



Mingo Pilot Knob and Ozark Cavefish

National Wildlife Refuges

Summary

Comprehensive Conservation Plan

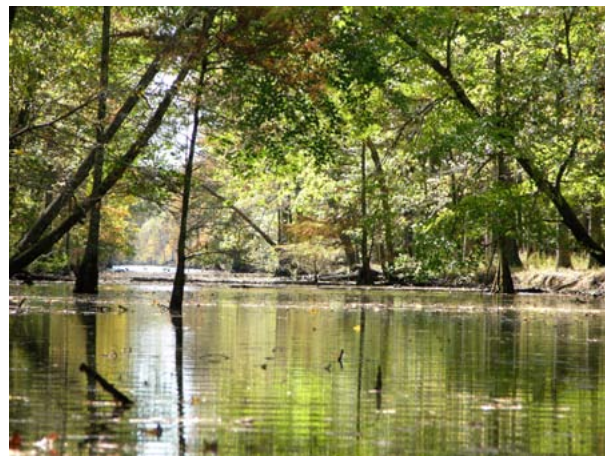
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Introduction

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 three national wildlife refuges in southern Missouri: Mingo NWR, Ozark Cavefish NWR and Pilot Knob NWR. The U.S. Fish & Wildlife Service approved the plan and is making it available online at: <http://www.fws.gov/midwest/planning/mingo.html>

Paper copies and compact disks with an electronic version of the CCP are also available. Please call the Refuge at 573/222-3589 to request a copy or CD-Rom. Copies of the CCP are also available for review at libraries in Puxico, Poplar Bluff, Dexter, Cape Girardeau, Ironton, Republic and Mount Vernon, Missouri.

The comprehensive conservation plan is intended to outline how the Refuge will fulfill its legal purpose and contribute to the National Wildlife Refuge System's wildlife, habitat and public use



Stanley Creek, Mingo NWR

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 reviewed and, if needed, updated every 5 to 10 years based on information gained through monitoring habitat and wildlife, as well as recreational usage.

While comprehensive conservation plans outline management direction, they do not constitute a commitment for staffing increases, operational and maintenance increases, or funding for future land acquisition.

Vital Statistics

Mingo National Wildlife Refuge

Established in 1944 under authority of the Migratory Bird Treaty Act, the 21,592-acre Mingo NWR is located in Stoddard and Wayne Counties in south-

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Historic entrance sign, Mingo NWR. USFWS

east Missouri, approximately 150 miles south of St. Louis. The Refuge serves as a resting and wintering area for migratory waterfowl, and peak waterfowl populations of 125,000 Mallards and 75,000 Canada Geese have been recorded. A shallow basin, the Refuge lies in an abandoned channel of the Mississippi River bordered on the west by the Ozark Plateau and on the east by Crowley's Ridge. The Refuge contains approximately 15,000 acres of bottomland hardwood forest, 3,500 acres of marsh and water, 506 acres of cropland, 704 acres of moist soil units, and 474 acres of grassy openings.

Recreational activities on the Refuge include fishing, hunting of waterfowl, squirrel, turkey, and deer, canoeing, and wildlife observation. Annual visitation to the Refuge has averaged about 100,000 visits over the past 5 years. Public facilities include a Visitor Center, a Swamp Friends bookstore, a 1-mile self-guided Boardwalk Nature Trail, a 19-mile self-guided Auto Tour Route, six overlooks, picnic tables, and a picnic shelter. A 7,730-acre portion of the Refuge is designated by Congress as Wilderness protected under the 1964 Wilderness Act.

Pilot Knob National Wildlife Refuge

Pilot Knob NWR was established in 1987. The 90-acre Refuge was donated by the Pilot Knob Ore Company and is located on top of Pilot Knob Mountain in Iron County, Missouri. The Refuge contains abandoned iron mine shafts excavated in the mid-1800s that have since become critical habitat for the

federally-listed endangered Indiana bat. Bats enter the shafts in the fall to hibernate and exit in the spring. The numbers have varied, but at one point up to a third of the known world population of Indiana bats were believed to hibernate in the old mine. In the interest of public safety and to avoid disturbance to the bats, the Refuge is closed to public use. The Refuge is managed by Mingo NWR staff located approximately 75 miles away.

Ozark Cavefish National Wildlife Refuge

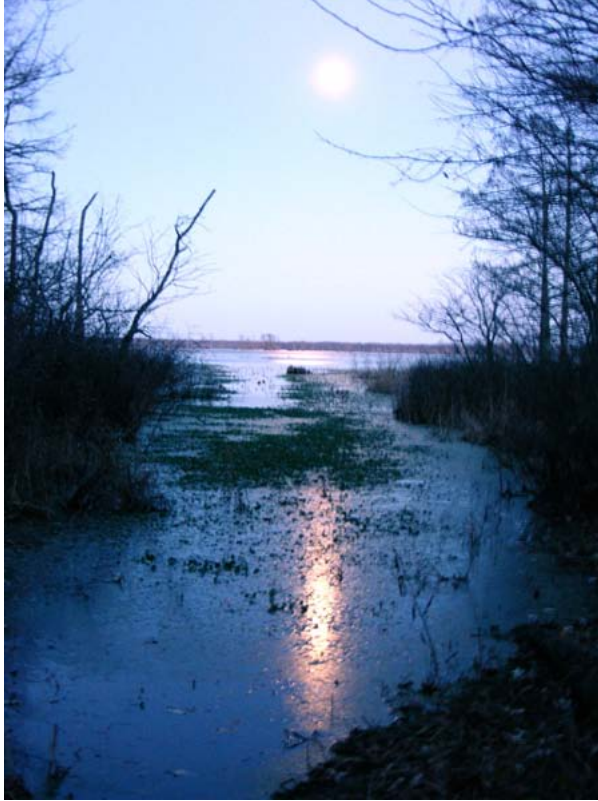
Ozark Cavefish NWR was established in 1991 to protect the federally-listed endangered Ozark cavefish. The 40-acre Refuge is located in Lawrence and Newton Counties, 20 miles west of Springfield, Missouri. Turnback Creek Cave Spring is located on the Refuge. The spring is the outlet of an underground stream that contains a population of the Ozark cavefish. Human access to the underground stream is through Turnback Cave, which has openings on adjacent Missouri Department of Conservation land. The Refuge includes a separate 1.3-acre parcel located several miles away along Hearrell Spring in Neosho, Missouri. It adjoins the Service's Neosho National Fish Hatchery. The Refuge is closed to public use. Ozark Cavefish NWR is also managed by Mingo National Wildlife Refuge staff.

Who We Are and What We Do

The Refuges are administered by the U.S. Fish and Wildlife Service (Service), the primary federal agency responsible for conserving, protecting, and enhancing the nation's fish and wildlife populations and their habitats. The Service oversees the enforcement of federal wildlife laws, management and protection of migratory bird populations, restoration of nationally significant fisheries, administration of the Endangered Species Act, and



Southern red-backed salamander, Mingo NWR



Monopoly Marsh, Mingo NWR

the restoration of wildlife habitat such as wetlands. The Service also manages the National Wildlife Refuge System, which was founded in 1903 when President Theodore Roosevelt designated Pelican Island in Florida as a sanctuary for Brown Pelicans.

Today, the Refuge System is a network of over 545 refuges covering more than 95 million acres of public lands and waters. Most of these lands (82 percent) are in Alaska, with approximately 16 million acres located in the lower 48 states and several island territories. Overall, the Refuge System provides habitat for more than 5,000 species of birds, mammals, fish, and insects. Refuges also provide unique opportunities for people. When it is compatible with wildlife and habitat conservation, they are places where people can enjoy wildlife-dependent recreation such as hunting, fishing, wildlife observation, photography, environmental education, and environmental interpretation.

Refuge Vision Statements

Mingo National Wildlife Refuge

Applying proven and innovative management practices, Refuge personnel will continue to ensure the protection of the Refuge ecosystems,

including the preservation of the 7,730-acre Wilderness Area, designated in 1976. Active management of non-Wilderness lands will utilize proactive strategies to maintain a high quality, sustainable, and highly diverse ecosystem. Proactive adaptive strategies will include traditional and accepted practices to protect the Refuge and surrounding lands from additional threats to the system, such as air quality and hydrological threats. The Refuge staff will continue to develop regeneration techniques and manage water levels to ensure the health and vitality of Refuge habitats

Adaptive strategies will also assure continued consideration of the values and preservation of cultural resources where appropriate and consistent with natural resources management. Priority public-use opportunities will be provided and enhanced for the more than 100,000 annual visitors, in harmony with healthy habitats and sustainable wildlife populations.

This vision will be accomplished by continuing and expanding efforts to partner with state and federal agencies and the surrounding community, including neighboring landowners, stakeholders, supporters, and friends.

Pilot Knob National Wildlife Refuge

In cooperation with others, Pilot Knob NWR will protect and maintain critical habitat that contributes to the recovery of the federally-listed endangered Indiana bat and gray bat. Visitors will enjoy scenic beauty and learn about the Refuge and the surrounding area in ways that are safe and that do no harm to the habitat or the bats that depend on it.

Ozark Cavefish National Wildlife Refuge

In cooperation with others, Ozark Cavefish NWR will contribute to the recovery of the federally-listed threatened Ozark cavefish and other subterranean species through habitat conservation, landowner education, and watershed protection within the Springfield Plateau.

The Planning Process

A team that included Refuge staff and Regional Office planners prepared the CCP for Mingo, Ozark Cavefish and Pilot Knob NWRs. The CCP was published in two phases and in accordance with the National Environmental Policy Act (NEPA). The

Draft Environmental Assessment was included as Appendix A in the Draft CCP. The Draft EA presented a range of alternatives for future management and identified the preferred alternative. The alternative that was selected has become the basis of the Final CCP and will guide management on the Refuge over the coming 15-year period. It will guide the development of more detailed step-down management plans for specific resource areas and it will underpin the annual budgeting process through submissions to the Refuge Operating Needs System (RONS) and Maintenance Management System (MMS). Most importantly, it will direct day-to-day decision-making and actions for managing habitat, wildlife, and visitors at Mingo, Ozark Cavefish and Pilot Knob NWRs.

The planning process began in 2003 with a series of public open houses in the areas surrounding the refuges. Citizens, non-governmental conservation organizations (NGOs), and employees of tribal, state, and local agencies all contributed time and expertise in addressing a variety of issues. This participation was vital and the ideas offered were valuable in determining the future direction of the three refuges. Refuge and regional staff – indeed, the entire U.S. Fish and Wildlife Service – are grateful to all of those who have contributed time, expertise and ideas throughout the comprehensive conservation planning process.

The Service invited public participation in the planning effort at open house events and workshops, and the planning team also maintained a website that provided information on the project. Both written and electronic comments on the plan and the planning process were accepted throughout the project.

The Draft CCP/EA was released for public review and comment in June 2006. A Draft CCP/EA or a summary of the document was sent to more than 276 individuals, organizations, and local, state, and federal agencies and elected officials. Three open houses, one for each Refuge, were held in June 2006 following release of the draft document. Eleven people attended the open house for Mingo NWR; two people attended the open house for Pilot Knob NWR. By the conclusion of the comment period we received 37 responses and identified more than 200 individual comments within those responses.

Refuge Management Goals

The goals are designed to meet the purposes of the Refuge and the mission of the National Wildlife Refuge System. The following goals were established for Mingo, Pilot Knob and Ozark Cavefish NWRs and will form the direction for the Refuge over the next 15 years.

Mingo NWR

Goal 1: Habitat

The Refuge will actively conserve a mosaic of upland and wetland habitats, including designated wilderness, through appropriate management strategies that preserve, protect, and enhance the vitality and health of the natural environment.

Goal 2: Wildlife

The Refuge will provide for a diversity of migratory birds and native fish and wildlife associated with healthy Refuge habitats and contributing to the mission of the National Wildlife Refuge System.

Goal 3: Visitor Services

Provide a variety of wildlife-dependent recreational and educational opportunities to allow the public to enjoy the resources of the Refuge and support the National Wildlife Refuge System.

Goal 4: Resource, Facility, and Visitor Safety and Protection

Protect natural, cultural, and man-made resources and provide for the safety of staff, volunteers, and visitors to the extent feasible.



Mallards, Mingo NWR

Goal 5: Off Refuge Conservation

Preserve, protect, and enhance Refuge integrity and encourage conservation beyond Refuge boundaries.

Goal 6: Human Resources and Facilities

Seek opportunities to obtain sufficient human resources and facilities through partner and agency funding mechanisms to achieve the goals and objectives of the CCP.

Pilot Knob NWR

Goal 1: Endangered Species

Contribute to the recovery of federally-listed species and the conservation of their subterranean habitat on the Refuge.

Goal 2: Refuge Visibility

Local residents and visitors are aware of the Refuge and its purpose.

Ozark Cavefish NWR

Goal 1: Endangered Species

Contribute to the recovery of federally listed species and the conservation of other subterranean species and their habitats within the Springfield Plateau.

Goal 2: Water Quality

Landowners in the recharge areas of the Refuge apply best management practices to maintain water quality.

Management Highlights at Mingo NWR

Bottomland Forest Habitat: Refuge staff will convert 547 acres to bottomland forest to benefit migratory waterfowl, neotropical migratory birds, and mammals such as the swamp rabbit. Objectives include improving water flow and reducing sedimentation within a 34-mile section of ditches. Sediment and obstructions currently impede the ditch system’s ability to hold and drain floodwaters, which over the years has contributed to shifting the composition of bottomland hardwood forest to species that tolerate flooding and largely eliminating regeneration.

Open Water (other than ditches): Over the next 15 years open water on the Refuge will be maintained or increased from the 2005 level of 9.2 miles of streams and 200 acres of open water within



White-tailed doe, Mingo NWR

Red Mill Pond, May Pond, Fox Pond, Job Corps Lake, Stanley Creek, Mingo River, Lick Creek and Cow Creek. The amount of open water in Gum Stump will decrease. Within 5 years, staff will increase the amount of open water within the Binford Unit by about 20 acres and increase the amount of structure within Fox Pond.

Grassy Openings, Cropland and Food Plots: Many people enjoy the opportunity to see wildlife on Mingo NWR, and the existence of grassy openings, cropland and food plots helps draw wildlife into the open. At the same time, the Refuge System generally favors natural regimes over food plots. The plan strikes a balance between visitors’ interest in visible wildlife and refuge management trends. The Refuge will maintain 205 acres of grassy openings, 253 acres of cropland, and about 73 acres of food plots, which will create areas where wildlife is more visible to visitors. Over the next 15 years, 449 acres of grassy openings will be converted to cane, oak savanna, and young bottomland forest to benefit Quail, Wild Turkey, Mourning Doves and swamp rabbits. Ultimately, the Refuge will develop a soft edge – a vegetative gradient from open to forested habitat – and replace fescue with native vegetation.



Red Mill Pond, Mingo NWR

Fish and Aquatic Species: The Refuge has a history of a diverse and abundant swamp-dependent fishery resource. Many of the 46 fish species found on the Refuge are locally abundant however rare on a state-wide basis. To help restore aquatic ecosystems to historic conditions, the Refuge will begin reintroducing extirpated native species over the next 4 years, and over the life of the CCP the Refuge will work to maintain diverse, self-sustaining fisheries in Refuge ponds.

Enhance Wildlife-dependent Recreation: The Refuge will enhance hunting opportunities and increase hunting visits by about 500 annually. Strategies will include offering access to the Ditch 3 area by opening Sand Blow Ridge Road year-round (except when it's flooded); managing hunts to reduce conflicts with other uses; offering educationally based fall youth firearms deer hunt within the public hunting area; and offering waterfowl hunting on Pool 8 when the water level reaches a suitable elevation. Hunters will enter a daily drawing, with a maximum of 40 names being drawn each day of the hunt. Fishing opportunities will also increase over the next 15 years as habitat improves.

Management Highlights at Pilot Knob NWR

Endangered Species Recovery: Physical barriers and enhanced law enforcement presence will benefit habitat preservation for the federally-listed endangered Indiana bat. The Refuge will try to deter people from disturbing bat habitat by placing

physical barriers to the mine entrance. The Refuge will increase law enforcement presence by developing a cooperative agreement with the Missouri Department of conservation to share law enforcement duties on the Refuge.

Allow Limited Visitation of the Refuge: The summit of Pilot Knob is geographically unique and offers a panoramic view of the surrounding area, which includes a Civil War battlefield. People have voiced strong interest in allowing public use on Pilot Knob NWR. While the Refuge will maintain diligent protection of Indiana bat habitat, within the next 5 years small guided tours will be offered with the goal of having 100 people a year visit the Refuge.

Management Highlights at Ozark Cavefish NWR

Refuge Visibility: Ozark Cavefish NWR is not actively promoted, nor is it currently open to public use. By offering compatible wildlife-dependent recreation at the Turnback Creek portion of the Refuge and with better promotion of the Refuge, we hope to increase the Refuge's profile in the community. Awareness of the Refuge and water quality issues may translate to a greater appreciation for land use improvements within the watershed, which in turn could lead to improved water quality that would benefit recovery of the federally-listed endangered Ozark Cavefish.

Plan Implementation, Monitoring and Evaluation

This CCP outlines an ambitious but achievable course of action for the future management of Mingo NWR, Pilot Knob NWR and Ozark Cavefish NWR. Pursuing and ultimately achieving goals set out in this CCP will require considerable staff and partnership commitment. Throughout the life of this CCP we will monitor our progress on achieving the goals, objectives and strategies it establishes. On a periodic basis, the Service will evaluate Refuge activities in light of the CCP. Additional "step-down" management plans will also be necessary to provide more details on Refuge programs such as visitor services, hunting, habitat management, water management and law enforcement.



"Stinkpot," Mingo NWR

Into the Future

Throughout the comprehensive conservation planning process, many people have contributed time and ideas to make the Mingo, Pilot Knob and Ozark Cavefish NWRs CCP a better document. We are grateful to everyone who cared enough about the Refuges and their future to participate in this planning effort.

To succeed, a refuge management plan has to adapt to nature's ever changing 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.

We hope that you will continue to care about and participate in conserving the Refuges' wildlife and habitat.