

CONTINUITY OF SERVICES
AGRICULTURAL RESPONSE MONOGRAPH
No. 005

NEBRASKA DEPARTMENT OF AGRICULTURE
AGRICULTURAL EMERGENCY RESPONSE ACTIONS
LIVESTOCK DISEASE EMERGENCY



Update Issue

January 2013

BLANK PAGE

TABLE OF CONTENTS

1.	SCOPE AND APPLICATION	1
2.	SUMMARY OF PROCEDURES	1
2.1.	Law Enforcement and Fire.....	3
2.2.	Trash Service	5
2.3.	Medical Services.....	7
2.4.	Schools.....	8
2.5.	Mail and Delivery Service	9
2.6.	Maintenance of Retail & Other Public Service Providers	10
2.7.	Companion Animals	10
2.8.	Use of Volunteer Services	11
2.9.	Livestock Feed Deliveries.....	11
2.10.	Movement of Farm Commodities.....	12
2.11.	Utilities.....	14
2.12.	High Risk/Vulnerable Populations	14
2.13.	Training.....	15
3.	PUBLIC INFORMATION	16
4.	REFERENCES	17

APPENDIX A BIOSECURITY



BLANK PAGE



1. SCOPE AND APPLICATION

The purpose of this monograph is to provide functional guidance about the maintenance of services throughout a foreign animal disease (FAD) emergency, especially within disease control zones. The need for public services, such as police, fire and emergency medical services (EMS) will continue at normal or elevated levels during an event, even within a disease control zone. In addition, the response to a FAD will alter the traditional paradigm of a short-lived response (e.g., several hour duration), which will be replaced by a long-term, day-in and day-out need for response personnel, further stressing available resources. This also will be true for other private services, such as feed delivery and other infrastructure maintenance activities. FAD emergencies often require counties to operate for an extended period of time under quarantine orders and other restrictions. During a FAD response, communities will need to provide essential public and private services, but at the same time maintain biosecurity protocols that are critical to eliminating the spread of a disease.

2. SUMMARY OF PROCEDURES

This monograph presents the operational considerations and details associated with maintaining public and some private services during a FAD, within control zones. The monograph provides suggestions for preventing the spread of an animal disease while allowing normal community functions to continue.

It will be critical to identify local public and private services that are important to maintain within the control zone during the entire response to the FAD. Once these critical services are identified, local emergency management should work with the private and public entities involved to develop operational plans that will allow these services to continue throughout the FAD response. The importance of these planning partnerships cannot be overstated. Effective, meaningful partnerships will result in coordinated planning, information sharing, and formal memorandums of understanding (MOUs) and mutual aid agreements. These will allow a response to unfold in a more organized and effective manner during an emergency. The



elimination of the need to develop these plans in the first stages of a response will allow critical assets to be directed at the response and not diverted to a planning role.

Fundamental issues that will need to be addressed focus on biosecurity associated with moving vehicles, supplies, and personnel inside and out of a control zone. The following monograph text will address some critical services and typical considerations necessary to develop plans for continuity of service during a FAD response. The continuation of services will be dependant on an entity's ability to function in a manner complementary to the FAD response and disease containment effort.

This monograph will provide suggestions for local planning and actions; however, specific requirements will depend on the critical service and the entity providing the service, especially in the case of non-governmental services. This monograph is not intended to provide solutions; rather, it is designed to discuss continuity of service issues relative to a FAD response and highlight zones that will challenge both private and public entities' abilities to provide these fundamental services.

Keep in mind that procedures will vary and change depending where in the Control Zone the services need to be provided (FADPrep 2012b). Procedures will need to be more restrictive or eliminated when dealing with Infected Premises and Suspect Premises. Contact and At-Risk Premises will require more precaution than providing services in non-livestock zones or non-susceptible specie locations within the control zone. Incident Command (IC) should be consulted to determine final procedures.

This monograph contains information from and is consistent with current National Animal Health Emergency Management System (NAHEMS) guidelines, as of July 2012.



2.1. Law Enforcement and Fire

Law enforcement, and fire and rescue – traditional response agencies – will continue normal call or caseloads during an event. In some instances, the demand for these services may even increase. For example, personnel may deal with additional crowd control or domestic incidents associated with community and victim frustration that could accompany any response effort that has not achieved universal understanding or acceptance.

Depending on the FAD, law enforcement's role may include enforcing the State Veterinarian's orders (e.g., quarantines or travel restrictions), securing the perimeter of infected zones, securing animal production facilities, controlling crowds, investigating scenes of suspected biological terrorism, and protecting response staging zones. Fire and rescue resources may have additional responsibilities associated with cleaning and disinfection (C&D), crowd control, traffic control and carcass disposal (if incineration is used).

In some situations, emergency calls within the control zone will need to be responded to. In all cases, human life takes precedence over animal disease containment. However, the development of certain protocols can reduce the chances for further disease spread. In cases of emergencies, such as those associated with human health or safety issues within the control zone, personnel and equipment that have entered or left the infected zone will go through C&D once the human health emergency has been mitigated. This will require communication and coordination between the IC and the final destination of the emergency vehicle(s), victim(s), and emergency personnel. This coordination should include disease containment and mitigation procedures for exposed and potentially exposed personnel and equipment. Non-life threatening events should be attended to by passing through the established response-developed protocols for entering the control zone.

In a large-scale FAD event, law enforcement, and fire and rescue resources will quickly become overwhelmed, and these agencies will have to balance their resources and efforts between these new responsibilities and everyday service demands. All of this may have to be accomplished



with a greatly diminished workforce, as personnel and their families may become directly involved in the response, if they own susceptible species of animals. It is possible that some of these personnel will determine that the risk of continuing to report to work is just too great to their livestock or poultry. One option for addressing a staffing shortfall involves redirecting personnel performing functions that are deemed nonessential during a FAD incident (e.g., training and recruiting) and having them perform primary response tasks. Reprioritizing calls for police services may have to occur, and smaller agencies may have to partner with larger agencies to provide service during periods of staff reduction (DOJ 2006). Mutual aid agreements that provide for agency interoperability and increase staff understanding of specific challenges or hazards present in the response environment should be established in advance.

Peace Officers and firefighters are more likely to report to work if their families and livestock or poultry are safe and protected. This effect may be magnified in jurisdictions with a high percentage of volunteer firefighters and EMS personnel. Advanced education in FAD response and potential risks – to include information on the value of sheltering-in-place for the officer and firefighter families inside a response zone and items that should be stockpiled – and planning (possibly securing a temporary residence for responders so they do not bring the disease home) may encourage a larger number of officers to report for duty (DOJ 2006).

Jurisdictions may wish to examine alternatives for activities that may not require highly trained individuals, such as water shuttles or hose-down operations. Correctional facilities may be a source of such labor. Historically, certain classes of pre-trained inmates have proven invaluable during western wildfire suppression activities. The same concept could be applied to an agricultural response. These approaches could allow trained resources to focus on the more technical aspects of the response.

Appropriate personnel assignments should help limit the movement into and out of the control zone. When possible, personnel should be designated to work either inside or out of the infected zone or the control zone – only working outside their designated zone during emergency situations. Emergency personnel who work with, own, or otherwise have contact with



susceptible species of animal, relative to a particular FAD, should not be used to work within an infected zone. If this exclusion is impractical, these personnel should be trained in biosecurity and have personnel plans to eliminate the possibility of them spreading a FAD to the animals with which they are associated.

Personnel working within an infected zone should be provided personal protective equipment (PPE), as directed by the response's health and safety officer. This will minimize their exposure to contaminated materials. Unless stipulated by the lead responding veterinarian (possibly a position added to the IC's Command Staff), respiratory protection will probably not be necessary. (See Monograph No. 004 *Cleaning and Disinfection*).

2.2. Trash Service

Domestic trash service will generally need to be maintained. It is important to handle waste from response activities, as well as typical trash service required by individuals, inside a control zone. Trash service providers should be aware of cleaning and disinfection requirements. It may be possible for the frequency of trash pick-up to be adjusted to reduce the number of day's trash trucks need to enter the control zone. Options for disposal inside a control zone should be considered. Options for disposal could include the creation of a landfill or the use of air curtain incinerators to dispose of trash inside the control zone. This type of planning needs to be coordinated with the Nebraska Department of Environmental Quality (NDEQ).

If trash must be removed from the control zone for disposal, it should be moved in a container that does not allow solids or liquids to be released. The use of conventional trash trucks may not be acceptable since many are not liquid tight. If other vehicles (e.g., dump trucks, etc.) or roll-offs are used, they must be lined to prevent liquid leakage, and they must be covered to prevent solid contents from being blown out by the wind during transport. Whether the trash is disposed of inside or outside of the control zone, it must be disposed of and isolated immediately. If this is not done, blowing trash or scavenger access to the trash could lead to the disease migrating out of the control zone. This may require pre-planning with local landfills to ensure that possibly infected loads are buried immediately. In some situations, it may be



possible to have individuals from infected zones deliver their own trash to designated drop-off locations within the control zone. This also would reduce the movement in and out of the infected zone and the control zone. If the disposal location falls within the infected zone, trucks leaving the zone to pick up trash would need to be cleaned and disinfected. If possible, trash service could dedicate some trucks to operate solely inside the infected or control zones and others to operate outside of the control zone to reduce cleaning and disinfection. Dumpsters or roll-off bins could be used to store trash until the appropriate truck picked it up, depending on the location of the landfill (i.e., using a clean truck, if landfill is located outside the control zone or a dirty truck if landfill is located inside the infected zone).

Incineration of trash inside the control zone also is an option to consider. An effective and efficient method of incinerating trash involves the use of an air curtain incinerator. The operating principle of an air curtain incinerator lies in the introduction of controlled high velocity air across the upper portion of a combustion chamber in which clean wood waste or other fuel is loaded. The powerful curtain of air created in this process traps unburned particles under the air curtain in the high temperature zone where temperatures can reach 1,832° F (1,000° C). The trapping of particles under this curtain of air increases combustion time and turbulence resulting in a re-burn and more complete combustion of the loaded trash. The escaping particulates are reduced to near their base elements. The resulting emissions from a properly operating air curtain incinerator will have an opacity rate below 10 percent during most steady state operations. This type of equipment is available for rent and requires little training to safely operate.

Medical waste generated during the response needs to be handled appropriately. Utilization of private companies certified to dispose of medical waste appropriately will be the easiest and most efficient way of handling this type of trash (NAHEMS 2003b). Counties should identify medical waste disposal companies in the zone that can be utilized. Companies should maintain appropriate biosecurity when picking up medical waste for disposal.



2.3. Medical Services

If a person in the infected zone, from an infected or exposed premises, is injured or becomes seriously ill, every effort must be made to aid and obtain medical care for the person as quickly as possible. The very nature of a FAD response means that there is a risk of transporting the infection with the injured person. For example, if it is necessary to initiate an emergency transport of personnel out of the infected zone, the level of initial C&D of the person injured will vary with the seriousness of the injuries. Human life is a priority and every measure must be taken to minimize discomfort or pain. If C&D procedures for the personnel and vehicle must be abbreviated due to the extent of an injury or medical condition, the risk of spreading a disease could be great. In this case, the IC must be notified. The IC will then notify the appropriate hospital authorities of the risk and regarding the appropriate personal disinfection for the patient and vehicle, which should be carried out as soon as circumstances permit.

To minimize the potential to spread a FAD during an emergency transport situation, the following steps should be taken as soon as possible (NAHEMS 2003a):

- The Incident Commander should be notified of the incident.
- An individual experienced in biosecurity and cleaning and disinfection procedures should be sent – along with cleaning and disinfection supplies – to meet the emergency vehicle at the medical facility.
- The Incident Commander or their designee should inform authorities at the medical facility of the existence of the risk of FAD transmission and ensure that C&D procedures for the patient and medical personnel are initiated as soon as appropriate.
- The patient's clothing and any of the medical personnel's clothing that may have become contaminated should be sealed in a plastic garbage bag. Disposable clothing can be worn by the emergency personnel and the victim to minimize the potential spread of contamination. Potentially contaminated clothing should be: (a) discarded safely or (b) removed from the bag and laundered, with care taken to dispose of the contaminated bag safely. Any contaminated medical equipment should be cleaned thoroughly (if possible, autoclaved) and disinfected with an approved disinfectant.
- Any surface – inside or outside the medical facility – that may have become contaminated should be cleaned thoroughly and disinfected with an approved disinfectant.



- The emergency vehicle should be cleaned and disinfected, including the interior, underside, wheels and wheel wells.
- Any clothing or boots of emergency vehicle attendants, orderlies or other personnel that may have become contaminated should be removed; sealed in a plastic garbage bag; laundered, dry cleaned or disinfected with an approved disinfectant; or discarded.

2.4. Schools

Many issues remain to be addressed regarding human quarantine or confinement during a non-zoonotic event involving a pathogen transmissible only between animals. Nonetheless, school jurisdictions need to consider and plan for the possibility that a decision could be made, as was the case in the United Kingdom (UK) during the 2001 epidemic of Foot-and-Mouth disease, to confine families residing on infected premises to their properties until they had been cleared of infection. In the UK, such confinement extended to nearly six months, in some cases. In Nebraska, every effort will be made to avoid the need to implement this level of quarantine. It may be necessary to relocate families from infected premises to temporary shelter outside of an infected zone or a control zone. This would alleviate the impact of quarantine on school attendance.

Local emergency management needs to develop plans to communicate information regarding a FAD outbreak and resulting response to local school districts. In addition, local jurisdictions need to partner with local schools and school districts to develop plans for continuing the education of students within control zones. These plans will address the establishment of group pick-up points for students within a control zone, necessary biosecurity measures to allow the students to leave the zone, intra-school education, and information releases for students and families not in the control zone. This aspect of public information will be critical in dispelling fears of non-affected students and their families. In addition, this information will be critical to increasing biosecurity of all school families and containing the disease to the control zone.

The need to continue the education of children is obvious. In some instances, the development of distance learning programs will be an effective way to keep students on pace with non-affected children. An alternative plan could utilize off-farm, in-community rental housing to



shelter school-age children and at least one parent (following their personal disinfection) for the duration of the event. School districts should be encouraged to appoint an appropriate liaison officer to work with local emergency management officials in exploration of the district's role and responsibilities to its students during a prolonged FAD response.

2.5. Mail and Delivery Service

Provision of mail and other delivery services hinges on a determination of animal health authorities relative to the size and degree of access control necessary to contain a disease outbreak. The most controlled and impacted zone would be the zone in which a known, active pathogenic agent is confirmed to be present, the infected zone. Virtually no uncontrolled access would be permitted. Standard mail and other carriers would need procedures in place to provide centralized deliveries at the entry to the most restricted zone. It might be necessary to consider internal distribution of packages and letters by authorized personnel trained and operating under proper biosecurity protocols. Timely distribution of parcels may be critical, especially if citizens within the control zone are relying on mail order medications. In addition, the establishment of centralized mail and parcel drop stations may need to be established inside the control zone. Mail from these stations will need to be collected by authorized personnel and taken to pre-arranged drop points or containers outside the control zone. This will allow control of mail and parcels movement out of the control zone and eliminate the need for mail and parcel companies to enter these areas for pickups. If this option is employed, the applicable policies and legal constraints need to be understood to meet all relevant rules and regulations. Local emergency management is encouraged to involve the local Postmaster in this aspect of continuity of services planning. To provide for additional communication support to residents within a control zone, local response agencies could consider establishing e-mail centers within the control zone where residents could send written messages outside the control zone, in addition to making phone calls.

Depending on the FAD and the stage of the response, mail and other deliveries originating in the control zone may need to be temporarily suspended. While this is an extreme case, if it were to occur it would create challenges associated with families and businesses inside a control zone



paying bills. In many cases, electronic bill payment will not be an option. The local emergency management may need to plan to have support personnel work with impacted families and businesses to arrange alternative bill payment methods or temporary postponement of payments. The local chamber of commerce may have some expertise that could be used to support this effort.

2.6. Maintenance of Retail & Other Public Service Providers

Retail stores, super markets, hospitals, and other similar establishments that provide critical services to a community often rely on frequent and sometimes daily supply shipments to maintain their services to the community. If these entities are within a control zone and they represent critical community services, a decision will be made to maintain their ability to service the community. For local jurisdictions this means that additional C&D resources will be needed to accommodate the delivery vehicles as they leave the control zone. These resources can be applied at normal access control points or special delivery access and exit points could be established to deal with these commercial shipments and not traffic associated with responders or private citizens. The creation and manning of such specialized access and exit points are discussed in more detail in Section 2.9 *Livestock Feed Deliveries*, later in the monograph.

2.7. Companion Animals

Companion animals, horses and other non-susceptible animals may need to be transported out of a control zone. The approval for this type of movement will be with the State Veterinarian's office and the IC. If this movement is allowed, generally under a state-issued permit, the IC will determine the need to C&D animals that are removed from the infected or control zone. If this type of C&D is required, the State Veterinarian's office and the IC will provide guidance on cleaning and disinfecting animals that are leaving the area. All equipment (i.e., kennels, trailers, etc.) also should be cleaned and disinfected. Careful consideration should be used when selecting the appropriate disinfectant to use on animals. Some commercial disinfectants, specifically those containing coal or wood tar, are toxic to cats. Local humane societies and



animal shelter personnel may be sources of volunteers and equipment to deal with companion animals leaving an infected or control zone.

2.8. Use of Volunteer Services

Due to the risk of inadvertent spread of FADs, volunteer agency support to residents living within a designated control zone should be limited to delivery of food, clothing, supplies, medicines, etc. These materials can be delivered to a staging area outside the control zone for final transportation to the recipient(s) inside the control zone.

2.9. Livestock Feed Deliveries

It is estimated that as many as one-third of the almost 10 million animals culled in the UK in 2001 were slaughtered on “welfare grounds.” Producers simply ran out of feedstuffs and were unable to replenish supplies due to tight agricultural movement controls. Many, if not most, were trapped inside surveillance zones and were never found to be infected with the disease virus.

All necessary animal production inputs, including feed, labor and ancillary services, must be sustained and provided to susceptible and non-susceptible species within a control zone. State and county jurisdictions may need to consider “animal feed delivery,” as an emergency response contingency. Local jurisdictions should plan how this service will be maintained and, in some cases, may need to identify additional sources of feed that could be accessed during a response. This may be especially applicable if a local jurisdiction’s temporary animal housing zone falls within a control zone. Local planners should remember that it is virtually impossible to deliver feed to an infected premises without the delivery vehicle and any remaining feed having a high probability of becoming contaminated. Feed deliveries for infected and suspect premises must be carefully planned and subject to strict quarantine and decontamination procedures.

Along with labor and the supply of other inputs, feed deliveries could be implemented by using staging zones or transfer points between control zones and free zones where fresh feed is



available, and surveillance or infected zones that are perhaps contaminated and where access and movement is controlled. If this type of feed transfer is considered, feed should be transferred from a “clean” truck (one originating outside the control zone) to the “dirty” truck (from a location within the control zone) at an appropriate place within the control zone. An appropriate place would allow the “clean” truck to drive into the control zone on paved roads, not traveled by vehicles from infected farms, and where the prevailing winds blow from the “clean” truck toward the off-loading location where the “dirty” truck is located. The driver of the farm truck, picking up the feed delivery, should stay in his truck while the feed is transferred.

Movement of feed out of infected premises should be prohibited and considered as a potential source of disease virus. Contaminated feed (or suspected) should be destroyed, preferably on site.

Feed mills that are epidemiologically linked to infected premises (contaminated) will likely be considered as separate infected premises and quarantined.

2.10. Movement of Farm Commodities

Perishable or time-sensitive food products must move off farm to processing on a steady basis in order to maintain the current “on-demand” delivery of America’s food supply. Some animal species, particularly poultry, must be marketed within a very narrow age range or else the product quality and consumer acceptance may suffer, impacting consumer demand. During the response to a FAD outbreak, the response may require that certain animal and plant commodities are restricted from leaving an infected or control zone. Some of these commodities, such as milk, are perishable, and they may be a potential transport mechanism for the disease itself. In these cases, producers will be directed to dispose of the materials on-site. For example, dairy producers will most likely be asked to acidify their milk and dispose of it on-site. Local emergency management can assist producers with identifying acceptable ways and locations to dispose of commodities that cannot leave a control zone. Some of this planning will need to be coordinated with NDEQ.



For commodities that are allowed to leave a control zone, local emergency management needs to plan to set-up access control (exit) points dedicated to the movement of commodities out of the control zone. These exit points should not be associated with the general access and exits points for a control zone; however, they may require C&D capabilities and staffing similar to those incorporated at the general access points to the control zone (See Monograph No. 004 *Cleaning and Disinfection*). In addition, personnel at these points will need to be trained to review state-issued transport permits, as well as inspect departing vehicles and cargo for proper biosecurity protocols. Much of the inspection and permitting requirements will be developed as the FAD response unfolds; therefore, constant communication with these personnel will be essential to maintaining disease containment in the infected zone. Because of the nature of commodity shipments, it may be possible to establish set operating hours for these exit points that do not require continuous staffing. This will greatly reduce personnel and equipment resource needs associated with maintaining quarantine. In a large event, a control zone may border on multiple counties. Under these conditions, it would be beneficial for local jurisdictions to plan on combining resources to staff and maintain a limited number of these exit points. Mutual aid agreements will make this resource sharing more timely and efficient. Planning on how to establish and staff these exit points also will allow a more rapid and efficient response, further helping producers in your jurisdiction maintain their livelihoods.

Local communities are encouraged to preplan the logistics necessary for continued marketing of their local agricultural commodities during an emergency. These plans will focus on the establishment and operation of commodity exit points from a control zone. The ultimate decision of whether or not grains, milk, eggs, live animals, and other agricultural commodities can leave a control zone will be made by the IC. Local jurisdictions should evaluate the agricultural commodity production in their zone, develop contingency plans and identify equipment suppliers that could assist with maintaining the movement of those commodities out of the control zone.

New programs are being established to pre-establish biosecurity requirements for moving commodities and animals out of control zones. The programs, collectively called the Secure



Food Supply, are specie and disease specific. In addition, once established individual states must sign MOUs to make the plans applicable to their state. The majority of the plans are still under development including those for beef cattle, dairy cattle, and hog production. The Secure Egg Supply plan which address egg, egg products, and poultry movement associated with the egg industry during a Highly Pathogenic Avian Influenza outbreak has been completed and Nebraska has signed the MOU making the plan applicable to the state. This plan clearly outlines the requirements for a non-impacted producer to receive a permit to ship their product outside the control zone. To read the full requirements, visit <http://secureeggssupply.com/>. Permits will be managed by the NDA; however, counties personnel, especially those implementing movement restrictions, will need to be aware of the permits to allow movement to occur.

2.11. Utilities

Utility service workers (water, power, telephone, and sewage management) will be critical in maintaining fundamental services to citizens within a control zone. A response to a FAD would not in and of itself interrupt these services, but repairs and routine maintenance in a control zone could be delayed and problematic. Pre-planning with utility companies to ensure that this repair and maintenance is coordinated with the response is critical. Pre-planning may include biosecurity training for these workers, and local emergency management review of company's contingency plans for working in control zones. Familiarity with county and state plans for a FAD response will provide companies with the necessary information to create FAD-associated contingency plans. Understanding the biosecurity and other travel restrictions associated with control zones, in advance, is essential for this planning. It is likely that these utility services will develop plans addressing the same issues and concerns raised in Section 2.1, *Law Enforcement and Fire*, of this monograph.

2.12. High Risk/Vulnerable Populations

In counties with high risk and/or vulnerable populations, such as the elderly, sick, homeless, or special needs individuals, it may be necessary to work with organizations providing services to this population to ensure their needs are met. Often these populations are dependent upon the



services provided by not-for-profit and non-government organizations (aka. community based organizations [CBO]), such as Meals-on-Wheels, Salvation Army, Second Harvest food banks, and countless local and faith-based organizations (Sorensen 2006). It is also important to note that many of these services are interrelated. The discontinuation of one service may prevent another service from assisting the population. For instance, many service providers may depend on a non-profit transportation group to get high risk/vulnerable population to the service location. Without this transportation provider, the services cannot be delivered to the special needs population.

CBOs will need to continue critical services inside the control zone. These groups will need to be instructed on appropriate procedures and biosecurity. While-just-in time training may be provided to these organizations, the best practice is to work with the primary CBOs within local jurisdiction, prior to an emergency. Developing procedures to most efficiently provide services, while minimizing movement in a control zone, will allow a more seamless integration into a local response. CBOs should be encouraged to incorporate FAD-related planning into their continuity of operations plans, and they should be included in relevant local training or exercise opportunities. It may be possible for some organizations to dedicate certain personnel or equipment to work within the control zone. Personnel will also need to be trained in biosecurity and C&D.

2.13. Training

Personnel training will be a critical component of planning to provide a continuation of public services within a control zone. Besides livestock and poultry-handling experience, all personnel associated with providing services inside a control zone will benefit from training in: biosecurity, FAD, the operation and maintenance of the disinfection equipment, disinfection procedures, associated environmental protection issues, and documentation requirements. Cooperative extension personnel, Nebraska's Livestock Emergency Disease Response System (LEDRS) veterinarians, and other qualified state and federal employees can provide many aspects of this training to personnel responsible for maintaining the continuity of public services in the control zone. Local fire and emergency medical services personnel can provide training in C&D. In



some counties, law enforcement and local public health personnel also can provide cleaning and disinfection training. Local veterinarians can provide training in biosecurity.

3. PUBLIC INFORMATION

Additional public messaging may be needed to address continuation of services to the general public. Procedures should be distributed to various media sources to provide the broadest distribution of information. This will be especially important in situations where typical methods of service distribution is altered, such as setting up a drop off location for trash pickup or mail delivery.

In addition, it may be necessary to address services that are not interrupted and to calm fears of the general public. For instance, there may be some concern regarding disease spread through well or public water systems. Providing educational information to the general public as well as livestock producers will reduce concerns.

Incident Command should determine which public services need to be altered to maintain biosecurity and which services can continue without interruption. The County public information officer should then work with the Joint Information Center to distribute information to the public.



4. REFERENCES

- Department of Justice (DOJ), (2006). *The Role of Law Enforcement in Public Health Emergencies: Special Considerations for an All-Hazards Approach*. NCJ 214333. September 2006
- Foreign Animal Disease Preparedness & Response Plan (FAD PReP). (2012a). *Highly Pathogenic Avian Influenza Secure Egg Supply Plan*. National Center for Animal Health Emergency Management. Draft April 30, 2012
- FAD PReP. (2012b). *FAD Prep Ready Reference Guides: Overview of FMD Response*. National Center for Animal Health Emergency Management. May 2012
- NAHEMS Guidelines. (2003a). *Zoos: Foot and Mouth Disease and Other Highly Contagious Diseases*. American Association of Zoo Veterinarians. American Zoo and Aquarium Association. March 7, 2002.
- NAHEMS Guidelines. (2003b). *Quarantine and Movement Control: Highly Contagious Disease*. United States Department of Agriculture. May 5, 2003.
- NAHEMS Guidelines. (2005). *Highly Contagious Diseases*. United States Department of Agriculture. September 2005.
- NAHEMS Guidelines. (2011a). *Biosecurity*. FADPrep. United States Department of Agriculture. March 2011.
- Barbara Vogt Sorensen. (2006). *Populations with Special Needs*. Oak Ridge National Laboratory. U.S. Department of Homeland Security. October 2006
- Initial materials for this Monograph were furnished by SES, Inc., as part of work performed for the Nebraska Department of Agriculture under a grant from the Nebraska Emergency Management Agency.*



BLANK PAGE



APPENDIX A
BIOSECURITY
(NAHEMS 2011)



BLANK PAGE



Before ENTERING a premises (infected or suspected of being infected),

DO:

- Park your vehicle away from site production facilities and/or ensure that your vehicle's tires, wheel wells, and undercarriage have been cleaned with soapy water so they are free of dirt and debris and/or that your vehicle has been taken through a pressure car wash.
- Designate separate "clean" and "dirty" zones in your vehicle. The "clean" zone is usually the passenger compartment. The "dirty" zone is usually the trunk or cargo zone.
- Put on clean coveralls, boots, hat, gloves, and other required apparel. Use only clean equipment and supplies.
- Wash your hands with soap and water.
- Consult with the owner to establish an arbitrary line on the site to demarcate the "clean" side of the premises from the "dirty" side. This will usually be somewhere along the driveway or in the parking zone.

DON'T:

- Enter a "clean" zone of either a premises or vehicle unless you have disposed of or cleaned and disinfected all clothes, footwear, hats, gloves, equipment, supplies, and other sources of pathogen transmission.
- Attempt to disinfect a surface unless it first had been thoroughly cleaned (i.e., it is free of all visible organic material).
- Drive your vehicle onto premises any more than necessary. Use an on-site vehicle for on-site transportation whenever possible.

Note: Additional biosecurity and cleaning and disinfection procedures are required to address the risks posed by suspected and confirmed foreign animal diseases and serious zoonotic diseases. This includes the creation of work zones for proper entry and exit from a contaminated zone.



Before LEAVING a premises (infected or suspected of being infected),

DO:

- Upon returning to the vehicle zone, use a brush and an approved disinfectant to thoroughly clean and disinfect all reusable clothing and equipment, including personal items such as jewelry and eyewear. If these items may be harmed by the disinfectant, they may be washed thoroughly in soap and water or, if an acid-susceptible virus is present (e.g., foot and mouth disease virus) dipped in vinegar (acetic acid).
- Clean vehicle exteriors and trailers, including tires, wheel wells, and the undercarriage, with soapy water so they are free of dirt and debris and/or take them through a pressure car wash.
- Place disposable coveralls (turned inside out), boots, and other used items in a plastic bag to leave with the owner on the premises or to transport in the “dirty” zone of your vehicle.
- Dispose of disinfectant solution according to label directions.
- Dispose of all plastic garbage bags containing used or contaminated supplies in a manner that prevents exposure to other people or animals.
- Wash your hands with soap and water.
- Clean and/or launder all reusable equipment and clothing.
- At the end of the day, take a shower. Personal hygiene should include shampooing your hair, cleaning under your fingernails, and clearing your respiratory passages by blowing your nose, clearing your throat, expectorating into a sink with running water, and washing your hands with soap and water.

DON'T:

- Bring “dirty” paperwork into the clean zone of your vehicle.
- Visit a second premises before complying with appropriate biosecurity protocol. Follow the incident specific Biosecurity Plan for guidance on waiting periods between visits to susceptible sites. The waiting period may vary based on the disease, the premises designation, the task assignment, and the level of biosecurity practiced.



General Biosecurity Practices

Premises Visits

- Do not enter an animal zone unless accompanied by a facility employee or authorized to do so by the facility owner.
- “Backyard” facilities are considered animal facilities. Follow all biosecurity practices when visiting these sites.

Clothing

- Wear rubber boots, other footwear that can be cleaned and disinfected, or disposable plastic boots.
- Wear disposable or clean coveralls, laboratory coats, smocks, or other suitable outerwear when coming in contact with animals, their secretions, or manure. If visiting multiple facilities, be sure to have an adequate supply of clean or disposable coveralls, so a fresh pair can be used at each site. Remove outerwear when leaving premises. Dirty items should be placed into a double plastic bag which is sealed and kept in the vehicle’s “dirty” zone.
- Wear disposable latex gloves. Hands should be washed after removing gloves.

Cleaning and Disinfection

- Remove all dirt and organic matter (mud, manure, straw, etc.) from boots and thoroughly disinfect them before entering and before leaving an animal facility. Use a bucket of water with an appropriate broad spectrum disinfectant and a brush to disinfect your boots. Thoroughly wash hands with antibacterial soap before entering and leaving the premises. Wearing disposable gloves is not a substitute for hand washing. Hands should be washed even if gloves are worn.
- If possible, dispose of used disposable boots, gloves, and coveralls at the facility. Otherwise, place the items in a plastic garbage bag, seal it, and double bag it for disposal later in a designated container at a designated location.
- Keep all equipment used in the field clean. Use disposable equipment or disinfect all equipment that comes in contact with animals or their secretions prior to leaving the premises. For field use, select equipment that is easily disinfected (e.g., plastic vs. wooden clipboards). For more information, see *FAD PReP/NAHEMS Guidelines: Cleaning and Disinfection (2011)*.



Vehicles

- Designate “clean” and “dirty” storage zones in the vehicle and keep clean and dirty clothes, supplies, and equipment in separate zones of the vehicle.
- When at a premises, avoid driving through manure or wastewater. Park on concrete or paved zones and away from barns, pens, pastures, or other animal zones. Avoid parking in zones where the vehicle may come in contact with run-off.
- Clean response vehicles between visits to animal production facilities. Cleaning should include tires and floor mats. Vehicle carpets should be covered by plastic floor mats. Commercial car washes with wheel-well washing provide adequate exterior cleaning. Tire sprays may be needed in some situations.

Contact with Infected Animals

- Personnel who come in contact with sick, dying, or dead animals should be considered “carriers” of the disease and should follow proper disinfection procedures prior to coming in contact with other animals. Vehicles used at the premises must also be cleaned and disinfected prior to visiting another premises.

