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U.S. National List of Reportable Animal Diseases (NLRAD) System Standards - Proposed



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INTRODUCTION

The United States National List of Reportable Animal Diseases (NLRAD) is in title 9 of the *Code of Federal Regulations* (CFR) part 57. The NLRAD regulation means there is a legal obligation to report detections of disease. The joint effort of many stakeholders, including the United States Animal Health Association (USAHA), the American Association of Veterinary Laboratory Diagnosticians (AAVLD), and the National Assembly of State Animal Health Officials (NASAHO) resulted in the creation of the NLRAD.

The purpose of the NLRAD is to have consistent animal disease reporting across the United States and to help animal health officials protect the U.S. agriculture infrastructure. The NLRAD also supports domestic and international commerce; helps meet international reporting obligations to the World Organization for Animal Health (OIE) and trading partners; supports the creation of export certifications; contributes to the knowledge of zoonotic and endemic animal diseases; and aids in the response to an emerging disease or issue in the United States. Finally, the NLRAD helps inform reports made to the World Health Organization's International Health Regulations and Public Health Emergencies of International Concern.

The national animal disease list (Appendix A), based on the OIE list of reportable diseases, is intended to complement and supplement State reportable disease lists. The NLRAD builds on the current National Animal Health Reporting System (NAHRS) that facilitates voluntary disease occurrence reporting by State animal health officials to USDA's Animal and Plant Health Inspection Service (APHIS). The NLRAD focuses primarily on domestic livestock, poultry, and aquaculture species. Additionally, we at APHIS recognize that wildlife, companion animals, and zoo animals potentially may play an important epidemiologic role in diseases affecting our Nation's agriculture industry; so, while the NLRAD focuses on agriculture, reporting may be required when listed-diseases are found in other animals.

This System Standards document describes the structure and contents of the list, reporting roles, information requirements, and APHIS' process for updating the list. The information in these Standards includes feedback from animal health organizations, States, and individual reviewers. Stakeholders and appropriate State and Federal agencies will review the System Standards, including listed diseases, annually. We will publish a notice in the *Federal Register* to inform stakeholders of any revisions made to these System Standards.

PART 1: LIST STRUCTURE AND REPORTING REQUIREMENTS

The NLRAD includes two categories: **Notifiable Diseases and Conditions** and **Monitored Diseases** (see Appendix A for complete list). The term ‘disease’ includes disease agents and pathogens.

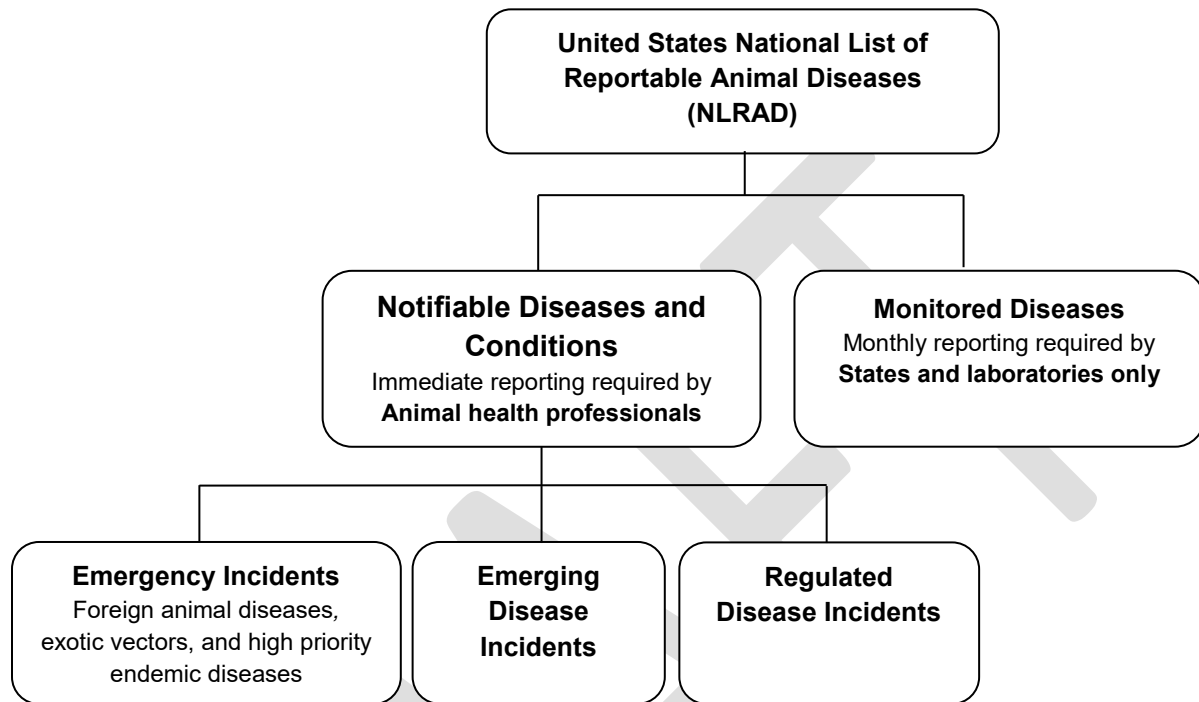


Figure 1. Structure of the NLRAD

NOTIFIABLE DISEASES AND CONDITIONS

Notifiable diseases and conditions (notifiable diseases) consist of *emergency incidents*, *emerging disease incidents*, and *regulated disease incidents*.

- **EMERGENCY INCIDENTS (FOREIGN ANIMAL DISEASES, EXOTIC VECTORS, AND HIGH PRIORITY ENDEMIC DISEASES)**
Emergency incidents include foreign animal diseases (also called transboundary diseases), exotic vectors that are not known to otherwise occur in the United States, and high priority endemic (present) diseases that can cause serious impacts to animals, humans, or trade. The NLRAD does not change any regulations or requirements for these diseases other than extending reporting rules to any animal health professional¹ who suspects or confirms the presence of these diseases or vectors.
- **EMERGING DISEASE INCIDENTS**

¹ An animal health professional is an individual, corporate entity, or animal health organization with formal training in the diagnosis or recognition of animal diseases and/or pests of livestock. Examples of animal health professionals include, but are not limited to, veterinary medical professionals, diagnostic laboratorians, biomedical researchers, public health officials, animal health officials, trained technicians, zoo personnel, and wildlife personnel with such training.

The NLRAD defines an emerging disease as a disease, infection, or infestation in domestic or wild animals that is a threat to terrestrial animals, aquatic animals, or humans, and meets one of the following criteria:

- a. An unknown agent that is causing disease in a herd/flock/premises and has the potential to result in a significant animal or public health impact, and applied diagnostic tests have yielded negative or non-definitive results; OR
 - b. A newly identified agent that is causing disease in a herd/flock/premises and has the potential to cause significant animal or public health impact, or is occurring in multiple herds/flocks/premises; OR
 - c. A previously identified or known pathogenic agent that has a change in epidemiology, such as:
 - Unexpected production impacts or morbidity/mortality over a previously defined range for the agent
 - Expanded host range
 - Change in geography of an agent with the potential to cause a significant animal or public health impact
- **REGULATED DISEASE INCIDENTS**

Regulated diseases are diseases for which we have regulations for eradication or control programs, such as the national tuberculosis eradication program. These diseases have specific instructions related to their reporting and control in the CFR. The NLRAD does not change any regulations or requirements for these diseases other than extending reporting rules to any animal health professional who suspects or confirms their presence.

NOTIFIABLE DISEASE REPORTING ROLES

If you are an animal health professional and you suspect or diagnose a notifiable disease, you must immediately report it to both:

- Your State animal health official (see <http://www.usaha.org/Members> or [NLRAD website](#) for contact information) **and**
- APHIS ([NLRAD website](#))

Case definitions for known diseases ([Part 2](#) below), can help you determine when you have a suspect or confirmed case that you need to report.

If you suspect an emerging animal disease, you must report it as soon as you think an animal or groups of animals are infected. This awareness may be through observation of case-compatible clinical signs, laboratory test-positive samples, or other knowledge of infection. The expectation is that animal health professionals will use their background knowledge, professional judgment, and experience to follow the intent of the emerging disease definition when making reporting decisions. When we confirm there is an emerging disease, we will decide specific details on continued reporting on a case-by-case basis.

The vast majority of reporting of notifiable diseases will occur through veterinarians and diagnostic laboratories; however, due to the serious nature of notifiable diseases and their possible negative impact on U.S. animal agriculture and trade, any animal health professional who has knowledge or suspicion of these diseases is required to report these diseases.

DATA TO REPORT FOR NOTIFIABLE DISEASES

Report the following information:

- Animal species and age
- Epidemiological information: clinical signs, case/herd history and type, vaccination history
- Location information: owner information, State where animal is located, zip code, and premises identification number (if known) or address
- Testing information (if samples were submitted for diagnostic testing):
 - Reason for sample submission
 - Sample identification: sample ID, animal ID, species, laboratory accession number, sample type
 - Date sample was collected, date sample was tested
 - Diagnostic methodology, results, and interpretation

Emerging disease investigations and outbreaks may require more information depending on the situation. APHIS will use diagnostic testing results and epidemiological information to detect and evaluate the status of a potential emerging disease threat. Once we confirm there is an emerging animal disease, we will use this information to create specific case definitions and disease reporting criteria. At the time of first reporting, the specific agent causing a potential emerging disease may be unknown, or the agent may be a newly identified but incompletely characterized strain.

State animal health officials and APHIS must closely communicate and cooperate on required reporting to ensure all responsible parties are in the reporting process and duplication of reporting does not become an issue. We will monitor reporting and seek to avoid duplication when possible. When we identify duplication, we will communicate with appropriate parties.

MONITORED DISEASES

Monitored diseases generally are those that are endemic (present) in the United States and are required to be reported in 6-month and annual reports to the World Organization for Animal Health (OIE). APHIS also uses data gathered to monitor changes in disease occurrence over time. The term 'endemic' does not fully describe the prevalence or geographic distribution of the disease. An endemic disease can have very low prevalence (rare occurrence) or it can have a high prevalence (common occurrence) and can occur over a limited or broad geographical area.

DATA TO REPORT FOR MONITORED DISEASES

States and laboratories must report occurrence (yes/no) information. We may request voluntary submission of additional case and testing information for some monitored diseases, such as number of diagnostic tests conducted, number of confirmed cases, vaccination status, number of susceptible animals, or other epidemiological information. This additional information request will occur when Federal, State, and industry representatives together identify significant diseases where additional information will help monitor disease trends; meet travel and movement requirements; and carry out control, response, and prevention activities.

MONITORED DISEASE REPORTING ROLES

Laboratories and States report monitored diseases monthly. States and all laboratories in the United States testing for the listed diseases must follow the NLRAD regulation. This includes laboratories that are publically funded, private, or universities. Other individuals do not need to report monitored diseases as part of the NLRAD

regulation. Individual State regulations may vary and may require more rapid reporting or reporting from more stakeholders.

- **If you are a laboratorian:**
 - Understand when diseases meet the criteria to report by checking case definitions on the NLRAD website (see [Part 2](#) below for more information on case definitions).
 - Review Appendix A to see if we are requesting more than occurrence information for any monitored diseases.
 - Send summary reports at least monthly to each State animal health official from States in which you have detected a monitored disease. Use a reporting method agreed upon between you and the respective State. Laboratory notifications will account for the vast majority of NLRAD-listed disease reports. More specific guidelines are provided for you in [Appendix B](#).
- **If you are a State animal health official:**
 - Determine occurrence information (yes/no) for each monitored disease by checking the case definitions on the NLRAD website. See [Part 2](#) below for more information on case definitions. Data to help determine disease presence comes primarily from veterinary, wildlife, and public health diagnostic laboratories, but can include data from any verifiable source.
 - If you have a case that does not meet the case definition, you may use more information such as alternative laboratory testing or epidemiological information to decide whether to report the presence of the disease. We recognize that for many diseases, especially endemic diseases, individuals may choose not to continue diagnostics to the presumptive/confirmed level of testing.
 - Review Appendix A to see if we are requesting more than occurrence information (yes/no) for any monitored diseases.
 - Report the information to APHIS monthly through National Animal Health Reporting System (NAHRS), or other designated system. The NLRAD website has more information available to help you report.
- **If you are another entity with knowledge of a disease on the monitored list:**
 - You do NOT need to report monitored diseases to meet NLRAD regulations; however, check State-specific regulations for any additional State-level requirements.

Table 1. Summary of reporting responsibilities.

	Notifiable Diseases	Monitored Diseases
Diagnostic laboratories	Report to State and APHIS immediately.	Report occurrence and other requested information to States at least monthly
Accredited veterinarians	Report to State and APHIS immediately.	Reporting not required for NLRAD regulation
Non-accredited veterinarians	Report to State and APHIS immediately.	Reporting not required for NLRAD regulation
Other animal health professionals	Report to State and APHIS immediately.	Reporting not required for NLRAD regulation
State officials	Communicate and cooperate with Tribal Nations and APHIS	Report occurrence and other requested information to APHIS monthly

APHIS	Communicate and cooperate with States and Tribal Nations. Report timely, accurate, and consistent summary information on current health status of U.S. animals.	Report timely, accurate, and continuous summary information on current health status of U.S. animals.
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PART 2: CASE DEFINITIONS

Knowing when to report a disease depends on the case definition and reporting criteria. We keep a case definition and reporting criteria library for listed diseases on the [NLRAD webpage](#). We base these case definitions on known diagnostics and the epidemiology of the agents. Case definitions and reporting criteria help standardize reporting and reduce reporting inaccuracies.

We coordinate the development and review of case definitions for all diseases on the list and include disease-specific expertise from both within and outside the agency. We may ask for input on the case definitions from State and Federal animal health officials, diagnosticians, epidemiologists, clinical veterinarians, and other subject matter experts as necessary. The VS Deputy Administrator gives final approval of case definitions for foreign animal diseases and regulatory program diseases.

Input on case definitions and reporting criteria are welcome. If you have comments on a specific case definition or reporting criteria, **submit your comments in writing** and include supporting scientific evidence. We will review your letter and consider your input in the next revision of the disease case definition.

Send your written comments to:

Attn: NLRAD Office
APHIS VS CEAH
2150 Centre Ave., Bldg. B
Fort Collins, CO 80526

OR

E-mail NLRAD.NAHR@usda.gov.

CASE CLASSIFICATION

The case classification, or state of knowledge about disease occurrence, defines the trigger for reporting. There are three case classification categories: suspect, presumptive positive, and confirmed positive.

In general, we classify known agents from the **monitored and notifiable** lists as the following (individual case definitions will vary):

- **Suspect case:** Epidemiological information indicating exposure, or clinical signs consistent with the disease of concern.
- **Presumptive positive:** A suspect case with epidemiological information indicating exposure and positive screening test. In some instances, reporting occurs at the presumptive level, and further diagnostics are not necessary. Specific disease case definitions will state this.

- **Confirmed positive:** A laboratory unequivocally determines the presence of the agent of concern using the accepted diagnostic test(s).

The case classification for **emerging diseases** is:

- **Suspect:** Presence of clinical signs and meets the definition for emerging disease; or laboratory has received submissions from multiple sources/farms; or applied diagnostic tests yielded negative or non-definitive results.
- **Presumptive:** Laboratory receives preliminary diagnostic results identifying a new, known, or unknown agent meeting the case definition for emerging animal disease.
- **Confirmed:** Confirmed presence of a newly identified or known agent via sequencing, virus isolation, or other technologies.

We recognize that there are not 'validated' assays for all diseases of concern. As such, specific case definitions may include a combination of clinical presentation and epidemiology. Laboratories can also apply advanced diagnostics to confirm the presence of a pathogen. The National Veterinary Services Laboratories can serve as a reference to help with diagnostic work up.

PART 3: PROCESS TO REVIEW, CHANGE, AND APPROVE THE LIST

The NLRAD is based on the OIE listed diseases. We, in collaboration with State animal health officials and other stakeholders, will review the listed diseases annually and recommend changes when necessary. We will start the routine review process after May of each year; if there is an emergency issue that requires immediate action, the review process will happen as needed. We will first review the list internally and then reach out to stakeholders for written comments and additional input. We will consider all input received and finalize the list by November for the upcoming year. We will communicate all final changes to the list via a *Federal Register* notice.

PROCESS FOR ADDITION OR REMOVAL OF A DISEASE

We will consider updates and edits to the list when:

- The OIE updates their list of reportable diseases, infections, and infestations. All additions to the OIE list are automatically included on the NLRAD. Review is necessary to decide whether the disease should be notifiable or monitored; review is also necessary to determine when to remove a disease from the list.
- We identify an emerging issue.
- We change other disease related regulations.
- There are changes made to the USDA Select Agents and Toxins List or Centers for Disease Control and Prevention (CDC) Category A, B, or C Bioterrorism Agents/Diseases list. All additions to these lists are automatically included on the NLRAD. Review is necessary to determine when to remove a disease from the list.
- We receive detailed written requests for changes or additions and we determine it is appropriate to incorporate the requests.

For us to add a disease onto the list that is not OIE listed, the disease will need to meet one of the following conditions:

1. The disease has a history of causing **significant** production losses in livestock², and losses due to morbidity or mortality are related to the agent and not solely management or environmental factors. There is a direct economic impact from the disease linked to its associated morbidity, mortality, or effects on product quality; OR
 - a. The disease has, or scientific evidence shows that it is likely to have, a **significant** negative effect on wildlife; OR
 - b. The agent that causes the disease is of high public health concern (zoonotic); natural transmission to humans has been proven and human infection is associated with severe consequences.
2. The infectious etiology of the disease is proven, or if the etiology is not yet known, an infectious agent is strongly associated with the disease; AND
 - a. A repeatable and robust means of detection/diagnosis exists; AND
 - b. A robust case definition is available to clearly identify cases and how cases are to be distinguished from other pathologies.
3. The disease has met the definition of an Emerging Disease.

PUBLIC INPUT ON THE LIST OF DISEASES

Input into the list is welcome. If you want to ask for a change or addition to the list, you may either contact us directly or contact your State animal health official who will then bring your written comments to us.

Provide your input in a written proposal stating the reason for the suggested change or addition. Include in your proposal the following information:

- To ask for an addition to the list, include in your written proposal with scientific evidence that:
 - The disease agent or condition causes significant production losses, sickness, death, or has a significant impact to public health.
 - The information collected on the disease will help control, eradicate, manage, or develop baseline information related to the disease.
- To ask for a removal from the list, include in your written proposal with scientific evidence that:
 - The disease agent or condition does not cause significant production losses, sickness, death, or does not have a significant impact to animals or public health.
 - The information collected on the disease does not help control, eradicate, manage, or develop baseline information related to the disease.
- To ask to move a disease from monitored to notifiable, or notifiable to monitored, include in your written proposal your reasons for this change.

Send your written proposal to:

Attn: NLRAD Office
APHIS VS CEAH
2150 Centre Ave., Bldg. B
Fort Collins, CO 80526

OR

² Livestock is defined as all farm-raised animals. This includes bees, farmed aquaculture, and animals maintained in captivity on a farm.

E-mail NLRAD.NAHRs@usda.gov.

PART 4: ELECTRONIC METHODS TO REPORT

NOTIFIABLE DISEASES

First, personally contact both your State animal health official and APHIS when you suspect or confirm a notifiable disease.

- Your State animal health official (see <http://www.usaha.org/Members> or [NLRAD website](#) for contact information) **and**
- APHIS ([NLRAD website](#))

Individual animal disease control or eradication programs may have data systems to collect additional information for disease investigation and response. We, or your State animal health official, will notify you if you need to use one of these data systems. The APHIS data systems used for notifiable diseases include Surveillance Collaborations Services (SCS), Veterinary Services Laboratory Submissions (VSLS), Emergency Management and Response System (EMRS) 2.0, Laboratory Messaging Services (LMS), Data Integration Services (DIS), and any subsequent applications that replace or augment these. States may use additional data systems not listed here.

MONITORED DISEASES

- State animal health official: Report the information to APHIS monthly through National Animal Health Reporting System (NAHRS) or any subsequent application that replaces or augments this system. The NAHRS access is available through the NLRAD website. The NLRAD website has more information available to help you report monitored diseases.
- Laboratories: Use a reporting method agreed upon between you and the State.

More information about our current and planned data systems is available on the NLRAD website [NLRAD website](#).

APPENDIX A: U.S. NATIONAL LIST OF REPORTABLE ANIMAL DISEASES

Notifiable disease – A disease or condition that requires immediate notification to Federal and State veterinary authorities. In addition to the listed notifiable diseases, these animal disease conditions **are notifiable** and must be immediately reported:

1. Suspicion or detection of **any** animal disease or infection not known to exist in the United States
2. Exotic vectors (flies and fly larvae, mites, and ticks)
3. **Emerging disease:** A disease, infection, or infestation in domestic or wild animals that is a threat to terrestrial animals, aquatic animals, or humans, and meets one of the following criteria:
 - d. An unknown agent that is causing disease in a herd/flock/premise and has the potential to result in a significant animal or public health impact, and applied diagnostic tests have yielded negative or non-definitive results; OR
 - e. A newly identified agent that is causing disease in a herd/flock/premise and has the potential to cause significant animal or public health impact, or is occurring in multiple herds/flocks/premises; OR
 - f. A previously identified or known pathogenic agent that has a change in epidemiology, such as:
 - i. Unexpected production impacts or morbidity/mortality over a previously defined range for the agent
 - ii. Expanded host range
 - iii. Change in geography of an agent with the potential to cause a significant animal or public health impact

Monitored disease – A disease or condition where occurrence is routinely tracked by APHIS and data are used to monitor changes in a given population and its environment, or to report on disease occurrence.

PROPOSED NATIONAL LIST OF REPORTABLE ANIMAL DISEASES (NLRAD) – 2020

* = Select agents that laboratories must also report to the [Federal Select Agent Program](#) when identified due to their severe threat to public or animal health.

Notifiable Multiple-Species Diseases	Monitored Multiple-Species Diseases
<ul style="list-style-type: none"> • Akabane • Anthrax (<i>Bacillus anthracis</i>)* • Bovine tuberculosis (<i>Mycobacterium bovis</i>) • Bluetongue (serotype 8) • Brucellosis (<i>Brucella abortus</i>)* • Brucellosis (<i>Brucella melitensis</i>)* • Brucellosis (<i>Brucella suis</i>)* • Crimean-Congo hemorrhagic fever* • Epizootic hemorrhagic disease • Equine encephalomyelitis (Eastern)* • Equine encephalomyelitis (Western) 	<ul style="list-style-type: none"> • Bluetongue (serotypes other than 8) • Echinococcosis/hydatidosis (<i>Echinococcus granulosus</i>, <i>E. multilocularis</i>) • Paratuberculosis (Johne’s disease) (<i>Mycobacterium avium</i> paratuberculosis) • Q fever (<i>Coxiella burnetii</i>)* • Tularemia (<i>Francisella tularensis</i>)*

- Equine encephalomyelitis (Venezuelan)*
- Foot-and-mouth disease*
- Glanders (*Burkholderia mallei*)*
- Heartwater (*Cowdria ruminantium*)
- Japanese encephalitis
- Melioidosis (*Burkholderia pseudomallei*)*
- New World screwworm (*Cochliomyia hominivorax*)
- Old World screwworm (*Chrysomya bezziana*)
- Pseudorabies (Aujeszky's disease)
- Rabies
- Rift Valley fever*
- Rinderpest*
- Surra (*Trypanosoma evansi*)
- Trichinellosis (*Trichinella* spp.)
- Vesicular stomatitis
- West Nile virus

Notifiable Avian Diseases	Monitored Avian Diseases
<ul style="list-style-type: none"> • Duck viral hepatitis (duck hepatitis A virus) (domestic poultry) • Fowl typhoid (<i>Salmonella enterica – Gallinarum</i>) • Highly pathogenic avian influenza* (reporting of occurrence in all birds) • Low pathogenic avian influenza (H5 or H7 subtypes) (poultry only) • Pullorum disease (<i>Salmonella enterica- Pullorum</i>) • Turkey rhinotracheitis (avian metapneumovirus) (domestic poultry only) • Virulent Newcastle disease (domestic poultry only)* 	<ul style="list-style-type: none"> • Avian chlamydiosis (psittacosis and ornithosis, <i>Chlamydophila psittaci</i>) • Avian infectious bronchitis • Avian infectious laryngotracheitis • Avian mycoplasmosis (<i>Mycoplasma gallisepticum</i>) • Avian mycoplasmosis (<i>Mycoplasma synoviae</i>) • Infectious bursal disease (gumboro disease)

Notifiable Bee Diseases	Monitored Bee Diseases
<ul style="list-style-type: none"> • None at this time 	<ul style="list-style-type: none"> • Acarapisosis of honey bees (infestation with <i>Acarapis woodi</i>) • American foulbrood of honey bees (infection with <i>Paenibacillus</i> larvae) • European foulbrood of honey bees (infection with <i>Melissococcus plutonius</i>) • Small hive beetle infestation (<i>Aethina tumida</i>) • Tropilaelaps infestation of honey bees (infestation with <i>Tropilaelaps spp.</i>) • Varroosis of honey bees (infestation with <i>Varroa spp.</i>)
Notifiable Bovine Diseases	Monitored Bovine Diseases
<ul style="list-style-type: none"> • Babesiosis (<i>Babesia bovis</i>, <i>B. bigemina</i>) • Bovine spongiform encephalopathy • Contagious bovine pleuropneumonia (<i>Mycoplasma mycoides mycoides</i>) • Hemorrhagic septicemia (<i>Pasteurella multocida</i>, serotypes B/Asian or E/African) • Lumpy skin disease* • Theileriosis (<i>Theileria annulata</i>, <i>T. parva</i>) • Trichomoniasis (<i>Tritrichomonas foetus</i>) • Trypanosomosis (tsetse-transmitted)(<i>Trypanosoma congolense</i>, <i>T. vivax</i>, <i>T. brucei brucei</i>) 	<ul style="list-style-type: none"> • Anaplasmosis (<i>Anaplasma marginale</i>, <i>A. centrale</i>) • Bovine genital campylobacteriosis (<i>Campylobacter fetus venerealis</i>) • Bovine viral diarrhea • Enzootic bovine leukosis • Infectious bovine rhinotracheitis/infectious pustular vulvovaginitis • Malignant catarrhal fever (ovine herpesvirus 2, alcelaphine herpesvirus 1)
Notifiable Caprine and Ovine Diseases	Monitored Caprine and Ovine Diseases
<ul style="list-style-type: none"> • Contagious caprine pleuropneumonia (<i>Mycoplasma capricolum capripneumoniae</i>) 	<ul style="list-style-type: none"> • Caprine arthritis and encephalitis • Contagious agalactia (<i>Mycoplasma agalactiae</i>, <i>M. Capricolum</i>)

- | | |
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| <ul style="list-style-type: none"> • Mange (<i>Sarcoptes scabiei var ovis</i>, <i>Chorioptes bovis</i>, <i>Psoroptes ovis</i>, <i>Psoroptes cuniculi</i>, <i>Psoregates ovis</i>) • Nairobi sheep disease • Peste des petits ruminants* • Scrapie • Sheeppox and goatpox* | <ul style="list-style-type: none"> <i>capricolum</i>, <i>M. putrefaciens</i>, <i>M. mycoides capri</i> • Enzootic abortion of ewes (<i>Chlamydia abortus</i>) • Maedi-visna/ovine progressive pneumonia • Ovine epididymitis (<i>Brucella ovis</i>) • Salmonellosis (<i>Salmonella abortus ovis</i>) |
|--|---|

Notifiable Equine Diseases	Monitored Equine Diseases
<ul style="list-style-type: none"> • African horse sickness* • Contagious equine metritis (<i>Taylorella equigenitalis</i>) • Dourine (<i>Trypanosoma equiperdum</i>) • Equine infectious anemia • Equine piroplasmiasis (<i>Theileria equi</i>, <i>Babesia caballi</i>) • Equine rhinopneumonitis/ equine herpesvirus-1 myeloencephalopathy (EHV1-EHM) • Hendra virus* 	<ul style="list-style-type: none"> • Equine influenza (virus type A) • Equine rhinopneumonitis EHV-1 (non EHM) • Equine viral arteritis • Pigeon fever (<i>Corynebacterium pseudotuberculosis</i>, ulcerative lymphangitis) • Strangles (<i>Streptococcus equi equi</i>)
Notifiable Farmed Cervid Diseases	Monitored Farmed Cervid Diseases
<ul style="list-style-type: none"> • Chronic wasting disease 	<ul style="list-style-type: none"> • None at this time
Notifiable Lagomorph (Rabbits & Hares) Diseases	Monitored Lagomorph (Rabbits & Hares) Diseases
<ul style="list-style-type: none"> • Myxomatosis • Rabbit hemorrhagic disease 	<ul style="list-style-type: none"> • None at this time
Notifiable Porcine Diseases and Infections	Monitored Porcine Diseases and Infections

- | | |
|---|--|
| <ul style="list-style-type: none"> • African swine fever* • Classical swine fever* • Nipah virus* • Swine vesicular disease* • Vesicular exanthema | <ul style="list-style-type: none"> • Cysticercosis (<i>Taenia solium</i>, <i>T. saginata</i>) • Porcine reproductive and respiratory syndrome • Transmissible gastroenteritis |
|---|--|

Notifiable ‘Other’ Diseases

Monitored ‘Other’ Diseases and Infections

- | | |
|--|---|
| <ul style="list-style-type: none"> • Camelpox • Leishmaniasis (<i>Leishmania</i> spp.) | <ul style="list-style-type: none"> • None at this time |
|--|---|

AQUATIC

Notifiable Amphibian Diseases

Monitored Amphibian Diseases

- | | |
|---|---|
| <ul style="list-style-type: none"> • <i>Batrachochytrium dendrobatidis</i> • <i>Batrachochytrium salamandrivorans</i> • Ranavirus (<i>Ranavirus</i> species) | <ul style="list-style-type: none"> • None at this time |
|---|---|

Notifiable Crustacean Diseases

Monitored Crustacean Diseases

- | | |
|---|---|
| <ul style="list-style-type: none"> • Acute hepatopancreatic necrosis disease (<i>Vibrio parahaemolyticus</i> pVA-1 plasmid) • Crayfish plague (<i>Aphanomyces astaci</i>) • Infectious hypodermal and hematopoietic necrosis • Infectious myonecrosis • Necrotizing hepatopancreatitis (<i>Candidatus Hepatobacter penaei</i>)(early mortality syndrome) • Taura syndrome • White spot disease (white spot syndrome virus) • White tail disease (<i>Macrobrachium rosenbergii</i> nodavirus) • Yellowhead (Infection with yellowhead virus genotype 1) | <ul style="list-style-type: none"> • None at this time |
|---|---|

Notifiable Fish Diseases	Monitored Fish Diseases
<ul style="list-style-type: none">• Epizootic hematopoietic necrosis• Epizootic ulcerative syndrome (<i>Aphanomyces invadans</i>)• Gyrodactylosis (<i>Gyrodactylus salaris</i>)• Infectious hematopoietic necrosis• Infectious salmon anemia (HPR0)• Infectious salmon anemia (HPR-deleted)• Salmonid alphavirus• Red sea bream iridoviral disease• Spring viremia of carp• Tilapia lake virus• Viral hemorrhagic septicemia	<ul style="list-style-type: none">• Koi herpesvirus disease
Notifiable Mollusc Diseases	Monitored Mollusc Diseases
<ul style="list-style-type: none">• Abalone herpesvirus• <i>Bonamia exitiosa</i>• <i>Bonamia ostreae</i>• <i>Marteilia refringens</i>• <i>Perkinsus olseni</i>• <i>Xenohaliotis californiensis</i>	<ul style="list-style-type: none">• <i>Perkinsus marinus</i>

APPENDIX B: LABORATORY CASE CLASSIFICATION AND REPORTING REQUIREMENTS

All laboratories in the United States testing for the listed diseases, including the National Veterinary Services Laboratories (NVSL), those that are publically funded, private, or universities, must follow the NLRAD regulation. Select agents must also be reported to the [Federal Select Agent Program](#) when identified due to their severe threat to public or animal health. There may be additional State and Federal rules and regulations that are not listed here.

We recognize that while the NLRAD focuses on the diseases in the two NLRAD categories - notifiable and monitored. Laboratories further classify the agents into known and unknown agents until they can be identified by a diagnostic test.

Laboratories play a key role in reporting both monitored and notifiable diseases. Shown here are tables that outline the laboratory reporting specifics for monitored, notifiable, and emerging diseases for each case classification. This includes the trigger at the laboratory for reporting results, timeframe, and reporting mechanism.

TABLE A1: MONITORED DISEASE REPORTING GUIDANCE FOR LABORATORIES

CASE CLASSIFICATION	TRIGGER at LAB/RESULTS	LAB REPORTS TO WHOM	MECHANISMS FOR REPORTING	TIMELINE FOR REPORTING	ACTION
Monitored Disease: Suspect	Clinical signs and meets case definition for monitored disease or submissions request for testing for monitored disease.	N/A	N/A	N/A	Lab → Continue testing
Monitored Disease: Presumptive	Receive preliminary diagnostic results; Meets case definition for monitored disease at presumptive level.	Submitter	Email or lab report. Recognize and use normal processes.	Per lab's reporting policy to submitter (routine).	Lab → +/-Confirmatory Testing depending on protocol for that disease Veterinarian → Treatment

CASE CLASSIFICATION	TRIGGER at LAB/RESULTS	LAB REPORTS TO WHOM	MECHANISMS FOR REPORTING	TIMELINE FOR REPORTING	ACTION
		State animal health official of State where animal is located.	Recognize and use normal processes.	Reporting monitored diseases at presumptive level dependent on State requirements if more stringent than NLRAD (not a NLRAD requirement).	State animal health official → evaluates (using professional judgment) if: presumptive lab diagnosis and other information meets case definition; reports to NAHRS on occurrence of disease.
		+/- Industry Associations			Industry → Awareness, planning
Monitored Disease: Confirmed	Confirmed presence of monitored disease; Meets case definition for monitored disease at confirmed level.	Submitter	Email or lab report. Recognize and use normal processes.	Per lab's reporting policy to submitter (routine). NAHRS reporting requirement is MONTHLY	Veterinarian → Treatment-same or alternative specific treatment
		State animal health official where animal is located.	Recognize and use normal processes.	As appropriate for State	State animal health official → +/- State response (may be in association with Federal response depending on disease and severity) - Mandatory NAHRS Reporting on occurrence
		+/- Industry associations	As appropriate for State/industry	As appropriate for industry	Industry → Awareness, planning

TABLE A2: NOTIFIABLE DISEASE REPORTING GUIDANCE FOR LABORATORIES

CASE CLASSIFICATION	TRIGGER at LAB/RESULTS	LAB REPORTS TO WHOM	MECHANISMS FOR REPORTING	TIMELINE FOR REPORTING	ACTION
Notifiable Disease: Suspect - FAD	<p>Clinical signs and history raise suspicion of FAD.</p> <p>Meets case definition for suspect FAD.</p>	State and Federal animal health officials	<p>Laboratory submission with history; encourage a phone call with laboratory.</p> <hr/> <p>Phone call followed up by email or email; Recognize and use normal communication and reporting protocols.</p>	Immediately; as soon as a FAD is suspected	<p>Lab → Initiates diagnostic testing at NVSL and/or National Animal Health Laboratory Network (NAHLN) lab</p> <p>State/Federal officials → Foreign animal disease/emerging disease investigation per APHIS Guidance 12001</p>
Notifiable Disease: Suspect - Regulatory diseases and high priority endemic diseases	Testing requested for regulatory disease based on combination of clinical signs and history that raises suspicion of regulatory disease or as part of regulatory program.	State and Federal animal health officials	Phone call followed up by email or email; Recognize and use normal communication and reporting protocols.	Follow regulatory program guidance and State regulations	<p>State and Federal Officials → Awareness</p> <p>Action will follow State and Federal guidance</p> <p>Action as a general rule is usually not at the suspect level; however, for some diseases preliminary actions may occur.</p>
		Submitter	Lab report and/or phone call followed up by written lab report	Per lab’s reporting policy	Submitter → Awareness of next step by State or Federal officials
		+/- Industry associations	As appropriate for State/industry	As appropriate for State/industry	Industry → Awareness

CASE CLASSIFICATION	TRIGGER at LAB/RESULTS	LAB REPORTS TO WHOM	MECHANISMS FOR REPORTING	TIMELINE FOR REPORTING	ACTION
<p>Notifiable Disease: Presumptive - FAD</p>	<p>Receive preliminary diagnostic results</p>	<p>State and Federal Animal Health Officials</p>	<p>Phone call; recognize and use normal communication channels.</p>	<p>Immediately</p>	<p>Lab → Completes diagnostic testing at NAHLN or NVSL</p> <p>State/Federal officials → Foreign animal disease/emerging disease investigation per APHIS Guidance 12001</p> <p>Report to State animal health officials if not already done so</p>
<p>Notifiable Disease: Presumptive - Regulatory diseases and high priority endemic diseases</p>	<p>Receive preliminary diagnostic results</p>	<p>State and Federal Animal Health Officials</p>	<p>Phone call followed up by email or email; Recognize and use normal communication and reporting protocols.</p>	<p>Per lab’s reporting policy</p> <hr/> <p>For regulatory diseases: Federal reporting expectations are expedient reporting (24-72 hr.); reporting may be defined in disease case definition or Federal regulations;</p> <p>For high priority endemic diseases: Reporting expectations at presumptive level based on State guidance</p>	<p>For regulatory diseases: State and Federal Regulatory Program Guidance</p> <p>For high priority endemic diseases: Primarily State response. State animal health official will evaluate all information in determining if presumptive diagnosis requires action. There may be preliminary actions but full response may wait until disease confirmation.</p>

CASE CLASSIFICATION	TRIGGER at LAB/RESULTS	LAB REPORTS TO WHOM	MECHANISMS FOR REPORTING	TIMELINE FOR REPORTING	ACTION
Notifiable Disease: Confirmed - FAD	Confirmation based on case definition.	State and Federal Officials	Phone call	Immediately	State/Federal officials → Foreign animal disease/emerging disease investigation per APHIS Guidance 12001 and FAD response plans
		Submitter/ Veterinarian	Lab report and/or phone call followed by written lab report;	Per lab’s reporting policy	State and program guidance
Notifiable Disease: Confirmed - Regulatory diseases and high priority endemic diseases	Confirmed presence of disease based on case definitions.	State and Federal Officials	Phone call followed up by email or email; Recognize existing communication and reporting protocols in many States. APHIS designated IT system.	For regulatory diseases: State guidance; Federal reporting expectations are expedient reporting (24-72 hr.); reporting may be defined in disease case definition; For high priority endemic diseases: State guidance	For regulatory diseases: State and Federal Regulatory Program Guidance For high priority endemic diseases: Primarily State response; and +/- Federal assistance State officials report into NAHRS data system
		Industry	As appropriate for State/industry		Industry → Awareness

TABLE A3: EMERGING DISEASE REPORTING GUIDANCE FOR LABORATORIES

CASE CLASSIFICATION	TRIGGER at LAB/RESULTS	LAB REPORTS TO WHOM	MECHANISMS FOR REPORTING	TIMELINE FOR REPORTING	ACTION
<u>Emerging Disease:</u> Suspect	Clinical signs and meets case definition for emerging disease, +/- submissions from multiple sources/farms; → applied diagnostic tests yielded negative or non-definitive results.	State and Federal Officials	Phone call followed up by email with confirmation of receipt; Recognize existing communication and reporting protocols in many States.	As soon as an emerging disease is suspected based on case definition criteria. This timeline will be dependent upon the evolution of the disease, but will be reliant upon the professional judgment and expertise of the laboratorian.	Lab → Continue testing State and Federal Officials → Awareness; foreign animal disease/emerging disease investigation per APHIS Guidance 12001 and FAD response plans
		Submitter	Lab report and/or phone call followed up by written report for notification of next steps with State/Federal officials.	Per lab’s policy	Awareness of next step by State or Federal Officials
		+/- Industry associations	As appropriate for State/industry	As appropriate for State/industry	Industry → Awareness
<u>Emerging Disease:</u> Presumptive	Receive preliminary diagnostic results identifying a new or known agent meeting the case definition for emerging animal disease.	State Officials	Phone call followed up by email with confirmation of receipt; Recognize existing communication and reporting protocols in many States.	Immediately, no later than same day.	Lab → Confirmatory Testing

CASE CLASSIFICATION	TRIGGER at LAB/RESULTS	LAB REPORTS TO WHOM	MECHANISMS FOR REPORTING	TIMELINE FOR REPORTING	ACTION
		Federal Officials	APHIS designated IT system		State/Fed → Awareness, planning, foreign animal disease/emerging disease investigation per APHIS Guidance 12001 and FAD response plans
		NVSL	Phone call followed up with email with confirmation of receipt		NVSL → +/-Confirmatory Testing, consultation, and support
		Submitter	Lab report and/or phone call followed up by written report		Veterinarian→ Treatment
		+/- Industry associations	As appropriate for State/industry		Industry → Awareness, planning
Emerging Disease: Confirmed	Confirmed presence of a newly identified or known agent via sequencing, VI or other technologies	State Officials	Phone call followed up by email with conformation of receipt; recognize existing communication and reporting protocols in many States.		State, Federal Officials and Industry associations→ See Emerging Disease Preparedness and Response Plan
		Federal Officials	Official conference call with lab, State and Federal animal health officials.		Immediately, no later than same day.

		Submitter	Lab report and/or phone call followed up by written report		Veterinarian → Treatment – same or alternative specific treatment
		Industry associations	As appropriate for State/industry		Industry → See response options

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