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Washington State Department of Agriculture

Homeland Security Region 1

FOREIGN ANIMAL DISEASE TABLETOP EXERCISE

SITUATION MANUAL

FEBRUARY 21, 2013

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Agenda

9:00 – 10:00 a.m. Registration and Networking

10:00 a.m. Welcome and Introduction

10:30 a.m. The Threat – An Introduction to Foot and Mouth Disease – State Veterinarian

11:00 a.m. Module 1 – Initial Response Phase
Alerting/Warning/Notification
Situation Briefing
Facilitated Discussion

12:00 – 1:00 p.m. Working Lunch and Networking

1:00 p.m. Module 1 – Initial Response Phase continued
Facilitated Discussion

1:30 p.m. Module 2 – Response Phase
Situation Briefing
Facilitated Discussion

3:00 p.m. Hotwash & Comments

3:30 p.m. Closing Comments & Adjourn

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CONTENTS

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PREFACE

In January 2011, Governor Christine Gregoire directed the formation of a FAD Preparation task force of selected State Cabinet departments and senior elected officials' agencies. Over the next month, the FAD task force and its working groups collaborated to develop and enhance Washington's capability —to protect essential public functions and services, mitigate the impact of damages, and respond to the public safety needs of the citizens of our state during a catastrophic FAD emergency.

This Homeland Security Region 1 FAD Tabletop Exercise is a product of the extensive work by WSDA staff who participated in the functional working groups that form the FAD tabletop exercise series into a discussion-based exercise series designed to review plans, examine policies, and identify issues. The Homeland Security Region 1 Tabletop was designed by the WSDA Homeland Security Program and Animal Services Division staff and Region 1 personnel to test the practicality of various planning efforts of WSDA staff, local, tribal, federal and other state agencies that may coordinate a response.

The Homeland Security Region 1 FAD Tabletop Exercise Situation Manual (SitMan) provides exercise participants with background information, exercise scope, objectives, schedule, and scenarios to guide players in their roles for the exercise. This SitMan was produced with input, advice, and assistance from the WSDA Homeland Security Program and Animal Services Division staff and Region 1 personnel. It follows exercise design standards and guidance set forth by the U.S. Department of Homeland Security (DHS) Homeland Security Exercise and Evaluation Program (HSEEP), adopted by the State of Washington in 2005.

The Homeland Security Region 1 FAD Tabletop Exercise is an unclassified exercise. Control of exercise information is based on public sensitivity regarding the nature of the exercise rather than actual exercise content. Some exercise material is intended for the exclusive use of exercise planners, facilitators, and evaluators, but players may view other materials that are necessary to their performance. All exercise participants may view the SitMan.

All exercise participants should use appropriate guidelines, as directed by Washington Administrative Codes and public disclosure laws, to ensure proper control of information within their areas of expertise and protect this material in accordance with current jurisdictional directives. Public release of exercise materials to third parties is at the discretion of the WSDA Homeland Security Program and the Region 1 Homeland Security Coordinator.

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INTRODUCTION

Scenario

The purpose of this exercise is to provide local, state, and federal emergency management teams with an opportunity to evaluate the planning efforts to respond to a catastrophic FAD event; to identify gaps in our local, state and federal plans for providing essential services during and after a disaster; and to address the necessary coordination between WSDA, state, federal and local agencies. The exercise covers all aspects of the FAD planning efforts and the measures taken to-date to provide public safety for the citizens, residents, businesses, and cities in Washington State.

Purpose

This exercise emphasizes regional and state decision-making and coordination in response to a FAD event. The scope of the exercise is limited to local, state, and federal activities and the policies that support those activities. Our focus will be coordination, integration of capabilities, problem identification, and resolution.

Goals & Objectives

Exercise design objectives focus on improving understanding of a response concept, identifying opportunities or problems, and achieving a change in attitude. This exercise will focus on the following design objectives selected by the Exercise Planning Team:

WSDA

1. **Test** WSDA National Veterinary Stockpile Plan
2. **Examine** Governor's Proclamation to stop movement
3. **Integration** of Type 1, 2, & 3 IMT into the response
4. **Identify** gaps and needs

Homeland Security Region 1

1. **Authority** of USDA, State, Locals Agencies
2. **Delegation of Authority** from Counties and State to IMT to a Unified Command
3. **Control Points**
4. **County Emergency Declaration** Governors Proclamation, Presidential
5. **Communications**

Exercise Structure

This tabletop exercise (TTX) will be a scenario-based, facilitated exercise presented in two phases:

I. Initial Response Phase – Actions taken prior to a Governor's Emergency Proclamation for an FAD event.

II. Combined Response Phase – Governor Gregoire has proclaimed a State of Emergency in Washington in response to an FAD outbreak in western Washington.

Each part begins with a scenario that summarizes key events occurring for that time period. Participants review the situation and engage in a plenary discussion of response issues.

Exercise Guidelines

- This TTX will be held in an open, low-stress, no-fault environment. Varying viewpoints, even disagreements, are expected and shall be respected
- Respond on the basis of your knowledge of current plans and capabilities (i.e., you may use only existing assets) and insights derived from your position as an agency leader.
- Decisions within the exercise do not set precedent and may not reflect your organization's final position on a given issue. This exercise is an opportunity to discuss and present multiple options and possible solutions.
- Issue identification is important, yet is not as valuable as recommended actions to improve response and preparedness efforts.
- One speaker at a time.

Assumptions and Artificialities

Assumptions and artificialities are necessary to complete the exercise in the time allotted. During this exercise, the following apply:

- The scenario is plausible, and events occur in the order they are presented.
- There is no hidden agenda, and there are no trick questions.
- All players receive information at the same time.
- Players should assume that all local, state and federal responders are initiating their plans, procedures, and protocols.
- A multi-agency response to an emergency situation will be required to protect the community.

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MODULE 1: ALERT/NOTIFICATION

Background

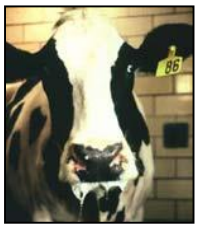
A small dairy producer near Burlington, WA area has 15 dairy cows, 2 heifers, 12 calves, a couple of butcher hogs due to be slaughtered in three weeks, and a bull on 20 acres behind the house. He and his family recently returned from a charity sponsored trip to an Asian country, where they assisted in building a school. The night the family returned from the trip, one of the calves had slipped under the fence and was standing in the driveway. They caught the calf and put it back in with the calves before unloading the car of their luggage. Two days after they returned from Asia, the producer purchased 2 more dairy cows and 3 more calves from his brother-in-law in Lynden, WA.

Within a 10 mile radius of this small producer is the Jones Family Dairy, one of the premier dairy operations in Washington State, having won many awards for their milk production.

Also within the 10 mile radius are 6 other dairies with a combined total of 7,000 head, 12 cattle producers with 2 to 50 head, 6 farms with sheep, and 2 farms with 1,000 to 1,500 hogs each. The hogs are being raised for export to Japan.

FMD Scenario – Day One

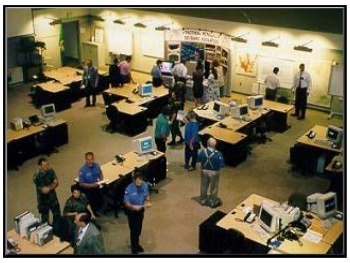
A week after returning from Asia, the producer noticed one of his cows was slobbering. He checked the hay for thistles and went to his job at the hardware store. He only worked half a day, being it was a Saturday. When he returned home to milk the cows, he found two more cows were slobbering and several were limping. One of the calves was down and refused to rise. He called his local veterinarian. Alarmed at the clinical signs, the private practitioner contacted the state veterinarian's office.



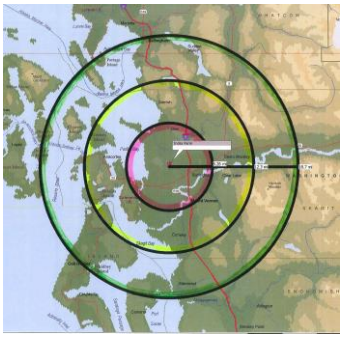
The state veterinarian dispatched a Foreign Animal Disease Diagnostician (FADD) who arrives at the farm within four hours. The FADD collected specific samples from the affected cows. Half the samples are to be sent to the Plum Island Animal Disease Center (PIADC) in New York and the other half are driven to Washington State University Animal Disease Diagnostic Laboratory (WADDL) in Pullman, WA by a WSDA employee who has not entered the premises. Samples arrived at WADDL within 6 hours.

During the investigation, the producer said when he transported the purchased livestock back to his farm. He stopped in a truck stop near Mount Vernon and parked his truck next to another loaded cattle truck while having lunch. He and the driver from the dairy farm near Coupeville, WA ate lunch and discussed cattle production for about an hour.

Samples being sent to Plum Island, New York are delayed as FedEx has already left the Seatac airport for the day. The state veterinarian makes a request to EMD to expedite air transportation from Washington State to JFK Airport where the samples will be picked up by staff from PIADC. After consultation with the state veterinarian, the FADD establishes a hold order of the farm to prohibit animal movement to or from the farm. Due to the strong suspicion of an FAD, the FADD remains at the farm pending results from the laboratory.



The Director of WSDA was notified by the State Veterinarian of the situation. The WSDA Emergency Operations Center (WSDA-EOC) became fully operational. The WSDA-EOC contacted the State Emergency Operations Center (SEOC) and the Snohomish County Emergency Manager and told them that WSDA was conducting operations outside of Burlington and would provide more information as it became available.



At approximately, 9:45 pm, the State Veterinarian was notified by the Director of the Washington State University Animal Disease Diagnostic Laboratory (WADDL) of the results from the samples from the farm near Burlington. They are a presumptive positive for foot and mouth disease, but the Plum Island Animal Disease Center (PIADC) in New York must make the final determination. The Director, WSDA was notified by the State Veterinarian of the situation at 10:00 PM.

The State Veterinarian has been in contact with the USDA- Area Veterinarian in Charge (USDA-AVIC) throughout the entire incident. They discussed the situation and have agreed to form a Unified Command.

FMD Scenario – Day Two

Early this morning, Jones Family Dairy's foreman reported to Mike Jones that a number of cattle were showing symptoms of: blisters inside the mouth causing excessive secretion of stringy or foamy saliva and drooling; and blisters on the feet that have ruptured. He has called the dairy's veterinarian who has arrived at the dairy, examined several of the cattle with symptoms. The daily milk hauler's pick up was completed at 7:30 AM and the truck was headed to the next farm on his route. The hauler picked up 2,500 gallons. Around 9:00 AM, the veterinarian called the Washington State Veterinarian's Office; he suspects a foreign animal disease and needs a WSDA Foreign Animal Disease Diagnostician (WSDA-FADD) to meet him at the dairy.

At approximately 11:30 AM, the WSDA-FADD arrives at the dairy and meets the local veterinarian. They both go into the dairy to begin a foreign animal disease investigation. The WSDA-FADD is concerned about the suspect disease and takes samples to be sent to the DHS National Veterinary Services Laboratory in Plum Island, New York and the WSU Washington Animal Disease Diagnostics Laboratory (WADDL) in Pullman, Washington.

The WSDA-FADD is not allowed to leave the dairy premises pending the results from the laboratory.

Due to his concerns about the disease, the WSDA FADD confers with the State Veterinarian and a hold order is placed on the Jones Family Dairy to ensure no animals are moved off the premises. The samples are picked up for shipment to laboratory by a WSDA brand inspector. The WADDL samples are driven directly to Pullman and arrive at the laboratory at approximately 2:00 PM; the samples are immediately process and analyzed. The DHS National Veterinary Services Laboratory samples are picked up by FedEx for overnight shipping to the laboratory in Plum Island, New York.

During the initial discussion and to trace forward – traceback movement to and from the farm and dairy determine the scope of the potential outbreak. The small dairy producer and Jones Family Dairy manager were questioned on vendors, veterinarians, buyers, deliveries, and any pick-ups of either cattle or other products from the farm. The small cow calf producer stated that he worked for R-P Feed and Farm Supply Company out of Everett and had them deliver feed to his animals. He stated he is pretty sure that they deliver to most of the major livestock (beef and pork) producers and dairies throughout the area. R-P Feed and Farm Supply Company was recommended to him by his boss because it served a number of counties and made timely deliveries on their routes in western Washington. He knew from their brochure they serviced Island, Skagit, San Juan, and Snohomish Counties from their Everett operation.

Module 1 - Questions

Based on the information provided, you have 60 minutes to consider the issues identified in Module 1. The following topics are provided to facilitate the discussion. Please focus on the critical issues of major concern for your agency at this point in the exercise. Identify any additional requirements, critical issues, decisions, and/or questions that should be addressed at this time.

WSDA Priorities

- Place hold order on presumed infected premises
- Rapid movement of samples to the laboratories
- Activate WSDA EOC
- Authority, “who has what & when”
- Notify State EOC and County Emergency Manager of ongoing operations
- Managing public information to protect industry prior to laboratory results
- Public Information to the general public, Joint Information System

WSDA Activity Questions

- WSDA response actions?
- What message do we send to the State EOC and County Emergency Manager?

- What activities on the infected premises will change? Deliveries? Pick-ups?
- How is the WSDA EOC activated and to what level?
- When & who needs to be contacted and how?
- Notification process, who, what, when?
- Emergency Support Function 11, Appendix B – State Animal Response Plan actions?
- Actions by the Initial Decision Group?

Policy Issues

Based on the information provided, participate in the discussion concerning the issues raised in this scenario. Identify any additional requirements, critical issues, decisions, or questions that should be addressed at this time.

- State Agency plans – what is in place?
- Command Structure, who, what, when, Unified Command structure, local, state, federal?
- Public information

State Agencies and Local Jurisdiction Questions

- Who is in charge for the situation described and what is their authority?
- Is your agency/jurisdiction involved at this time?
- For the situation as presented, what notifications are needed for your agency/ jurisdiction to implement response activities? Are there current plans, procedures, or guidelines identifying others to be notified in-turn?
- Will you have agency/jurisdiction personnel in the field in direct response activities?
- Will your procedural actions for the situation affect activities within the community? If so, how are those actions coordinated with the local authorities?
- Are there any biosecurity issues of concern for your agency/jurisdiction personnel?
- Explore and discuss the general considerations and actions to be implemented by your agency for the situation. For systems affected by the event, identify the backup methods or support needed to implement response and safety actions.
- What Federal or military support is anticipated for the situation? Will you be coordinating with agencies other than WSDA and the State EOC?

Federal Agencies Questions

- When would you expect to be informed of the situation? How will you be informed?
- How will the results of the testing of the samples sent to Plum Island be released to the State Veterinarian and consequently the public?
- Who is in-charge for the situation described?
- What actions will your agency take at this time?

- Will your procedural actions for the situation affect activities within the community? If so, how are those actions coordinated with the local authorities? How will you coordinate that?
- What other safety or security concerns involving the community would there be for the current situation?
- What information is anticipated from private, local and state agencies?
- How would information be provided to external agencies and the public? How will it be coordinated with State and Local agencies?
- Specifically, what interagency coordination is necessary at this point?
- Tribal Governments, their role, notification process, jurisdictional, cultural, & agriculture issues.

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MODULE 2: COMBINED RESPONSE

FMD Scenario – Day Three

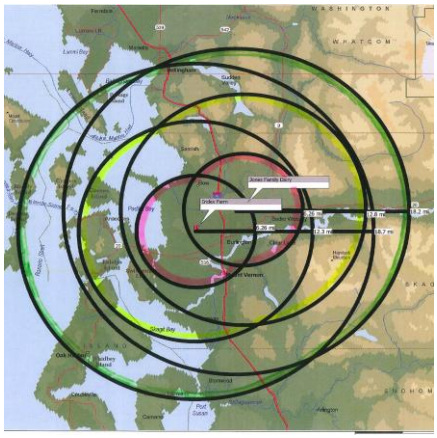
Overnight, WADDL processed and analyzed the samples from the dairy near Colfax. At least one sample tested positive for foot and mouth disease. Only PIADC can provide a definitive diagnosis, so the sample is considered a 'presumptive positive' based on preliminary results from WADDL and the supporting clinical signs and history. WADDL followed their internal notification protocols and the State Veterinarian was notified.

The Director, WSDA is requesting a Governor's Proclamation of Emergency in conjunction with the State Emergency Operations Center and Whitman County is preparing an emergency proclamation for the County Commissioners.

The State Veterinarian dispatched previously alerted WSDA Animal Services personnel and is alerting the Washington State Reserve Veterinary Corps for additional veterinarians to support the response.

The USDA-AVIC is also dispatching USDA- Animal and Plant Health Inspection Service personnel. The USDA-AVIC has requested a Type 1 Incident Management Team for the outbreak.

The State Veterinarian and the USDA-AVIC confer and a request for the National Veterinary Stockpile is forwarded to the USDA National Veterinary Stockpile Coordinator. <u>This asset will arrive in 24 hours</u>.



The WSDA-EOC contacted the State EOC and the Snohomish County EOC for support in establishing isolation and quarantine of the producer's farm. WSDA is also requesting the regional Type 3 Incident Management Team to support the response and coordinate resources arriving on-scene at the two farms.

The State Veterinarian has ordered a ***6.25 mile (10 km)radius infected zone***, a ***12.5 mile (20 km)radius buffer zone***, and a ***18.75 mile (30 km) radius surveillance zone*** be immediately established around the affected farms. The 10 km infected zone includes Jones Family Dairy, other dairies, a wildlife refuge, and multiple smaller farm operations with an estimated total potentially susceptible animal population of over 100, 000. In addition, a sale is scheduled for tomorrow at the Auction Barn in Everson, WA.

Disinfection and Decontamination Stations for personnel and vehicles will be required to allow any vehicular traffic outside the zones. **NO** animals will be allowed outside of the infected zone. Assistance from other state agencies and the local jurisdiction is required to accomplish this mission.

Module 2 – Questions

Please take the next 60 minutes to consider the questions in Module 2. You should also identify any additional questions, critical issues, or decisions you feel should be addressed at this time. Your decisions should be made using the information provided and your best judgment on how to proceed.

Participants are not required to address every question in this module. Take a moment to review the questions in their entirety, and then focus on the critical issues of major concern for your agency at this point in the exercise.

WSDA Priorities

- Safety of responders and the public
- Establish Infected, Buffer, and Surveillance zones
- Control movement of animals and vehicular traffic onto and off animal premises.
- Establish Biosecurity/Disinfection/Decontamination
- Obtain a Governor's Proclamation of Emergency
- Coordinate with State EOC and County Emergency Manager for ongoing operations
- Establish public messaging to inform and reassure public.

WSDA Activities

- Request Local Jurisdiction support
- Request support from agencies providing support under Emergency Support Function 11
- Communicate with Public – what is our message? While conveying the message that the food is safe to eat
- Coordinate movement of WSDA resources
- Deploy staff
- Establish Unified Command with locals and USDA
- Request National Veterinary Stockpile
- Activate a State Staging Area for receipt of National Veterinary Stockpile
- Determining what crops are currently in harvest – keeping commerce moving
- Determining if a product recall or embargo is needed for products from the infected premises

County EOCs

- At what point will your resources and any mutual aid be exhausted?

- Given the nature of the biological agent, what protection measures, if any, must be immediately implemented? How will these steps be accomplished?
- What is the authority for order of an agricultural quarantine? What are the limits to this authority? What legal and/or logistical challenges might be posed by quarantine enforcement? What alternative measures are available to limit movement or access?
- How will quarantine procedures affect the local response resources? How will you handle isolation or quarantine of animals? Agricultural facilities? Will there be a requirement for sheltering? Feeding?
- What are the staffing and resources requirements for the current situation?
- What guidelines are followed regarding implementation of infection control measures? How are they informed and trained regarding these guidelines?
- What plans are in place for establishing and operating a Joint Information Center (JIC)?

Washington State EOC

State EOC Priorities

- Life Safety, environmental protection and property protection
- Situation stabilization
- Support state agencies and local jurisdictions in response operations
- Provide public messaging and situational awareness
- Continuity of Business during the event, Allowing the movement of "good animals" and "movement of commerce"?

State EOC Questions

- Do we have all the authority to conduct isolation and quarantine operations stated in the Governor's Proclamation? How will this proclamation impact the local jurisdiction? Will it give them necessary authority to act?
- What agencies are necessary to coordinate the implementation of depopulation and disposal plans? Who is responsible for timely conduct of the process?
- What alternative communications/procedures are in place to address the overload of state/ local systems? Is there a need for secure communications?
- What information and direction are you seeking from state, tribal, and local public health and emergency management agencies? What do those agencies need from you?
- What plans are in place for establishing and operating a Joint Information Center (JIC)?
- What information can be used to calm public concern about the animal and economic crisis? What expertise do you require to develop this information? Where will you obtain needed expertise?
- Mutual Aid Agreements, state mobilization plan for law enforcement, is it needed?
- Control of movement for people, authority under the governor proclamation?
- Type 1 & 2 IMTs, what do they do? Authority from whom and for what?
- EMAC and PNEMA agreements, when should they be utilized? What are the trigger

points?

Other Agencies:

- Who has authority in this situation?
- Who is in charge?
- What is the public messaging?
- How is the public responding?
- Cattle Industry and their role in the response?
- What kinds of support would your agency provide?

Federal Response Agencies Questions

- Which is the Lead Federal Agency for this event?
- If agroterrorism is suspected, who is in charge of the response?
- What are the primary objectives for the given situation?
- What are the requirements for indemnification?
- What Federal resources are available for state and local support to mitigate effects of this event?
- What information is immediately available to calm public concerns?
- USDA-AHPIS involvement, when & what?

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AFTER ACTION REVIEW

(HOTWASH)

After the completion of this exercise we will spend a few minutes capturing the lessons we learned from conducting this exercise.

Hotwashes are a no-fault method of discussing actions taken during the exercise. The goal is to address issues we find and ultimately incorporate those recommendations into an improvement plan. We will discuss the exercise activities in this format:

1. **Strengths** – Actions or procedures that were accomplished well during the exercise. We will frame the discussion in the following format:

    a. Issue: What happened?

    b. Discussion: Why is the action a strength?

    c. Recommendations: Can it be improved further or applied to other actions?

2. **Areas that need improvement** – Actions or procedures, accomplished or not during the exercise, that need improvement will be identified. We will frame the discussion in the following format:

    a. Issue: What happened?

    b. Discussion: Why is this is an area that needs improvement?

    c. Recommendations: Ideas to either improve the area or how we can incorporate improvements with other actions.

    WSDA will generate an after action report, including an improvement plan, to be distributed to participants.

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APPENDIX A: ACRONYMS

Acronym	Term
AAR	After Action Review
APHIS	Animal & Plant Health Inspection Service
CEMP	Comprehensive Emergency Management Plan (WA)
DHS	U.S. Department of Homeland Security
DOH	Department of Health
EMD	Emergency Management Division
EOC	Emergency Operations Center
FAD	Foreign Animal Disease
FBI	Federal Bureau of Investigation
FDA	Food & Drug Administration
FERN	Food Emergency Response Network
FMD	Foot and Mouth Disease
FSIS	Food Safety and Inspection Service
HSEEP	Homeland Security Exercise and Evaluation Program
ICP	Incident Command Post
ICS	Incident Command System
MAA	Mutual Aid Agreement
MOU	Memorandum of Understanding
NIMS	National Incident Management System
NRF	National Response Framework
PIADC	Plum Island Animal Disease Center
PIO	Public Information Officer
NVS	National Veterinary Stockpile
NVSL	National Veterinary Services Laboratory
TTX	Tabletop Exercise
TW	Tri-Wall Container
USDA	United States Department of Agriculture
WSDA	Washington State Department of Agriculture

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APPENDIX B: FMD FACT SHEET

Importance

Foot-and-mouth disease (FMD) is a highly contagious viral disease that primarily affects cloven-hooved livestock and wildlife. Although adult animals generally recover, the morbidity rate is very high in naïve populations, and significant pain and distress occur in some species. Sequelae may include decreased milk yield, permanent hoof damage and chronic mastitis. High mortality rates can be seen in young animals. Although foot-and-mouth disease was once found worldwide, it has been eradicated from some regions including North America and most of Europe. Where it is endemic, this disease is a major constraint to the international livestock trade. Unless strict precautions are followed, FMD can be readily re-introduced into disease-free livestock. Once this occurs, the disease can spread rapidly through a region, particularly if detection is delayed. Outbreaks can severely disrupt livestock production, result in embargoes by trade partners, and require significant resources to control. Direct and indirect economic losses equivalent to several billion US dollars are not uncommon. Since 1997, a Pan Asia lineage virus has caused a series of outbreaks in Asia, Africa, the Middle East and Europe. Some outbreaks, particularly those in Taiwan and the United Kingdom, have been devastating.

Etiology

The foot-and-mouth disease virus (FMDV) is a member of the genus *Aphthovirus* in the family Picornaviridae. There are seven immunologically distinct serotypes - O, A, C, SAT 1, SAT 2, SAT 3 and Asia 1 - and over 60 strains within these serotypes. New strains occasionally develop spontaneously.

FMDV serotypes and strains vary within each geographic region. Serotype O is the most common serotype worldwide. This serotype is responsible for a pan-Asian epidemic that began in 1990 and has affected many countries throughout the world. Other serotypes also cause serious outbreaks. Immunity to one serotype does not provide any cross-protection to other serotypes. Cross-protection against other strains varies with their antigenic similarity.

Species Affected

FMDV can infect most or all members of the order Artiodactyla (cloven-hooved mammals), as well as a few species in other orders. Each species varies in its susceptibility to infection and clinical disease, as well as its ability to transmit the virus to other animals. Livestock susceptible to FMD include cattle, pigs, sheep, goats, water buffalo and reindeer. Lllamas, alpacas and camels can be infected experimentally, but do not appear to be very susceptible. FMDV can also infect at least 70 species of wild animals including African buffalo (*Syncerus caffer*), bison (*Bison* spp.), elk, moose, chamois, giraffes, wildebeest, blackbuck, warthogs, kudu, impala, and several species of deer, antelopes and gazelles. Susceptible non cloven-hooved species include hedgehogs, armadillos, kangaroos, nutrias, capybaras, guinea pigs, rats and mice. Infections have been reported in African and Asian elephants in zoos; however, African elephants are not considered susceptible to FMD under natural conditions in southern Africa.

On most continents, cattle are usually the most important maintenance hosts for FMDV, but some virus strains are primarily found in pigs, sheep or goats. Cattle and African buffalo are the usual maintenance hosts for FMDV in Africa; African buffalo are currently thought to carry only the SAT serotype. With this exception, wildlife hosts do not seem to be able to maintain FMD viruses, and are usually infected by contact with domesticated livestock. Early reports suggested that transmission also occurred between cattle and European hedgehogs, but there is no evidence that this species has helped to propagate FMDV in the last 40 years.

Geographic Distribution

Foot-and-mouth disease is endemic in parts of Asia, Africa, the Middle East and South America. In parts of Africa, virus persistence in wild African buffalo makes eradication unfeasible. North America, New Zealand, Australia, Greenland, Iceland and most of Europe are free of this disease. Sporadic outbreaks have occurred in disease-free countries, with the exception of New Zealand, Greenland, Iceland and the smaller islands of Oceania. The last U.S. outbreak occurred in 1929.

Transmission

FMDV can be found in all secretions and excretions from acutely infected animals, including expired air, saliva, milk, urine, feces and semen. Pigs, in particular, produce large quantities of aerosolized virus. Animals can shed FMDV for up to four days before the onset of symptoms. This virus is also found in large quantities in vesicle fluid, and peak transmission usually occurs when vesicles rupture. Transmission can occur by direct or indirect contact with infected animals and contaminated fomites; routes of spread include inhalation of aerosolized virus, ingestion of contaminated feed, and entry of the virus through skin abrasions or mucous membranes. The importance of each of these routes varies with the species. For example, pigs are less susceptible to aerosolized virus than cattle or sheep. Sheep may have less obvious symptoms than other species, and have been important in disseminating the virus in some outbreaks. Sexual transmission could be a significant route of spread for the SAT type viruses in African buffalo populations.

Some animals carry FMDV for prolonged periods after recovering from acute disease. Animals with natural or vaccine-induced immunity can also become carriers if they are later exposed to virus; these animals can remain asymptomatic. FMDV can persist for up to nine months in sheep and up to four months in goats. Most cattle carry this virus for six months or less, but some animals remain persistently infected for up to 3.5 years. Individual African buffalo have been shown to be carriers for at least five years, and the virus can persist in a herd of African buffalo for at least 24 years. Llamas do not become carriers. A single study suggested that pigs may become carriers, but many other studies have found that this species cleared the infection within 3 to 4 weeks. In carriers, FMDV is found only in the esophageal-pharyngeal fluid. The amount of virus is small, and it may be found only intermittently. Carriers might be able to transmit FMDV to other animals if they come in close contact; the importance of this route of transmission is controversial. Unequivocal evidence for transmission from carriers has been reported only from Africa, where African buffalo can spread the disease to cattle. With the exception of African buffalo, wildlife seems to be infected by contact with domesticated animals; FMDV disappears from the wildlife populations when outbreaks in livestock are controlled. Persistent infections have been reported in some experimentally infected wildlife including fallow (*Dama dama*) and sika deer (*Cervus nippon*) and kudu (*Tragelaphus strepsiceros*), and occasionally in red deer (*Cervus elaphus*). Deer could carry FMDV for up to 11 weeks.

FMDV can be transmitted on fomites including vehicles, as well as mechanically by animals and other living vectors. Airborne transmission can occur under favorable climatic conditions. FMDV is thought to have been transmitted via aerosols from Brittany to Jersey (approximately 30 miles or 48 km) and for approximately 70 miles (113 km) from Jersey to the Isle of Wight. There is limited information on the survival of FMDV in the environment, but most studies suggest that it remains viable, on average, for three months or less. In very cold climates, survival up to six months may be possible. Virus stability increases at lower temperatures; in cell culture medium at 4°C (39°F), this virus can remain viable for up to a year. It was reported to survive on bran and hay for more than three months in a laboratory. It can also remain viable for approximately two months on wool at 4°C, with significantly decreased survival when the temperature increases to 18°C (64°F), and for 2 to 3 months in bovine feces. Organic material protects the virus from drying, and enhances its survival on fomites. Virus survival is also enhanced when FMDV is protected from sunlight. FMDV is inactivated at pH below 6.5 or above 11. This virus can persist in meat and other animal products when the pH remains above 6.0, but it is inactivated by acidification of muscles during rigor mortis. It can survive for long periods in chilled or frozen lymph nodes or bone marrow.

In humans, FMDV may be carried in the nasal passages for a period of time. In one study, this virus was detected in the nasal passages of one of eight people 28 hours after exposure to infected animals, and from none of the eight at 48 hours. More recent studies have found that FMDV is not transmitted by people when personal hygiene and biosecurity protocols are followed, and suggest that nasal carriage of the virus may be unimportant. The discrepancy between these studies remains to be resolved.

Incubation Period

In cattle, the incubation period varies from two to 14 days, depending on the dose of the virus and route of infection. In pigs, the incubation period is usually two days or more, but can be as short as 18-24 hours. The incubation period in sheep is usually 3 to 8 days. Incubation periods as short as 24 hours and as long as 12 days have been reported in this species after experimental infection.

Clinical Signs

Foot-and-mouth disease is characterized by fever and vesicles (blisters) on the feet, in and around the mouth, and on the mammary gland. Occasionally, vesicles may occur at other locations including the vulva, prepuce or pressure points on the legs. Vesicles often rupture rapidly, becoming erosions. Pain and discomfort from the lesions leads to a variety of symptoms including depression, anorexia, excessive salivation, lameness and reluctance to move or rise. Lesions on the coronary band may cause growth arrest lines on the hoof. In severe cases, the hooves may be sloughed. Although FMDV does not cross the placenta, abortion may occur in pregnant animals. Most adults recover in two to three weeks, although secondary infections may lead to a longer recovery time. Possible complications include temporary or permanent decreases in milk production, chronic lameness or mastitis, weight loss and loss of condition. Deaths usually occur only in young animals, as the result of multifocal myocarditis; vesicles are not always found. In some outbreaks, the mortality rate in young animals can be high. Severe disease may also cause sudden deaths among older animals, particularly some species of wildlife, but this is rare. The symptoms and severity of FMD vary with the species of animal, and the serotype and strain of the virus. Cattle usually become febrile and develop lesions on the tongue, dental pad, gums, soft palate, nostrils or muzzle. The vesicles on the tongue often coalesce, rupture quickly, and are highly painful, and the animal becomes reluctant to eat. Profuse salivation and nasal discharge are common; the nasal discharge is mucoid at first, but becomes mucopurulent. Affected animals become lethargic, may lose condition rapidly, and have gradual or sudden, severe decreases in milk production. Hoof lesions occur in the area of the coronary band and interdigital space. Foot lesions cause reluctance to rise, or stamping or shaking of the feet. Pregnant animals may abort. Young calves can die of heart failure without developing vesicles. In areas where cattle are intensively vaccinated, the entry of FMD into the herd can sometimes cause swelling of tongue and severe symptoms that resemble an allergic disease.

In pigs, the most severe lesions usually occur on the feet. The first symptoms may be lameness and blanching of the skin around the coronary bands. Vesicles develop on the coronary band and heel, and in the interdigital space. The lesions may become so painful that pigs crawl rather than walk. The horns of the digits are sometimes sloughed. Lesions at other sites are less common and less severe. Vesicles are sometimes found on the snout or udder, as well as on the hock or elbows if the pigs are housed on rough concrete floors. Mouth lesions are usually small and less apparent than in cattle, and drooling is rare. Affected pigs may also have a decreased appetite, become lethargic and huddle together. Fever may be seen, but the temperature elevation can be short or inconsistent. In some cases, the temperature may be near normal or even below normal. Young pigs up to 14 weeks may die suddenly due to heart failure; piglets less than eight weeks of age are particularly susceptible.

Foot-and-mouth disease tends to be mild in sheep and goats. Common symptoms include fever and mild to severe lameness of one or more legs. Vesicles may develop in the interdigital cleft and on the heel bulbs and coronary band, but they may rupture and be hidden by foot lesions from other causes. Mouth lesions are often not noticeable or severe, and generally appear as shallow erosions. Vesicles may also be noted on the teats, and rarely on the vulva or prepuce. Milk production may drop, and rams can be reluctant to mate. Ewes may abort. Up to 25% of infected sheep remain asymptomatic, and 20% have lesions only at one site. Young lambs and kids may die due to heart failure, without vesicles. In some epidemics, large numbers of lambs may fall down dead when stressed.

Minimal lesions and fever have been reported in llamas, which rarely become anorexic or demonstrate pain and discomfort.

The symptoms in wildlife resemble those seen in domesticated livestock. Vesicles and erosions may be found at various sites, particularly on the feet and in the mouth. More severe lesions occur where there is frequent mechanical trauma, e.g. on the feet and snout of suids or the carpal joints of warthogs. Loss of horns has also been seen. Some wildlife species typically experience subclinical infections or mild disease, while others develop severe, acute disease. Infections with SAT-type viruses in African buffalo are often subclinical, although small mouth and/or foot lesions have been reported. Severe disease has been documented in mountain gazelles, impala, blackbuck, white tailed-deer, warthogs and a kangaroo. In one outbreak in mountain gazelles, at least half the animals died due to heart failure or pancreatic atrophy and emaciation. Young animals of any species can die suddenly of myocarditis.

Post Mortem Lesions

The characteristic lesions of foot-and-mouth disease are single or multiple, fluid-filled vesicles or bullae from 2 mm to 10 cm in diameter. The earliest lesions can appear as small pale areas or vesicles. Some vesicles may coalesce to form bullae. Vesicles are generally present for only a short period. Once they rupture, red, eroded areas or ulcers will be seen. These erosions may be covered with a gray fibrinous coating, and a demarcation line of newly

developing epithelium may be noted. Loss of vesicular fluid through the epidermis can lead to the development of "dry" lesions, which appear necrotic rather than vesicular. Dry lesions are particularly common in the oral cavity of pigs.

The location and prominence of FMD lesions varies with the species. In cattle, numerous erosions, ulcers or vesicles may be found in the oral cavity. In pigs, sheep and goats, these lesions may be more common on the heel, coronary band and interdigital cleft of the feet. Some lesions may extend to the skin. Coronitis may be seen on the hooves, and animals with severe disease may slough their hooves or claws. In addition, vesicles may be found in other locations including the teats or udder; pressure points of the legs, ruminal pillars, prepuce or vulva. In young animals, cardiac degeneration and necrosis can cause gray or yellow streaking in the myocardium; these lesions are sometimes called "tiger heart" lesions.

Morbidity and Mortality

The morbidity rate varies with the species, immunity and other factors. Recovery from infection leads to immunity against the infecting virus, but little or no immunity develops to other serotypes. If several serotypes are endemic in a region, periodic episodes of disease may be seen. If only a single, persistent serotype circulates in a population, clinical disease may be mild and mainly occurs in young animals as they lose their protection from maternal antibodies. Carriers occur in endemic areas. In wild African buffalo populations, 50-70% of the animals may become carriers. Carrier rates from 15% to 50% have been reported in cattle and sheep.

In regions where FMD is not endemic, the morbidity rate can be as high as 100%. All susceptible species may not be affected during an outbreak. During one Asian epidemic, only pigs were infected. The mortality rate is generally less than 1% in adult livestock, but it can be much higher in young animals. Mortality rates of 40-94% have been reported in lambs. During one epidemic in Taiwan, the overall mortality rate in piglets was 40%. Up to 100% of suckling pigs may die.

Among wildlife, impala seem to be particularly susceptible to disease; regular epidemics of FMD occur in this species in southern Africa. Most outbreaks in wildlife are similar to those in domesticated species, with animals usually recovering in a week or two; however, higher mortality rates have occasionally been reported. A case fatality rate of at least 50% was reported in mountain gazelles in Israel. The same virus caused the usual symptoms and few deaths in cattle.

Diagnosis *Clinical*

The symptoms of FMD vary with the species, but vesicles and erosions in the oral cavity or on the feet, teats or other areas are suggestive. In cattle, suspicion should be raised by simultaneous salivation and lameness, particularly when a vesicular lesion has been seen or is suspected to exist. Profuse salivation is uncommon in pigs or sheep, where lameness is more typical. Suspect or febrile animals should be examined closely for lesions. When sudden death is observed in young cloven-hooved livestock, older animals should also be examined; young animals that die of heart disease may not have vesicular lesions. Tranquilization may be necessary for a thorough examination as vesicles are painful and may be difficult to see. Laboratory confirmation is necessary, as all vesicular diseases have almost identical clinical signs.

Differential diagnosis

FMD cannot be distinguished clinically from other vesicular diseases including vesicular stomatitis, swine vesicular disease and vesicular exanthema. In domesticated animals, the symptoms may also resemble foot rot, traumatic stomatitis, and chemical and thermal burns. In cattle, oral lesions can resemble rinderpest, infectious bovine rhinotracheitis, bovine viral diarrhea, malignant catarrhal fever and epizootic hemorrhagic disease. In sheep, the lesions can be confused with bluetongue, contagious ecthyma, and lip and leg ulceration.

Laboratory tests

Foot-and-mouth disease can be diagnosed by virus isolation, detection of viral antigens or nucleic acids, and serology. FMDV can be isolated in primary bovine thyroid cells or primary pig, calf or lamb kidney cells. BHK-21 or IB-RS-2 cells can also be used, but cell lines are less sensitive than primary cells. If necessary, unweaned mice may be inoculated with the virus. In cell cultures, FMDV is identified using enzyme-linked immunosorbent assay (ELISA), complement fixation or reverse transcription polymerase chain reaction (RT-PCR) tests. ELISAs can also identify viral antigens directly in tissues; complement fixation is less specific and sensitive. RT-PCR techniques are also available. The virus serotype can be determined with either ELISA or RT-PCR. Electron microscopy is

sometimes used to distinguish FMDV from other viruses in lesions.

Serological tests can be used for diagnosis as well as to certify animals for export. Antibodies to FMDV structural proteins are used to diagnose previous or current infections in unvaccinated animals. These tests include ELISAs and virus neutralization tests, and are serotype specific. Serological tests that detect antibodies to nonstructural proteins (NSP) can diagnose previous or current infections in vaccinated animals. Anti-NSP tests include ELISAs, and are not serotype specific. Some vaccinated animals that become persistently infected may not be detected by anti-NSP tests.

Carrier animals can be identified by isolating FMDV from the esophageal-pharyngeal fluids, but the virus may be present in low amounts and shed only intermittently. Repeated sampling may be necessary. RT-PCR can also be used to identify these animals.

Samples to collect

Before collecting or sending any samples from vesicular disease suspects, the proper authorities should be contacted. Samples should only be sent under secure conditions and to authorized laboratories to prevent spread of the disease. Since vesicular diseases cannot be distinguished clinically, and some are zoonotic, samples should be collected and handled with all appropriate precautions.

In acute disease, the preferred sample for virus detection is epithelium from unruptured or freshly ruptured vesicles, or vesicular fluid. Sedation is generally advisable before these samples are collected. FMDV is extremely sensitive to low pH, and virus isolation is dependent on good buffering; epithelial samples should be shipped in a transport medium, and kept refrigerated or on ice. If vesicles are not available, blood (serum) and esophageal-pharyngeal fluid samples can be collected for virus isolation or RT-PCR. Esophageal–pharyngeal fluids are taken by probang cup from ruminants, or as throat swabs from pigs, and are shipped in transport medium. These samples should be refrigerated or frozen immediately after collection. Vesicles are the preferred sample from animals that died of heart failure, but myocardial tissue or blood can be collected if vesicles are not present. FMDV may also be found in milk, other secretions and excretions, and other organs. Serum should be collected for serology. In animals suspected to be carriers, esophageal-pharyngeal fluids should be collected.

Recommended actions if foot and mouth disease is suspected

Notification of authorities

A quick response is vitally important in containing an outbreak of FMD. State and federal veterinarians should be immediately informed of any suspected vesicular disease. Federal: Area Veterinarians in Charge (AVIC):http://www.aphis.usda.gov/animal_health/area_offices/StateVeterinarians:http://www.aphis.usda.gov/vs/sregs/official.html

Control

FMDV is usually introduced into a country in contaminated feed or infected animals. Waste food (swill) fed to swine is a particular concern. In countries where foot-and-mouth disease is not endemic, the importation of animals and animal products from FMD-endemic areas is strictly controlled. Heat-treatment of all swill fed to pigs reduces the risk of an outbreak. Some countries have banned swill feeding altogether, due to difficulties in ensuring that adequate heat-treatment protocols are followed. Low-temperature pasteurization [72°C (162°F)] for 15 seconds) does not inactivate FMDV. High temperature short time (HTST) pasteurization greatly reduces the amount of viable FMDV in milk, but some studies suggest that residual virus may sometimes persist.

FMD outbreaks are usually controlled by quarantines and movement restrictions, euthanasia of affected and in-contact animals, and cleansing and disinfection of affected premises, equipment and vehicles. Effective disinfectants include sodium hydroxide (2%), sodium carbonate (4%), citric acid (0.2%) and Virkon-S®. Iodophores, quaternary ammonium compounds, hypochlorite and phenols are less effective, especially in the presence of organic matter. Infected carcasses must be disposed of safely by incineration, rendering, burial or other techniques. Milk from infected cows can be inactivated by heating to 100°C (212°F) for more than 20 minutes. Slurry can be heated to 67°C (153°F) for three minutes. Rodents and other vectors may be killed to prevent them from mechanically disseminating the virus. Good biosecurity measures should be practiced on uninfected farms to prevent entry of the virus.

Vaccination may be used to reduce the spread of FMDV or protect specific animals (e.g. those in zoological

collections) during some outbreaks. The decision to use vaccination is complex, and varies with the scientific, economic, political and societal factors specific to the outbreak. Vaccines are also used in endemic regions to protect animals from clinical disease. FMDV vaccines must closely match the serotype and strain of the infecting strain. Vaccination with one serotype does not protect the animal against other serotypes, and may not protect the animal completely or at all from other strains of the same serotype. Currently, there is no universal FMD vaccine. Vaccine banks contain a wide variety of strains, particularly those judged to be the greatest threat of introduction, for use in an outbreak. Some countries maintain individual vaccine banks. There are also three international vaccine banks: the North American FMD Vaccine Bank (for Canada, the U.S. and Mexico), the E.U. Vaccine Bank (for all EU countries) and the International Vaccine Bank (for a variety of countries including Australia, New Zealand and some European nations).

Humans are thought to carry FMDV mechanically for a short period of time, based on a study that found this virus in the nasal passages of one of eight people 28 hours after they had been exposed to infected animals and none of the eight people at 48 hours. People who have been exposed to infected animals should avoid susceptible livestock for a designated period, usually a few days to a week. Some recent studies suggest that extended avoidance periods may not be necessary if good biosecurity practices, including effective personal hygiene protocols (showering or washing hands, and changing clothing), are followed. The discrepancy between these studies remains to be resolved, and government authorities should be consulted for the most recent waiting period recommendations.

Transmission of FMDV from wildlife in southern Africa is controlled by separating wildlife from domesticated livestock with fences, and by vaccination of livestock.

Public Health

Foot-and-mouth disease is not considered to be a public health problem. FMDV infections in humans are very rare, with approximately 40 cases diagnosed since 1921. Vesicular lesions and influenza-like symptoms can be seen; the disease is generally mild, short-lived and self-limiting.

[Note: Foot=and-mouth disease is not related to hand, foot and mouth disease, a condition seen only in humans.]

DRAFT

APPENDIX C: NVS FACT SHEET

National Veterinary Stockpile Questions & Answers

Subject: **NVS Push Packages**

Q. What does the term "push pack" mean?

A. We refer to our first shipment as a 24-hour push package: "24-hour" because the shipment will arrive within 24 hours of APHIS' order to deploy, "push" because a State need only tell us basic information, and we will ship (i.e. push) what it needs to continue responding to a damaging animal disease.

- The number of responders the State is fielding to determine the amount of personal protective equipment (PPE) and disinfectant to provide.

- The disease to determine if it is zoonotic, which in turn determines the type of highly protective equipment for responders in the push pack.

- The species to determine the type of depopulation equipment the State may need.

- The affected population (infected an exposed) to determine the amount of depopulation equipment the State may need.

Q. How large is a push pack and what does it contain?

A. The size and composition of a push pack will depend on information the State provides when it requests our help. Here's how we determine the composition and size of a push package:

- Personal protective equipment and disinfectant
- We round the number of responders the state will field up to the nearest multiple of 10.
- If, for instance, the State declares it is fielding 12 responders, we round the number up to 20.
- We use the following table to determine the number and type of modules to deploy for every multiple of 10 responders. Each module of PPE contains kits of all PPE items a responder will need. It protects 10 responders changing 5 times a day for 10days.
- Personal Protective Equipment Disinfectant

High respiratory protection (zoonotic)	**Standard (non-zoonotic)**
1 Tyvek module (2 TWa)	1 Tyvek module (2 TW)
1 gray Tychem module (1 TW)	1 module (1 TW) n-95 Respirators, gloves, boots
1 PAPRb module (1 TW) a. Tri-wall container b. Powered air purifying respirators	1 yellow Tychem module (1 TW)

• Depopulation equipment: We will work with the State to determine their depopulation equipment needs and the availability of trained personnel to use the equipment.

  - If the State has personnel trained to use the equipment, we deploy the equipment to State for use.
  - If the State needs the equipment but does not have the personnel who are trained to use it, we deploy the equipment with one of our 3D contractors to support the State.
- Pharmaceuticals/Veterinary Biologics: Whether a push package contains pharmaceuticals such as prophylactic antivirals to protect responders or animal vaccines to protect and stop the spread of disease will depend on the disease and, in the case of vaccines, a joint stakeholder decision to vaccinate.

Q. Will all components in a push package arrive together?
A. Probably not. All components will deploy from NVS logistics centers closest to the outbreak, but the centers will depend on the components in a push package. PPE and disinfectant, for instance, will come from one center, depopulation equipment from another, and pharmaceuticals from other centers.

The time in which the components arrive will also vary. PPE and disinfectant modules will arrive within 24 hours. Depopulation equipment will arrive shortly thereafter. Vaccines will arrive after a decision has been made to vaccinate.

Q. How do you pack a push package?
A. We pack the majority of a push package in weather-resistant, triwall containers. Triwalls are made of triple thick cardboard that can protect contents against moderate rain for a short period. Each triwall has a snap-lock top that can be easily removed and a pallet base that provides easy movement by forklifts or pallet jacks.

We pack like items together in each triwall to help warehouse personnel find and pick specific items responders need. All Tychem PPE, for instance, is packed in one tri-wall and Tyvek PPE in another.

Q. How do you identify items in a push package?
A. We color code and manifest tri-walls and other items in our push pack so warehouse workers can offload and place like items together in the warehouse and find and pick the items when responders request them.

- **Blue** - Personal protective equipment
- **White** - Disposal and decontamination equipment and supplies
- **Gray** - Animal handling equipment for depopulation
- **Yellow** - Biologicals, pharmaceuticals, and related supplies (e.g., vaccines, antivirals, and vaccination supplies)
- **Green** - Powered Air Purifying Respirators (PAPRs)
- **Pink** - General supplies.

We append a detailed manifest to the outside of each tri-wall that identifies the contents of the triwall to help warehouse workers receive everything in our shipment.

Q. Do push packages have to be stored in a temperature-controlled environment?

A: The storage requirement for a push package will depend on its contents. Antiviral medications require storage between 14°C - 30°C. Vaccines require refrigeration at 2°C - 8°C. Neither can be frozen.

Q. Does a push package require covered storage?
A. Although our triwalls can withstand some exposure to rain for a short period, we recommend you store them under covered storage as soon as possible.

Q. Do I need special tools/equipment to unpack a push package?
A. No. Our triwalls have a snap-lock top that can be easily removed.

Q: I don't know much about the NVS. What does it do? What are its responsibilities?
A: The National Veterinary Stockpile (NVS) is the nation's repository of supplies, vaccines, equipment, and other critical veterinary resources. Established by Homeland Security Presidential Directive 9 and operational in 2006, we are able to deploy large quantities of veterinary resources anywhere in the continental U.S. within 24 hours. We exist because of the nation's concern after 9/11 that terrorists could release animal diseases of catastrophic proportions that would • deplete State and local response inventories, • generate surge material requirements that would overwhelm traditional commercial sources, and • prevent unaffected States from providing significant help for fear of the threat crossing their borders.

Q: If I have more questions, how do I get answers?
A: Email us at **nvs@aphis.usda.gov.** We will respond quickly.

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APPENDIX D: STATUTORY REQUIREMENTS AND AUTHORITIES

Questions were posed by Region 1 responders that they would like to see answered prior to the final planning meeting for HLS Region 9 (November 8, 2011)

Ensure the exercise design team and facilitators understand the statutory requirements and authorities.

Related to this was a question from Public Works about who gives authority and permission to dig a hole to bury carcasses on private and/or public lands (i.e. the land owner, or does someone else have to authorize this action)?

Answer from Attorney General's Office:

"First, the land owner (public or private) has to grant permission for the people and equipment to be on the property in order to dig the hole. Whether or not a state agency can gain access to the property when the owner refuses permission to enter depends on the situation. For example, WSDA's authority to gain entrance to property in an animal disease situation is described in RCW 16.36.060.

The second issue is whether the animal can be buried or should be disposed of in another manner. WSDA law and rules generally allow burial of animals that die of disease (see RCW 16.36.102 and chapter 16-25 WAC). But animals that die from a reportable disease (or are destroyed because of exposure to disease) need to be disposed of in manner approved by the State Vet. See WAC 16-25-030. FMD is a reportable disease so in an emergency response situation, mandatory instructions on disposal will likely be issued by WSDA (or USDA under comparable federal laws)."

In addition, local ordinances and environmental laws may also restrict the methods of disposal allowable in certain areas."

Statutory requirements and authorities

"RCW 43.23.070
Powers and duties of state veterinarian.

The state veterinarian shall exercise all the powers and perform all duties prescribed by law

relating to diseases among animals and the quarantine and destruction of diseased animals.

The state veterinarian shall enforce and supervise the administration of all laws relating to meat inspection, the prevention, detection, control and eradication of diseases of animals, and all other matters relative to the diseases of livestock and their effect upon the public health."

"RCW 16.36.010

Quarantine — Hold order.

(1) The director *(WSDA)* shall supervise the prevention of the spread and the suppression of infectious, contagious, communicable, and dangerous diseases affecting animals within, in transit through, and imported into the state.

(2) The director may issue a quarantine order and enforce the quarantine of any animal or its reproductive products when any animal or its reproductive products are affected with or have been exposed to disease or when there is reasonable cause to investigate whether any animal or its reproductive products are affected with or have been exposed to disease, either within or outside the state. Overt disease or exposure to disease in any animal or its reproductive products need not be immediately obvious for a quarantine order to be issued or enforced. The quarantine shall remain in effect as long as the director deems necessary.

(3) The director may issue a hold order when:

(a) Overt disease or exposure to disease in an animal is not immediately obvious but there is reasonable cause to investigate whether an animal is diseased or has been exposed to disease;

(b) Import health papers, permits, or other transportation documents required by law or rule are not complete or are suspected to be fraudulent; or

(c) Further transport of an animal would jeopardize the well-being of the animal or other animals in Washington state.

A hold order is in effect for fourteen days and expires when released by the director or no later than midnight on the fourteenth day from the date of the hold order. A hold order may be replaced with a quarantine order for the purpose of animal disease control.

(4) Any animal or animal reproductive product placed under a quarantine or hold order shall be kept separate and apart from other animals designated in the instructions of the quarantine or hold order, and shall not be allowed to have anything in common with other animals.

(5) The expenses of handling and caring for any animal or animal reproductive product placed under a quarantine or hold order are the responsibility of the owner.

(6) The director has authority over the quarantine or hold area until the quarantine or hold

order is released or the hold order expires.

(7) Any animal or animal reproductive product placed under a quarantine or hold order may not be moved, transported, or sold without written approval from the director or until the quarantine or hold order is released, or the hold order expires.

(8) The director may administer oaths and examine witnesses and records in the performance of his or her duties to control diseases affecting animals."

"RCW 16.36.090

Destruction of diseased or quarantined animals.

When public welfare demands, the director *(WSDA)* may order the slaughter or destruction of any animal affected with or exposed to any contagious, infectious, or communicable disease that is affecting or may affect the health of the state's animal population. The director may order destruction of any animal held under quarantine when public welfare demands or the owner of the animal fails or refuses to follow a herd or flock plan. The director shall give a written order directing an animal be destroyed by or under the direction of the state veterinarian."

"RCW 16.36.102

Duty to bury carcass of diseased livestock — Dead livestock presumed diseased.

Every person owning or having in charge any livestock that has died because of disease shall dispose of the carcass within a time frame and in a manner prescribed in rule by the director *(WSDA)*, which may include, but is not limited to, burial, composting, incinerating, landfilling, natural decomposition, or rendering. Any livestock found dead from an unknown cause is presumed to have died because of disease."

"RCW 43.06.220

State of emergency — Powers of governor pursuant to proclamation.

(1) The governor after proclaiming a state of emergency and prior to terminating such, may, in the area described by the proclamation issue an order prohibiting:

(a) Any person being on the public streets, or in the public parks, or at any other public place

during the hours declared by the governor to be a period of curfew;

(b) Any number of persons, as designated by the governor, from assembling or gathering on the public streets, parks, or other open areas of this state, either public or private;

(c) The manufacture, transfer, use, possession or transportation of a molotov cocktail or any other device, instrument or object designed to explode or produce uncontained combustion;

(d) The transporting, possessing or using of gasoline, kerosene, or combustible, flammable, or explosive liquids or materials in a glass or uncapped container of any kind except in connection with the normal operation of motor vehicles, normal home use or legitimate commercial use;

(e) The possession of firearms or any other deadly weapon by a person (other than a law enforcement officer) in a place other than that person's place of residence or business;

(f) The sale, purchase or dispensing of alcoholic beverages;

(g) The sale, purchase or dispensing of other commodities or goods, as he or she reasonably believes should be prohibited to help preserve and maintain life, health, property or the public peace;

(h) The use of certain streets, highways or public ways by the public; and

(i) Such other activities as he or she reasonably believes should be prohibited to help preserve and maintain life, health, property or the public peace.

(2) The governor after proclaiming a state of emergency and prior to terminating such may, in the area described by the proclamation, issue an order or orders concerning waiver or suspension of statutory obligations or limitations in any or all of the following areas as further specified and limited by chapter 181, Laws of 2008:

(a) Liability for participation in interlocal agreements;

(b) Inspection fees owed to the department of labor and industries;

(c) Application of the family emergency assistance program;

(d) Regulations, tariffs, and notice requirements under the jurisdiction of the utilities and transportation commission;

(e) Application of tax due dates and penalties relating to collection of taxes; and

(f) Permits for industrial, business, or medical uses of alcohol.

(3) In imposing the restrictions provided for by RCW 43.06.010,

and 43.06.200 through 43.06.270, the governor may impose them for such times, upon such conditions, with such exceptions and in such areas of this state he or she from time to time deems necessary.

(4) Any person willfully violating any provision of an order issued by the governor under this section is guilty of a gross misdemeanor."

"WAC 16-25-030

Disposal of livestock that have died from a reportable disease.

The carcass of a livestock animal that has died from a reportable disease must be disposed of in consultation with the state veterinarian. The list of reportable diseases and reporting requirements are found in chapter 16-70 WAC." **Note: Foot and Mouth Disease is found in WAC 16-70.**

"WAC 16-25-040

General emergency authority.

If the state veterinarian determines there is an animal health emergency, the state veterinarian has the authority to specify the method of disposal and place additional requirements for the disposal of carcasses of livestock animals that die of disease or are euthanized to prevent the spread of disease."

DRAFT Governor's Proclamation – Language

(Coordinated with EMD, WSDA, and Attorney General's Office)

DRAFT – Governor's Proclamation

PROCLAMATION BY THE GOVERNOR

WHEREAS, Foot-and-Mouth disease (FMD) is a severe, highly communicable viral disease of cattle, sheep, swine, and other cloven-hoofed animals that has the potential to spread rapidly in the surrounding area and cause severe economic losses in the production of meat, milk and other animal products; and,

On *[insert date(s)]*, a case of FMD was *[or "x number of cases of FMD were"]* confirmed to exist by the Director of the Washington State Department of Agriculture in [_____ County*[ies]] [or "throughout the state"]*; and,

Due to the highly communicable nature of FMD and its potential for spreading rapidly, this outbreak threatens the life, health and property of our citizens, as well as the state of Washington, and is a public disaster that affects life, health, property or the public peace *[in all jurisdictions of Washington State] [or "in (list counties affected, which may potentially include more than just those counties in which it has actually been found) Counties"]*; and,

Under the authority of RCW 16.36, the Washington State Department of Agriculture is establishing quarantine areas and inspection points, issuing quarantine and hold orders, developing and implementing procedures to prevent the disease from spreading, working closely with other state agencies and local jurisdictions to coordinate supporting resources, and continuing to assess the risks, threats and geographic scope of this outbreak; and,

The Washington State Military Department activated the state Emergency Operations Center in response to the outbreak of FMD, initiated implementation of emergency response procedures under Emergency Support Function 11 regarding Animal Health Events of the *Washington State Comprehensive Emergency Management Plan*, and coordinated resources to support local officials in alleviating the immediate social and economic impacts to people, property, and infrastructure, and is continuing to assess the magnitude of the incident.

NOW THEREFORE, I, Christine O. Gregoire, Governor of the state of Washington, find that as a result of the aforementioned outbreak of FMD and under the provisions of RCW 38.08, 38.52 and 43.06, do hereby proclaim that a State of Emergency exists *[in the counties of _____, _____and _____] //or// [throughout the State of Washington]* and direct the plans and procedures of the *Washington State Comprehensive Emergency Management Plan* be implemented. State agencies and departments are directed to utilize state resources and to do everything reasonably possible to assist affected political subdivisions in an effort to respond to and recover from the outbreak.

Under the provisions of RCW 38.08.040, I also hereby order into active state service the organized militia of Washington State to include the National Guard and the State Guard, or part thereof as may be

necessary in the opinion of the Adjutant General, to perform such duties as directed by competent authority of the Washington Military Department. Additionally, the Washington State Military Department, Emergency Management Division, is instructed to coordinate all state emergency-related assistance to the affected areas.

Under the provisions of RCW 43.06.220(1), to preserve and maintain life, health, property or the public peace, I also hereby prohibit the transportation or movement of cloven-hoofed animals, the products of such animals, and all materials that such animals may have been in contact with in a manner inconsistent with quarantine areas, orders and inspection points established by the Director of the Department of Agriculture under RCW 16.36 regarding this FMD outbreak.

All persons are advised of potential criminal penalties for violation of this order pursuant to RCW 43.06.220 and RCW 38.52.150, and violation of RCW 16.36 pursuant to RCW 16.36.110.

Signed and sealed with the official seal of the state of Washington this _____ day of _____, A.D. Two Thousand _____ at Olympia, Washington.

By:

_____
Governor of Washington

BY THE GOVERNOR:

_____
Secretary of State

DRAFT – Governor's Proclamation