



THE WILDLIFE SOCIETY

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Submitted by:

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Senate Appropriations Subcommittee on Commerce, Justice, Science and Related Agencies
144 Dirksen Senate Office Building
Washington, DC 20510

The Wildlife Society (TWS) appreciates the opportunity to submit testimony concerning the FY 2011 budget for the National Science Foundation (NSF). **TWS requests that the Committee work to provide the National Science Foundation (NSF) with the \$7.424 billion requested by the President for fiscal year (FY) 2011**, allowing NSF to fund its many important programs, including the Biological Sciences directorate (BIO) at \$767.81 million.

The Wildlife Society was founded in 1937 and is a non-profit scientific and educational association representing over 9,100 professional wildlife biologists and managers, dedicated to excellence in wildlife stewardship through science and education. Our mission is to represent and serve wildlife professionals—the scientists, technicians, and practitioners actively working to study, manage, and conserve native and desired non-native wildlife and their habitats worldwide.

As stated in its mission, NSF exists to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense. The budget for fiscal year 2010, along with the much-needed funding provided by the American Recovery and Reinvestment Act, were essential in enabling NSF to carry out its mission. However, this budget needs to be sustained in coming years if we are to benefit from the true potential of our nation's scientific enterprise. Because of the issues posed to our national safety, infrastructure, and environment by a changing climate and a high jobless rate, TWS urges strong support for NSF in fiscal year 2011 to tackle these issues.

The basic, fundamental research performed with funding from NSF at our universities and research centers fuels innovation and drives economies around the nation. NSF was the second largest provider of federal R&D funding in 2008 (the latest year in which data is available), providing an excess of \$3.8 billion across numerous academic fields. These funds employ the scientists and personnel that conduct research and maintain equipment, they support graduate student salaries and undergraduate training opportunities, and they provide early career scientists with the support that enables them to develop successful lifelong research programs. In short,

NSF provides the sturdy foundation upon which our nation's impressive scientific legacy has been built.

This scientific legacy has not only allowed the U.S. to lead the world in scientific, engineering, and medical breakthroughs, but it also provides us with a means for continuing to lead the world through the pressing social issues of today. Our world needs science more than ever to research and develop practices that will enable us to adapt to climate change, conserve natural resources, and mitigate environmental degradation. NSF will play a major role in this as the largest single-agency funder of academic R&D in the environmental and basic non-medical biological sciences, having spent over \$1.057 billion in these two areas in 2008 alone.

The mission of the BIO directorate is to enable discoveries for the understanding of life, and its mission is particularly critical to the wildlife scientists represented by TWS. The basic biological and environmental science being performed by NSF scientists within the BIO directorate helps us determine the best strategies for fire prevention, illuminates effects of nitrogen on wildlife habitats, and helps us predict how air pollution affects organisms in glacial lakes. This sort of research provides us with resources for monitoring ecosystems and adapting to change. For example, a recent NSF-funded modeling study showed that diverting sediment-rich water from the Mississippi River through cuts in the levees below New Orleans could generate new land in the river's delta in the next century, equaling almost half the land that is expected to disappear in the same amount of time due to sea-level rise, storms, and erosion. Studies such as this will be invaluable for adapting New Orleans and other large centers of human population for the inevitable environmental changes of the coming centuries.

NSF also plays a major role in understanding how human, wildlife, and environmental health are closely intertwined. An example of this is a joint NSF and National Institutes of Health program on the ecology of infectious diseases that supports research into the underlying ecological and biological mechanisms behind environmental changes and the emergence of these diseases. Projects funded through programs such as this allow scientists to study how large-scale environmental changes, such as habitat destruction, invasive species, and pollution enable emergence of viral, parasitic and bacterial diseases in humans, domestic animals, and wildlife. This sort of research not only allows us to understand how disease is transmitted, but also helps scientists determine the unintended consequences of development projects and gives them the capacity to forecast disease outbreaks.

Moreover, NSF adds value to the lives of Americans by playing a role in conserving of our valuable natural resources, such as iconic species like the American Bison, and treasured landscapes like the Sonoran desert. These natural resources are managed and monitored by legions of natural resource professionals, including wildlife and fisheries biologists, conservation scientists, foresters, ecologists, range managers, wildlife veterinarians, and marine biologists, among others. In 2008, the Bureau of Labor Statistics estimated that there were approximately 30,000 conservation scientists employed in the US; add to this number all of the other professionals who work on ecological and natural resource issues, and many hundreds of thousands of individuals are employed in jobs that support our environment. NSF plays a key role in training these professionals to safeguard America's environment: during the course of

their educational and research careers, most wildlife and ecological scientists receive training or mentoring made possible by NSF.

We ask you to keep NSF's vital role in mind as you continue through the FY 2011 appropriations process, and fully fund NSF with the \$7.424 billion as requested by the President. This will allow NSF to provide \$767.81 million to the BIO directorate to continue to support the biological and environmental sciences that play an integral role in our national health, environment, and security.

We thank you for considering the views of wildlife professionals. Please feel free to contact Jenna Jadin, Assistant Director of Government Affairs, at jenna@wildlife.org or at (301) 897-9770 x309 if you need further information or have any questions.