

FAD PReP/NAHEMS Tactical Topics: Wildlife Management & Vector Control

Information is based on the **Foreign Animal Disease Preparedness and Response Plan (FAD PReP)/National Animal Health Emergency Management System (NAHEMS) Guidelines: Wildlife Management and Vector Control for a Foreign Animal Disease Response in Domestic Livestock (2014)** to be used in training or during an animal health emergency. References to the Guidelines sections are provided in parenthesis for more detail.

Introduction/Overview: In the event that wildlife play a role in an FAD outbreak in domestic livestock, USDA APHIS will coordinate the response effort with Federal, State, and Tribal agencies that have primary jurisdiction over wildlife. Wild animals exposed to the FAD may serve as a reservoir or vector to transmit the pathogen to naïve domestic livestock, complicating the challenges to control, contain and eradicate the disease. Guidance for USDA, APHIS, VS is provided by *"Animal Health Policy in Relation to Wildlife"* (VS Memorandum 573.1).

FOR QUESTIONS REGARDING WILDLIFE MANAGEMENT AND VECTOR CONTROL PROCEDURES: Contact your immediate supervisor. Follow chain of command.

Responsibilities within the ICS – Wildlife Cell and Vector Control Group (5)

- Incident Commander: Holds ultimate responsibility for implementing wildlife management and vector control activities. Cooperates with Federal, State, and Tribal agencies that have primary jurisdiction for wildlife.
- Wildlife Cell/Planning Section and Vector Control Group/Operations Section: Assesses the risk of disease transmission by wildlife (agent, host, environment interaction), determines surveillance measures, identifies and implements management and control measures to prevent disease spread between wildlife and livestock.
- Safety Officer: Identifies hazards (including those unique to wildlife management) to mitigate safety risks, prevent unsafe working conditions, and to protect responders.

Definitions (2)

- Feral: Domestic animals (e.g., cats, horses, pigs) that are not confined or under control.
- Wildlife reservoir: Any population of free-ranging or free-living species in which an infectious agent/vector has been established, lives and multiplies and is therefore a potential source of infection/infestation to other domestic and free ranging species.
- Vector: Any living organism, including arthropods, rodents and scavengers that can carry disease agents.
- Biological transmission: The transfer of a disease agent from a host to a susceptible animal. The pathogen undergoes some part of its life cycle within the host.
- Mechanical transmission: The transfer of a disease agent to a susceptible animal via external body parts.

Four Steps in Wildlife Management in an FAD Outbreak (may occur simultaneously) (6)

1. Assess the Extent of Wildlife Involvement (6.1)

- Focus on the wildlife present in and near the regulatory Control Area.
- Identify which wildlife species exist, their susceptibility to the FAD, their likelihood of exposure and potential to spread the disease, and their interaction with livestock.
- Determine if wildlife are infected, act as a reservoir and/or vectors (biological or mechanical), and are a threat for the transmission of the FAD to domestic livestock.
- Use various sources to collect data to assess the distribution and density of wildlife species.
- Reassess all response activities for effectiveness as the outbreak continues and new information is available.

2. Carry Out Disease Surveillance in Wild Animals (6.2)

- Understand characteristics and risk factors of the disease, and develop a surveillance plan to demonstrate the absence, presence, spread, and/or prevalence of the FAD in a given wildlife population.



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- Determine if the FAD has spread between wild and domestic species.
- Use visual surveillance and/or diagnostic testing, as necessary, to detect new and existing cases.
- Set sampling parameters based on available resources and practicality (live capture, observation, carcass collection).
- Employ safe handling protocols, and humane euthanasia methods if euthanasia is required.

3. Contain and Control Susceptible Wildlife to Prevent Further Transmission of the Disease (6.3)

- Ideally, choose techniques that apply to all targeted wildlife species.
- Ensure techniques used for one species do not compromise the effectiveness of efforts used for another.
- Design and implement control measures; prioritize which species of wildlife should be targeted first.
- Reduce the incidence of infection within the wildlife population.
- Lower the risk of transmission between wildlife and domestic animals.
- Consider methods of manipulating wildlife populations (removal, relocation, dispersal).
- Consider methods of manipulating wildlife habitats (fencing, alteration, vector control).

4. Demonstrate Freedom from Disease in Wildlife, as Applicable (6.4)

- Develop a wildlife management plan that intends to preserve international trade opportunities.
- Refer to policy established by the World Organization for Animal Health (OIE) *Terrestrial Animal Health Code* (2014) for disease-specific guidelines and recommendations on disease freedom and international trade. (4.3)

Wildlife Management Plan (7)

- Base the plan on risk assessment, surveillance, and feasibility of control measures.
- Include factors of epidemiology, ecology, resources, and sociopolitical issues in developing the plan.
- Conduct all activities within local laws and regulations.
- Identify short-term objectives (contain and control the outbreak), as well as long-term objectives and extended activities (eradicate the disease).
- Evaluate unintended consequences of control measures.
- Specify whether demonstrating freedom from the FAD in wildlife is required for OIE-free status.

Vector Control (8)

- Identify biological and mechanical vectors.
- Choose effective measures based on life stage of the vector and the vector-pathogen-host relationship.
- Reduce habitat of vectors (disrupt, eliminate or reduce areas of stagnant water, vegetation, or wet manure).
- Minimize contact and limit exposure to arthropod vectors to reduce transmission and infection risk.
- Use chemical control of vectors as a supplemental measure – **use chemicals according to label directions.**
- Use biological agents or natural predators to reduce and control vector populations.

Hazards and Personnel Safety (6.2.4 and 9.2)

- Recognize potential hazards of response (physical, environmental, biological, zoonotic, psychological).
- Be aware of dangerous behavior that particular wild species may present.
- Institute safety plans and protocols prior to any handling and restraint procedures.
- Have all resources, including equipment and personnel, prepared and available ahead of time.
- Develop a chain of command and assign each person to a specific duty.
- Determine ahead of time how the animal is to be released if necessary.
- Use appropriate equipment and personal protective equipment, such as gloves or goggles, when necessary.
- Confirm all personnel are aware of back up plans in the event that something goes wrong.
- Develop procedures for handling injured personnel.
- Protect unaffected animal populations from disease through proper biosecurity and cleaning and disinfection.