



(Photo Credit: Government of Alberta)



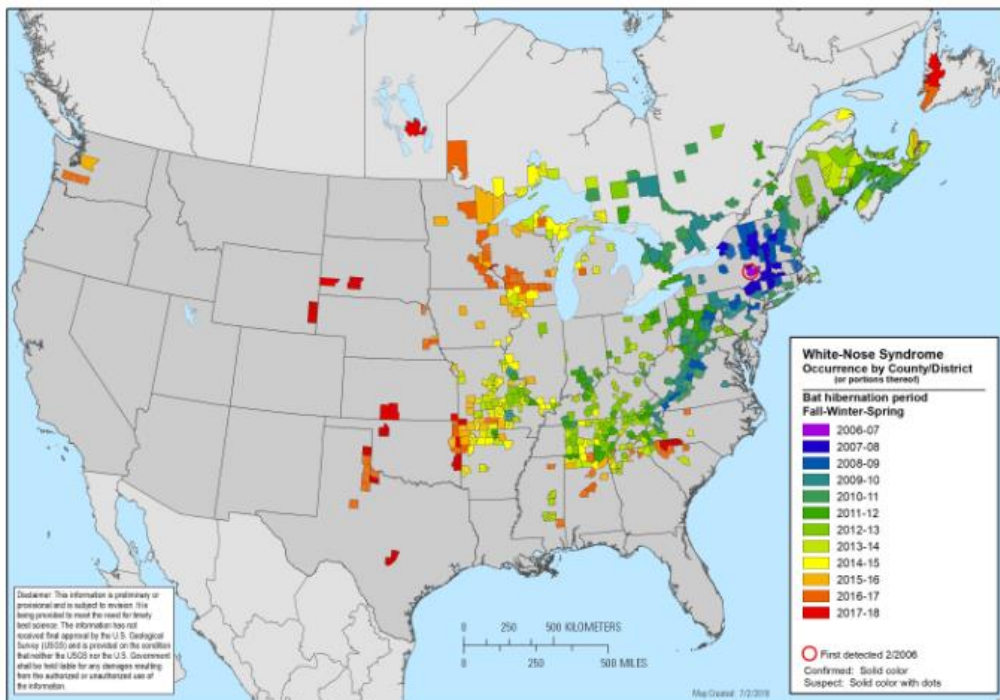
## White-Nose Syndrome Fact Sheet

### What is White-Nose Syndrome?

White-Nose Syndrome (WNS) is a fatal fungal disease caused by *Pseudogymnoascus destructans* that was introduced to the U.S. in Albany, NY in 2006. The characteristic white fungus from which the disease derives its name appears on the muzzles, ears, and wing membranes of many bat species. Before the emergence of WNS, little research was conducted on changes in bat population sizes and distributions in Washington, D.C. With the rapid spread of this disease, many populations have declined by up to 90%.

The fungus that causes WNS grows in cool, moist environments, such as caves. Bat species that hibernate during the winter in caves are more susceptible to contracting the fungus than species that do not enter caves. Among hibernating bats, fungal growth causes early arousal from torpor as bats feel the need to groom themselves. Increased frequency and duration of arousals leads bats to exhibit aberrant behavior, such as large numbers moving within hibernacula or flying during the day. As a result, bats prematurely use up their fat reserves, forage during the winter hibernation period, and become emaciated. The fungus can spread quickly between bats, especially in species that roost in large colonies, resulting in high rates of winter mortality.

### What areas have been affected by White-Nose Syndrome?

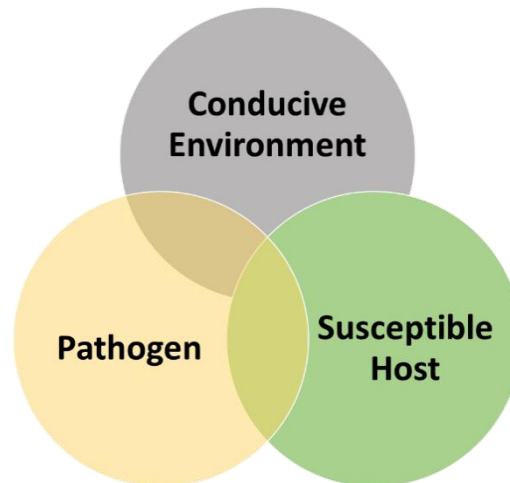


As of 2018, WNS has been observed in 33 states and 7 Canadian provinces. The fungal causal agent has been further identified in 3 additional states. Visit [www.whitenosesyndrome.org](http://www.whitenosesyndrome.org) to learn more and view an interactive time lapse map of the disease spread.

Source: <https://www.whitenosesyndrome.org/static-page/where-is-wns-now>

## What is being done to battle White-Nose Syndrome?

The spread of the disease is an interactive process that involves a susceptible host (hibernating bats), a conducive environment (cold, moist, dark places like caves), and a virulent pathogen (*Pseudogymnoascus destructans*). Researchers hope to alter the disease triangle for WNS and break the cycle of its spread.



(Photo Credits: USFWS)

Although WNS isn't harmful to humans, we must address the rapid spread of this deadly syndrome to protect bat populations. WNS is spread by contact among bats and with their environment. WNS can also be transferred to caves from human visitors, as contaminated clothing and gear can transmit fungal spores into new areas.

The U.S. Fish and Wildlife Service (USFWS) urges cavers to refrain from caving in all WNS affected states and adjoining states. Cavers should also avoid caving anywhere during bats' hibernation period (September-May) to minimize disturbance and mortality. Decontamination protocol can be found at: <https://www.whitenosesyndrome.org/topics/decontamination>

The USFWS has implemented a nationwide White-Nose Syndrome Response Plan and is responsible for funding and coordinating much of the current research on WNS. Universities, non-governmental organizations, and government agencies (such as Washington, D.C.'s Department of Energy and Environment) address specific research questions and management challenges related to bat conservation and responses to WNS.

## How can you help?

Everyone can take steps to conserve and protect bats and help them survive White-Nose Syndrome. It is important to remember to respect bats and refrain from handling them directly. If you have direct contact with a bat, please refer to the information [here \[insert hyperlink\]](#). Check out some of these ways to get involved in bat conservation.

### At your home:

- Construct a bat house in your yard following these [instructions \[insert hyperlink\]](#) and count how many bats use it to help your state monitor bat populations.
- Protect natural bat habitats and reduce human disturbance around your home: reduce outdoor lighting, limit tree clearing, and protect streams and wetlands.
- If you have unwanted bats in your house, [contact \[insert hyperlink\]](#) your local natural resource agency to exclude or remove them after the end of the maternity season. The best time to exclude bats is when they aren't in your home.

### Within your community:

- Learn about bats and teach others about bats and their ecological importance.
- Be observant and monitor for bats in your community.
- Stay out of caves and mines where bats are known or suspected to hibernate.
- Attend educational programs or events celebrating bats.
- Report unusual bat behavior to your state [natural resource agency \[insert hyperlink\]](#), (bats flying during the day, bats roosting outside structures in sunlight, or bats unable to fly/get off ground)

### In/near bat habitat (caves, abandoned mines, etc.):

- Avoid possible spread of WNS via humans by cleaning shoes and gear before and after entering caves.
- Leave bats alone.
- Obey signs: Don't enter closed or gated hibernacula.

Source: <https://www.whitenosesyndrome.org/static-page/how-you-can-help>



(Photo Credits: NPS)



(Photo Credits: Joey Weber, Indiana State University)