



Northern Prairie Wildlife Research Center <http://www.npwrc.usgs.gov>

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Integrated Science for the Nation's Northern Great Plains

The Northern Prairie Wildlife Research Center (NPWRC) conducts integrated research to fulfill the Department of the Interior's responsibilities to the Nation's natural resources. During its 40-year history, scientists at NPWRC have earned an international reputation for leadership and expertise on the biology of waterfowl and grassland birds, wetland ecology and classification, mammalian behavior and ecology, statistics, geographic information systems, and grassland management. To meet current science challenges, Northern Prairie scientists collaborate with researchers from other U.S. Geological Survey disciplines (Biology, Geography, Geology and Water) and with biologists and managers in the Department of the Interior (DOI), U.S. Department of Agriculture, state agencies, universities, and nongovernmental organizations (NGOs). Expanding upon its scientific expertise and leadership, Center is moving in new directions, including invasive species, restoration of native habitats, carbon sequestration and marketing, ungulate management on DOI lands, and environmental benefits of conservation programs.

Our Mission:

To provide and disseminate scientific information needed to conserve and manage the nation's biological resources, with an emphasis on the species and ecosystems of the nation's interior. Specifically, the Center's goals include the following:

- Evaluate responses of fauna and flora to natural and anthropogenic influences.
- Develop tools for assessing status and trends of animal and plant populations.
- Use integrated, long-term research to model linkages among ecosystem components.
- Develop the biological knowledge needed to sustain and restore ecosystems.
- Provide the scientific foundation for federal policies and management strategies related to natural resources.
- Disseminate the latest in technical information and research findings to client agencies, conservation organizations, and others responsible for the management of our Nation's natural resources.

Center Capabilities and Expertise

- Migratory birds
- Terrestrial mammals
- Wetland and grassland ecosystems
- Invasive plant species
- Restoration of native habitats
- Plant population biology, community analysis, and modeling
- Assessment of land management practices for DOI bureaus
- Environmental effects of agricultural practices
- Carbon sequestration and marketing
- Wildlife population dynamics, modeling, and assessment
- Conservation of imperiled species
- Tools for inventory and monitoring
- Application of statistical, remote sensing, and geographical information systems to wildlife ecology

Highlights of Current Research Program

- Values of the Conservation Reserve Program (CRP) for wetland and grassland birds
- Carbon sequestration in native prairies and wetlands
- Population and breeding ecology of piping plovers and least terns on the upper Missouri River
- Methods to control invasive plant species
- Restoration of native prairies and wetlands
- Population ecology of elk in national parks
- Migration and population ecology of mid-continental sandhill cranes
- Ecology and conservation of carnivores such as wolves, lynx, swift fox, and Channel Island foxes
- Investigation of wetland processes to improve management capabilities on national wildlife refuges
- Development and evaluation of tools for inventory and monitoring in National Parks
- Impact of West Nile virus on American white pelican colonies
- Investigating effects of grazing on grassland birds
- Predicting vegetation structure and bird communities using LIDAR
- Impact of sedimentation on management of riverine wetlands on National Wildlife Refuges
- Integrated landscape monitoring of ecosystem services
- Long-term monitoring and research at Cottonwood Lake Study Area

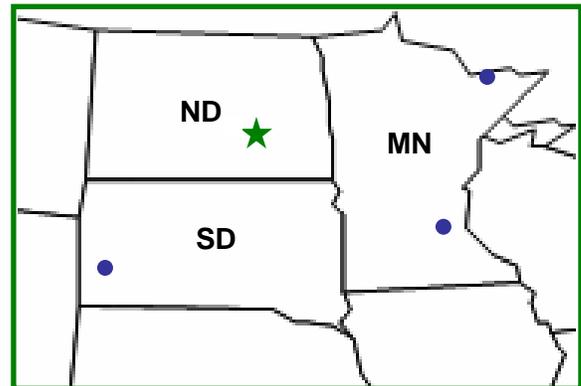
Recent Major Accomplishments

- Studies evaluating factors affecting waterfowl productivity in the Prairie Pothole Region, including the role of the Conservation Reserve Program, have provided important information for land managers and Joint Ventures.
- Scientists have developed approaches and databases for ecosystem services, including carbon sequestration, for use by researchers, U.S. Department of Agriculture, and DOI land managers.
- Methods to control invasive plant species and factors influencing success of control efforts were evaluated for NPS, USFWS, and the U.S. Forest Service.
- Scientists developed plant monitoring protocol for the Great Plains Network of NPS.
- Scientists provided extensive information on population and migration ecology of midcontinental sandhill cranes to U.S. Fish and Wildlife Service, Canadian Wildlife Service, and flyways to improve population and habitat management.
- The impacts of habitat and water management along the Platte River on migratory birds and plant communities were evaluated in several recently published studies.
- Center scientists completed several studies evaluating the impact of habitat management practices on grassland birds, including Conservation Reserve Program, grazing, and water management, and remain leaders in this field.
- Center scientists have provided critical research information and consultation for the conservation of imperiled species, such as wolves, lynx, and swift and Channel Island foxes.
- The Center completed the North Dakota GAP project and associated geospatial products, including a state-of-the-art vegetation cover map, useful for ecological applications and planning by state, federal, and NGO partners.
- Scientists organized and conducted 11 national and international workshops, including invasive species and migratory waterfowl.
- The Center has developed and maintained active partnerships for research with a diversity of organizations, such as the USFWS, NPS, U.S. Department of Agriculture, Army Corps of Engineers, Ducks Unlimited Inc., and various state agencies.
- The Center maintains a high level of scientific productivity, producing 79 publications during 2005 and 2006.



Center and Duty Station Locations

The Center is geographically located in the heart of the northern prairie region. The main office is located in Jamestown, North Dakota. Duty stations are located at the University of Minnesota-St. Paul, and Rapid City, South Dakota. Staff at the University of Minnesota station also conduct research from a U.S. Forest Service lab in Ely, Minnesota.



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