

Spring Creek Watershed Priority Geography Public Land

Dark Hollow Natural Area
Morris Prairie Conservation Area
Shoemaker Conservation Area
Union Ridge Conservation Area

Ten-Year Area Management Plan FY 2017-2026






Wildlife Division Chief



Date



Forestry Division Chief



Date

Spring Creek Watershed Priority Geography Public Land Management Plan Approval Page

PLANNING TEAM

Ryan Jones, Wildlife Management Biologist

Yvette Amerman, Resource Forester

Krista Noel, Natural History Biologist

Darren Thornhill, Fisheries Management Biologist

John Murphy, Private Lands Conservationist

Karen Armstrong, Education Consultant

Marsha Jones, Conservation Agent

NORTHEAST REGION

RCT Chair

Shawn Grube
Signature

4/18/16
Date

MISSOURI RIVER UNIT

Wildlife Management Chief

Michael Schen
Signature

4/25/16
Date

Forest Management Chief

Justin Gathree
Signature

5/16/16
Date

OVERVIEW

The Spring Creek Watershed Priority Geography (Spring Creek Watershed) is a coalescence of the Union Ridge Conservation Opportunity Area (COA), Union Ridge Aquatic COA and a Priority Forest Landscape. At its core, management in the Spring Creek Watershed is about focusing resources in a limited geography to conserve and improve the natural resources. Management of the area relies on public and private partnerships and recognizes the necessity of private landowner cooperation for success. The following document is a ten-year management plan for Dark Hollow Natural Area (NA), Morris Prairie Conservation Area (CA), Shoemaker CA and Union Ridge CA located within the Spring Creek Watershed. These areas represent 18.2 percent (8,510 acres) of the 46,795-acre Spring Creek Watershed Priority Geography, and will demonstrate natural community management practices.

Area Name	Area Number	Year Acquired	Acres	County	Administrative Responsibility	Maintenance Responsibility
Dark Hollow NA	9333	1993	315	Sullivan	Wildlife	Wildlife
Morris Prairie CA	200518	2005	167	Putnam, Sullivan	Wildlife	Wildlife
Shoemaker CA	8927	1989	259	Adair	Forestry	Wildlife
Union Ridge CA	8932	1989	8,111	Adair, Putnam, Sullivan	Wildlife	Wildlife

Statements of Purpose:

A. Strategic Direction

The Missouri Department of Conservation (the Department) manages Dark Hollow NA, Morris Prairie CA, Union Ridge CA and Shoemaker CA to provide diverse habitat for fish, forest and wildlife through sound management practices, while offering the public compatible outdoor recreational opportunities. Special emphasis is placed on prairie, savanna, woodland and forest natural community restoration and enhancement.

B. Desired Future Condition

The desired future condition of Dark Hollow NA, Morris Prairie CA, Union Ridge CA and Shoemaker CA is healthy natural communities including prairie, savanna, woodland and forest.

C. Federal Aid Statement

Dark Hollow NA, Morris Prairie CA and Union Ridge CA were purchased with Department funds. Shoemaker CA was donated by a private individual. There are no federal aid dollars associated with the acquisition of these areas.

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

Area Name	Priority Areas	Natural Areas
Dark Hollow NA	Yes ¹	Dark Hollow NA
Morris Prairie CA	Yes ²	Morris Prairie NA
Shoemaker CA	Yes ³	None
Union Ridge CA	Yes ⁴	Spring Creek Ranch NA

¹ Spring Creek Watershed Priority Geography, Union Ridge Terrestrial Conservation Opportunity Area (COA), Spring Creek (NE) Fisheries Priority Watershed, Missouri Iowa Woodland Initiative

² Spring Creek Watershed Priority Geogrpahy, Spring Creek (NE) Fisheries Priority Watershed, Priority Forest Landscape, Missouri Iowa Woodland Initiative

³ Spring Creek Watershed Priority Geography, Union Ridge Terrestrial COA, Union Ridge Aquatic COA, Spring Creek (NE) Fisheries Priority Watershed, Priority Forest Landscape, Missouri Iowa Woodland Initiative

⁴ Spring Creek Watershed Priority Geography, Union Ridge Terrestrial COA, Union Ridge Aquatic COA, Spring Creek (NE) Fisheries Priority Watershed, Missouri Iowa Woodland Initiative

II. Important Natural Features and Resources

Area Name	Species of Conservation Concern	Caves	Springs	Other
Dark Hollow NA	Yes ¹	None	None	Yes ^{2,3}
Morris Prairie CA	Yes ¹	None	None	
Shoemaker CA	Yes ¹	None	None	
Union Ridge CA	Yes ¹	None	None	

¹ 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.

² The Spring Creek Watershed has 1,208 acres of rare woodland, savanna, forest and prairie natural communities currently recognized in the Department's Heritage Database, in addition to a warm-water headwater stream. The largest savanna tract in the state occurs within the priority geography.

³ The Spring Creek Watershed contains two of the nine land type associations that are found in the Central Dissected Till Plains; the Unionville Upland Prairie Plain and the Upper Chariton River Woodland/Forest Hills.

III. Existing Infrastructure

Area Name	Concrete Boat Ramp	Privy	Parking Area #	Buildings	Wetland Structures	Lakes/ Ponds
Dark Hollow NA	None	None	1	None	None	None
Morris Prairie CA	None	None	1	1	None	5 ponds (2.5 acres total)
Shoemaker CA	None	None	2	None	None	1 pond (0.1 acre)
Union Ridge CA	1	2	18	2	1	22 ponds (10.4 acres total), 1 lake (11 acre- Union Ridge Lake)

IV. Area Restrictions or Limitations

Area Name	Deed Restrictions	Federal Interest	Easements	Cultural Resources	Hazards	Endangered Species	Boundary Issues
Dark Hollow NA	None	Yes ¹	None	None known	None observed	Yes ⁵	No
Morris Prairie CA	None	Yes ¹	None	None known	None observed	None observed ⁶	No
Shoemaker CA	None	Yes ¹	Yes ²	None known	None observed	None observed ⁶	No
Union Ridge CA	None	Yes ¹	Yes ⁴	None known	None observed	Yes ⁵	Yes

¹ 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.

²Two right of way easements with the same neighboring landowner

⁴Sullivan County Public Water Supply District #1 waterline

⁵ Endangered Species are known from this area. Area Managers should consult the Natural Heritage Database annually and review all management activities with the Natural History Biologist.

⁶ Endangered Species are not known from this site, but are found in the surrounding area. Area Managers should consult annually with the Natural History Biologist.

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

Dark Hollow NA

Challenges and Opportunities:

- 1) Manage high quality natural communities including savanna, woodland and forest.
- 2) Control of invasive species is a high priority.

Management Objective 1: Enhance woodland and forest communities on the entire area.

Strategy 1: Implement appropriate woodland and forest management activities, as identified in the inventory. Management work may include, but is not limited to, mechanical thinning, herbicide application, forest stand improvement and prescribed burning. The goal of any management practice will be the enhancement of the resources. (Wildlife, Forestry)

Strategy 2: Promote native forbs and improve oak regeneration with prescribed fire. (Wildlife, Forestry)

Management Objective 2: Actively monitor and control invasive and exotic species.

Strategy 1: Monitor for invasive and exotic species. (Wildlife, Forestry)

Strategy 2: Control invasive and exotic species through a variety of techniques, including, but not limited to, chemical application, mechanical thinning and prescribed fire. (Wildlife, Forestry)

Management Objective 3: Control or set back woody species encroachment on savanna restoration.

Strategy 1: Use timely prescribed fire to set back woody encroachment. (Wildlife)

Strategy 2: Mechanically control woody encroachment. (Wildlife)

Strategy 3: Use chemical application to control woody encroachment while not harming desirable plants. (Wildlife)

Management Objective 4: Monitor and manage for species of conservation concern.

Strategy 1: Conduct annual surveys for species of conservation concern. (Wildlife)

Strategy 2: Manage for species of conservation concern found during annual surveys. (Wildlife)

Morris Prairie CA

Challenges and Opportunities:

- 1) Manage high quality natural communities including woodland and prairie.
- 2) Control of invasive species is a high priority.

Management Objective 1: Enhance woodland and prairie communities on the entire area.

Strategy 1: Restore and promote native prairie with supplementary plantings of native grasses and forbs. (Wildlife)

Strategy 2: Promote native plants and control invasive and exotic species utilizing prescribed fire. (Wildlife)

Management Objective 2: Actively control invasive and exotic species.

Strategy 1: Monitor for invasive and exotic species. (Wildlife)

Strategy 2: Control invasive and exotic species through a variety of techniques, including, but not limited to, chemical application, mechanical thinning and prescribed fire. (Wildlife)

Management Objective 3: Control or set back woody encroachment in grassland area.

Strategy 1: Use timely prescribed fire to set back woody encroachment. (Wildlife)

Strategy 2: Mechanically control woody encroachment. (Wildlife)

Strategy 3: Use chemical application to control woody encroachment while not harming desirable plants. (Wildlife)

Management Objective 4: Monitor and manage for species of conservation concern.

Strategy 1: Conduct annual surveys for species of conservation concern. (Wildlife)

Strategy 2: Manage for species of conservation concern found during annual surveys. (Wildlife)

Shoemaker CA

Challenges and Opportunities:

- 1) Manage as a high quality even aged, oak/hickory forest.
- 2) Control of invasive and exotic species is a high priority.

Management Objective 1: Enhance forest communities.

Strategy 1: Conduct a forest inventory by FY19 to determine forest management needs. (Forestry)

Strategy 2: Implement appropriate woodland and forest management activities, as identified in the inventory. Management work may include, but is not limited to, timber sales, herbicide application, forest stand improvement and prescribed burning. The goal of any management practice will be the enhancement of the resources. (Forestry)

Strategy 3: Follow the appropriate best management practices outlined in *Missouri Watershed Protection Practice Recommended Practices for Missouri Forests* (2014) when conducting silvicultural operations. (Forestry)

Management Objective 2: Monitor and control invasive and exotic species.

Strategy 1: Monitor for invasive and exotic species. (Forestry)

Strategy 2: Control invasive and exotic species through a variety of techniques, including, but not limited to, chemical application, mechanical thinning and prescribed fire. (Forestry)

Union Ridge CA

Challenges and Opportunities:

- 1) Manage high quality woodland, savanna and forest natural communities including Spring Creek Ranch NA.
- 2) Control of invasive and exotic species is a high priority.
- 3) Provide high quality outdoor recreational opportunities for a wide range of stakeholders.

Management Objective 1: Manage and enhance Spring Creek Ranch NA as the premier savanna landscape in the state.

Strategy 1: Continue an aggressive prescribed fire regime. (Wildlife)

Strategy 2: Complete savanna tree thinning and timber stand improvement on the eastern portions of Spring Creek Ranch NA. (Wildlife)

Strategy 3: Plant native forbs and grasses on rough areas including old crop fields and historically heavily grazed areas. (Wildlife)

Management Objective 2: Enhance woodland and forest communities.

Strategy 1: Conduct forest inventory to determine forest management needs. (Forestry)

- Conduct Compartment 5 inventory by FY2017.
- Conduct Compartment 4 inventory by FY2018.

- Conduct Compartment 7 inventory by FY2019.
- Conduct Compartment 1 inventory by FY2022.

Strategy 2: Implement management prescriptions of the forest inventory within five years of the inventory completion, with priority given to the stands that will meet the management emphasis of the conservation area. (Wildlife, Forestry)

Strategy 3: Follow the appropriate best management practices outlined in *Missouri Watershed Protection Practice Recommended Practices for Missouri Forests* (2014) when conducting silvicultural operations. (Wildlife, Forestry)

Strategy 4: Follow *Watershed and Stream Management Guidelines for Land and Waters Managed by the Missouri Department of Conservation* (Missouri Department of Conservation, 2009), as appropriate. (Wildlife, Forestry)

Management Objective 3: Enhance and expand woodland acres on Union Ridge CA.

Strategy 1: Continue aggressive prescribed fire regime. Use of prescribed fire will decrease in frequency once floral composition is at a desired state. (Wildlife)

Strategy 2: Based on the forest inventory, expand woodland units to Compartment 3 and Compartment 4 in locations supported by site and vegetative conditions. Expansion will be accomplished by using a variety of management techniques, including, but not limited to, woodland improvement and prescribed fire management practices. (Wildlife, Forestry)

Management Objective 4: Provide cereal grain and green browse food plots to enhance small and large game habitat.

Strategy 1: Continue to work with a permittee farmer to ensure that a mixture of food is available for wildlife and to ensure that best management practices are being implemented. (Wildlife)

Strategy 2: Plant cover crop mixes in sunflower fields annually. (Wildlife)

Strategy 3: Maintain crop land through Ag Crop program and Department planted foodplots. (Wildlife)

Strategy 4: Annually disk or leave idle the previous year's food plots on open fields to provide early successional habitat. (Wildlife)

Management Objective 5: Manage the old fields not in agricultural program to provide early successional habitat.

Strategy 1: Remove undesirable woody vegetation from old fields not in agricultural program and create downed woody cover. (Wildlife)

Management Objective 6: Opportunistically manage available shallow water wetland resources.

Strategy 1: Control woody invasion and reed canary grass in the wetland unit. (Wildlife)

Strategy 2: Promote early successional wetland plant species by disking when conditions allow. (Wildlife)

Strategy 3: Investigate feasibility of increasing surface water input into the wetland unit. (Wildlife)

Management Objective 7: Actively monitor and control invasive and exotic species.

Strategy 1: Monitor for invasive and exotic species. (Wildlife, Forestry)

Strategy 2: Control invasive and exotic species through a variety of techniques, including, but not limited to, chemical application, mechanical thinning and prescribed fire. (Wildlife, Forestry)

Strategy 3: Manipulate water levels in wetland pool to control reed canary grass. (Wildlife)

Management Objective 8: Monitor and manage for species of conservation concern.

Strategy 1: Conduct annual surveys for species of conservation concern. (Wildlife)

Strategy 2: Manage for species of conservation concern found during annual surveys. (Wildlife)

VI. Aquatic Resource Management Considerations

Dark Hollow NA

Challenges and Opportunities:

- 1) Maintain stream water quality to support a healthy ecosystem.

Management Objective 1: Improve long-term stream stability and ecological function on Dark Hollow NA according to Department guidelines (Missouri Department of Conservation, 2009).

Strategy 1: Maintain or widen, if appropriate, the existing minimum 50-foot wide, wooded riparian corridor on all lands bordering the streams on Dark Hollow NA. (Wildlife)

Morris Prairie CA

Challenges and Opportunities:

- 1) Maintain fishing opportunities for future generations.
- 2) Maintain water quality of the streams and ponds to support a healthy ecosystem.

Management Objective 1: Maintain self-sustaining largemouth bass and bluegill fisheries in Pond 1 and Pond 2.

Strategy 1: Control excessive aquatic macrophytes chemically or biologically to promote efficient foraging by largemouth bass. (Fisheries)

Strategy 2: Opportunistically survey Ponds 1 and 2 every 5 to 10 years and evaluate fish communities beginning in FY2017. (Fisheries)

Management Objective 2: In fishless ponds and ponds lacking viable fish populations, provide suitable habitat for amphibians and reptiles.

Strategy 1: Maintain current conditions in fishless ponds and do not stock ponds with fish. (Fisheries)

Strategy 2: Explore the feasibility of chemically removing fish from ponds lacking viable fish populations, and, if feasible, chemically remove fish by FY2017. (Fisheries)

Management Objective 3: Improve long-term stream stability and ecological function on Morris Prairie CA according to Department guidelines (Missouri Department of Conservation, 2009).

Strategy 1: Maintain a minimum 50-foot wide riparian corridor in native vegetation on all lands bordering the streams on Morris Prairie CA. (Wildlife)

Strategy 2: Inspect all stream crossings by FY2017 to ensure they meet design specifications for light equipment crossings. Crossings that do not meet specifications should be eliminated or corrected through the budget process by FY2018. (Wildlife)

Shoemaker CA

Challenges and Opportunities:

- 1) Maintain fishing opportunities for future generations.
- 2) Maintain water quality of the streams and pond to support a healthy ecosystem.

Management Objective 1: In the fishless pond, provide suitable habitat for amphibians and reptiles.

Strategy 1: Maintain current conditions in the fishless pond and do not stock pond with fish. (Fisheries)

Management Objective 2: Improve long-term stream stability and ecological function of Spring Creek on Shoemaker CA according to Department guidelines (Missouri Department of Conservation, 2009).

Strategy 1: Maintain a minimum 200-foot wide, wooded riparian corridor on all lands bordering Spring Creek. (Forestry)

Union Ridge CA

Challenges and Opportunities:

- 1) Maintain fishing opportunities for future generations.
- 2) Maintain water quality of the streams and ponds to support a healthy ecosystem.
- 3) Monitor and manage an experimental population of Topeka shiners to Spring Creek Watershed.

Management Objective 1: Maintain self-sustaining largemouth bass and bluegill fisheries in Union Ridge Lake, Pond 1 and Pond 2.

Strategy 1: Control excessive aquatic macrophytes chemically or biologically to promote efficient foraging by largemouth bass. (Fisheries)

Strategy 2: Survey and evaluate Union Ridge Lake fish community every three to five years beginning in FY2017. (Fisheries)

Strategy 3: Opportunistically survey Ponds 1 and 2 every 5 to 10 years and evaluate fish communities beginning in FY2017. (Fisheries)

Management Objective 2: Maintain a put-grow-and-take fishery for channel catfish in Union Ridge Lake.

Strategy 1: Stock Union Ridge Lake with 8- to 10-inch channel catfish every other year beginning in FY2018. (Fisheries)

Management Objective 3: Manage designated Topeka shiner brood ponds according to *Topeka Shiner Recovery Plan* (Missouri Department of Conservation, 2010).

Strategy 1: Maintain fishless condition according to the *Topeka Shiner Recovery Plan*. (Fisheries)

Strategy 2: Stock orange-spotted sunfish and Topeka shiners in brood ponds at rates determined by the *Topeka Shiner Recovery Plan*. (Fisheries)

Strategy 3: Explore the feasibility of constructing off-channel, brood rearing habitat adjacent to area streams by FY2018. (Fisheries)

Management Objective 4: In fishless ponds and ponds lacking viable fish populations, provide suitable habitat for amphibians and reptiles.

Strategy 1: Maintain current conditions in fishless ponds and do not stock ponds with fish. (Fisheries)

Strategy 2: Explore the feasibility of chemically removing fish from ponds lacking viable fish populations, and, if feasible, chemically remove fish by FY2018. (Fisheries)

Management Objective 5: Improve long-term stream stability and ecological function of Spring Creek and its tributaries on Union Ridge CA according to Department guidelines (Missouri Department of Conservation, 2009).

Strategy 1: Maintain and monitor a minimum 200-foot wide, wooded riparian corridor on all lands bordering Spring Creek. (Wildlife, Fisheries)

Strategy 2: Maintain and monitor a minimum 100-foot wide, vegetated riparian corridor on all lands bordering Spring Creek tributaries on Union Ridge CA. (Wildlife, Fisheries)

Strategy 3: Inspect all stream crossings by FY2017 to ensure they meet design specifications for light equipment crossings. Crossings that do not meet specifications should be eliminated or corrected through the budget process by FY2019. (Wildlife, Fisheries)

VII. Public Use Management Considerations for All Areas

Challenges and Opportunities:

- 1) Maintain current infrastructure.
- 2) Improve access to fishable ponds.
- 3) Enforce statewide and area specific regulations.

Management Objective 1: Maintain current infrastructure to established maintenance standards to invite public use and keep area users informed of regulations.

Strategy 1: Keep area brochure on bulletin board and map box stocked at area parking lots. (Wildlife, Forestry)

Strategy 2: Maintain current levels of area maintenance. Keep field roads mowed to improve area access. (Wildlife, Forestry)

Management Objective 2: Provide improved pond-fishing access for the public on all areas with stocked ponds.

Strategy 1: Ensure field trails leading to fishing ponds and dams are mowed according to area maintenance standards. (Wildlife, Forestry)

Management Objective 3: Ensure statewide and area specific regulations are enforced and provide citizens a safe environment for outdoor recreational use.

Strategy 1: Enforce 10 p.m. to 4 a.m. closure regulation. (Protection)

Strategy 2: Through personal contacts, invoke the help of neighbors in observing and reporting unauthorized use of the area. (Protection)

Union Ridge CA

Challenges and Opportunities:

1) Provide outdoor recreational opportunities.

Management Objective 1: Provide outdoor recreational opportunities for stakeholders to participate on Union Ridge CA.

Strategy 1: Annually consider providing a managed deer hunt during the antlerless-only season. (Wildlife)

Strategy 2: Allow horseback riding according to the Wildlife Code on field roads north of Highway D by Special Use Permit. (Wildlife)

VIII. Administrative Considerations

Lands Proposed for Acquisition:

When available, inholdings and/or 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 TIMETABLES

Strategies are considered ongoing unless listed in the following tables.

Dark Hollow NA:

	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
Terrestrial Resource Management										
<i>Objective 2</i>										
Strategy 1	X	X	X							

Morris Prairie CA:

	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
Terrestrial Resource Management										
<i>Objective 1</i>										
Strategy 1	X									
<i>Objective 4</i>										
Strategy 1	X					X				
Aquatic Resource Management										
<i>Objective 1</i>										
Strategy 2		X					X			
<i>Objective 2</i>										
Strategy 2		X								
<i>Objective 3</i>										
Strategy 2			X	X						

Shoemaker CA:

	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
Terrestrial Resource Management										
<i>Objective 1</i>										
Strategy 1			X							
Strategy 2				X	X	X	X	X		

Union Ridge CA:

	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
Terrestrial Resource Management										
<i>Objective 1</i>										
Strategy 2	X	X	X	X						
<i>Objective 2</i>										
Strategy 1	X	X	X			X				
Strategy 3				X						
<i>Objective 3</i>										
Strategy 1		X	X	X	X	X	X	X	X	X
<i>Objective 9</i>										
Strategy 1	X					X				
Aquatic Resource Management										
<i>Objective 1</i>										
Strategy 2	X			X			X			
Strategy 3	X					X				
<i>Objective 2</i>										
Strategy 1		X		X		X		X		X
<i>Objective 3</i>										
Strategy 3		X								
<i>Objective 4</i>										
Strategy 2		X								
<i>Objective 5</i>										
Strategy 3	X		X							

APPENDICES

Public Input Summary:

The draft Spring Creek Watershed Priority Geography Public Land Area Management Plan was available for a public comment period June 1–30, 2015. The Missouri Department of Conservation received comments from four respondents (Appendix A). The Spring Creek Watershed Priority Geography Public Land 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 Spring Creek Watershed Priority Geography Public Land Area public comment period

Suggests prioritizing prairie and savanna restoration.

Natural community restoration and enhancement is a priority on all conservation areas in this priority geography. Woodland thinning, prescribed fire, and exotic species control are the main practices used.

Suggests adding more ponds/lakes for fishing.

Through recent land purchases we have added two fishable ponds and are in the process of improving access to fishing locations. Currently there are five fishing ponds (including the lake) on Union Ridge CA, and two fishing ponds on Morris Prairie CA. As an agency, the Department carefully reviews any new infrastructure and balances those requests against other regional and statewide needs. At this time, given the current and anticipated public use of the areas for the 10 year duration of this plan, the Department does not plan on building any new ponds or lakes.

Suggests constructing several shelter areas for hikers, picnickers, educational events, etc.

The Department carefully reviews any new infrastructure and balances those requests against other regional and statewide needs. At this time, given the current and anticipated public use of the areas for the 10 year duration of this plan, the Department does not plan on building any new shelters on the areas.

Would like to see improved privies at Union Ridge CA.

We recently relocated and improved both privies on the area. One privy is located in Parking Lot E and the other was elevated and moved to the north side of Parking Lot N. We installed doors on both units and poured an Americans with Disabilities Act (ADA) accessible pad.

Suggests adding accessible camping areas. Suggests developing an equestrian camping area.

Primitive camping is allowed throughout the areas year round, except during firearms deer and turkey seasons. During firearms deer and turkey seasons camping is only allowed in designated parking areas. We have added fire-rings at Parking Lot N on Union Ridge CA, and all the parking lots are well maintained throughout the year. The current use of the area by equestrian users does not warrant a camping site for this purpose.

Suggests adding 10-12 miles of multi-use trails (loop trails preferred) and allowing horseback riding without a special use permit.

Currently, there are 7 miles of looping field roads that horseback riding is allowed on with a special use permit. There are no plans to expand the trails. The Department will continue to require a special use permit. By requiring the special use permit, the area manager can monitor public use of the area, and the permit allows the manager to share a map of the field roads and other pertinent information with riders. The special use permit process has been streamlined to make it easy for riders to request and utilize the permit.

Concern about limiting horseback riding to field roads north of Highway D. Concern about not allowing horseback riding (even with special use permit) on Spring Creek Ranch Natural Area.

Horseback riding is allowed north of Highway D, because it is the portion of the area that lends itself best to such use. Wildlife Code CSR 10-11.130 states that horseback riding will not be allowed in Spring Creek Ranch Natural Area. This regulation is in effect primarily to protect the rare savanna natural community. The remainder of Union Ridge CA is either lacking adequate field roads or the field roads are dead ends. Currently, there are 8 miles of looping field roads that horseback riding is allowed on with a special use permit (SUP). There are no plans to expand the trails.

Suggests offering more educational programs at Union Ridge CA (e.g., bird watching, hiking, plant/tree identification, fish days, etc.).

Public outreach has been, and will continue to be, a major priority on Union Ridge CA. During the past year, over 300 local grade school students have participated in field trips on Union Ridge CA. In addition, 24 presentations have been given about the area to over 700 attendees. The Missouri Prairie Foundation and the Missouri Native Plant Society have also held field days on the area.

Suggests more directional signs within and outside of Union Ridge CA. Suggests adding interpretive signs within Union Ridge CA.

The Department has requested the Missouri Department of Transportation place new highway signs at the intersection of Hwy D and Hwy 6. We are also adding a welcome sign at the corner

of Hwy D and Meade Road and a sign on Hwy D showing the location of the lake. The area map is being updated with more detailed information including field roads and unique features. This map will be available in area parking lots and online.

Suggests creating a visitor’s center at Union Ridge CA that would be open year-round. The center would provide outdoor education, promote conservation and attract out-of-state visitors.

The Department carefully reviews any new infrastructure and balances those requests against other regional and statewide needs. At this time, given the current and anticipated public use of the areas for the 10 year duration of this plan, the Department does not plan on creating a visitor’s center on Union Ridge CA.

Suggests developing and seeking out more partnerships with local groups (e.g, nature clubs, gardening groups, 4-H, etc.).

Department staff currently present many school related programs on the area. We also work with 4-H clubs and are active with organizations such as the National Wild Turkey Federation, Ducks Unlimited, Quail Forever, and the Kirksville Master Gardeners.

Suggests providing regular forums or mailings for area neighbors to voice their opinion on area use, plans, management, etc.

The Department is planning an “Open House” in June 2016 to better inform citizens about the Spring Creek Watershed Priority Geography with an emphasis on opportunities within Union Ridge CA. Landowners within the Spring Creek Watershed Priority Watershed have been and will continue to be included in information sharing and helping the Department enhance and protect these areas.

References:

Missouri Department of Conservation. (1995). *Shoemaker Conservation Area limited area plan*.

Missouri Department of Conservation. (1998). *Union Ridge Conservation Area and Dark Hollow Natural Area plan*.

Missouri Department of Conservation. (2005). *Forest management plan Shoemaker CA*.

Missouri Department of Conservation. (2009). *Watershed and stream management guidelines for lands and waters managed by Missouri Department of Conservation*. Jefferson City, Missouri: Missouri Department of Conservation.

Missouri Department of Conservation. (2010). *A ten-year strategic plan for the recovery of the Topeka shiner in Missouri*. Jefferson City, Missouri: Missouri Department of Conservation.

Missouri Department of Conservation. (2011). *Forest management plan Union Ridge CA Compartment 2*.

Missouri Department of Conservation. (2013). *Forest management plan Dark Hollow NA*.

Missouri Department of Conservation. (2013). *Forest management plan Union Ridge CA Compartment 6*.

Missouri Department of Conservation. (2014). *Forest management plan Union Ridge CA Compartment 1*.

Missouri Department of Conservation. (2014). *Missouri watershed protection practice recommended practices for Missouri forests: 2014 management guidelines for maintaining forested watersheds to protect streams*. Jefferson City, Missouri: Conservation Commission of the State of Missouri.

Missouri Department of Conservation. (n.d.). Natural Heritage Database. Jefferson City, Missouri.

Missouri Natural Areas Committee. (2011). *Missouri natural areas procedures manual*.

Nelson, P. W. (2010). *The terrestrial natural communities of Missouri*. Jefferson City, Missouri: Missouri Natural Areas Committee.

Appendices:

Appendix 1. Conservation Areas within Spring Creek Watershed Priority Geography.

Appendix 2. Dark Hollow Natural Area Background

Appendix 3. Map of Dark Hollow Natural Area

Appendix 4. Cover Type Map of Dark Hollow Natural Area

Appendix 5. Morris Prairie Conservation Area Background

Appendix 6. Map of Morris Prairie Conservation Area

Appendix 7. Cover Type Map of Morris Prairie Conservation Area

Appendix 8. Shoemaker Conservation Area Background

Appendix 9. Map of Shoemaker Conservation Area

Appendix 10. Cover Type Map of Shoemaker Conservation Area

Appendix 11. Easements on Shoemaker Conservation Area

Appendix 12. Union Ridge Conservation Area Background

Appendix 13. Map of Union Ridge Conservation Area

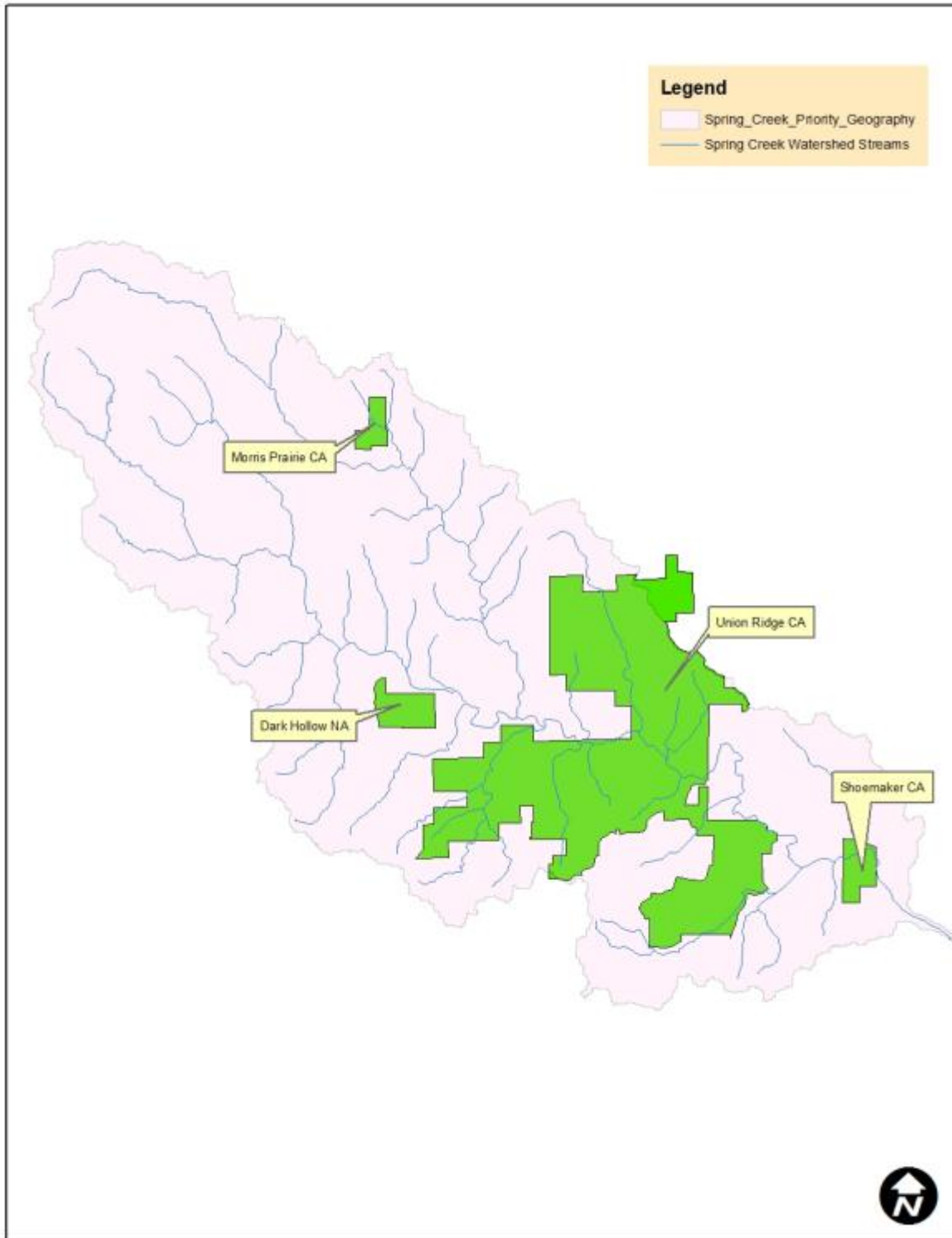
Appendix 14. Cover Type Map of Union Ridge Conservation Area

Appendix 15. Easements on Union Ridge Conservation Area

Appendix 16. Union Ridge Conservation Area Forestry Compartments

Appendix 17. Spring Creek Conservation Area Management Plan Public Comments

Appendix 1. Conservation Areas within Spring Creek Watershed Priority Geography.



Appendix 2. Dark Hollow Natural Area Background

Dark Hollow NA is located approximately 4 miles north of Green City, Missouri in Sullivan County. The area was purchased in 1989 and was considered part of Union Ridge CA until 1993. An additional 22 acres were added in 1994.

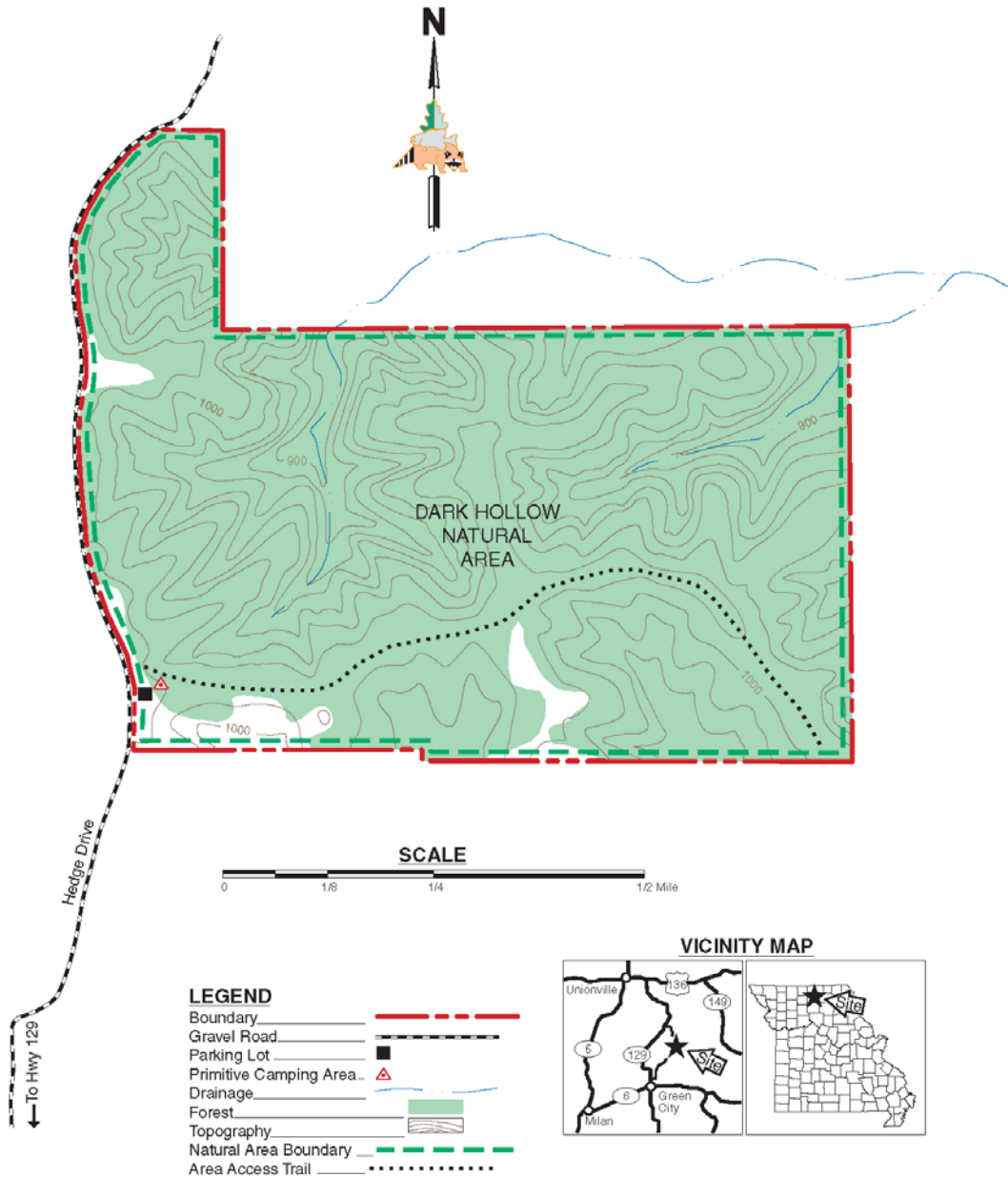
Dark Hollow NA is managed primarily for its natural communities. Botanist Julian Steyermark, author of the first edition of *Flora of Missouri*, recognized this site as having value for its varied plant life in 1954. This area was historically a transition zone between savannas and prairies to the south, and forests on the hills and bottoms along Spring Creek to the north.

Current Land and Water Types:

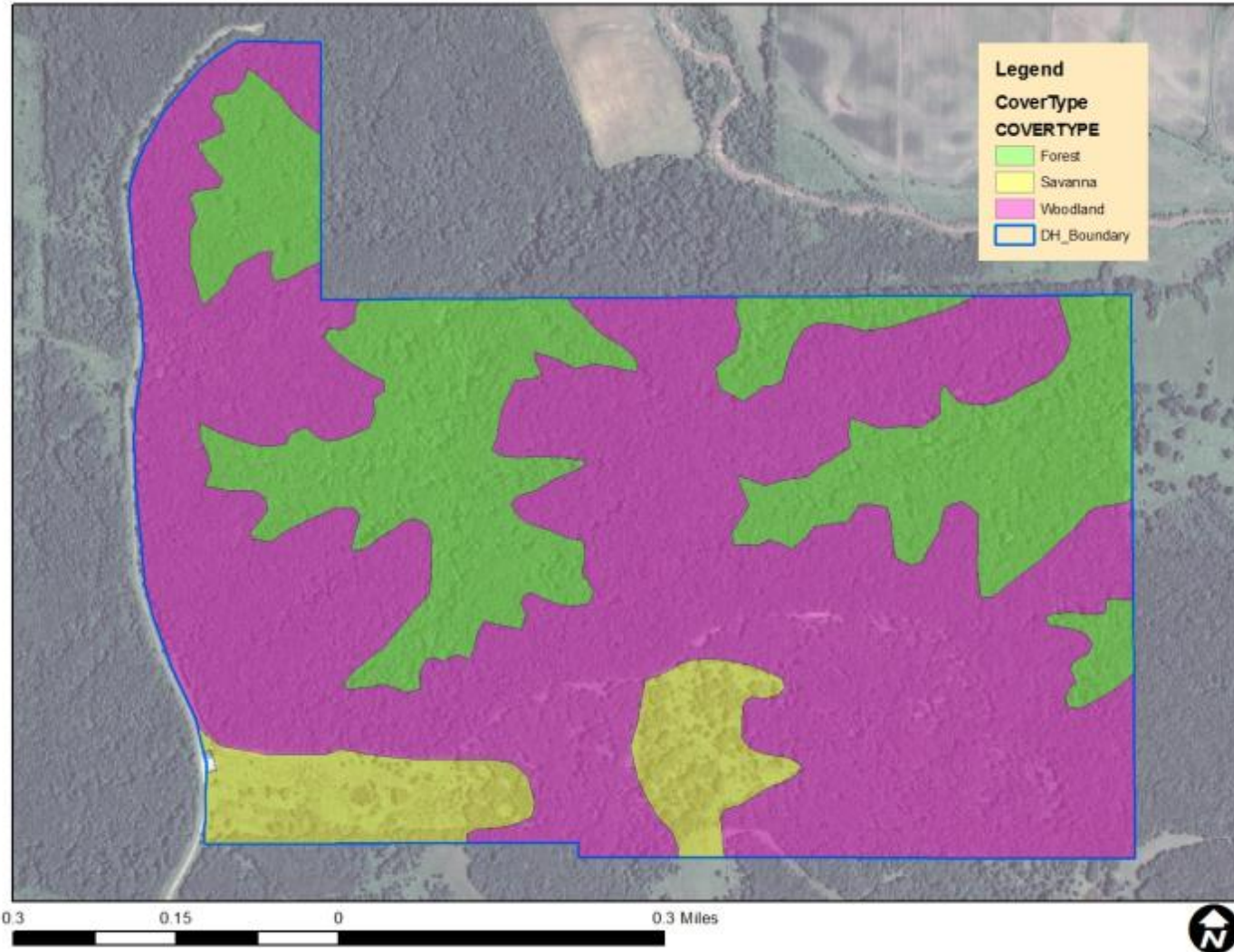
Land/Water Type	Acres	% of Area
Woodland	202	64
Forest	87	28
Savanna	26	8
Total	315	100

DARK HOLLOW NATURAL AREA

SULLIVAN COUNTY
315 ACRES



Appendix 4. Cover Type Map of Dark Hollow Natural Area



Appendix 5. Morris Prairie Conservation Area Background

Morris Prairie CA is located approximately 10 miles southeast of Unionville, Missouri in Putnam and Sullivan counties. The area was purchased in 2005 and contains the 47-acre Morris Prairie Natural Area located in the southwest corner of the Area.

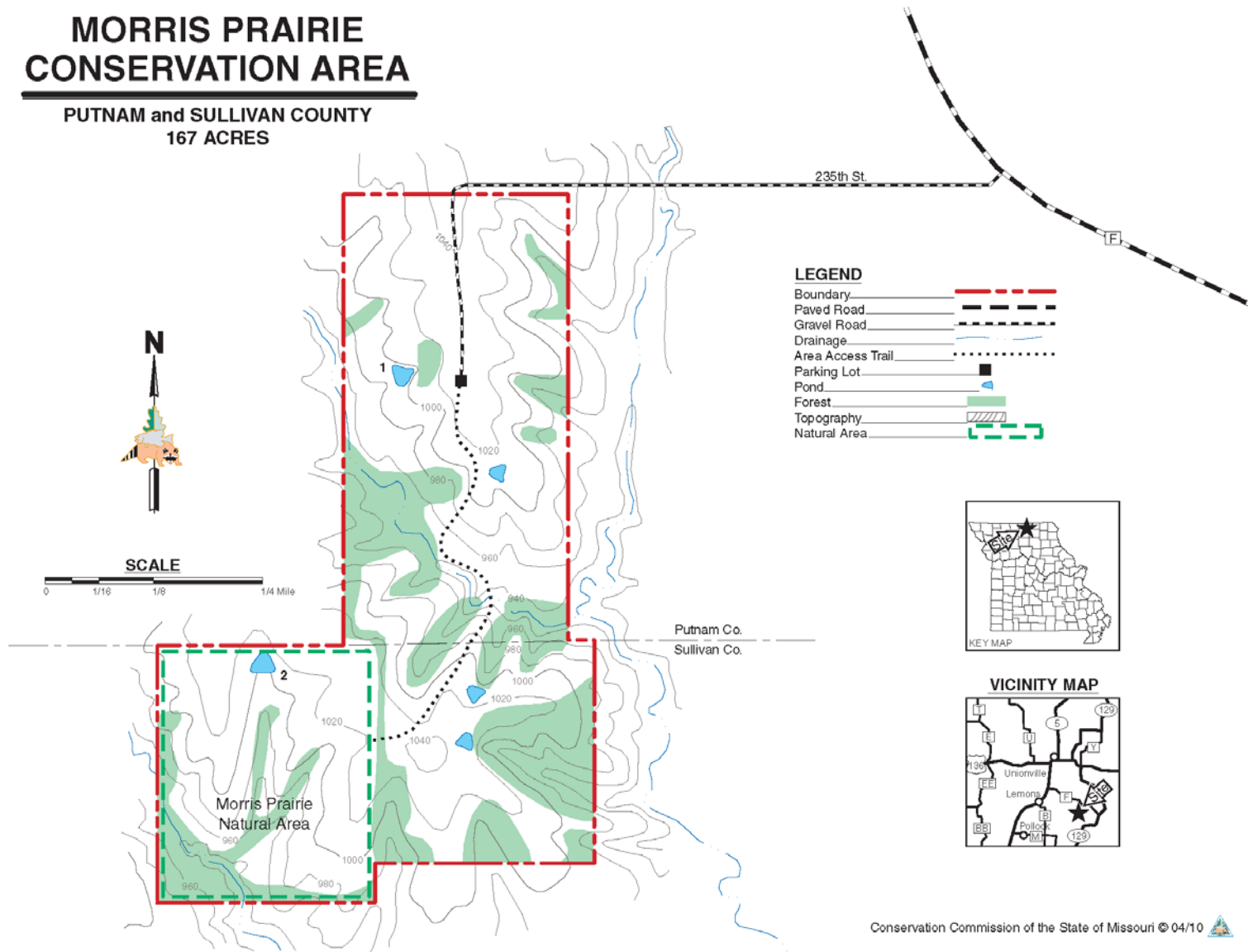
Current Land and Water Types:

Land/Water Type	Acres	% of Area
Grassland	145.6	87
Woodland	18.7	11
Other	2.7	2
Total	167	100

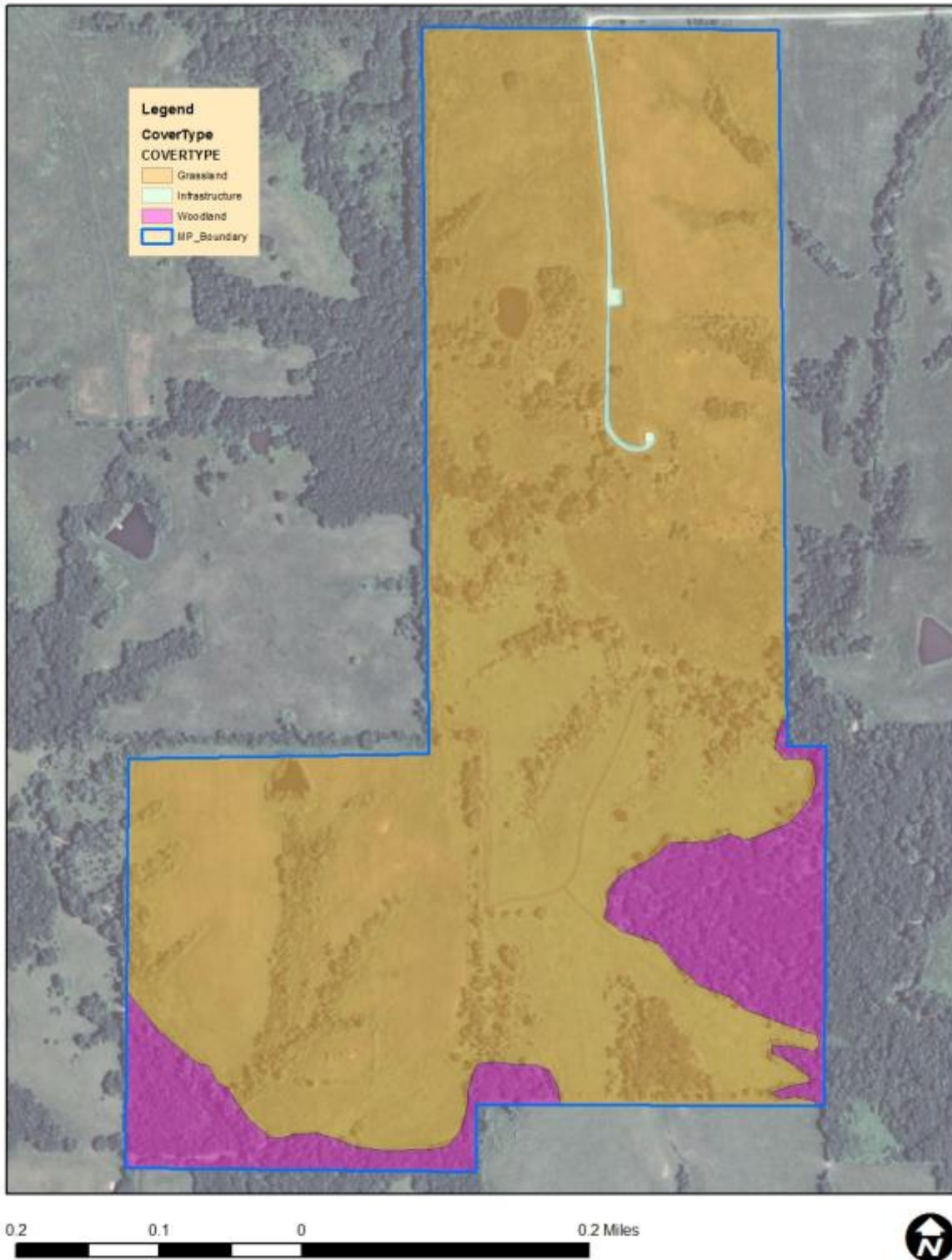
Appendix 6 Map of Morris Prairie Conservation Area

MORRIS PRAIRIE CONSERVATION AREA

PUTNAM and SULLIVAN COUNTY
167 ACRES



Appendix 7. Cover Type Map of Morris Prairie Conservation Area



Appendix 8. Shoemaker Conservation Area Background

Shoemaker CA is located 7 miles north of Novinger, Missouri in Adair County. The area was donated in 1989 by Elizabeth H. Shafer and named after her first husband’s surname. An additional 59 acres were purchased in 2008 to improve access to Spring Creek.

The area is characterized by oak-hickory wooded hills with narrow ridges. Spring Creek cuts through the northern portion of the area.

Current Land and Water Types:

Land/Water Type	Acres	Miles	% of Area
Forest	169		65
Woodland	49		19
Old Field	27.5		11
Stream Channel	12.5		4
Other	1		1
Total	259		100
Stream Frontage		1.0	

Appendix 0. Map of Shoemaker Conservation Area

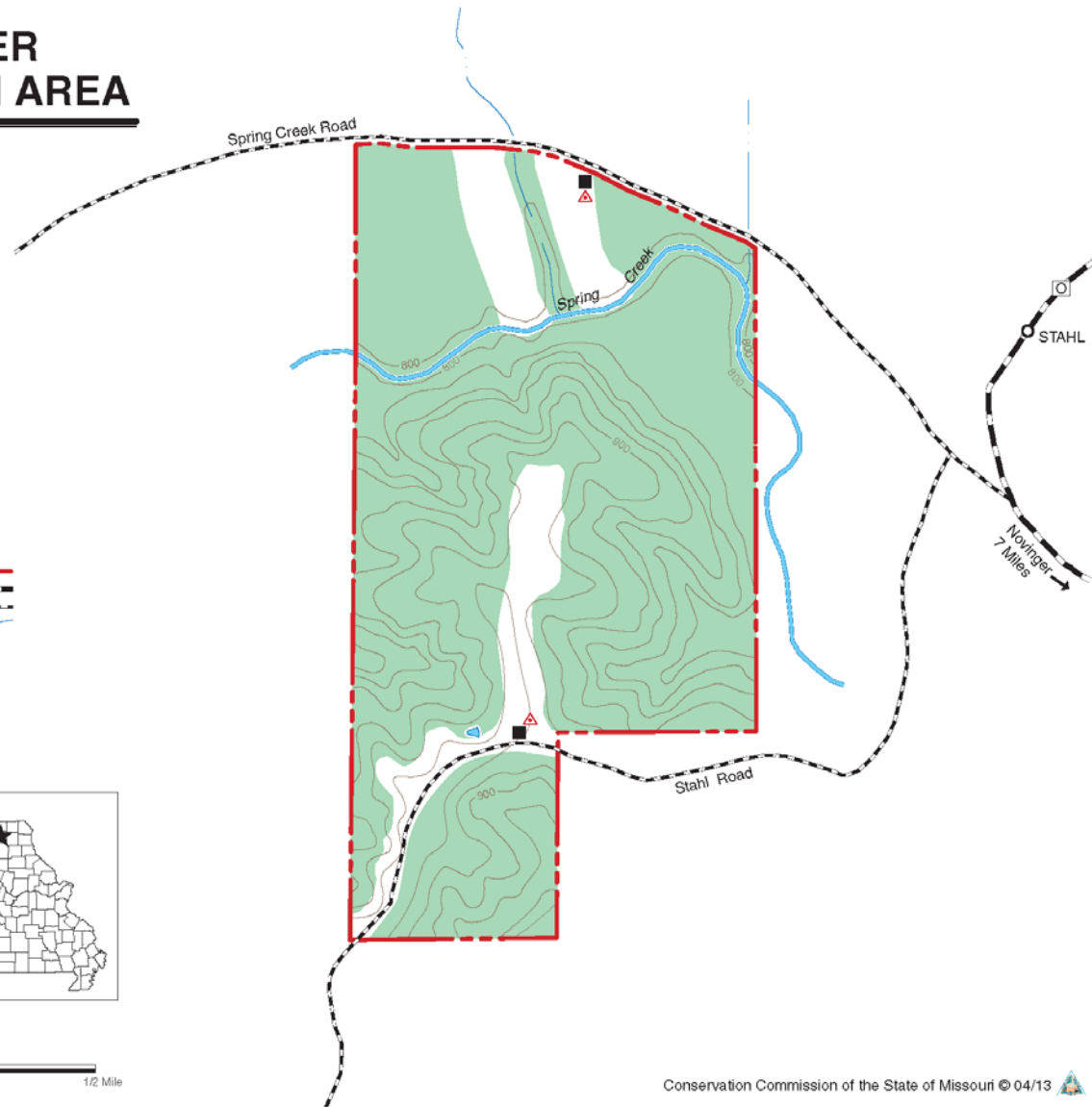
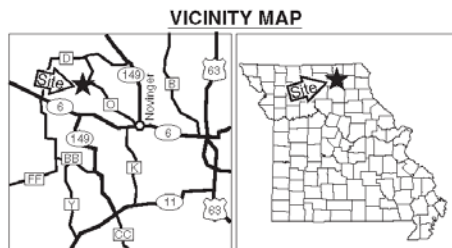
SHOEMAKER CONSERVATION AREA

ADAIR COUNTY
259 ACRES

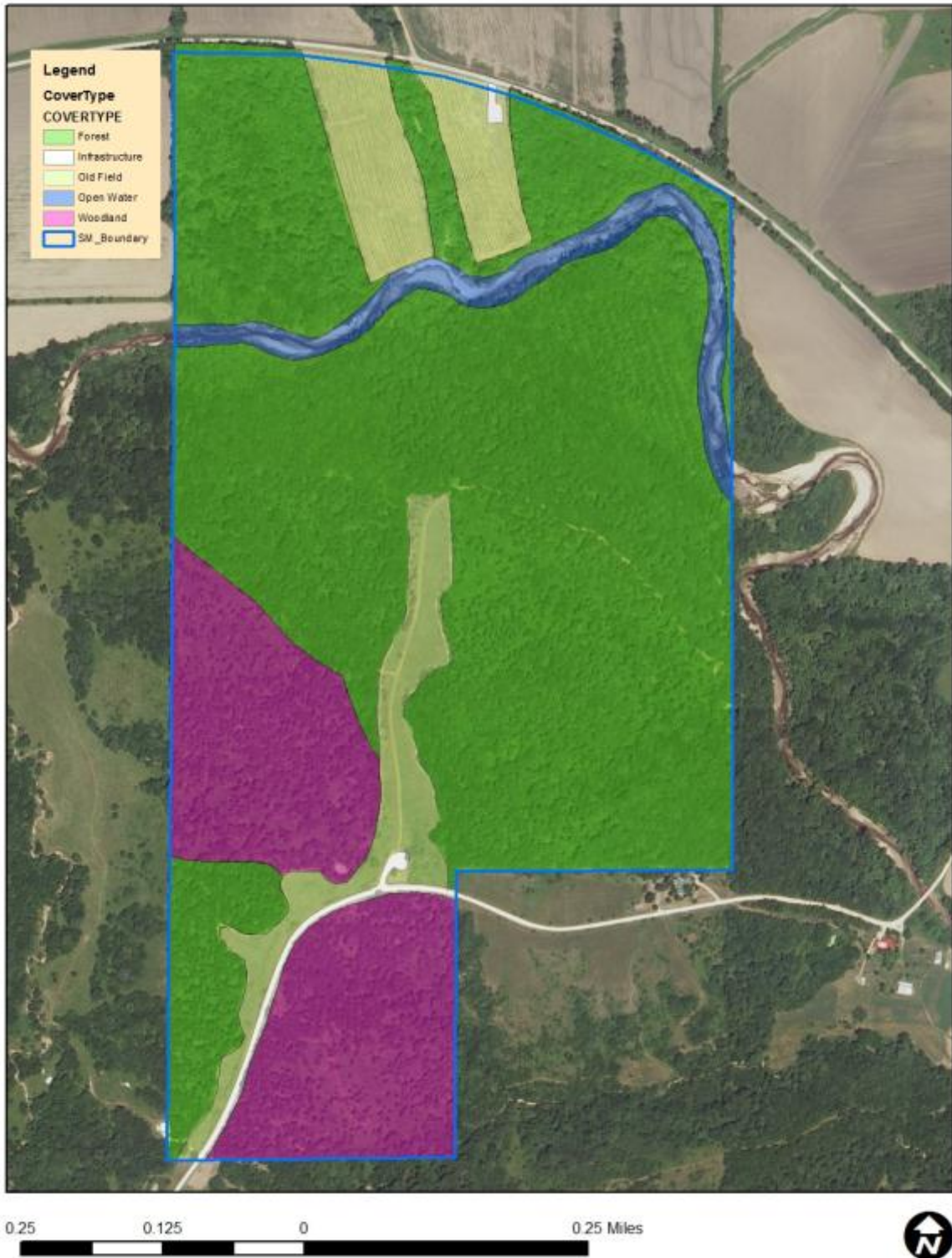


LEGEND

- Boundary
- Paved Road
- Gravel Road
- Drainage
- Parking Lot
- Primitive Camping Area
- Pond
- Forest
- Topography



Appendix 10. Cover Type Map of Shoemaker Conservation Area



Appendix 11. Easements on Shoemaker Conservation Area



Appendix 12. Union Ridge Conservation Area Background

Union Ridge CA is located 2 miles north of Green Castle, Missouri in Adair, Putnam and Sullivan counties. This conservation area was created in 1989, when the Department purchased the bulk of the property from Mutual Assurance of New York. The area had mainly been used for cattle ranching and was known locally as Henley Ranch and later as Spring Creek Ranch.

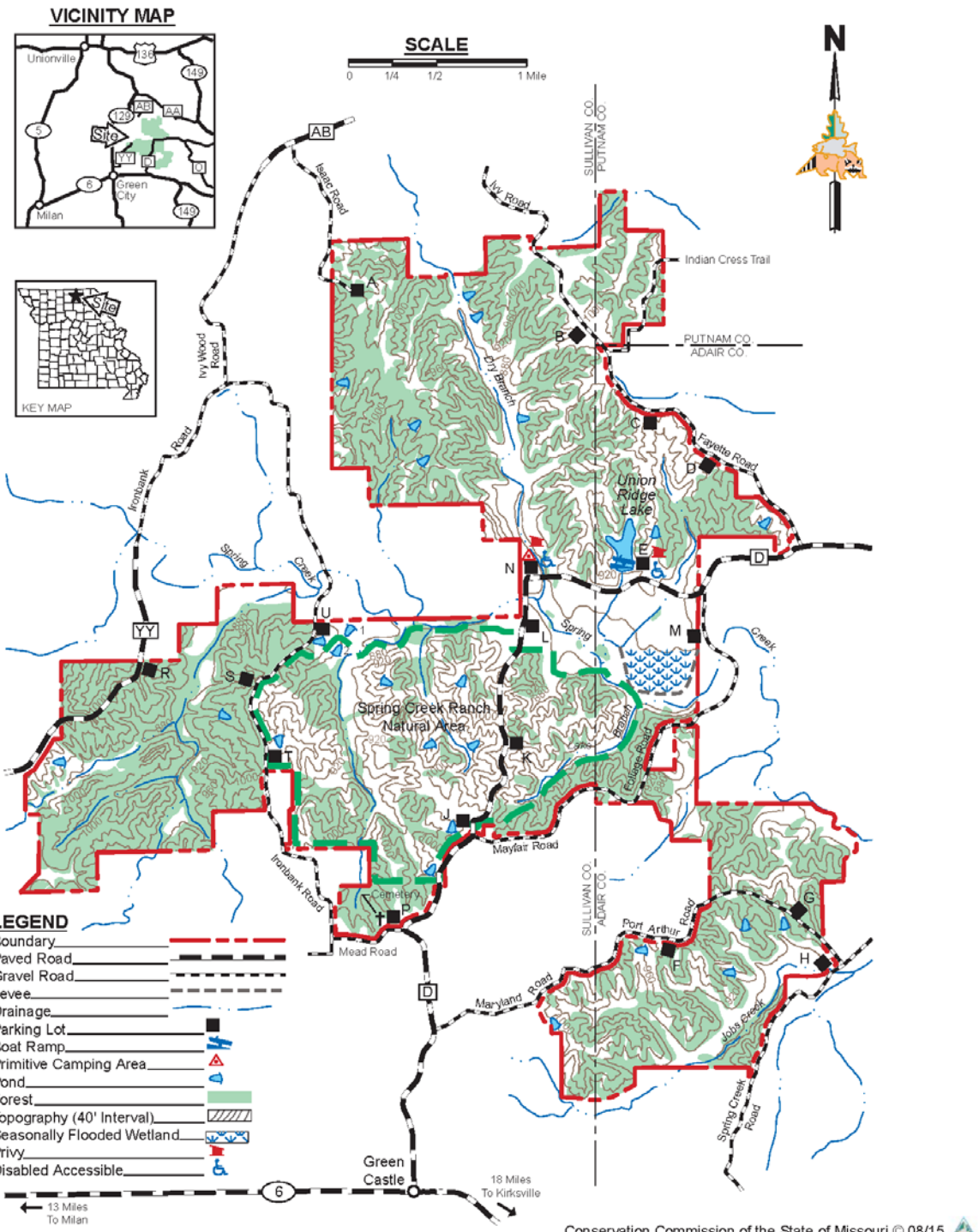
A 1,769-acre portion of the area has been designated as the Spring Creek Ranch Natural Area. This area is being managed to restore prairie and savanna communities and is located in the south-central portion of the area.

Current Land and Water Types:

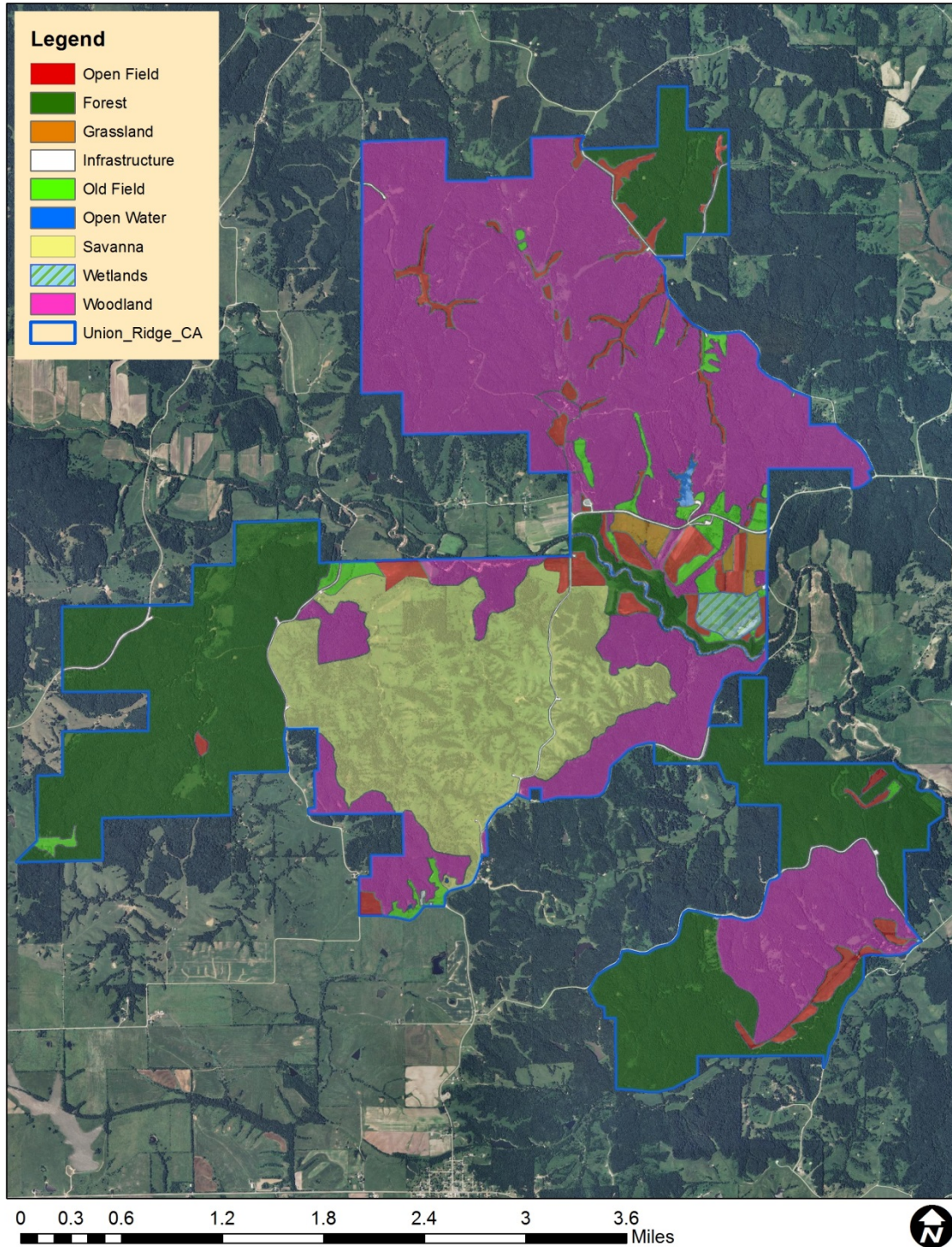
Land/Water Type	Acres	Miles	% of Area
Woodland	3,447		42
Forest	2,462		30
Savanna	1,479		18
Agriculture	397		5
Old Field	175		2
Grassland	60		1
Wetland	55		1
Open Water	36		1
Total	8,111		100
Stream Frontage		1.75	

UNION RIDGE CONSERVATION AREA

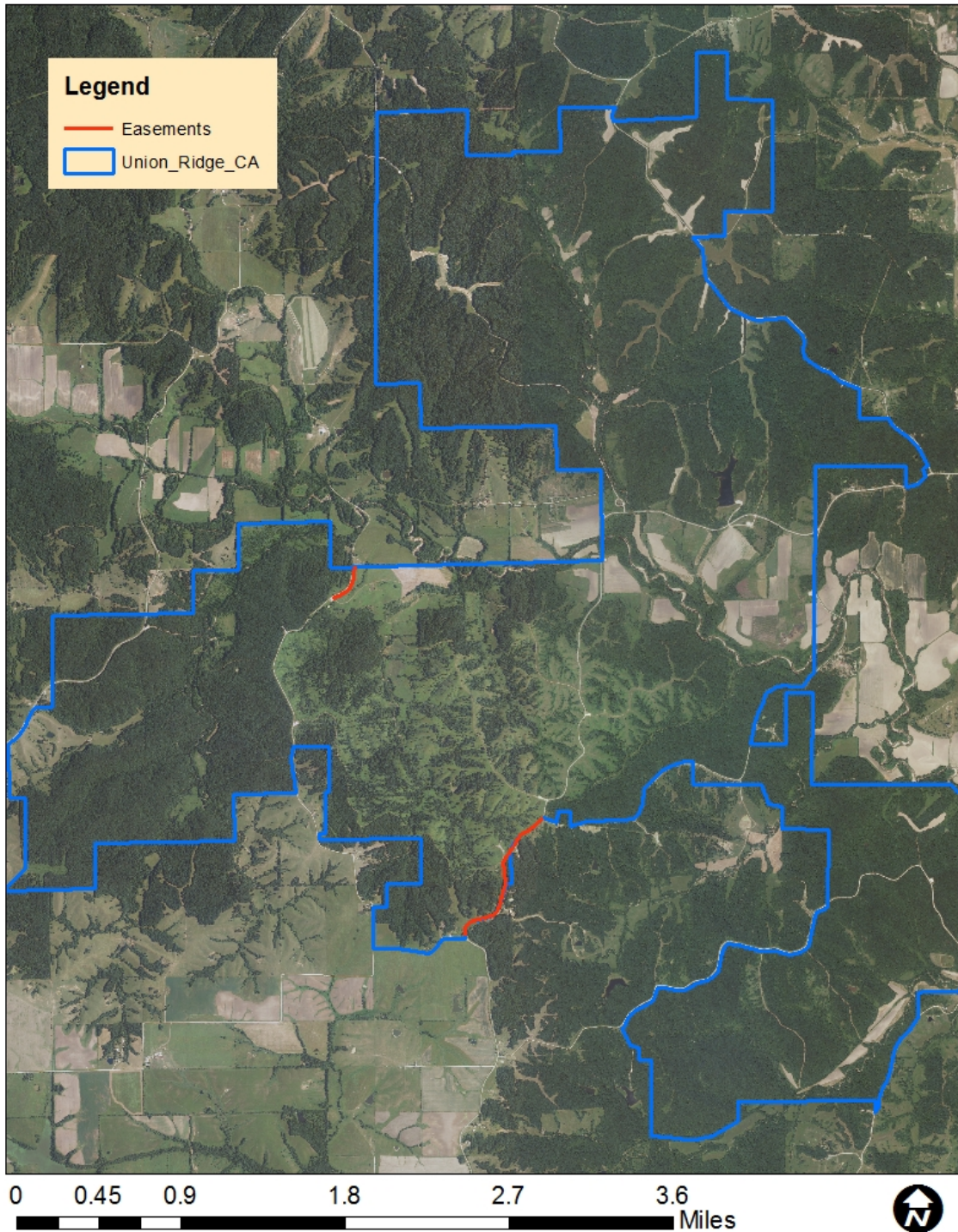
ADAIR, PUTNAM, AND SULLIVAN COUNTIES
8,262 ACRES



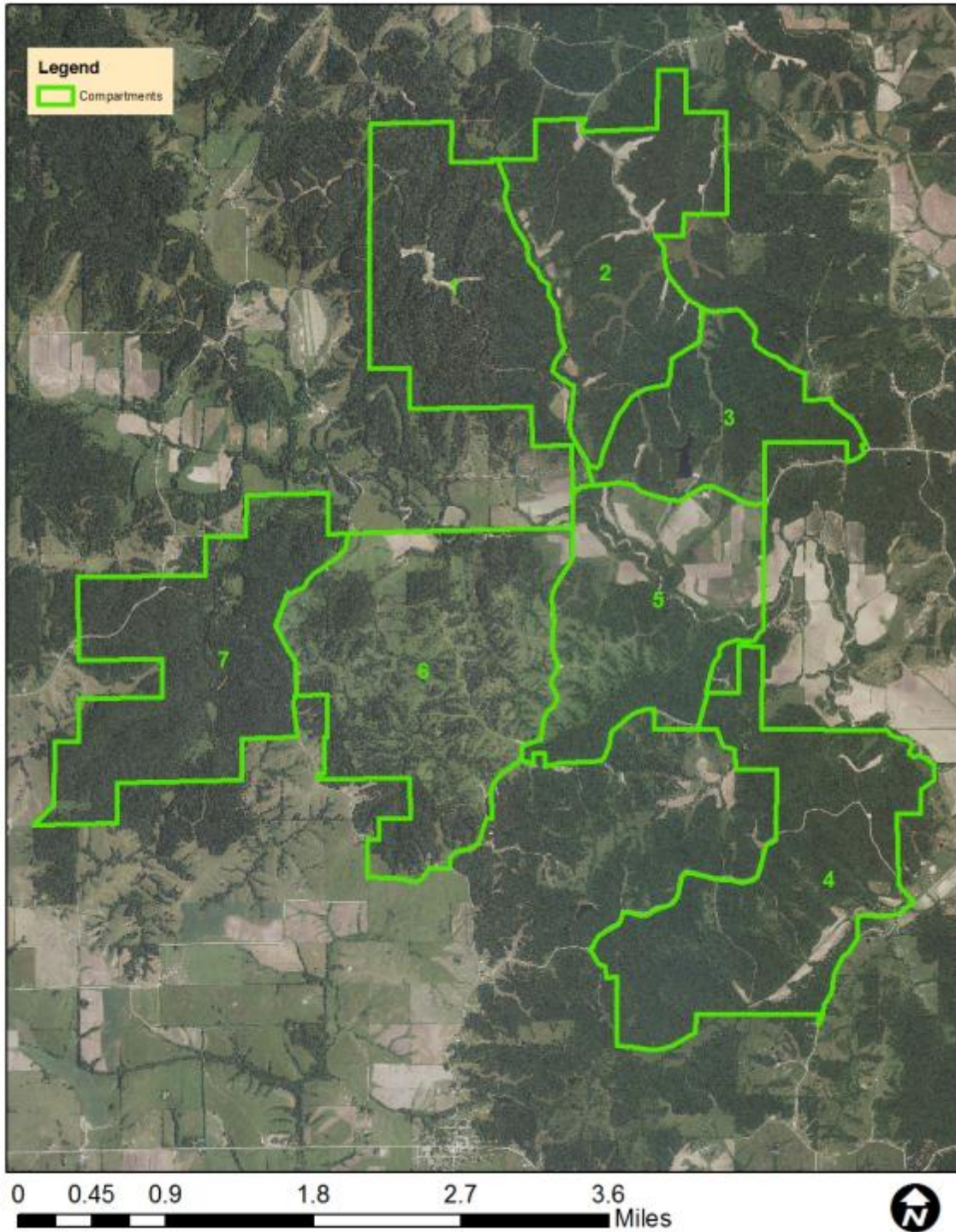
Appendix 14. Cover Type Map of Union Ridge Conservation Area



Appendix 15. Easements on Union Ridge Conservation Area



Appendix 16. Union Ridge Conservation Area Forestry Compartments



Appendix 17. Spring Creek Conservation Area Management Plan Public Comments

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

Would like to see prairie and savanna restoration as priorities.

Hard copy comment for Union Ridge Conservation Area (received June 19, 2015): In an area this size, there should be several small lakes and large ponds with access and camping. Walking is great if you are young; but the people who have the time to camp and fish are not young. Don't waste our money on areas you don't intend to make assessable.

We have a unique opportunity to draw people from near and far if we can provide camping and fishing areas. Surely that much area should attract more than hunters.

Also, I don't believe horseback riding should be by permit only. The trails could be marked and I believe people would honor the confines. I have been lost in those hills horseback and it is nothing to aspire to. Horseback riding is something you do when the weather is perfect, friends drop in on a weekend or maybe you just received bad news. Not usually situations you can plan for ahead.

SPRING CREEK WATERSHED PRIORITY PUBLIC LAND

TEN-YEAR MANAGEMENT PLAN

Recommendations and Feedback

June 15, 2015

A group of ten passionate volunteers for the betterment of Green Castle, the surrounding communities, and the Union Ridge Conservation Area met on Monday, June 15, 2015, with MDC staff Ryan Jones, Kevin Powell, and Yvette Amerman to discuss the management plan for Union Ridge Conservation Area. After an hour of discussion and questions with the staff, the group met another hour to form recommendations for MDC related to the management of the people's Union Ridge Conservation Area.

The following recommendations may also have merit for the additional conservation areas within the Spring Creek Watershed.

Recommendations:

1. Significantly increase the number and diversity of MDC sponsored/supported/advertised programs in Union Ridge. Some may be bird-watching, hiking, plant/tree identification, fish days, nature trails, etc. The audience for these sponsored programs would include, but not limited to, school groups, youth clubs, seniors, gardening groups, nature lovers, etc.
2. Construct and provide horse pens allowing for overnight stays for trail riders.
3. Significantly increase the number of directional signs both within and external to Union Ridge so that a public awareness of this resource on state highways and county roads is evident. For example, on Highway 6 (and other roads surrounding the park), there is no sign to turn on Highway D to access Union Ridge areas. Within the Conservation Area, there should be more way-finding signs identifying mowed trails, ponds, unique features, horse trails, etc.
4. Establish a history-marker system and waysides that discuss Union Ridge history, unique nature features, plant/tree identification, horse trails, etc.
5. Develop several shelter areas that encourage recreation, trail-hiking, picnicking, educational seminars, gathering points, etc. A good start would be at the small lake.
6. Construct several new lakes/smaller ponds within the park that offer fishing, aquatic species, etc.
7. Wherever possible, trails should loop and not be dead ends.
8. Union Ridge Conservation Area is an ideal site for a visitor's center focused on education, promotion of conservation, and a destination point for Missouri and out-of-state visitors. Therefore, a philosophical and programmatic move from seasonal use for hunting and conservation studies to a year-round active people's area is desirable and an expected outcome.
9. Identify and construct quality privy throughout Union Ridge.
10. Develop "themed" trail heads/areas for individuals or groups having interests in birds, aquatic plants, stands of trees, prairie grasses, etc.
11. Develop productive partnerships/relationships with businesses or community

groups, such as youth nature clubs, master gardeners, 4-H, etc. Advertise the process whereby they can become involved with MDC programs/activities and contribute to public awareness of conservation goals and objectives. Suggested partnership/relationship organizations:

- Grow Native: <http://grownative.org/resource-guide/seed-supplies/>
- Hartzell Hardwoods Kelly Hostetter, General Manager

<http://www.hartzellhardwoods.com/timeline.htm>

(and those who may harvest hardwood from Union Ridge)

12. Provide a list of property owners adjoining Union Ridge so that they can be included (if they wish) in the mailing of information like this and future meetings. Sponsor an annual “users” forum inviting comment on the use, plans, and management of the conservation area.

13. Advertise the Great Missouri Birding Trail and the efforts of Wallis Companies (Wallis Simpson) <https://www.facebook.com/greatmissouribirdingtrail> . How can we help?

14. Explore funding opportunities through:

- the Missouri Department of Economic Development
<http://www.ded.mo.gov/Ded/ContactUs.aspx>

- the Missouri Foundation for Health

<https://www.mffh.org>

(Dr. Janet Gooch is currently serving on the board for 2015-17.)

Final comments:

In summary, we wish to see MDC invest much greater resources in developing and promoting the Union Ridge Conservation Area to Missouri and the nation. We wish to see it become a destination point for educators, youth, recreation enthusiasts, nature lovers, seniors, scouts, researchers, etc.

Thank you for the opportunity to comment on the Draft Spring Creek Watershed Priority

Geography Public Land Management Plan. My comments apply specifically to Union Ridge Conservation Area.

Show-Me Missouri Back Country Horsemen commends the Department for allowing equestrian use on Union Ridge CA, and we appreciate the intent to continue allowing that activity.

We are concerned, however, with the apparent intent to further restrict equestrian activity on the CA. At present the CSR, Div. 10, Ch. 11 states that equestrian use may be authorized by special use permit excluding the (1,769 acre) Spring Creek Ranch NA. The Area Regulations echo the first part—that equestrian use may be authorized by special use permit—but makes no mention of the exclusion of Spring Creek Ranch NA. The brochure for Union Ridge makes no mention of any equestrian use opportunity in the list of recreational opportunities or in the lead paragraph under that section; the seventh bullet point of 13 states that there are “No horseback riding opportunities except on public roadways or by special use permit.” There is no mention of the exclusion of Spring Creek Ranch NA. The Area Summary in the online Conservation Atlas makes no mention at all of permitted equestrian use.

The Draft Management Plan states that future intent is to allow horseback riding according to the Wildlife Code on field roads north of Highway D by special use permit only. There are significant inconsistencies in the statements from the various sources that specify current equestrian use opportunities and restrictions; one would assume the Wildlife Code from the CSR is the authoritative source. None of the current sources restrict equestrian use to field roads or to the somewhat ambiguous “area north of Highway D.” Consequently it seems apparent that the intent is to reduce the area offering equestrian use opportunity to less than half its current level. On a CA of 8,111 acres located over 100 miles from any substantial population center it seems unnecessary to restrict horseback riding to less than 3,000 acres.

The special use permit requirement places an undue burden on riders; hunters, fishermen, hikers, birdwatchers are not required to obtain such a permit. The permit application and approval process imposes a cost in time and resources and provides the Department with no appreciable useful information to guide management. The special use permit requirement should be suspended.

The 1,769 acre Spring Creek Ranch NA exists to showcase prairie and savanna land cover types—rare in Missouri, unfortunately. A single-file horse path through a prairie or savanna would make no significant damage to the ecological system and would offer a significant public segment the opportunity to enjoy and appreciate these rare landscapes.

Exclusion of the NA from equestrian use is not biologically necessary and should not be part of the restrictions.

Riding on field roads is much more desirable than being prohibited from riding on the CA altogether, but being confined to these field roads offers a mediocre riding experience. The rider is not able to see, enjoy, and appreciate many of the natural wonders and pleasing vistas that public land jewels such as Union Ridge CA have to offer. Carefully, properly located single-file multi-use trails on natural surface need not be causes of erosion or cause environmental degradation. SMMBCH recommends that the Department designate 10-12 miles of multi-use trails on Union Ridge. This CA is listed as a priority for trail designation in the 2015 SMMBCH Proposal to Expand Public Land Multi-Use Trails in Missouri. Our organization offers, subject to availability of volunteers, to assist the Department to lay out and mark trails and install or improve supporting infrastructure.

Thank you for your due consideration.