



Nebraska Invasive Species Council
Terrestrial Invasive Pathogens and Diseases List* – Updated 02/16/2026

***DISCLAIMER:**

As opposed to aquatic invasive species and noxious weeds, **there is no official list of Nebraska’s invasive terrestrial (land-dwelling) pathogens and diseases created by a regulatory agency in the state. This list is unofficial; it is not for regulatory purposes and should NOT be used as a substitute for national, state, and/or county notifiable disease reporting requirements.**

Instead, this list is intended to serve two purposes:

1. To enhance the public’s awareness of these potentially high impact diseases and pathogens.
2. To encourage the public to report observations of these pathogens and diseases, which can be shared with regulatory agencies and other organizations to help control and/or prevent their spread in Nebraska.

Pathogens and diseases on this list may be included for a variety of reasons. Those reasons may include:

- The pathogen or disease shows common characteristics identified as invasive in published scientific literature.
- The pathogen or disease is designated as invasive by a regulatory agency and/or government authority in Nebraska and/or a nearby state.
- The pathogen or disease appeared in Nebraska and highly impacted its populations, resources, and/or economy in the past, so building awareness among the public is critical to prevent its spread and mitigate its impacts.

NOTIFIABLE DISEASE REPORTING INFORMATION

For more information on how to report notifiable diseases, please use the contact information listed below:

Organization	Phone Number	Website	What to Report
Nebraska Department of Health and Human Services Epidemiology Public Health Hotline	402-471-2937	https://dhhs.ne.gov/	Notifiable diseases contracted by humans
U.S. Centers for Disease Control and Prevention	800-232-4636	https://www.cdc.gov/	Notifiable diseases contracted by humans
Nebraska Department of Agriculture	402-471-2351	https://nda.nebraska.gov/	Notifiable diseases contracted by livestock, poultry, plants, and domestic animals
Animal and Plant Health Inspection Service	844-820-2234	https://www.aphis.usda.gov/	Notifiable diseases contracted by livestock, poultry, plants, and domestic animals
Nebraska Game and Parks Commission	402-471-0641	https://outdoornebraska.gov/	Notifiable diseases contracted by wildlife
Nebraska Veterinary Diagnostic Center	402-472-1434	https://vbms.unl.edu/nvdc/	Disease surveillance and diagnostic services for veterinarians, livestock producers, pet owners, and researchers

INVASIVE SPECIES

Invasive species are plants, animals, or other organisms that are found in an area where they do not naturally exist, and their introduction to that area does or is likely to harm the environment, economy, or human health. They may be from an area very far away (non-native), such as another continent, country, or state, or from an area close by (native), such as another county, city, or neighboring habitat.

Invasive species are usually brought to the new area by someone or something, either accidentally or on purpose, through trade, travel, recreation, e-commerce, land/resource use change, or unwanted/accidental pet release. Once introduced to a new environment, they spread quickly and aggressively, harming other species by using up their resources, such as food, water, and habitat, that they need to survive. Since they are new to the area, they often don't have natural predators, which allows their population to expand at alarming rates.

There are two types of invasive species in Nebraska: terrestrial (land-dwelling) and aquatic (water-dwelling).

COMMON CHARACTERISTICS

For a pathogen or disease to be considered invasive, it typically has the following traits:

1. **Non-Native Origin:** Invasive pathogens and diseases are introduced to an ecosystem outside of its natural range. This introduction typically occurs accidentally, such as through the import of ornamental plants or pets carrying the disease or pathogen.
2. **Rapid Reproduction and Spread:** Invasive pathogens and diseases often reproduce quickly and in large numbers. They can adapt to a variety of environments, allowing them to spread far and wide.
3. **Ecological Disruption:** Invasive pathogens and diseases can cause severe decline in native species populations.
4. **Lack of Natural Cures:** In their new environment, invasive pathogens and diseases often have few or no cures to keep their spread in check. This allows them to thrive unchecked.

TERRESTRIAL INVASIVE PATHOGENS AND DISEASES

Terrestrial invasive pathogens and diseases include diseases and disease-causing microorganisms, such as bacteria, fungi, viruses, parasites, and prions, that cause disease in terrestrial plants, animals, and humans. Spread of these diseases and microorganisms often occurs through direct transmission from other organisms or the environment. They can be very persistent, often remaining within the soil, water, and elsewhere (e.g., host organisms) for many years. For some of these pathogens and diseases, there is no cure once an organism has been infected.

Most pathogens only infect specific species, like one type of animal. But some can jump from one species to another, like from an animal to a human (zoonotic diseases). Bugs, like mosquitoes, ticks, or fleas, can also spread some pathogens by biting you. When this happens, the bugs that spread them are called vectors.

PATHOGENS AND DISEASES CATEGORIES

The Nebraska Invasive Species Council created four categories for terrestrial invasive pathogens and diseases that are found in Nebraska. Those categories are as follows:

1. **Watchlist:** potential invasive pathogens and diseases that are uncommon but may be present in Nebraska, and their impacts are unknown at this time.
2. **Potential:** invasive pathogens and diseases that have not yet been sampled in Nebraska and are considered a high threat.
3. **Priority:** invasive pathogens and diseases that are considered highly unwanted, and all efforts should be made to prevent their spread and/or outbreak.
4. **Established:** invasive pathogens and diseases that are well established in Nebraska and total elimination is impossible. Local elimination and containment are the best that can be expected.

WATCHLIST TERRESTRIAL INVASIVE PATHOGENS AND DISEASES

Watchlist terrestrial invasive pathogens and diseases are potential pathogens and diseases that are uncommon but may be present in Nebraska, and their impacts are unknown at this time. **There are currently no known watchlist terrestrial invasive pathogens and diseases in Nebraska.**

POTENTIAL TERRESTRIAL INVASIVE PATHOGENS AND DISEASES

Potential terrestrial invasive pathogens and diseases are invasive pathogens and diseases that have not yet been sampled in Nebraska and are considered a high threat. Those pathogens and diseases include:

Common Name	Species Name
Rabbit Hemorrhagic Disease	<i>Lagovirus</i> spp.
Sudden Oak Death	<i>Phytophthora ramorum</i>
Thousand Cankers Black Walnut Disease	<i>Geosmithia morbida</i>

PRIORITY TERRESTRIAL INVASIVE PATHOGENS AND DISEASES

Priority terrestrial invasive pathogens and diseases are potential pathogens and diseases that are considered highly unwanted, and all efforts should be made to prevent their spread and/or outbreak. Those pathogens and diseases include:

Common Name	Species Name
Avian Influenza	<i>Alphainfluenzavirus influenzae</i>
Rabies	<i>Lyssavirus</i> spp.

ESTABLISHED TERRESTRIAL INVASIVE PATHOGENS AND DISEASES

Established terrestrial invasive pathogens and diseases are well established in Nebraska, and total elimination is impossible. Local elimination and containment are the best that can be expected. Those pathogens and diseases include:

Common Name	Species Name
Chytrid Fungus	<i>Batrachochytrium dendrobatidis</i>
White Nose Syndrome	<i>Pseudogymnacus destructans</i>

COMPLETE TERRESTRIAL INVASIVE PATHOGENS AND DISEASES LIST

#	Common Name	Species Name	Category
1	Avian Influenza	<i>Alphainfluenzavirus influenzae</i>	Priority
2	Chytrid Fungus	<i>Batrachochytrium dendrobatidis</i>	Established
3	Rabbit Hemorrhagic Disease	<i>Lagovirus</i> spp.	Potential
4	Rabies	<i>Lyssavirus</i> spp.	Priority
5	Sudden Oak Death	<i>Phytophthora ramorum</i>	Potential
6	Thousand Cankers Black Walnut Disease	<i>Geosmithia morbida</i>	Potential
7	White Nose Syndrome	<i>Pseudogymnacus destructans</i>	Established

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