



NFWF

Bats for the Future Fund 2018 Grant Slate

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PARTNERS

- Avangrid Foundation
- Southern Company
- U.S. Fish and Wildlife Service
- U.S. Forest Service

ABOUT NFWF

The National Fish and Wildlife Foundation (NFWF) protects and restores our nation's fish and wildlife and their habitats. Created by Congress in 1984, NFWF directs public conservation dollars to the most pressing environmental needs and matches those investments with private funds. Learn more at www.nfwf.org

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Little brown bat with white-nose syndrome

Credit: Jonathan Mays, Maine Department of Inland Fisheries and Wildlife

OVERVIEW

The National Fish and Wildlife Foundation (NFWF), in partnership with the Avangrid Foundation, Southern Company, the U.S. Fish and Wildlife Service, and U.S. Forest Service, announced the 2018 round of funding for the Bats for the Future Fund. Four grants totaling \$1.1 million were awarded to prevent and slow the spread of white-nose syndrome (WNS), advance management tools and treatments to minimize WNS, promote the survival and recovery of WNS-affected bats, and support innovative research leading to lasting management solutions. The four awards generated more than \$900,000 in match from the grantees, providing a total conservation impact of \$2 million.

Unfortunately, more than 6 million bats have died over the past decade from WNS. In some sites where WNS has been detected, up to 100 percent of bats have been killed. Since signs of the disease were first observed in New York in 2006, WNS has spread rapidly from the Northeast to the Midwest and eastern and southeastern Canada, with cases confirmed in 33 U.S. states and seven Canadian provinces to date.

The Bats for the Future Fund focuses on existing and novel disease treatments and management strategies urgently needed to stem the impacts of WNS at the leading edge of the disease, areas with a mosaic of contaminated and uncontaminated sites on the front line of the fungus' invasion. This includes areas where WNS is currently causing the greatest bat population declines, such as the Midwest. By investing funding to treatments and new management strategies for WNS, the fund hopes to defeat this devastating disease.

(continued)



Big brown bat

Understanding the Role of a Virus in the Virulence of the Fungus that Causes White-Nose Syndrome (PA)

Grantee: The Pennsylvania State University
 Grant Award:..... \$263,168
 Matching Funds: \$226,846
Total Amount:..... \$490,014

The Pennsylvania State University, in collaboration with the Pennsylvania Game Commission, has identified that *Pseudogymnoascus destructans partitivirus* (PdPV) affects the biology and spore production of *Pseudogymnoascus destructans* (Pd), the fungus causing WNS. Researchers will develop *Pseudogymnoascus destructans partitivirus*-free strains of the fungus to study the roles of PdPV in affecting virulence of Pd, and develop a virus-induced gene silencing system to alter gene expression in the pathogen. Project will develop a virus-induced gene silencing system using infectious clones of PdPV that can be used to test the roles

of various genes of Pd, including those affecting virulence, and assess the potential to weaken PdPV-infected fungus by displacing it with PdPV-free or altered-virus strains.

Testing Ultraviolet Light and Polyethylene Glycol as a White-Nose Syndrome Management Strategy

Grantee: Bat Conservation International
 Grant Award:..... \$111,760
 Matching Funds: \$70,428
Total Amount:..... \$182,188

Bat Conservation International in collaboration with the U.S. Forest Service, Lockhaven University, Northern Arizona University and the University of Winnipeg, will evaluate the efficacy of using two non-toxic agents – ultraviolet light and polyethylene glycol – to treat mine walls, and reduce the prevalence of the fungus that causes WNS on roosting surfaces in bat hibernacula. Project will test the two environmental agents in three mines along the northern and southern edges of the WNS spread, to test the potential of environmental cleaning as a WNS management strategy.

Developing and Testing Delivery Methods for Vaccine Treatments to Reduce White-Nose Syndrome in Bats

Grantee: US Geological Survey National Wildlife Health Center
 Grant Award:..... \$400,000
 Matching Funds: \$429,466
Total Amount:..... \$829,466

The U.S. Geological Survey National Wildlife Health Center in collaboration with Palo Alto Research Company will modify and test mass delivery methods to deliver topical vaccines and other treatment compounds to free ranging bats affected by white-nose syndrome. Project will utilize automatic spray technology for applying liquid or gel to bats as they fly into or out of roosts, and measure biomarkers to assess rates of topical application and ingestion by bats.

Integrated Disease Management System Approach to Reduce White-Nose Syndrome Mortality in Texas

Grantee: Texas Parks and Wildlife Department
 Grant Award:..... \$365,642
 Matching Funds: \$194,307
Total Amount:..... \$559,949

The Texas Parks and Wildlife Department in collaboration with Kennesaw State University, Texas A&M University and Lockhaven University will implement an integrated disease management approach aimed at minimizing WNS mortality amongst tricolored bats in Texas. Project will use multiple mitigation approaches, including high-pressure steam cleaning, application of polyethylene glycol, and anti-fungal fumigants, to delay the establishment of Pd, the causal agent of WNS, reduce WNS-related mortality, and slow the spread of the pathogen.