



United States Department of Agriculture

Animal and Plant
Health Inspection
Service

July 2014

Proposal for a U.S. National List of Reportable Animal Diseases (NLRAD)

Concept Paper

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Section 1. Introduction

A United States National List of Reportable Animal Diseases (NLRAD) will be a uniform, science- and policy-based, nationally supported standardized list of animal diseases. It will provide the basis for consistent reporting with uniform case findings and reporting criteria. This will facilitate national, interstate, and international commerce; assist in meeting international reporting obligations to the World Organization for Animal Health (OIE) and trading partners; support the generation of export certifications; contribute to the assessment and reporting of listed zoonotic and endemic animal diseases; and facilitate response to an emerging disease or issue in the United States.

The NLRAD will be implemented through Federal-State cooperation. Regulatory action will officially recognize the NLRAD and codify specific reporting requirements for State animal health officials, laboratory personnel, producers, and others. The U.S. agriculture infrastructure is vulnerable to significant damage from listed as well as emerging diseases. The increased Federal authority for the NLRAD will help animal health officials protect the U.S. agriculture infrastructure.

The Animal and Plant Health Inspection Service (APHIS) Veterinary Services (VS), in collaboration with numerous stakeholders, developed the proposed NLRAD for the United States. The national list has been created through a deliberative process led by the United States Animal Health Association (USAHA)/American Association of Veterinary Laboratory Diagnosticians (AAVLD) Committee on Animal Health Information Systems (CAHIS), National Animal Health Reporting System (NAHRS) Steering Committee, and VS. The National Assembly of State Animal Health Officials and other stakeholders have supported these efforts and have been directly involved in developing the list.

The NLRAD list, Appendix A, is based on the OIE list of reportable diseases. It is intended to complement and supplement State reportable disease lists. The NLRAD will focus on agriculture and domestic animals. The significant role of wildlife on the epidemiology of domestic animal diseases is recognized; however, surveillance for wildlife diseases is carried out through multiple State and Federal agencies. State and Federal authority on reporting and control of diseases is primarily related to agriculture and domestic animals.

1.1 Stakeholders

A list of likely stakeholders and responsible parties, along with their anticipated roles, is presented below:

Stakeholders	Interest
Representatives of the pork Industry	Industry-specific scientific, policy, and trade issues
Representatives of the beef Industry	Industry-specific scientific, policy, and trade issues
Representatives of the dairy Industry	Industry-specific scientific, policy, and trade issues
Representatives of the small ruminant industries	Industry-specific scientific, policy, and trade issues
Representatives of the avian/poultry industry	Industry-specific scientific, policy, and trade issues
Representatives of the equine industry	Industry-specific scientific, policy, and trade issues
Representatives of the aquatic industry	Industry-specific scientific, policy, and trade issues
State animal health officials	State diagnostics and regulatory disease control programs

Veterinary, wildlife, and public health diagnostic laboratories	Animal disease diagnostics and communication of results
Tribal leaders	Tribal-specific policy and disease control issues

Responsible Parties	Responsibility
Veterinary Services	Cooperative data sharing
VS Surveillance, Preparedness and Response Services (SPRS)	Implementation and management of VS disease activities
National Import and Export Services (NIES)	Import, export and international health status management
SPRS	Development of Federal emergency response plans for notifiable and emerging diseases
Science, Technology, and Analysis Services (STAS) -Surveillance, Design, and Analysis (SDA) -Office of STAS Interagency Coordination -Risk Identification and Risk Analysis	Development of reporting criteria and case definitions for the NLRAD-listed diseases, data collection, NAHRS and OIE reporting Risk-based analysis, spatial analysis
SPRS Assistant District Directors -Directors, epidemiologists, and field staffs	Passive and active surveillance support, field investigations, implementation of Federal response plans if necessary, disease reporting
Program Support Services (PSS) Chief Information Officer (CIO)	IT systems for data management
STAS National Veterinary Services Laboratories (NVSL)	Diagnostic laboratory support; expertise, reference laboratory services and budgeting
STAS Center for Veterinary Biologics	Vaccine and commercial reagent licensing and testing
APHIS Wildlife Services and State wildlife management agencies	Passive and active surveillance support
National Animal Health Laboratory Network (NAHLN)	Sample testing and data reporting
Veterinary, wildlife, and public health diagnostic laboratories	Sample testing and data reporting
State animal health officials	Routine reporting of disease occurrences

1.2 Authority

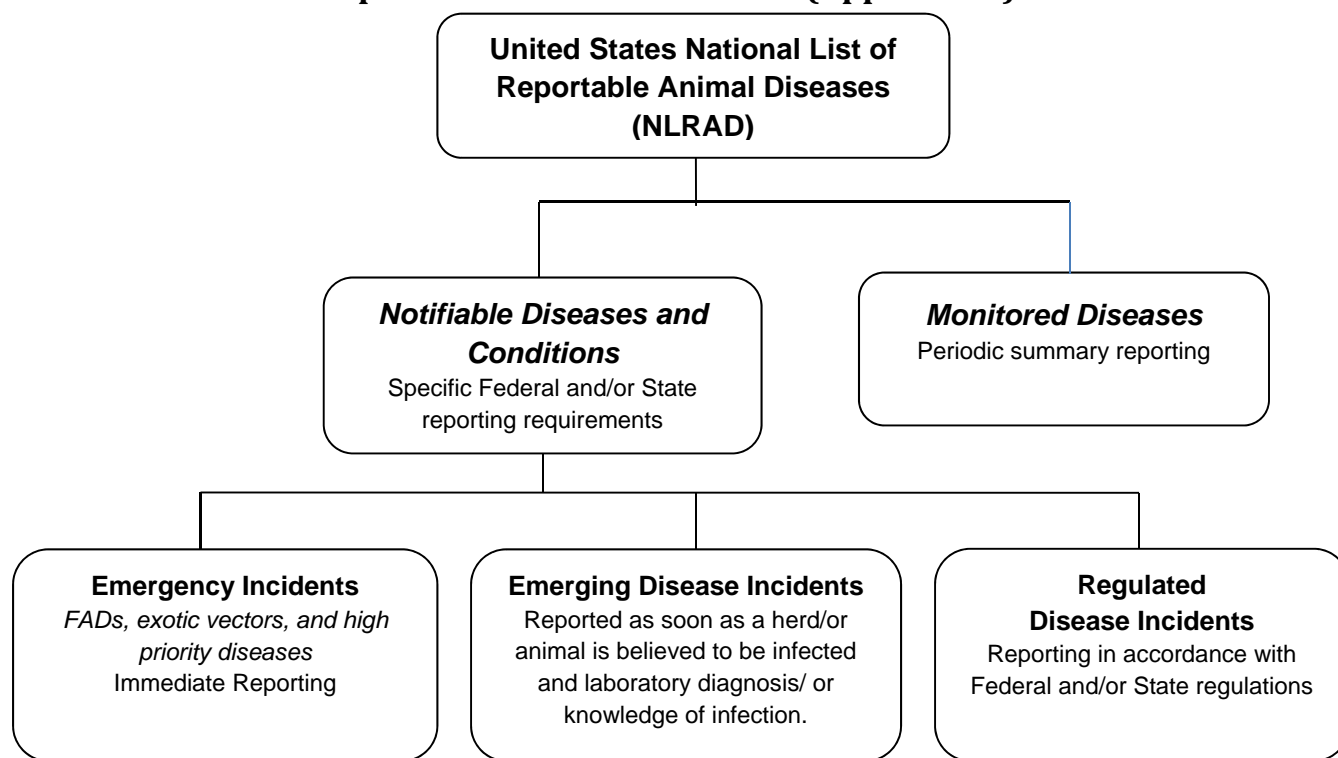
The NLRAD will be identified through regulation as the official U.S. National List of Reportable Animal Diseases and has been initiated through the NAHRS as a cooperative effort. The Federal authority for the NLRAD is related to reporting of foreign animal diseases (FADs) and program diseases, the USDA Secretary's authority in controlling diseases under the Animal Health Protection Act, interstate transportation of diseased animals, accredited veterinarian animal disease reporting responsibilities; in addition, individual States have authority to require reporting. However, a gap currently exists in the United States in animal disease reporting; while requirements do exist for accredited veterinarians under Title 9, *Code of Federal Regulations* (9 CFR) 161.3(f), no

other groups are specifically required to report cases of diagnosed or suspected cases of animal diseases. VS will move to address the gap in animal disease reporting by developing the NLRAD's expanded authority through the regulatory process. The justification can be found under existing authority mentioned above and through the Animal Health Protection Act. Further, the Homeland Security Presidential Directive (HSPD-9): *establishes a national policy to defend the agriculture and food system against terrorist attacks, major disasters, and other emergencies. The Secretaries ofshall develop robust, comprehensive, and fully coordinated surveillance and monitoring systems, including international information, for animal disease.....that provides early detection and awareness of disease, pests, or poisonous agents; develop systems that as appropriate, track specific animals and plants, as well as specific commodities and food.....*

The codified reference to an NLRAD will indicate that the actual list will be in VS Guidance Document format. This rulemaking will be flexible and responsive to essential updates and changes to the list as needed.

Section 2. Proposed NLRAD Structure And Reporting

2.1 Format of the reportable animal disease list (Appendix A)



2.1.1 United States National List of Reportable Diseases

The NLRAD is the list of diseases reportable to the U.S. national veterinary authority (VS). The NLRAD is divided into two categories: Monitored Diseases and Notifiable Diseases and Conditions. The Notifiable Diseases and Conditions section is subdivided into emergency incidents, emerging disease incidents, and regulated disease incidents.

2.1.1.1 Notifiable Diseases and Conditions

A disease or condition listed as notifiable by the national veterinary authority must be brought to the attention of the veterinary authority within prompt, defined timeframes, in accordance with national and State regulations. As an example, accredited veterinarians are required by regulation to immediately report to the VS Assistant District Director (ADD) and the State animal health official all diagnosed or suspected cases of a communicable disease for which VS has a control or eradication program, or animal diseases not known to exist in the United States. Also, State reportable lists typically include all program and all foreign animal diseases.

A recent swine emerging disease event illustrated that VS should consider seeking additional authority to require Federal reporting from any individual, including producers, veterinarians, laboratory personnel, or others with knowledge of occurrence or suspected occurrence of a notifiable disease. The VS ADD and the State animal health official must closely communicate and cooperate on required reporting. To be complete, reporting must include an official premises identification number (PIN), submitter identification, date of sample collection, type of unit being sampled, test methods used to make the diagnosis, test results, accession and specimen identification/barcode data values. The reporting information must not be encrypted. Due to the possibly severe consequences of their occurrence, “notifiable diseases” will generally result in a State or Federal action related to a positive disease finding. The action may be regulatory in nature or investigative for further information gathering.

2.1.1.1.1 Emergency Incidents (FADs, exotic vectors, and high priority diseases)

VS Guidance 12001.2, *Investigation of Potential Foreign Animal Disease (FAD) Emerging Disease Incidents (EDI)*, describes the investigation response to an FAD or EDI. It defines a FAD as a terrestrial animal disease or pest, or an aquatic animal disease or pest not known to exist in the United States or its territories; and reporting is required by federally accredited veterinarians. Regulations and requirements for these diseases remain in place. Authority under the NLRAD would require reporting by anyone identifying or suspecting a notifiable disease or condition; the implementation of the U.S. NLRAD will not otherwise change how national reporting and investigation is accomplished for FADs or regulated diseases.

2.1.1.1.2 Regulated Disease Incidents

As indicated in the previous paragraph, the implementation of the U.S. NLRAD expands the reporting requirement to anyone with knowledge of occurrence, but does not otherwise change national reporting requirements for FADs or regulated diseases. Current regulations and requirements for these diseases remain in place.

2.1.1.1.3 Emerging Disease Incidents

VS Guidance 12001.2 defines an Emerging Disease Incident (EDI) as any characterized or known terrestrial animal or aquatic animal disease in the United States or its territories that changes or mutates in pathogenicity, communicability, or zoonotic potential to become a threat to terrestrial animals, aquatic animals, or humans. An emerging disease includes:

- Detection of any animal disease or infection not known to exist in the United States with or without zoonotic potential, including a new strain of a known disease occurring in any animal species, including wildlife;
- Unexpected and unexplained increase in morbidity or mortality of diseased animals;

- Evidence of a change in the epidemiology of a known animal disease such as increased pathogenicity, expanded host range, or clinical signs that do not fit the classical picture; and
- Exotic vectors or unusual myiasis or acariasis (infestation with exotic flies, mites, ticks, etc.).

Emerging animal diseases must be reported to State and Federal authorities. Reporting is required of any individual, including producers, veterinarians, laboratory personnel, or others with knowledge of occurrence or suspected occurrence of an emerging disease. A case must be reported as soon as the herd or animal is determined to be infected through observation of case-compatible signs (if developed) and laboratory test-positive samples or other knowledge of infection. Immediate reporting should follow existing channels to the VS ADD and State animal health official. Laboratory reporting will be submitted electronically through the VS Laboratory Messaging System (LMS), or other alternative communication method, to NVSL. To be complete, reporting must include an official premises identification number (PIN), submitter identification, date of sample collection, type of unit being sampled, test methods used to make the diagnosis, test results, accession and specimen identification/barcode data values. The reporting information must not be encrypted. Laboratory characterization and reporting of undetermined disease agents should, if possible, occur within two weeks of submission. Specific details on continued disease reporting once an emerging disease has been identified will be determined on an incidence basis. Emerging diseases may or may not prompt State or Federal action related to a positive finding depending on the circumstances of the emerging disease or issue. State or Federal response may be an operational response to the disease, investigation of sources or causes, or facilitating research.

2.1.1.2 Monitored disease(s)

A monitored disease is one where occurrence is routinely tracked and data are used to monitor changes in a given population and its environment, or to report on disease occurrence. State animal health officials and ADDs are the primary responsible parties for collecting, collating, and reporting data on monitored diseases. Laboratories are required to report positive testing and occurrence information to the animal health official in the State where the animal is located. VS will continue to explore methods for NAHLN or other laboratories to report this information through electronic LMS or other agreed-on alternative methods. State animal health officials collect monitored disease occurrence data on diseases that meet case definitions; data are primarily from veterinary, wildlife, and public health diagnostic laboratories but can include data from any verifiable source.

The data on monitored diseases are routinely reported monthly by State animal health officials to the national veterinary authority through a national reporting system such as the NAHRS, in accordance with program guidance. In addition, State animal health officials will report routine summary data on notifiable disease occurrences to the national veterinary authority through a national reporting system such as the NAHRS. *Monitored diseases* usually have no Federal regulatory action associated with identification.

Required data reporting for a monitored disease can range from simple occurrence information reporting (Yes/No) to expanded case and testing information requested for certain diseases. State, Federal, and industry representatives will collaborate to identify significant diseases in which expanded case and testing information may be collected. The collection, analysis, and reporting of this additional case and epidemiological information will help State, Federal, and industry officials document and monitor national and State disease trends, help

meet travel and movement requirements, and evaluate and implement management, control, response, and prevention activities.

Section 3. NLRAD Operating Procedures

3.1 Case definitions and reporting criteria

Standardized national case definitions and reporting criteria are essential to the usefulness of reported animal disease data. VS is coordinating the development of case definitions for all diseases listed on the NLRAD and is responsible for ensuring that each case definition reflects the expertise of many disciplines (e.g., epidemiology, disease specialists, laboratory, emergency response, and others).

3.2 Updates and Edits to the NLRAD

Updates and edits to the NLRAD will be considered when:

- An emerging disease or issue is identified
- Changes are made on the OIE List of Reportable Diseases
- Changes are made in VS regulations, memoranda, and guidance documents
- Changes are made on the National Veterinary Stockpile (NVS) list; HHS/USDA Select Agent List; or CDC Category A, B, C bioterrorism agent/disease list
- Changes or additions are requested by stakeholders

3.3 Maintenance of the NLRAD

VS, in collaboration with stakeholders including State animal health officials, the USAHA-AAVLD CAHIS NAHRS Steering Committee, and industry, will maintain the NLRAD and recommend the addition or removal of diseases from the list each year as new pathogens either emerge, decrease in significance, or are added to or removed from the OIE list. VS will have the final authority for maintaining the U.S. NLRAD.

Section 4. Requirements for Implementation and Other Considerations

4.1 Infrastructure for NLRAD management and reporting

A functional and well managed U.S. NLRAD will require dedicated personnel and information technology resources.

4.1.1 Personnel resources

Dedicated personnel will:

- Develop and update case definitions;
- Review and analyze reported data (or provide data for other units);
- Develop, manage, and update VS Web resources related to an NLRAD; and
- Develop and implement training for the NLRAD/NAHRS.

4.1.2 Information Technology

Two VS information management systems have the functionality to manage testing and reporting data: the Emergency Management Reporting System (EMRS) 2 and the Surveillance Collaboration Services (SCS) system. Both are or will be integrated with the LMS for laboratory data through premises identification information. The use of these systems needs to be expanded or clarified; currently there are numerous examples of disease testing being reported through multiple spreadsheets. At a minimum, procedures for reporting testing data and related information need to be clearly described for all NLRAD-listed diseases.

The process and IT requirements for reporting monitored diseases needs to be reviewed closely. The current system used to collect primarily summary level national information is the NAHRS Web Reporting tool. The NAHRS Web Reporting tool is on an older IT platform and updates to the system are limited. Therefore, the enhanced/expanded case information can't be reported through the tool. Future IT options may include other systems such as the EMRS 2 or the SCS system. The integration of the system with the LMS for laboratory data needs to be explored and defined.

4.2 VS Cooperative Agreements Related to U.S. NLRAD

The VS Cooperative Agreement Program provides funding for surveillance, monitoring, prevention, and control activities through a comprehensive approach for animal health management. Receiving funding in animal health lines gives VS the flexibility to shift resources to health issues of greater public, industry, or State/Tribal government concerns. VS provides funding to States, Tribal nations, industry groups, nonprofit organizations, and universities to enable them to carry out the programs identified. Consideration should be given to helping State animal health officials meet NLRAD reporting requirements (administrative assistance funding, etc). In addition to assisting State animal health officials, the cooperative agreement would describe the specific reporting requirements.

4.3 Implementation Process

- Stakeholder review of proposed NLRAD-listed diseases. The current draft of NLRAD-listed diseases includes broad stakeholder input gathered since 2006. Stakeholders will be able to further review and provide input to the proposed NLRAD-listed diseases and the rulemaking process.
- Initiate regulatory process (publish concept paper, publish proposed rule, and final rule)
- Complete development of NLRAD resources: NLRAD Web site; case definitions; NLRAD process standards; IT platforms; and other resources as needed.

Section 5. Summary

The development and implementation of a U.S. NLRAD is a large undertaking that will benefit the U.S. agricultural industry by enhancing U.S. animal disease surveillance and standardization of animal disease reporting, and improve international transparency and relations. This process will require extensive stakeholder input including Tribal nations, State animal health officials, Federal officials, industry stakeholders, academic partners, laboratory officials, and the VS liaison.

Section 6. Acronyms

AAVLD	American Association of Veterinary Laboratory Diagnosticians
ADD	Assistant District Director (formerly the Area Veterinarian in Charge or AVIC)
APHIS	Animal and Plant Health Inspection Service
CAHIS	USAHA Committee on Animal Health Surveillance and Information Systems
CDC	Centers for Disease Control and Prevention
CEAH	VS-STAS Center for Epidemiology and Animal Health
HHS	Department of Health and Human Services
NAHRS	National Animal Health Reporting System
NASAHO	National Assembly of State Animal Health Officials
NLRAD	National List of Reportable Animal Diseases
NVAP	VS-SPRS National Veterinary Accreditation Program
NVSL	VS-STAS National Veterinary Services Laboratories
NVS	VS-SPRS National Veterinary Stockpile
OIE	World Organization for Animal Health (formerly Office International des Epizooties)
OSIC	VS-STAS Office of Interagency Coordination
PIN	Premises Identification Number
STAS	VS Science and Technology Services
SPRS	VS Surveillance, Preparedness, and Response Services
NIES	VS National Import and Export Services
USAHA	United States Animal Health Association
USDA	United States Department of Agriculture
VS	Veterinary Services

Section 7. References

1. Report of the USAHA / AAVLD Committee on Animal Health Information Systems in Proceedings of the 111th Annual Meeting of the United States Animal Health Association, 2007. Reno, NV. Pages 169-171. http://portals5.gomembers.com/Portals/6/Proceedings/2007_USAHA_Proceedings.pdf; accessed 8.22.2011.
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3. Resolution 10. United States Animal Health Association, 2008. <http://www.usaha.org/Reference/USAHAResolutions.aspx#2008>; accessed 8.22.2011.
4. Resolution 6. United States Animal Health Association, 2010. <http://www.usaha.org/Reference/USAHAResolutions.aspx#2010> ; accessed 8.23.2011.
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6. VS Guidance 12001.2, *Investigation of Potential Foreign Animal Disease (FAD) Emerging Disease Incidents (EDI)* (June 5, 2014).
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10. USDA, APHIS, Veterinary Services, 2008. National Animal Health Reporting System (NAHRS) Operation Manual and Uniform Methods and Rules. http://www.aphis.usda.gov/animal_health/nahrs/downloads/nahrs_operational_manual_and_um_and_r_9_2008.pdf; Accessed 8.22.2011

Appendix A. U.S. National List of Reportable Animal Diseases

Notifiable disease – a disease listed by the national veterinary authority that must be brought to the attention of the veterinary authority within defined timeframes according to national and State regulations and guidance. In addition to the listed notifiable diseases, these emerging animal disease conditions are notifiable and must be reported:

- Detection of any animal disease or infection not known to exist in the United States, including a new strain of a known disease occurring in any animal species, including wildlife
- Emerging animal disease with zoonotic potential
- Unexpected and unexplained increase in morbidity or mortality of diseased animals
- Evidence of a change in the epidemiology of a known animal disease such as increased pathogenicity, expanded host range, or clinical signs that do not fit the classical picture
- Exotic vectors (flies, myiasis, acarases (mites) and ticks), if identified, should be reported to State and Federal animal health officials for further investigation.

Monitored disease – a disease in which occurrence is routinely tracked and data used to detect disease occurrence changes in a given population and its environment, or to report on disease occurrence. State animal health officials routinely report the data to the veterinary authority according to NLRAD NAHRS guidance.

Notifiable Multiple-Species Diseases	Monitored Multiple-Species Diseases
<ul style="list-style-type: none"> • Akabane • Anthrax • Aujeszky's disease (Pseudorabies, PRV) • Bluetongue (non-endemic) • Brucellosis (<i>Brucella abortus</i>) • Brucellosis (<i>Brucella melitensis</i>) • Brucellosis (<i>Brucella suis</i>) • Chronis wasting disease • Crimean Congo hemorrhagic fever • Epizootic hemorrhagic disease (EHD) • Equine encephalomyelitis (Eastern) • Equine encephalomyelitis (Venezuelan) • Foot-and-mouth disease • Glanders (<i>Burkholderia mallei</i>) • Heartwater • Japanese encephalitis • Melioidosis (<i>Burkholderia pseudomallei</i>) • New and Old World screwworms • Rabies • Rift Valley fever • Rinderpest • Surra (<i>Trypanosoma evansi</i>) • Tuberculosis (<i>M. bovis</i>, <i>M. tuberculosis</i>) • Vesicular stomatitis • West Nile fever/virus 	<ul style="list-style-type: none"> • Bluetongue (endemic types 2,10,11,13,17) • Echinococcosis/hydatidosis (<i>E. granulosus</i>, <i>E. multilocularis</i>, <i>E. oligarthrus</i>, or <i>E. vogeli</i>) spirosis • Paratuberculosis (Johne's disease) • Q fever • Trichinellosis • Tularemia

Notifiable Cattle Diseases	Monitored Cattle Diseases
<ul style="list-style-type: none"> • Bovine babesiosis • Bovine spongiform encephalopathy • Contagious bovine pleuropneumonia • Hemorrhagic septicemia • Lumpy skin disease • Theileriosis (East Coast fever) • Trichomoniasis • Trypanosomosis (tsetse transmitted) 	<ul style="list-style-type: none"> • Anaplasmosis (<i>A. marginale</i>, <i>A. centrale</i>) • Bovine genital campylobacteriosis (<i>Campylobacter fetus venerealis</i>) • Bovine viral diarrhea (BVD, mucosal disease) • Enzootic bovine leucosis (BLV) • Infectious bovine rhinotracheitis/infectious pustular vulvovaginitis (IBR/IPV) • Malignant catarrhal fever
Notifiable Swine Diseases	Monitored Swine Diseases
<ul style="list-style-type: none"> • African swine fever • Classical swine fever • Nipah virus • Swine vesicular disease • Vesicular exanthema • Porcine epidemic diarrhea • Porcine Deltacoronavirus disease 	<ul style="list-style-type: none"> • Porcine cysticercosis • Porcine reproductive and respiratory syndrome • Swine erysipelas • Transmissible gastroenteritis (TGE)
Notifiable Sheep & Goat Diseases	Monitored Sheep & Goat Diseases
<ul style="list-style-type: none"> • Contagious caprine pleuropneumonia • Nairobi sheep disease • Peste des petites ruminants • Scabies • Scrapie • Sheep pox and goat pox 	<ul style="list-style-type: none"> • Contagious agalactia • Caprine arthritis/encephalitis (CAE) • Enzootic abortion of ewes (ovine chlamydiosis, <i>Chlamydia psittaci</i>) • Maedi-visna • Ovine epididymitis (<i>Brucella ovis</i> infection) • Salmonellosis (<i>Salmonella abortusovis</i>)
Notifiable Equine Diseases	Monitored Equine Diseases
<ul style="list-style-type: none"> • African horse sickness • Contagious equine metritis • Dourine • Equine encephalomyelitis (Western) • Equine infectious anemia (EIA) • Equine piroplasmosis • Equine rhinopneumonitis/equine herpesvirus-1 myeloencephalopathy (EHV1-EHM) • Hendra 	<ul style="list-style-type: none"> • Equine influenza (Virus Type A) • Equine rhinopneumonitis (non-EHM) • Equine viral arteritis
Notifiable Avian Diseases	Monitored Avian Diseases
<ul style="list-style-type: none"> • Duck viral hepatitis • Exotic (virulent) Newcastle disease per OIE definition • Fowl typhoid (<i>Salmonella gallinarum</i>) • Highly pathogenic AI and low pathogenic AI in poultry as defined in Chapter 10.4, Terrestrial Animal Health Code 	<ul style="list-style-type: none"> • Avian chlamydiosis • Avian infectious bronchitis • Avian infectious laryngotracheitis • Avian mycoplasmosis (<i>M. gallisepticum</i>) • Avian mycoplasmosis (<i>M. synoviae</i>)

- Pullorum disease (*Salmonella pullorum*)
- Turkey rhinotracheitis

- Infectious bursal disease (Gumboro disease)

Notifiable Fish Diseases

- Epizootic hematopoietic necrosis
- Epizootic ulcerative syndrome (EUS)
- Gyrodactylosis (*Gyrodactylus salaris*)
- Infectious haematopoietic necrosis (IHN)
- Infectious salmon anemia (ISA)
- Oncorhynchus masou virus disease (herpesvirosis of salmonids)*
- Red sea bream iridoviral disease
- Spring viremia of carp (SVC)
- Viral encephalopathy and retinopathy*
- Viral hemorrhagic septicemia (VHS)

*under APHIS review

Monitored Fish Diseases

- Bacterial kidney disease (*Renibacterium salmoninarium*)*
- Infectious pancreatic necrosis*
- Koi herpesvirus diseases
- Piscirickettsiosis (*Piscirickettsia salmonis*)*
- Whirling disease (*Myxobolus cerebralis*)*
- White sturgeon iridoviral disease*

Notifiable Amphibian Diseases

- None at this time

Monitored Amphibian Diseases

- Infection with *Batrachochytrium dendrobatidis*
- Infection with ranavirus

Notifiable Mollusc Diseases

- Infection with abalone herpes-like virus
- Infection with *Bonamia exitiosa/roughleyi*
- Infection with *Bonamia ostreae*
- Infection with *Marteilia chungmuensis**
- Infection with *Marteilia refringens*
- Infection with *Marteilia sydneyi**
- Infection with Ostreid herpesvirus-1 microvar (OsHV-1 microvar)
- Infection with *Perkinsus olseni/atlanticus*
- Infection with *Vibrio tapetis**
- Infection with *Xenohaliotis californiensis*

*under APHIS review

Monitored Mollusc Diseases

- Infection with *Haplosporidium costale* (seaside organism)*
- Infection with *Haplosporidium nelsoni* (MSX)*
- Infection with *Mikrocytos mackini**
- Infection with *Perkinsus marinus*
- Infection with Quahog parasite unknown (QPX)*

Notifiable Crustacean Diseases

- Crayfish plague (*Aphanomyces astaci*)
- Infectious hypodermal and haematopoietic necrosis
- Infectious myonecrosis
- Necrotizing hepatopancreatitis
- Spherical baculovirosis (*Penaeus monodon*-type)
- Taura syndrome
- Tetrahedral baculovirosis (*B. penaei*)*
- White spot disease
- White tail disease
- Yellowhead disease

*under APHIS review

Monitored Crustacean Diseases

- None at this time

Notifiable Bee Diseases	Monitored Bee Diseases (under review)
<ul style="list-style-type: none"> • None at this time 	<ul style="list-style-type: none"> • Acarapisosis of honey bees • American foulbrood of honey bees • European foulbrood of honey bees • Small hive beetle infestation (<i>Aethina</i>) • Tropilaelaps infestation of honey bees • Varroosis of honey bees
Notifiable Lagomorph Diseases	Monitored Lagomorph Diseases
<ul style="list-style-type: none"> • Myxomatosis • Rabbit hemorrhagic disease 	<ul style="list-style-type: none"> • None at this time
Notifiable 'Other' Diseases	Monitored 'Other' Diseases
<ul style="list-style-type: none"> • Camel pox • Leishmaniosis 	<ul style="list-style-type: none"> • None at this time