

**House Committee on Appropriations
Subcommittee on Interior, Environment, and Related Agencies**

**Testimony of Nina Fascione, Executive Director, Bat Conservation International,
regarding funding for a Fiscal Year 2012 national strategy to address
the bat disease White-nose Syndrome**

Good morning, Chairman Simpson, Ranking Member Moran, and members of the Subcommittee. My name is Nina Fascione, and I am Executive Director of Bat Conservation International (BCI). Based in Austin, Texas, with a membership of more than 10,000 people from all 50 of the United States, BCI conducts and supports science-based research, education, and conservation to ensure that bats will still be helping to maintain healthy environments and human economies far into the future. I am here today to request \$11.1 million in Fiscal Year (FY) 2012 funding for a national strategy to address White-nose Syndrome (WNS), a disease decimating North American bats. Numerous Federal agencies are involved in WNS response: the U.S. Fish and Wildlife Service, U.S. Geological Survey, the National Park Service, Bureau of Land Management, U.S. Forest Service, and the Department of Defense.

WNS poses the gravest threat ever faced by bats of the United States. Since its discovery in 2006, the disease has killed well over one million bats. It is named for a previously unknown, cold-loving white fungus found on the faces and wings of infected bats that is believed to cause the disease. WNS-infected bats awaken frequently during hibernation, burning the fat reserves they need to survive the winter. They often emerge early from hibernation, before the return of warm weather and insects, only to freeze or starve to death. The disease or its associated fungus has spread to 17 states and three Canadian provinces in the five years since WNS was first observed in a cave near Albany, New York. The northeastern United States has borne the brunt of WNS so far, but the disease or its fungus has spread as far south as North Carolina and Tennessee and as far west as Oklahoma.

Biologists consider the WNS die-off to be North America's most precipitous wildlife decline in the past century. The disease strikes hibernating bats – those that sleep through the winter in caves and mines – and has affected every hibernating bat species in its geographic path. Of the nation's 46 bat species, 25 hibernate, and all of these hibernating species are considered at risk of the disease. WNS or the fungus currently affects nine species, including endangered Indiana and gray bats, which could well be even closer to extinction as a result. Some WNS-infected sites experience mortality rates of almost 100%. Losses are so severe that researchers are predicting regional extinctions of the little brown bat – previously one of America's most common mammals – in northeastern states within 16 years.

Bats provide many benefits to humankind. As primary predators of night-flying insects, bats are critical to maintaining the balance of nature. A bat can eat half to all of its body weight in insects per night, consuming vast numbers of pests that damage crops such as corn, cotton, and potatoes. A study published on April 1, 2011 in the journal *Science* estimates the value of bats to the U.S. agriculture industry ranges from \$3.7 billion to \$53 billion per year. Bats also eat insects that damage forests and spread disease. Some bat species pollinate crops and disperse seeds. Research of bat biology has yielded important chemical products, including a medication to

prevent strokes. Bat droppings in caves support unique ecosystems, including microorganisms that could provide resources for detoxifying industrial wastes and producing safer pesticides and antibiotics.

The loss of bats would have serious ecological and economic consequences. The one million-plus bats killed by WNS would have eaten about 700 tons of insects each year. With the bats gone, these insects are surviving to attack crops and forests. The authors of the *Science* article argue that, as a result of WNS, North American agriculture will begin noting economic losses within four to five years, with especially severe impacts to the Midwest and Great Plains regions. In addition to crop losses, farmers will need to use more pesticides, increasing the financial strain on farming families, raising the price of food for consumers, and releasing more chemicals into our environment. Bats are important predators, so their disappearance could have broad, ripple effects on the environment that we can't yet assess.

The population declines from WNS could well lead to listing more bat species under the Federal Endangered Species Act, as well as state-level statutes, which would cause far-ranging economic costs. The Center for Biological Diversity has petitioned the FWS for listing of the northern long-eared bat and eastern small-footed bat because of WNS and other factors, while BCI and other organizations have requested the FWS to review the status of the little brown bat and to file an emergency listing of the species in the interim. At the state level, Ohio has designated four bat species as species of concern; Wisconsin is in the process of listing three bat species as threatened; and other states, including New York and New Hampshire, are considering designations. According to the Government Accountability Office (GAO-06-463R), the average cost for recovery of an endangered species is \$15.9 million. The highest estimate on record is \$125 million to recover the whooping crane. Bat species affected by WNS have broad geographic distributions and complex ecological patterns, which would likely require very high recovery costs. Finally, regulations stemming from listing more bat species would have economic impacts on industries such as mining, defense, energy, forestry, construction, transportation, tourism, and outdoor recreation.

The Federal government recognizes how much is at stake from WNS and, in conjunction with state, local, and tribal agencies, academic institutions, and nonprofits, has mounted an admirable response to the disease. WNS and its associated fungus were unknown to science until discovered in New York, but since then, Federal dollars have enabled researchers at USGS and elsewhere to isolate, identify, and develop a test for the WNS fungus, to map its genome, and answer some basic questions about the nature, transmission, and diagnosis of the disease. The FWS, the lead agency for WNS response, coordinates government and other entities in order to maximize efficient use of resources, prevent redundancy, and facilitate an effective national response. In this role, the agency has funded scientific research and on-the-ground disease surveillance and management, developed recommendations to help prevent disease spread, and created the National Plan for Assisting States, Federal Agencies, and Tribes in Managing White Nose Syndrome in Bats in collaboration with all involved Federal agencies, as well as State and other entities. Land-management agencies have been at the forefront in developing disease-monitoring techniques, gathering bat-survey data, managing resources to increase bat survival, and producing materials to educate the public about WNS. The NPS's Mammoth Cave National Park has developed a site-based response plan that is being used as a model for public lands

throughout the country; USFS is testing ways to improve bat habitat to boost post-disease survival rates; and DoD is refining acoustical bat-monitoring methods. All of these agencies provide technical support to, and collaborate and pool resources with, State, Local, and Tribal agencies as well as academic institutions and non-profits.

Despite this progress, the need for WNS-response funding continues and is, in fact, increasing. As the disease spreads, the number of entities involved and the scale of the response grows. While scientists have learned much about the disease, they cannot yet stop its spread. Critical research topics aimed at finding solutions include the susceptibility of different bat species to WNS, possible biological-control agents, and the disease-producing interface of the fungus, bats, and the cave environment. In FY 2010, FWS awarded \$1.6 million for WNS research through a granting process for which the agency received \$10.5 million in proposals. On-the-ground monitoring and management is required in both previously and newly infected areas. Overall coordination and communication is needed to ensure efficiency and the sharing of information and resources. The westward spread of WNS is sharply increasing the need for a Federal response. Western states have a higher proportion of public land than those in the East. Beyond that, much less is known about western bat populations than eastern ones, and the rugged western terrain makes data-gathering more difficult. To this point, FY 2012 is the first year for which BLM anticipates significant WNS expenses, many of which will go toward surveying approximately 400 western caves and abandoned mines for baseline data on bats.

Concluding from analysis of past WNS spending and disease-spread trends, we urge the Subcommittee to ensure that Federal agencies engaged in the WNS response receive \$11.1 million to address WNS in FY 2012. The cross-agency need is broken down as follows:

FY 2012 WNS Needs

FWS	USGS	NPS	BLM	USFS	DoD	TOTAL
\$5,200,000	\$2,400,000	\$200,000	\$1,000,000	\$2,000,000	\$300,000	\$11,100,000

One can compare this to WNS spending from FYs 2007 to 2010 (we do not have reliable expenditure figures for FY 2011):

**Estimated expenditures on White-nose Syndrome
(Note: BLM did not report WNS expenditures in past years.)**

	FWS	USGS	NPS	USFS	DoD	
FY10	3,690,000	345,500	207,000	1,815,000	206,300	6,263,800
FY09	1,790,000	334,000	162,500	890,000	5,000	3,181,500
FY07-08	3,200,000	575,000	162,500	N/A	N/A	3,937,500

8,680,000 1,254,500 532,000 2,705,000 211,300 13,382,800

The increase for FY 2012 over FY 2010 expenses is \$4,836,200, or 77%. We believe this ask is conservative and in fact will barely keep pace with the disease's spread. From 2007 to 2010, the disease moved from one state to 14, and from five sites to at least 157. From 2009 to 2010 alone, the number of affected states increased by 56%, and the number of infected sites by 78%. Overall, the number of affected states and sites increased by 50 to 100+% each year. Already this year, WNS has been confirmed in three new states, and confirmed or suspected in 15 new counties. A 77% increase in WNS spending from FY 2010 to FY 2012 is therefore clearly proportionate to the disease's expected expansion by the start of FY 2012.

Congressional support is critical for addressing WNS. Other funding sources are extremely limited. State budgets have been drastically reduced and, especially given the spread of the disease, Federal agencies' existing resources are not sufficient to meet the need. According to the President's FY 2012 budget, there is WNS funding in the FWS's Preventing Extinction initiative and in the USGS's Ecosystems program. The budget does not specify the amount of WNS money in these accounts. We are grateful for these funds, and we urge Congress to supplement them such that the cross-agency total designated for WNS in FY 2012 is \$11.1 million.

Congress is facing a difficult financial climate, so let me point out that money spent on WNS is a wise investment. First, preventing the spread of WNS will spare businesses the regulatory and other impacts of bat die-offs. In 2008 and 2009, the threat of WNS caused officials to cancel the yearly Crawlathon caving event in and around Carter Caves State Resort Park in eastern Kentucky. Normally held during the off-tourist season in a rural area with limited economic opportunities, the event's cancellation cost the park and local businesses revenue losses each year. After the WNS fungus was reported in Missouri in early 2010, officials decided to close the caves at Iowa's Maquoketa Caves State Park in order to protect the caves' bats. Park attendance, which in previous years had averaged around 250,000 visitors per year, dropped in 2010 to approximately 60,000. The loss in park revenues has hurt the Iowa Department of Natural Resources, which had already been suffering from the national economic downturn. Show caves – small businesses that provide jobs and contribute to local economies – could also be hurt by WNS. States with many show caves include Missouri, Pennsylvania, Tennessee, and South Dakota. In addition, implementing WNS response generates jobs. The USFS management of forests for bat conservation includes thinning stands of trees. The agency contracts with local businesses to harvest, haul, and process the trees for timber. Finally, conducting WNS research, management, and prevention now will reduce future expenses to the U.S. economy resulting from pest impacts to agriculture and forestry, businesses affected by additional bat listings, and the cost of listed-species recovery. In this case, an ounce of prevention is truly worth a pound of cure.

Unless additional funding is provided in FY 2012, WNS will continue to spread across the country unchecked, killing even more bats than have already died. The consequent ecological and economic impacts will affect all of us as consumers, taxpayers, and residents of a planet that will have been further impoverished of biological diversity. We desperately need designated

support for WNS response. I urge Congress to ensure FWS, USGS, NPS, BLM, USFS, and DoD receive a total of \$11.1 million for WNS in FY 2012.

Thank you for the opportunity to share BCI's position on this serious matter, and I respectfully ask you to consider our urgent request.