

## PLAN IMPLEMENTATION

Future development of Refuge facilities will involve potential partnerships with the State of Kansas. Due to the planned upgrading of State Highway 69 located just west of the Refuge, the construction of a rest area with facilities on Refuge land is being considered. Such a facility could serve the public as a visitor contact station and support the function and mission of three agencies:

Kansas Department of Transportation providing a safe and convenient Rest Area on public land,

Kansas Wildlife and Parks providing wildlife management and public use on the adjacent Marais des Cygnes Wildlife Management Area, and

U.S. Fish and Wildlife Service providing wildlife management and public use including environmental education and interpretation at the Marais des Cygnes National Wildlife Refuge.

Such a partnership would be in the best interest of taxpayers and would represent the most efficient way for three separate agencies to serve the public.

### Projects, Funding, and Personnel Requirements

Staff: Project leader, refuge operations specialist, two biological technicians, administrative clerk, outdoor recreational planner, 5 FTE's permanent, 2 FTE's temporary (seasonal)

Staff Funding: \$200,000 permanent  
\$ 38,000 seasonal

Other Costs: \$ 7,000 utilities (electricity, gas, phone, water, trash)  
\$ 6,000 office maintenance (copier repairs, computer replacement, office supplies, brochures, etc.)  
\$ 5,000 training/travel (LE refresher, regional/zone meeting, staff training, etc.)  
\$ 3,000 volunteer program expenses  
\$ 25,000 routine maintenance and replacement of light vehicles  
\$ 25,000 routine maintenance of refuge structures/facilities/habitats (grading roads, gravel, culverts, grass and hardwood restoration, boundary posting, fencing, dike repair, interpretive trails, public access areas, a boat launch, entrance sign upkeep, etc.)

**One-time Start up Costs:**

Four pickups and one utility vehicle	\$70,000.00
Primary and Secondary entrance signs	\$15,000.00
Small and medium tractors, disk, mowers, chain saws, post hole auger, fencing supplies, tree planter	\$100,000.00
Stake bed truck	\$30,000.00
Boat and motor	\$4,000.00
Multi-agency office/visitor center (with exhibits)	\$1,500,000.00
Auto tour route/interpretive trail	\$18,000.00
Maintenance facility	\$500,000.00
Backhoe front end loader	\$50,000.00
D-7 bulldozer	\$85,000.00
Biological and law enforcement equipment	\$3,000.00
Fire fighting equipment	\$75,000.00
Master plan contract work	\$35,000.00
Cultural Resources Inventory	\$60,000.00
Wildlife Resources Inventory	\$50,000.00
Maintenance equipment and tools (saws, welder, compressor, mechanic and carpentry tools, press, grinders, benches, etc.)	\$30,000.00
Radio system	\$20,000.00
Dike rehabilitation and water control structures	\$150,000.00
<b>TOTAL</b>	<b>\$2,795,000.00</b>

**Step-Down Management Plans**

The following is a list of potential step-down management plans. This list includes mandatory plans, and plans that need to be written as soon as practical, in order for certain management objectives to be accomplished. The preparation and execution of these plans will partially be dependent upon funding and staff time, but should be completed within three years after the Refuge is fully staffed and funded.

**Habitat Management Plan**

The selection of the most appropriate management strategies will occur in this step-down plan. Therefore, the strategies listed under the Refuge objectives should be considered as potential strategies. There may be others developed in the HMP and some listed in the CCP may be rejected in the HMP as inappropriate or impractical.

**Safety Plan**

**Public Use Management Plan** (Including general wildlife-oriented recreation and Search and Rescue procedures)

**Law Enforcement Plan****Refuge Inventory and Monitoring Plan**

A step-down refuge monitoring plan will be developed driven by refuge goals and objectives and by the HMP. Because Marais des Cygnes is a relatively new refuge, there is limited baseline information on which to base management decisions. Therefore, high

priority will be given to an inventory of the flora and fauna of the area. Monitoring will be designed to assess the impacts and effectiveness of management actions implemented to achieve refuge goals and objectives. The desired result will be an adaptive refuge management program that facilitates the improvement of resource management over time.

#### **Fire Management Plan (including Prescribed Burn Plan)**

Fires have occurred for hundreds of thousands of years in grasslands, forests, marshes, and many other types of vegetation communities. Fire is especially important in grasslands. Without fire, most grasslands would ultimately become forests or shrublands. However, the role that fire played in the natural grassland community differed for each grassland species. The fire history of the Refuge is not known at this time. Prior to the preparation of a step-down fire management plan, a study will be made to determine what role fire played in maintaining the Refuge vegetation communities. That knowledge will then be used to determine the best use of fire in managing the Refuge landscape.

#### **Pollution Abatement Plan**

#### **Crowd Control Plan**

#### **Cultural Resources Management Plan**

The limited amount of information regarding cultural resources on Marais des Cygnes is directly related to a lack of cultural resource inventory on the Refuge. The objectives under the Landscape Goal have the potential to adversely impact significant, but unidentified and/or unevaluated resources. A cultural resource inventory is proposed under the one-time start-up costs. This inventory needs to be completed prior to the development of the Cultural Resources Management Plan. The CRM Plan needs to be completed prior to implementation of the objectives that have the potential to impact significant cultural resources.

The inventory and CRM Plan should be completed within three years after the final CCP is submitted. The CRM Plan will identify areas with significant sites and develop methods of the management of these resources. It will also identify areas with a high potential for significant resources that may not have been identified during the inventory, i.e., buried sites. The CRM Plan will provide the manager information allowing them to make decisions on development that will protect value cultural resources and that may prevent costly resource mitigation programs.

#### **Hunting Plan** (in preparation)

#### **Fishing Plan** (in preparation)

#### **Water Use Plan** (or Water and Marsh Management Plan)

#### **Integrated Pest Management Plan** (and Pesticide Use Plan)

### **Wilderness Review**

The Refuge does not conform to the definition of a wilderness, as described in the Wilderness Act of 1964. The area has been noticeably affected by humans (i.e., mining, human habitation). In addition, due to existing inholdings and rights-of-way, there are no significant areas that provide for outstanding solitude and primitive type recreation opportunities.

Designation of a wilderness area that meets the standards of the Wilderness Act (+/- 5,000 acres) would potentially conflict with other management goals because the Refuge is only about 9,300 acres in size. Therefore, there will be no wilderness area established on the Refuge.

## **Monitoring and Evaluation**

Establish around 50 permanent vegetation and wildlife sampling plots to provide baseline information on the distribution, structure, and abundance of habitat types and on the chronology and extent of use, population size, and habitat use by migratory and resident wildlife communities.

Sample plots will be distributed in relative proportion to habitat occurrence on the Refuge, plots will be geo-referenced (i.e., GPS) and permanently marked, trees will be tagged and mapped, elevations should be determined. Management practices that occur within and adjacent to the plots will be recorded in detail, a few old fields will be sampled to determine rates of succession to forest and the composition of trees reestablishing in the field.

Resample permanent vegetation and wildlife sampling plots on a two-year cycle for the first ten years and on a five-year cycle thereafter to provide information to evaluate the effects of management and restoration techniques on plant and animal communities.

### **Bottomland Hardwood:**

Species composition by area - every ten years

Age structure by area - every ten years

### **Native Prairie/uplands:**

Species composition/ground cover by location and area (map) - every five years

### **River and Herbaceous Wetlands:**

#### Marais des Cygnes River:

Water quality, stream flows, aquatic life would be monitored by the State of Kansas

#### Herbaceous Wetlands:

Monitor moist soil plants annually

#### Croplands:

Monitor annually:

- wildlife uses of area and crops
- use of fertilizer and herbicides and other chemicals and
- success of rotations.

### **Nongame Migratory Birds:**

Groups of special interest on the Refuge are shorebirds, raptors, breeding neotropical migrants, and wintering and migrating song birds.

Gather information on the temporal and spatial habitat requirements of migratory and resident songbirds, waterbirds and other resident wildlife, including endangered species to provide guidance for management and restoration activities.

The first step in monitoring and evaluation will be to document the avifauna present on the Refuge. This information will include general seasonality, status, and habitat preference of the bird species. This level is commonly referred to as "baseline" and will involve acquiring and summarizing existing information and acquiring the information needed to publish a checklist for the Refuge. Appendix A reflects the current state of knowledge of birds on the Refuge.

At the second level, monitoring and evaluation will refine refuge baseline data documenting the degree, type, and amount of individual species use. For migrants, this data includes identification of the species, timing of migration, and habitats generally used as migration stopovers. For breeding species, this data will include identification of species, habitat uses, and timing. For wintering birds, this data will include identification of species, and habitat uses. This level allows us to establish the range and amounts of use on the Refuge. This level is commonly referred to as inventory data and will use methods such as area search, checklists, and atlases.

The third level is the systematic monitoring of refuge management and priority habitats and species. This level will be used to determine avian relative abundance, population trends, densities, and distribution. This level is designed to give early indications of potential problems, triggering a more intensive level of management. Standardized methods for monitoring both populations and habitats have been established in Region 6 (Stephanie Jones, *Interim Guidelines for Monitoring Nongame Landbirds*, 1996), and will be used. Priority habitats that have been determined on the Refuge are bottomland hardwood and native prairie/uplands.

The final level is the more detailed species and population monitoring or research investigating the status of selected species, species guilds, or communities. This level should be used if data on species listed under ESA or the regional special concern list is required. It will also be used to evaluate the effects of management actions on species of special concern, or to evaluate the causes of declines documented in monitoring (level three, above).

All avian monitoring and evaluation should include a similar level of vegetation and habitat assessment, as related to bird use. Standardized methods for vegetation classification and assessment will be used for this evaluation.

**Public Use and Education:**

Public use minimum requirement review

Annual compatibility evaluation

Annual funding evaluation

Monitor Kansas game and creel survey results (see hunting and fishing plans)

Cultural Resources - Annual Report to Congress

