



U.S. Fish & Wildlife Service

# Squaw Creek National Wildlife Refuge Comprehensive Conservation Plan

## Summary

*August 2005*

## Comprehensive Conservation Plan Approved

A planning effort that involved neighbors, non-government organizations, local officials and many interested citizens has concluded with the completion of a comprehensive conservation plan (CCP) for Squaw Creek National Wildlife Refuge. The U.S. Fish & Wildlife Service approved the plan and is making it available online.

The comprehensive conservation plan outlines how the Refuge will fulfill its legal purpose and contribute to the National Wildlife Refuge System's wildlife, habitat and public use goals. The plan articulates management goals for the next 15 years and specifies the objectives and strategies needed to accomplish these goals. While the planned future condition is long-term, we anticipate that the plan will be updated every 5 to 10 years based on information gained through monitoring habitat and wildlife, as well as recreational usage.

Highlights of future management direction include:

- Provide a diversity of habitats, with particular emphasis on wetlands.
- Maintain waterfowl use day levels at a minimum of 5 million, however we will assist in international efforts to reduce the mid-continent population of Lesser Snow Geese. This will include reducing cropland on the Refuge as well as offering a spring Snow Goose hunt.
- Maintain bottomland cottonwood forest areas in an effort to support Bald Eagles during fall and winter migration periods.
- Maintain habitat that is critical to the Eastern Massasauga rattlesnake and Least Bittern.
- Design and implement interactive programs that meet Service standards and bring existing facilities up to Service standards.
- Improve Refuge orientation maps and signage.



*Pair of Northern Shovelers. Frank Durbian*

## The Refuge

Squaw Creek National Wildlife Refuge (Refuge), is located in Holt County in northwest Missouri, approximately midway between Kansas City, Missouri and Omaha, Nebraska, 2.5 miles off Interstate Highway 29. This 7,415-acre refuge includes approximately 6,700 acres of floodplain that is managed as wetland, grassland and riparian habitats that attract up to 475 Bald Eagles, 300,000 Snow Geese, and 200,000 ducks during fall and winter seasons.

The Refuge gets its name from Squaw Creek, a major stream that drains the Loess Hills on the east and flows through the Missouri River floodplain lands of the Refuge via a man-made ditch, and then empties into the Missouri River approximately 8 miles south of the Refuge. Davis Creek, which has also been ditched, flows along the eastern Refuge boundary and joins Squaw Creek just after leaving the Refuge. The Refuge's west boundary is about 5 miles from the closest bank of the Missouri River. The Santa Fe-Burlington Northern railroad embankment runs along the



*Snow Geese. Frank Durbain*

west Refuge boundary. Its embankment provides some protection from Missouri River overflows.

The almost 700 acres of Refuge upland include a segment of the 200-mile long band of hills known as the Loess Hills. The Loess Hills, formed by wind-deposited, silt-sized soil particles, are a geologic phenomenon unique to the Missouri River Valley. While loess deposits do exist elsewhere in North America and the world, only in the Missouri River Valley are the deposits deep enough to create such an extensive land form. The Loess Hills support rare remnants of native prairie and prairie associated wildlife.

The Refuge hosts 310 species of birds, 33 mammals, and 35 reptiles and amphibians. Missouri's largest wet prairie remnant (983 acres) is on the Refuge and it is home to Missouri's largest meta-population of the Eastern Massasauga rattlesnake.

## Who We Are and What We Do

The U.S. Fish and Wildlife Service is the primary federal agency responsible for conserving, protecting, and enhancing fish and wildlife and their habitats for the continuing benefit of the American people. Our specific responsibilities include enforcing federal wildlife laws, managing migratory bird populations, restoring nationally significant fisheries, administering the Endangered Species Act, and restoring wildlife habitat such as wetlands. The mission of the Service is to work with others to conserve, protect, and enhance fish, wildlife and plants and their habitats for the continuing benefit of the American people.

The Service's role also includes managing the National Wildlife Refuge System, the world's largest collection of lands specifically managed for fish and wildlife. The System

is a network of more than 540 national wildlife refuges encompassing more than 93 million acres of public land and water. The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

When it is compatible with wildlife and habitat needs and the purpose for which the refuge was established, Refuges can be used for wildlife-dependent activities such as hunting, fishing, wildlife observation, photography, environmental education and environmental interpretation.

## Where You Can Find the CCP

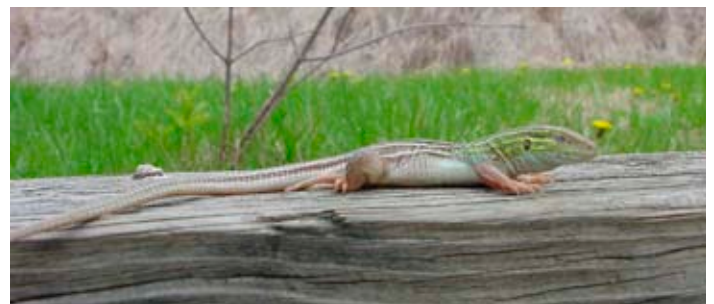
The CCP is available online at <http://www.fws.midwest.gov/planning/squawcreek/index.html>, and copies are also available by calling the Refuge at 660/442-3187 (TTY: 1-800-877-8339 (Federal Relay) or writing to the Refuge Manager at:

Squaw Creek NWR  
P.O. Box 158  
Mound City, MO 64470

Copies are also available in libraries in communities surrounding the Refuge.

## The Planning Process

The planning process began in July 1999. Initially, members of the CCP planning team and Refuge staff identified a list of issues and concerns that were associated with management of the Refuge. These preliminary issues and concerns were based on staff knowledge of the area and association with citizens in the community. The planning team, consisting of Refuge staff and Service planners, then invited Refuge neighbors, organizations, local government agencies and local staff of national and state government agencies, schools, and interested citizens to share their thoughts in a focus group meeting on August 18, 1999.



*Racoon. Frank Durbain*





*Turtle research at Squaw Creek NWR. Frank Durbian*

Nineteen people attended the meeting. An open house was held on September 14, 1999, and 12 attended. The planning team accepted oral and written comments at the open house. Five written comments were received.

The draft CCP and EA were released for public review on June 28, 2004, with the comment period closing on August 27, 2004. Eleven people attended a public open house on August 4, 2004. A total of 43 comments were received during the public review period. The final CCP was approved by the Acting Regional Director on July 19, 2005.

## Refuge Vision for the Future

The Refuge staff envision a future that includes:

- Restoration and preservation of the wetland ecosystems of the Missouri River floodplain continues to be the major management thrust of Squaw Creek NWR.
- Refuge wetlands, which include the largest remnant wet prairie in Missouri, continue to provide safe habitat for concentrations of waterfowl and other birds during the migration and nesting seasons.
- The historic threat of wetland sedimentation has declined significantly as managers of the vast surrounding agriculture lands employ more conservative practices advocated by the Refuge staff and other agencies.
- The Refuge habitat diversity emphasizes both wetland and grassland, interspersed with stands of mixed shrubs

and woodlands, managed on a scale to minimize habitat fragmentation and to be attractive to indigenous species as well as neo-tropical and passerine birds.

- Habitat diversity broadens each year as progress is made to convert former monotypic stands of reed canary grass, American lotus, and croplands to aquatic and upland species complexes that benefit both indigenous and migratory wildlife.
- Squaw Creek NWR continues to be a destination for people to enjoy wildlife-dependent recreation. Dynamic environmental education and interpretive displays and programs, presented in well designed facilities, help the public to understand and become supportive of the Refuge staff's efforts to conserve, preserve and manage wildlife resources and their habitats.
- The Refuge serves as an outdoor laboratory for biological researchers whose study results aid in the management for species of special concern such as the Eastern massassauga rattlesnake, Blanding's turtle and the Least Bittern.
- The multi-disciplined staff of biologists, technicians, and support personnel are a well trained team proficient in their functions of serving Refuge visitors, cooperators, and the general public, in their stewardship of the resources put in their charge, and in their maintenance of Refuge facilities and equipment. This team places high value on its connections with the community and relies heavily on stakeholder input.
- The Refuge budget, staff, and administrative facilities are adequate to implement the strategies required to achieve the goals and objectives set forth in this plan.

## Refuge Goals

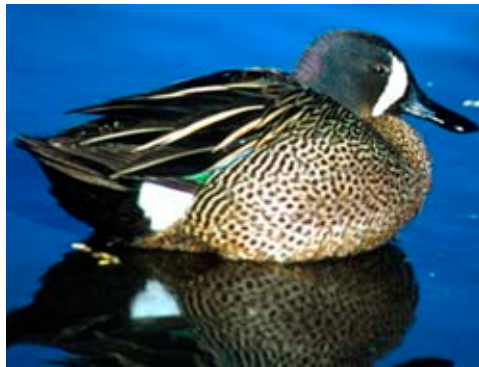
- *Goal 1: Habitat:* Manage a diversity of habitat to benefit threatened and endangered species, waterfowl, other migratory birds, and indigenous species in Lower Missouri River floodplain ecosystem and the Central Tallgrass Prairie ecosystem.
- *Goal 2: Wildlife:* Conserve species indigenous to the Refuge, the Lower Missouri River Ecosystem, and the Central Tallgrass Prairie Ecosystem with emphasis on those species identified in the Service's Fish and Wildlife Resource Conservation Priorities.
- *Goal 3: People:* Visitors, nearby residents and other stakeholders will enjoy wildlife-dependent recreation and education; appreciate the natural resources and ecological processes and cultural resources of Squaw Creek NWR; help achieve the objectives of the Refuge; and support the Service's mission.

## Management Direction

Managing a national wildlife refuge demands that we chart a long-term course that will ensure the health and persistence of wildlife and habitat species. There may be too many variables to plot a course into the future that is as precise as a road map, but we can at least note a few landmarks to steer by. Through this comprehensive conservation plan, which has been developed with the participation of the State of Missouri and other partners, and with participation by neighbors and other interested people, we have defined goals that will guide Squaw Creek NWR for the next 15 years.

**Habitat:** In considering the Refuge's future, we are mindful that the Refuge was established to provide a resting, breeding and feeding ground for migratory birds and other wildlife. We intend to accomplish this by providing a diversity of habitats, with particular emphasis on wetlands. We will maintain uplands that create diverse habitats. We will manage forest land to benefit migratory songbirds and to benefit threatened and endangered species, other migratory birds, and indigenous species. We will work with farm program cooperators to convert cropland to grassland or woodlands. By continuing our work with private landowners using existing programs, we will contribute to reducing erosion and sedimentation and improving the quality of surface runoff waters.

**Fish and Wildlife:** We will learn more about annual peak populations of wildlife using the Refuge so that we better understand species' needs and the Refuge's ability to meet those needs. We will maintain waterfowl use day levels at a minimum of 5 million, however we will assist in international efforts to reduce the mid-continent population of Lesser Snow Geese. This will include reducing cropland on the Refuge as well as offering a spring Snow Goose hunt. We will better manage deer populations to improve the quality of Refuge habitat. We will seek Refuge designation as a Western Hemispheric Shorebird Reserve Network, which would contribute to funding initiatives and gain international recognition of the Refuge and its work to conserve indigenous species. We will maintain bottomland cottonwood forest areas in an effort to support Bald Eagles during fall and winter migration



*Blue-winged Teal. USFWS*

periods. We will maintain habitat that is critical to the Eastern Massassauga rattlesnake and Least Bittern.

**Wildlife-dependent Recreation, Environmental Education and Interpretation:** Our programs will inspire people to care about Squaw Creek NWR, natural resources, and the environment. Toward that end, we will focus on improving the quality of the visit. To accomplish this, we will design and implement interactive programs that meet Service standards and bring existing facilities up to Service standards. We will improve our orientation maps and signage. We appreciate traditional Refuge visitors and want them to continue coming to Squaw Creek NWR, and we will reach out to diverse groups of people who are not traditional Refuge visitors.

Volunteers play a critical role at the Refuge, and we want to strengthen our relationships with volunteers (and through them, the community) by drawing more people to contribute their time and talent to the Refuge. We will work to strengthen our relationship with Friends of Squaw Creek National Wildlife Refuge.

## Into the Future

Throughout the comprehensive conservation planning process, many people have contributed time and ideas to make the Squaw Creek NWR CCP a better document. We are grateful to everyone who cared enough about the Refuge and its future to participate in this planning effort.

To succeed, a refuge management plan has to adapt to nature's everchanging conditions. Although the plan is complete, we expect to revise it every 5 to 10 years in response to conditions that could not be anticipated in planning. We will continue to welcome your thoughts on Refuge management.

Squaw Creek NWR is a place for both wildlife and people to use and enjoy, now and in the future. We hope that you will continue to care about and participate in conserving the Refuge's wildlife and habitat.