

The Center for Biological Diversity's Petition for Administrative Bat Cave Closures

On January 21, 2010, the Center for Biological Diversity filed a petition with the federal government, requesting measures to protect bats at risk from the spread of the newly emergent, highly lethal bat illness known as white-nose syndrome (WNS). The requested actions focused on administrative closures of bat-inhabited caves throughout the continental United States. The restrictions would be maintained until it is clear that bats are not at risk from possible human transmission of the disease. This document responds to common concerns and frequently asked questions about the Center's petition.

Q. Does the petition apply to all caves and mines in the country?

A. No. The petition addresses bat-inhabited caves and mines only. Further, the petition requests administrative closure of bat caves and mines on federal land only. With regard to non-federal land, the Center has requested that the federal government make **recommendations** to state government agencies and to private cave owners to the effect that bat cave administrative closure to nonessential access is strongly advised.

Q. Does the petition call for caves to be sealed off or otherwise made physically inaccessible to people?

A. No. The petition calls for **administrative action**, not physical barriers. Sealing off or blocking caves, except with bat-safe gates installed by experts, can do great damage to cave ecosystems and would be devastating to bats. The petition seeks restrictions on human activities in caves, not physical alteration of caves.

Q. If implemented, would the petition prohibit all human access into bat caves?

A. No. The petition seeks restrictions on **nonessential** human access into bat-inhabited caves and mines, until it is clear that it is safe for bats for the restrictions to be lifted. Access for scientific research, especially on WNS, and to protect human safety (e.g., rescues), would be permitted to continue.

Q. Is there any evidence that white-nose syndrome is spread by people?

A. Yes. Evidence of people spreading WNS exists but is not conclusive at this time because not enough research has been conducted. The Center actively supports more research to determine the extent of human involvement in the spread of WNS. Bats also appear to spread the disease themselves, because some affected caves have not had human visitors in many years. The human-transmission theory is still that — a theory — but several pieces of evidence suggest that humans are a factor in the spread of this disease:

- The pattern of spread is discontinuous and has been described as “leapfrogging” because sequentially infected caves and mines are located great distances apart, farther than infected bats are likely to disperse. In 2008-2009, WNS jumped from hibernacula in southern New York to sites in central Pennsylvania, northern Virginia, and eastern West Virginia, a distance of more than 500 miles. No bat species affected by WNS is known to migrate more than 250 miles annually, substantially less than this major southward expansion in the range of WNS

during 2008-2009. Scientists have thus come to believe that while bat-to-bat transmission may be primarily responsible for the local or regional spread of white-nose, some other vector is carrying the disease to new and distant sites.

- The first caves to become infected in Virginia and West Virginia were popular recreational caves, and records from the Northeastern Cave Conservancy show that individuals who had visited WNS-infected caves in New York state subsequently entered these caves. Additionally, many caves inaccessible to humans in the region are as-yet unaffected by the disease.
- Data from trials at the National Wildlife Health Center indicate that *Geomyces destructans*, the fungus associated with WNS, can be acquired from the bats' environment as well as transmitted among bats.
- The genetic signature of *Geomyces destructans* was confirmed in sediment from infected hibernacula, indicating that the fungus is present in environmental materials within these caves, and thus has the potential to be acquired and transmitted by humans moving between hibernacula.
- Though the origins of WNS in North America are not clear, *Geomyces destructans* was recently confirmed on a healthy bat in France. There are reports of the fungus on bats in several other European countries, but affected bats do not appear to be ill. WNS behaves in many ways like other introduced diseases, where host species that have evolved with the pathogen have developed resistance, and new, "naive" hosts have little or no immunity. If *Geomyces destructans* was indeed carried to the United States from Europe, human-mediated transmission is the likely means. Bats are not known to migrate across the Atlantic, and are very unlikely to have the physiological capacity to make such a flight.

Q. If it's not proven that people can spread WNS, then why does the petition request restricting people from going into caves?

A. Because bat species and cave ecosystems are at immediate, grave, and unprecedented risk from the spread of WNS, until scientists know more about how the disease spreads, restricting human access into bat caves for the time being is an important precautionary step. Consider an analogous situation with a new disease that might develop in humans. In the case of an unknown, highly lethal, apparently contagious illness, the cautious approach would be to restrict suspected vectors for disease transmission as much as is reasonably possible. The temporary suspension of nonessential human access into bat caves on federal land is a reasonable response to an unprecedented wildlife disaster.