Bluffwoods Conservation Area

Ten-Year Area Management Plan
FY 2015-2024

Lisa D. Allen
Forestry Division Chief

11-5-15
Date

Bluffwoods Conservation Area Management Plan Approval Page

PLANNING TEAM

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NORTHWEST REGION

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FORESTRY DIVISION

Forest Management Chief _____ 11/5/15
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- **Official Area Name:** Bluffwoods Conservation Area, # 7403; Bluffwoods Conservation Area – Goodell Memorial Annex, # 8435
- **Year of Initial Acquisition:** 1974
- **Acreage:** 2,344 acres, including the 63 acre Goodell Memorial Annex
- **County:** Buchanan
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**
  - **A. Strategic Direction**
    Manage native vegetation to provide habitat for game and non-game woodland and forest species. Provide quality recreational opportunities for the public. Maintain a loess hill forest close to St. Joseph and Kansas City.
  - **B. Desired Future Condition**
    Maintain a healthy and sustainable woodland and forest complex along with compatible recreational opportunities.
  - **C. Federal Aid Statement**
    N/A

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

A. Priority Areas: Weston-Iatan Priority Forest Landscape

B. Natural Areas: None

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. Springs: None

D. Other: According to the *Atlas of Missouri Ecoregions* (Nigh & Schroeder, 2002), Bluffwoods Conservation Area (CA) occurs in the Loess Hills subsection, Missouri River Loess Woodland/Forest Breaks Landtype Association. This landtype consists of a thick loess mantle and soils with rugged, deep loess hills bordering the Missouri River floodplain. Local relief is generally around 200 feet. Narrow ridges, steep slopes and numerous short, steep drainages are common. Bedrock and glacial till can be found in the deeper valleys. Vegetation includes prairie with timber (oak and mixed-hardwood woodland and forest) in the valleys and steeper slopes. Today only the roughest lands are still timbered with second

growth while the remainder is grass pasture, crops and urbanization (Nigh & Schroeder, 2002).

Forest Community – Mesic and Dry Loess/Glacial Till Forest. This natural community contains mesophytic or mixed hardwood forest with multiple vertical layers. The soils are deep, well drained, with naturally high fertility, and are strongly acidic to neutral (pH of 5.1-7.3). The canopy is typically composed of a few dominant tree species with several tree species co-dominant or in an intermediate position. Canopy dominants range from 60 to 130 feet tall or taller with overlapping and spreading crowns and a nearly complete (>80%) canopy closure. Dominant species include white oak, shagbark hickory, northern red and black oak, basswood, ash, black walnut, Kentucky coffeetree and sugar maple. The understory contains Ohio buckeye, pawpaw and eastern hop hornbeam. A subcanopy of short structure trees (15-30 feet) is present. The understory is composed of native shade-tolerant shrubs, small trees and canopy saplings (5-10 feet) and woody vines. The ground layer consists of shrubs, many vernal herbs, ferns and a patchy scattering of mosses and fungi. Decaying logs and leaf litter is often covered in mosses, liverworts and fungi. The number of woody and vernal herbaceous species is high. Woody vines, shrubs, trees, ferns, and perennial forbs are important groups.

The mesic loess/glacial till forest occurs on lower backslopes, footslopes, toeslopes and in ravines in breaks and hills associated with landscapes that are highly dissected by streams. They are gently sloping to steep (5-35% slope or more) typically with north and east aspects. (Nelson, 1985).

III. Existing Infrastructure

- 6 parking lots, 2 American with Disabilities Act (ADA) accessible pads
- 2 designated primitive camping areas (1 by Special Use Permit only, 1 open year-round)
- 1 picnic pavilion, including fire rings and 8 picnic tables (1 is ADA accessible)
- 2 vault pit toilets/privies (all ADA accessible)
- 2 primitive hiking trails (Lone Pine 1.5 miles, difficult; and Maple Falls 1.5 miles, difficult)
- 3 asphalt hiking trails (Prairie 0.2 miles, easy, ADA accessible; Meadow 0.3 miles, easy, ADA accessible; and Bluff 0.6 miles, moderate)
- 1.7 miles of interior service roads suitable for hiking
- 0.1 miles of maintained gravel public access roads
- 11 fishless watering holes

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:** Public road and power line rights of way
D. **Cultural Resources Findings:** Yes, records kept with the Missouri Department of Conservation (the Department) Environmental Compliance Specialist. Managers should follow Best Management Practices for Cultural Resources found in the Department Resource Policy Manual.
E. **Hazards and Hazardous Materials:** None observed.
F. **Endangered Species:** None observed.
G. **Boundary Issues:** None

MANAGEMENT CONSIDERATIONS

V. <u>Terrestrial Resource Management Considerations</u>

Challenges and Opportunities:

1) Enhance the forest and woodland communities on the area.
2) Enhance deer and turkey populations on the area.
3) Enhance the diverse mixture of native and forest vegetation.

Management Objective 1: Manage for a healthy and sustainable mixture of woodland and forest communities on the area.

Strategy 1: Conduct forest inventories for Compartment 1 in fiscal year 2022, Compartment 2 in fiscal year 2019 and Compartment 4 in fiscal year 2034.
Strategy 2: Monitor woodlands and forests for invasive exotic vegetation, diseases and insects. Treat undesirable vegetation and pests to control spread.
Strategy 3: Implement compartment scale Forest Resource Management Plans, including timber stand improvement work, tree and shrub planting, and timber harvests (Figure 2).
Strategy 4: Utilize Best Management Practices to maintain soil, water and visual integrity.

Management Objective 2: Enhance deer and turkey populations and non-game species on the area.

Strategy 1: Provide diverse habitats using agricultural, mechanical and chemical treatments; prescribed fire; and native food types, including hard tree, soft tree and shrub mast.

Management Objective 3: Enhance the diverse mixture of native and forest vegetation.

Strategy 1: Implement agricultural disturbances (including prescribed fire) to establish and maintain quality vegetation.

Strategy 2: Monitor and annually treat exotic and noxious vegetation and pests with herbicides, mechanical methods and prescribed fire.

VI. Public Use Management Considerations

Challenges and Opportunities:

Provide infrastructure and regulations for the public to access terrestrial resources, including hunting, hiking and viewing opportunities.

Management Objective 1: Maintain infrastructure and regulations to access resources and recreational opportunities.

Strategy 1: Monitor and evaluate infrastructure and regulations annually.

Strategy 2: Ensure that information regarding the area is accurate, consistent and available to the public through general contact, Conservation Atlas database, posted signs and brochures.

Strategy 3: Provide quick response to issues or questions that arise from area users or activities.

Strategy 4: Allow year-round access for area users to hunt, fish, gather edibles, and enjoy Missouri's outdoors appropriately and in accordance with State and area specific regulations**.**

VII. Administrative Considerations

Challenges and Opportunities:

1) Maintain area infrastructure at current levels.
2) Acquisition of land.

Management Objective 1: Maintain area infrastructure at current levels.

Strategy 1: Monitor and mark the area boundaries according to the pre-established marking schedule**.**

Strategy 2: Maintain area infrastructure in accordance with Department guidelines to ensure that signage, parking lots, trails and privies are in good shape.

Strategy 3: Maintain the primitive camping opportunities.

Lands Proposed for Acquisition:

When available, adjacent land may be considered for acquisition from willing sellers. Tracts that improve area access, provide public use opportunities, contain

unique natural communities and/or species of conservation concern, or meet other Department priorities, as identified in the annual Department land acquisition priorities, may be considered.

MANAGEMENT TIMETABLE

Strategies are considered ongoing unless listed in the following table.

	FY15	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**
Terrestrial Resource Management										
Objective 1										
Strategy 1					X			X		

APPENDICES

Area Background:
Bluffwoods CA is located approximately 9 miles south of St. Joseph and 40 miles north of Kansas City, in Buchanan County. The Department began acquiring the area in 1974. The area currently contains 2,344 acres, including a separate 63-acre tract known as the Goodell Memorial Annex, which is located about 1.5 miles north of Bluffwoods CA. The conservation area was originally purchased to protect a large remnant tract of forest land near metropolitan areas.

Bluffwoods CA is located within the Loess Bluffs adjacent to the Missouri River floodplain. Loess soil is a unique natural feature formed as the ice age glaciers melted, leaving behind very fine wind-blown deposits. The soil is prone to erosion, especially if the original columnar structure is disturbed. Local relief can be as much as 200 feet of loess soil on top of a base limestone shelf.

Over 100 woodland species of wildlife can be found on the conservation area, including turkey, squirrel, raccoons, deer, foxes and numerous species of birds. The area has been designated by Audubon Missouri as an Important Bird Area. Important Bird Areas are sites that have been identified by Audubon as those that are the most crucial for bird populations, due to their abundance and/or the diversity of birds present.

Approximately 90 percent of the conservation area is currently covered in trees (mixed oak-hickory), of which 2 percent is black walnut and other tree plantations. The remaining acres are old fields, wildlife food plots, warm-season grass plantings, watering holes, and small remnant loess hill prairies, mostly located on ridge tops and south-facing slopes.

The area is open to the public from 4 a.m. to 10 p.m. daily. Special facilities include a number of hiking trails (some ADA accessible) and foot paths that lead through lush forests and overlooks of the Missouri River floodplain.

Current Land and Water Types:

Land/Water Type	Acres	Feet	% of Area
Forest/woodland	2,100		90
Old field	200		9
Native grasses	30		<1
Miscellaneous	10		<1
Total	**2,344**		**100**
Stream frontage		9,750	

Public Input Summary:
The draft Bluffwoods Conservation Area Management Plan was available for a public comment period June 1–30, 2015. The Missouri Department of Conservation received one comment (Appendix A). The Bluffwoods Conservation Area Planning Team carefully reviewed and considered these ideas as they finalized this document. A brief summary of public input themes, including how they were incorporated or why they were not, can be found below. Rather than respond to each individual comment, comments are grouped into general themes and are addressed collectively.

Department responses to themes and issues identified through Bluffwoods Conservation Area public comment period

Landowner adjacent to the Goodell Memorial Annex supports area management and is pleased to have increased deer and turkey sightings over the past 20 years.
The Missouri Department of Conservation appreciates the support for the current management of Bluffwoods Conservation Area. We strive to provide as many outdoor opportunities as possible including hiking, orienteering, bird watching and deer and turkey hunting/viewing.

References:
Nelson, P. W. (1985). *The terrestrial natural communities of Missouri.* Jefferson City, Missouri: Missouri Natural Areas Committee.

Nigh, T. A., & Schroeder, W. A. (2002). *Atlas of Missouri ecoregions*. Jefferson City, Missouri: Missouri Department of Conservation.

Maps:
Figure 1: Area Map
Figure 2: Aerial Map
Figure 3: Vegetation Map

Additional Appendices:
Appendix A. Bluffwoods Conservation Area Public Comments

Figure 1: Area Map

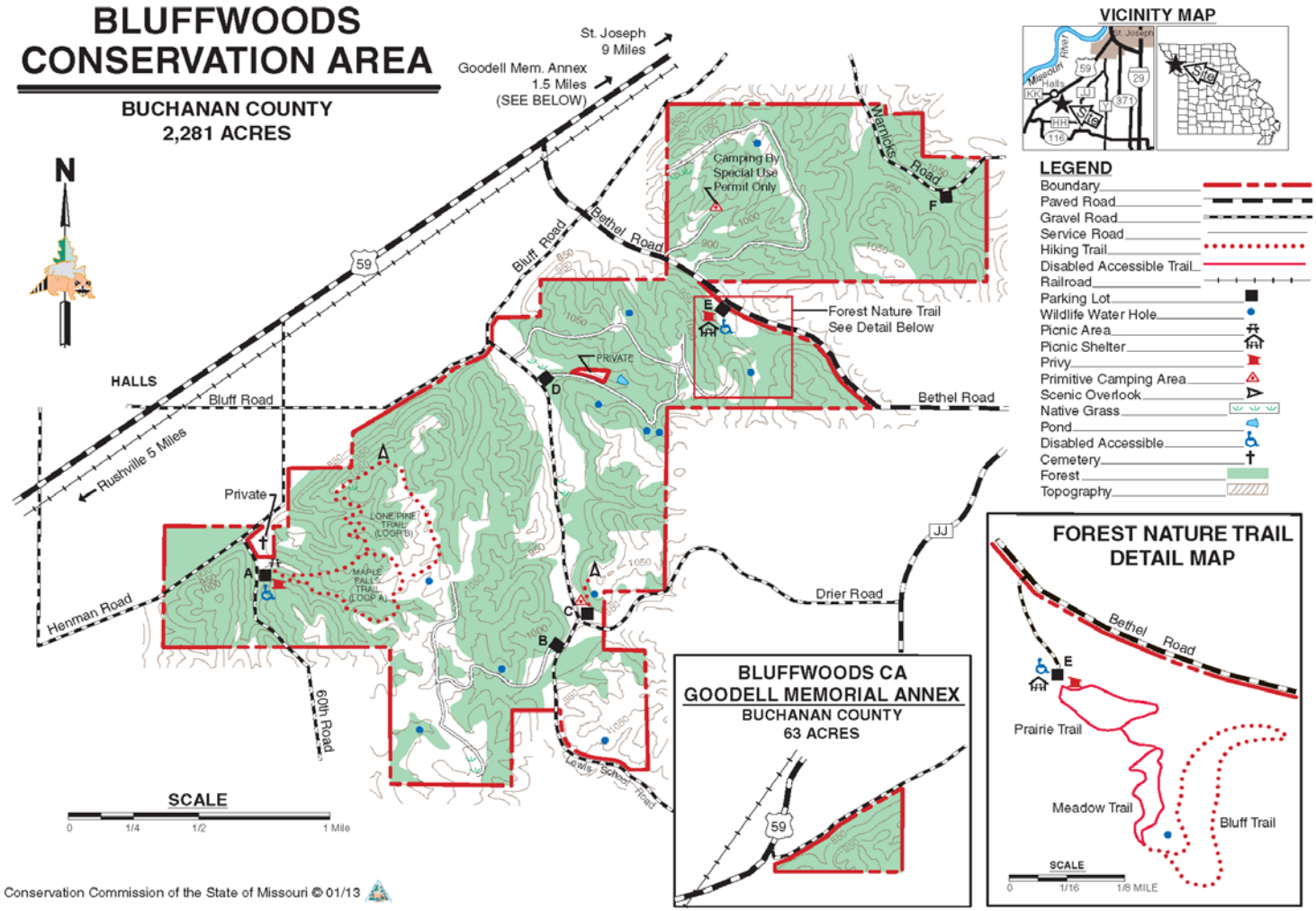


Figure 2: Aerial Map

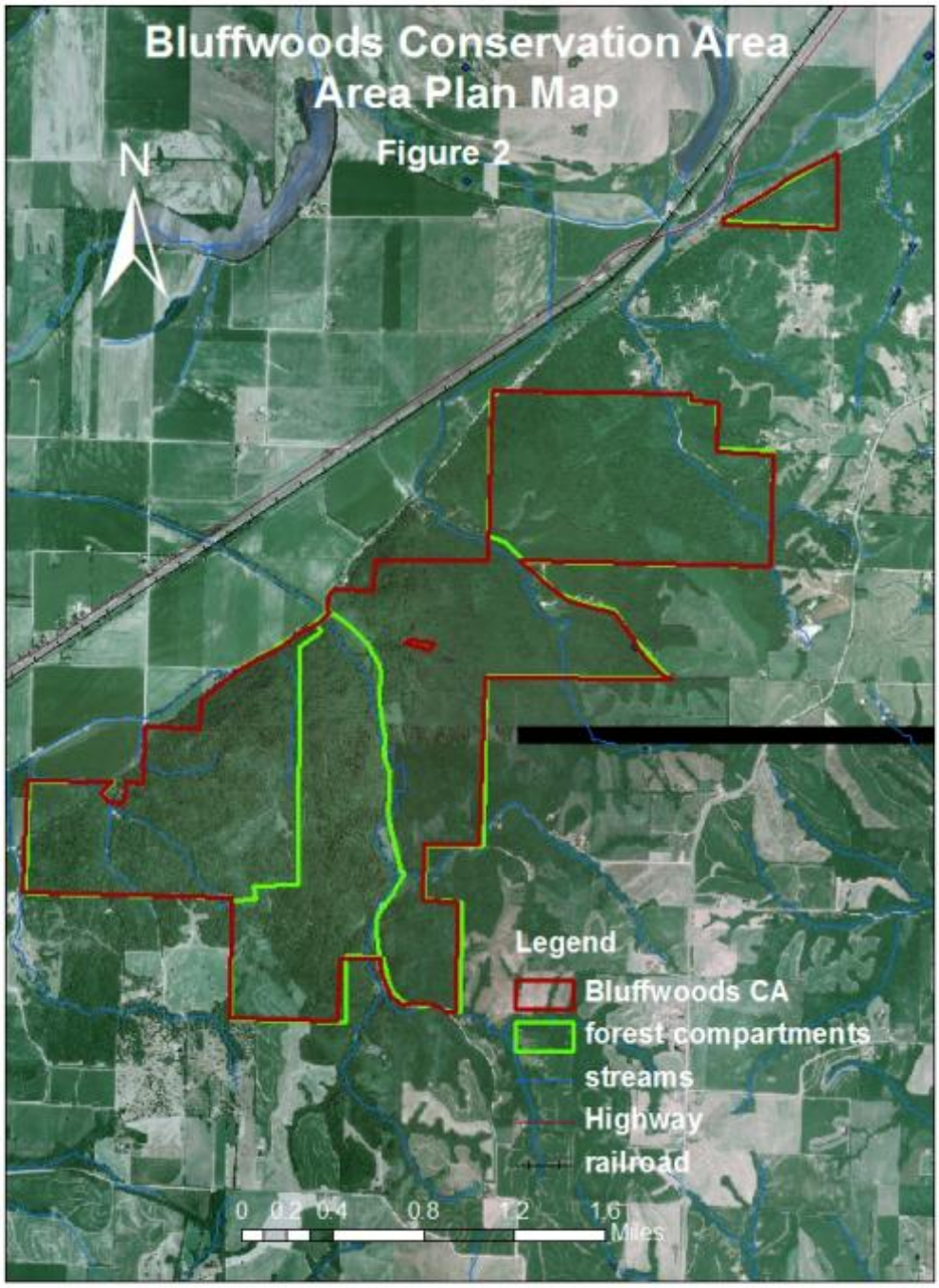
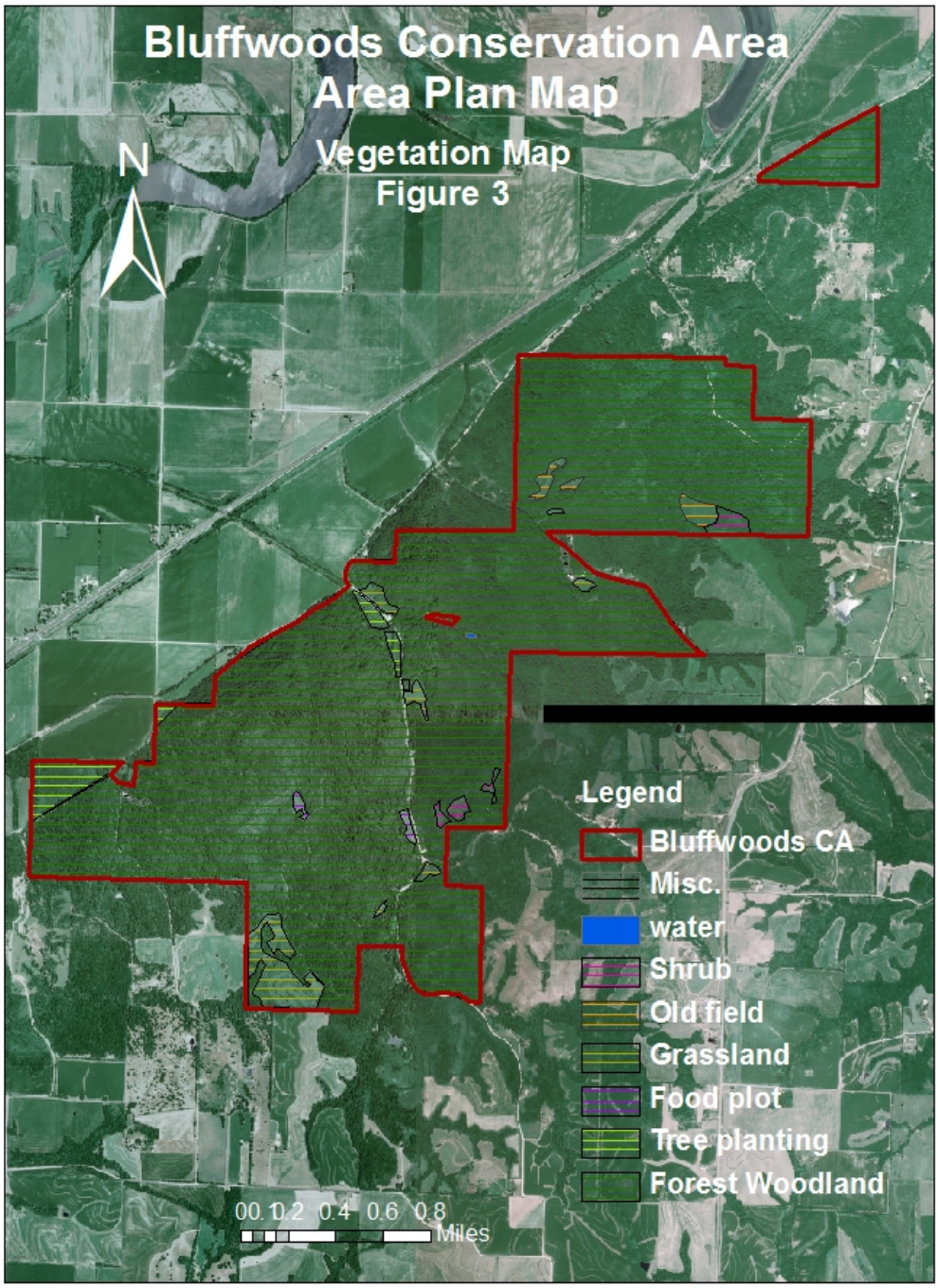


Figure 3: Vegetation Map



Appendix A. Bluffwoods Conservation Area Management Plan Public Comments

Received during public comment period (June 1-30, 2015):

I support the proposed plan. As an overall whole mdc does a very good job managing the MO conservation areas. Keep up the good work. As a landowner adjoining the Goodall annex of bluffwoods CA for 20+ years, we are having sightings of more turkey and deer now than 20 years ago. Please feel free to contact me if you would like more detailed comment or assistance with your management goals.