

## Ecology and Management of Wild and Captive Whooping Cranes



Research will focus on development of knowledge and technologies to promote the production of healthy whooping crane chicks, such as this one at the USGS Patuxent whooping crane breeding facility. Photo by Glenn Olsen.



The reintroduced Eastern Migratory Population, an adult member of which is seen here, breeds on and around Necedah National Wildlife Refuge, in central Wisconsin. Photo by Sarah Converse.



- **The Challenge:** The whooping crane is one of the most critically endangered birds in North America. Individuals exist in the one naturally-occurring population (the Aransas-Wood Buffalo Population) and in two reintroduced populations (the Florida Non-Migratory Population and the Eastern Migratory Population) as well as in captive breeding facilities. Managers of these populations require information and tools to support decision making for management of existing populations, ongoing reintroductions, and in the captive breeding programs which provide birds for reintroduction. The goal of this project is to provide science products in support of the conservation of this species, including basic research on and evaluation of the drivers of population demographics; decision-support tools for management of populations, habitats, and captive breeding programs; and monitoring tools to promote learning and evaluation.
- **The Science:** This project encompasses a variety of research questions, all with a focus on improving the captive breeding, reintroduction, and recovery of whooping cranes. Examples of work recently completed or currently underway include:
  1. Development of a decision-support framework to increase nesting success of whooping cranes in the Eastern Migratory Population, breeding at Necedah National Wildlife Refuge. We developed a framework to support decision making about management on the Refuge to benefit nesting whooping cranes. A primary use of this framework was to evaluate which research strategies would be most important for increasing knowledge that could improve management of whooping cranes on the Refuge.
  2. Development of information and technologies necessary for the improved management of captive breeding in whooping cranes. We are collaborating with scientists at the National Zoo (Smithsonian Institute) on development of improved knowledge about the causes of, and potential solutions for, poor reproductive performance in captive whooping cranes at USGS Patuxent Wildlife Research Center, the largest captive population.
- **The Future:** This project will be ongoing as new research needs and collaborative opportunities are identified. The primary focus is to create information that can be used to inform management of this highly endangered species. Management partners include the US Fish and Wildlife Service and Canadian Wildlife Service (which assume joint regulatory authority for the species under the US Endangered Species Act and the Canadian Species at Risk Act), along with State management partners, private and public agencies working to reintroduce whooping cranes, and captive breeding centers. In addition, development of this knowledge base will be valuable to a worldwide audience working to conserve, reintroduce, and captive-propagate critically-endangered species.

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