

Buffalo Wallow Prairie Conservation Area

Ten Year Area Management Plan FY 2013 – 2022



J. Battson Warren
Wildlife Division Chief

11/21/13
Date

Buffalo Wallow Prairie Conservation Area Management Plan Approval Page

PLANNING TEAM

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SOUTHWEST REGION

SW RCT Chair


Signature

Oct. 30, 2013
Date

WILDLIFE DIVISION

Wildlife Management Chief


Signature

11/12/13
Date

OVERVIEW

- **Official Area Name:** Buffalo Wallow Prairie Conservation Area, #8738
- **Year of Initial Acquisition:** The original purchase for this area was 320 acres in 1987. In 1994, 537 acres was added (known as the Lipscomb tract). This addition was not connected to the original 320 acres (north and west) however it did touch corners from an existing MDC Conservation Area called the Catlin Prairie (originally purchased in 1978). Following this purchase both Conservation Areas were joined and the Catlin Prairie name was dropped in favor of naming the entire area Buffalo Wallow Prairie Conservation Area. Another 96.4 acres was added in 1997. The current acreage total is 1,113.
- **Acreage:** 1,113 total acres
- **County:** Barton
- **Division with Administrative Responsibility:** Wildlife Division, Southwest Region
- **Division with Maintenance Responsibility:** Wildlife Division, Southwest Region
- **Statements of Purpose:**

A. Strategic Direction

To have healthy, sustainable, and diverse grassland, woodland, cropland, old- field, and aquatic communities for future generations to use and enjoy. To increase Missouri citizens' awareness of the values and benefits of diverse and native grasslands and to demonstrate various management techniques to manage them properly. To promote and provide quality consumptive and non- consumptive use of the area. Buffalo Wallow Prairie Conservation Area (CA) is a mix of native prairie, planted grassland, old field, crop, and woodland of varying quality. The rarest of these habitat types found on the area is the dry-mesic sandstone prairie. Maintaining the diversity and integrity of the native prairie is the highest priority. Management practices that protect and increase the native plant and animal diversity of all habitat types will be implemented. Buffalo Wallow Prairie CA will be a showcase of practical management techniques that result in healthy and diverse terrestrial and aquatic systems. Recreation, both consumptive and non-consumptive, will be promoted so that area users can observe these unique habitats and understand how positive management practices are implemented.

B. Desired Future Condition

The desired future condition of Buffalo Wallow CA is a grassland/woodland/cropland complex.

C. Federal Aid Statement

N/A

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

- A. **Priority Areas:** Buffalo Wallow Prairie Conservation Area (CA) is within the Western Cherokee Grasslands Conservation Opportunity Area (COA) and is also part of the Nature Conservancy's Liberal Landscape Conservation Area (LCA). Buffalo Wallow Prairie is located within Little Drywood Creek East Prairie Plains COA, and the areas lying west of US Highway 71 are also in the Little Drywood Creek Priority Watershed.
- B. **Natural Areas:** None
- C. **Other:** Prairie-chicken Focus Area

II. Important Natural Features and Resources

- A. **Species of Conservation Concern:** Species of conservation concern are known from this area. Area Managers should consult the Natural Heritage Database annually and review all management activities with the Natural History Biologist.
- B. **Caves:** None
- C. **Spring:** None

III. Existing Infrastructure

- 6 gravel parking areas
- Small metal clad pole-type shed (approx. 16'x16' with a concrete floor)

IV. Area Restrictions or Limitations

- A. **Deed Restrictions or ownership considerations:** None
- B. **Federal Interest:** Federal funds may be used in the management of this land. Fish and wildlife agencies may not allow recreational activities and related facilities that would interfere with the purpose for which the State is managing the land. Other uses may be acceptable and must be assessed in each specific situation.
- C. **Easements:** There are easements in favor of Southwestern Bell Telephone Company recorded in Deed of Records of Barton County Missouri. There are Right-of-Way Agreements in favor of The Gas Service Company recorded in the Deed of Records of Barton County Missouri. Conveyances to the State of Missouri for highway purposes are recorded in the Deed of Records of Barton County, Missouri. There is also an easement with the Consolidated Public Water Supply District #1.
- D. **Cultural resource findings:** Yes, records kept with MDC Environmental Compliance Specialist. Managers should follow Best Management Practices for Cultural Resources found in the MDC Resource Policy Manual.
- E. **Hazards and Hazardous Materials:** None observed

F. Endangered Species: Species of conservation concern are known from this area. Area Managers should consult the Natural Heritage database annually and review all management activities with the Natural History Biologist.

G. Boundary Issues: None

MANAGEMENT CONSIDERATIONS

I. Terrestrial Resource Management Considerations

Challenges and Opportunities

- 1) Exotic Species – The native prairies on this area are a priority habitat. The biggest threat to the plant and animal diversity on these native grasslands is the spread and dominance of exotic species. *Sericea lespedeza* is currently the most aggressive and threatening exotic species on the area, while tall fescue is the most widespread. Priority for control should be given to the most diverse prairies on the area. Funding and labor should also be focused on control/eradication of these invasive plants in old field sites, waterways and roadsides that act as a reservoir and seed source that can further spread seed and contaminate the area.
- 2) Woody Vegetation Management – Historically, fires were the natural force that kept woody vegetation from becoming established in the native prairies and grasslands. However, such natural fires are no longer a normal occurrence on this landscape. Prescribed burning is a management tool that is used, but often conditions conducive for eliminating woody stems are not within acceptable parameters in prescribed fire planning. Subsequently, the reduction of woody vegetation must be done by mechanical, chemical and via prescribed fires under approved conditions. Unacceptable growth of trees and shrubs jeopardizes not only plant diversity; but more significantly it affects survival of many grassland birds that require early succession grass land habitats. Reduction of perch sites for avian predators and mammalian travel routes will also improve survival and nesting success of many species of grassland birds that use this area. Priority should be given to maintaining the woody vegetation to the accepted density and height.

Management Objective 1: (Wildlife) Increase acreage, vegetative diversity and structure of grasslands to provide critical habitat for grassland dependent wildlife.

Strategy 1: Identify fields adjacent to existing grassland units and determine a schedule for increasing acreage of grasslands utilizing prairie reconstruction techniques.

Strategy 2: Utilize prescribed burning, patch burn grazing, mowing, herbicide application, and haying as management tools where possible and appropriate.

Strategy 3: Maintain a 2-3 year prescribed burn frequency on grasslands with objectives to provide brood rearing habitat for grassland birds, stimulate prairie forb seed production, increase plant diversity, and keep woody vegetation at acceptable levels.

Strategy 4: Reduce/eradicate exotic species within grasslands without negatively impacting native grasses and broadleaf plants. (Targeting sericea lespedeza, fescue, teasel, and musk thistle).

Strategy 5: Maintain woody vegetation on the prairie portion of the area at a height of less than 15 feet by using tree removal equipment, prescribed fire and herbicides without causing negative impacts to the native plants or soils.

Strategy 6: Prevent native sumac from dominating grassland units by reducing stem density using timely prescribed burning, mowing, and herbicides.

Management Objective 2: (Wildlife) Maximize usable space in grasslands, crop fields, and old fields for bobwhite quail and grassland birds.

Strategy 1: Manage for 5-15% open ground using prescribed burning, grazing, herbicide application, crop rotation and disking where appropriate and possible.

Strategy 2: Provide adequate escape cover (covey headquarters) by conducting edge feathering, planting shrubs, and/or allowing existing native shrubs to grow where appropriate.

Strategy 3: Increase plant species diversity of old fields and planted grasslands by eliminating exotic species (specifically sericea lespedeza and tall fescue).

Management Objective 3: (Private Lands, Wildlife) Continue to improve adjoining private landowner relationships and awareness.

Strategy 1: Provide educational and cost-share opportunities to adjoining landowners and those within the Little Drywood Creek and Clear Creek watersheds.

Strategy 2: Provide adjoining landowners with information on best management practices for grasslands, scattered tracts of timber, and riparian areas of associated watersheds.

II. Aquatic Resource Management Considerations

Challenges and Opportunities

- 1) Buffalo Wallow Prairie Conservation Area is located in the West Osage River basin. The area is divided by Interstate 49 with areas lying west of Interstate 49 draining into the Drywood Creek sub-basin and areas lying east of Interstate 49

draining into the Clear Creek sub-basin. Aquatic features consist of at least two non-managed ponds and 5.9 miles of small streams.

- 2) Second-order streams are the largest sized streams on this conservation area.
- 3) Fishing opportunities are limited to one of the non-managed ponds.
- 4) Land-use within the watersheds of the small streams are primarily agriculture with cropland and grassland being the dominate uses.

Management Objective 1: (Forestry, Fisheries, Wildlife) Enhance or expand the riparian corridors of first- and second-order streams to a minimum of 50 feet on both stream sides.

Strategy 1: Maintain grass or forested buffers between cropland or other agricultural practices and streams. These buffers can consist of native warm season grasses, shrubs, and trees.

Strategy 2: Limit the clearing of trees within riparian areas to first-order streams with little impact from land use practices within their respective watersheds. The Wildlife Management Biologist and Fisheries Management Biologist for the area will concur on the drainages that can withstand selective tree removal.

Strategy 3: Allow natural regeneration to vegetate the riparian corridors, or plant shrubs within the corridors where regeneration is not likely to occur or be sufficient to maintain channel stability.

Strategy 4: Implement stream management Best Management Practices (BMPs) as appropriate on all area streams as outlined in the “*Watershed and Stream Management Guidelines for Lands and Waters Managed by the Missouri Department of Conservation.*”

III. Public Use Management Considerations

Management Objective 1: (Wildlife) Provide un-harvested grain, legumes and/or grasses (food plots) or native seed plants for area users to readily observe deer, turkey, and quail, and provide food and cover for various wildlife species.

Strategy 1: Using the agricultural crop system, leave approximately 2-5 acres of small grain crops scattered in small strips throughout the area each year.

Strategy 2: Plant approximately 1-3 small food plots grains/legumes in old field habitat throughout the area and/or disk approximately 1-3 acres of old field sites in various seasons to provide native plants utilized by wildlife.

Management Objective 2: (Protection) Ensure statewide game and fish laws are enforced at Buffalo Wallow Prairie Conservation Area and provide citizens a safe environment for outdoor recreational use.

Strategy 1: Enforce 10:00PM to 4:00AM closure regulations.

APPENDICES

Area Background

Buffalo Wallow Prairie Conservation Area (CA) is in Barton County, 8.5 miles north of Lamar. This area, now totaling 1,113 acres, combines the original 320-acre Buffalo Wallow Prairie CA (to the west), land purchases in 1993 and 1997 (central) and the previously named Catlin Prairie Conservation Area (to the east). The name originates from what appears to be the remains of a buffalo wallow on the area. The entire area, except for the wooded creeks and drainages was once prairie.

Before it became public land, much of the area was plowed for cropland. However, more than 400 acres of native prairie still exist and are managed for their rich plant and animal diversity. Approximately 250 acres of cropland are farmed by local farmers following conservation practices, and 200 acres of former cropland have been converted to native warm-season and cool-season grasses to provide food and cover for wildlife. This combination of native prairie, cropland, old fields, and wooded drainages makes this area rich in wildlife. Grassland birds, deer, rabbit, and quail are seen on the area, and turkeys frequent the wooded drainages. The area’s wildlife habitat is restored and improved with a combination of farming, prairie reconstruction, prescribed burns, haying, tree removal, disking, and shrub plantings.

Current Land and Water Types

Land/Water Type	Acres	Miles	% of Area
Native Prairie	432		39
Crop	244		22
Woodland (Riparian)	149		13
Cool Season Grasses	87		8
Prairie – Shrub/ Drainage	77		7
Prairie – Reconstruction	67		6
Warm Season Grass Plantings	38		3
Old Field	14		1
Shrub Plantings	3		>1
Other (Roads/ Facilities)	2		>1
Total	1113		100%
Stream Frontage (1 st order and above)		5.9 miles	
Ponds		1	

Public Input Summary:

The draft Buffalo Wallow Prairie Conservation Area Management Plan was available for a public comment period September 1 - September 30, 2013. The Missouri Department of Conservation received no comments during this time period.

References:

Missouri Department of Conservation. 2009. Watershed and stream management guidelines for lands and waters managed by the Missouri Department of Conservation. MDC, Jefferson City, MO, USA.

Maps:

Figure 1: Buffalo Wallow CA Area Map

Figure 2: Buffalo Wallow CA Habitat Map

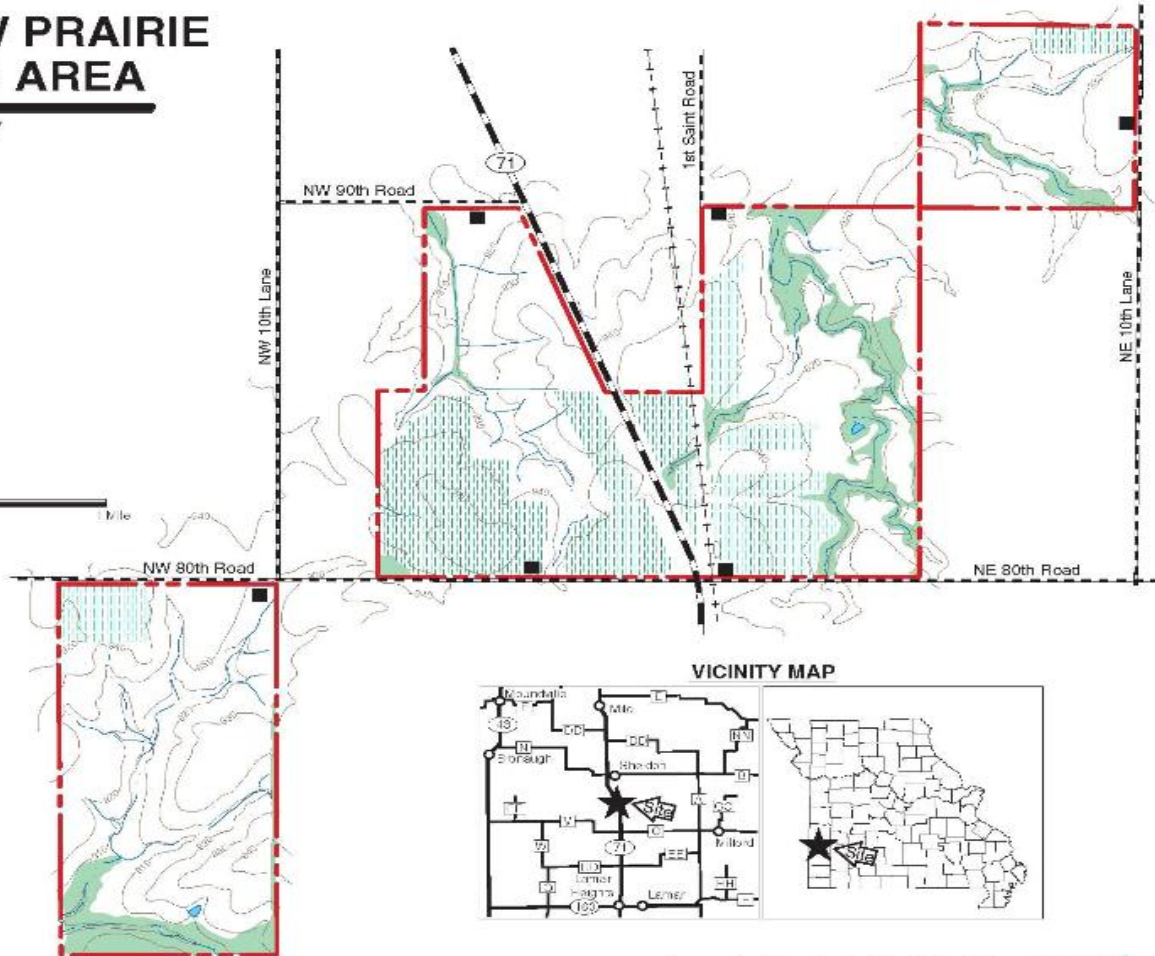
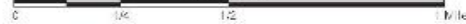
Figure 1: Buffalo Wallow CA Area Map

BUFFALO WALLOW PRAIRIE CONSERVATION AREA

BARTON COUNTY
1,113 ACRES



SCALE



LEGEND

Boundary	
Paved Road	
Gravel Road	
Drainage	
Railroad	
Parking Lot	
Pond	
Forest	
Crops	
Topography	

VICINITY MAP

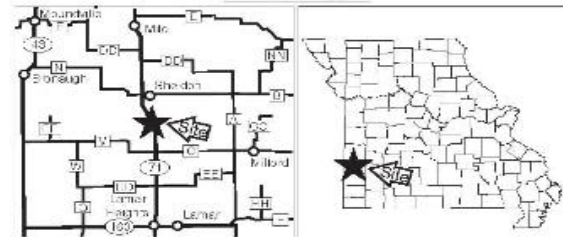


Figure 2: Buffalo Wallow CA Habitat Map

