

Interim
Foot-and-Mouth Disease Response Plan
National Park Service

Prepared
together
by:

The National Park Service
Biological Resource
Management Division

The National Park Service
National Incident
Management Team

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Executive Summary

What is the danger of foot-and-mouth?

Foot-and-mouth disease (FMD) is a highly contagious disease of cloven-hoofed domestic animals that can infect wildlife species and can be carried by humans. Humans very rarely contract FMD and it is not life threatening.

Foot-and-mouth disease primarily affects the productivity of livestock. The economic consequences of losing disease-free status and the measures taken to regain it are substantial.

The effects of FMD on cloven-hoofed wildlife are highly variable and not well tested on North American species. Measures taken to control FMD pose a potential threat to wildlife in national parks and to the economies of communities near them.

What is in this Response Plan?

This Interim Response Plan recommends actions to be taken at the park level if FMD occurs in North America and is close enough to an NPS unit that restrictions are imposed on animal movement or on park visitors. The Plan provides methods of FMD identification. It also addresses two different circumstances: first, if a park is within a surveillance or movement control zone and second, if a park is within an FMD infected zone.

What to do if an NPS unit is in a foot-and-mouth disease surveillance zone.

A surveillance or movement control zone is delineated to prevent the potential rapid spread of the disease. The FMD coordinators, assigned for each park and region, should identify what resources in the park, particularly any livestock, may be affected.

Communication with other agencies, particularly the USDA Animal and Plant Health Inspection Service and the state veterinarian, is critical. The FMD coordinators should consult their park-specific list of appropriate local contacts. Information should be provided to all employees and the public.

In consultation with the FMD coordinator and park management, NPS units could conduct targeted disease surveillance as outlined in this Plan.

What to do if an NPS unit is in a foot-and-mouth disease infection zone.

If foot-and-mouth disease is confirmed in an NPS unit, park staff should analyze the situation or order an Incident Management Team, if necessary.

The FMD incident should be managed in accordance with enabling legislation, agency policies, park purpose and significance, and management goals.

Introduction

BACKGROUND

Historical and Scientific Information

Foot-and-mouth disease (FMD) is a highly contagious viral disease of domestic cloven-hoofed animals. It may also affect wildlife species including deer, elk, moose, caribou, bighorn sheep, mountain goats, bison, pronghorn antelope, javelina, and feral pigs. Infection causes blisters on the mouth and feet of susceptible animals. The FMD virus is spread by direct contact, and by indirect contact with contaminated items. The virus is hardy and survives best in a cool, damp environment.

Foot-and-mouth disease is not native to or currently present in North America. The outbreak of FMD in Europe and other parts of the world has heightened concern in the United States. Although FMD is not usually lethal in animals and does not usually affect humans, the disease is of concern because of its potential for economic impact.

If FMD was identified in livestock in the United States, regulatory agencies would likely respond with immediate slaughter of infected animals and other animals in contact with them. During the first two months of the outbreak in the United Kingdom the number of confirmed cases increased from 1 to 1400. More than 2,000,000 domestic animals were destroyed to prevent the spread of disease.

The impacts of FMD on wildlife would likely be both direct and indirect. While FMD may cause some direct mortality to wildlife, the greatest impact may be actions taken on wildlife to protect livestock. During the last U.S. outbreak of FMD in the 1920s, approximately 22,000 deer were killed in California as part of the plan to eradicate the disease in livestock.

National Park Service Management Considerations

Park managers have an opportunity to consider potential disease response actions before an outbreak occurs in North America. This plan considers the following:

- Potential impairment of park resources, including actions recommended for disease control.
- Viable populations of wildlife and plants in parks, in accordance with each park's purpose and significance.
- Visitor experiences in parks, in accordance with each park's purpose and significance.
- Economic loss to communities and the private sector from either animal destruction or travel restrictions.

PURPOSE OF THIS PLAN

General Purposes

Should an outbreak of foot-and-mouth disease occur in or near a park, that park is likely to be involved in a coordinated response with other agencies. Many of these agencies will want decisions made immediately and actions taken quickly.

The primary purpose of this National Park Service Interim Foot-and-Mouth Disease Response Plan is to provide guidance for park managers and staff in the event of an outbreak near a park. This plan can help park managers consider the impacts to park resources and visitor experiences that proposed actions could cause.

The Incident Command System is ideally suited for managing complex situations, including those involving multiple jurisdictions and agencies. This plan provides information, prototypes, and samples of incident management materials that can assist parks and incident responders in properly managing a foot-and-mouth disease incident.

Relationship with Policy and Compliance

This plan is not intended to establish or modify NPS or individual park policy. *The applicability of legal constraints and obligations, policy requirements, applicable definitions (such as impairment) and strategic management goals must be considered when planning actions.*

Operational personnel and scientists reviewed this plan. However, in order to have guidance available before a critical situation arises, this plan has been prepared quickly, without the normal full review. These plans should be considered "highly recommended advice" to parks and are entitled "interim" documents. If concern over FMD continues for more than twelve months, the Biological Resource Management Division (BRMD) will consider a full review of the Plan and prepare any needed compliance.

Preparation

TRAINING AND REFERENCE MATERIAL FOR IDENTIFYING FOOT-AND-MOUTH DISEASE

Introduction

Foot-and-mouth disease (FMD) is a highly contagious viral disease of domestic cloven-hoofed animals that may also affect wildlife. While most domestic cloven-hoofed animals exhibit similar clinical signs of the disease, species-specific variation can occur and little is known about the clinical response of North American wildlife species to FMD.

Clinical Signs

Clinical signs and lesions are not specific to FMD. Trauma or other diseases (vesicular stomatitis, epizootic hemorrhagic disease, bluetongue) can cause similar lesions. Secondary bacterial infections can change the appearance of FMD lesions or there is a possibility that no lesions at all may be present. Confirmation of diagnosis is based on laboratory testing of collected samples from suspect animals.

Because of the variability in clinical presentation, park staff is encouraged to make the best field assessment possible and call expert assistance as needed. The most classic clinical signs and lesions of FMD for domestic livestock are described below.

Acute clinical signs in domestic livestock that may be noted in live animals:

1. Lameness
 - a. "Walking on eggs" – arched back, head held low (except newborns)
 - b. Limping or lack of use of a limb
 - c. Licking or shaking of the feet
 - d. Reluctance to rise or run
2. Excessive salivation
3. Fuzzy appearance, especially on the face, due to fever

Lesions that may be observed on examination:

1. Vesicles (blisters) or ulcerations in the mouth (tongue, lips, palate) or nose.
2. Vesicles or ulcerations on the feet around or between the hooves.
3. A break or fault in the hoof wall as it grows out.

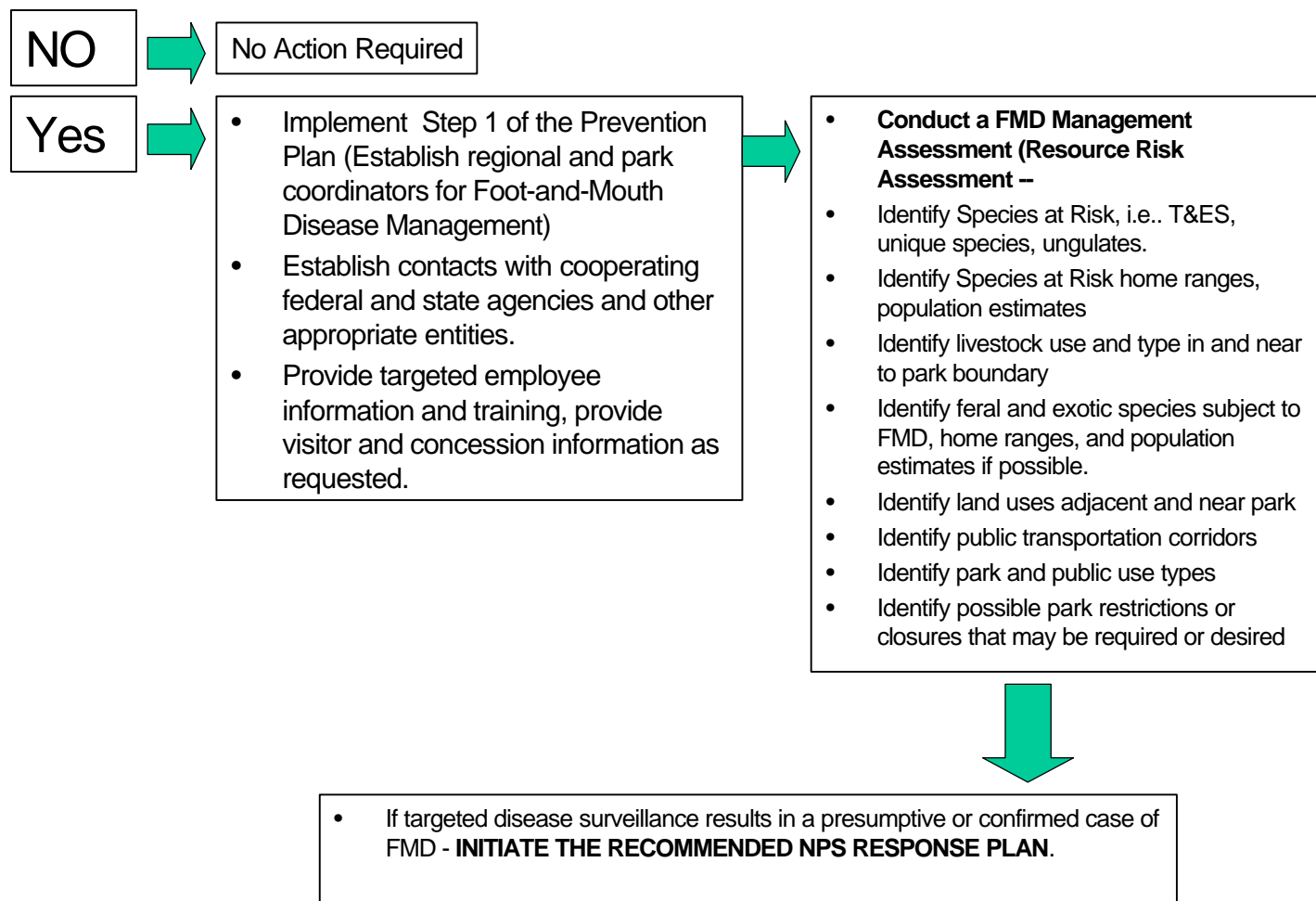
Species Susceptibility

Species	Susceptible	Concerns
Humans	No	In very rare cases human infection has occurred. Humans can spread the disease on the body, clothing, shoes, or gear.
Domestic Sheep	Yes	Act as the maintenance host. In sheep the lesions can be mild and difficult to detect, however, the animal is contagious to other animals.
Pigs	Yes	Act as amplifiers of FMD virus. Pigs produce 30 to 100 times more virus in aerosol than do sheep or cattle.
Cattle	Yes	Cattle act as the indicator species. Clinical signs develop more rapidly and are more severe than lesions in sheep, goats, or pigs.
Goats	Yes	
Llamas	Yes	
Horses, mules, burros	No	Resistant to FMD, however, they can spread the virus on their body or particularly in organic material on their hooves.
Wildlife Cloven-hoofed animals	Likely	Potentially susceptible species: Deer, elk, moose, caribou, bighorn sheep, mountain goats, bison, pronghorn antelope, javelina, feral pigs, exotic deer species
Birds	No	Birds are not susceptible to FMD but can mechanically transmit the virus on their beaks or feathers. This is of particular concern with birds that form large flocks around agricultural areas.

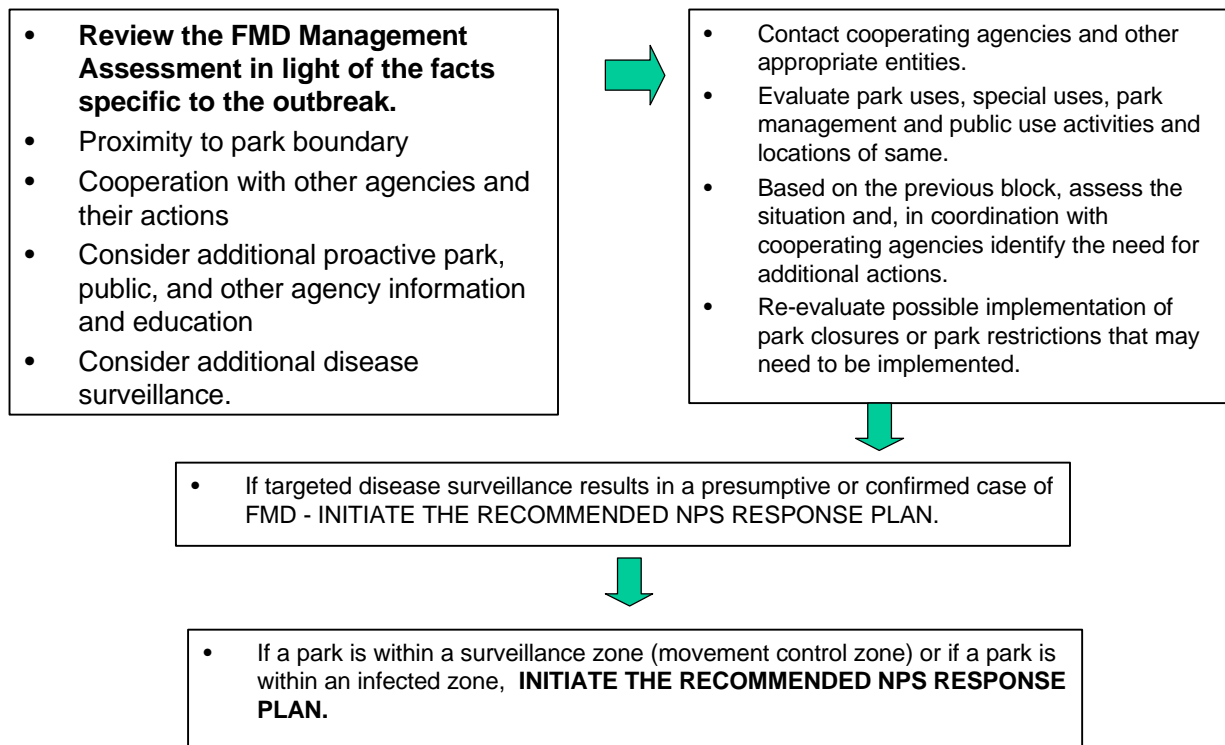
DECISION KEY (Recommend actions for consideration) for Response Plan

- This decision key has been developed to assist or provide guidance to managers in determining when or whether to move from the foot-and-mouth prevention planning stage to the foot-and-mouth response stage. The process starts with a prevention plan (a limited measured response designed to provide park managers with the necessary information to identify and implement appropriate management actions and concerns
- Park Managers should be advised that should a presumptive or confirmed case of FMD be identified in or adjacent to the United States that the USDA, Animal and Plant Health Inspection Service (APHIS) may create (establish) Movement Control Zones and Infected Zones which may include units of the National Park Service. Should such movement or infected zones be established by APHIS, NPS units may be required to go directly to implementing all or portions of the NPS Response Plan. In order to establish and maintain a measured response, communications between NPS and cooperators is essential.

A foot-and-mouth health alert recognizes that there is an **increased risk** of FMD entering the North American continent, Hawaii, and U.S. Territories through livestock, wildlife, humans, mechanical or other means.



Foot-and-Mouth Disease is **presumptive**, or **confirmed** to be present in the North American continent, Hawaii, or U.S. Territories.



WHAT TO DO IF SOMEONE IS REPORTING A SICK ANIMAL TO YOU

DEFINITION: An FMD suspect is a cloven-hoofed animal with lesions or blisters on the mouth, nose, or feet consistent with FMD. Other diseases can produce similar signs. FMD diagnosis is confirmed or refuted based on laboratory analyses of samples collected from suspect animals. Dead animals without lesions consistent with FMD are not considered FMD suspects unless other unique circumstances as determined by animal health officials exist.

CONSIDERATIONS: Park staff is encouraged to perform targeted disease surveillance for FMD (see Targeted Surveillance Program below) as recommended by the park FMD coordinator. Extreme care must be used to avoid spread of disease from the suspect animal to other animals.

RECOMMENDED ACTIONS

STEP 1: Contact the appropriate animal health officials.

If possible, make calls from the site to avoid possible transmission of the disease. If the FMD suspect is a domestic livestock animal, contact your private veterinary practitioner and the appropriate FMD coordinators.

If the FMD suspect is a free-ranging wildlife species (native, exotic, feral), contact:

1. Appropriate FMD coordinator
2. State veterinarian's office (see Contact and Notification Lists)
3. USDA APHIS area veterinarian-in-charge (AVIC) (see Contact and Notification Lists)

APHIS may dispatch a foreign animal disease diagnostician (FADD) to investigate.

STEP 2: Secure the area in accordance with the instructions of the experts contacted in step 1.

Use personal protective equipment (coveralls, gloves, boots) and good hygiene practices when handling an FMD suspect animal. Follow directions of the experts for securing the area, handling the carcass, and disinfecting the area. If possible, simply monitor the area to keep visitors and animals away from the carcass until the foreign animal disease diagnostician arrives. Use extreme caution to minimize possible contamination of equipment, vehicle, or yourself with the virus and follow-up with disinfection and avoidance of other susceptible animals. Mark, disinfect, and secure the collection area as instructed.

STEP 3: Coordinate initial actions with cooperating agencies.

The foreign animal disease diagnostician will use clinical signs, history, and professional experience to classify the suspect as unlikely, possible, or highly likely. Based on this classification and in consultation with the state veterinarian's office and APHIS AVIC, the foreign animal disease diagnostician will recommend management actions to the park. Strongly consider implementing these recommendations until diagnostic tests refute or confirm FMD. If FMD is confirmed, implement the full response plan.

YOUR PARK IS IN A DISEASE SURVEILLANCE OR MOVEMENT CONTROL ZONE: MEASURED RESPONSE

DEFINITION: The park is within the boundaries of a surveillance or movement control zone but not within the infected zone of a presumptive or confirmed case of FMD. The infected zone extends at least 6 miles beyond the presumptive or confirmed premises. The surveillance or movement control zone surrounds the infected zone.

CONSIDERATIONS: Park managers are encouraged to implement a measured response based on the park's assessment of potential disease transmission from the infected zone of a presumptive or confirmed FMD case. Based on this assessment, park staff may consider implementing response actions. The state veterinarian or APHIS could request parks, located within a surveillance zone, to implement the state's response plan. Park staff should consider these requests based on the NPS mission, park enabling legislation, other applicable policy, and this Response Plan.

RECOMMENDED ACTIONS

STEP 1: Contact cooperating agencies and organizations.

Contact the appropriate agencies, organizations, or entities. As part of the Prevention Plan, park units have previously identified resources at risk, developed an appropriate contact list specific to their park, and made introductory notifications to individuals.

Depending on park unit resources at risk, five broad categories may guide the minimum level of contacts to initiate (see Table 1).

Table 1. Categories guiding contacts with other agencies and organizations.

Resources at risk	Recommended minimum level of contact
No livestock, wildlife, cultural, or visitor resources at risk	No additional contact needed.
No livestock, wildlife, or cultural resources at risk but visitor activities at risk (hiking trails, commercial travel lanes)	Contact appropriate park and regional personnel, State Veterinarian, and AVIC for potential road, trail, or movement closures.
Cultural resources at risk plus one or more of the following: livestock, wildlife, or visitor activities.	Contact appropriate park and regional personnel, State Veterinarian, AVIC, and State Historic Preservation Office (SHPO).
Livestock at risk plus possibly one or more of the following: wildlife, cultural, or visitor activities.	Contact appropriate park and regional personnel, State Veterinarian, and AVIC. Additional agencies or entities as needed.
Wildlife at risk plus possibly one or more of the following: livestock, cultural resources, visitor activities.	Contact park and regional personnel, State Veterinarian, AVIC, state wildlife agency contact, and additional agencies or entities.

STEP 2: Conduct a situation analysis, including incident complexity, and order incident resources as needed.

- A. Gather as many facts about the incident as possible, using the Situation Analysis form (see form under the “Prototype Incident Management Materials” heading). Be sure to consider the potential and forecasted effects. Ask yourself, what could happen, as well as likely to happen, in the next two weeks? The next month?
- B. Use the “Factors” column on the Incident Complexity Guide form (also located under “Prototype Incident Management Materials” heading) to review the facts from the Situation Analysis.
- C. Contact your regional incident management coordinator and discuss the situation. Include type 2 or type 1 incident commanders in the decision process, as appropriate.
- D. Looking at the typical characteristics of each factor, decide which of the characteristics listed under the “type” columns best describes your incident. Remember, no single incident will have all of the factors under just one of the “type” columns.
- E. Determine the complexity based upon the preponderance of factor characteristics identified. See the instructions for the Complexity Guide.
- F. Order incident resources, including an Incident Management Team, if needed. One of the benefits of the Incident Command System is that if the situation changes, you can always transition to a more complex or less complex management structure. You should place the orders through your local or zone dispatch center (same system that is used to order fire resources).

STEP 3: Review existing plans and policy documents.

- A. Review the plans and policy documents applicable to the management of your park. These may include:
 - Enabling legislation
 - Park Strategic Plan
 - Resource Management Plan
 - General Management Plan
 - Concessions Plans, Agreements and Contracts
 - Visitor Service Plans
 - Compliance Policies
 - Land Protection Plans
 - Cooperative Agreements

- B. Consult with your park's legal, policy, and technical experts to determine the appropriate management approach to the situation.

STEP 4: Take actions in coordination with cooperating agencies.

- A. Work with cooperating agencies to determine the appropriate actions.

- B. Potential objectives.

- Control and/or eradicate this outbreak of foot-and-mouth disease.
- Provide for the safety of the public, agency and incident personnel.
- Minimize negative impacts to private and public property, resources, recreation, businesses, and individuals.
- Provide accurate and timely information to agency and incident personnel and the public.
- Keep costs commensurate with incident needs.

- C. Potential strategies.

- Provide education to workers, residents and the public.
- Establish infected and surveillance/movement control zones.
- Close areas in or near the established disease zones.
- Restrict human travel, activities and uses in or near disease zones.
- Limit the movement of animals in or near disease zones.
- Require the decontamination of humans, equipment and other property being moved from disease zones.
- Exclude or eliminate livestock in disease zones.
- Control feral and non-native species in or near disease zones.
- Vaccinate animals in or near the disease zones.
- Reduce or depopulate wildlife in disease zones.

Refer to the "Sample Incident Objectives and Strategies" under the "Prototype Incident Management Materials" heading for more complete information.

YOUR PARK IS IN AN INFECTED ZONE: FULL RESPONSE

DEFINITION: The park is within the boundaries of an infected zone, i.e., when an FMD presumptive or confirmed case is diagnosed within park boundaries or a part of the park falls within an infected zone from a case outside the park.

CONSIDERATIONS: The state veterinarian or APHIS could request the park located within an infected zone to implement the state's response plan. Park staff should consider these requests based on the NPS mission, park enabling legislation, other applicable policy, and this Response Plan.

RECOMMENDED ACTIONS

STEP 1: Notify cooperating agencies and organizations.

Contact the appropriate agencies, organizations, or entities. As part of the Prevention Plan, park units have previously identified resources at risk, developed an appropriate contact list specific to their park, and made introductory notifications to individuals.

Depending on park unit resources at risk, five broad categories may guide the minimum level of contacts to initiate (Table 2). Except for extraordinary cases, all minimal contacts should include the regional and park FMD coordinators, state veterinarians, and APHIS AVIC. The park FMD coordinators may recommend additional contacts depending on discussions with a park staff and a park unit's visitor and resource situation.

Table 2. Categories guiding contacts with other agencies and organizations.

Resources at risk	Recommended minimum level of contact
No livestock, wildlife, cultural, or visitor resources at risk.	Contact appropriate park and regional personnel, AVIC and state veterinarian to identify possible requests of resources.
No livestock, wildlife, or cultural resources at risk but visitor activities at risk (hiking trails, commercial travel lanes)	Contact appropriate park and regional personnel, State Veterinarian, and AVIC for potential road, trail, or movement closures.
Cultural resources at risk plus possibly one or more of the following: livestock, wildlife, or visitor activities.	Contact appropriate park and regional personnel, State Veterinarian, AVIC, and State Historic Preservation Office (SHPO).
Livestock at risk plus possibly one or more of the following: wildlife, cultural, or visitor activities.	Contact appropriate park and regional personnel, State Veterinarian, and AVIC. Additional agencies and entities as needed.
Wildlife at risk plus possibly one or more of the following: livestock, cultural resources, visitor activities.	Contact park and regional personnel, State Veterinarian, AVIC, state wildlife agency, and additional agencies or entities.

STEP 2: Conduct a situation analysis, including incident complexity, and order incident resources, including an Incident Management Team if needed.

- A. Gather as many facts about the incident as possible, using the Situation Analysis form (see form under the “Prototype Incident Management Materials” heading). Be sure to consider the potential and forecasted effects. Ask yourself, what could happen, as well as likely to happen, in the next two weeks? The next month?
- B. Use the “Factors” column on the Incident Complexity Guide form (also located under “Prototype Incident Management Materials” heading) to review the facts from the Situation Analysis.
- C. Contact your regional incident management coordinator and discuss the situation. Include type 2 or type 1 incident commanders in the decision process, as appropriate.
- D. Looking at the typical characteristics of each factor, decide which of the characteristics listed under the “type” columns best describes your incident. Remember, no single incident will have all of the factors under just one of the “type” columns.
- E. Determine the complexity based upon the preponderance of factor characteristics identified. See the instructions for the Complexity Guide.
- F. Order incident resources, including an Incident Management Team, if needed. One of the benefits of the Incident Command System is that if the situation changes, you can always transition to a more complex or less complex management structure. You should place the orders through your local or zone dispatch center (same system that is used to order fire resources).

STEP 3: Take initial containment actions in coordination with cooperating agencies.

- A. Work with cooperating agencies, especially APHIS, to determine appropriate actions that should be taken.
- B. Potential initial actions:
 - Establish infected and surveillance/movement control zones
 - Close areas in or near the established disease zones.
 - Restrict human travel, activities and uses in or near disease zones.
 - Exclude or eliminate livestock in disease zones.
 - Set up decontamination stations for humans, equipment and other property being moved from disease zones.
 - Limit the movement of animals in or near disease zones.
 - Provide education to workers, residents and the public.

STEP 4: Manage the incident in accordance with law, policy, and management goals.

A. Review the plans and policy documents that are applicable to the management of your park. These may include:

- Enabling legislation
- Park Strategic Plan
- Resource Management Plan
- General Management Plan
- Concessions Plans, Agreements and Contracts
- Visitor Service Plans
- Compliance Policies
- Land Protection Plans
- Cooperative Agreements

Consult with legal, policy, and technical experts to determine your park's appropriate management approach to the situation.

- B. Complete a written Delegation of Authority for the incoming Incident Commander (see sample delegation under the heading "Prototype Incident Management Materials"). Be sure to include all critical policy and management considerations in the document. *NOTE:* This plan recommends managing an outbreak incident under unified command with the other agencies (such as APHIS) and the sample delegation is written from that perspective. However, if other agencies do not wish to operate under unified command, the delegation should be rewritten to reflect only NPS interests.
- C. The Agency Administrator (Park Superintendent) and the initial Incident Commander (IC) should brief the incoming IC or Incident Management Team (IMT). The Superintendent's briefing should focus on management considerations. The initial IC's briefing would normally be more concerned with field issues.
- D. Park staff should work with the IMT to properly manage the incident. Additional materials that can assist incident management personnel are provided in the next section of this plan.

Prototype Incident Management Materials

The materials in this section are offered as samples, prototypes, and guidelines for the management of a FMD incident. At the time of an actual incident, the Agency Administrator (usually the Superintendent or acting) would prepare the delegation of authority. The IMT would determine objectives, strategies, and tactics and resources.

Sample materials included:

- Foot-and-Mouth Disease Situation Analysis form
- Incident Complexity Guide
- Sample delegation of authority
- Sample listing of incident objectives and strategies
- Sample incident information checklist and strategy
- Incident management considerations
- Sample Incident Action Plan

FOOT-AND-MOUTH DISEASE SITUATION ANALYSIS	Park Name:	Prepared by (Name and Title):	Date and Time Prepared
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Geographic Factors	
Describe the location of the source (attach map)	Give GPS or other coordinates
Describe the Disease Surveillance or Movement Control Zone (attach map)	Describe the Infected Zone (attach map)
List the facilities or transportation routes in the Disease Surveillance or Movement Control Zone:	List the facilities or transportation routes in the Infected Zone:
Describe the topography of the zones:	List accessibility problems:
Landownership Issues:	Land Use Issues:

Human Factors	
Describe known hazards or other safety considerations:	
Describe visitor and/or public uses that may be affected in or near a park:	
What restrictions are in place: <input type="checkbox"/> Area closures <input type="checkbox"/> Travel restrictions <input type="checkbox"/> Decontamination requirements	Details of restrictions:
Describe the actual or potential socio-economic effects:	
Describe the level of media attention and political interest:	Describe the likelihood of protest actions:

Resource Factors	
What is at risk (see Vulnerability Assessment): <input type="checkbox"/> Unique ungulate species <input type="checkbox"/> Other ungulates <input type="checkbox"/> T+E species <input type="checkbox"/> Unique plant communities <input type="checkbox"/> Livestock <input type="checkbox"/> Cultural resources <input type="checkbox"/> Feral populations <input type="checkbox"/> Other _____	Describe the risks (see Vulnerability Assessment in the FMD Prevention Plan):
Describe other natural resource issues or considerations:	
Describe other cultural resource issues or considerations:	

Incident Management Factors			
How many people are likely to be involved?	What size is the incident area?	Are air operations likely to be involved?	Are other incidents occurring in the area?
Describe potential safety considerations:			
Describe policy issues and considerations:			
Describe likely logistical problems:			
Describe the current and forecast weather and its projected effect on the situation:			
What is the availability of resources? <input type="checkbox"/> Good <input type="checkbox"/> Fair – other incidents are occurring <input type="checkbox"/> Poor – competition for resources is strong	Summarize the overall situation in the country:		

NATIONAL PARK SERVICE · Incident Management Program • INCIDENT COMPLEXITY GUIDE

FACTOR	TYPE 3	TYPE 2	TYPE 1
Resources	<ul style="list-style-type: none"> •mostly local resources •small to moderate number •used to working together •variety of resources not of issue •local resources generally qualified and experienced 	<ul style="list-style-type: none"> •moderate number •many resources arrived pre-organized •moderate variety of different kinds of resources •some ordering difficulties •may be a lack of qualified resources locally 	<ul style="list-style-type: none"> •large number •large number of single resources that need to be organized •there may be span of control issues to be resolved •wide variety of different kinds of resources •serious/severe ordering difficulties
Political sensitivity/visibility and consequences	<ul style="list-style-type: none"> •local significance 	<ul style="list-style-type: none"> •high local/regional significance 	<ul style="list-style-type: none"> •national/ international significance
Variety of activities involved in incident	<ul style="list-style-type: none"> •encompasses a small to moderate variety of activities •activities are generally standard for local operations 	<ul style="list-style-type: none"> •encompasses a moderate variety of activities 	<ul style="list-style-type: none"> •encompasses a wide variety of activities
Costs/source of money	<ul style="list-style-type: none"> •uses well established funding mechanisms 	<ul style="list-style-type: none"> •WASO budget office may be involved •possibility of needing supplemental appropriation 	<ul style="list-style-type: none"> •WASO budget office is likely to be involved •there is a definite possibility of needing supplemental appropriation
Number of agencies and organizations involved	<ul style="list-style-type: none"> •small to moderate number 	<ul style="list-style-type: none"> •moderate number 	<ul style="list-style-type: none"> •large number
Scope of agreements and contracts	<ul style="list-style-type: none"> •agreements and contracts are in place and useable, or are not needed •incident operations are well within local capabilities 	<ul style="list-style-type: none"> •some or most agreements and contracts exists and are useable •a small number may need to be written 	<ul style="list-style-type: none"> •large number of agreements and contracts need to be developed and implemented •very large contracts may need to be developed (Level IV Warrant)
Logistic difficulties	<ul style="list-style-type: none"> •within local capabilities or can be easily solved 	<ul style="list-style-type: none"> •problems can be resolved through normal procedures and channels •incident activities may be dispersed over a wide geographic area 	<ul style="list-style-type: none"> •special interventions with outside organizations may be needed to solve logistics problems •logistics may need to be branched
Safety complexity	<ul style="list-style-type: none"> •most identified risks can be mitigated by standard procedures 	<ul style="list-style-type: none"> • most identified risks can be mitigated by standard procedures 	<ul style="list-style-type: none"> •significant research may be needed to identify risks or appropriate litigations •large number of assistant safety officers may be required
Media interest / complexity	<ul style="list-style-type: none"> •low to moderate local or regional significance 	<ul style="list-style-type: none"> •high local/regional significance •most information is straight forward 	<ul style="list-style-type: none"> •national / international significance •potential for highly sensitive information or circumstances
Size of area involved	<ul style="list-style-type: none"> •incident facilities and operational work sites are relatively close together 	<ul style="list-style-type: none"> •moderate number of scattered incident facilities and or operational work sites. 	<ul style="list-style-type: none"> •large number of widely scattered incident facilities and operational work sites.
Duration or other impacts to unit operations	<ul style="list-style-type: none"> •short duration or •variety of resources not of issue 	<ul style="list-style-type: none"> •normal operations may be disrupted for a prolonged period of time 	<ul style="list-style-type: none"> •normal operations may be disrupted for a very prolonged period or may not be possible until the incident is resolved
Air operations	<ul style="list-style-type: none"> •the local agency is prepared to properly manage the air resources needed to manage the incident 	<ul style="list-style-type: none"> •the local agency is not prepared to manage the air resources needed 	<ul style="list-style-type: none"> • the local agency is not prepared to manage the air resources needed •aviation complexity may require OAS or FAA intervention to resolve issues

Product of the National Park Service Incident Management Steering Committee • April, 2001

INCIDENT COMPLEXITY GUIDE, Instructions and Definitions

INSTRUCTIONS FOR USING THIS GUIDE

1. Gather as many facts about the incident as possible, using the “factors” column to help identify the information needed.
2. Contact your regional incident management coordinator and discuss the situation with her or him. Include type 2 or type 1 incident commanders in the decision process, as appropriate.
3. Looking at the typical characteristics of each factor, decide which of the characteristics listed under the “type” columns best describes your incident. Remember, usually no one incident will have all of the factors fall under just one of the “type” columns.
4. Determine the complexity based upon the column under which the preponderance of factor characteristics fall. For example, if most of the characteristics are best described by the type 2 column, then the incident is probably of type 2 complexity. But, also consider mitigating as well as aggravating circumstances. For example, an analysis of agency participation in the 2002 Olympics in Salt Lake City seemed to have a number of type 1 characteristics, such as international significance and world-wide media attention. However, further inspection of these factors showed that they were NOT an agency responsibility and should not force the incident to type 1. Conversely, the President’s three week vacation in Grand Teton National Park meant high-level political involvement with significant media attention over an extended period, driving an otherwise type 2 incident to type 1.
5. Order incident resources, including an Incident Management Team, if needed, accordingly. Remember, one of the benefits of the Incident Command System is that if you were wrong, or if the situation changes, you can always transition to a more complex or lower complex management structure as needed.

INFORMATION REGARDING INCIDENT TYPES

Type 5 incidents are relatively simple incidents that are usually handled by one resource. Examples:

- motor vehicle accident with no injuries investigated by a single police officer
- small grass fire extinguished by a single engine.

Type 4 incidents are those normally encountered by an agency or jurisdiction and are normally managed by the initial responding resources. Examples:

- multi-vehicle accident with injuries, handled by multiple resources.
- single-alarm working building fire.

Type 3 incidents are incidents that may require more resources in addition to those that initially responded and/or the timeframes for managing the incident are extended. (Some large parks may maintain organized type 3 Incident Management Teams.) Examples:

- lost person search extending over several operational periods.
- one-day dignitary visit.
- multiple alarm structural fire.

Type 2 incidents are incidents of significant complexity exhibiting characteristics shown by the factors listed on the reverse side of this sheet. These incidents are usually managed by regionally organized type 2 Incident Management Teams. Examples:

- impacts from moderate to large disaster, such as a hurricane, flood, tornado or earthquake.
- large special event or ceremony.

Type 1 incidents are the most complex incidents, often involving multiple kinds of activities, a large area of operation or significant political involvement. These incidents are usually managed by a nationally organized type 1 Incident Management Team. Examples:

- impacts from a large disaster, such as a hurricane, flood, tornado or earthquake.
- large special event or ceremony with national or international significance.

SAMPLE DELEGATION OF AUTHORITY

Memorandum

To: Incident Commander, NPS Incident Management Team
From: Superintendent, [name of park]
Subject: Delegation of Authority, Foot-and-Mouth Disease Response

You are hereby assigned to manage the incident related to this outbreak of Foot-and-Mouth Disease in (insert name of NPS Unit). You have full authority and responsibility for managing incident activities within the framework of law, regulation, Service and park policy, this Delegation, and guidance provided in the initial and subsequent briefings.

Specific direction and management considerations for this incident are:

1. For the safety of incident personnel and the public, identify hazards and assess and mitigate risks before taking actions.
2. Coordinate incident management, including priority setting, through Unified Command.
3. Protect private and public property and resources, basing actions on analysis of values at risk. Prevent, mitigate, or otherwise minimize resource impacts resulting from incident situations or operations.
4. Work with park staff to ensure that all incident operations are in compliance with all laws, regulations, and policies. Record and document plans and actions for Park's historical archives.
5. Provide accurate and timely information to incident personnel, cooperating agencies and the public.
6. Keep costs commensurate with incident needs. Coordinate reimbursable costs with cooperating agencies as required. Develop a request for emergency funding and provide the necessary documentation. Coordinate finance with the Park administrative staff.
7. I appoint _____ to serve as my Agency Advisor. She/He has full authority to make decisions in my stead. Park personnel may be assigned to the incident. Coordinate their availability with Agency Advisor.
8. Make all out-of-area resource orders directly with _____ Dispatch.
9. Prepare a list, to be used for letters of appreciation, of any cooperative agencies, and their personnel that are assigned to the incident.
10. Ensure that as incident facilities are released back to the Park that they are cleaned and put back to good order. Work with the Park staff to refurbish any equipment and incident kits upon completion of their use.
11. Notify me 24 hours in advance of the closeout of your management of the incident.
12. Meet with me personally for a closeout meeting prior to your departure.

Superintendent,

Date

FOOT-AND-MOUTH DISEASE OUTBREAK

Sample Incident Objectives and Strategies

1. Control and/or eradicate this outbreak of Foot-and-Mouth Disease, consistent with legislation and agency policies.

Alternative strategies to evaluate. In most instances, multiple strategies will be employed simultaneously. In coordination with cooperating agencies, pick those strategies that best accomplish the objective while still complying with legal constraints, policy requirements and management goals:

Potential Strategy	Considerations
1. Providing education to workers, residents and the public.	<ul style="list-style-type: none"> • One of the most cost-effective, and most likely, strategies.
2. Identify the boundaries of and establish both an infected zone and a surveillance/movement control zone.	<ul style="list-style-type: none"> • Actual zones will be established by APHIS. • APHIS may be willing to negotiate some aspects of the zones, especially toward the outer boundaries.
3. Completely close all or part of either the infected zone or the surveillance/ movement control zone.	<ul style="list-style-type: none"> • Would have significant impacts on facilities, employees and residents in the closed area(s).
4. Restrict human travel, activities and uses in either the infected zone or the surveillance/ movement control zone.	<ul style="list-style-type: none"> • Could have significant impacts on the local tourist industry and retail trade. • Restrictions may vary considerably, especially if used in conjunction with mitigating strategies such as decontamination.
5. Limiting the movement of animals in and around established zones.	<ul style="list-style-type: none"> • Could have significant impacts on the local livestock industry. • Limitations may vary considerably.
6. Require the decontamination of humans, equipment and other property being moved out of the infected zone or the surveillance/ movement control zone.	<ul style="list-style-type: none"> • May be used as a mitigating strategy to reduce the need for travel restrictions. • Will likely be required for incident personnel and equipment.
7. Exclude or eliminate livestock in either the infected zone or the surveillance/ movement control zone.	<ul style="list-style-type: none"> • Would have significant impacts on the local livestock industry. • The most likely strategy to be used by APHIS.
8. Control feral and non-native species in either the infected zone or the surveillance/ movement control zone.	<ul style="list-style-type: none"> • May or may not meet legal or policy requirements and management goals for parks or state wildlife management agencies. • Consider bringing in expert assistance. • Could be operationally difficult to carry out.
9. Vaccinate animals within the infected zone or the surveillance/ movement control zone.	<ul style="list-style-type: none"> • Research suggests that this strategy is not very effective, especially given the effort and expense that would be required to carry it out. • Consider bringing in expert assistance. • Operationally, this could be a very difficult strategy to carry out
10. Reduce or depopulate infected wildlife in either the infected zone or the surveillance/ movement control zone.	<ul style="list-style-type: none"> • May or may not meet legal or policy requirements and management goals for parks or state wildlife management agencies. • Could have significant impacts on wildlife populations for years to come. • Research is inconclusive as to the efficacy of this strategy. Consider bringing in expert assistance. • Consider other strategies or combinations of strategies to avoid this choice, if needed. • Could be operationally difficult to carry out.

2. Provide for the safety of the public, agency and incident personnel.

Strategies:

- Analyze all planned operational tactics and logistical arrangements to identify likely hazards and performance errors. Plan and implement actions to remove or mitigate the hazards and errors.
- Use only standard and approved procedures for all activities.
- Use only qualified personnel for specialized procedures and techniques.

3. Minimize negative impacts to private and public property, resources, recreation, businesses and individuals.

Strategies:

- Determine the types of unacceptable impacts.
- Conduct an impact review of all planned actions. Analyze proposed operational tactics to identify impacts on property, natural and cultural resources, residents, visitors and other members of the public. Identify those actions that will result in unacceptable impacts and either alter the action or take mitigating steps to prevent the impacts.

4. Provide accurate and timely information to agency and incident personnel and the public.

Strategies:

- Develop and implement an Information Plan for target audiences.
- Fulfill each request for information from other sources on a case-by-case basis.

5. Keep costs commensurate with incident needs.

Strategies:

- Use local resources to the extent possible.
- Require Section Chief approval for all orders.
- Provide instruction to incident personnel regarding proper ordering procedures.
- Require that all personnel follow standard ICS ordering procedures.
- Require justification for unusual or expensive requests.

SAMPLE INCIDENT INFORMATION CHECKLIST AND STRATEGY

Checklist:

Is there a park Public Information/Public Affairs Officer or is it someone's collateral duty? This person may have an existing information strategy and list of contacts, i.e. media, elected officials, key community members, neighboring agencies, etc.

If not, assign this role to a staff member who has experience dealing with the public. Even if a team comes in to manage the incident, having a park person available to work with the information function is invaluable as a source of local knowledge and it facilitates the dissemination of information to park staff and others.

Is there a website manager? This person will be a valuable asset to the incident.

Make a list of phone, fax numbers and/or email addresses of important contacts, i.e. concessioner representatives, elected officials, special interest groups, park partners, neighboring agencies and others who will want/need information and updates on situation. If a media contact list is not available, compile a list of the newspapers, TV and radio stations that serve the area surrounding the park.

Determine information center location(s) at the park, if appropriate facilities exist. Will park employees provide the staffing, or will additional resources need to be ordered?

Example of an information strategy:

Situation: *brief statement on who, what, where, when*

An outbreak of the highly contagious foot-and-mouth disease (FMD) is occurring in or near the park. The NPS is activating its response plan, which provides options for actions to protect the park's wildlife resources from further (or possible) infection.

Communication Objectives: *measurable and attainable*

Provide timely and updated information to the target audiences on the actions the park is taking related to the threat or presence of FMD. This information can include press releases, community and park bulletin boards, public meetings, and information centers.

Target groups: *who are you communicating with?*

Park employees

Park concessioners, cooperating associations, other park partners

Incident management staff (if different from park staff)

Local residents in surrounding/gateway communities

Inholders

Business permit holders

Cooperating agencies (APHIS, USDA Forest Service, state fish and game, state veterinarians, county sheriff, state highway patrol)
Elected officials
Special interest groups (environmental, animal rights, outfitters and guide association)
News media

Information Center Location:

Use park visitor center(s) or public information office, if possible. Otherwise establish center at Incident Command Post or appropriate location (needs to have access and phone lines). Consider how many information centers are needed (i.e., a center may be needed at each entrance).

Communication Methods: *use as many as appropriate*

Establish information centers to provide information in person or over the phone.

Establish information bulletin boards in areas utilized by park visitors and in local communities. Consider providing roving information staff in high use areas.

Provide information to local residents and businesses by distributing updates in person via door to door handouts.

Utilize existing park web site or create one for incident. Update daily or as situation changes.

Key Messages: *significant points you want to get across*

This disease affects cloven-hoofed domestic livestock and wildlife and can spread rapidly. The National Park Service is being proactive and prudent in preventing the disease from entering the park and/or assisting (working in cooperation with) other agencies with containment.

The wildlife resources of the National Park System are significant and protecting them is an integral portion of the agency's mission. Wildlife viewing is a major visitor activity in national parks and many parks provide habitat for endangered and threatened species.

At the same time, the NPS recognizes that the disease poses a large-scale threat and economic harm to the livestock and tourist industries.

A measured, rational response to the threat of FMD is required so that impacts on the park and the surrounding area are appropriate to the degree of threat.

Monitor all types of media:

Check newspapers for coverage
Monitor TV and radio coverage
Feedback from employees, visitors, local residents, and officials
Information gathered from community/park contacts
Hits on web site

INCIDENT MANAGEMENT CONSIDERATIONS

Unified Command

- Definition: a command structure that provides for all agencies or individuals who have jurisdictional responsibility, either geographical or functional, to jointly manage an incident through a common set of objectives.
- In the case of foot-and-mouth disease, the Animal and Plant Health Inspection Service (USDA APHIS) is the lead agency for national response to the disease. While the NPS must be responsive to the concerns of APHIS, a park does not give up its fundamental mission to protect park resources. NPS authority is not relinquished to APHIS; rather, planned actions must be jointly negotiated through a unified process.
- A park manager may delegate incident management to an Incident Management Team (IMT) or Unified Command by means of a signed Delegation of Authority.

Safety Officer

- Obtain briefings from APHIS and public health officials to understand hazards, risks, and mitigation strategies
- Be sure to inform all incident personnel of the true risk factors and required mitigation strategies involved in FMD management
- Order enough Assistant Safety Officers to monitor logistical functions as well as operations in the field

Information Officer (refer to the Incident Information Checklist and Strategy)

Operations Section Chief

- Confer with local subject matter experts and the Situation Unit on current incident conditions (wildlife, humans, topography, access, road conditions).
- Many personnel may be new to ICS. Briefings on organization, chain-of-command, terms, ordering procedures may be required
- Maintain lines of communication to track the status of resources (human and supplies/equipment)
- Check on any upcoming events (festivals, hunting seasons, etc.) that may significantly impact the incident, the park unit, surrounding area, and neighboring communities

Planning Section Chief

- Consider providing briefing packets in addition to the Incident Action Plan
- Field Observers may be very useful in locating and tracking wildlife
- Documentation will be extremely important. Consider preparing an Incident History for publication
- Technical specialists may be assigned to Operations or Planning.

Logistics Section Chief

- Incident security is likely to be an Operations function although security for facilities and supplies/equipment caches may be required
- It is likely that area closures will require incident base facilities to be located a substantial distance from operational areas
- Multiple agencies will be involved and communications could be a significant challenge
- Consider ordering a technical specialist to manage disinfection, decontamination, and disposal
- Ground support may require a substantial number of vehicles for moving live animals or carcasses
- Fencing materials may be required; a fencing crew may work for Logistics or Operations and need to coordinate with Resource Advisors

Finance Section Chief

- Comps/Claims issues may arise.
- Tort claims (Form SF-95) may arise from private citizens
- SEMA and FEMA may be involved
- Multiple agency involvement will result in complex accounting
- Prepare reimbursable accounts as needed
- Check for existing cooperative agreements

Foot-and-Mouth Disease Outbreak
At Your Park

SAMPLE INCIDENT ACTION PLAN
Operational Period: [insert date and times]

INCIDENT OBJECTIVES	1. INCIDENT NAME Foot-and-Mouth Disease Outbreak	2. DATE PREPARED	3. TIME PREPARED										
4. OPERATIONAL PERIOD (DATE/TIME) [insert date and times of operational period here]													
5. INCIDENT OBJECTIVES <ol style="list-style-type: none"> 1. Control and/or eradicate this outbreak of foot-and-mouth disease, consistent with legislation and agency policy. 2. Provide for the safety of the public, agency and incident personnel. 3. Minimize negative impacts to private and public property, resources, recreation, businesses and individuals. 4. Provide accurate and timely information to incident and agency personnel and the public. 5. Keep costs commensurate with incident needs. 													
6. WEATHER FORECAST FOR OPERATIONAL PERIOD [insert latest weather forecast here]													
7. GENERAL/SAFETY MESSAGE [insert pertinent general safety information here]													
8. ATTACHMENTS (☒ IF ATTACHED) <table border="0" style="width: 100%;"> <tr> <td>☒ - ORGANIZATION LIST (ICS 203)</td> <td>☒ - SAFETY MESSAGE</td> </tr> <tr> <td>☒ - DIVISION ASSIGNMENT LISTS (ICS 204)</td> <td>☐ - INCIDENT MAP</td> </tr> <tr> <td>☒ - COMMUNICATIONS PLAN (ICS 205)</td> <td>☐ - TRAFFIC MAP</td> </tr> <tr> <td>☒ - MEDICAL PLAN (ICS 206)</td> <td>☐ - UNIT LOG (ICS 214) (Turn in to Planning at end of period)</td> </tr> <tr> <td>☒ - AIR OPERATIONS SUMMARY</td> <td></td> </tr> </table>				☒ - ORGANIZATION LIST (ICS 203)	☒ - SAFETY MESSAGE	☒ - DIVISION ASSIGNMENT LISTS (ICS 204)	☐ - INCIDENT MAP	☒ - COMMUNICATIONS PLAN (ICS 205)	☐ - TRAFFIC MAP	☒ - MEDICAL PLAN (ICS 206)	☐ - UNIT LOG (ICS 214) (Turn in to Planning at end of period)	☒ - AIR OPERATIONS SUMMARY	
☒ - ORGANIZATION LIST (ICS 203)	☒ - SAFETY MESSAGE												
☒ - DIVISION ASSIGNMENT LISTS (ICS 204)	☐ - INCIDENT MAP												
☒ - COMMUNICATIONS PLAN (ICS 205)	☐ - TRAFFIC MAP												
☒ - MEDICAL PLAN (ICS 206)	☐ - UNIT LOG (ICS 214) (Turn in to Planning at end of period)												
☒ - AIR OPERATIONS SUMMARY													
202 ICS 3/80	9. PREPARED BY (PLANNING SECTION CHIEF)	10. APPROVED BY (INCIDENT COMMANDER)											

ORGANIZATION ASSIGNMENT LIST <i>ICS-203</i>	DATE PREPARED	TIME PREPARED
Foot-and-Mouth Disease Outbreak Incident	OPERATIONAL PERIOD (DATE/TIME)	
<p style="text-align: center;">INCIDENT COMMAND AND STAFF</p> <p>Unified Incident Commanders Information Officer Safety Officer Agency Representatives USDA APHIS State Dept. of Wildlife State Veterinarian Other state or Federal agencies Tribes Non-Governmental Organizations Concessions</p>	<p style="text-align: center;">OPERATION SECTION</p> <p>Operation Chief Division A Division B [as many as needed] Animal Management Group [other groups as needed]</p>	
<p style="text-align: center;">PLANNING SECTION</p> <p>Planning Section Chief Resource Unit Leader Situation Unit Leader Documentation Unit Leader Demobilization Unit Leader Technical Specialists: Wildlife Veterinarian Wildlife Biologist Cultural Resource Specialist</p>	<p style="text-align: center;">AIR OPERATIONS BRANCH</p> <p>Air Ops Branch Director Fixed-wing Coordinator Helicopter Manager Helibase Manager</p>	
<p style="text-align: center;">LOGISTICS SECTION</p> <p>Logistics Chief Communications Unit Leader Medical Unit Leader Ground Support Unit Leader Facilities Unit Leader Food Unit Leader</p>	<p style="text-align: center;">FINANCE SECTION</p> <p>Finance Section Chief Time Unit Leader Procurement Unit Leader Comp/Claims Unit Leader Cost Unit Leader</p>	
PREPARED BY (Resource Unit Leader)		Date/time:

1. BRANCH ----	2. DIVISION/GROUP A	DIVISION ASSIGNMENT LIST (ICS) 1/82					
3. INCIDENT NAME Foot-and-Mouth Disease Outbreak			4. OPERATIONAL PERIOD DATE TIME				
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF _____		DIV/GROUP SUPERVISOR _____					
BRANCH DIRECTOR _____		AIR ATTACK SUPERVISOR NO. _____					
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE/ RESOURCE DESIGNATOR	LEADER	NO. OF PERSONS	TRANS. NEEDED	DROPOFF PT/TIME	PICKUP PT/TIME		
Law Enforcement Unit		1	No	As Assigned	As Assigned		
Law Enforcement Unit		1	No	As Assigned	As Assigned		
Law Enforcement Unit		1	No	As Assigned	As Assigned		
Law Enforcement Unit		1	No	As Assigned	As Assigned		
Law Enforcement Unit		1	No	As Assigned	As Assigned		
7. CONTROL OPERATIONS							
<ul style="list-style-type: none"> • Restrict travel in the following areas: • Conduct foot and horse patrols and post lookouts to prevent people from entering the infected area. • Post closure signs at main access points. • Observe domestic livestock and wildlife activities and report such activities to the Operations Section Chief as appropriate. 							
8. SPECIAL INSTRUCTIONS							
Division Supervisor will notify the Operations Section Chief of any breach of the closed area immediately. Ensure that biosafety/decontamination protocols are followed when moving from one area to another. Keep a supply of information packets available to distribute to the public as needed.							
9. DIVISION/GROUP COMMUNICATION SUMMARY							
FUNCTION	FREQ	SYST.	CHAN	FUNCTION	FREQ.	SYSTEM	CHAN.
TACTICAL/LOCAL							
COMMAND/ REPEATER				[insert radio information here]	TX		
					RX		
PREPARED BY (Resources Unit Leader)		APPROVED BY (Planning Section Chief)		DATE		TIME	

1. BRANCH	2. DIVISION/GROUP	DIVISION ASSIGNMENT LIST			
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----	B	(ICS) 1/82					
3. INCIDENT NAME Foot-and-Mouth Disease Outbreak		4. OPERATIONAL PERIOD DATE TIME					
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF _____	DIV/GROUP SUPERVISOR _____						
BRANCH DIRECTOR _____	AIR ATTACK SUPERVISOR NO. _____						
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE/ RESOURCE DESIGNATOR	LEADER	NO. OF PERSONS	TRANS. NEEDED	DROPOFF PT/TIME	PICKUP PT/TIME		
Law Enforcement Unit		1	No	As Assigned	As Assigned		
Law Enforcement Unit		1	No	As Assigned	As Assigned		
Law Enforcement Unit		1	No	As Assigned	As Assigned		
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FUNCTION	FREQ	SYST.	CHAN	FUNCTION	FREQ.	SYSTEM	CHAN.
TACTICAL/LOCAL							
COMMAND/ REPEATER				[insert radio information here]	TX		
					RX		
PREPARED BY (Resources Unit Leader)	APPROVED BY (Planning Section Chief)			DATE	TIME		

1. BRANCH ----	2. DIVISION/GROUP Animal Management Group	DIVISION ASSIGNMENT LIST (ICS) 1/82
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3. INCIDENT NAME Foot-and-Mouth Disease Outbreak				4. OPERATIONAL PERIOD DATE TIME			
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF _____			DIV/GROUP SUPERVISOR _____				
BRANCH DIRECTOR _____			AIR ATTACK SUPERVISOR NO. _____				
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE/ RESOURCE DESIGNATOR	LEADER	NO. OF PERSONS	TRANS. NEEDED	DROPOFF PT/TIME	PICKUP PT/TIME		
Law Enforcement Unit		1	No	As Assigned	As Assigned		
Wildlife Biologist		1	No	As Assigned	As Assigned		
Wildlife Veterinarian		1	No	As Assigned	As Assigned		
Control Specialist		1	No	As Assigned	As Assigned		
Hazardous Materials Specialist		1	No	As Assigned	As Assigned		
Disposal Team		4	No	As Assigned	As Assigned		
7. CONTROL OPERATIONS <ul style="list-style-type: none"> • Limit animal movement in the park by rounding up and penning domestic animals. • Fence wildlife routes as assigned. • Observe domestic livestock and wildlife activities and report such activities to the Operations Section Chief as appropriate. 							
8. SPECIAL INSTRUCTIONS Ensure that biosafety/decontamination protocols are followed when moving from one area to another. Keep a supply of information packets available to distribute to the public as needed.							
9. DIVISION/GROUP COMMUNICATION SUMMARY							
FUNCTION	FREQ	SYST.	CHAN	FUNCTION	FREQ.	SYSTEM	CHAN.
TACTICAL/LOCAL							
COMMAND/ REPEATER				[insert radio information here]	TX		
					RX		
PREPARED BY (Resources Unit Leader)		APPROVED BY (Planning Section Chief)			DATE		TIME

INCIDENT RADIO COMMUNICATIONS PLAN			1. INCIDENT NAME Foot-and-Mouth	2. DATE/TIME PREPARED	3. OPERATIONAL PERIOD (DATE/TIME)
4. BASIC RADIO CHANNEL UTILIZATION					
SYSTEM/CACHE	CHANNEL	FUNCTION	FREQUENCY/TONE	ASSIGNMENT	REMARKS
		Operations			
		Contingency Tactical			
		Command			
		Logistics			
205 ICS 9/86	5. PREPARED BY (COMMUNICATIONS UNIT)				

MEDICAL PLAN	1. INCIDENT NAME Foot-and-Mouth Outbreak	2. DATE PREPARED	3. TIME PREPARED	4. OPERATIONAL PERIOD				
	5. INCIDENT MEDICAL AID STATIONS							
MEDICAL AID STATIONS		LOCATION		PARAMEDICS				
				YES		NO		
None								
6. TRANSPORTATION								
A. AMBULANCE SERVICES								
NAME	ADDRESS		PHONE	PARAMEDICS				
				YES		NO		
B. INCIDENT AMBULANCES								
NAME	LOCATION			PARAMEDICS				
				YES		NO		
7. HOSPITALS								
NAME	ADDRESS	TRAVEL TIME		PHONE	HELIPAD		BURN CENTER	
		AIR	GRD		YES	NO	YES	NO
8. MEDICAL EMERGENCY PROCEDURES								
<p>Minor injuries will be treated by on-site ambulance crews. If anyone becomes seriously injured or ill, locate, access, and stabilize the patient. If the patient is in a hazardous location, remove the hazard, if possible, or move the patient away from the hazard. Notify the Operations Section Chief and request medical assistance. Ambulance transport will be to the _____ Hospital.</p>								
206 ICS 8/78		9. PREPARED BY (MEDICAL UNIT LEADER)			10. REVIEWED BY (SAFETY OFFICER)			

AIR OPERATIONS SUMMARY		1. INCIDENT NAME Foot-and-Mouth Outbreak		2. OPERATIONAL PERIOD		3. DISTRIBUTION HELIBASES _____ FIXED WING BASES _____			
4. PERSONNEL AND COMMUNICATIONS		NAME	AIR/AIR FREQUENCY	AIR/GROUND FREQUENCY		5. REMARKS (Spec. Instructions, Safety Notes, Hazards, Priorities)			
AIR OPER. DIRECTOR		_____	_____	_____		<p>All personnel will wear personal protective equipment and be briefed on safe helicopter operations by qualified personnel.</p> <p>Priority will be given to any mission involving a threat against life.</p> <p>Reconnaissance flights will be scheduled as needed.</p>			
AIR ATTACK SUPER.		_____	_____	_____					
HELICOPTER COOR.		_____	_____	_____					
AIR TANKER COOR.		_____	_____	_____					
_____		_____	_____	_____					
_____		_____	_____	_____					
6. LOCATION/ FUNCTION	7. ASSIGNMENT	8. FIXED WING		9. HELICOPTERS		10. TIME		11. AIRCRAFT ASSIGNED	12. OPERATING BASE
		NO.	TYPE	NO.	TYPE	AVAIL.	COM- MENCE		
13. TOTALS			1						
220 ICS 3/82 NFFS 1351		14. AIR OPERATIONS SUPPORT EQUIPMENT						15. PREPARED BY (Include Date & Time)	

Foot-and-Mouth Disease Outbreak

Safety Message

- **STAY OUT** of the infected zone unless you are specifically assigned to conduct tasks within that zone.
- **Be sure to drink plenty of fluids and work with your incident supervisor to schedule breaks in hot weather.**
- **There may be an unusual number of vehicles in the area. Watch yourself around traffic.**
- **Be aware of your surroundings at all times, especially when walking on or near roads with traffic moving!**
- **Watch your footing! You may encounter uneven surfaces, dense brush, uneven pavement, and stairs.**
- **Normal traffic patterns will be altered during the control of the disease. Stay alert!**
- **Ticks are numerous! Do a tick check after work, especially if your assignment was in wooded or grassy areas.**
- **Drive at speed limits and drive defensively.**
- **Consider other safety issues:**

Personal Protective Equipment (PPE).
Decontamination procedures.
Animal handling procedures and safety.
Firearms and immobilization drug safety.
Aviation safety issues, if needed.

LOOK UP

LOOK DOWN

LOOK AROUND

Targeted Surveillance Program for Foot-and-Mouth Disease

All park staff can be alert for animals that display signs of illness. Visitor reports of clinically ill or dead animals can be investigated. The species of concern for infection with FMD are cloven-hoofed animals including deer, elk, moose, caribou, bighorn sheep, mountain goats, bison, pronghorn, javelina, feral pigs, exotic deer species, and livestock.

Acute clinical signs of FMD in livestock that can be observed from a distance include:

1. Lameness
 - a. "Walking on eggs"- arched back, head held low, except for newborn
 - b. Limping or lack of use of a limb
 - c. Licking or shaking of the feet
 - d. Reluctance to rise or run
2. Excessive salivation
3. Fuzzy appearance, especially in the face, due to fever

These clinical signs may be less pronounced or absent in wildlife. Little is known about the clinical response of North American wildlife species to FMD. In addition, these clinical signs are not specific to FMD. Trauma or other diseases (e.g., hemorrhagic disease, vesicular stomatitis) can cause similar clinical signs. It is important that park staff discuss criteria for collection of potentially affected animals in advance and determine which employees are approved to make such decisions and collections.

Criteria for collection of suspect animals could be based on:

1. Species affected – cloven-hoofed animals are species of concern
2. Imminent threat of FMD
 - a. Proximity of nearest case of FMD
 - b. Climatic conditions favorable to FMD virus survival (cool, moist)
3. Confidence in diagnosis of clinical signs
4. Impact of collection on visitors relative to importance of collection
5. Impact of collection on resources relative to importance of collection
6. Proximity to livestock

If an animal is collected, human safety is of primary importance in the collection procedure. Additionally, humane standards should be followed by application of appropriate methods of collection (shooting with appropriate caliber firearm in the head, neck, or chest would be the preferred method).

If cloven-hoofed animals are collected due to clinical signs that are consistent with FMD, they should be examined post-mortem. Similarly, any carcass of a cloven-hoofed animal that is found dead should be examined for clues as to cause of death. Personal protective equipment (e.g., coveralls, gloves, boots) and good sanitation techniques should be used whenever handling sick or dead animals.

Examine the carcass for typical lesions of FMD which include:

1. Blisters or sores in the mouth (tongue, lips, palate) or nose
2. Blisters or sores on the feet around or between the hooves or a break or fault in the hoof wall as it grows out

Although these signs are not specific for FMD, if these signs are noted FMD cannot be ruled out so the animal should be considered an FMD suspect.

1. If clinical signs are not consistent with FMD, standard procedures for sample submission can be followed.
2. If a suspect animal is identified precautions and notification of appropriate individuals should occur. These include:
 - a. Notification. If possible call from the site:
 - i. Your identified park contact for FMD, your supervisor, or appropriate chain-of-command
 - ii. NPS contacts - Dr. Margaret Wild, Wildlife Veterinarian, BRMD, (970) 225-3593, Michael Coffey, Wildlife Biologist, BRMD, (970) 225-3553
 - iii. State veterinarians office (see Contact and Notification Lists)
 - iv. USDA APHIS Area Veterinarian-in-Charge (see Contact and Notification Lists)
 - b. Precautions
 - i. Anyone who comes in contact with the carcass is potentially contaminated with the virus. FMD is extremely rare in humans; however, contamination is a serious concern because humans can easily transport the virus to other susceptible animals.
 - ii. Do not move the carcass unless directed by experts.
 - iii. If possible, cover carcass to keep out of direct sunlight.
 - iv. Monitor the scene to keep visitors and scavengers away from the carcass.
 - v. Until a diagnosis is made, anyone in contact with the carcass should not go near other susceptible animals (wild or domestic).
 - vi. In some situations (inability to reach contacts, inability to control scene, delayed response by contacts) it may be necessary to move the carcass. If instructions cannot be obtained and carcass movement is required, it is recommended that personnel:
 1. Wear personal protective equipment (PPE) that can be removed after handling the carcass.
 2. Mark the collection site.
 3. Place a covering (e.g., trash bag) over the head and another around the feet and tape in place to minimize contamination of the surroundings.
 4. Cover the entire carcass, place in a truck or trailer, and transport to a secure location that is remote from other animals and where the carcass can stay cool but not frozen.
 5. Prior to leaving the collection site disinfect vehicle (including tires), remove and bag PPE, and disinfect shoes.
 6. If possible, disinfect collection site. If collection site cannot be immediately disinfected, consider monitoring the site to prevent access by visitors or animals.
 7. Dilute bleach solution or household vinegar are effective, readily available disinfectants. Ammonia products and phenolic disinfectants are not effective against FMD virus.

The response to a suspect animal will likely be as follows:

1. A foreign animal disease diagnostician (FADD; a veterinarian trained in foreign animal diseases) will be dispatched to:
 - a. Investigate the case
 - b. Collect samples for disease diagnosis
 - c. Implement initial control (e.g., disinfection, animal disposal)
2. Based on clinical signs, history, and professional experience, the FADD will classify the case as:
 - a. Unlikely - FADD may suggest voluntary quarantine until laboratory tests are completed. The park should consider this possibility and determine how the animal collection area should be secured.
 - b. Possible - FADD may suggest voluntary quarantine until laboratory tests are completed. The park should strongly consider this possibility and determine how the animal collection area should be secured.
 - c. Highly likely - The samples collected will be tested in an approved laboratory so that a presumptive diagnosis can be made within 24 hours. The FADD will consult with the state veterinarian and AVIC to determine the recommended approach. At this point, the park should:
 - i. Re-notify the NPS contacts.
 - ii. Review NPS Foot-and-Mouth Disease Response Plan.
 - iii. Secure the animal collection area.
 - iv. Discuss other management options with experts.
3. Diagnostic test results will classify the sample as:
 - a. Negative – No further action required, although it is recommended that investigation into the cause of blisters is pursued. Negative classification will most likely be made on the suspect sample but may be made on a presumptive positive case. Some likelihood exists that a false positive test result may be obtained in preliminary tests.
 - b. Presumptive positive – If preliminary tests are positive or if other epidemiological information is indicative of FMD the case will be classified as presumptive positive.
 - c. Confirmed positive – When the FMD virus is isolated and identified the case is classified as a confirmed positive. In this case activate this Interim Foot-and-Mouth Disease Response Plan.

Contact and Notification Lists

STATE VETERINARIAN OFFICES

State	State Vet	Phone	Fax
Alabama	Dr. Tony Frazier Acting Director	(334) 240-7255	(334) 223-7352
Alaska	Dr. Bert A. Gore	(907) 745-3236	(907) 745-8125
Arizona	Dr. Richard Willer	(602) 542-4293	(602) 542-4290
Arkansas	Dr. Conley Byrd	(501) 907-2400	(501) 907-2425
California	Dr. R.E. Breitmeyer	(916) 654-0881	(916) 653-2215
Colorado	Dr. Wayne Cunningham	(303) 239-4161	(303) 239-4164
Connecticut	Dr. Mary Jane Lis	(860) 713-2504	(860) 713-2515
Delaware	Dr. H.W. Towers, Jr.	(302) 739-4811	(302) 697-6287
Florida	Dr. Leroy Coffman	(850) 410-0900	(850) 410-0915
Georgia	Dr. Lee Myers	(404) 656-3671	(404) 657-1357
Hawaii	Dr. James Foppoli	(808) 483-7100	(808) 483-7110
Idaho	Dr. Bob Hillman	(208) 332-8540	(208) 334-4062
Illinois	Dr. R.D. Hull	(217) 782-4944	(404) 524-7702
Indiana	Dr. Bret D. Marsh	(317) 227-0300	(317) 227-0330
Iowa	Dr. John Schiltz	(515) 281-5306	(515) 281-6236
Kansas	Mr. George Teagarden Livestock commissioner	(785) 296-2326	(785) 296-1765
Kentucky	Dr. D.L. Notter	(502) 564-3956	(502) 564-7852
Louisiana	Dr. Maxwell Lea, Jr.	(225) 925-3980	(225) 925-6012
Maine	Dr. Chip Ridky	(207) 287-3701	(207) 287-7548
Maryland	Dr. Roger Olson	(410) 841-5810	(410) 841-5999
Massachusetts	Dr. Lorraine O'Connor	(617) 626-1791	(617) 626-1850
Michigan	Dr. Harry M. Chaddock (vet until Aug.)	(517) 373-1077	(517) 373-6015
Minnesota	Dr. Thomas J. Hagerty (until August)	(651) 296-2942	(651) 296-7417
Mississippi	Dr. James Watson	(601) 359-1170	(601) 359-1177
Missouri	Dr. John W. Hunt, Jr.	(573) 751-3377	(573) 751-6919
Montana	Dr. Arnold A. Gertonson	(406) 444-2043	(406) 444-1929
Nebraska	Dr. Larry Williams	(402) 471-2351	(402) 471-3252

Nevada	Dr. David Thain	(775) 688-1180	(775) 688-1178
New Hampshire	Dr. C.W. McGinnis	(603) 271-2404	(603) 271-1109
New Jersey	Dr. Ernest Zirkle	(609) 292-3965	(609) 777-8395
New Mexico	Dr. Steven England	(505) 841-6161	(505) 841-6160
New York	Dr. John P. Huntley	(518) 457-3502	(518) 485-7773
North Carolina	Dr. David Marshall	(919) 733-7601	(919) 733-6431
North Dakota	Dr. Larry Schuler	(701) 328-2655	(701) 328-4567
Ohio	Dr. R. David Glauer	(614) 728-6220	(614) 728-6310
Oklahoma	Dr. Burke Healey	(405) 521-3891	(405) 522-0756
Oregon	Dr. Andrew Clark	(503) 986-4679	(503) 986-4734
Pennsylvania	Dr. John I. Enck, Jr.	(717) 772-2852	(717) 787-1868
Rhode Island	Contact Division Chief	(401) 222-2781	(401) 222-6047
South Carolina	Dr. Jones W. Bryan	(803) 788-2260	(803) 788-8058
South Dakota	Dr. Sam Holland	(605) 773-3321	(605) 773-5459
Tennessee	Dr. Ronald Wilson	(615) 837-5120	(615) 837-5335
Texas	Dr. Linda Logan	(512) 719-0777	(512) 719-0719
Utah	Dr. Michael Marshall	(801) 538-7160	(801) 538-7169
Vermont	Dr. Todd Johnson	(802) 828-2421	(802) 828-2361
Virginia	Dr. Wm. M. Sims, Jr.	(804) 786-2481	(804) 371-2380
Washington	Dr. Robert Mead	(360) 902-1878	(360) 902-2087
West Virginia	Dr. Lewis Thomas	(304) 558-3214	(304) 348-2203
Wisconsin	Dr. Clarence Siroky	(608) 224-4872	(608) 224-4871
Wyoming	Dr. Jim Logan	(307) 777-7515	(307) 777-6561

CONTACT LIST FOR AREA VETERINARIANS-IN-CHARGE

STATE	AVIC	Phone Number
Alabama	Dr. O.W. Hester	(334) 223-7141
Alaska/Hawaii/Washington	Dr. Gary L. Brickler	(360) 753-9430
Arizona	Dr. Hortentia Harris	(480) 491-1002
Arkansas	Dr. Robert B. Sanders	(501) 224-9515
California/Nevada	Dr. Paul Ugstad	(916) 857-6170
Colorado	Dr. Jerry D. Diemer	(303) 231-5385
Florida	Dr. U.J. Lane	(352) 333-3120

Georgia	Dr. Edgardo Arza	(770) 922-7860
Idaho	Dr. Cynthia Gaborick	(208) 378-5631
Illinois`	vacant	(217) 241-6689
Indiana	Dr. Francisco Collazo-Mattei	(317) 290-3300
Iowa	Dr. Kevin L. Petersburg	(515) 284-4140
Kansas	Dr. Kevin P. Varner	(785) 235-2365
Kentucky	Dr. Roger J. Odenweller	(502) 227-9651
Louisiana	vacant	(225) 389-0436
Maryland (DE, DC)	Dr. David Vogt	(410) 349-9708
Massachusetts (CT, ME, NH, RI, VT)	Dr. Robert Brady Dr. Wm. Smith	(508) 865-1421
Michigan	Dr. Reed Macarty	(517) 324-5290
Minnesota	vacant	(651) 290-3691
Mississippi	Dr. Deborah Brennan	(601) 965-4307
Missouri	Dr. Robert L. Fischer	(573) 636-3116
Montana	Dr. Wilbur Clark	(406) 449-5407
Nebraska	Dr. Kathleen Akin	(402) 434-2300
New Jersey	Dr. Roxanne C. Mullaney	(609) 259-8387
New Mexico	Dr. Mike Greenlee	(505) 761-3160
New York	Dr. Kay W. Wheeler	(518) 453-0187
North Carolina	Dr. Terry Clark	(919) 513-4170
North Dakota	Dr. Larry A. White	(701) 250-4210
Ohio	Dr. Arnaldo Vaquer	(614) 469-5602
Oklahoma	Dr. Brian H. Espe	(405) 427-9413
Oregon	Dr. Don Herriott	(503) 399-5871
Pennsylvania	Dr. Lynne Siegfried	(717) 782-3442
Puerto Rico	Dr. Joel Goldman	(787) 766-6050
Rhode Island	Not Hired yet	
South Carolina	Dr. Deloris Lenard	(803) 788-1919
South Dakota	Dr. Larry A. White	(605)224-6186
Tennessee	Dr. Robert E. Southall	(615) 781-5310
Texas	Dr. Richard A. Ferris	(512) 916-5551
Utah	Dr. Robert DeCarolis	(801) 524-5010
Virginia	Dr. Terry Taylor	(804) 771-2774
Washington	Dr. Gary L. Brickler	(360) 753-9430
West Virginia	Dr. Arnaldo Vaquer	(614) 469-5602
Wisconsin	Dr. Jack Shere	(608) 270-4000
Wyoming	Dr. Bret Combs	(307) 772-2186

GLOSSARY

This glossary contains simple explanations of terms, as they can be understood in the context of the foot-and-mouth disease Prevention and Response Plans.

Amplifier – An animal that when infected produces large quantities of FMD virus. Virus can be spread by direct or indirect transmission routes, including aerosol. Pigs are FMD virus amplifiers.

APHIS - Animal and Plant Health Inspection Service, part of USDA.

AVIC – Area Veterinarian-in-Charge. The lead veterinarian for USDA APHIS in a particular geographical area; there are 42 areas nationwide.

BRD – Biological Resources Division. A division of the U.S. Geological Survey based in Reston, VA but including the Wildlife Health Center in Madison, WI.

BRMD – Biological Resource Management Division. A new division of the National Park Service, part of the Natural Resource Program Center, based in Fort Collins, CO.

Cloven-hoofed animal – Ungulate with split toes.

Carrier animal – An animal that is not showing clinical signs of the disease, but does harbor the FMD virus. No North American wildlife species are known carriers. Sheep and cattle can carry FMDV for 6 and 24 months respectively.

Disinfectant – A chemical or mechanical means of rendering the virus unviable. For FMD, bleach and vinegar work at appropriate concentrations. Ammonia and phenol do not. See appendix for Disinfectant Details.

FADD – Foreign animal disease diagnostician. A veterinarian that has been through the foreign animal disease training course at Plum Island and receives continuing education in animal health emergency management. There are about 260 FADDs nationwide.

FMD – Foot-and mouth disease. FMD is a highly contagious viral infection of cloven-hoofed domestic and wild animals. The disease is caused by an aphthovirus and characterized by vesicles, with subsequent erosions in the mouth and feet, and sometimes also in the nose, muzzle, feet, or teats.

FMD Coordinator – A person designated in each NPS Unit to evaluate the vulnerability of the unit to an FMD outbreak, and to be aware of the NPS Preparation and Response Plans for the disease.

FMD Regional Coordinator – a person appointed by the NPS Regional Director to help ensure that FMD Prevention and Response Plans are coordinated between park units, the NPS Washington Office, the APHIS AVIC and the State Veterinarian.

FMDV – FMD virus. The virus that causes foot-and-mouth disease. There are at least seven strains of the virus. The current strain is Great Britain and other countries in western Europe is Type O.

Incident Management Team (IMT) – The team has authority delegated by the Agency Administrator to take necessary actions to respond to a specific emergency.

Incident – An occurrence or event, either human-caused or natural phenomena that require action by emergency service personnel to prevent or minimize loss of life or damage to property and/or natural resources. An FMD outbreak that affected NPS units would be handled as an incident.

Incident Action Plan (IAP) – The incident action plan, which is usually prepared at the first meeting, contains general control objectives reflecting the overall incident strategy, and specific action plans for the next operation period (yep, incidents are divided into operational periods) The FMD Response Plan includes an IAP.

Incident Commander – The individual responsible for all incident operations.

Incident Command System (ICS) – The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure with responsibility for the management of assigned resources to effectively accomplish stated objective pertaining to an incident.

Hand-foot-and-mouth disease – a common human childhood illness, this ailment is caused by a coxsackievirus and should not be confused with foot-and-mouth disease of ungulates. In many people, infection with hand-foot-and-mouth disease causes no symptoms. In others, infection may result in blisters in the mouth, on the gums and tongue, on the palms and fingers or on the soles of the feet.

Hoof and mouth disease - An earlier, regional name for foot-and-mouth disease. While synonymous, foot-and-mouth is now the accepted term for the disease and FMD is the accepted acronym.

Mechanical transmission – Movement of a virus by inanimate object or by an organism that has not contracted the disease (i.e. car tires and horse hooves respectively).

State Veterinarian – State official that is responsible for livestock disease control to ensure compliance with federal and state laws

Serological test – Laboratory analysis performed on the serum fraction of a blood sample to detect exposure to a disease.

Targeted disease surveillance – Monitoring for clinical signs consistent with a particular disease such as FMD.

T&E Species – Threatened and endangered species as designated by listing under the provisions of the Endangered Species Act.

Ungulate – A hoofed mammal.

USDA – United States Department of Agriculture. The designated lead department of the federal government in a foreign animal disease outbreak. APHIS is a part of the Department of Agriculture.

Vesicle – A blister; a small sac containing liquid (serum) or gas.

Vesicular stomatitis – A disease that occurs in ungulates that shares many of the clinical signs of FMD, but its not. One reason why if you see an animal with signs of FMD, you should contact an expert, such as an FADD.

Veterinary Medical Officer (VMO) – Local veterinarian that works for APHIS, but does not necessarily have training in foreign disease diagnosis.

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