Hi Ridge Grasslands Focus Area Management Plan

Bruns Tract
Bryson's Hope Conservation Area
Drovers Prairie Conservation Area
Friendly Prairie Conservation Area
Grandfather Prairie Conservation Area
Hartwell Conservation Area
Hi Lonesome Prairie Conservation Area
Ionia Ridge Conservation Area
Mora Conservation Area
Paint Brush Prairie Conservation Area
W.R. Kearn Memorial Conservation Area

Fifteen Year Area Plan

FY 2014 - 2028

Wildlife Division Chief

7/9/14
Date

Hi Ridge Grassland Focus Area Management Plan Approval Page

PLANNING TEAM

Steve Cooper, Wildlife Division

Richard Grishow, Design and Development

Mark Miller, Outreach & Education Division

Dave Niebruegge, Private Land Services Division

Kevin Polley, Protection Division

Larry Rizzo, Wildlife Division

Jake Willard, Forestry Division

Trish Yasger, Fisheries Division

KANSAS CITY REGION

KC RCT Chair

Richard Grishow June 25, 2014
Signature *Date*

WILDLIFE DIVISION

Unit Chief

Michael D Schwan 7/3/14
Signature *Date*

OVERVIEW

Area Name	Area Number	Year Acquired	Acreage	County	Administrative Responsibility	Maintenance Responsibility
Bruns Tract	200612	Owned by Missouri Prairie Foundation (MPF)	160	Pettis	Wildlife	Wildlife
Bryson's Hope CA	200702	2006	340	Pettis	Wildlife	Wildlife
Drovers Prairie CA	8507	Owned by MPF	80	Pettis	Wildlife	Wildlife
Friendly Prairie CA	7849	Owned by MPF	40	Pettis	Wildlife	Wildlife
Grandfather Prairie CA	8736	1987	80	Pettis	Wildlife	Wildlife
Hartwell CA	200801	2008	165	Pettis	Wildlife	Wildlife
Hi Lonesome Prairie CA	8740	1987	655	Benton	Wildlife	Wildlife
Ionia Ridge CA	9400	2008	233	Benton	Wildlife	Wildlife
Mora CA	6705	1967	601	Benton	Wildlife	Wildlife
Paint Brush Prairie CA	7832	1978	314	Pettis	Wildlife	Wildlife
W.R. Kearn Memorial CA	8844	1987	282	Pettis	Wildlife	Wildlife

Statements of Purpose:

A. Strategic Direction

Depending on the individual area, these units may be comprised solely of native prairie or may have a diversity of native prairie, prairie reconstruction plantings and/or cool-season grasses. The management emphasis is to maintain a functional grassland habitat for grassland-dependent game and non-game species while offering the public compatible outdoor recreational opportunities.

B. Desired Future Condition

The desired future condition of the prairies in the Blackwater District of the Kansas City Region is to promote a diversity of native flora and fauna that represents a healthy tallgrass prairie ecosystem, and to include a prairie headwater stream edge community (Nelson, 2005).

C. Federal Aid Statement

Mora CA, or a portion thereof, was acquired with Pittman-Robertson Wildlife Restoration funds to restore and manage wildlife, conserve and restore suitable wildlife habitat and provide

public access for hunting or other wildlife-oriented recreation. A portion of Mora CA was also acquired by the U.S. Department of Agriculture Farm Service Agency and donated to the State to provide fish and wildlife benefits and land conservation. A portion of Grandfather Prairie CA was acquired by the U.S. Air Force and donated to the State with perpetual restrictions and conditions.

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

Area Name	Priority Area	Natural Area
Bruns Tract	Green Ridge Township Grasslands Coalition Priority Focus Area, Greater Prairie-Chicken Focus Area	None
Bryson's Hope CA	Green Ridge Township Grasslands Coalition Priority Focus Area, Greater Prairie-Chicken Focus Area	None
Drovers Prairie CA	Cole Camp Prairies Conservation Opportunity Area (COA), Henry Creek Priority Watershed, The Nature Conservancy (TNC) Portfolio Site, Sedalia Prairies Important Bird Area (IBA), Hi Lonesome Grasslands Coalition Priority Focus Area, Greater Prairie-Chicken Focus Area	None
Friendly Prairie CA	Cole Camp Prairies COA, Henry Creek Priority Watershed, TNC Portfolio Site, Sedalia Prairies IBA, Hi Lonesome Grasslands Coalition Priority Focus Area, Greater Prairie-Chicken Focus Area	None
Grandfather Prairie CA	Cole Camp Prairies COA, Henry Creek Priority Watershed, TNC Portfolio Site, Sedalia Prairies IBA, Hi Lonesome Grasslands Coalition Priority Focus Area, Greater Prairie-Chicken Focus Area	None
Hartwell CA	Crooked Creek Aquatic COA; Green Ridge Township Grasslands Coalition Priority Focus Area, Greater Prairie-Chicken Focus Area	None
Hi Lonesome Prairie CA	Cole Camp Prairies COA, Henry Creek Priority Watershed, TNC Portfolio Site, Sedalia Prairies IBA, Hi Lonesome Grasslands Coalition Priority Focus Area, Greater Prairie-Chicken Focus Area	None
Ionia Ridge CA	Cole Camp Prairies COA, Henry Creek Priority Watershed, TNC Portfolio Site, Sedalia Prairies IBA, Hi Lonesome Grasslands Coalition Priority Focus Area, Greater Prairie-Chicken Focus Area	None
Mora CA	Cole Camp Prairies COA, TNC Portfolio Site, Sedalia Prairies IBA, Hi Lonesome Grasslands Coalition Priority Focus Area, Greater Prairie-Chicken Focus Area	None
Paint Brush Prairie CA	Cole Camp Prairies COA, TNC Portfolio Site, Sedalia Prairies IBA, Hi Lonesome Grasslands Coalition Priority Focus Area, Greater Prairie-Chicken Focus Area	Paint Brush Prairie Natural Area (76

	An additional tract south of Manila Road has been identified as a potential addition to the Natural Area System	acres)
W.R. Kearn Memorial CA	Green Ridge Township Grasslands Coalition Priority Focus Area, Greater Prairie-Chicken Focus Area	None

II. Important Natural Features and Resources

Area Name	Species of Conservation Concern	Caves	Springs
Bruns Tract	Yes[1]	None	None
Bryson's Hope CA	Yes[1]	None	None
Drovers Prairie CA	Yes[1]	None	None
Friendly Prairie CA	Yes[1]	None	None
Grandfather Prairie CA	Yes[1]	None	None
Hartwell CA	Yes[1]	None	None
Hi Lonesome Prairie CA	Yes[1]	None	None
Ionia Ridge CA	Yes[1]	None	None
Mora CA	Yes[1]	None	None
Paint Brush Prairie CA	Yes[1]	None	None
W.R. Kearn Memorial CA	Yes[1]	None	None

[1] Species of conservation concern are known form this area. Area Managers should consult the Natural Heritage Database annually and review all management activities with the Natural History Biologist.

III. Existing Infrastructure

Area	Parking Lots	Dams	Managed Ponds
Bruns Tract	1	0	0
Bryson's Hope	2	0	0
Drovers Prairie	1	0	0
Friendly Prairie	1	0	0
Grandfather Prairie	1	0	0
Hartwell	1	0	0
Hi Lonesome Prairie	2	1	1
Ionia Ridge	1	0	0
Mora	4	1	1
Paint Brush Prairie	3	0	0
W.R. Kearn	1	0	0
Totals	**18**	**2**	**2**

IV. Area Restrictions or Limitations

Area Name	Deed Restric-tions	Federal Interest	Easements	Cultural Resources	Hazards	Endangered Species	Boundary Issues
Bruns Tract	Owned by Missouri Prairie Foundation (MPF)	See next table	None	None known	None observed	Yes[5]	None
Bryson's Hope CA	None	See next table	None	None known	None observed	Yes[5]	None
Drovers Prairie CA	Owned by (MPF)	See next table	None	None known	None observed	Yes[5]	None
Friendly Prairie CA	Owned by (MPF)	See next table	None	None known	None observed	Yes[5]	None
Grandfather Prairie CA	None	See next table	None	None known	Former Missile Site	Yes[5]	None
Hartwell CA	None	See next table	None	None known	None observed	Yes[5]	None
Hi Lonesome Prairie CA	Yes[1]	See next table	Yes[3]	None known	None observed	Yes[5]	None
Ionia Ridge CA	None	See next table	None	None known	None observed	Yes[5]	None
Mora CA	Yes[2]	See next table	Yes[4]	None known	None observed	Yes[5]	None
Paint Brush Prairie CA	None	See next table	None	None known	None observed	Yes[5]	None
W.R. Kearn Memorial	None	See next table	None	None known	None observed	Yes[5]	None

[1] A natural gas pipeline traces the area from southeast to northwest across the area.
[2] An abandoned U.S. Air force missile cable crosses the area, but does not limit management options. There is a U.S. Department of Defense easement on 14.36 acres. There is also a U.S. Fish and Wildlife wetland easement along the 2nd order drainage that traverses the area from south to north.
[3] One easement at the Magellan Pipeline Co. (1-800-720-2417) for a natural gas pipeline that traverses the area from west to east.
[4] One easement with the adjoining landowner on the southwest corner of the area.
[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.

Federal Interest

Area	Funding Source (acquisition)	Federal Interest conditions/restrictions
Bruns Tract	Commission (Leased from MPF)	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.
Bryson's Hope	Commission	
Drovers' Prairie	Commission (Leased from MPF)	
Friendly	Commission (Leased from MPF)	
Hartwell	Commission	
Hi Lonesome	Commission	
Ionia Ridge	Commission	
WR Kearn	Gifts or Bequeaths	
Paintbrush	Commission	
Grandfather	Commission	
Grandfather	USAF (donated)	1.6 acres (deed 2771) was a former missile site w/perpetual restrictions and conditions. Federal funds may also 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.
Mora	Wildlife Restoration (Pittman-Robertson)	Uses of land acquired with federal funds may not interfere with the purpose for which it was acquired. Federal funds may also 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.
	Farm Service Agency (FSA) (Gifts or Bequeaths)	

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

The primary management goal is to promote a diversity of native and non-native and flora grassland habitat for terrestrial and aquatic species that are grassland dependent. Riparian conditions will be maintained to assure water quality. Opportunities to promote public awareness and expand compatible experiences for the public will be considered for each individual area.

Challenges and Opportunities:

1) The native prairie portions of these areas have a long history of intensive grazing, late-season haying and lack of burning. This has led to a general degradation of this threatened habitat with most sites showing grass domination, decreased forb diversity, increases in the number and spread of exotic plant species and a decrease in native terrestrial fauna. Current management practices will improve this habitat component.
2) The non-native portions of these areas have been converted to cropland and/or non-wildlife-friendly cool season grasses prior to Department acquisition. This conversion has significantly reduced the amount of high quality grasslands in these focus areas. In some cases highly competitive exotic species have been introduced, which threaten adjoining high quality grassland habitats. All the cropland acres have been converted to either a prairie reconstruction mix or a cool-season grass/forb mix that is wildlife friendly. The established sites of invasives will be eradicated and converted.
3) The species composition and health of existing woodland/forest stands will be enhanced through appropriate management regimes.

Management Objective 1: Restore native prairie remnants.

Strategy 1: Identify, monitor and apply management techniques to enhance diversity.
Strategy 2: Use best management practices to restore and maintain existing native prairie sites.

Management Objective 2: Establish prairie reconstructions.

Strategy 1: Use native, locally collected seed to reconstruct prairie conditions on appropriate sites.
Strategy 2: Use best management practices to establish and maintain reconstructed prairie habitat.

Management Objective 3: Establish and maintain wildlife-friendly cool season grasses where appropriate.

Strategy 1: Identify sites for conversion to desirable cool season/forb habitat.
Strategy 2: Use best management practices to maintain cool season/forb habitats.
Strategy 3: Establish and maintain wildlife-friendly cool season grasses and native shrub species where appropriate.

Management Objective 4: Control invasive species.

Strategy 1: Monitor and treat all areas to eradicate/control invasive species.

Strategy 2: Use best management practices to control invasive species.

Management Objective 5: Maintain and enhance existing woodland/forest communities.

Strategy 1: Implement appropriate Forest Management Practices based upon forest inventory data and recommendations.

VI. Aquatic Resource Management Considerations

These eleven areas are in seven watersheds and all have several streams up to 3rd order running through them. There are numerous small ponds on the areas, however, most of them are wildlife watering holes and not managed for fishing.

Challenges and Opportunities:

1) Manage landscapes on a watershed basis. Land management within a watershed affects conditions locally and downstream of the site. Protect stream riparian areas, leaving filter strips along streams to protect water quality and instream habitat.

Management Objective 1: Maintain and protect healthy watersheds by implementing best management practices.

Strategy 1: Follow Watershed and Stream Management Guidelines and MDC Resource Policy Manual, to ensure that all grazing plans and management activities adhere to Best Management Practices (BMPs).

Management Objective 2: Maintain and restore adequate stream corridors on area streams in order to maintain or improve water quality.

Strategy 1: Restore and establish stream corridors adjacent to management practices and grazing areas.

VII. Public Use Management Considerations

Challenges and Opportunities:

1) These grassland areas provide good hunting opportunities for early successional species such as cottontail rabbits and bobwhite quail. Most of these areas support huntable whitetail deer populations, but hunters tend to avoid these areas due to the challenges of open vistas and limited concealment cover.
2) Area ponds, although limited in number, provide shore-line angling opportunities.
3) Other public uses including bird watching and environmental studies will be encouraged whenever compatible with area objectives.

Management Objective 1: Continue to provide good quality hunting opportunities for the public.

Strategy 1: Encourage public use by providing access through parking lots, maintained access trails and informational bulletin boards.

Management Objective 2: Provide public fishing opportunities within the limited aquatic resources.

Strategy 1: Manage fishing ponds for self-sustaining populations. Supplementally stock channel catfish as needed.

Strategy 2: Use mechanical methods and herbicides to control unwanted aquatic vegetation and nuisance species.

Management Objective 3: Improve educational and interpretive opportunities.

Strategy 1: Use media resources to communicate to the public the recreational opportunities these areas provide.

Strategy 2: Communicate to local schools, Scout and Youth groups the opportunities these areas offer for ecology classes, school programs, study sites and workshops.

VII. Administrative Considerations

Challenges and Opportunities:

1) These areas provide the core and satellite sites for the Recommendations for Recovery of Greater Prairie- in Missouri (FY07-FY11) within this focus area.
2) The gravel roads that provide access to these areas are maintained by Pettis and Benton county road districts. Proper maintenance is vital to provide safe access to these areas by the public.
3) When available, land that meets the criteria as established in the Recommendations for Recovery of Greater Prairie-Chicken in Missouri Plan (FY07-FY11) and department priorities may be considered for acquisition from willing sellers.

Management Objective 1: Field staff will provide input to the Recommendations for Recovery of Greater Prairie-Chicken in Missouri (FY07-FY11) revision process.

Strategy 1: Upon approval of the revised Recommendations for Recovery of Greater Prairie-Chicken in Missouri (FY07-FY11) plan, all areas will be reevaluated to ensure they are compatible with the stated goals within the plan.

Management Objective 2: Continue the County Aid Road Trust (CART) agreement with Pettis and Benton counties.

Strategy 1: Provide input to Construction and Maintenance Supervisor who oversees the CART agreements.

Lands Available for Acquisition

Where appropriate, pursue opportunities to expand public land ownership within the focus area. Work closely with local Realtor agents to stay current with land parcels that meet the criteria of the Recovery Plan that they become available for acquisition.

MANAGEMENT TIMETABLE

All strategies for this management plan are considered ongoing.

APPENDICES

References:

Missouri Natural Heritage Database records; **http://mdc.mo.gov/your-property/greener-communities/missouri-natural-heritage-program**

Forest Land Action Guide (FLAG)
http://mdc4.mdc.mo.gov/applications/MDCLibrary/MDCLibrary2.aspx?NodeID=2335

Missouri Department of Conservation. Resource Policy Manual. 2013. Department Intranet.

Missouri Department of Conservation. Recommendations for Recovery of Greater Prairie-Chicken in Missouri (FY07-FY11).

Missouri Department of Conservation (2009) Watershed and Stream Management Guidelines
http://mdcsharepoint/sites/Fisheries/Streams/Documents/Watershed and Stream Management Guidelines.pdf

Easements: All real estate documents, including acquisition and easement documents are held at the Missouri Department of Conservation Central Office, 2901 W. Truman Blvd., Jefferson City Missouri 65102. 573-522-4115.

Public Input Summary:

The draft High Ridge Grasslands Focus Area Management Plan was available for a public comment period April 1 – 30, 2014. The Missouri Department of Conservation received comments from two respondents (Appendix 35). The High Ridge Grasslands Focus 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.

<u>MDC responses to themes and issues identified through High Ridge Grasslands Focus Area public comment period</u>

Supports managing native grasslands.

Thank you for your support for our efforts to manage our native habitats.

Suggests some woody cover (plum thickets) along waterways to improve quail habitat.

There is an on-going program to establish native shrub species (see Terrestrial Resource Management Considerations, Management Objective #3, Strategy #3) both along the riparian corridors and scattered throughout the grasslands units as a whole.

Suggests sharing this plan with all neighboring landowners.
As part of the Area Planning process, all adjoining landowners were mailed a notice soliciting their comments to the Area Plan as a whole, or to any portion of the Plan that they felt pertinent. In total, thirty one (31) neighbors received notices. In addition, personal contact was made in a few instances.

Appendices:
Appendix 1: Bruns Tract Area Background
Appendix 2: Bruns Tract Area Map
Appendix 3: Bruns Tract Aerial Map
Appendix 4: Bryson's Hope Area Background
Appendix 5: Bryson's Hope Area Map
Appendix 6: Bryson's Hope Aerial Map
Appendix 7: Drovers Prairie Area Background
Appendix 8: Drovers Prairie Area Map
Appendix 9: Drovers Prairie Aerial Map
Appendix 10: Friendly Prairie Area Background
Appendix 11: Friendly Prairie Area Map
Appendix 12: Friendly Prairie Aerial Map
Appendix 13: Grandfather Prairie Area Background
Appendix 14: Grandfather Prairie Area Map
Appendix 15: Grandfather Prairie Aerial Map
Appendix 16: Hartwell Area Background
Appendix 17: Hartwell Area Map
Appendix 18: Hartwell Aerial Map
Appendix 19: Hi Lonesome Prairie Area Background
Appendix 20: Hi Lonesome Prairie Area Map
Appendix 21: Hi Lonesome Prairie Aerial Map
Appendix 22: Ionia Ridge Area Background
Appendix 23: Ionia Ridge Area Map
Appendix 24: Ionia Ridge Aerial Map
Appendix 25: Mora Area Background
Appendix 26: Mora Area Map
Appendix 27: Mora Aerial Map
Appendix 28: Paint Brush Prairie Area Background
Appendix 29: Paint Brush Prairie Area Map
Appendix 30: Paint Brush Prairie Aerial Map
Appendix 31: W. R. Kearn Area Background
Appendix 32: W. R. Kearn Area Map
Appendix 33: Hi Ridge COA Aerial Map
Appendix 34: Hi Ridge COA with Priority Watersheds
Appendix 35: Draft Hi Ridge Grasslands Focus Area Management Plan Public Comments

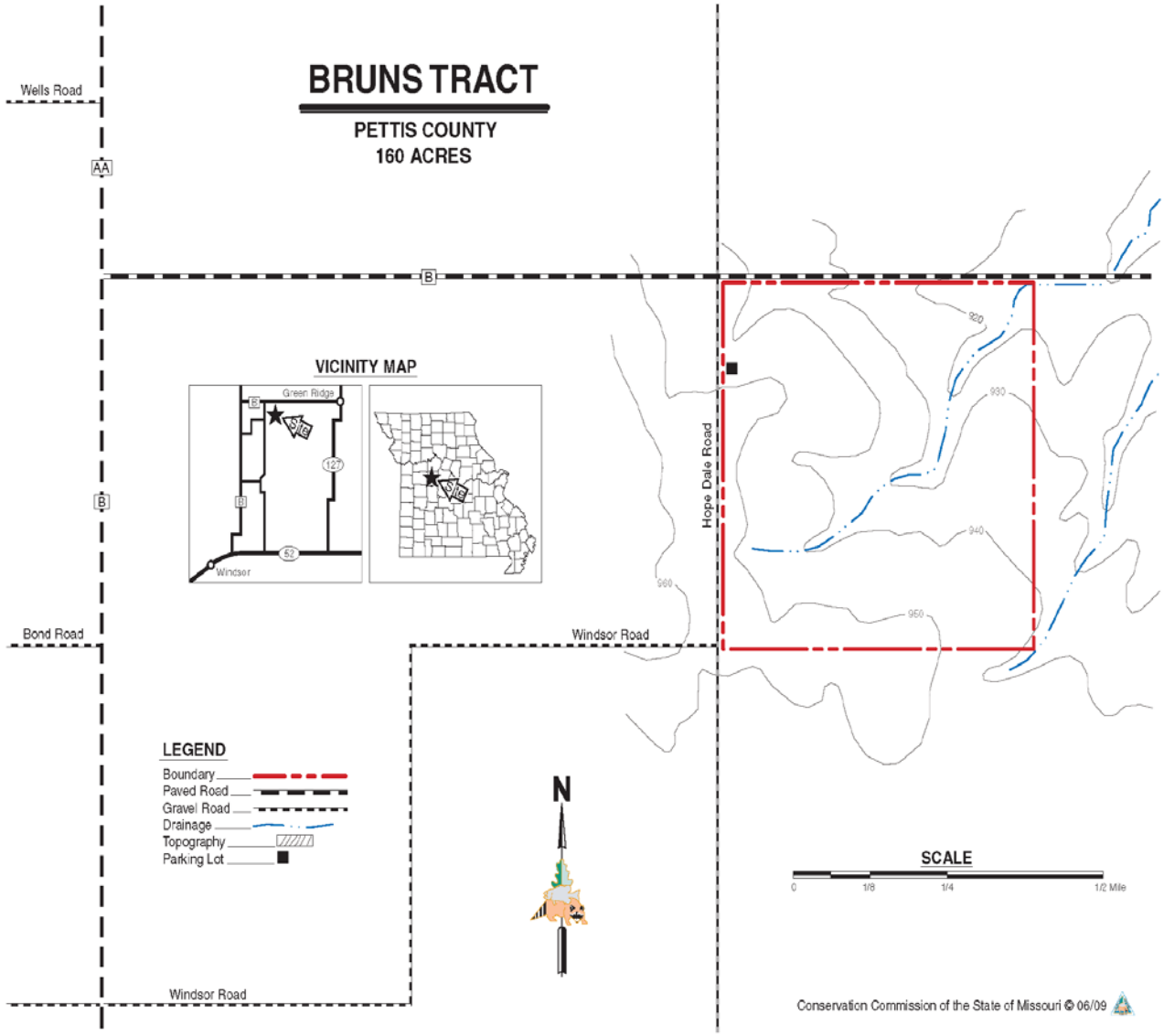
Appendix 1: Bruns Tract Area Background

This 160-acre area is owned by the Missouri Prairie Foundation and is jointly managed by the Conservation Department. The former cropland has been converted to native prairie plantings and most of the timber has been removed. The current management efforts are to provide both nesting and brood-rearing cover for prairie chickens and Bobwhite quail. This area is being managed for grassland diversity that provides habitat for a diverse group of plants and animals. Because less than one-half of one percent of our original prairie remains, some of these species have become increasingly rare. Quail and other early-successional species are common on this area.

Current Land and Water Types:

Bruns Tract Land/Water Type	**Acres**	**Miles**	**% of Area**
Grassland	160		100
Total	**160**		**100**
Stream Frontage		1st – 0.60 2nd – 0.51 Total: 1.11	
Ponds	2		

Appendix 2: Bruns Tract Area Map



Appendix 3: Bruns Tract Aerial Map

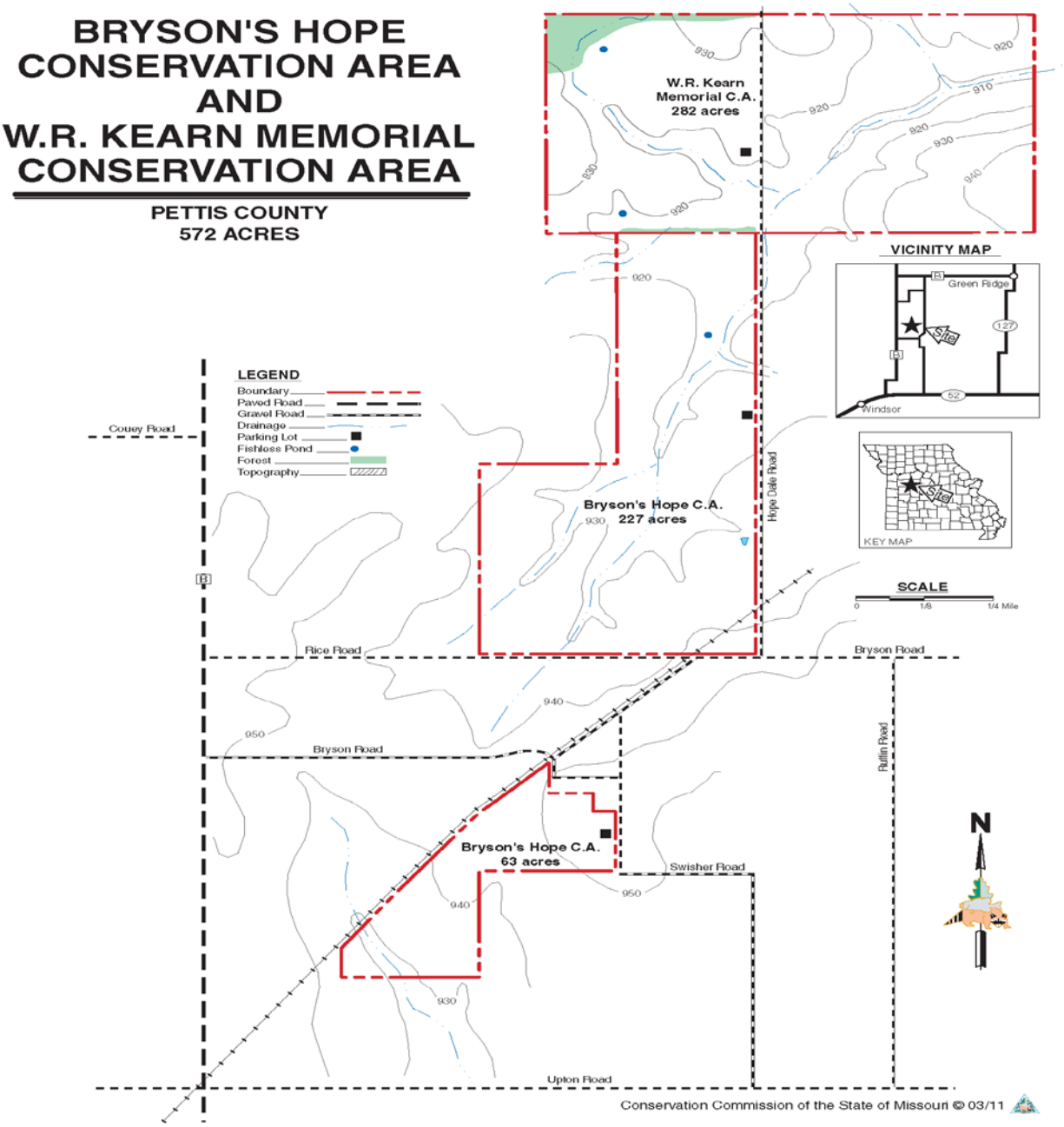
Appendix 4: Bryson's Hope Area Background

The initial 196-acre tract was purchased by the Department in 2006. An additional 90 acres was added in 2008. A small addition was added in 2010 to put this area at 290 acres. This area falls within the Green Ridge Focus Area as identified in the Recommendations for Recovery of Greater Prairie-Chicken in Missouri (FY07-FY11) plan. When acquired, the habitat was intensively row-cropped with very little habitat for grassland wildlife. Since acquisition, the area has been converted to a variety of cool-season and warm-season grass mixtures. The purpose of this area is to provide optimum nesting and brood-rearing habitat not only for prairie chickens, but also other grassland species. High quality grasslands are important habitat for many species.

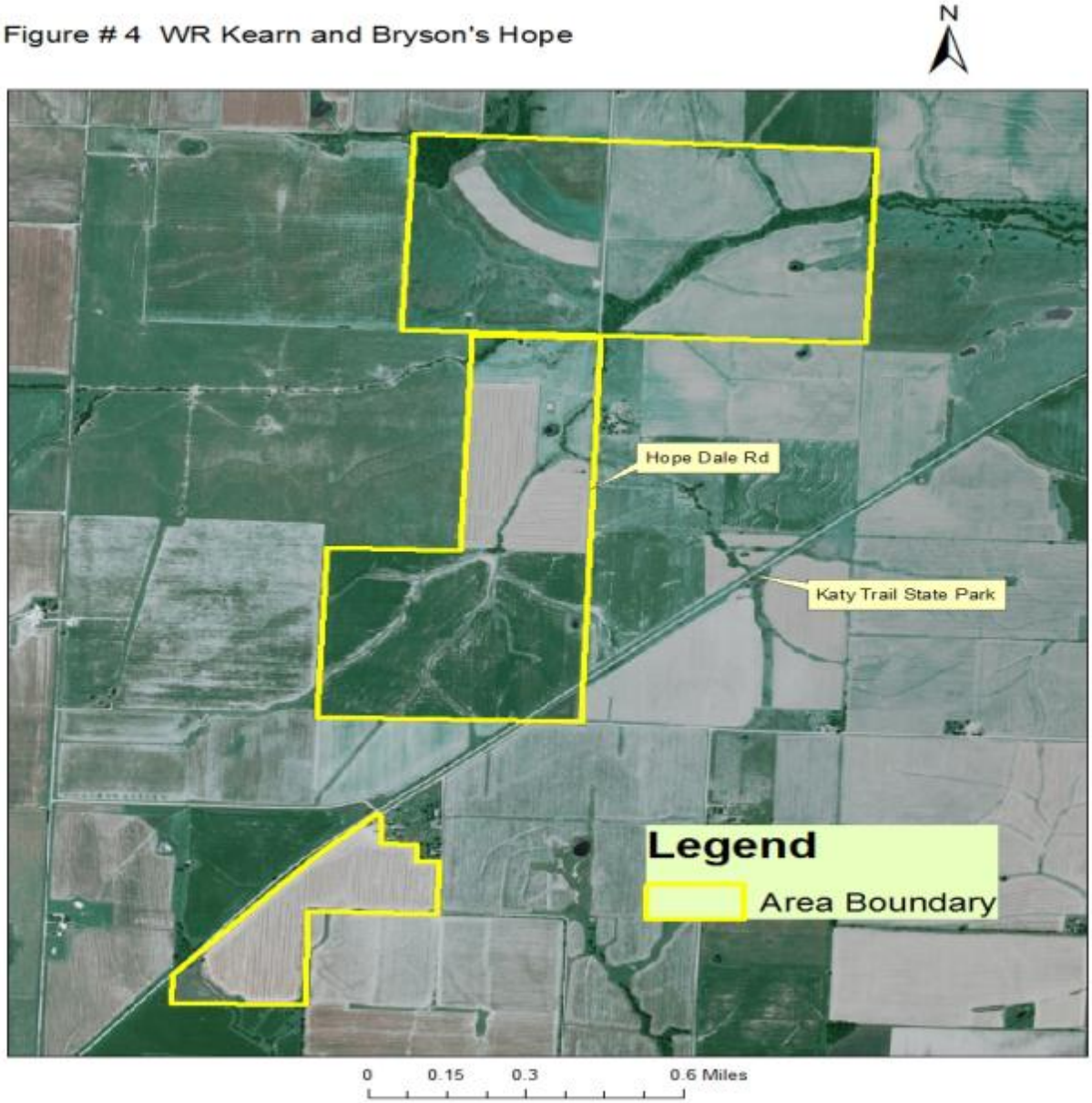
Current Land and Water Types:

Bryson's Hope CA Land/Water Type	**Acres**	**Miles**	**% of Area**
Grassland	282.3		100
Total	**282.3**		**100**
Stream Frontage		North Unit 1st – 0.73, 2nd – 1.04, 3rd – 0.15 South Unit 1st – 0.14 Total= 2.06	
Ponds	2		

Appendix 5: Bryson's Hope Area Map



Appendix 6: Bryson's Hope Aerial Map



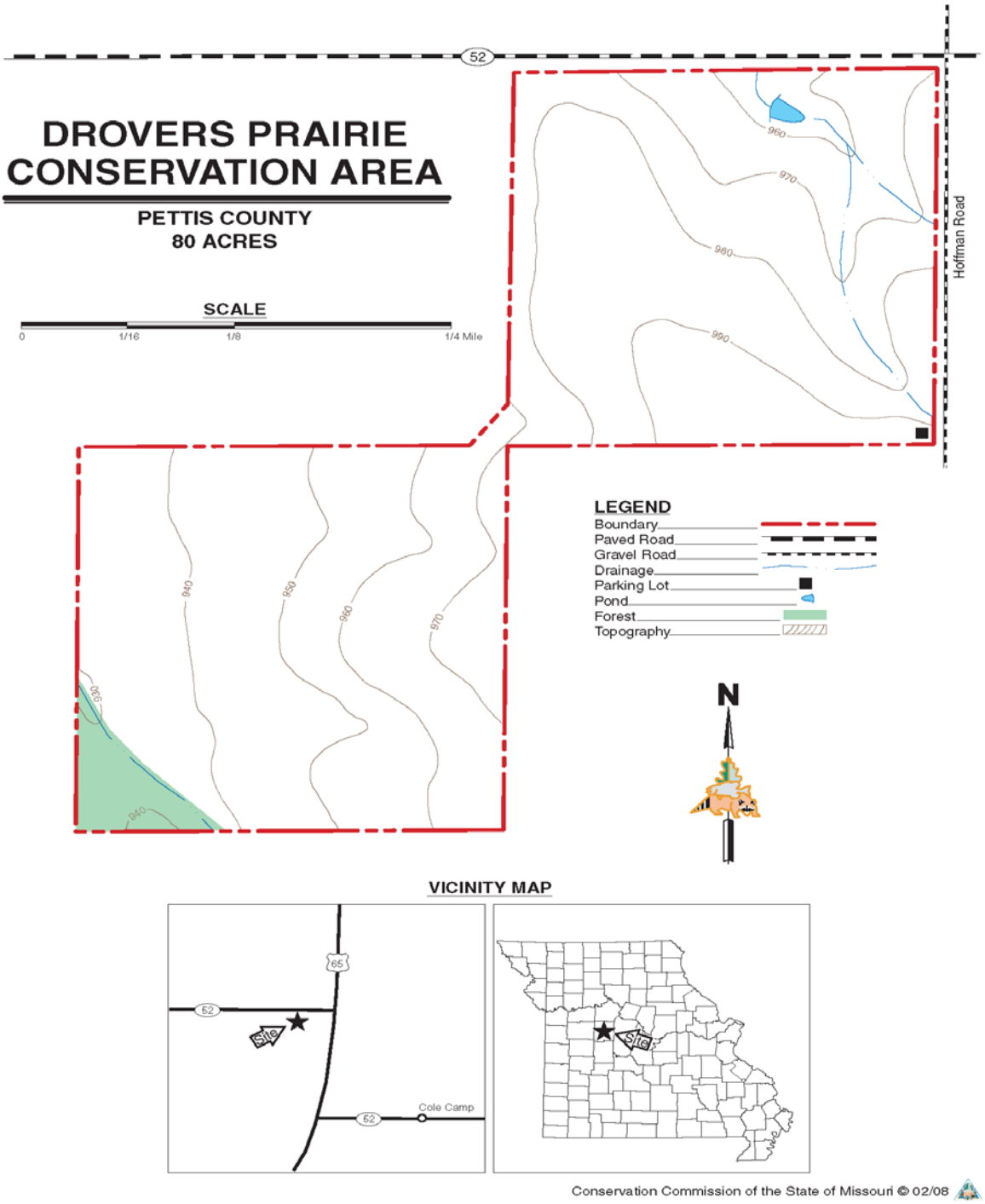
Appendix 7: Drovers Prairie Area Background

This 80-acre native prairie remnant is owned by the Missouri Prairie Foundation and is jointly managed with the Conservation Department. The Conservation Department assumed management responsibilities in 1985. Management objectives have focused on preserving and enhancing the native prairie flora and fauna found on the area. This area has been designated by Audubon Missouri as an Important Bird Area (IBA). IBAs are sites that have been identified by Audubon as those that are most crucial for bird populations, due to their abundance and/or diversity of birds present. To find out more about the IBA program, visit http://mo.audubon.org/. This area is a remnant of a once vast prairie ecosystem that provides habitat for a diverse group of plants and animals.

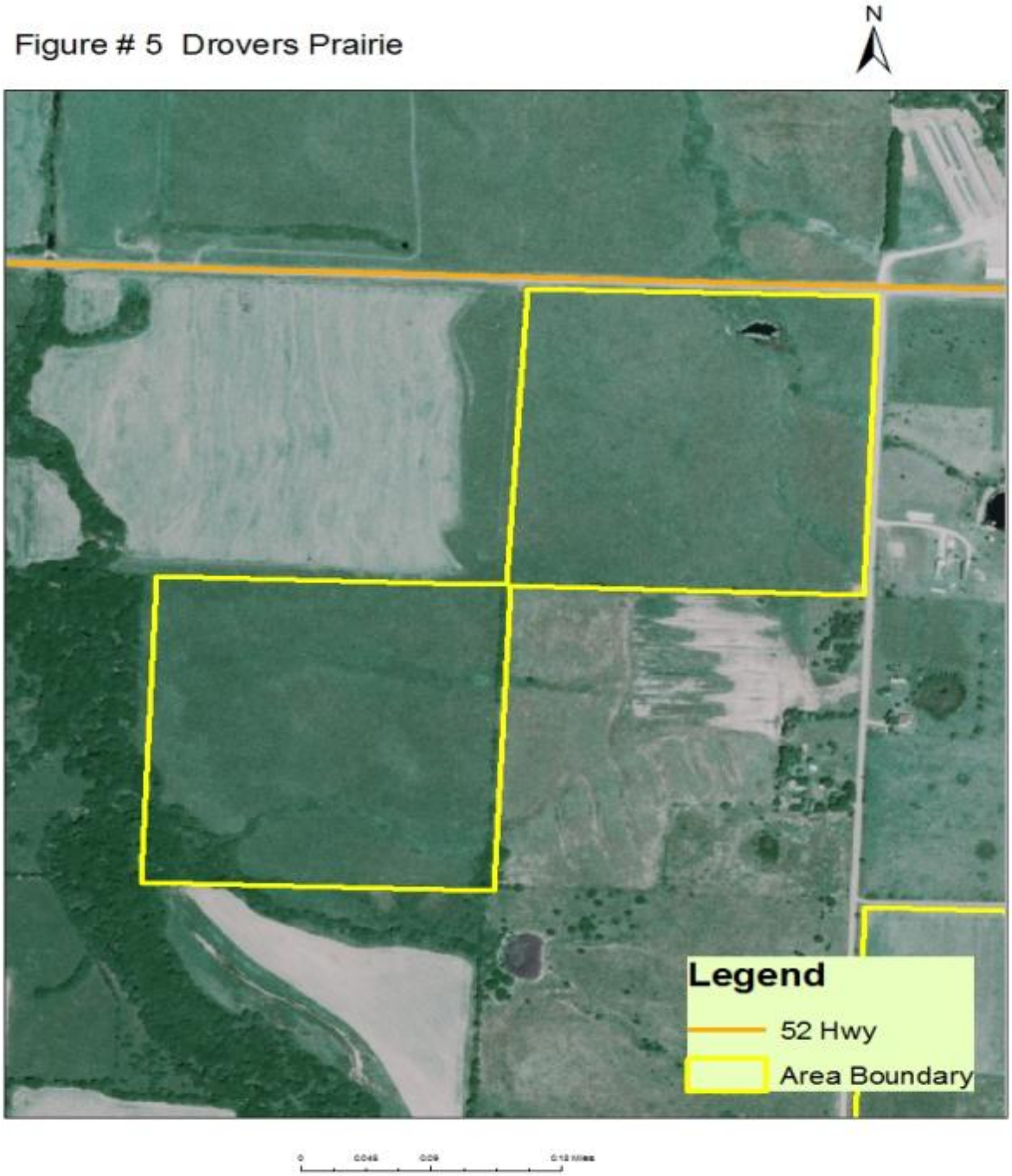
Current Land and Water Types:

Drovers Prairie Land/Water Type	**Acres**	**Miles**	**% of Area**
Forest/ Woodland	2.4		3
Native Prairie	77.6		97
Total	**80**		**100**
Stream Frontage		1st – 0.32 2nd – 0.19 3rd – 0.04 Total=0.55	
Ponds	1		

Appendix 8: Drovers Prairie Area Map



Appendix 9: Drovers Prairie Aerial Map



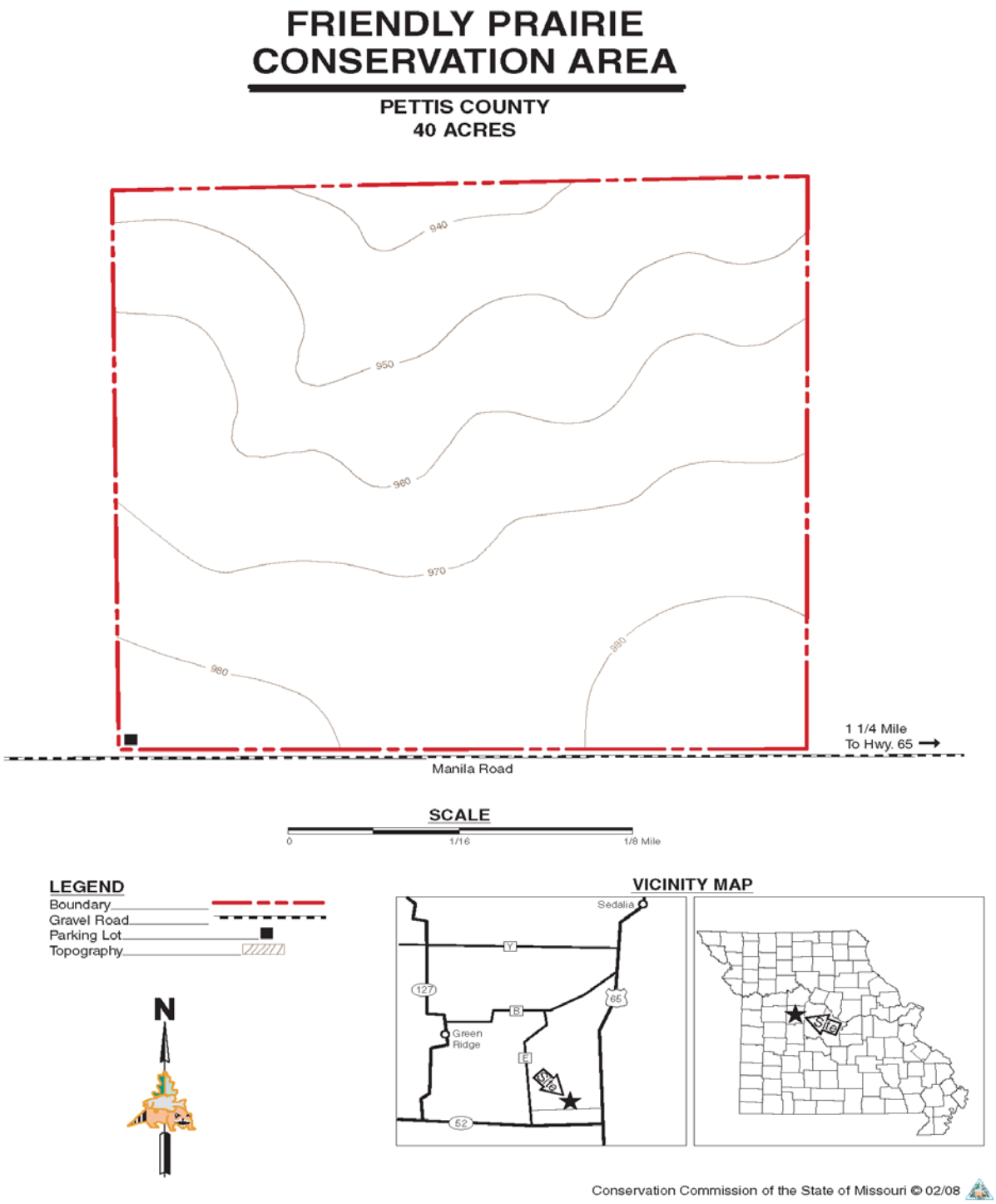
Appendix 10: Friendly Prairie Area Background

This 40-acre native prairie remnant is owned by the Missouri Prairie Foundation and is jointly managed with the Conservation Department. The Conservation Department assumed management responsibilities on this area in 1977. This area has been designated by Audubon Missouri as an Important Bird Area (IBA). IBAs are sites that have been identified by Audubon as those that are the most crucial for bird populations, due to their abundance and/or diversity of birds present. To find out more about the IBA program, visit http://mo.audubon.org/. This area is a remnant of a once vast prairie ecosystem that provides habitat for a diverse group of plants and animals. Because less than one-half of one percent of our original prairie remains, some of these species have become increasingly rare.

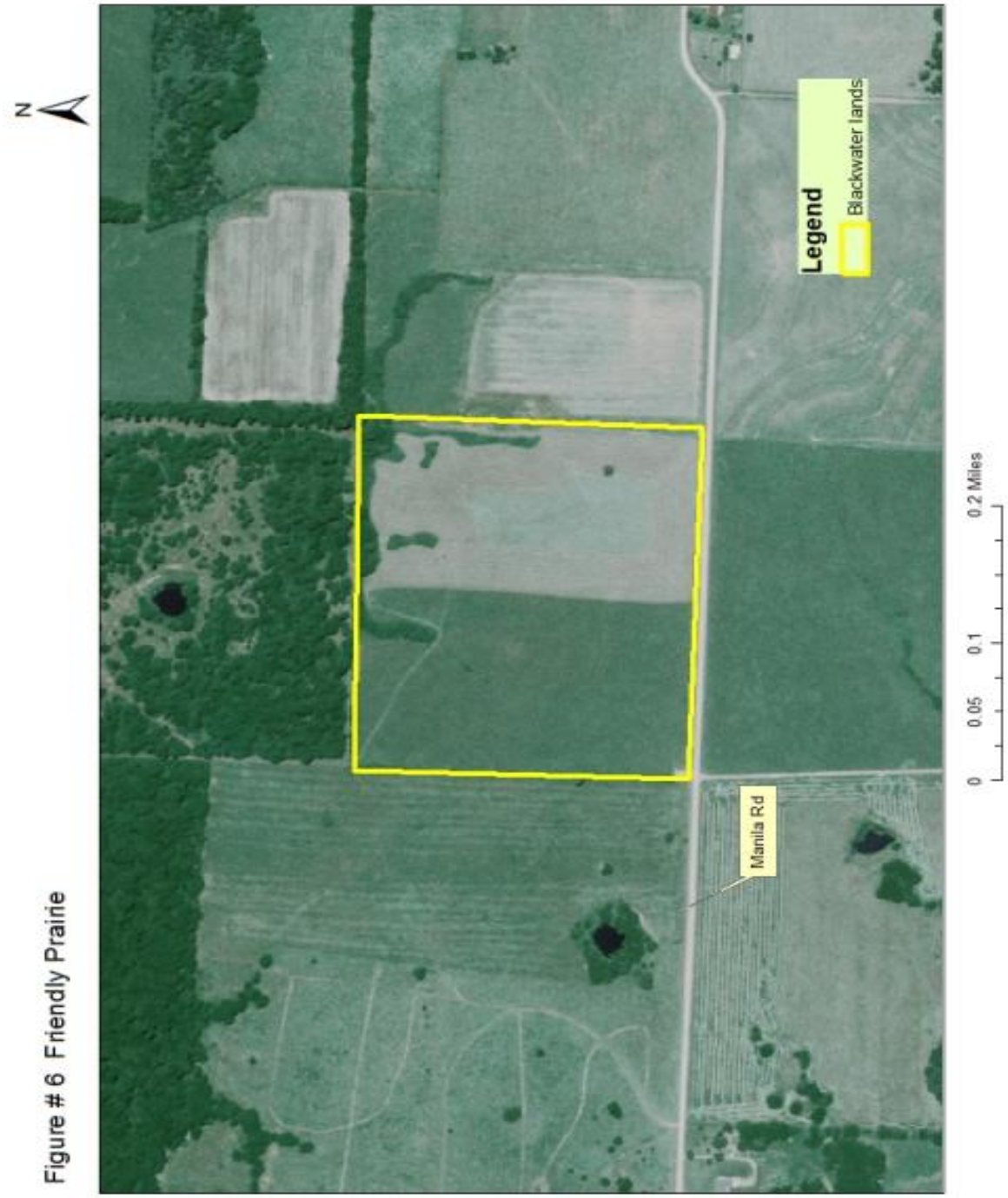
Current Land and Water Types:

Friendly Prairie Land/Water Type	Acres	Miles	% of Area
Native Prairie	40		100
Total	**40**		**100**
Stream Frontage		0.16	

Appendix 11: Friendly Prairie Area Map



Appendix 12: Friendly Prairie Aerial Map



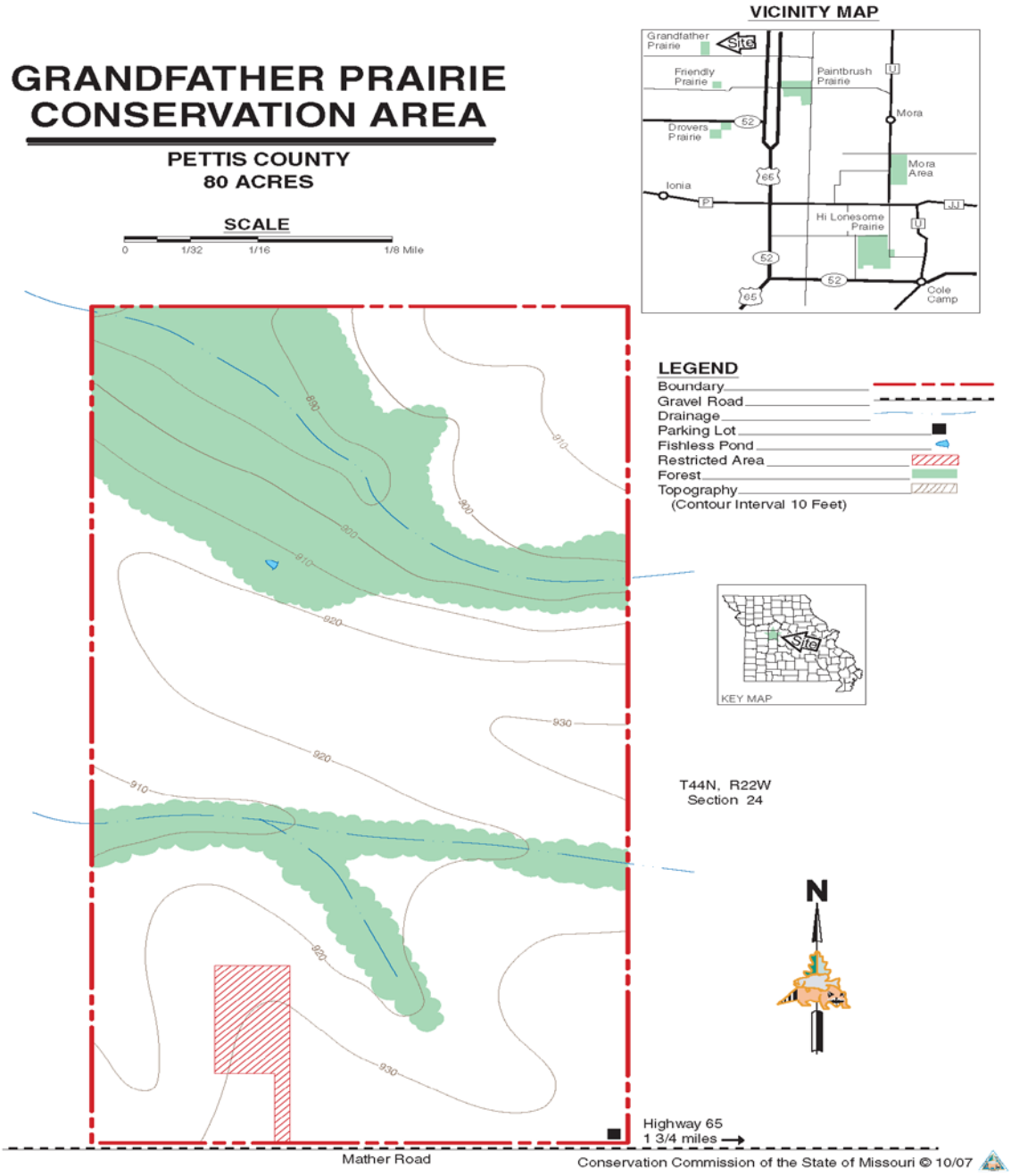
Appendix 13: Grandfather Prairie Area Background

This 80-acre native prairie remnant is named after the Osage Indians' traditional name for the sun. The Conservation Department acquired this prairie in 1987. This area has been designated by Audubon Missouri as an Important Bird Area (IBA). IBAs are sites that have been identified by Audubon as those that are the most crucial for bird populations, due to their abundance and/or diversity of birds present. To find out more about the IBA program, visit http://mo.audubon.org/. This area is a remnant of a once vast prairie ecosystem that provides habitat for a diverse group of plants and animals. Because less than one-half of one percent of our original prairie remains, some of these species have become increasingly rare.

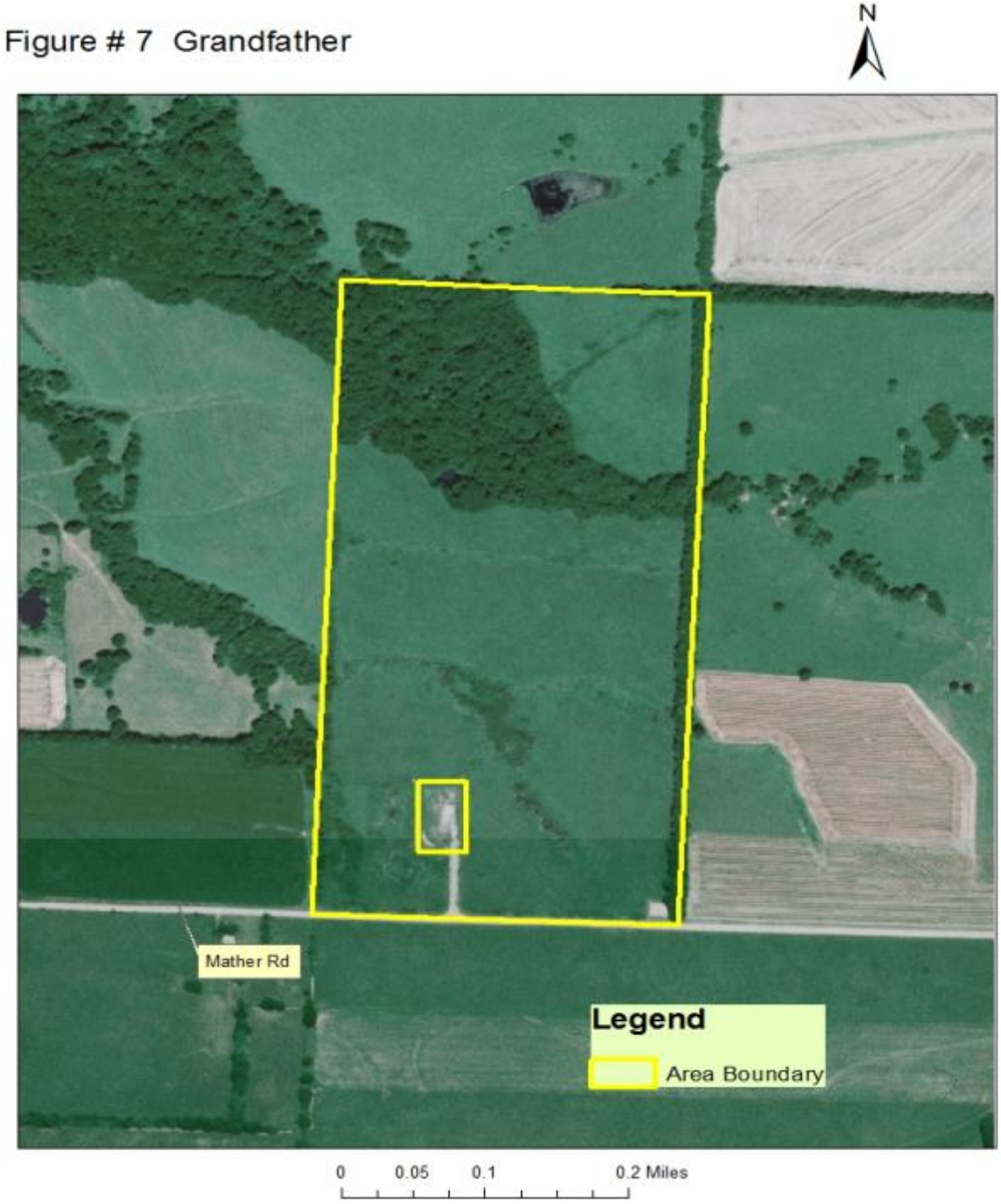
Current Land and Water Types:

Grandfather Prairie Land/Water Type	**Acres**	**Miles**	**% of Area**
Forest/ Woodland	18		25
Native Prairie	52.6		75
Total	**70.6**		**100**
Stream Frontage		1st – 0.39 2nd – 0.45 Total = 0.84	
Ponds	1		

Appendix 14: Grandfather Prairie Area Map



Appendix 15: Grandfather Prairie Aerial Map



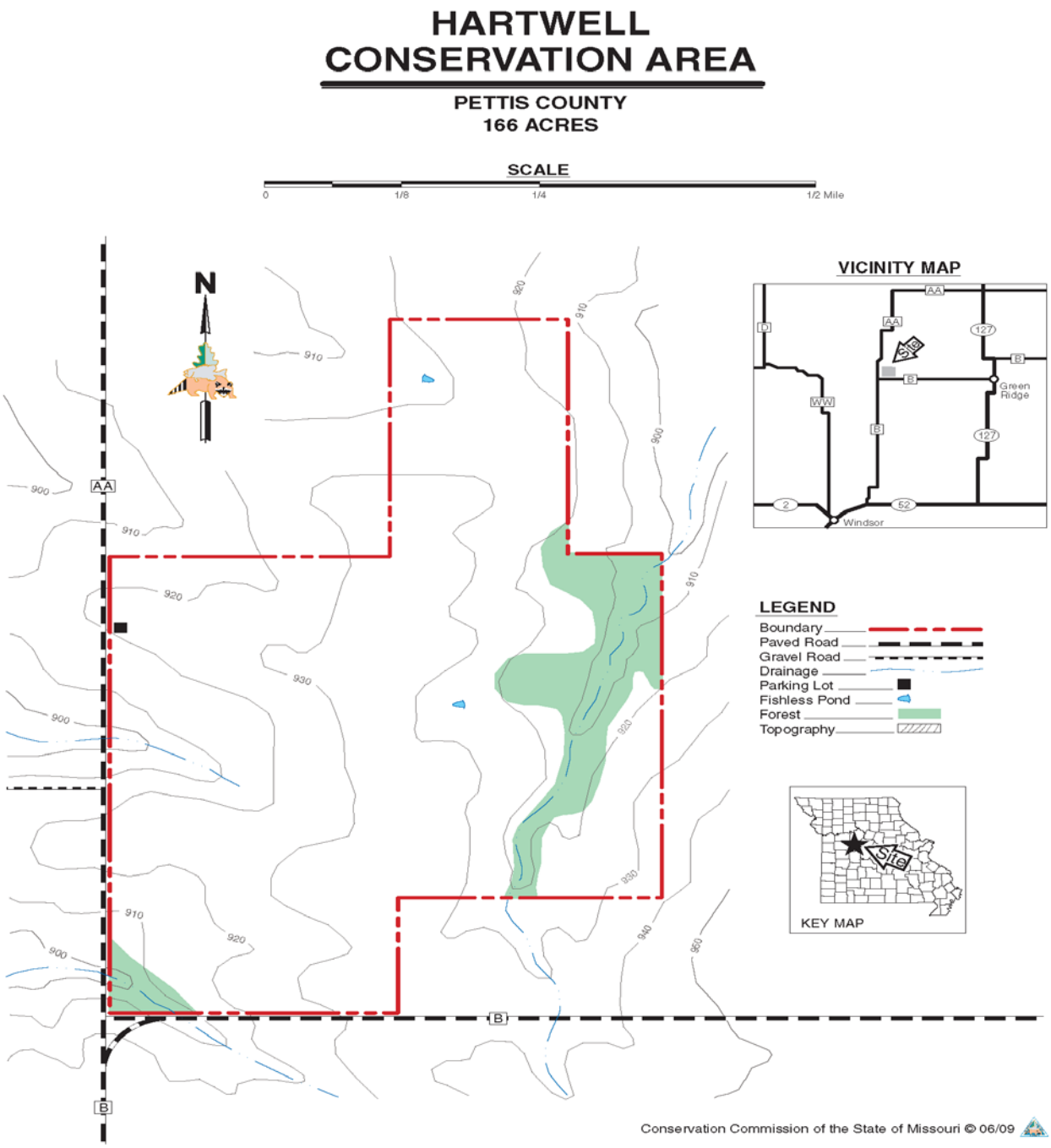
Appendix 16: Hartwell Area Background

This 165-acre area consists primarily of cool and warm-season grass units interspersed with trees, mostly Osage orange and black locust. Two small ponds exist, but do not provide any fishing opportunity due to the lack of proper water depth. The area will be managed for grassland species, with an emphasis on the Greater Prairie Chicken.

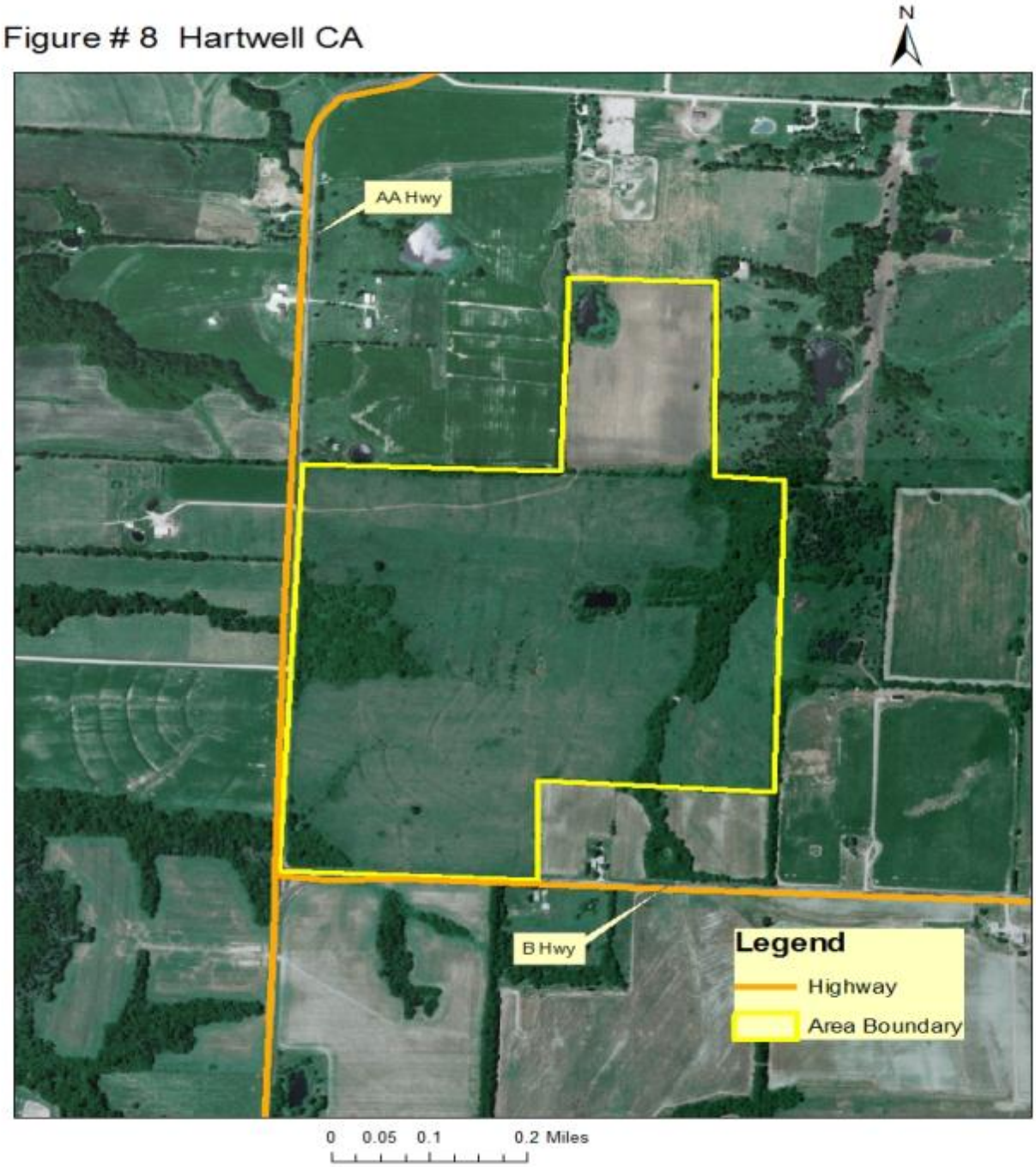
Current Land and Water Types:

Hartwell Land/Water Type	**Acres**	**Miles**	**% of Area**
Forest/ Woodland	16.3		11
Grassland	136		89
Total	**152.3**		**100**
Stream Frontage		1st – 0.64 2nd – 0.09 Total = 0.73	
Ponds	2		

Appendix 17: Hartwell Area Map



Appendix 18: Hartwell Aerial Map



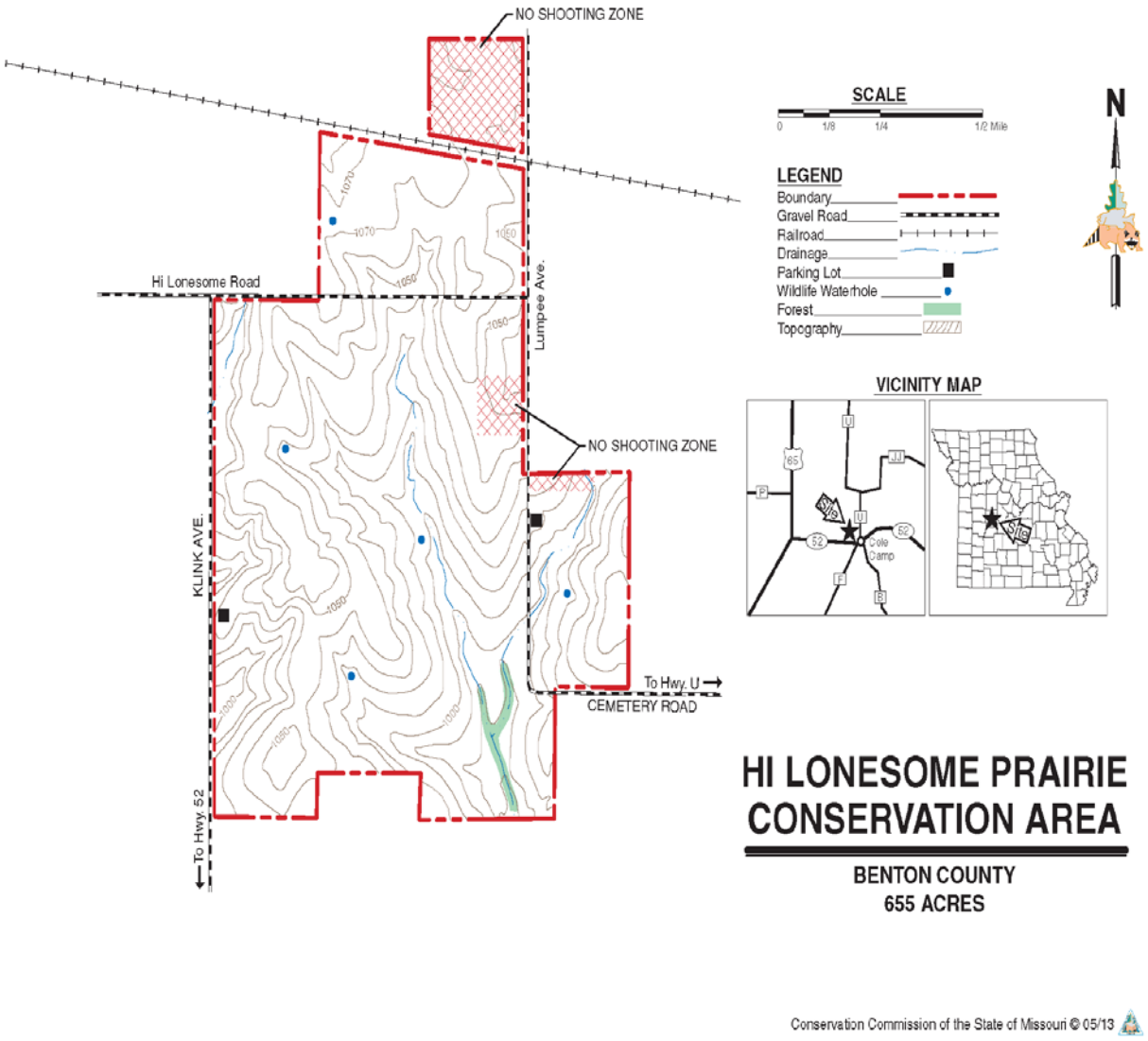
Appendix 19: Hi Lonesome Prairie Area Background

This 655-acre native prairie was purchased from Vaughn Lumpee in 1987. Mr. Lumpee ran a cattle operation on this area and he had a great fondness for the cowboy lifestyle. The unusual name for this area can be traced to the traditional greeting that one cowboy might give to another when meeting out on the vast prairies, "Hi Lonesome". These words hung above Mr. Lumpee's cabin home.
This area has been designated by Missouri Audubon as an Important Bird Area (IBA). IBAs are sites that have been identified by Audubon as those that are the most crucial for bird populations, due to their abundance and/or diversity of birds present. To find out more about the IBA program, visit http://mo.audubon.org/. High quality grasslands are important habitat for many species. This area is a remnant of a once vast prairie ecosystem that provides habitat for a diverse group of plants and animals. Because less than one-half of one percent of our original prairie remains, some of these species have become increasingly rare.

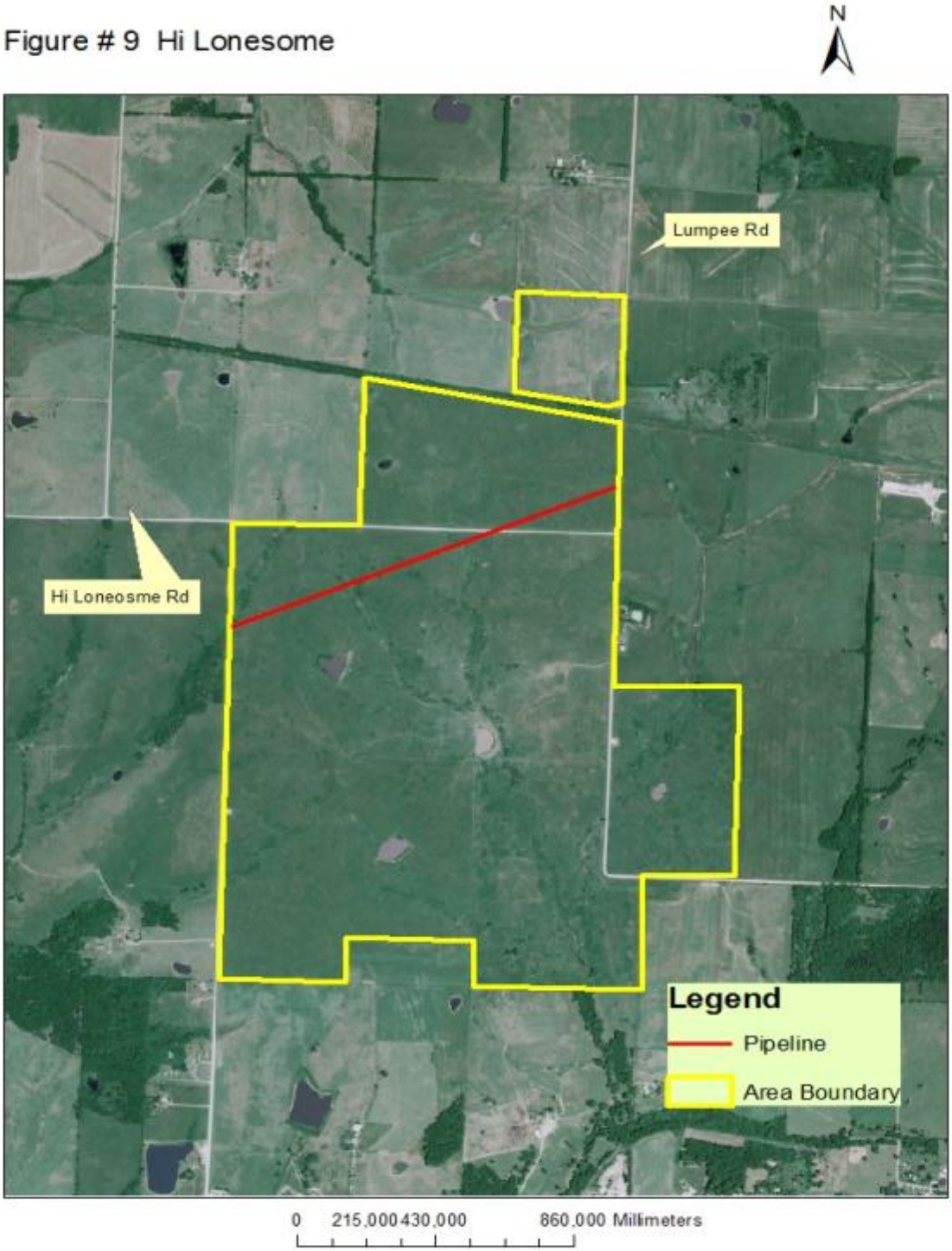
Current Land and Water Types:

Hi Lonesome Prairie Land/Water Type	Acres	Miles	% of Area
Grassland	20		3
Native Prairie	631.2		97
Total	**651.2**		**100**
Stream Frontage		1st – 2.01 2nd – 0.59 3rd – 0.68 Total=3.28	
Ponds	5		

Appendix 20: Hi Lonesome Prairie Area Map



Appendix 21: Hi Lonesome Prairie Aerial Map



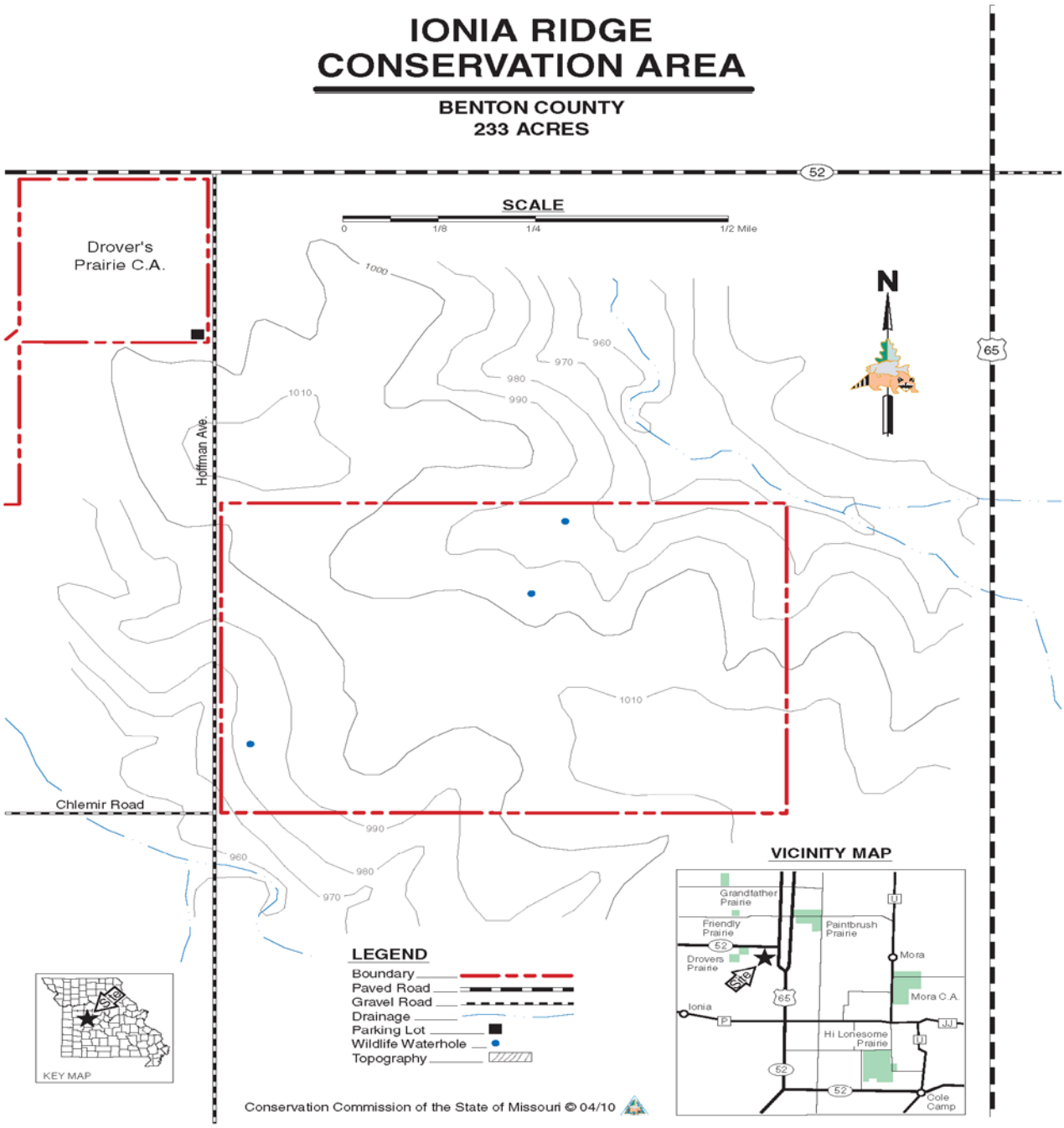
Appendix 22: Ionia Ridge Area Background

This area was an active row-crop and cattle grazing farm prior to the acquisition by the Conservation Department. With the existing native prairie and past history of prairie chicken use, this area was determined to be of great value in the effort to restore prairie chickens and other grassland species back into this landscape. The heavily grazed cool-season pastures also show promise of restoration to prairie remnant habitat. Future management will be directed to enhance those portions of the area. This 233-acre area was purchased by the Conservation Department in 2008. It is located within the Hi Lonesome Focus Area for the recovery of the greater prairie chicken and to enhance habitat for other grassland species. The area has gently rolling topography and is currently a mix of native prairie remnant, cool-season grass pastures and cropland. The area plan calls for the conversion of the cropland into warm-season grasses that are favored by prairie chickens and other grassland species. Future management plans will be to provide habitat for all grassland species, including Bobwhite quail and Cottontail rabbits.

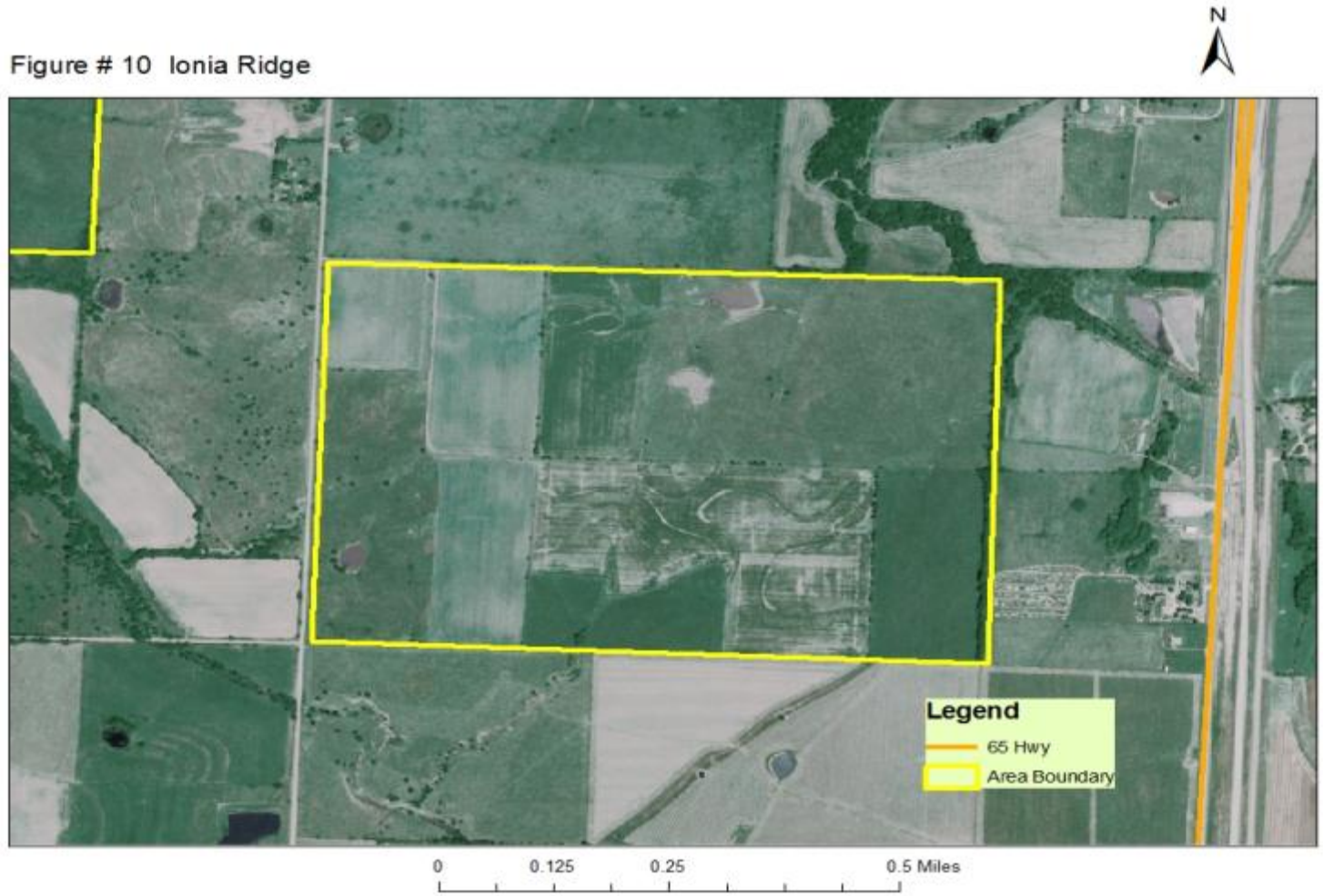
Current Land and Water Types:

Ionia Ridge Land/Water Type	**Acres**	**Miles**	**% of Area**
Grassland	188		88
Native Prairie	43		12
Total	**213**		**100**
Stream Frontage		1st – 0.60 2nd – 0.14 Total = 0.74	
Ponds	3		

Appendix 23: Ionia Ridge Area Map



Appendix 24: Ionia Ridge Aerial Map



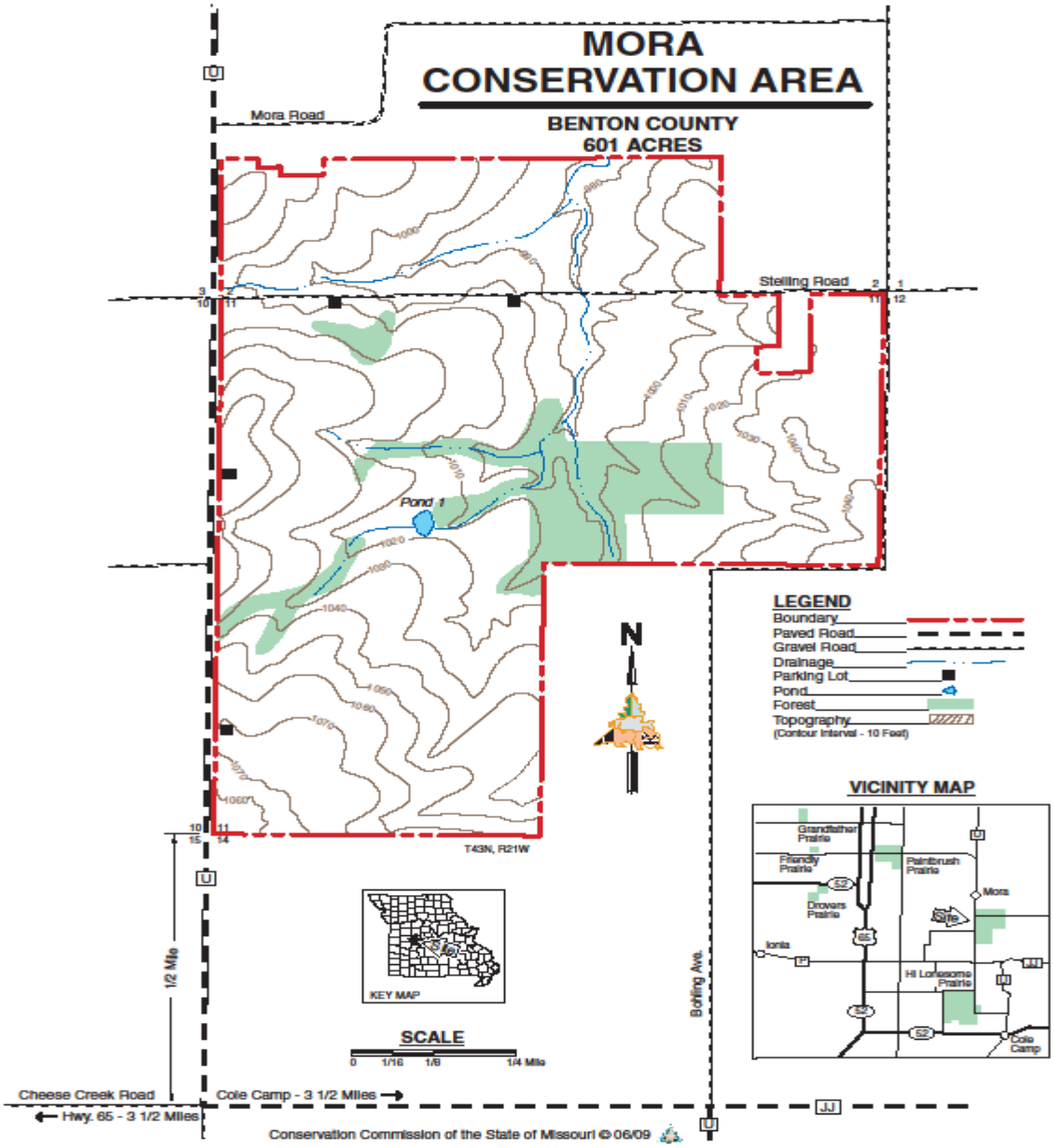
Appendix 25: Mora Area Background

The original portion of this 601- acre area was acquired by the Conservation Department in 1967. Prior to that purchase this entire area was native prairie, but the landowner plowed it prior to acquisition by the Conservation Department. Additional acres were added in 1997. Early management emphasized small upland game species. This area has been designated by Audubon Missouri as an Important Bird Area (IBA). IBAs are sites that have been identified by Audubon as those that are most crucial for bird populations, due to their abundance and/or diversity of birds present. To find out more about the IBA program, visit http://mo.audubon.org. High quality grasslands are important habitat for many species. This area is being managed for grassland diversity that provides habitat for a diverse group of plants and animals. Because less than one-half of one percent of our original prairie remains, some of these species have become increasingly rare.

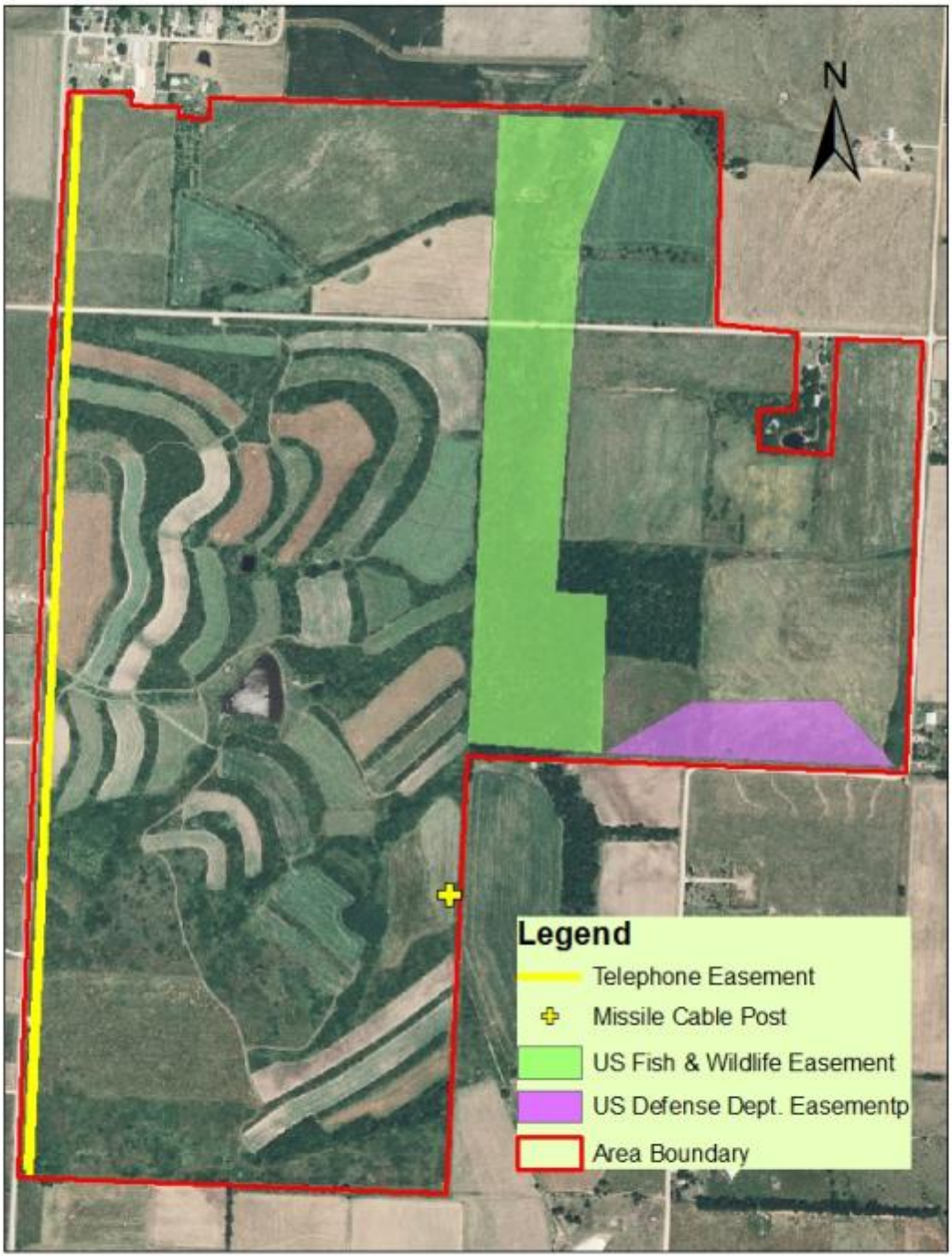
Current Land and Water Types:

Mora Land/Water Type	**Acres**	**Miles**	**% of Area**
Forest/ Woodland	56.6		10
Grassland	512.9		90
Total	**569.5**		**100**
Stream Frontage		1st – 1.4 2nd – 0.67 Total = 2.07	
Ponds	3		

Appendix 26: Mora Area Map



Appendix 27 Mora Aerial Map



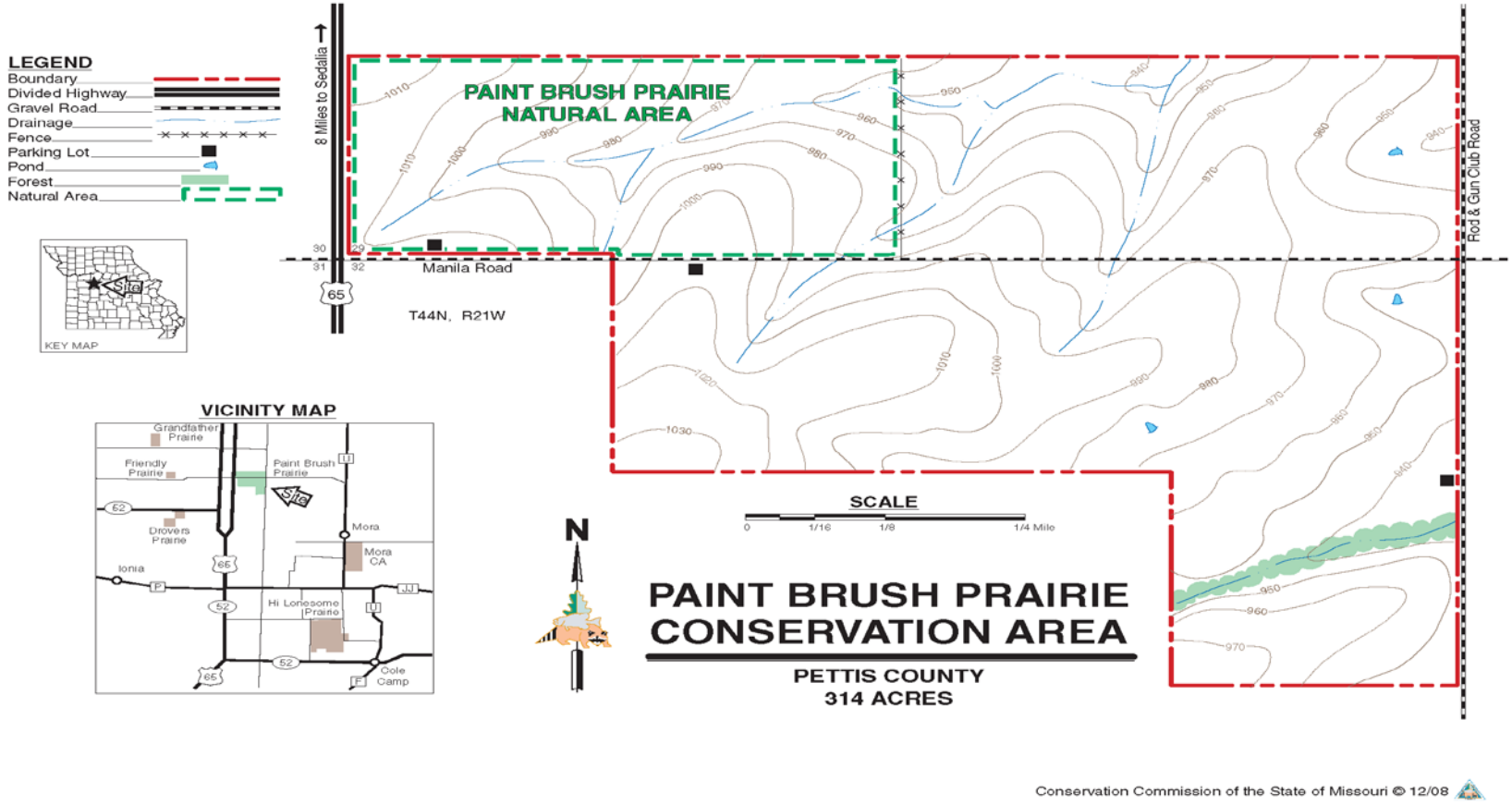
Appendix 28: Paint Brush Prairie Area Background

The Conservation Department acquired this native remnant prairie in 1978. It is currently 314 acres in size. The northwest portion of the area has been designated a natural area, which recognizes a diverse plant community of over 200 tallgrass prairie plants, including federally listed species. Slightly raised circular mounds measuring up to 12 feet in diameter, known as mima mounds or prairie mounds, are found on the area. Their origin is still open to debate. This area has been designated by Audubon Missouri as an Important Bird Area (IBA). IBAs are sites that have been identified by Audubon as the most crucial for bird populations, due to their abundance and/or diversity of birds present. To find out more about the IBA program, visit http://mo.audubon.org. High quality grasslands are important habitat for many species. This area is a remnant of a once vast prairie ecosystem that provides habitat for a diverse group of plants and animals. Because less than one-half of one percent of our original prairie remains, some of these species have become increasingly rare.

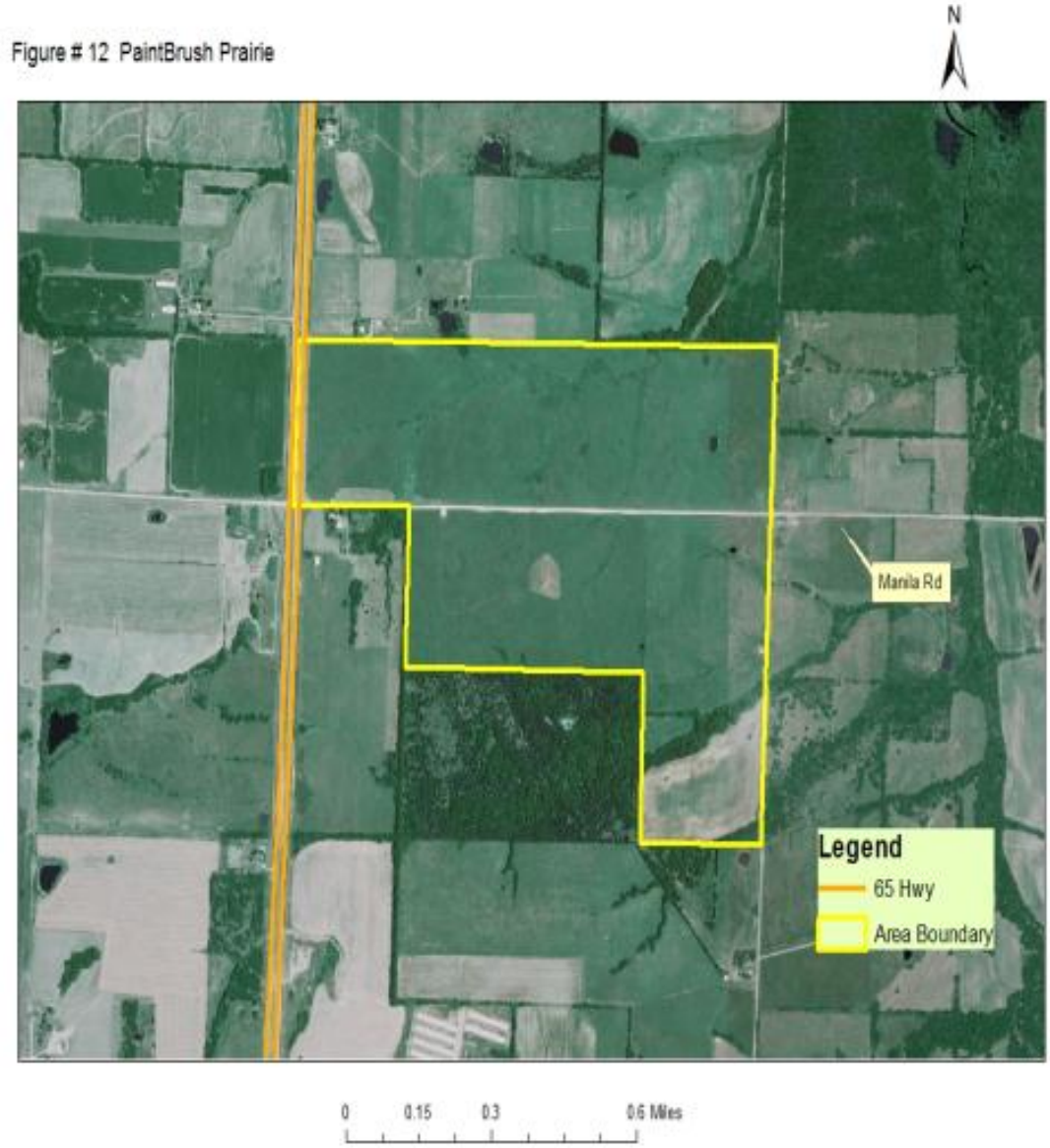
Current Land and Water Types:

Paint Brush Prairie Land/Water Type	**Acres**	**Miles**	**% of Area**
Forest/ Woodland	8.2		3
Grassland	300		97
Total	**308.2**		**100**
Stream Frontage		1st – 1.46 2nd-0.65 3rd-0.36 Total=2.47	
Ponds	3		

Appendix 29: Paint Brush Prairie Area Map



Appendix 30: Paint Brush Prairie Aerial Map



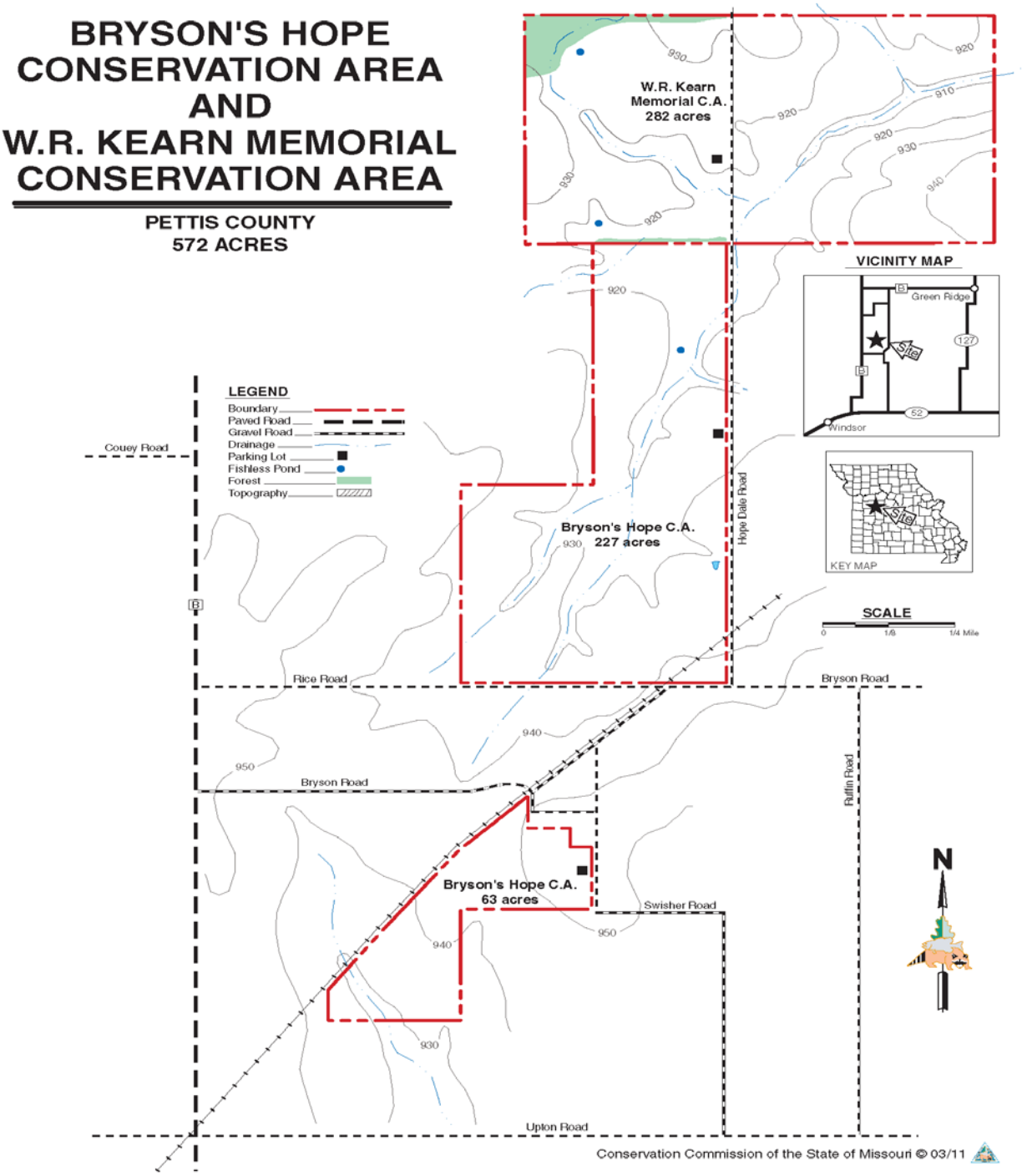
Appendix 31: W. R. Kearn Area Background

The original 120 acres of this area was donated in 1987 by William R. Kearn. In 2011 an additional 162 acres were added. Intensive management has occurred to provide grassland habitat for a variety of wildlife species. High quality grasslands are important for many species. This area is managed for grassland diversity that provides habitat for a diverse group of plants and animals. Because less than one-half of one percent of our original prairie remains, some of these species have become increasingly rare. Prairie chickens can sometimes be seen on this area.

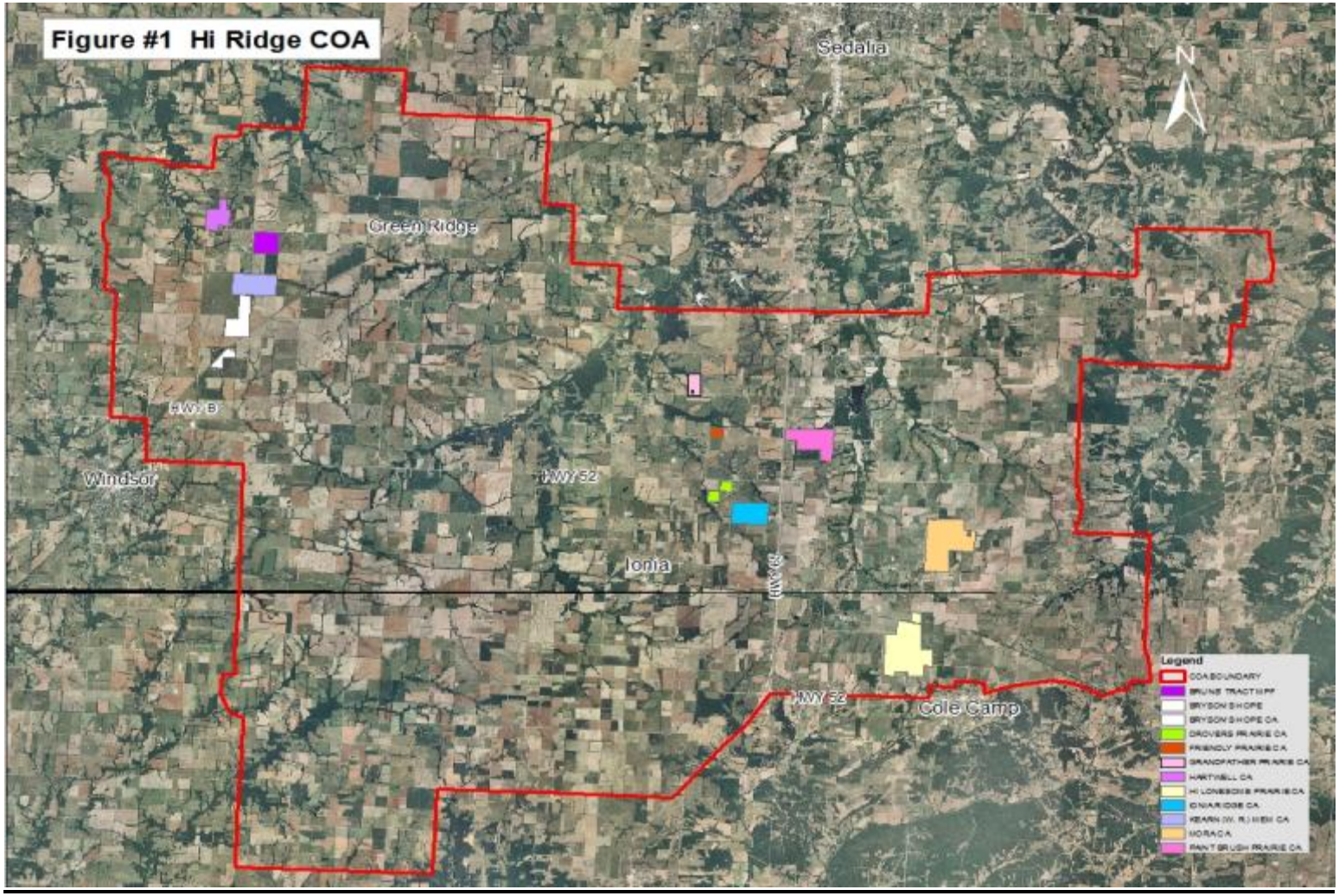
Current Land and Water Types:

W.R. Kearn Land/Water Type	Acres	Miles	% of Area
Forest/ Woodland	3.4		1
Grassland	273		99
Total	**276.4**		**100**
Stream Frontage		1st – 0.51 2nd – 0.64 3rd – 0.65 Total = 1.80	
Ponds	3		

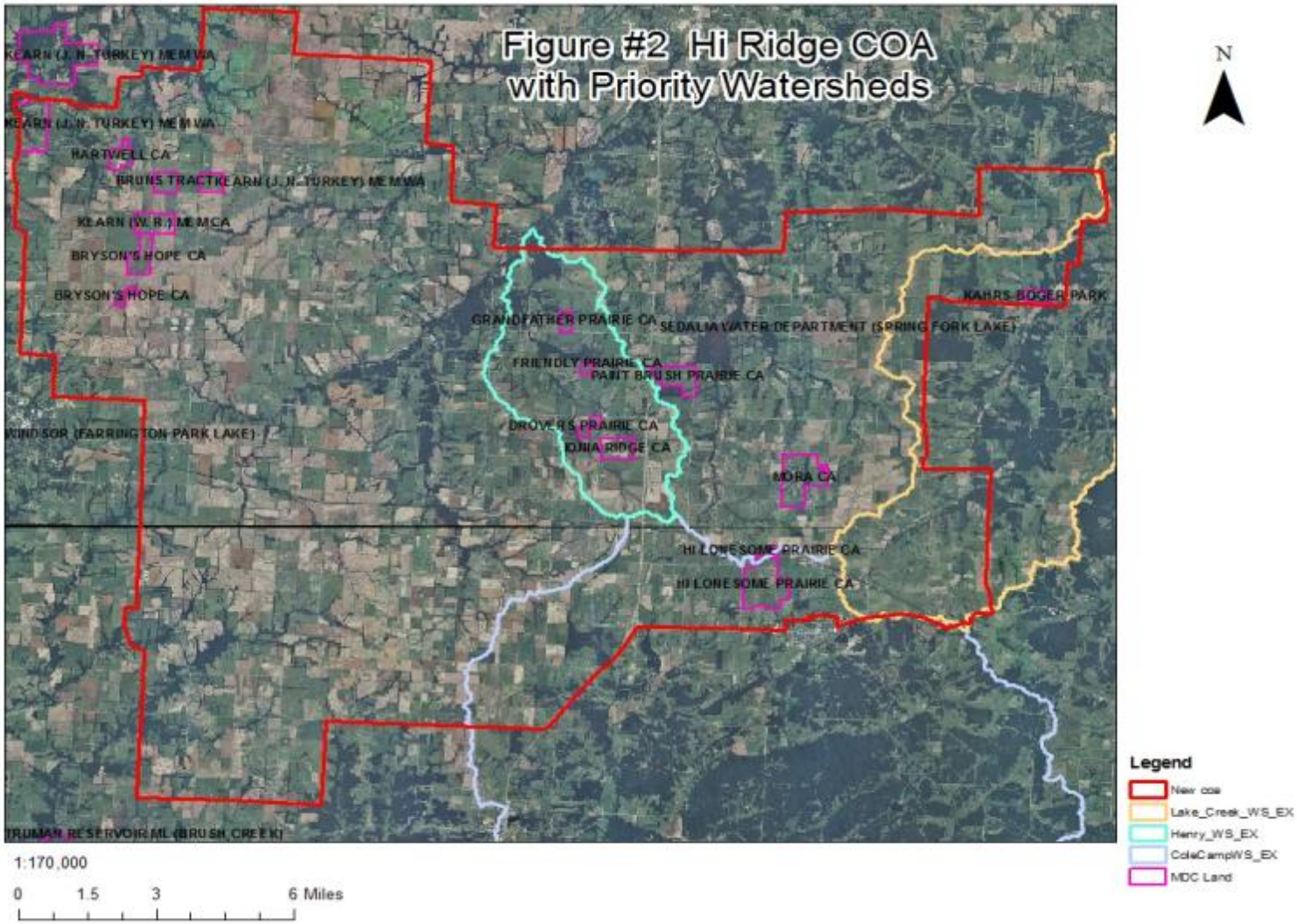
Appendix 32: W. R. Kearn Area Map



Appendix 33: Hi Ridge COA Aerial Map



Appendix 34: Hi Ridge COA with Priority Watersheds



Appendix 35. Draft Hi Ridge Grasslands Focus Area Management Plan Public Comments
Received during public comment period (April 1-30, 2014)

As a long time quail hunter I am really glad to hear you are working on improving our natural grasslands.Last year I spent a lot of time quail hunting some of the western praire chicken focus area's and found quail on every one of them.(please do not share this information.ha ha) I have found when hunting these areas that to find quail there has to be some woody cover along the waterways such as plum thickets or such and hope these will be included in your plans. Thanks John Heitkamp
Excellent. Such goals as 're-establish tallgrass prairie' and other native/natural associations as with the Greater Prairie Chicken are desirable and commendable. I would suggest that this management plan be intentionally directed to all owners of contiguous properties. Their comments and commitment to support these areas in view of the spraying and other normal ag practices will be crucial to the success of the plan. So I'm telling you something you already know. Keep up the laudable intents and being a good neighbor. Thanks, Dan Barton