



**STANDARD OPERATING PROCEDURES:
19. OVERVIEW OF ANIMAL WELFARE**

FAD PReP

**Foreign Animal Disease
Preparedness & Response Plan**



**United States
Department of
Agriculture**

United States Department of Agriculture • Animal and Plant Health Inspection Service • Veterinary Services

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The Foreign Animal Disease Preparedness and Response Plan (FAD PreP) Standard Operating Procedures (SOP) provide operational guidance for responding to an animal health emergency in the United States.

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Contents

19.1	Introduction.....	19-1
	19.1.1 Goals	19-1
19.2	Purpose.....	19-2
19.3	U.S. Regulatory Authorities for Animal Welfare	19-2
19.4	American Veterinary Medical Association.....	19-4
	19.4.1 Animal Welfare Principles.....	19-4
	19.4.2 Humane transport of Equines AVMA Policy	19-5
19.5	World Organization for Animal Health: <i>Terrestrial and Aquatic Animal Health Codes</i>	19-5
19.6	USDA APHIS Animal Welfare Response Roles and Responsibilities	19-6
19.7	Animal Handling and Movement.....	19-6
19.8	Euthanasia and Mass Depopulation	19-8
	19.8.1 Euthanasia	19-8
	19.8.2 Mass Depopulation	19-8
19.9	Biosecurity Considerations	19-9
	Attachment 19.A Additional Resources and References	19-10
	Attachment 19.B Abbreviations.....	19-12

19.1 Introduction

Consideration should always be given to the welfare of affected animals prior to, during, and after a foreign animal disease (FAD) incident or outbreak. Responders will provide humane treatment of animals at all times during an FAD outbreak, given the extenuating circumstances of an FAD situation. Instituting standards for appropriate animal care and carrying out these specifications requires coordination between animal needs, human needs, societal expectations, environmental concerns, and the challenges surrounding control of the outbreak. The progression of animal welfare standards should be motivated and guided by ethological, ecological, ethical and veterinary considerations.¹

This standard operating procedure (SOP) provides an overview of general guidance on animal welfare during an FAD outbreak. This document specifically focuses on the role of officials involved in FAD incidents and outbreaks. The treatment of research, zoo, and show animals along with normal producer and facility animal care, while very important, are outside the scope of this document.

Several key USDA APHIS documents complement this SOP and provide further detail when necessary. This SOP references the following APHIS documents:

- Foreign Animal Disease Preparedness and Response Plan (FAD PReP)/National Animal Health Emergency Management System (NAHEMS):
 - Biosecurity
 - Cleaning and Disinfection (C&D)
 - Mass Depopulation and Euthanasia
 - Health and Safety
 - Personal Protective Equipment (PPE)
- FAD PReP SOPs:
 - Biosecurity
 - C&D
 - Mass Depopulation and Euthanasia
 - Health and Safety/PPE.

These documents are available on the APHIS FAD PReP website: www.aphis.usda.gov/fadprep.

19.1.1 Goals

19.1.1.1 Preparedness Goal

Identify the resources and training necessary to provide humane treatment to animals during disease incidents or outbreaks, particularly if identified presumptive positive for an FAD, which

¹ American Veterinary Medical Association (AVMA). (2016). Joint AVMA-Federation of Veterinarians of European Veterinary Medical Association statement on the roles of veterinarians in ensuring good animal welfare. Retrieved from <https://www.avma.org/KB/Policies/Pages/Joint-Statement-Animal-Welfare.aspx>.

may include vaccination activities until animals are declared free of disease or euthanized or depopulated as prescribed by veterinary authorities of affected State(s), Tribal Nation(s), or Federal.

19.1.1.2 Response Goal

Provide humane treatment to animals during FAD incidents or outbreaks, especially if euthanasia or mass depopulation is the appropriate disease response strategy. Humane care should be conducted from the time an animal is identified presumptive positive for an FAD, until it is declared free from disease or slaughtered as prescribed by veterinary authorities of affected State(s), Tribal Nation(s), or Federal.

19.2 Purpose

This SOP provides USDA APHIS Veterinary Services, Incident Command personnel, and other animal health response officials' guidance on animal welfare in the event of an FAD incident or outbreak in domestic animals. The guidance in this SOP is relevant to animal disease outbreaks of varying size, whether the outbreak is isolated to a single premises or spans across a region to numerous premises. This SOP only offers guidance and should not replace the advice of a subject matter expert. Always consult a professional prior to implementing any guidance found in this document.

19.3 U.S. Regulatory Authorities for Animal Welfare

This section lists select U.S. laws regarding animal welfare; these are not specific to an FAD outbreak, and this list is not exhaustive. The *APHIS Foreign Animal Disease Framework Manual 1-0: Roles and Coordination* contains more information regarding APHIS' authority to intervene during FAD outbreaks. APHIS authority for animal welfare activities during an FAD outbreak could come from any of the following:

- Animal Health Protection Act (7 United States Code [U.S.C.] 8301–8322)
Congress finds that—
 - (1) The prevention, detection, control, and eradication of diseases and pests of animals are essential to protect animal health and the health and welfare of the people of the United States, the economic interests of the United States livestock and related industries, the environment of the United States, and interstate and foreign commerce of the United States in animals and other articles.
 - (2) Animal diseases and pests are primarily transmitted by animals and articles regulated under this Act.
 - (3) The health of animals is affected by the methods by which animals and articles are transported in interstate commerce and foreign commerce.
 - (4) The Secretary must continue to conduct research on animal diseases and pests which constitutes a threat to the livestock of the United States.
 - (5) All animals and articles regulated under this Act are in or affect interstate commerce or foreign commerce, and regulation by the Secretary and cooperation by the Secretary with other nations, States or other jurisdictions, or persons are necessary to prevent and eliminate burdens on interstate commerce and foreign

commerce, to regulate effectively interstate commerce and foreign commerce, and to protect the agriculture, the environment, the economy, and the health and welfare of the people of the United States.²

- Animal Welfare Act (7 U.S.C.) 2131–2159)

Congressional statement of policy—

The Congress finds that animals and activities which are regulated under this chapter are either in interstate or foreign commerce or substantially affect such commerce or the free flow thereof, and that regulation of animals and activities as provided in this chapter is necessary to prevent and eliminate burdens upon such commerce and to effectively regulate such commerce, in order—

- (1) to insure that animals intended for use in research facilities or for exhibition purposes or for use as pets are provided humane care and treatment;
- (2) to assure the humane treatment of animals during transportation in commerce; and
- (3) to protect the owners of animals from the theft of their animals by preventing the sale or use of animals which have been stolen.

The Congress further finds that it is essential to regulate, as provided in this chapter, the transportation, purchase, sale, housing, care, handling, and treatment of animals by carriers or by persons or organizations engaged in using them for research or experimental purposes or for exhibition purposes or holding them for sale as pets or for any such purpose or use.³

- Humane Methods of Livestock Slaughter Act (7 U.S.C. 1901–1907)

Congress findings—

The Congress finds that the use of humane methods in the slaughter of livestock prevents needless suffering; results in safer and better working conditions for persons engaged in the slaughtering industry; brings about improvement of products and economies in slaughtering operations; and produces other benefits for producers, processors, and consumers which tend to expedite an orderly flow of livestock and livestock products in interstate and foreign commerce. It is therefore declared to be the policy of the United States that the slaughtering of livestock and the handling of livestock in connection with slaughter shall be carried out only by humane methods.⁴

- Horse Protection Act (15 U.S.C. 1821-1831)

The Congress finds and declares that—

² U.S.C. Title 7—Agriculture: Chapter 109—Animal health protection. (2013). In *U.S. Government Publishing Office*. Retrieved from <https://www.gpo.gov/fdsys/pkg/USCODE-2013-title7/html/USCODE-2013-title7-chap109-sec8301.htm>.

³ U.S.C. Title 7—Agriculture: Chapter 54—Transportation, sale, and handling of certain animals. (2013). In *U.S. Government Publishing Office*. Retrieved from <https://www.gpo.gov/fdsys/pkg/USCODE-2013-title7/html/USCODE-2013-title7-chap54.htm>.

⁴ U.S.C. Title 7—Agriculture: Chapter 48—Humane methods of livestock slaughter. (2011). In *U.S. Government Publishing Office*. Retrieved from <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title7/html/USCODE-2011-title7-chap48-sec1901.htm>.

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- (1) the soring of horses is cruel and inhumane;
 - (2) horses shown or exhibited which are sore, where such soreness improves the performance of such horse, compete unfairly with horses which are not sore;
 - (3) the movement, showing, exhibition, or sale of sore horses in intrastate commerce adversely affects and burdens interstate and foreign commerce;
 - (4) all horses which are subject to regulation under this chapter are either in intrastate or foreign commerce or substantially affect such commerce; and
 - (5) regulation under this chapter by the Secretary is appropriate to prevent and eliminate burdens upon commerce and to effectively regulate commerce.⁵

19.4 American Veterinary Medical Association

The AVMA is an important veterinary authority and provides key guidance regarding the health and welfare of animals.

19.4.1 Animal Welfare Principles

Animal welfare during an FAD incident is based on best practices, given the extenuating circumstances of an FAD incident. The AVMA offers the following eight integrated principles for developing and evaluating animal welfare policies, resolutions, and actions:

- The responsible use of animals for human purposes, such as companionship, food, fiber, recreation, work, education, exhibition, and research conducted for the benefit of both humans and animals, is consistent with the Veterinarian's Oath.
- Decisions regarding animal care, use, and welfare shall be made by balancing scientific knowledge and professional judgment with consideration of ethical and societal values.
- Animals must be provided water, food, proper handling, health care, and an environment appropriate to their care and use, with thoughtful consideration for their species-typical biology and behavior.
- Animals should be cared for in ways that minimize fear, pain, stress, and suffering.
- Procedures related to animal housing, management, care, and use should be continuously evaluated, and when indicated, refined or replaced.
- Conservation and management of animal populations should be humane, socially responsible, and scientifically prudent.
- Animals shall be treated with respect and dignity throughout their lives and, when necessary, provided a humane death.

⁵ U.S.C. Title 15—Commerce and trade: Chapter 44—Protection of horses. (2011). In *U.S. Government Publishing Office*. Retrieved from <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title15/html/USCODE-2011-title15-chap44-sec1821.htm>.

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- The veterinary profession shall continually strive to improve animal health and welfare through scientific research, education, collaboration, advocacy, and the development of legislation and regulations.⁶

19.4.2 Humane transport of Equines AVMA Policy

The AVMA believes conveyances used to transport equines must—

- Be designed, constructed and maintenance to protect the health and welfare of the equines being transported at all times;
- Accommodate segregation of stallions and aggressive equines so that no stallion or aggressive equines can come into contact with other equines on the conveyance;
- Have sufficient interior height to allow each equine on the conveyance to stand with its head extended to its fullest normal postural height;
- Not comprise animal cargo space that is divided into two or more stacked levels (conveyances with collapsible floors may be configured to transport equines on one level only, so long as the collapsed configuration meets the height requirements previously specified);
- Provide adequate ventilation;
- Contain no sharp protrusions that can injure horses;
- Be equipped with doors and ramps of sufficient size and location to allow safe loading and unloading;
- Be loaded so that each equine is provided with sufficient space to shift its weight as needed, and is not crowded in a way that is likely to cause injury or discomfort; and
- Afford secure footing for equines during loading, offloading, and transport.⁷

19.5 World Organization for Animal Health: *Terrestrial and Aquatic Animal Health Codes*

The World Organization for Animal Health (OIE) standards include the *Terrestrial Animal Health Code (Terrestrial Code)* and the *Aquatic Animal Health Code (Aquatic Code)*. An *ad hoc* Group of independent experts provides recommendations for new standards or the revision of existing standards to the appropriate Specialist Commission (usually consisting of 6 people)—either the Terrestrial Animal Health Standards Commission (Code Commission) or the Aquatic Animal Health Standards Commission (Aquatic Animals Commission). These Specialist Commissions address comments sent back after the Assembly’s review directly or give to an *ad hoc* or Working Group, such as the Animal Welfare Working Group, who assists in addressing the remarks. The Assembly (representing the 180 OIE Member Countries and Territories) meets annually at the OIE General Session where they approve the newly recommended or revised standards. A typical turnaround time for adoption of new standards takes approximately 2 years.⁸

⁶ AVMA. (2016). AVMA Animal Welfare Principles. Retrieved from <https://www.avma.org/KB/Policies/Pages/AVMA-Animal-Welfare-Principles.aspx>.

⁷ AVMA. (2016). Humane transport of equines policy. Retrieved from <https://www.avma.org/KB/Policies/Pages/Humane-Transport-of-Equines.aspx>.

⁸ OIE. (2016). Procedures used by the OIE to set standards and recommendations for the international trade, with a focus on the *Terrestrial and Aquatic Animal Health Codes*. In *Standard-Setting: The Codes*. Retrieved from

Currently, the adopted animal welfare standards are incorporated into 11 elements of the *Terrestrial Code* and into 3 elements of the *Aquatic Code*. These standards include the latest scientific research and cover the following:

- *Terrestrial Animal Health Code*:⁹
 - Transport of animals by land
 - Transport of animals by sea
 - Transport of animals by air
 - Slaughter of animals
 - Killing of animals for disease control purposes
 - Stray dog population control
 - Use of animals in research and education
 - Animal welfare and beef cattle production systems
 - Animal welfare and broiler chicken production systems
 - Animal welfare and dairy cattle production systems
 - Welfare of working equids.
- *Aquatic Animal Health Code*:¹⁰
 - Welfare of farmed fish during transport
 - Welfare aspects of stunning and killing of farmed fish for human consumption
 - Killing of farmed fish for disease control purposes.

19.6 USDA APHIS Animal Welfare Response Roles and Responsibilities

Within the Unified Incident Command, there may be one or more individuals directly accountable for overseeing animal welfare on a premises. Animal welfare responsibilities may fall under the Euthanasia Group or within the Site Manager position as designated per the incident or outbreak. Even with designated oversight, all response personnel are responsible for ensuring animals are treated humanely and for maintaining awareness for specific issues directly related to the disease event.

19.7 Animal Handling and Movement

A part of animal welfare is animal handling/movement. Livestock and poultry should be handled and managed appropriately in accordance with their innate behaviors and husbandry systems.

http://www.oie.int/fileadmin/Home/eng/International_Standard_Setting/docs/pdf/A_OIE_procedures_standards_2016.pdf.

⁹ OIE. (2016). Animal welfare. In *Terrestrial Animal Health Code* (Section 7). Retrieved from <http://www.oie.int>.

¹⁰ OIE. (2016). Welfare of farmed fish. In *Aquatic Animal Health Code* (Section 7). Retrieved from <http://www.oie.int>.

They should also be handled in a way that avoids as much stress as possible to prevent injuries to animals and personnel.

Calm animals are easier to handle and move than excited animals. Animals can become agitated very quickly, but can require 20 to 30 minutes to settle down again, creating a challenge for handling.¹¹ Animals that are calm will move without difficulty through appropriately designed systems, with driving and prodding utilized as little as possible.¹² Animals should not be forced to move any quicker than a normal rate of walking speed and should be handled on surfaces designed to prevent slipping. They should be handled in a quiet manner without loud agitation, and must be restrained in such a way that doesn't cause injury or needless pain. Increased safety, efficiency, and animal welfare can be achieved through reducing stress and alarm during animal handling and movement.¹³

Non-ambulatory animals should be euthanized prior to being moved to the disposal location as a humane consideration. Handling livestock less before euthanasia that are not accustomed to considerable interactions with humans, may bring about a more humane death.¹⁴ When transporting animals, specific guidelines should be considered to ensure their well-being. Table 1 provides examples of specific items to take into account when managing the transportation of livestock.

Table 1. Items to be Considered When Transporting Animals¹⁵

Item	Considerations for Animal Transport
Temperature Management	Livestock and poultry should be protected against temperature extremes. Load densities should be decreased to lessen heat stress and ensuring animals are dry and providing wind protection is important when air or wind chill temperatures are low.
Trailer Maintenance	Trailers should be kept clean and in good repair. They should have non-slip floors to provide additional traction and be designed in such a manner to ensure that the conveyance incurs no damage on the animals (e.g., no sharp edges or joints; paneling of proper width such that limbs are not trapped).
Driving Practices	Driving with caution, by avoiding sudden stops and fast acceleration, can help to prevent bruises, injuries, and stress.

¹¹ Grandin, T., & American Meat Institute Animal Welfare Committee. (2010). Recommended Animal Handling Guidelines and Audit Guide: A Systematic Approach to Animal Welfare. Retrieved from <http://www.animalhandling.org/ht/a/GetDocumentAction/i/58425>.

¹² Grandin, T., & American Meat Institute Animal Welfare Committee. (2010). Recommended Animal Handling Guidelines and Audit Guide: A Systematic Approach to Animal Welfare. Retrieved from <http://www.animalhandling.org/ht/a/GetDocumentAction/i/58425>.

¹³ For more information on handling considerations, please see the *FAD PReP/NAHEMS Guidelines: Mass Depopulation & Euthanasia* available on the APHIS FAD PReP website: www.aphis.usda.gov/fadprep.

¹⁴ For more information on handling and movement considerations for euthanasia, please see the *FAD PReP/NAHEMS Guidelines: Mass Depopulation & Euthanasia* available on the APHIS FAD PReP website: www.aphis.usda.gov/fadprep.

¹⁵ Grandin, T., & American Meat Institute Animal Welfare Committee. (2010). Recommended Animal Handling Guidelines and Audit Guide: A Systematic Approach to Animal Welfare. Retrieved from <http://www.animalhandling.org/ht/a/GetDocumentAction/i/58425>.

Loading/ Unloading	Overloading can cause bruising, death, or injury; therefore vehicles should be stocked at a density commensurate with the accepted carrying capacity of the conveyance. Animals should be unloaded immediately, however, rushing livestock while unloading can be a significant cause of bruises.
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There also are species specific handling methods to take into consideration. Please refer to sector-specific documents, AVMA guidance, and the *FAD PReP/NAHEMS Guidelines: Mass Depopulation & Euthanasia* for more information. The use of knowledgeable and skilled personnel for handling and management of animals is strongly recommended.¹⁶

19.8 Euthanasia and Mass Depopulation

Euthanasia and/or mass depopulation may be utilized during FAD outbreaks to euthanize infected (and at times, contact) animals in order to control, contain, and eradicate the disease to protect the nation’s food supply, animal agriculture, and animal health. To the extent possible, animals should be euthanized or depopulated in ways that minimize fear, pain, stress, and suffering.

Mass depopulation is a distinct practice and is not synonymous with euthanasia. Mass depopulation is a method by which large numbers of animals must be destroyed quickly and efficiently in an outbreak or other emergency, with as much consideration given to the welfare of the animals as possible. Euthanasia involves transitioning an animal to death as painlessly and stress-free as possible.

19.8.1 Euthanasia

Euthanasia should occur in such a way that minimizes an animal’s pain and stress. To meet this requirement, the animal should be rendered unconscious as quickly as possible. The method of euthanasia should be consistent with the current *AVMA Guidelines for the Euthanasia of Animals: 2013 Edition* based on the following criteria:

- (1) ability to induce loss of consciousness and death with a minimum of pain and distress;
- (2) time required to induce loss of consciousness;
- (3) reliability;
- (4) safety of personnel;
- (5) irreversibility;
- (6) compatibility with intended animal use and purpose;
- (7) documented emotional effect on observers or operators;
- (8) compatibility with subsequent evaluation, examination, or use of tissue;
- (9) drug availability and human abuse potential;
- (10) compatibility with species, age, and health status;
- (11) ability to maintain equipment in proper working order;
- (12) safety for predators and scavengers should the animal’s carcass be consumed;
- (13) legal requirements;
- and (14) environmental impacts of the method or disposition of the animal’s remains.¹⁷

19.8.2 Mass Depopulation

Mass depopulation is employed in response to animal health emergencies, including FADs, in order to contain or limit the spread of the FAD agents through elimination of infected or

¹⁶ Grandin, T., & American Meat Institute Animal Welfare Committee. (2010). Recommended Animal Handling Guidelines and Audit Guide: A Systematic Approach to Animal Welfare. Retrieved from <http://www.animalhandling.org/ht/a/GetDocumentAction/i/58425>.

¹⁷ AVMA. (2013). *AVMA Guidelines for the Euthanasia of Animals: 2013 Edition*. Retrieved from <https://www.avma.org/KB/Policies/Documents/euthanasia.pdf>.

potentially infected animals. Qualified personnel should perform depopulation with the quickest, safest, and most humane procedures possible.

The USDA APHIS recognizes the AVMA definition of mass depopulation as:

Method by which large numbers of animals must be destroyed quickly and efficiently with as much consideration given to the welfare of the animals as practicable, but where the circumstances and tasks facing those doing the depopulation are understood to be extenuating.¹⁸

For further details on euthanasia and mass depopulation methods, see the *FAD PReP/NAHEMS Guidelines: Mass Depopulation and Euthanasia* and disease specific *FAD PReP Mass Depopulation and Euthanasia SOPs*.

19.9 Biosecurity Considerations

Biosecurity protocols are meant to prevent the risk of introducing and spreading disease-causing pathogens within animal populations. Biosecurity must be considered during any and all response activities. Movements under quarantine on Infected, Contact, and Suspected Premises, during a FAD outbreak, are highly restricted. Movement is prohibited unless a permit is issued by the Incident Command for either critical movements (e.g., animal welfare) or for essential movements related to response activities. A site-specific biosecurity plan addresses the control of all movements that should be followed during an incident, and should explicitly take into account animal welfare considerations (e.g., movement of feed on to a premises).

Biosecurity measures help ensure that response personnel working on an Infected or Contact Premises with livestock and poultry do not spread disease when they enter or leave the premises. Clothes, boots, vehicles, and equipment may become fomites of infection. Therefore, all personnel entering an Infected, Contact, or any other Premises within the Control Area must don disease or function appropriate PPE and then doff the same PPE and undergo proper C&D/virus elimination procedures upon exit. This includes for any animal welfare activities. Any questions regarding appropriate PPE should be directed through the Unified Incident Command organizational structure.

For more information on biosecurity considerations, please see the *FAD PReP/NAHEMS Guidelines: Biosecurity* and the *FAD PReP Biosecurity SOP*. These document are available on the APHIS FAD PReP website: www.aphis.usda.gov/fadprep.

¹⁸AVMA. (2016). Poultry Depopulation. Retrieved from <https://www.avma.org/KB/Policies/Pages/Poultry-Depopulation.aspx>.

Attachment 19.A Additional Resources and References

- American Veterinary Medical Association (AVMA). (2016). AVMA Animal Welfare Principles. Retrieved from <https://www.avma.org/KB/Policies/Pages/AVMA-Animal-Welfare-Principles.aspx>.
- American Veterinary Medical Association (AVMA). (2013). *AVMA Guidelines for the Euthanasia of Animals: 2013 Edition*. Retrieved from <https://www.avma.org/KB/Policies/Documents/euthanasia.pdf>.
- American Veterinary Medical Association (AVMA). (2016). Humane transport of equines policy. Retrieved from <https://www.avma.org/KB/Policies/Pages/Humane-Transport-of-Equines.aspx>.
- American Veterinary Medical Association (AVMA). (2016). Joint AVMA-Federation of Veterinarians of Europe-Canadian Veterinary Medical Association statement on the roles of veterinarians in ensuring good animal welfare. Retrieved from <https://www.avma.org/KB/Policies/Pages/Joint-Statement-Animal-Welfare.aspx>.
- Grandin, T., & American Meat Institute Animal Welfare Committee. (2010). Recommended Animal Handling Guidelines and Audit Guide: A Systematic Approach to Animal Welfare. Retrieved from <http://www.animalhandling.org/ht/a/GetDocumentAction/i/58425>.
- Hutson, G.D. (1985). The influence of barely food rewards on sheep movement through a handling system. *Applied Animal Behaviour Science*, 14, 263-273.
- Shulaw, W.P. (2005). *Sheep Care Guide*. In *American Sheep Industry Association*. Retrieved from https://www.sheepusa.org/ResearchEducation_Publications_SheepCareGuide.
- United States Code (U.S.C.) Title 7—Agriculture: Chapter 48—Humane methods of livestock slaughter. (2011). In U.S. Government Publishing Office. Retrieved from <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title7/html/USCODE-2011-title7-chap48-sec1901.htm>.
- United States Code (U.S.C.) Title 7—Agriculture: Chapter 54—Transportation, sale, and handling of certain animals. (2013). In U.S. Government Publishing Office. Retrieved from <https://www.gpo.gov/fdsys/pkg/USCODE-2013-title7/html/USCODE-2013-title7-chap54.htm>.
- United States Code (U.S.C.) Title 7—Agriculture: Chapter 109—Animal health protection. (2013). In U.S. Government Publishing Office. Retrieved from <https://www.gpo.gov/fdsys/pkg/USCODE-2013-title7/html/USCODE-2013-title7-chap109-sec8301.htm>.
- United States Code (U.S.C.) Title 15—Commerce and trade: Chapter 44—Protection of horses. (2011). In U.S. Government Publishing Office. Retrieved from <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title15/html/USCODE-2011-title15-chap44-sec1821.htm>.

United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS). (2015). *APHIS Foreign Animal Disease Framework Manual 2-0: Response Strategies*. Retrieved from https://www.aphis.usda.gov/animal_health/emergency_management/downloads/documents_manuals/fadprep_manual_2.pdf.

United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS). (2016). FAD PReP Materials and References. Retrieved from https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/emergency-management/ct_fadprep.

World Organization for Animal Health (OIE). (2016). Animal Welfare. In *Terrestrial Animal Health Code* (Section 7). Retrieved from <http://www.oie.int>.

World Organization for Animal Health (OIE). (2016). Procedures used by the OIE to set standards and recommendations for the international trade, with a focus on the *Terrestrial and Aquatic Animal Health Codes*. In *Standard-Setting: The Codes*. Retrieved from <http://www.oie.int/en/international-standard-setting/overview/standard-setting-the-codes/>.

World Organization for Animal Health (OIE). (2016). Welfare of Farmed Fish. In *Aquatic Animal Health Code* (Section 7). Retrieved from <http://www.oie.int>.

Attachment 19.B Abbreviations

APHIS	Animal and Plant Health Inspection Service
AVMA	American Veterinary Medical Association
C&D	cleaning and disinfection
FAD	foreign animal disease
FAD PReP	Foreign Animal Disease Preparedness and Response Plan
NAHEMS	National Animal Health Emergency Management System
OIE	World Animal Health Organization
PPE	personal protective equipment
SOP	standard operating procedure
U.S.C.	United States Code
USDA	United States Department of Agriculture