

Chapter 1.0 – Purpose And Need For Action

1.1 Introduction

This draft Environmental Assessment (EA) provides the public and agency decision-makers with an analysis of the range of options to restore, enhance, and protect wetland and upland habitats within a proposed new addition (Addition) to an existing national wildlife refuge. The Addition is proposed for Marais des Cygnes National Wildlife Refuge, which is located in Linn County, Kansas (Figure



*“Oxbow Wetland”
along Marais des
Cygnes River*

1). The Addition would occur in Bates County, Missouri, and includes parts of Homer and Walnut townships (Figure 2). The proposed Addition could eventually restore and protect a landscape of 5,255 acres of floodplain hardwood forest with associated shallow and deepwater wetlands, 5,890 acres of tallgrass prairie and savannah, 7.2 miles of large streams, and 8.8 miles of river.

The EA also publicly discloses the direct, indirect, and cumulative effects of each strategy on the quality of the human environment, as required by the National Environmental Policy Act of 1969 (P.L. 91-190), as amended). The Interim Comprehensive Conservation Plan found in Appendix A presents a

blueprint for management practices and public recreational opportunities on the proposed addition to Marais des Cygnes National Wildlife Refuge (Refuge).

1.2 Purpose

An Addition to the Refuge is being proposed by the U.S. Fish and Wildlife Service (Service) as a means of preserving and restoring floodplain hardwood forest, wetlands, tallgrass prairie, and riverine habitats for the fish and wildlife species dependent on them. Protection of the area would meet goals of the North American Waterfowl Management Plan which in 1998 identified the need to restore and protect an additional 8,030 acres of wetland within the mid and upper reaches of the Marais des Cygnes River. In a 1998 assessment of the West Osage River Basin, the Missouri Department of Conservation stated “Expansion of this refuge [MDC NWR] into Missouri should be given a high priority”. This assessment was based largely on the area’s importance to reproduction of paddlefish (Dent et al. 1998). The Nature Conservancy in 2000 identified the reach of the Marais des Cygnes River along the Kansas/Missouri State Line as one of 177 areas in the Great Plains that should be protected . The areas it identified only encompass 14 percent of the Great Plains and are considered to be ecologically functioning landscapes of biological significance. The mid reach of the Marais des Cygnes River was specifically identified by the Nature Conservancy as a “High Quality River System” (TNC 2000).

Figure 1: Marais des Cygnes NWR and Study Area for Proposed Addition

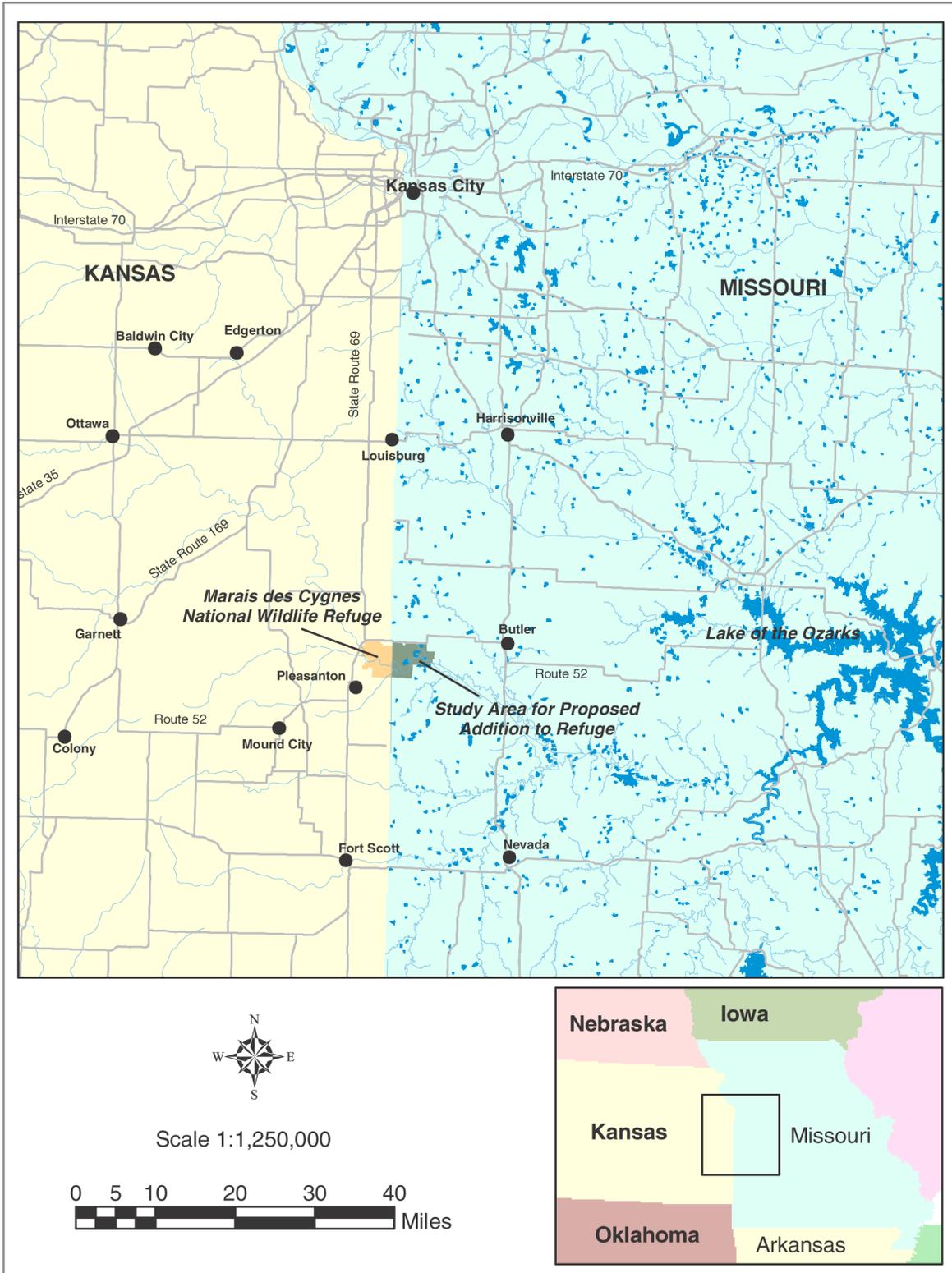
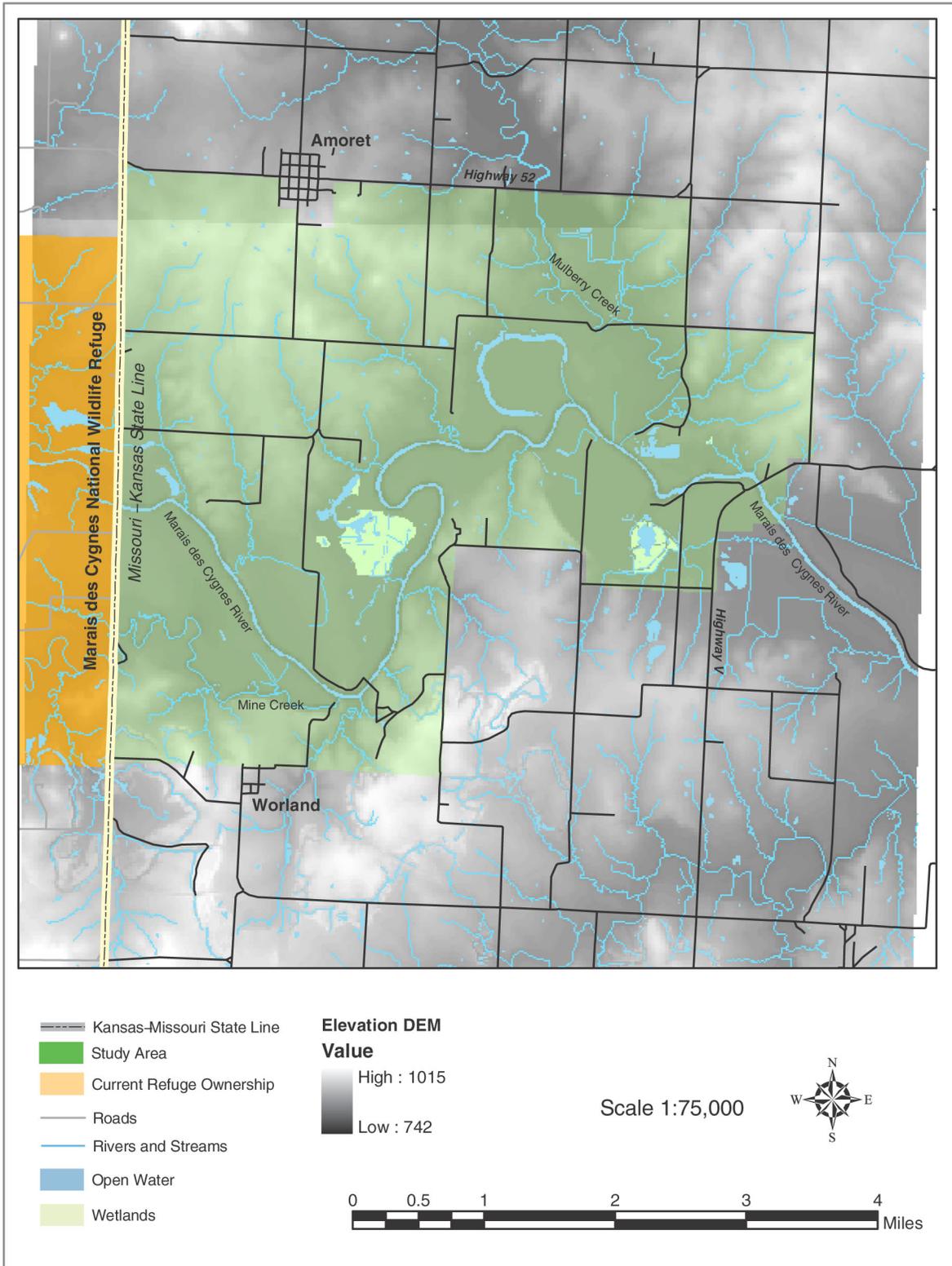


Figure 2: Study Area for Proposed Addition to Marais des Cygnes NWR



1.3 Need for Action

There is a need to prevent further fragmentation and degradation of the rare habitats found in this area in as large of contiguous blocks as possible, benefiting the species that depend upon them. Many species of Service interest are sensitive to the impact of other competing species due to the “edge effect” of small habitat blocks.

Native prairie has declined by 99.67 percent in Missouri, and there is a critical need to protect and restore the remnant prairie found on the Refuge. Protection of the Addition area in Missouri, in conjunction with the adjacent Marais des Cygnes National Wildlife Refuge and Marais des Cygnes Wildlife Area in Kansas, and with successful land acquisition, could protect a continuous block of 27,000 acres of wildlife habitat and 27 miles of river.

There is a need to protect large blocks of floodplain hardwood forests and their associated wetlands, which are critical habitat for trust species such as the Red-shouldered Hawk, the Cerulean Warbler and the broadhead skink. The Red-shouldered hawk and the Cerulean Warbler are rare/declining species and habitat degradation has been identified as a factor contributing to their decline.

Prairie rivers throughout the Midwest have lost many species of fish and mussels due to changes in hydrology, siltation, and pollution. There is a need to protect relatively unmodified prairie rivers from further habitat degradation.



Floodplain hardwood forest along Mine Creek.

1.4 Background

Quality floodplain hardwood forest, wetlands, tallgrass prairie, and riverine habitat are critical for a host of migratory birds, waterfowl, and indigenous species. These highly productive habitats should be protected or restored whenever possible. The proposed Addition is within the Osage Plains Region, an area dominated by open rangeland and forested streams and known for its rich diversity of prairie and forest wildlife. Much of the floodplain hardwood forests and native prairies in the region have been converted to other uses including fescue pasture and cropland. Existing tracts of floodplain hardwood forest continue to be threatened by conversion to these uses. Remaining tracts of prairie are threatened by conversion to non-native grasses, forestation, and noxious weeds. Many of the prairie streams and rivers in the region have been dammed and/or levees placed along their banks to prevent flooding of the floodplain. Remaining rivers, such as the Marais des Cygnes, with few of these impacts harbor a rich diversity of mussels and migratory fish.

The southern edge of the Kansas City metropolitan area of 1.6 million people is within 45 miles of the proposal area. Fragmentation of wildlife habitat is occurring rapidly as retirement homes and hobby farms are built throughout the

region. River bottoms are increasingly under pressure for timber harvest and construction of levees to prevent flooding and create “higher value” land.

Species of grassland and forest birds that require large tracts of native grassland or mature floodplain forest are declining throughout their range. Many species of migratory fish and mussels found in prairie rivers are also declining rapidly. Recent research has shown that large blocks of grasslands and floodplain hardwood forest habitats, such as those located within the proposed Addition, may be very important to reversing the downward trend. Large prairie rivers with annual flood events and an unobstructed floodplain, as is found in the proposal area, are also uncommon and biologically important.

The Fish and Wildlife Service is the primary federal agency responsible for conserving migratory species and appears to be the only entity available to acquire these lands for permanent resource protection. Many other organizations and agencies agree with the concept of protection but are not able to make the long-term financial and management commitment necessary to effect protection.

The following paragraphs describe the habitat concerned in this Environmental Assessment.

1.4.1 Wetlands

The majority of wetlands in the proposed Addition area would be located within the forested floodplain. The most common type of wetlands are characterized by many small depressions less than 5 acres in size and less than 2 feet deep. These wetlands are often filled by local rain events. Large portions of the floodplain are inundated by an average of 4 feet of water two to three times per year (Gleason 2000). Deeper oxbow wetlands up to 7 feet deep are also present and rarely go dry.

In Missouri, as of 1990, it was estimated that 13 percent of natural, pre-settlement wetlands remained (Dahl 1990). Most of the 87 percent of wetlands that were lost were located along forested streams and rivers.

Many floodplain wetlands have been leveed/ditched to prevent river flooding and carry off local rains for agricultural production. Others have been either flooded (upstream) or flooding has been eliminated (downstream) by reservoirs.

Today, there is a new understanding of the valuable role wetlands play in ecology. Wetlands provide a host of direct benefits to humans including acting as natural filters for pollution and reducing the extent of flooding. In addition to being key habitat for migratory birds, wetlands also serve as nurseries for a variety of fish and mussel species.

The wetlands of the restored Addition area would provide feeding and/or nesting areas for local waterfowl such as the Wood Ducks, Hooded Merganser, Mallard, and Canada Goose. Most waterfowl use would occur during spring and fall migration with as many as 25 different species migrating through the area. Wintering populations of waterfowl would largely consist of mallard and Canada Geese. Other wetland-dependent wildlife, such as Great Blue and Green Heron, egrets, otter, young paddlefish, and flat floater mussels would also gain additional habitat.

1.4.2 Floodplain Hardwood Forest

Stands of floodplain forest are largely comprised of pecan, pin oak, shellbark hickory, green ash, and American Elm. These forests are extremely important for the Cerulean Warbler, Red-shouldered Hawk, and broadhead skink, which are dependent on large stands of mature floodplain forest

Flooding frequency and duration are extremely important in determining the composition of floodplain forests. Reductions in flooding allow the invasion of upland species while increased flooding kills mast species and allows the invasion of more water-tolerant species such as silver maple, cottonwood, and willow. Flooding in the proposed Addition area, based on observance of natural regeneration, still appears to favor the dominance of hardwoods.

1.4.3 Tallgrass Prairie

Native prairie has declined by 99.67 percent in Missouri (Taney and Auckley 1987). Grassland bird species have shown steeper, more consistent, and geographically more widespread declines than any other group of North American birds (Knopf 1994). Fifty-five grassland plants or animal species in the U.S. are threatened or endangered (Samson and Knopf 1994).

The need for tallgrass prairie habitat preservation and restoration has become more critical each year as remaining native grasslands are lost and populations of many grassland bird species continue to decline throughout their range. Native tallgrass prairie habitats in Missouri can contain 200 to 300 species of plants. Many of our most endangered plant and animal species reside on remaining prairie fragments. Remnant prairies within the Addition area likely contain populations of the threatened Mead's milkweed. Missouri and Kansas are believed to be the only two remaining states that harbor viable populations of this once widely distributed prairie plant.



Tallgrass native prairie near Amoret, Missouri.

1.4.4 Prairie River

Prairie rivers throughout the Midwest have lost many species of fish and mussels due to changes in hydrology, siltation, and pollution. Few if any large prairie rivers remain that have not suffered at least some adverse impacts. Remaining rivers with fewer impacts, such as the mid reach of the Marais des Cygnes River, which bisects the proposed Addition area, harbor a host of increasingly uncommon species including paddlefish and many species of mussels.

Several mussel beds on the adjacent national wildlife refuge each harbor over 10,000 mussels. A total of 30 different mussel species have thus far been documented to occur in the River and adjacent floodplain wetlands. The gravel beds that support the mussels likewise are believed to be important natural spawning sites for paddlefish and walleye (Dent, et al. 1997).

1.4.5 Trust Species

1.4.5.1 Migratory Birds

The original floodplain hardwood forests and tallgrass prairies of western Missouri were important habitats for countless migratory birds. However, the State of Missouri has lost 99.67 percent of its original, pre-settlement prairies and over 87 percent of its wetlands.

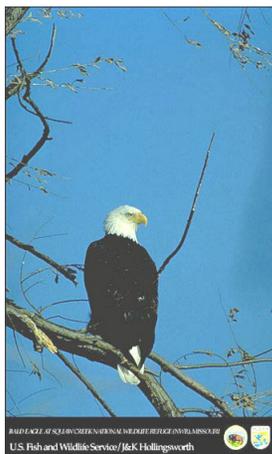
To varying degrees, grassland bird species have adapted to and co-existed with agriculture for most of the past century. However, grassland bird populations are steadily declining in Missouri and other Midwest states due to continued habitat fragmentation and degradation.

The following migratory bird species are listed as Resource Conservation Priorities by Region 3 of the U.S. Fish and Wildlife Service and will benefit from the proposed project: Bald Eagle, Wood Thrush, Piping Plover, Least Tern, Loggerhead Shrike, Grasshopper Sparrow, and Dickcissel. Other birds known to use the area include Cerulean Warbler, Bell's Vireo, Red-shouldered Hawk, American Bittern, American Woodcock, Henslow's Sparrow, Scissor-tailed Flycatcher, and Short-eared Owl.

The landscape of the region has subtly changed from one dominated by native prairie and forested streams to one dominated by cool season grass pastures surrounded by forested fence rows and wooded draws. Many floodplain forests have been cleared to provide cropland and pasture. The fragmentation of grassland and floodplain forest habitats is strongly correlated with declines in most grassland bird populations as well as many forest birds throughout the Midwest.

1.4.5.2 Migratory Fish

Populations of paddlefish, walleye, and white bass, in addition to many other fish species, annually migrate from Truman Reservoir and the Osage River to the middle reach of the Marais des Cygnes River on both sides of the Kansas/Missouri state line. This section of river is largely free of levees with a floodplain of mostly natural vegetation and receives floods frequently enough to provide fish access to valuable floodplain food resources and nursery habitat for young. River gravel bars provide important spawning habitat for paddlefish and walleye and more than 20 species of mussels.



American Bald Eagle

1.4.5.3 Federally Listed Threatened/Endangered Species

Bald Eagle, Least Tern, Piping Plover, and Meads's milkweed have been observed on Marais des Cygnes NWR and Marais des Cygnes Wildlife Area and would benefit by continued protection and restoration efforts.

Scale shell mussel, American burying beetle, western prairie fringed orchid, and running buffalo clover may also occur in the area but have not been recently confirmed. Populations of these species could possibly be restored to the area.

1.5 The U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service as we know it today has evolved slowly with changes in the country's use of natural resources and growing respect for the environment. Today the Service is the primary federal agency responsible for conserving, protecting, and enhancing fish and wildlife species and their habitats.



Specific responsibilities include managing the National Wildlife Refuge System, enforcing federal wildlife laws, managing migratory bird populations, restoring nationally significant fisheries, administering the Endangered Species Act, and restoring wildlife habitats such as wetlands.

The Service's mission 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."

1.6 The National Wildlife Refuge System

The National Wildlife Refuge System is the world's largest and most diverse collection of lands set aside specifically for wildlife. The Refuge System began in 1903 when President Theodore Roosevelt designated 3-acre Pelican Island, a pelican and heron rookery in Florida, as a national bird sanctuary.

The National Wildlife Refuge System mission is to administer a 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.



Today, over 530 national wildlife refuges have been established from the Arctic Ocean to the South Pacific, from Maine to the Caribbean. Varying in size from half-acre parcels to thousands of square miles, they encompass more than 92 million acres of the Nation's best wildlife habitats. The vast majority of these lands are in Alaska, with the remainder spread across the rest of the United States and several U.S. territories.

Like Pelican Island, many early wildlife refuges were created for herons, egrets, and other water birds. Other refuges were set aside for large mammals like elk and bison. But by far the most have been created to protect migratory waterfowl. This is a result of the United States' responsibilities under international treaties for migratory bird conservation and legislation such as the Migratory Bird Conservation Act of 1929.

National wildlife refuges offer the public a wide variety of wildlife-dependent recreational and educational opportunities. Many refuges have fishing and hunting programs, visitor centers, hiking trails, and environmental education programs. Nationwide, some 34 million visitors annually hunt, fish, observe, and photograph wildlife or participate in interpretive activities on national wildlife refuges.

1.7 Public Involvement

Involvement by local government officials, organizations, landowners and other interested citizens is integral to planning for any new national wildlife refuge. Proposals that involve land acquisition by a government agency can be controversial, though establishment of Marais des Cygnes NWR in Kansas received minimal controversy.

Open communication with all parties is essential throughout the planning process. Starting in April 2002 the Service began providing information about the proposed project through news releases, interviews, open house events, group presentations, letters to landowners and one-on-one discussions.

1.7.1 Background

A Preliminary Project Proposal (PPP) for a refuge (or later addition to an existing adjacent Refuge) within the study area was developed by Service biologists to brief the Director of the U.S. Fish and Wildlife Service about the resource conservation opportunities of the area and to obtain permission to conduct a study of the merits of the proposal. The proposal was approved by the Director on April 4, 1991. Later, an amendment was approved on January 22, 1992.

Early in 1999, the Team Leader of the Lower Missouri River (LMR) Ecosystem proposed that the ecosystem team review the merits of expanding Marais des Cygnes NWR into Missouri as indicated in a 1992 PPP. A letter indicating ecosystem team support and requesting consideration for the project was prepared by the team and submitted to the Regional Director on August of 1999. Members of the LMR Ecosystem Team and Region 3 Realty visited the Refuge and PPP area in May of 2000. A slide presentation introducing the Refuge and PPP area to other LMR Ecosystem Team members and members of the Ozark Plateau Ecosystem Team was presented at Swan Lake NWR in February of 2001. Both Ecosystem Teams unanimously agreed to support the Refuge expansion proposal. A slide presentation introducing the Refuge and PPP area to the Great Lakes/Big Rivers Regional Management Team in Minneapolis, Minnesota, was presented in August 2001. A short while later the Regional Director indicated that a Decision Document should be prepared.

1.7.8.1 Issues, Opportunities and Concerns

Some common concerns brought up at an April 18, 2002, Focus Group meeting and a May 21, 2002, Open House meeting were: potential loss of taxes resulting from lands being transferred from private to public ownership, potential impacts to neighboring lands from public land uses, use of Eminent Domain to acquire land, and the possibility of road closures. Also addressed in this EA are how the various alternatives impact the Refuge management goals and what the consequences of each alternative are related to such socioeconomic interests as recreational opportunities, the local economy, and taxes. The issues of landowner rights, Service land acquisition policies, revenue sharing, relocation benefits, cultural resources, effects on current drainage patterns, water pumping, crop depredation, Refuge administration impacts on public roads, cumulative impacts, and environmental justice will be discussed. These issues are addressed in detail in Chapter 4, Section 4.2, "Environmental Consequences Related to the Socioeconomic Environment."

1.8 Public Comments

A focus group meeting was conducted on April 18, 2002, at the Refuge Office to help identify local concerns and prepare for an upcoming open house. Twelve people representing seven local organizations attended the meeting. Organizations represented were: Bates County, City of Butler, Bates County Farm Bureau, Bates County Cattlemen's Association, Kansas Dept. of Wildlife and Parks, Missouri Dept. of Conservation, and Missouri Dept. of Natural Resources.

On May 21, 2002, an Open House was conducted at the Butler Senior Center in Butler, Missouri. A total of 29 people attended the meeting, 15 of whom represented land ownerships (nine different ownerships) within the boundary of the proposed Addition area.

In addition to these meetings, Refuge staff received several phone calls and visits by concerned citizens.

Issues brought up by these discussions are identified in the above section and addressed in Chapter 4, Section 4.2, "Environmental Consequences Related to the Socioeconomic Environment."

All written and verbal comments received by the Service are summarized in Appendix B.

1.9 Decisions

This Environmental Assessment is the first step in the Service's formal decision-making process. In compliance with the National Environmental Policy Act, the Regional Director, Great Lakes/Big Rivers Region, will consider the information presented in this document to select one of the alternatives.

The Regional Director will determine whether the preferred alternative will or will not have a significant impact on the quality of the human environment and issue a Finding of No Significant Impact or a Decision of Significant Impact. A Finding of No Significant Impact (FONSI) means that the preferred alternative is accepted and can be implemented in accordance with other laws and regulations. If the Regional Director decides that there would be projected impacts, the project would either be dropped or a Notice of Intent to prepare an Environmental Impact Statement would be published in the Federal Register. All proposals to establish new refuges or expand the boundaries of existing refuges must also be approved by the Director of the Fish and Wildlife Service in Washington D.C.

1.10 Legal Compliance

The Service planning process, land acquisition, and management are done in accordance with authority delegated by Congress and as interpreted by Department of the Interior and agency regulations and guidelines. Land acquisition authority includes the Endangered Species Act, Emergency Wetlands Resources Act, and the Fish and Wildlife Act, as amended. Land management authority,

including comprehensive conservation planning, is directed primarily by the National Wildlife Refuge System Improvement Act of 1997. Other relevant Acts and Executive Orders are listed in Appendix C.

1.10.1 Establishing Authority

Lands acquired by the Service for the proposed addition to Marais des Cygnes NWR would be purchased under the authority of the Fish and Wildlife Act of 1956 and the Emergency Wetland Resources Act of 1986.

