

Appendix A: Concept Management Plan

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Appendix A – Concept Management Plan

Introduction

The following Concept Management Plan (CMP) was developed as a general guideline for how the proposed Addition to Marais des Cygnes National Wildlife Refuge would be managed over the course of the next several years until a full plan can be completed. The CMP does not present extensive detail about where facilities would be located, the timing of restoration actions, hunting opportunities, etc. All of these details would be a part of a future Comprehensive Conservation Plan developed with public input and in compliance with the National Environmental Policy Act and Service policies. However, this CMP does attempt to answer some basic questions that may be posed by area landowners and others about future Refuge management. Please see the Environmental Assessment for more details about the study area and existing land uses.

The proposed 11,145-acre Addition to Marais des Cygnes National Wildlife Refuge could eventually protect and restore 5,255 acres of floodplain hardwood forest and nearly 5,890 acres of tallgrass prairie habitat. These lands could provide increased habitat for migratory birds found in floodplain hardwoods and prairies, including nearly 30 species of warblers, as well as waterfowl. Upland and big game would also benefit. The project would also increase and enhance nursery habitat and water quality for local fisheries.

Goals

The goals of the proposed Addition to Marais des Cygnes National Wildlife Refuge are as follows:

- Protect and increase the diversity and abundance of migratory bird and waterfowl species dependent on floodplain hardwood and tallgrass prairie habitats.
- Protect and restore federally and state-listed threatened and endangered species.
- Conserve, manage, and restore the diversity and viability of native fish, mussels, and other aquatic life unique to a prairie river hydrology and habitat, as well as wildlife and plant populations associated with floodplain hardwood and tallgrass prairie.
- Work in partnership with others, including private landowners, to restore or enhance floodplain hardwood, tallgrass prairie, and other unique plant communities.
- Restore, enhance, and protect water quality and quantity that approaches natural hydrologic functions.
- Provide for compatible wildlife-dependent recreational uses by the public, emphasizing increased public understanding of floodplain hardwood forest and tallgrass prairie ecosystems and the mission of the National Wildlife Refuge System.

Refuge Management

Refuge management refers to all aspects of Refuge operations including habitat restoration, equipment and personnel management, facility maintenance, and visitor services.

A. Floodplain Management

Floodplain vegetation includes floodplain forest, cropland, managed and unmanaged wetlands, shrubland, and grassland. Primary management objectives would be to restore the floodplain to floodplain forests and wetlands.

Hardwood trees including pecan, pin oak, bur oak, and shellbark hickory would be planted as nuts or seedlings on sites that were historically forest as indicated by the 1856 Land Survey. Small crop fields surrounded by forest would not be planted but would be allowed to revegetate naturally. Wetland restoration would vary depending on site characteristics and possible impacts to neighboring lands but would likely include plugging of ditches and construction of shallow depressions. Removal or lowering of existing levees or construction of low level dikes may also be desired on some sites. Use of grade control structures and other stream bank stabilization practices will be evaluated as possible means to reduce excessive bank erosion and sediment transport to the Marais des Cygnes River and streams on the proposed expansion area.

Currently, floodplains are dominated by forest (35 percent), cropland (29 percent), and grassland (28 percent). Remaining areas include wet prairie and open wetlands.

Croplands are generally planted to soybeans and corn. Most cropfields would likely be planted to trees or restored to wetland. Croplands would be leased until restoration efforts could be undertaken, a process that would be undertaken with much care and likely take many years. Generally leases are offered in a priority order of: 1) previous landowner 2) current lessee 3) neighbors 4) others. Restrictions on some aspects of farming such as kinds of herbicides allowed for use and prohibition of fall tilling are likely but are compensated for by lower rental rates.

Grasslands would also be leased in a similar manner as cropland. Restoration efforts would differ from cropland. Only large sites heavily dominated by fescue would require active forestation efforts. Other sites would be allowed to naturally convert to forest.

B. Upland Management

Uplands found within the proposed Addition area include grassland, shrubland, cropland, and forest. Maintaining existing native prairie and restoring fescue grassland to prairie will be a primary management focus. Habitat diversity will also be addressed to ensure healthy populations of wildlife, especially the declining species of grassland birds and animals. A mosaic of habitats comprised mostly of restored native prairie grasslands with smaller scattered sites of shrubland and woodlands will provide a diversity of wildlife with food, water, and cover.

Grasslands are generally restored by planting a mixture of native grass seeds and forbs. This mixture may include species such as big and little blue stem, switchgrass, side-oats gramma, Indian grass, black-eyed susans, cone flowers and prairie clover. Burning, haying and grazing are all common methods used to maintain a native prairie grassland. Prescribed fire is an especially useful tool to stimulate native prairie grasses and reduce woody and undesirable vegetation. Grazing, haying, and prescribed fire would be used to increase native vegetation and decrease non native vegetation such as fescue. These tools would also be used to provide a diversity of grass heights and density. This is generally done by managing the duration and seasonal timing of these management activities. Season-long grazing, annual spring burning, and annual haying of sites are generally not undertaken. Rest-rotational grazing, burning during different times of the year, and infrequent haying are often the norm.

Currently, uplands are dominated by fescue pasture (60 percent) and woodland (28 percent). Remaining areas include native prairie and croplands. Some fescue pastures are largely a monoculture while others contain a great diversity of native plants. Diverse fescue pastures can often be managed to increase the abundance and diversity of native plants. Woodlands vary from young dense stands to very open stands with a grass understory. Prescribed fires can be used to prevent brush sites from turning into forest sites and to maintain or create open woodlands with a grass understory, often referred to as “savannah.”

Croplands are generally planted to soybeans, wheat, and milo. Most cropfields would likely be planted to prairie. The conversion of cropland to prairie would likely take a number of years. However, only a small portion of the uplands are cropland so conversion would not be a major undertaking. Although most Refuge uplands would be managed as grassland, some shrub and tree cover would remain on the landscape.

C. Water Management

The natural hydrology and ecological dynamics of the study area have changed throughout the last 100 years, largely to facilitate agricultural production. Reservoirs, levees, and conversion of native prairie to forest and cool season grasses have likely changed the frequency, intensity, and duration of flood events. Despite these changes, the floodplain still supports important and uncommon natural communities.

The Service supports the goal of trying to restore the natural hydrology of the area. Achieving this goal will require the efforts of many organizations and individuals throughout the watershed, particularly in Kansas. However, Service efforts within the much smaller Addition Area would nevertheless be important by providing habitats that are rare or no longer present throughout the larger watershed and by showcasing alternative land management methods.

The Service proposes to eventually restore all of the natural wetlands within the Addition Area boundaries. Restoration work that has the potential to impact adjacent landowners will actively involve those landowners to prevent negative impacts. Restorations may also occur on adjoining private land with the permission of landowners or through a cooperative effort. Restoration of floodplain hydrology by removing, setting back, or breaching existing levees to increase over bank flooding and resulting recharge of wetlands are among the options that will be considered.

D. Fire Management and Suppression

Fire has been a part of natural ecosystems since the origin of plant communities on earth. Fire management is a useful tool for managers to stimulate native prairie grasses and reduce woody and undesirable vegetation. Safety aspects of using prescribed fire are uppermost on everyone's minds. For this reason, refuge staff are well trained and equipped to conduct prescribed fires. Fire management plans specify who, when, why, where, and how prescribed fires will be conducted. Smoke management and contingency plans are described in detail. Every effort for the protection of life and property is made during planning and fire activities.

Wildfires, which are unplanned fires caused by lightening strikes, railroads, humans, etc. are put out as soon as they are discovered. Natural firebreaks such as roads and streams are often used as fire breaks unless a house or other structure prevents this use. A fire management plan would address wildfire initial attack and response. Cooperative agreements coordinated with local and volunteer fire departments are arranged as soon as possible.

E. Law Enforcement

Law Enforcement is a cooperative effort by several agencies. Some Service employees are trained and commissioned to conduct law enforcement duties on federal property and enforce certain federal laws. This enforcement activity is primarily focused on the protection of Refuge fish and wildlife resources, and on the protection of Refuge visitors and their possessions from disturbance or harm by other visitors or themselves. Two or more Refuge staff generally have law enforcement authority and work in close cooperation with state conservation officers, and other local enforcement agencies.

F. Refuge Administration

The proposed Addition Area would be administered by the current staff at Marais des Cygnes National Wildlife Refuge. As land purchases dictate, requests for additional staff would be made. The office site for the Refuge is located 3 miles west of Amoret, Missouri, on the south side of State Highway 52 and contains visitor information as well as staff during the week. A maintenance facility with land management equipment and tools is located adjacent to the office.

G. Public Use Opportunities and Management

The following are potential recreational opportunities that may be available to the public if the proposed Addition becomes a reality. Public use activities are not described in detail and exact locations of facilities or access points are not identified. Decisions about exact locations for facilities and programs will be made with public input, and will be described in detail in the future Comprehensive Conservation Plan. Before any public use can be allowed on the proposed Addition, the use must first be determined to be compatible with the Refuge's purposes. These use-specific compatibility determinations will be made as part of subsequent Refuge management plans.

National wildlife refuges are managed first and foremost for the conservation of fish, wildlife, and plants. However, through careful planning and regulation, refuges can also provide the public with a variety of diverse and rewarding opportunities for wildlife dependent recreation. Wildlife-dependent recreation, as defined by the National Wildlife Refuge System Improvement Act of 1997 (P.L. 105-57), includes hunting, fishing, wildlife observation, wildlife photography, environmental education, and interpretation. These are the priority public uses of the National Wildlife Refuge System, and of the proposed Addition Area. Through participation in these activities, visitors to the Refuge will gain an appreciation for healthy habitats and the fish and wildlife populations they support.

1. Hunting and Trapping

A Refuge Hunt Plan would be prepared with input from the public and interested organizations, including the Missouri Department of Conservation. Following completion of a Refuge Hunt Plan, it is expected that hunting for small and big game would occur on much of the Addition Area. Hunter access parking lots would be located at several convenient and safe locations. Some restrictions would occur such as use of non-toxic shot for small game hunting. Other restrictions may occur if deemed necessary such as drawing hunts, limitations on use of rifles, “no shooting” zones near residences, etc.

Waterfowl hunting opportunities would likely be provided on much or all of the Addition Area. The Refuge Hunt Plan would identify which areas of the Refuge are open to migratory bird hunting. The progress of wetland restoration, hunter access, bird numbers and habitat use will ultimately determine the areas open to hunting.

A portion of the Addition Area may be closed to hunting and other public uses. “Closed Areas” occur on portions of most national wildlife refuges to provide waterfowl resting areas and undisturbed areas for public wildlife viewing and environmental education. Some “Closed Areas” are only closed during a portion of the year while others are closed all year. Some “Closed Areas” are only closed to waterfowl hunting while others are closed to all public entry. The size of “Closed Areas” varies tremendously depending on area goals and needs, adjacent land uses, and other characteristics of the area. “Closed Areas” encompassing 25 percent to 40 percent of a refuge are common, though some refuges are totally closed to public use while others are completely open to public use. Marais des Cygnes National Wildlife Refuge in Kansas has a “Closed Area” that closes 25 percent of the Refuge to all public use.

The need, and if applicable, size and location of “Closed Areas” are discussed in detail during the public planning process for the Refuge Hunt Plan. No necessities or possible locations for “Closed Areas” in the Addition Area have been discussed or actively considered during or as a part of the planning process for the Addition proposal.

Trapping is not considered a priority wildlife-dependent recreational activity and would not likely be allowed in the Addition Area. However, occasional problem situations, such as beavers flooding a road, may require the need for trapping. In these instances, free Special Use Permits may be given out to interested individuals.

2. Fishing

Most sport fishing opportunities would occur in the Marais des Cygnes River, which contains a popular fishery for paddlefish, walleye, and catfish (blue, flathead, and channel). Crappie, white bass, and black bass are also present. Numerous farm ponds, mine ponds, and river tributaries offer additional fishing opportunities. The restored shallow wetlands within the Addition area would probably not support large populations of game fish. A Refuge Sport Fishing Plan would be prepared in conjunction with the Refuge Hunt Plan to identify fishing opportunities, access, and management needs. We will invite the Missouri Department of Conservation fisheries management staff to assist in the preparation of the Refuge Sport Fishing Plan.

3. Wildlife Observation & Photography

The Addition Area contains scenic vistas of a vast prairie/woodland landscape. Wildlife inhabiting the area includes many interesting prairie and woodland species such as Scissor-tailed Flycatcher, Loggerhead Shrike, and Short-eared Owl in the grasslands and Kentucky Warbler, Prothonotary Warbler, and Red-shouldered Hawk in the forest. Waterfowl and wading birds, turkey and quail, and nearly 30 species of warblers are also present as well as species more unique to the Midwest such as woodrat, otter, bobcat, and armadillo. The combination of diverse wildlife and landscape beauty creates excellent wildlife observation and photography opportunities throughout the Addition Area.

Short hiking trails (with boardwalks as needed) and wildlife observation platforms and blinds could also be developed to immerse visitors into the tallgrass prairie and floodplain hardwood forest landscapes.

Refuge staff would work with local communities and private conservation groups to support or develop special public wildlife celebrations, like Earth Day, National Wildlife Refuge week, or Warbler Migration Day celebrations. These events would help build community awareness and pride in the Refuge and help provide an additional draw of visitors to the area.

4. Interpretation

The major interpretive themes for Marais des Cygnes National Wildlife Refuge and the proposed Addition Area include the concepts of: floodplain hardwood forest and tallgrass prairie ecosystems; Refuge habitat restoration and management; and the Refuge's place in the National Wildlife Refuge System. These themes are the core messages of the Refuge's interpretive program and will be included in different forms of interpretive signs, leaflets, and exhibits.

5. Visitor Contact Station

A visitor contact station currently exists 3 miles west of the Addition Area (and west of Amoret, Missouri) on the south side of Highway 52. This facility contains information and exhibits about the Refuge and serves as an office for Refuge staff. It will be the first stop for most first-time visitors. If land is purchased for the Addition Area east of Amoret, along Highway 52, an information kiosk with an orientation map, interpretive displays, and brochures could be constructed.

6. Interpretive Waysides

Interpretive signs could be provided at key wildlife observation areas and hiking trails. These signs would reinforce the Refuge's interpretive themes and provide site-specific information that will help the visitor appreciate the Refuge's resources.

7. Interpretive Trails

During a more thorough Refuge planning and site analysis, sites would be identified for the development of interpretive loop trails. These trails could include interpretive signs, or leaflets, keyed to landscape and wildlife features.

8. Environmental Education

Refuge staff would seek partnerships with local school districts and state and local organizations to provide site-based learning about conservation and the restoration of habitat for wildlife and people. Partnership projects could include hosting teacher workshops and youth leader programs. Activities would be coordinated closely with local schools to be sure any activities offered by the Refuge would assist the teachers/students with meeting graduation standards or required curriculum components.

9. Wilderness Review

Lands within the boundaries of the proposed Addition area have been reviewed for wilderness suitability as part of the CMP process. No lands were found suitable for designation as Wilderness as defined in the Wilderness Act of 1964. The study area does not presently contain 5,000 contiguous roadless acres to make it possible for any portion of it to be designated as Wilderness. The lands of the Refuge have been substantially affected by humans, particularly through agriculture.

10. Refuge Regulations and Enforcement

Marais des Cygnes National Wildlife Refuge and the proposed Addition is part of a national system of more than 500 refuges, where the needs of wildlife come first. However, some general public uses are allowed on many refuges. The following regulations are typical of most National Wildlife Refuges and are published in the Code of Federal Regulations:

- Vehicles allowed only on designated roads.
- Camping and open fires not allowed.
- Some wildlife-sensitive areas may be annually or seasonally closed to public entry and use.
- Horseback riding on refuge trails is not allowed.
- Possession or discharge of firearms is prohibited except during established hunting seasons in areas open to hunting.
- Dogs and pets must be kept on leash (except while hunting).
- Disturbing or collecting plants or animals is prohibited except under special permit.
- Searching for, or removal of objects of antiquity or historical importance is not allowed except under permit.

