illness, or accident to your incident supervisor and the Safety Officer immediately. Certain types of injuries must be reported to OSHA within a very short time period. Notification of the Safety Officer fulfills the notification requirements; APHIS EMSSD notifies OSHA and/or provides required reports.

Incident reports must include:
- Date, time, and place of occurrence
- Person(s) involved
- Type of incident
- Description of the incident and action taken
- Recommendation(s) for prevention of a similar occurrence

Sign and date the completed report. The Safety Officer will sign and date the report upon receipt. All incident reports and follow-up action on the incidents will be kept on file by the Safety, Health, and Environmental Protection Branch in APHIS EMSSD.

8.2 Accident and Injury Reports

1. For any serious accident or emergency, call 911.
2. Immediately report all accidents or injuries to your supervisor and the Safety Officer.
3. Seek medical assistance, if necessary.
4. In case of a serious injury, response personnel should be accompanied to the hospital by another response team member.

5. Following an accident or injury, supervisors will immediately initiate an investigation and develop recommendations for remediation. Supervisors should consult with the Incident Commander as appropriate.
6. Federal response personnel can obtain Workers' Compensation Forms from the Finance Unit. Temporary employees should see their employment agency representative for State Workers' Compensation Forms.

8.3 Workers' Compensation

Workers' Compensation is available for government employees injured while working. It is important to report all injuries as soon as possible and complete all paperwork in a timely manner. There are time limits in place for reporting claims. Consult with a workers' compensation specialist to make sure you are aware of any filing deadlines.

Employee:
- Report injury/illness to supervisor
- Review Form CA-10 (What to do When Injured)
- Complete Form CA-1 (Notice of Traumatic Injury and Claim for Continuation of Pay/Compensation) or Form CA-2 (Notice of Occupational Disease and Claim for Compensation) as appropriate
- If medical treatment is required complete Form CA-16 (Authorization for Examination and/or Treatment)
- Return all completed documents (Forms CA-1/CA-2 and medical documentation) to supervisor

Supervisor:
- Ensure employee obtains treatment, if necessary
- Ensure all required documents are completed, including employee and supervisor signatures, and transferred to the Safety Officer as soon as possible.

Safety Officer:
- Maintain required forms
- Review documents for completeness
- Update all required OSHA forms and reports
- Transfer all Office of Workers' Compensation Programs forms and medical documentation to the Finance Officer, as soon as possible

Finance Officer:
- Scan all Office of Workers' Compensation Programs (CA-1, CA-16) documents and medical documentation and e-mail to the Safety and Occupational Health Manager as soon as possible
- Fed-Ex all Office of Workers' Compensation Programs documents and medical documentation to:
  USDA APHIS WC Program
  4700 River Road
  Unit 124
  Riverdale, MD 20737
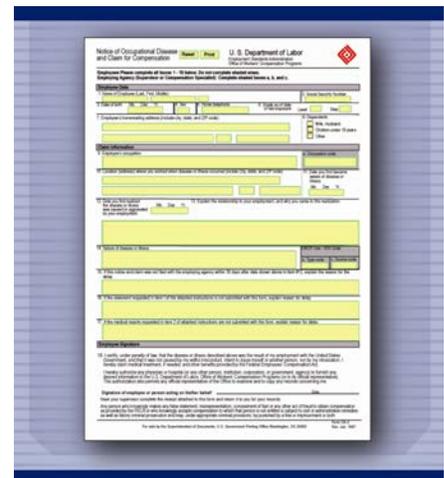
Workers' Compensation Program Manager:
- Will send
  - All Office of Workers' Compensation Programs forms indicating treatment or lost time to the appropriate Office of Workers' Compensation Programs District Office. Copies of forms will be sent to the employee's official duty station office/regional office.
  - First Aid forms to the employee's official duty station.
- Will maintain a database of all injuries/accidents from the ICS based on the submitted CA-1/CA-2s and will provide bi-weekly statistical reports to the Safety Officer.

9. DEMOBILIZATION

Demobilization is an essential element of the ICS process. It is essential to have a plan to safely and efficiently return personnel to their Official Duty Stations or reassign them to another incident. Demobilization must be completed in an orderly manner to ensure that the Incident Commander is aware of the resources available at any given time. Safety is a primary concern for personnel demobilizing and returning home.

Personnel should monitor their health status according to the guidance received with the demobilization instructions. Upon return to their duty station, responders should contact their employer with any follow-up health and safety questions. For APHIS employees, this is the EMSSD.

10. REFERENCES

Mayo Clinic. Hypothermia:
http://www.mayoclinic.com/health/hypothermia/ds00333

National Ag Safety Database. Beware of Manure Pit Hazards:
http://nasdonline.org/1292/d001097/beware-of-manure-pit-hazards.html

Nusbaum JE, Wenzel JG, Everly GS. Psychologic first aid and veterinarians in rural communities undergoing livestock depopulation. J Am Vet Med Assoc. 2007:231(5):692-4.

U.S. Department of Agriculture: Animal and Plant Health Inspection Service (APHIS)

APHIS Emergency Responders: Requirements for Being an Emergency Responder. October 2008.

Directive APHIS 6800.1: Ensuring the Protection of Employees Involved in Highly Pathogenic Avian Influenza Control and Eradication Activities. May 10, 2006 (under review, update, and clearance as of November 2018).

FAD PReP NAHEMS Guidelines: Biosecurity. June 2016.

FAD PReP NAHEMS Guidelines: Cleaning and Disinfection. July 2014.

FAD PReP/NAHEMS Guidelines: Personal Protective Equipment (PPE). April 2011.

Safety & Health Guide for Deployed Personnel (HPAI). August 2015.

U.S. Department of Health and Human Services

Centers for Disease Control and Prevention (CDC)

Frostbite:
https://www.cdc.gov/disasters/winter/staysafe/frostbite.html

Preventing Deaths of Farm Workers in Manure Pits:
https://www.cdc.gov/niosh/docs/90-103/

National Institute for Occupational Safety and Health (NIOSH)

Traumatic Incident Stress: Information for Emergency Response Workers:
https://www.cdc.gov/niosh/topics/traumaticincident/default.html

U.S. Department of Homeland Security: Federal Emergency Management Agency (FEMA)

Demobilization Check-Out (ICS 221)
https://www.fema.gov/media-library/assets/documents/33569

ICS 100 Training Course. https://training.fema.gov/is/courseoverview.aspx?code=IS-100.b

ICS 200 Training Course. https://training.fema.gov/is/courseoverview.aspx?code=IS-200.b

IS-305: Environmental Health Training in Emergency Response Awareness.
https://training.fema.gov/is/courseoverview.aspx?code=IS-305.

U.S. Department of Labor: Occupational Safety and Health Administration (OSHA)

Disaster Site Worker Outreach Training Program Guidelines (course):
https://www.osha.gov/dte/outreach/disaster/index.html

Emergency Preparedness and Response: Safety and Health Guides:
https://www.osha.gov/SLTC/emergencypreparedness/guides/index.html

Frequently Asked Questions: Extended Unusual Work Shifts:
https://www.osha.gov/OshDoc/data_Hurricane_Facts/faq_longhours.html

General Considerations for Working in All Impacted Areas:
https://www.osha.gov/SLTC/etools/hurricane/recommendations.html

OSHA's Role During Response to Catastrophic Incidents:
https://www.osha.gov/SLTC/emergencypreparedness/guides/osha_role.html

Keeping Workers Safe During Clean Up and Recovery Operations Following Hurricanes:
https://www.osha.gov/Publications/OSHA3698.pdf

Occupational Noise Exposure
https://www.osha.gov/SLTC/noisehearingconservation/index.html

Post-Deployment Guide for Emergency and Disaster Response Workers:
https://www.osha.gov/SLTC/emergencypreparedness/resilience_resources/support_documents/postdeploy/er_disaster_workers_nmh05-0219.html

Quick Card – Heat Stress:
http://www.osha.gov/Publications/osha3154.pdf

Quick Card – Sun:
http://www.osha.gov/Publications/osha3166.pdf

Safety and Health Checklist for Voluntary and Community-Based Organizations Engaged in Disaster Recovery Demolition and Construction Activities:
https://www.osha.gov/dts/oohn/disasterrecovery_shchecklist.html

Substance Abuse and Mental Health Services Administration (SAMHSA)

Delivering Behavioral Health Services After a Disaster:
https://www.samhsa.gov/homelessness-programs-resources/hpr-resources/health-services-after-disaster

11. FOR MORE INFORMATION

Bite Terminator®

http://www.biteterminator.com/

Centers for Disease Control and Prevention (CDC)

Coping with a Disaster or Traumatic Event
https://emergency.cdc.gov/coping/responders.asp

Emergency Response Resources
https://www.cdc.gov/niosh/topics/emres/sitemgt.html

Mental Health
https://www.cdc.gov/mentalhealth

Code of Federal Regulations – Title 29 – 2010

https://www.dol.gov/general/cfr/title_29
> Subchapter H – Hazardous Materials
> 29 CFR 1910.120 – Hazardous waste operations and emergency response
> https://www.gpo.gov/fdsys/pkg/CFR-2010-title29-vol5/pdf/CFR-2010-title29-vol5-sec1910-120.pdf

> Subchapter I – Personal Protective Equipment
> 29 CFR 1910.132 – General Requirements
> https://www.gpo.gov/fdsys/pkg/CFR-2010-title29-vol5/pdf/CFR-2010-title29-vol5-sec1910-132.pdf

> 29 CFR 1910.134 – Respiratory protection
> https://www.gpo.gov/fdsys/pkg/CFR-2010-title29-vol5/pdf/CFR-2010-title29-vol5-sec1910-134.pdf

Federal Emergency Management Agency (FEMA) – Emergency Management Institute

ICS Forms

https://training.fema.gov/icsresource/icsforms.aspx

Federal Occupational Health

Employee Assistance Program
www.foh4you.com

Legal Information Institute

U.S. Code

https://www.law.cornell.edu/uscode/text/18/111

Substance Abuse and Mental Health Services Administration (SAMHSA)

Coping with Traumatic Events – For Responders and Health Professionals
https://www.samhsa.gov/capt/tools-learning-resources/coping-traumatic-events-resources

U.S. Department of Agriculture – Animal and Plant Health Inspection Service (APHIS)

Foreign Animal Disease Response (FAD PReP) Materials and References
https://www.aphis.usda.gov/fadprep

HPAI Response and Policy Information
https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/emergency-management/fadprep-hpai

Job Hazard Assessment Form
https://www.aphis.usda.gov/library/forms/pdf/aphis270r.pdf

Public Health Monitoring Plan for USDA/APHIS Responders to Detections of Avian Influenza Virus in Poultry
https://www.aphis.usda.gov/animal_health/downloads/animal_diseases/ai/ai-monitoring-plan.pdf

U.S. Department of Health and Human Services – Public Health Emergency

Responders, Clinicians, and Practitioners
https://www.phe.gov/preparedness/responders/Pages/default.aspx

U.S. Department of Labor

Emergency Preparedness and Response
https://www.osha.gov/SLTC/emergencypreparedness/

Occupational Safety and Health Administration (OSHA)

Emergency Preparedness and Response
https://www.osha.gov/SLTC/emergencypreparedness/index.html

Heavy Equipment and Powered Industrial Truck Use
https://www.osha.gov/SLTC/etools/hurricane/heavy-equip.html

Frequently Asked Questions: HAZWOPER
http://www.osha.gov/html/faq-hazwoper.html

12. ACKNOWLEDGMENTS

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13. PHOTO AND ILLUSTRATION CREDITS

Page 1   This is a photo of a responder vaccinating an animal during an animal health emergency. Photo source: Phil Prater, Morehead State University, Morehead, Kentucky

Page 2   This illustration depicts the Incident Command System structure. Graphic illustration by: Oriana Hashemi-Toroghi, Iowa State University

Page 4   This photo shows a woman receiving a vaccination. Photo source: CDC Image Library

Page 5   This illustration depicts a list of items responders should be sure to include when packing. Graphic illustration by: Oriana Hashemi-Toroghi, Iowa State University

Page 8   This photo shows two men inspecting a livestock trailer at night. Photo source: Roger Holley, USDA

Page 9   **(Top)** This illustration shows that reduced sleep, extended shifts, and activity level all affect responder health. Graphic illustration by: Oriana Hashemi-Toroghi, Iowa State University

(Bottom) This illustration demonstrates safe lifting techniques. Graphic illustration by: Oriana Hashemi-Toroghi, Iowa State University

Page 10   **(Top)** This photo shows a needle and syringe being properly disposed of in a sharps container. Photo source: Dani Ausen, Iowa State University

(Bottom) This is a photo of an aggressive dog. Photo source: Megan Keplinger, Iowa State University

Page 12   This illustration depicts the noise levels associated with several common activities. Content provided by: National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention. Graphic illustration by: Oriana Hashemi-Toroghi, Iowa State University

Page 13   This table describes heat-related illnesses and their treatment. Graphic illustration by: Oriana Hashemi-Toroghi, Iowa State University

Page 14   **(Top)** This illustration depicts a person being warmed by a blanket and a hot beverage. Graphic illustration by: Oriana Hashemi-Toroghi, Iowa State University

(Bottom) This illustration shows a person with frostbitten fingertips preparing to re-warm them in water. Graphic illustration by: Oriana Hashemi-Toroghi, Iowa State University

Page 16   **(Top)** This illustration depicts the potential effects of stress on a person. Graphic illustration by: Oriana Hashemi-Toroghi, Iowa State University

(Bottom) This table shows common symptoms of stress following a traumatic event. Graphic illustration by: Dani Ausen, Iowa State University

Page 17   This table describes psychological disorders that may occur following a traumatic event. Graphic illustration by: Dani Ausen, Iowa State University

Page 18   This illustration depicts two people talking to one another. Graphic illustration by: Oriana Hashemi-Toroghi, Iowa State University

Page 19   **(Top)** This illustration shows the phone number for the USDA Employee Assistance Program. Graphic illustration by: Oriana Hashemi-Toroghi, Iowa State University

(Bottom) This illustration shows an example of signage that can help maintain the security of the incident site. Graphic illustration by: Oriana Hashemi-Toroghi, Iowa State University

Page 20   This figure depicts the three types of work zones. Graphic illustration by: Dani Ausen and Andrew Kingsbury, Iowa State University

Page 21   This photo shows two responders using the buddy system while working in the Exclusion Zone. Photo source: Gordon Harman, FEMA Center for Domestic Preparedness

Page 22   This photo shows personnel receiving a briefing. Photo source: USDA

Page 24	This illustration depicts the symbol that is used to designate evacuation shelters. Graphic illustration by: Oriana Hashemi-Toroghi, Iowa State University
Page 25	**(Top)** This is a photo of a responder that is cleaning up a toxic spill and wearing personal protective equipment. Photo source: FEMA Center for Domestic Preparedness
	(Bottom) This is a photo of a tornado. Photo source: Image Library NOAA
Page 27	This photo shows responders examining an animal while wearing appropriate personal protective equipment. Photo source: FEMA Center for Domestic Preparedness
Page 28	**(Top)** This illustration shows that cell phones cannot be used while a vehicle is in motion. Graphic illustration by: Katlyn Harvey, Iowa State University
	(Bottom) This is a photo of two vehicles in a crash. Graphic illustration by: Katlyn Harvey, Iowa State University
Page 31	This illustration depicts Form CA-2, which is an example of a form that should be completed in order to receive workers' compensation. Graphic illustration by: Katlyn Harvey, Iowa State University

Acronyms

ASD
Acute Stress Disorder
APHIS
Animal and Plant Health Inspection Service
CDC
Centers for Disease Control and Prevention
EAP
Employee Assistance Program
EMSSD
Emergency Management Safety and Security Division
FAD
Foreign Animal Disease
HASP
Health and Safety Plan
HAZWOPER
Hazardous Waste Operations and Emergency Response
IAP
Incident Action Plan
ICS
Incident Command System
JHA
Job Hazard Analysis
NAHEMS
National Animal Health Emergency Management System
NIOSH
National Institute for Occupational Safety and Health
OSHA
Occupational Safety and Health Administration
PTSD
Post-Traumatic Stress Disorder
PPE
Personal Protective Equipment
SOP
Standard Operating Procedures
USDA
U.S. Department of Agriculture

APPENDIX A: PRE-DEPLOYMENT CHECKLIST/WHAT TO PACK

Pre-Deployment Checklist/What to Pack

☐ Emergency Contact numbers:

☐ Airline tickets (or e-ticket information) and other documents needed for travel. Make sure you know where to report and/or who will meet you at your destination

☐ Driver's license

☐ U.S. passport for international responses

☐ Photo ID badge

☐ Medical ID tags or bracelets, as needed (for example, allergies)

☐ Any paperwork you have been told to bring for deployment (e.g., copies of professional license, medical competency folders or other credentials)

☐ Reference materials: ICS Glossary of Terms, handouts from Just-in-Time Training, and other materials as desired

☐ Personal protective equipment: Typically provided at the response, but please note if your deployment orders indicate special needs or considerations.

☐ Sufficient cash and credit/debit card(s). APHIS responders should have taken all appropriate training with regard to their Travel Card and understand associated rules and requirements.
  - Be aware that cash machines may not be available or working at the site of an emergency.
  - Take only the cash you think you will need. Use caution when carrying large sums of cash on your person.

☐ Medical needs:
  - All personal medications needed for the period of deployment (for instance, a 30-day supply). Pharmacies may not be available in the emergency area.
  - OTC pain relief/fever medication such as ibuprofen (Advil®), acetaminophen (Tylenol®) or aspirin
  - Diarrhea medications:
    - Ciprofloxacin or Rifaximin
    - Pepto Bismol® or bismuth-containing compounds
    - Antimotility agents (such as Imodium®)
    - Oral rehydration preparations

☐ Appropriate seasonal clothing:
  - 2-3 work uniforms
  - Baseball cap or other appropriate hat
  - Appropriate clothing for off-duty wear
  - Extra underclothing & socks
  - Jacket appropriate for season and climate
  - Lightweight rain gear such as a poncho
  - Tennis shoes/walking shoes
  - Sunglasses, sunscreen, lip balm/Chapstick®
  - Flashlight, extra batteries
  - Small portable radio and batteries
  - Leatherman® or small pocket/utility knife

Pre-Deployment Checklist/What to Pack

☐ **Toiletries:**
- Mosquito repellent
- Tissues
- Toilet paper
- Unscented toilettes
- Toothbrush and toothpaste
- Soap, towel, washcloth
- Shampoo
- Antiperspirant/deodorant
- Gold Bond® powder
- Razor and shaving cream

- Hand lotion
- Contact lens cleaner (bring glasses with you)
- Personal hygiene items for women
- Travel size bottle/ box of laundry soap
- Zip-lock bags
- 2-3 trash bags or laundry bags
- Consider a 20-foot length of thin nylon rope and clothespins
- 2-3 bottles of water
- Pre-packaged snack bars

☐ **Other items to consider:**
- Cell phone
- Alarm clock
- Flip-flops for shower
- Travel pillow

- Electronic equipment
- Computer/ printer
- Sleeping bag
- Sleep aids (ear plugs, eye shields, etc.)

Note: If you are flying within or from the U.S., the Transportation Safety Administration (TSA) limits each traveler to the number of 3.4 oz or smaller containers of liquids or gels that can fit into ONE quart-sized, plastic, zip-top bag. Bottles of liquids or gels greater than 3.4 oz cannot be carried on and must be placed in checked luggage. Larger volumes of medications are allowed, but must be declared.

DO NOT CARRY ALCOHOL OR WEAPONS