Upper Osage District Prairie Conservation Areas

Taberville Prairie CA
Wah'Kon-Tah Prairie CA
Monegaw Prairie CA
Gay Feather Prairie CA
Bristow CA
Osage Prairie CA
Little Osage Prairie CA

Ten Year Area Management Plan

FY 2014-2023

Wildlife Division Chief

11/13/14

Date

Upper Osage Prairie Conservation Areas Management Plan Approval Page

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OVERVIEW

Area Name	Area Number	Year Acquired	Acreage	County	Administrative Responsibility	Maintenance Responsibility
Taberville Prairie CA	6124	1959	1680	St. Clair	Wildlife	Wildlife
Wah'Kon-Tah Prairie CA[1]	7414	1973	3030	Cedar/ St. Clair	Wildlife	Wildlife
Monegaw Prairie CA[1]	7817	1975	270	Cedar	Wildlife	Wildlife
Gay Feather Prairie CA[2]	7416	1976	114	Vernon	Wildlife	Wildlife
Bristow CA	9240	1992	158	Vernon	Wildlife	Wildlife
Osage Prairie CA	6130	1959	1545	Vernon	Wildlife	Wildlife
Little Osage Prairie CA[3]	7415	1972	80	Vernon	Wildlife	Wildlife

[1] Owned by The Nature Conservancy (TNC) and Missouri Department of Conservation (the Department)
[2] Owned by Missouri Prairie Foundation (MPF,Gayfeather Prairie) and the Department
[3] Owned by The Nature Conservancy

Statements of Purpose:

A. Strategic Direction

The prairie conservation areas in the Upper Osage District of the Kansas City Region are primarily native grasslands with inclusions of remnant prairie, prairie plantings, non-native grass plantings, headwater streams, cropland, and forest land along prairie stream riparian zones and in small blackjack oak woodland patches. Management is focused on a diversity of tallgrass prairie grassland flora and fauna resources in accordance with the Strategic Guidance for Missouri Grasslands with emphasis on providing habitat needed for grassland birds, herptiles, mammals and invertebrates; encouraging plants of high floristic quality; and providing compatible recreational opportunities.

B. Desired Future Condition

The desired future condition of the prairies in the Upper Osage District of the Kansas City Region is a healthy tallgrass prairie ecosystem and prairie headwater stream edge community (Nelson, 2005).

C. Federal Aid Statement

Taberville Prairie CA and Osage Prairie CA, or a portion thereof, were acquired with Pittman-Robertson Wildlife Restoration funds to restore and manage wildlife, conserve and restore suitable wildlife habitat and provide public access for hunting and other wildlife-oriented recreation.

Bristow CA, or a portion thereof, was acquired with federal funds and donated to the State to provide fish and wildlife benefits and land conservation.

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

Area	Priority Area	Natural Area
Taberville Prairie CA	Marmaton/Wah'Kon-Tah Conservation Opportunity Area (COA); Taberville/ El Dorado Springs Grassland Coalition Focus Area; Baker Branch Priority Watershed	Taberville Prairie Natural Area (1360 acres)
Wah'Kon-Tah Prairie CA	Marmaton/ Wah'Kon-Tah COA; Taberville/El Dorado Springs Grassland Coalition Focus Area; Little Clear Creek Aquatic COA	None
Monegaw Prairie CA	Marmaton/Wah'Kon-Tah COA	None
Gay Feather Prairie CA	None	None
Bristow CA	None	None
Osage Prairie CA	Western Cherokee Grassland COA; Little Drywood Creek Priority Watershed	Osage Prairie Natural Area (679 acres)
Little Osage Prairie CA	Western Cherokee Grassland COA; Little Drywood Creek Priority Watershed	Little Osage Prairie Natural Area (80 acres)

II. Important Natural Features and Resources

Area	Species of Conservation Concern	Caves	Springs	Other
Taberville Prairie CA	Yes[1]	None	None	National Natural Landmark
Wah'Kon-Tah Prairie CA	Yes[1]	None	None	None
Monegaw Prairie CA	Yes[1]	None	None	None
Gay Feather Prairie CA	None	None	None	None
Bristow CA	None	None	None	None
Osage Prairie CA	Yes[1]	None	None	None
Little Osage Prairie CA	Yes[1]	None	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.

III. Existing Infrastructure

Area	Parking Lots	Buildings	Pond Dams	Managed Ponds
Taberville Prairie CA	4	0	7	0
Wah'Kon-Tah Prairie CA	2	4	16	1
Monegaw Prairie CA	1	0	1	0
Gay Feather Prairie CA	1	0	0	0
Bristow CA	1	0	1	0
Osage Prairie CA	2	0	6	0
Little Osage Prairie CA	1	0	1	0

IV. Area Restrictions or Limitations

Area	Deed Restrictions	Federal Interest	Easements	Cultural Resources	Hazards	Endangered Species	Boundary Issues
Taberville Prairie CA	None	Yes[1]	KAMO Electric Co.	Yes[2]	None	Yes[4]	None
Wah'Kon-Tah Prairie CA	Cooperative Agreements with TNC	None	Magellan Pipeline	Yes[2]	Yes[3]	Yes[4]	None
Monegaw Prairie CA	Cooperative Agreements with TNC	None	None	Yes[2]	None	Yes[4]	None
Gay Feather Prairie CA	Cooperative Agreements with MPF	None	None	Yes[2]	None	None	None
Bristow CA	None	Yes[1]	None	Yes[2]	None	None	None
Osage Prairie CA	None	Yes[1]	None	Yes[2]	None	Yes[4]	None
Little Osage Prairie CA	Cooperative Agreements with TNC	None	None	Yes[2]	None	Yes[4]	None

[1] 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.

[2] Yes, records kept with the Department's Environmental Compliance Specialist. Managers should follow "Best Management Practices for Cultural Resources" found in the *Department Resource Policy Manual.*

[3] Restrictions on an abandoned missile site prohibit breaking or digging through the ground surface at the site.

[4] 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.

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

Challenges and Opportunities:

1) The native grasslands of the Upper Osage District are unique and considered high quality with a suite of native plants, animals, and insects of which many are species of conservation concern and are endemic to remnant prairie. These grasslands are representative of the tallgrass prairie that occurred historically in the Osage Plains ecological section of Missouri. They provide opportunity for prairie enthusiasts to experience the open vista and treeless topography. These grasslands also offer an occasion for a wide array of studies on the flora and fauna through management evaluation projects. Several studies have been conducted in the past and will continue into the future. Challenges continue with the understanding of the effects of management practices on conservative plants and animals of the prairie. As these effects are understood, managers have the opportunity to use adaptive management to provide a diversity of habitat on the native prairie. One of the biggest challenges on native grasslands is managing woody plant succession and keeping the prairie open. The prairies that have populations of Greater Prairie Chicken are managed to provide the best habitat possible for this and other grassland-dependent birds.
2) Several of the areas have non-native grasses and forbs that were present when the Department began management of the ground. Many of the fields have a small number of prairie species among the non-native vegetation. There is opportunity to expand the native prairie species. The challenge is to eradicate exotic plant species that are very persistent. Noxious weeds must be controlled according to state law.
3) Plant succession has the greatest effect on the grasslands covered under this plan. Annual disturbance provides a diversity of successional stages on the prairies. Early successional habitat provides for insect production, recruitment of prairie plants, and bird brood-rearing. Management practices that are used to manipulate succession include prescribed burning, haying, livestock grazing, brush hogging and high clipping. Agricultural cropping has been used on some areas to promote annual plant growth and supplement winter food source for wildlife.
4) Trees occur mainly along the larger streams that traverse the prairie and in small stands of oaks near the edge of some of the prairies. Most of these stands are managed as transitional woodlands from the open prairie. The natural area riparian along Landon Branch on Osage Prairie is classified as a mesic sandstone forest which is an example of woods associated with larger prairie streams.

Terrestrial Management Objective 1: Maintain a diverse prairie natural community.

Strategy 1: Survey and monitor areas for rare and endangered species.

Strategy 2: Monitor all open lands and grasslands for woody encroachment.

Strategy 3: Follow the *Recommendations for Recovery of Greater Prairie-Chicken in Missouri* (MDC, 2006) for habitat needs for that species where applicable.

Strategy 4: Implement best management practices to set back woody plant succession, diversify plant structure and maintain high-quality prairies.

Terrestrial Management Objective 2: Restore and re-construct native grasslands including the control of exotic species.

Strategy 1: Identify areas of low-quality restorable prairie.

Strategy 2: Identify areas, such as agricultural fields, for reconstruction with native prairie plants.

Strategy 3: Promote native seed harvest with concerted efforts through private and public entities.

Strategy 4: Monitor and treat all portions of the areas to eradicate exotic and invasive flora or fauna.

Strategy 5: Use best management practices to seed prairie plantings, control exotic species and restore low-quality prairie.

Terrestrial Management Objective 3: Manage the forest and woodland resources.

Strategy 1: Inventory the forest and woodland stands on the areas and assess the management that is needed for those sites.

Strategy 2: Use best management practices for forest management.

VI. <u>Aquatic Resource Management Considerations</u>

Challenges and Opportunities:

1) Invasive and nuisance plant species in ponds. Monitor for invasive species in all ponds and control if needed. Eurasian watermilfoil is an invasive, non-native plant that can reach nuisance levels. Control and suppression of this plant is important to managing the fisheries in area impoundments. Other plants can reach nuisance levels including Southern Naiad, coontail, and filamentous algae and may also warrant control measures.
2) Managing landscapes on a watershed basis to reach their potential diversity and community integrity of native fish species in streams on CAs and in downstream reaches. Land management within a watershed affects conditions locally and downstream of the site. Protect riparian areas and leave filter strips between streams and disturbed areas to protect water quality and habitat in streams.

3) There are several impoundments scattered across the prairie areas in this plan. Some ponds have fish in them, but most are fishless. They are of various size, depth and age. Some impoundments have been evaluated for fishing potential while others have yet to be evaluated.

Aquatic Management Objective 1: Increase fishing opportunities for local citizens.

Strategy 1: Identify existing ponds suitable for fishing on the areas. Factors that contribute to a suitable pond include depth, water quality, proximity to adequate parking, proximity to other fishing opportunities, and watershed management.

Strategy 2: Assess sport-fish populations on an "as-needed" basis in all fishing ponds on the areas. Management emphasis will be to provide a balanced fishery for largemouth bass relative to other sunfish. Supplemental stocking and regulation changes will be utilized when appropriate in ponds. Channel catfish will be stocked periodically to maintain a viable fishery.

Strategy 3: Monitor aquatic vegetation condition in fishing impoundments, and provide appropriate control measures, when necessary. This especially means monitoring the expansion of Eurasian water milfoil and other exotics in all prairie ponds covered by this plan.

Aquatic Management Objective 2: Protect clean and healthy waters.

Strategy 1: If livestock grazing is going to be used on the area, maintain a 100-foot minimum grazing exclusion zone around fishing ponds. Creation of limited access watering points for livestock is acceptable provided they are constructed to minimize the area available to livestock and discourage their loafing in the access.

Strategy 2: If livestock grazing is going to occur on an area, a grazing plan will be designed in collaboration with Wildlife and Fisheries staff prior to introduction of the animals.

Aquatic Management Objective 3: Conserve plants, animals and their habitats.

Strategy 1: Manage for aquatic diversity by providing diverse habitats and good water quality for streams, ponds and downstream neighbors. Refer to Watershed and Steam Management Guidelines (MDC, 2009).

Strategy 2: Identify and assess aquatic communities in headwater streams.

Strategy 3: Identify impoundments, which are fishless or can be made fishless, to be managed for reptile and amphibian habitat.

VII. Public Use Management Considerations

Challenges and Opportunities

1) The grassland areas in the Upper Osage District offer numerous public use opportunities. Hunting is allowed on Department-owned areas but regulations for deer hunting have restricted methods. Hunting and Fishing regulations approved by the Department have been reviewed and agreed to by MPF and TNC respectively on prairies they own that are managed by the Department.
2) The native prairie provides opportunities for the public to visit and experience firsthand the large variety of plants, the openness of the landscape, and offer the chance to see rare species. One key component for managing the areas is to build and maintain relationships with neighboring landowners.

Public Use Management Objective 1: Provide public hunting and fishing opportunities.

Strategy 1: Manage diverse habitat for wildlife game species to encourage hunting.

Strategy 2: Where suitable, improve fishing opportunities in selected ponds.

Strategy 3: Post signage to inform the public of hunting and fishing regulations.

Public Use Management Objective 2: Improve educational and interpretive opportunities.

Strategy 1: Communicate recreational opportunities.

Strategy 2: Schedule events, workshops, and programs that will provide public groups information about the grasslands, the species that live there, and the management that is needed to maintain a native prairie.

Strategy 3: Identify seasonal walking trails that will provide access to the prairie and provide wildlife viewing opportunities. Trails should be simple mowed paths with no infrastructure, installed for use during appropriate seasons and can be temporary in nature.

Public Use Management Objective 3: Maintain a good working relationship with adjoining landowners.

Strategy 1: Work with neighbors to minimize any boundary or trespass issues.

Strategy 2: Promote habitat management on neighboring landowners' properties.

VIII. Administrative Considerations

Challenges and Opportunities

1) Several of the prairie areas are owned by TNC and MPF. The Department manages these prairies under cooperative agreement with these entities. Opportunity occurred in early 2000s to meet annually with TNC to cooperatively develop an Annual Management Plan on Wah'Kon-Tah Prairie and Monegaw Prairie. Recently annual management planning has occurred on MPF prairie areas that the Department manages.
2) Roads that provide access to the prairie areas in this district are primarily gravel and maintained by St. Clair and Vernon County road districts. Some roads are poorly maintained and at times they become impassible for the public.
3) Maintain area infrastructure at current levels.

Administrative Management Objective 1: Develop an Annual Management Plan on TNC and MPF areas managed by the Department.

Strategy 1: Meet with personnel from TNC and MPF annually to assess management accomplishments from previous year and agree on proposed management activities for the next year.

Administrative Management Objective 2: Continue working relationship with St. Clair and Vernon County road districts.

Strategy 1: Participate in County Aid Road Trust (CART) when appropriate.

Administrative Management Objective 3: Maintain area infrastructure at current levels in accordance with Department policy.

Strategy 1: Maintain area parking lots for area users.

Strategy 2: Maintain area perimeter fences with neighbors in usable condition. Execute Fencing Agreements for fence construction as needed with the adjoining landowners.

Strategy 3: Conduct maintenance on the buildings at Wah'Kon-Tah Prairie for seed harvest and management operations.

Lands proposed for acquisition/disposal:

When available, adjacent properties 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:

	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
Terrestrial Resources Management										
Objective 2										
Strategy 1	X	X	X							
Strategy 2	X	X	X							
Aquatic Resource Management										
Objective 1										
Strategy 1	X	X								
Strategy 2	X	X		X	X		X	X		X
Objective 3										
Strategy 2		X	X				X	X		
Strategy 3		X								
Public Use Management										
Objective 1										
Strategy 2	X	X		X	X		X	X		X
Objective 2										
Strategy 2	X		X		X		X		X	
Administrative Considerations										
Objective 2										
Strategy 1	X		X		X		X		X	

APPENDICES

References:

MDC. (2013). *Strategic guidance for Missouri grasslands*. Jefferson City, Missouri: Missouri Department of Conservation.

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

MDC. (2006). *Recommendations for recovery of greater prairie-chicken in Missouri (FY07-FY11)*. Jefferson City, Missouri: Missouri Department of Conservation.

Nelson, P. W. (2005). *The terrestrial natural communities of Missouri, revised edition.* Jefferson City, Missouri: The Missouri Natural Areas Committee.

Public Input Summary:

The draft Upper Osage District Prairie Conservation Areas Management Plan was available for a public comment June 1-30, 2014. The Department received comments from one respondent (Appendix 36). The Upper Osage District Prairie Conservation Areas Planning Team carefully reviewed and considered these ideas, 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>Department responses to themes and issues identified through the Upper Osage District Prairie Conservation Areas public comment period</u>

Supports prairie and native habitat restoration.

All prairie areas within the Upper Osage District Prairie Conservation Areas contain original native prairie that is being managed with best management practices to maintain a diversity of plants and animals originally occurring on these areas. Three of the areas have designated Natural Areas that are monitored annually and reported to the Missouri Department of Conservation Natural Area Committee for approval of future management. Four of the prairie areas are owned in part by The Nature Conservancy or the Missouri Prairie Foundation who approve an annual work plan with the Department that manage these prairies.

Most of these prairie areas have acreage in various stages of prairie restoration and reconstruction to provide quality original Missouri habitat of the tallgrass prairie ecosystem. Prairie seed used in this process is harvested locally from native prairie.

Contact information for companies with easements:

KAMO Company
David Coale
800 South First Street
El Dorado Springs, MO 64744
417-876-8808

Magellan Pipeline Company
P.O. Box 777157
Henderson, NV 89077
Ken Clagett, Energy Projects Consultant
Ken@kenclagett.com
702-378-8200

Appendices:

Appendix 1: Taberville Prairie Area Background
Appendix 2: Taberville Prairie Area Map
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Appendix 4: Taberville Prairie Location of Streams
Appendix 5: Taberville Prairie Management Units Waterline and Easements
Appendix 6: Wah'Kon-Tah Prairie Area Background
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Appendix 26: Osage Prairie Area Background
Appendix 27: Osage Prairie CA Area Map
Appendix 28: Osage Prairie 2013 Land Cover
Appendix 29: Osage Prairie Locations of Streams
Appendix 30: Osage Prairie Management Units and Water Lines
Appendix 31: Little Osage Prairie Area Background
Appendix 32: Little Osage Prairie Conservation Area Map
Appendix 33: Little Osage Prairie 2013 Land Cover
Appendix 34: Little Osage Prairie Locations of Streams
Appendix 35: Little Osage Prairie Management Units
Appendix 36: Draft Upper Osage District Prairie Conservation Areas Public Comment

Appendix 1: Taberville Prairie Area Background

Taberville Prairie was the first prairie purchased by the Department for management of the Greater Prairie Chicken. Acquisition of various tracts took place from 1959 to 1961. The area was named after the town of Taberville and its first physician, Dr. Taber. The elevation of the area ranges from 760’ above mean sea level (MSL) to 869’ above MSL.

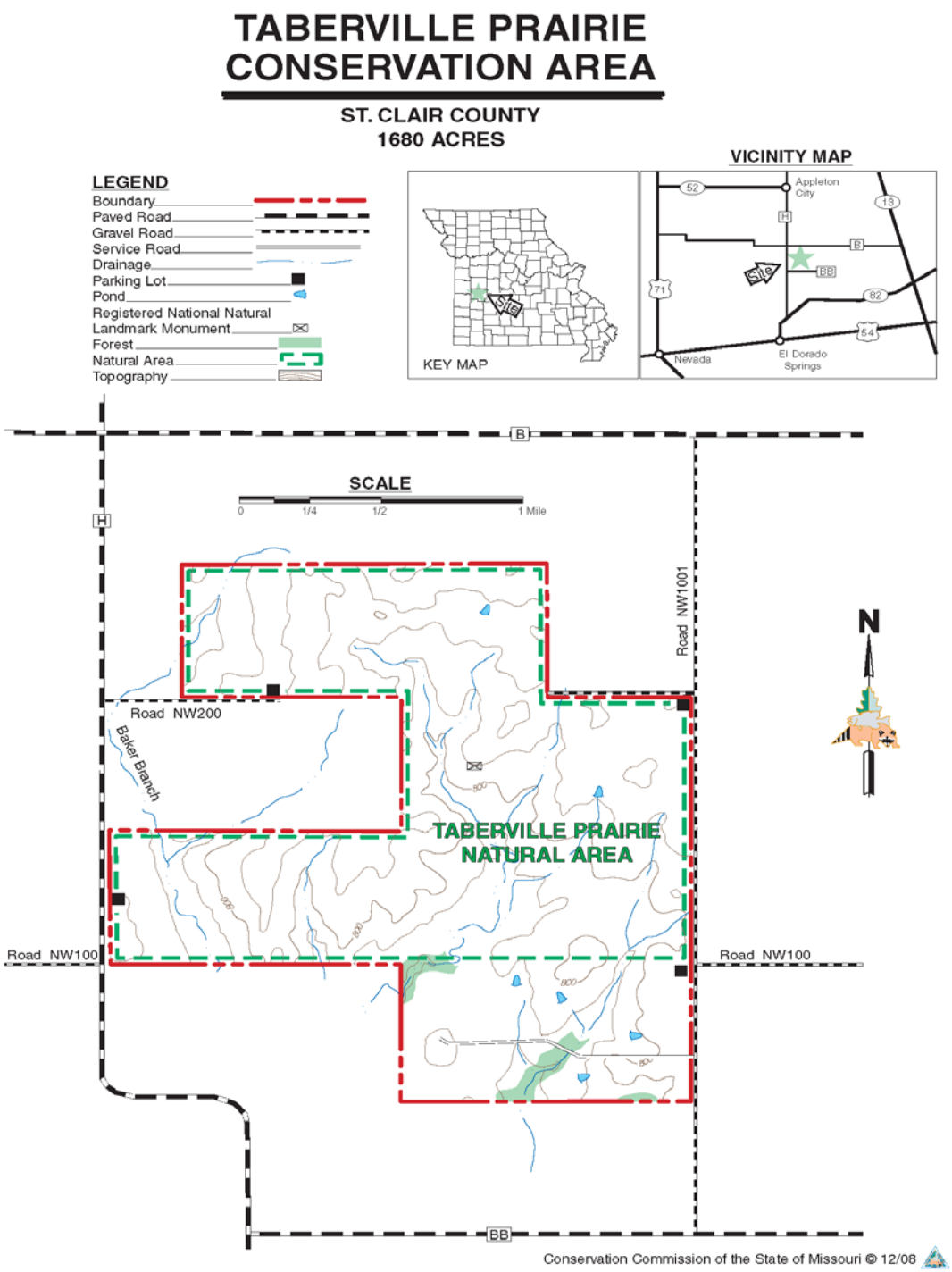
Prior to 1959, haying was the main use of the area. Grazing did occur on portions of the central units at moderate rates. Since 1959 a hay-rest rotation has been carried out on all units of prairie except one unit designated as a control. Grazing was re-introduced in 2002 as an experiment for patch-burn grazing method. Patch-burn grazing was studied in a Management Evaluation project in portions of T-5, 6&7 by Resource Science Division to monitor effects of this type of grazing on plants, grassland birds (including prairie chicken), and grassland insects. Prescribed fire has been used on all units of native prairie.

In 1971 a State Natural Area was designated on the north portion of the area which contains native prairie. In 1976 Taberville Prairie was designated as a National Natural Landmark with a marker plaque located on top of a ridge in Unit T-5N.

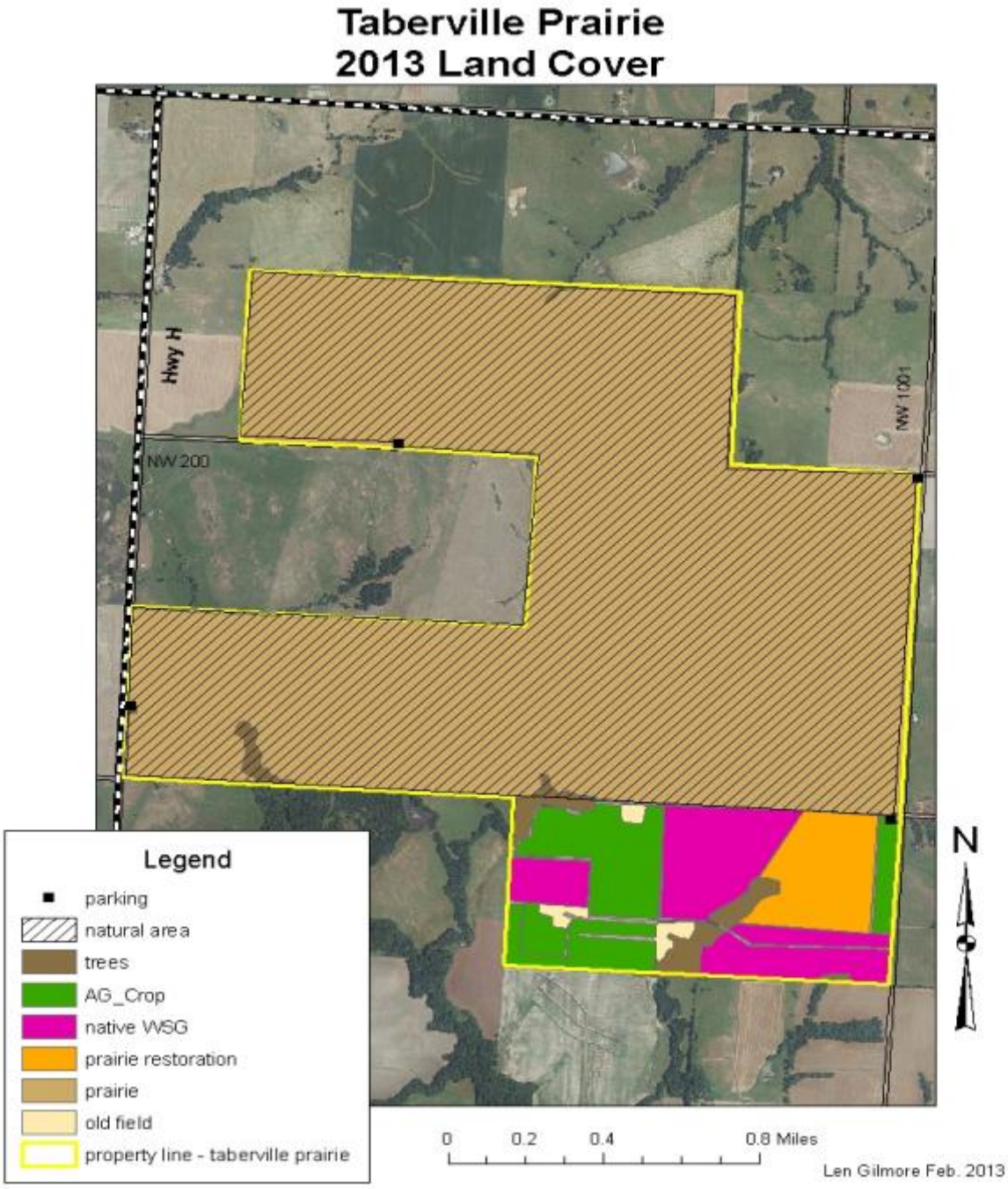
Current Land and Water Types

Land/Water Type	Acres	Feet	% of Area
Native Prairie	1,360		81.0
Native Warm Season Grass Plantings	116		7.0
Crop Fields	96		5.7
Prairie Restoration	71		4.2
Trees	20		1.2
Old Field	12		0.7
Roads and Parking Lots	5		0.2
Total	**1,680**		**100**
Stream Frontage		39,526	

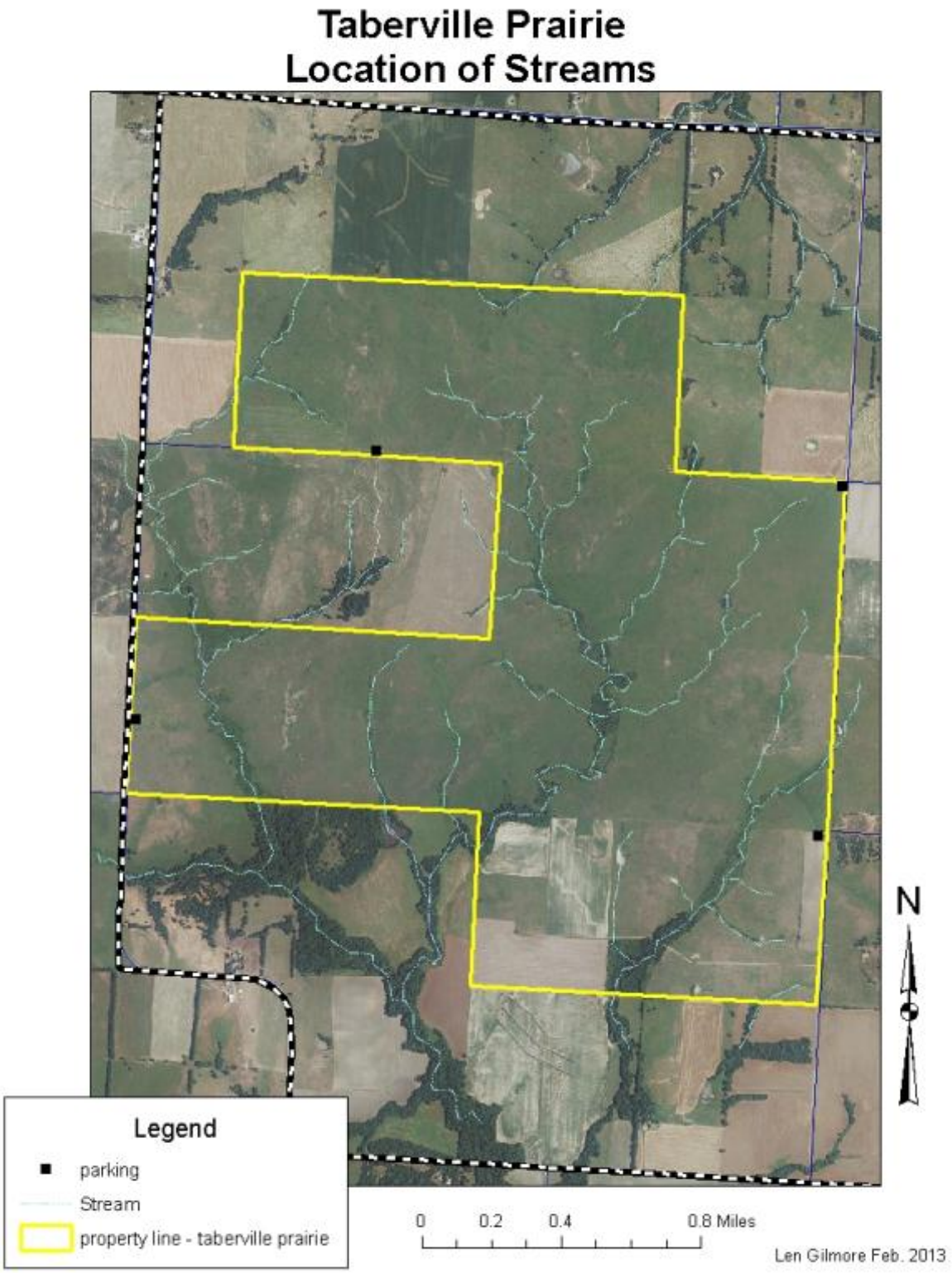
Appendix 2: Taberville Prairie Area Map



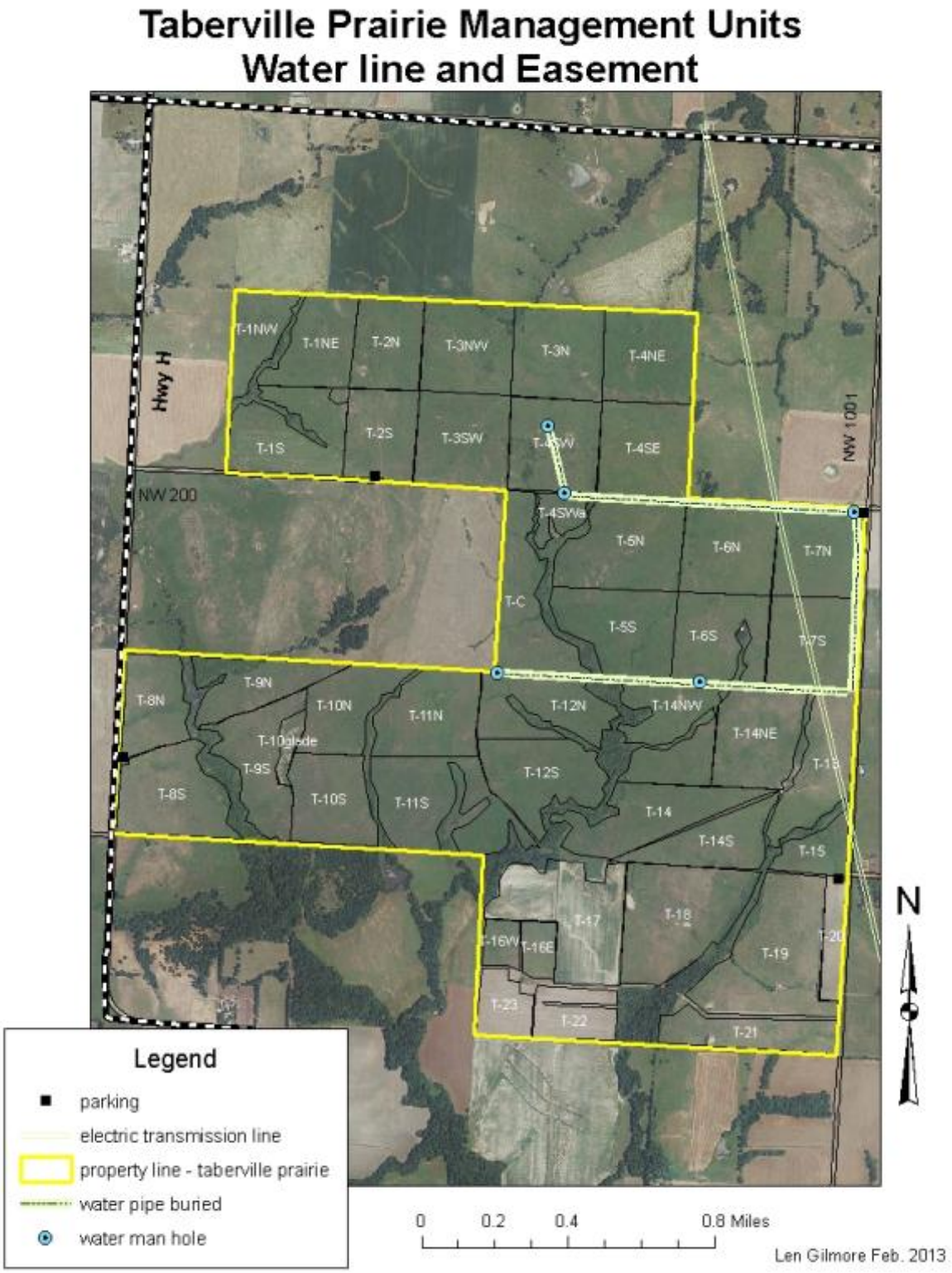
Appendix 3: Taberville Prairie 2013 Land Cover



Appendix 4: Taberville Prairie Location of Streams



Appendix 5: Taberville Prairie Management Units Waterline and Easements



Appendix 6: Wah'Kon-Tah Prairie Area Background

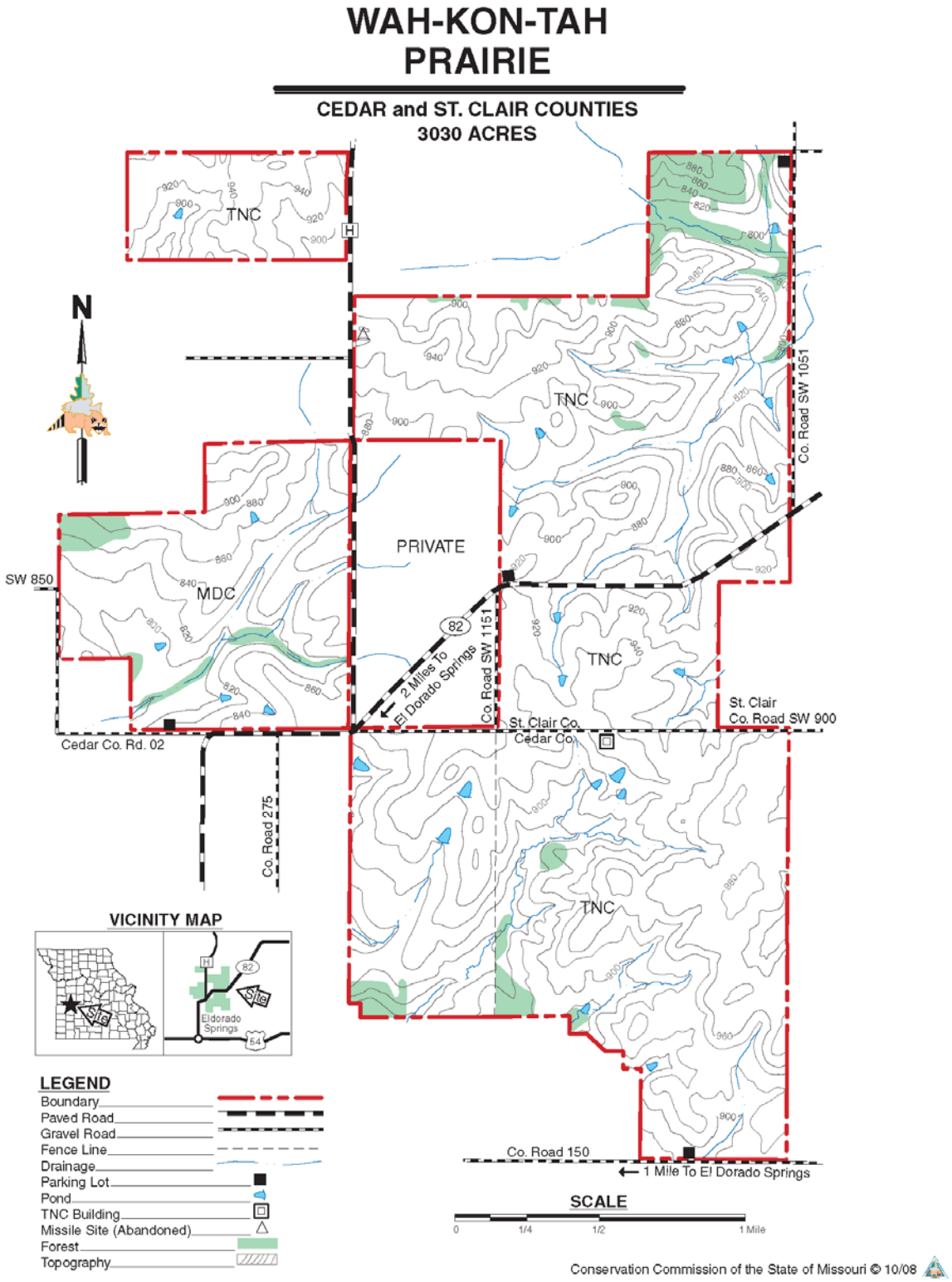
Portions of Wah'Kon-Tah Prairie were purchased in 1973, 1976, and 1981 by The Nature Conservancy with funds provided by Miss Katherine Ordway. The area was named for the Great Spirit or Great Mystery of the Osage tribe. A portion of the prairie north of Hwy. 82 was used as a golf course in the early years of El Dorado Springs. The south portion of the prairie was named MO-KO Prairie prior to The Nature Conservancy purchasing the Thoreson Ranch which linked Wah'Kon-Tah Prairie with MO-KO Prairie. MO-KO Prairie was purchased with Miss Katherine Ordway funds by The Nature Conservancy in 1974 through 1975 and was named after the Indian word for medicine. Later, Missouri Dept. of Conservation purchased the Foust tract. The whole area was named Wah'Kon-Tah Prairie after that. The elevation of the area ranges from 820' above MSL to 980' above MSL.

Prior to purchase much of the area (management units WK-9&10, MK-1&2, and all the Thoreson and Foust tracts) was grazed annually. On MK-1 a moderate grazing rotation was carried out after purchase until 1984. Since 1985 a rotation of haying, grazing, and burning has been conducted on MK-1&2. The remainder of the area was annually hayed with some light grazing. Prior to acquisition, most of the Thoreson tracts and a small portion of the Foust tract had been overseeded to tall fescue. Beginning in 1980 the management changed to a rotation of hay-burn. In 2002 grazing was re-introduced into the management rotation.

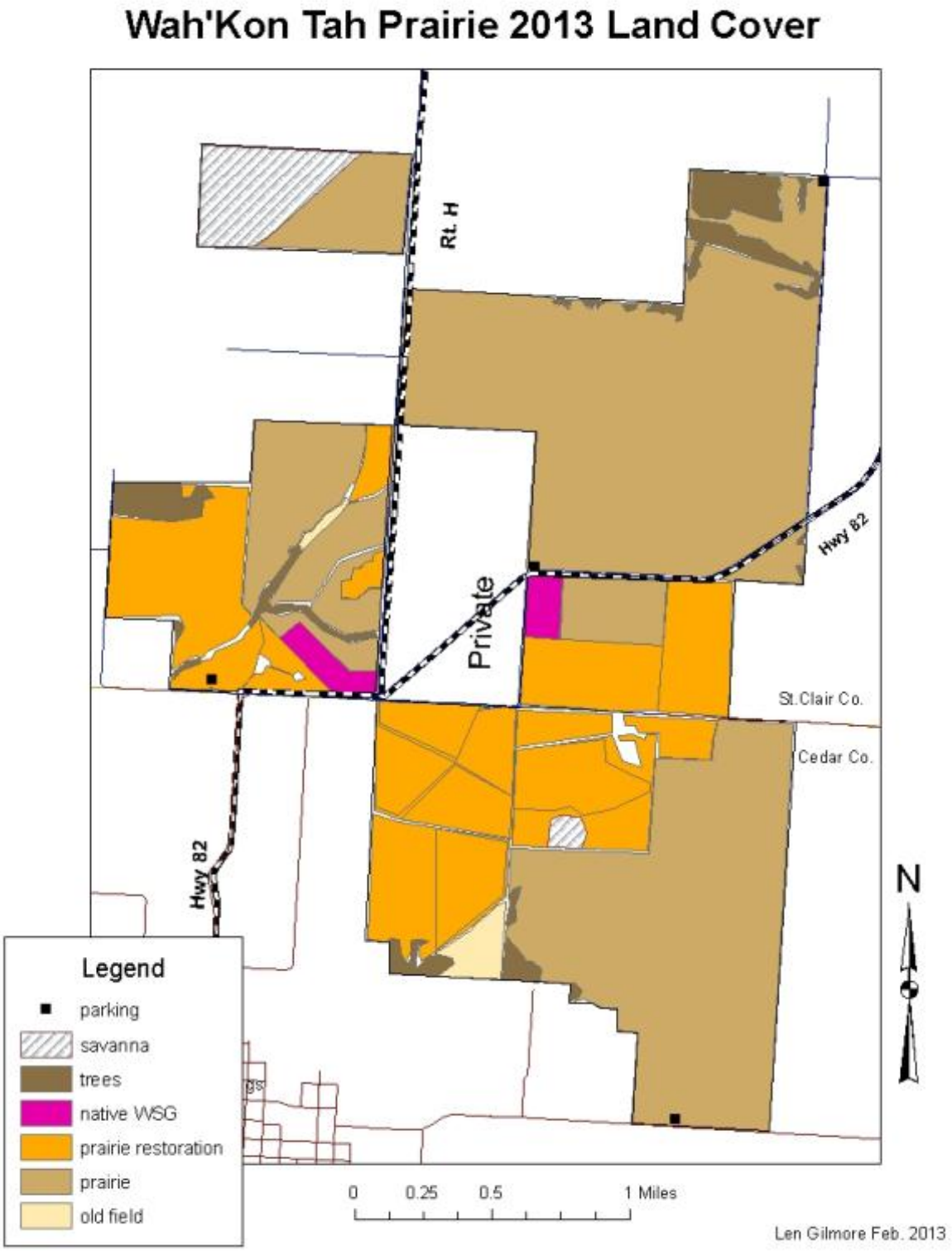
Current Land and Water Types

Land/Water Type	Acres	Feet	% of Area
Native Prairie	1,916		63.2
Prairie Restoration	809		26.7
Trees	231		7.6
Native Warm Season Grass Planting	42		1.4
Old Field	31		1.1
Roads and Parking Lots	1		<0.1
Total	**3,030**		**100**
Stream Frontage		126,747	

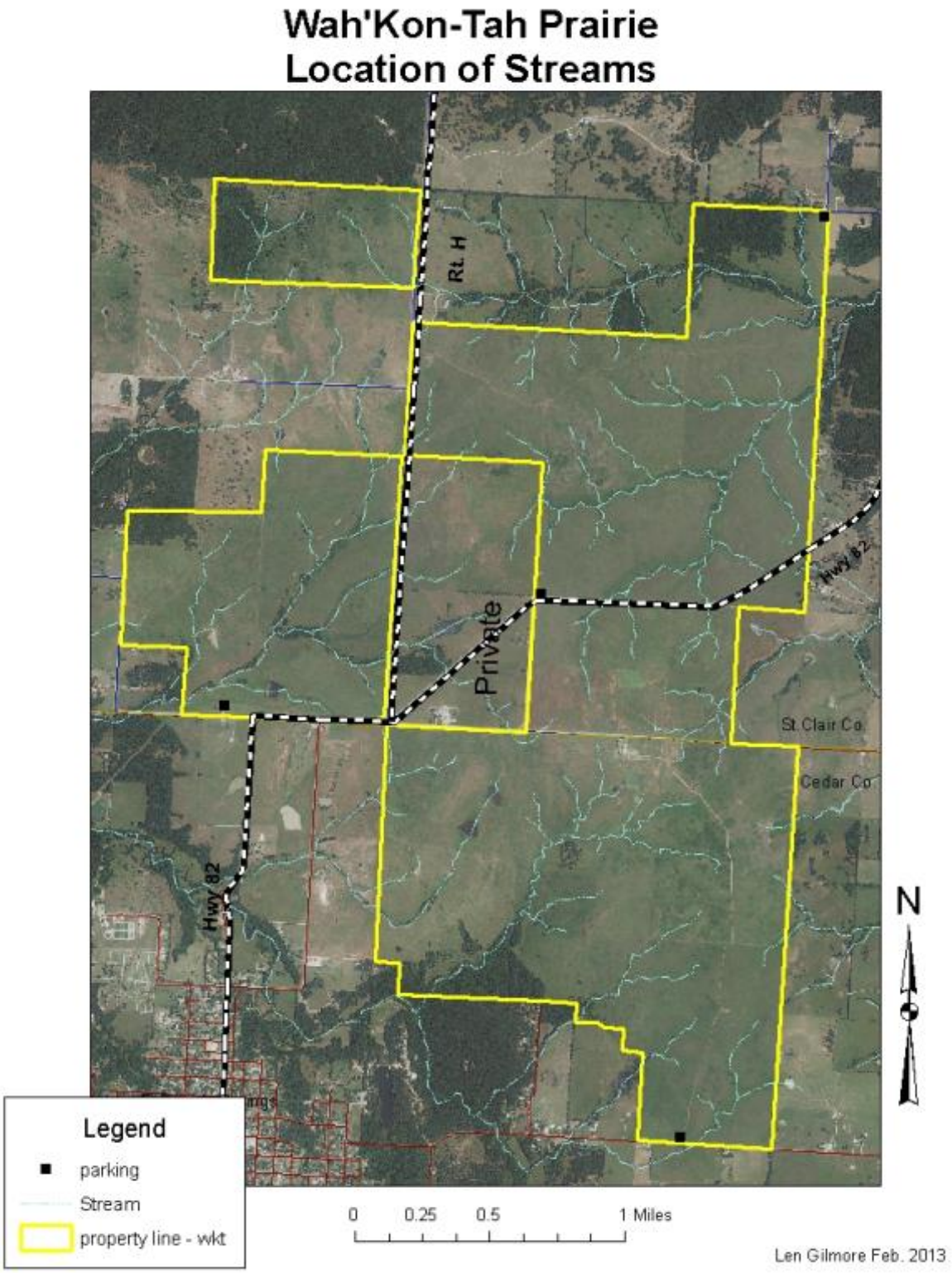
Appendix 7: Wah-Kon-Tah Prairie Area Map



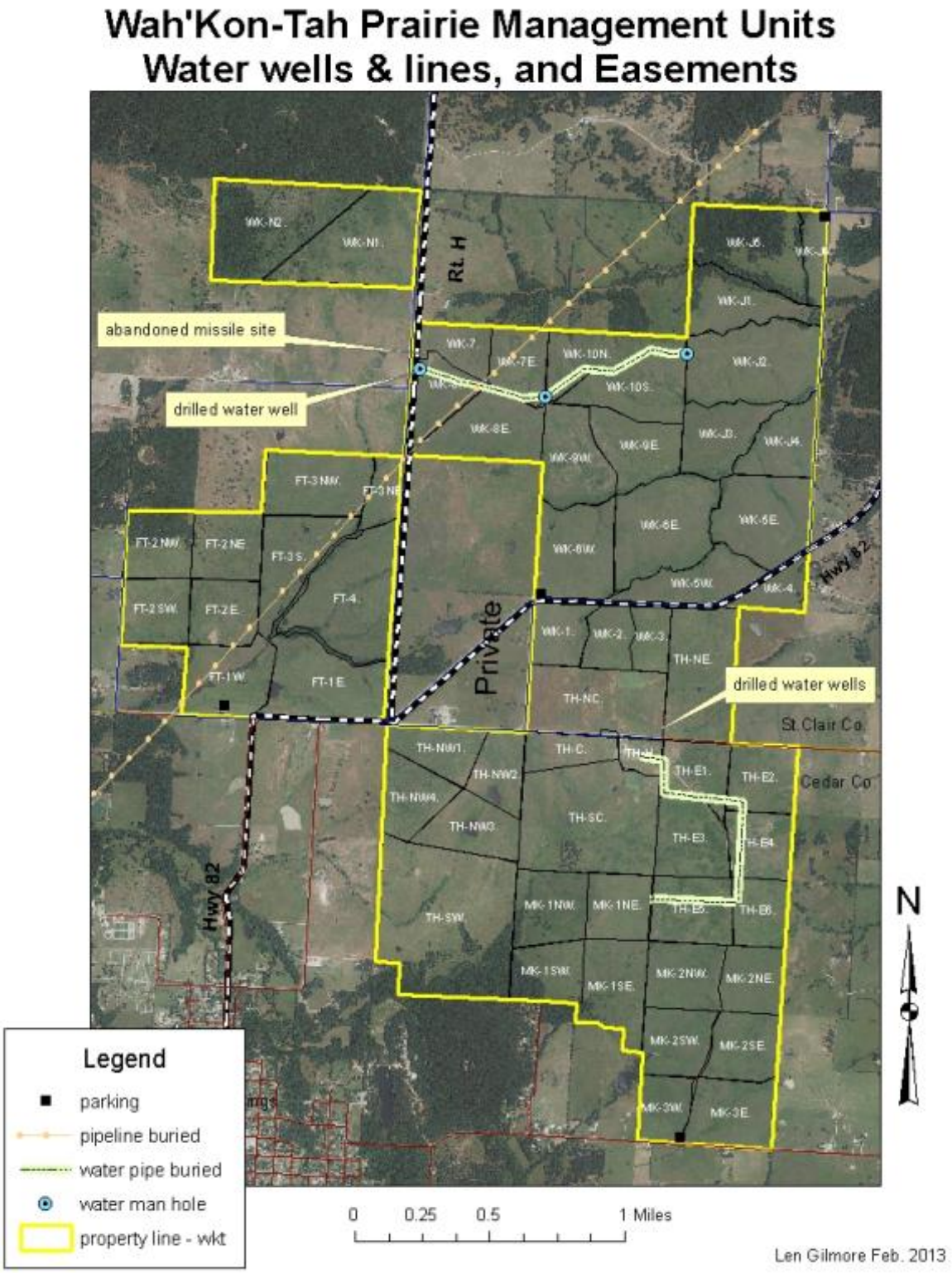
Appendix 8: Wah'Kon Tah Prairie 2013 Land Cover



Appendix 9: Wah'Kon-Tah Prairie Location of Streams



Appendix 10: Wah'Kon-Tah Prairie Management Units Water Wells, Lines, Easements



Appendix 11: Monegaw Prairie Area Background

Monegaw Prairie was purchased by TNC in 1975 with funds from Miss Katherine Ordway. The south 90 acres was purchased by the Department from TNC in 1978. The area is named after a latter day Osage Chief who reportedly lived in the Monegaw Springs area. Elevations are from 840 to 950 feet above MSL.

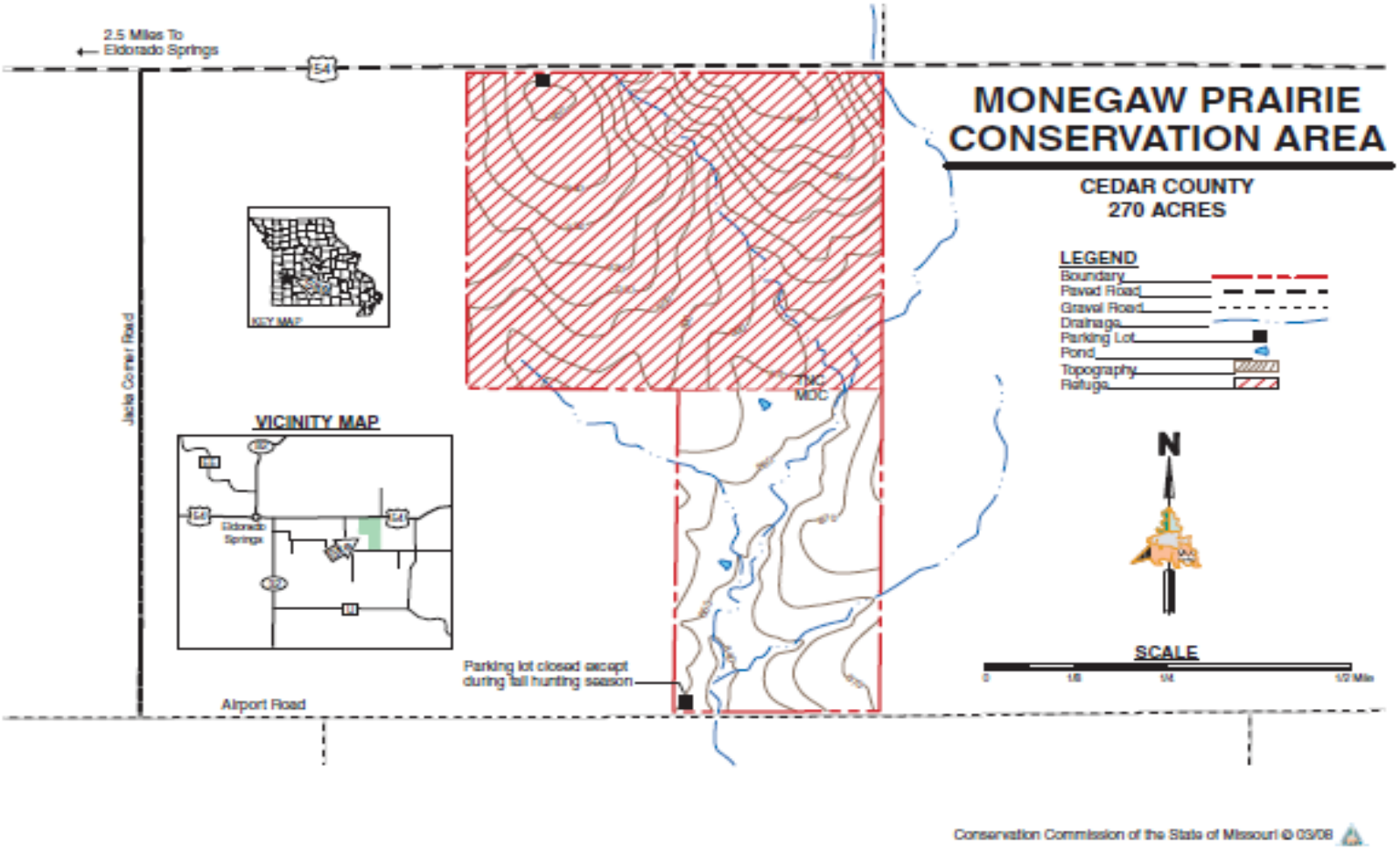
The past use of this area was periodic haying and grazing. Tall fescue was seeded, prior to TNC purchase, in the northwestern portion of the area.

Current Land and Water Types

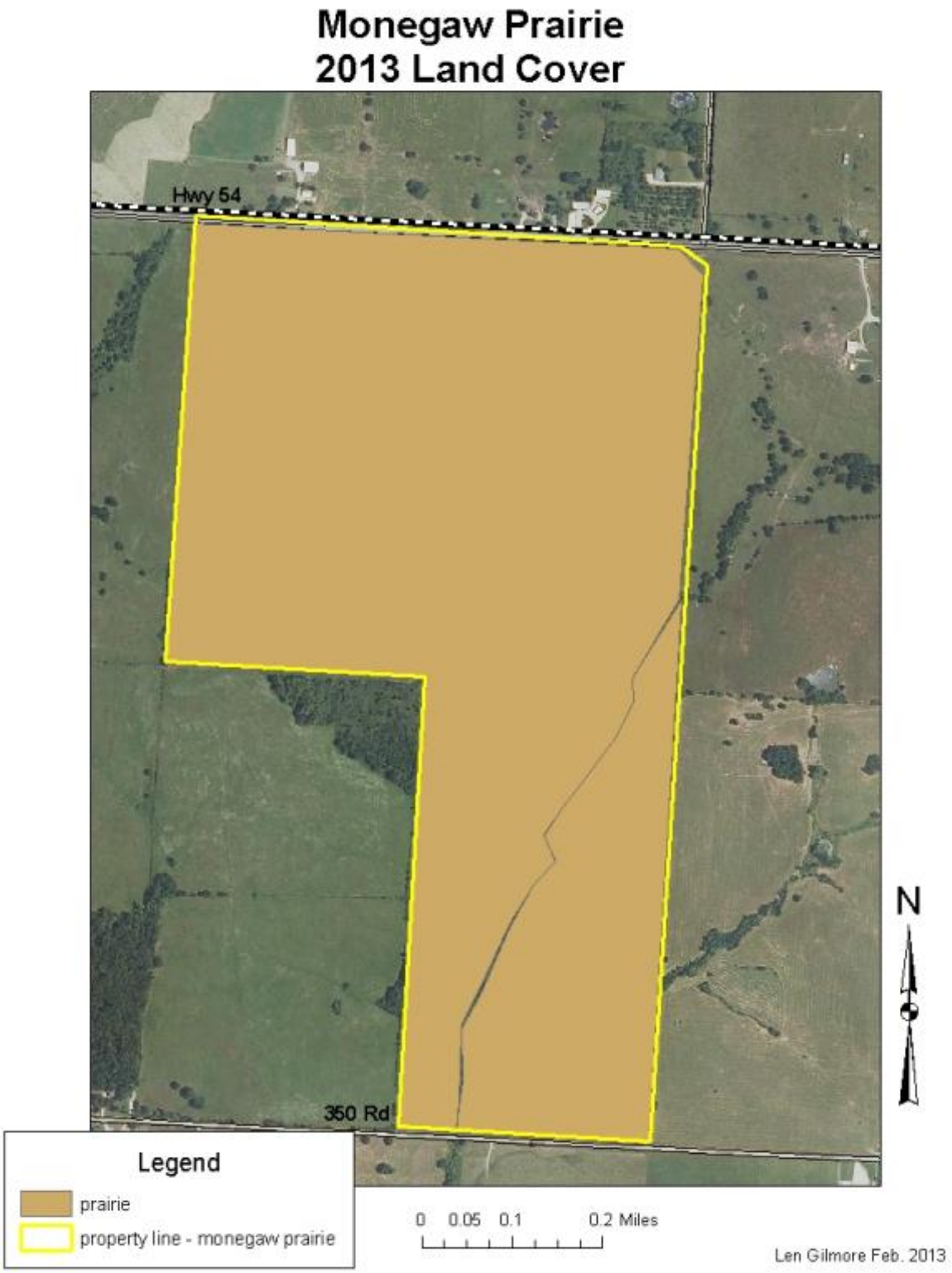
Land/Water Type	Acres	Feet	% of Area
Native Prairie	270		100
Total	**270**		**100**
Stream Frontage		11,143	

* Trees have been removed from the area. Shrubs occur in the bottom of the drainages.

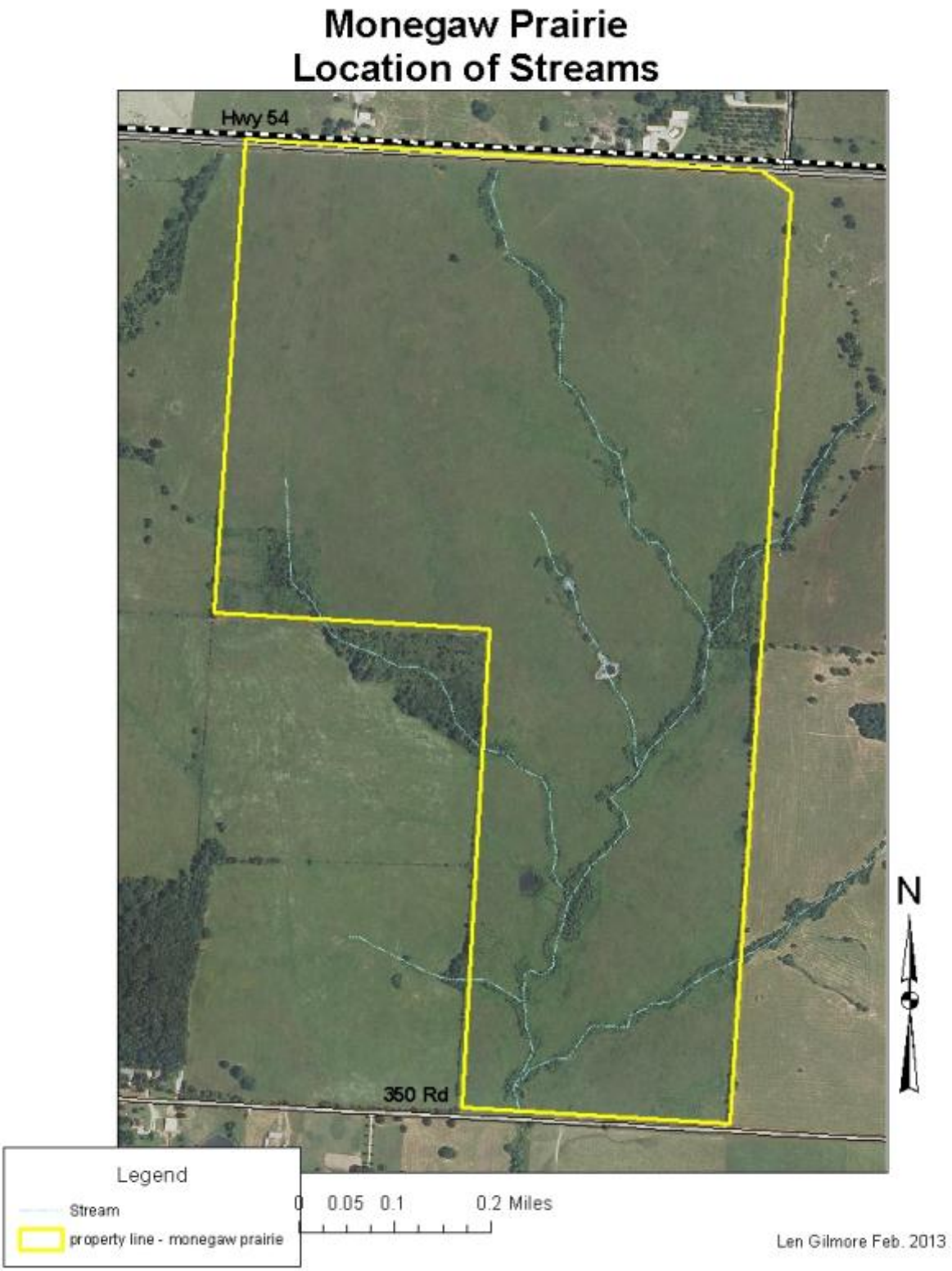
Appendix 12: Monegaw Prairie Area Map



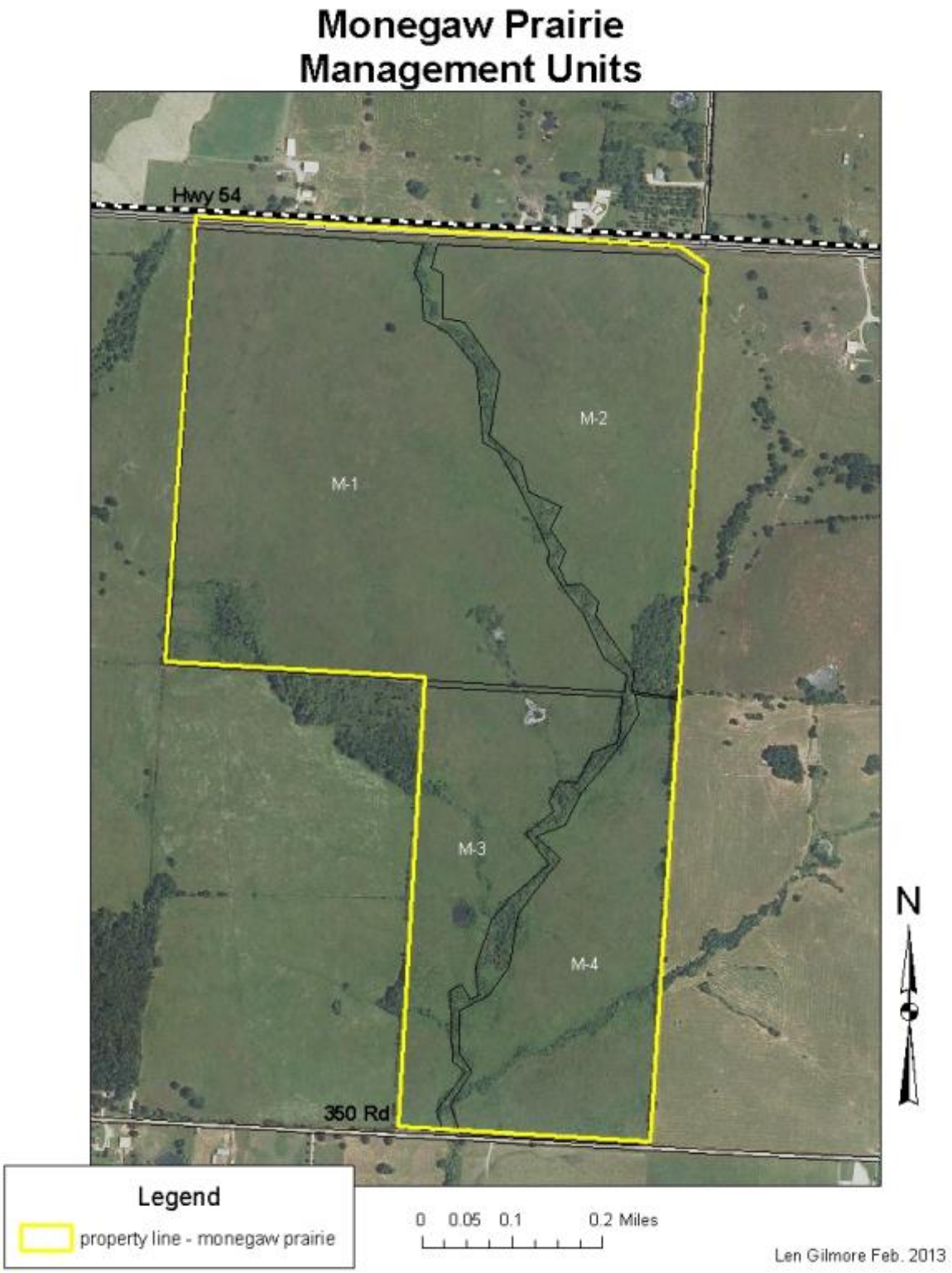
Appendix 13: Monegaw Prairie 2013 Land Cover



Appendix 14: Monegaw Prairie Location of Streams



Appendix 15: Monegaw Prairie Management Units



Appendix 16: Gay Feather Prairie Area Background

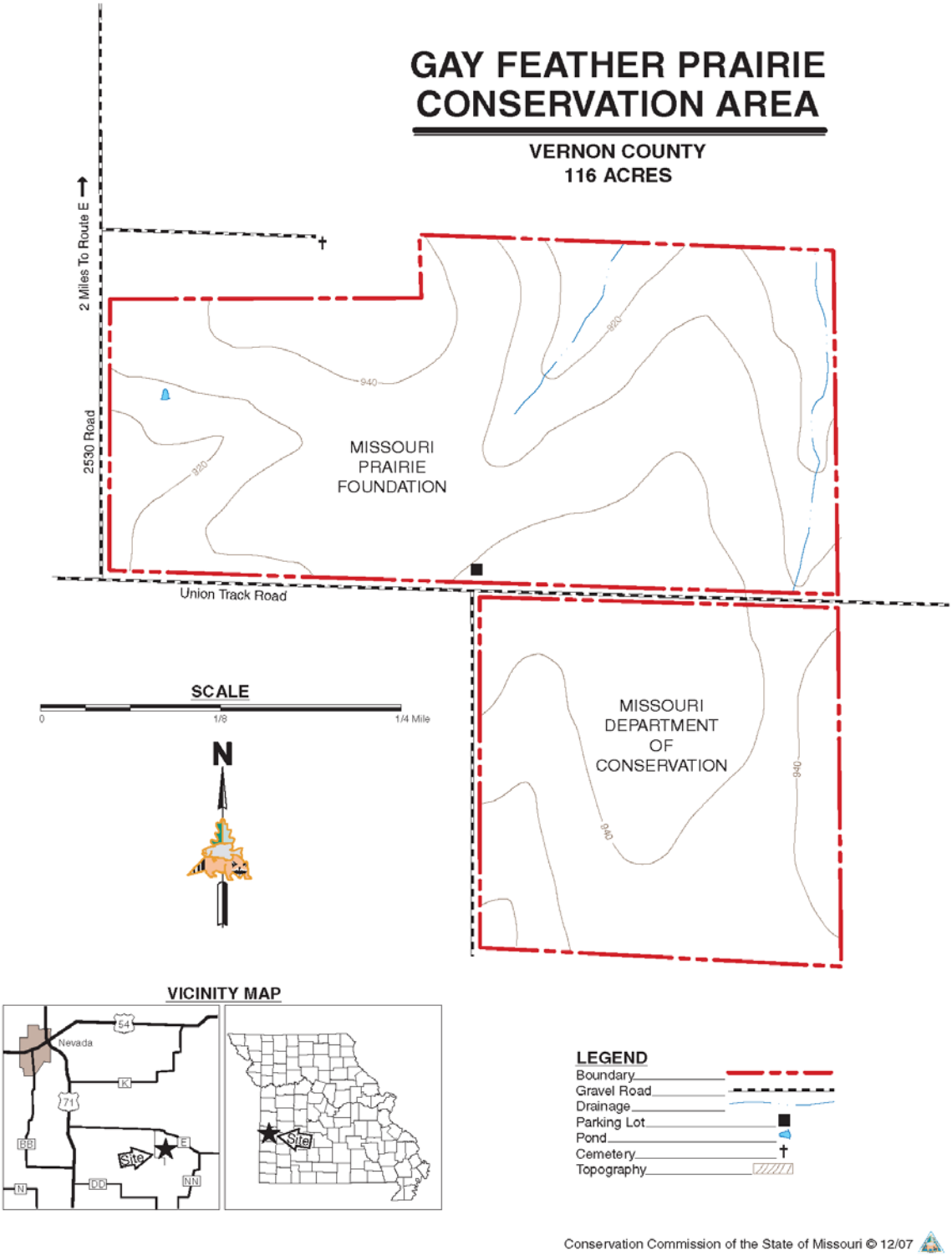
Seventy-six acres were purchased by MPF in 1976 forming the Gayfeather Prairie. The Department purchased an additional 40 acres in 1984 making the prairie area 116 acres. The area is named after one of the showy prairie flowers of the genus *Liatris*. Elevations range from 910 to 940 feet above MSL.

The past use of this area was annual haying. Since purchase, a hay rotation of rest-cut with periodic prescribed burns has been conducted.

Current Land and Water Types

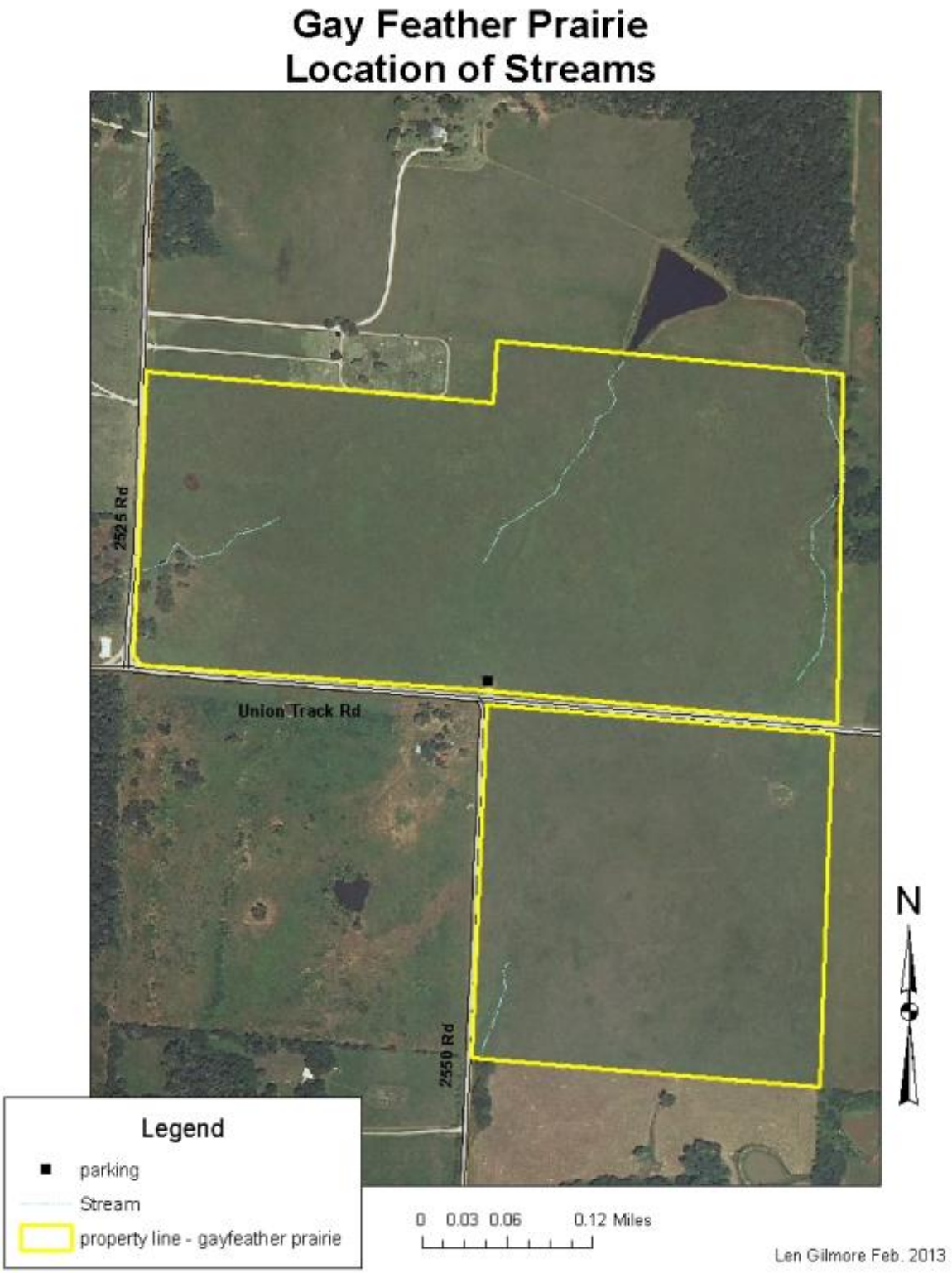
Land/Water Type	Acres	Feet	% of Area
Native Prairie	114		98.3
Trees	2		1.7
Total	**116**		**100**
Stream Frontage		2,980	

Appendix 17: Gay Feather Prairie CA Area Map



Appendix 18: Gay Feather Prairie 2013 Land Cover

Appendix 19: Gay Feather Prairie Location of Streams



Appendix 20: Gay Feather Prairie Management Units

Appendix 21: Bristow Conservation Area Background

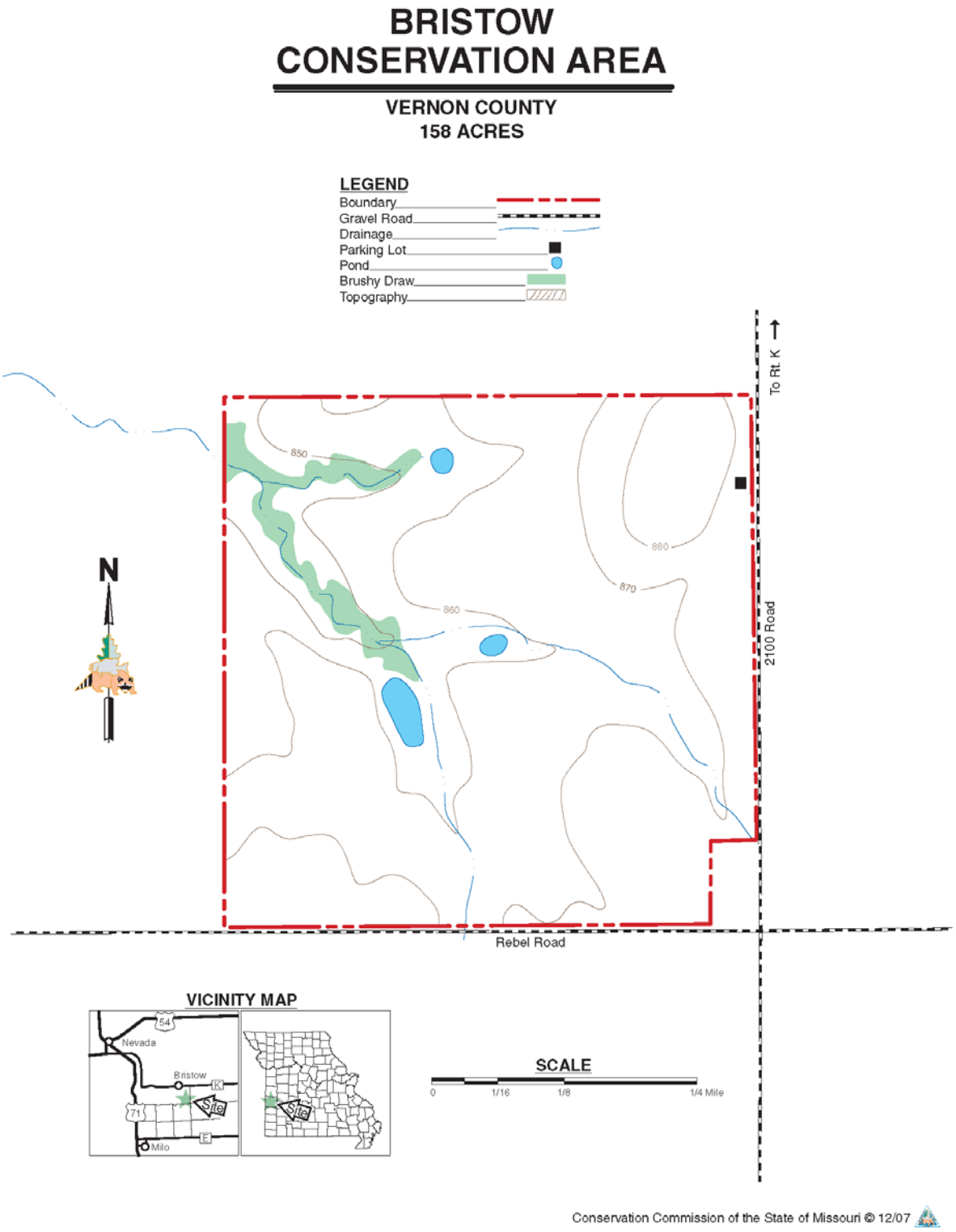
Bristow was acquired by the Department in 1992. The majority of the native prairie here was plowed or converted in the past to make way for other land uses. Bristow still has three native prairie remnants in the northwest portion of the area. Elevations range from 840 to 880 feet above MSL.

Management practices after acquisition included prescribed burning, haying, and other tools to simulate historic disturbances that maintain healthy grasslands and limit the negative impacts of invasive plants, including trees, which were historically uncommon here. Management priorities include providing nesting and brood-rearing habitat for Bobwhite Quail and other grassland birds while maintaining the high quality native prairie remnants.

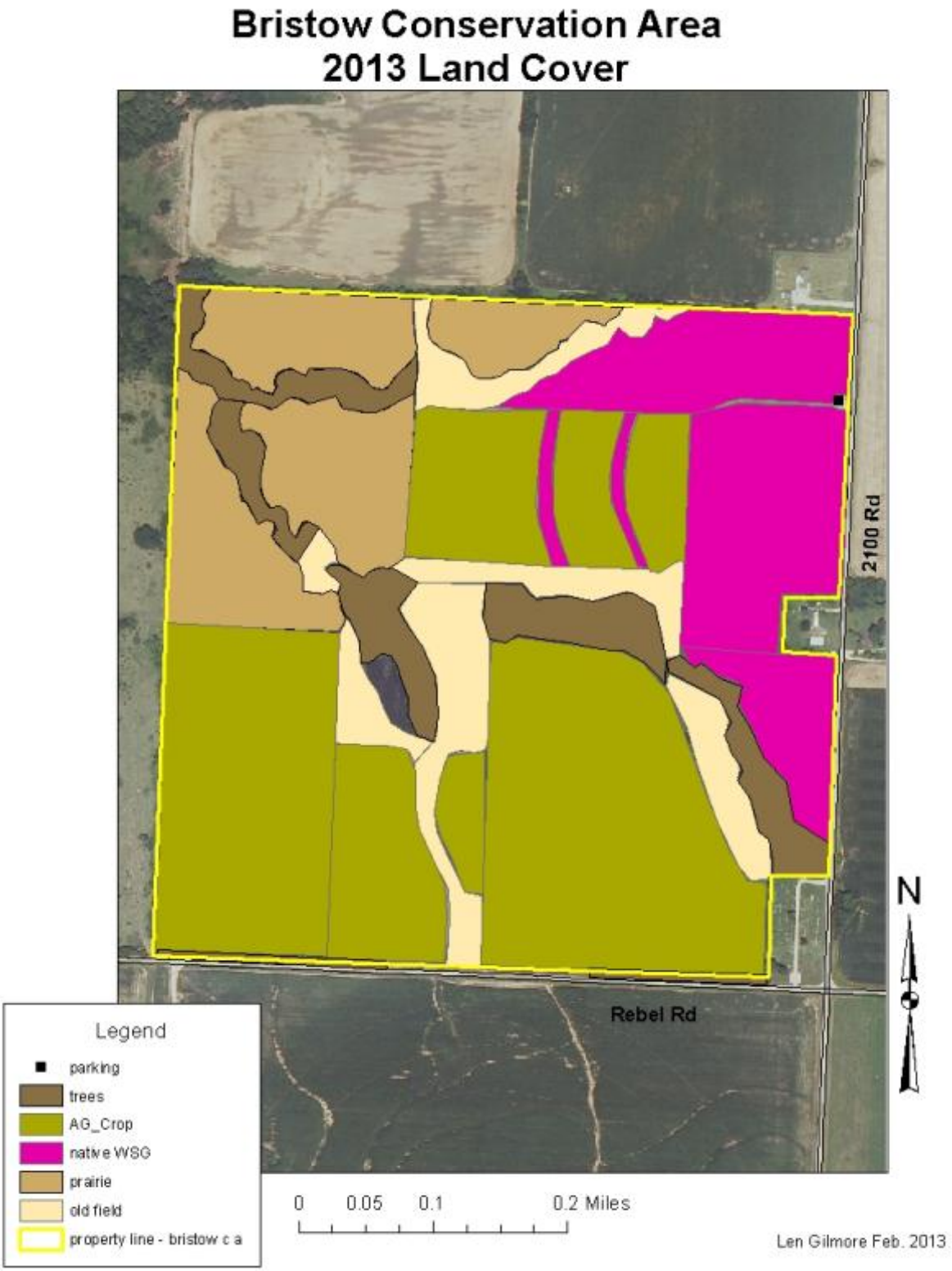
Current Land and Water Types

Land/Water Type	Acres	Feet	% of Area
Crop Fields	71.5		45.2
Native Warm Season Grass planting	27.9		17.7
Native Prairie	24.8		15.7
Old Field	17.2		10.9
Trees	14.8		9.4
Roads and Parking Lots	1.8		1.1
Total	**158**		**100**
Stream Frontage		7,448	

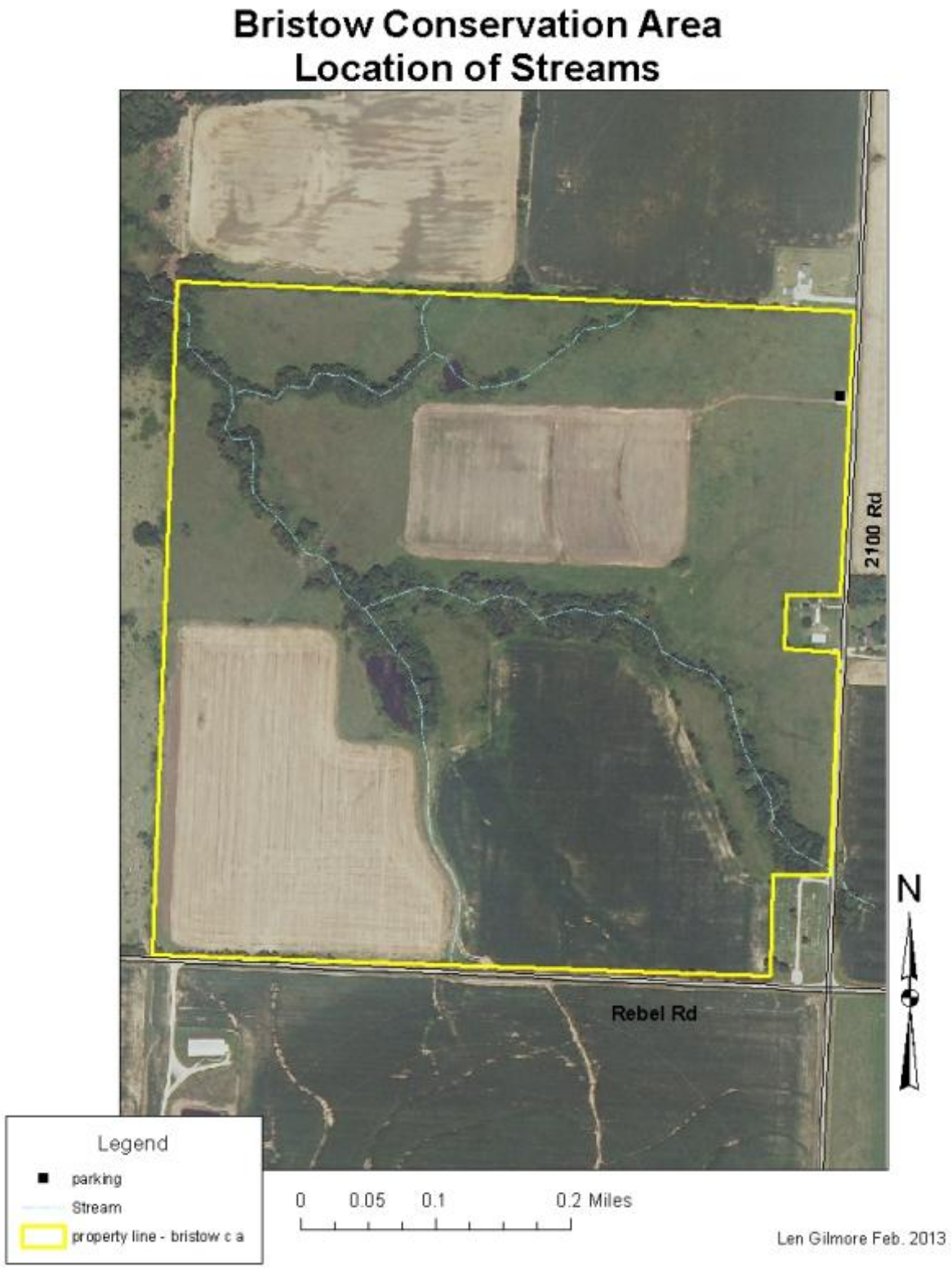
Appendix 22: Bristow CA Area Map



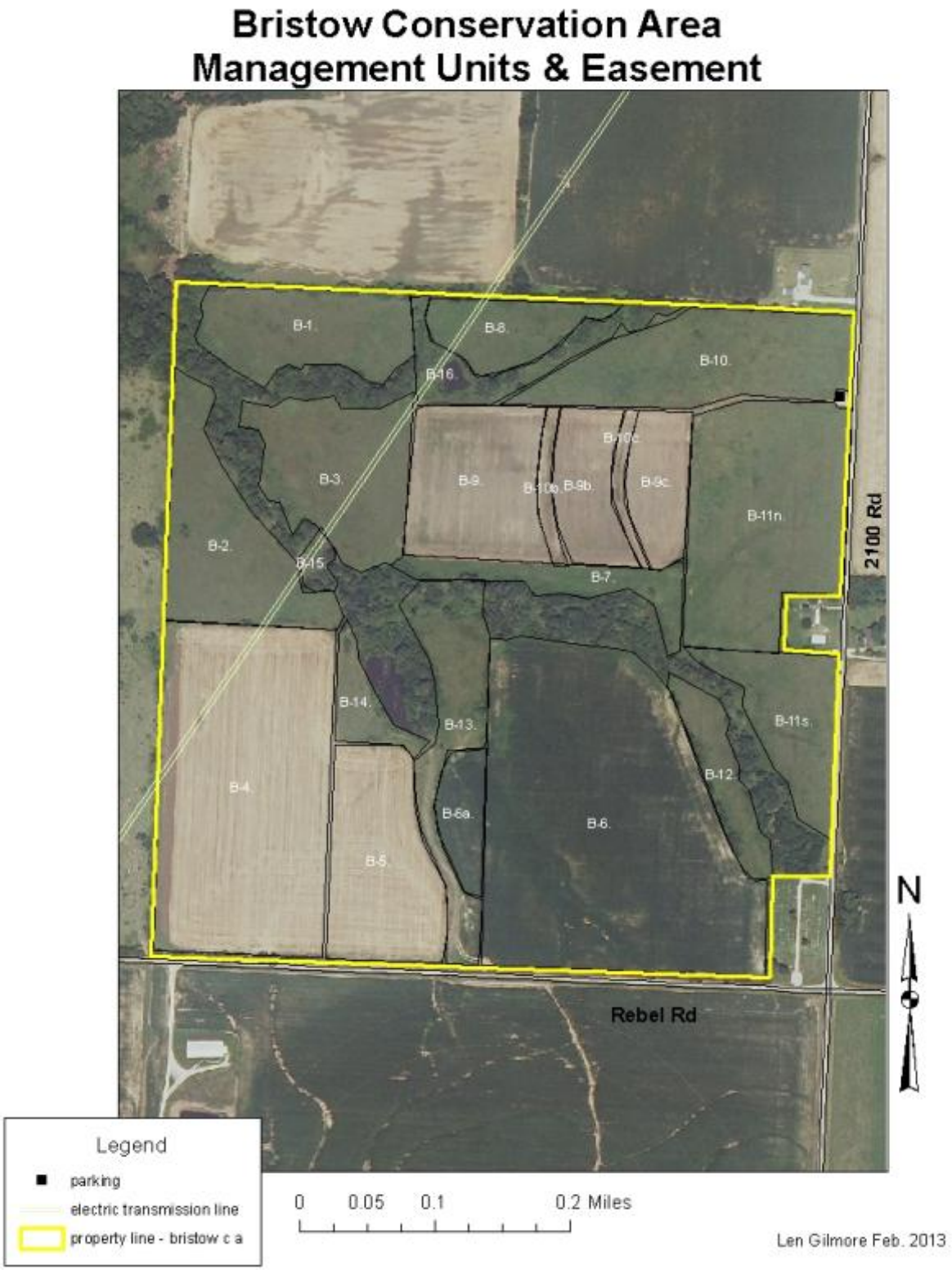
Appendix 23: Bristow CA 2013 Land Cover



Appendix 24: Bristow CA Location of Streams



Appendix 25: Bristow CA Management Units and Easements



Appendix 26: Osage Prairie Area Background

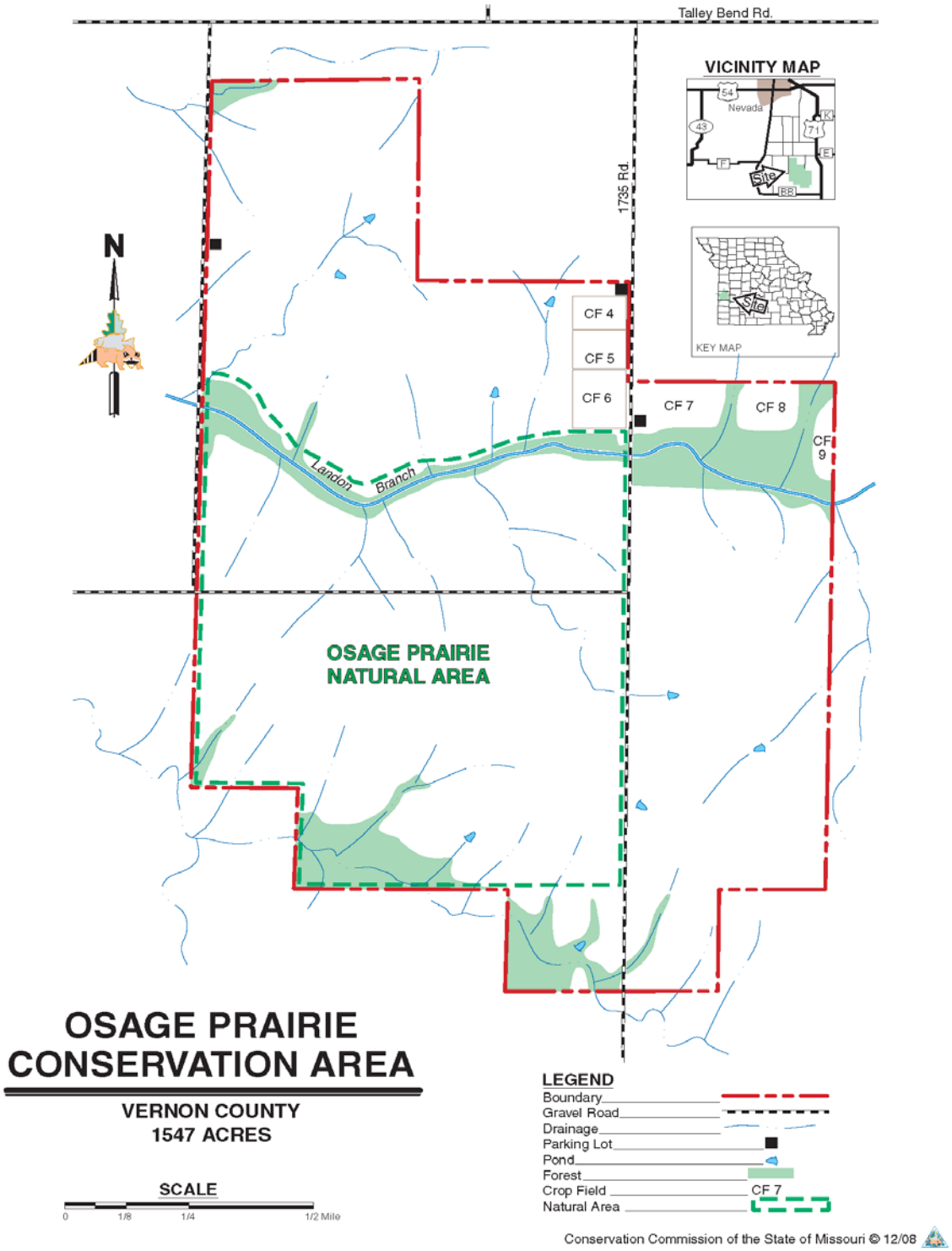
Milo Prairie (85 acres) was one of the first tracts purchased by the Department in 1959 for conservation of the prairie chicken. TNC, with funds from Miss Katherine Ordway, purchased 1,115 acres for their first Missouri prairie in 1972, and renamed the prairie Osage. TNC later purchased an additional 80 acres. In 1981 the Department purchased 267 acres and in 1982 purchased all of the TNC ownership. The area is named after the main Indian tribe of the region. Elevations range from 810 to 910 feet above MSL.

Before TNC acquisition the area was annually grazed at an excessive rate creating overgrazing on 90 percent of the acreage. The area purchased by the Department was annually hayed. Since purchase, the area has been managed by a combination of rest-haying-grazing with periodic prescribed burns. A 335 acre tract was designated as a state Natural Area in two segments Dec. 20, 1971 and Aug. 26, 1975.

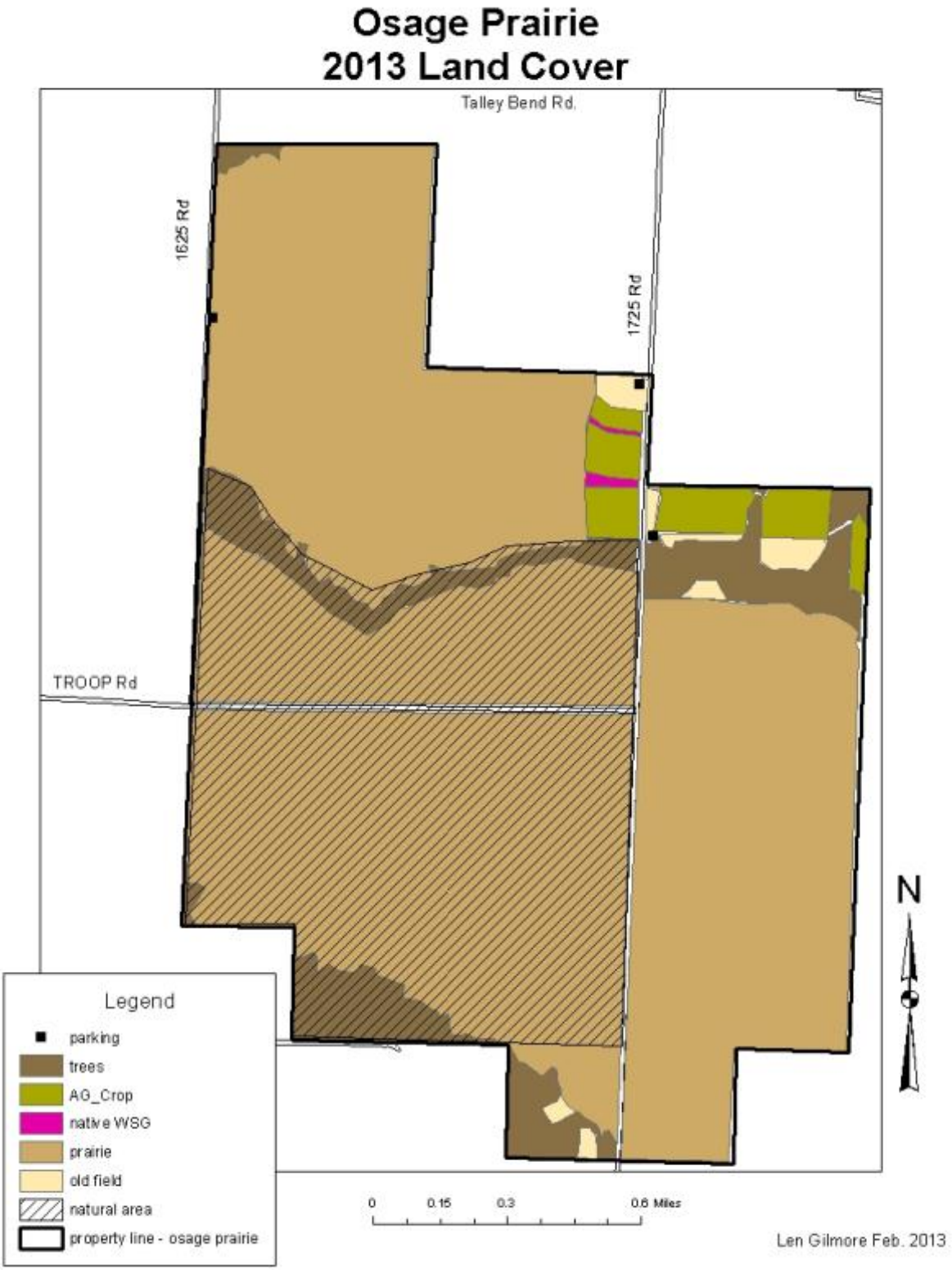
Current Land and Water Types

Land/Water Type	Acres	Feet	% of Area
Native Prairie	1,338		86.5
Trees	136.5		8.8
Crop Fields	49		3.2
Old Field	20		1.3
Native Warm Season Grass planting	3		0.2
Roads and Parking Lots	0.5		<0.1
Total	**1,547**		**100**
Stream Frontage		76,696	

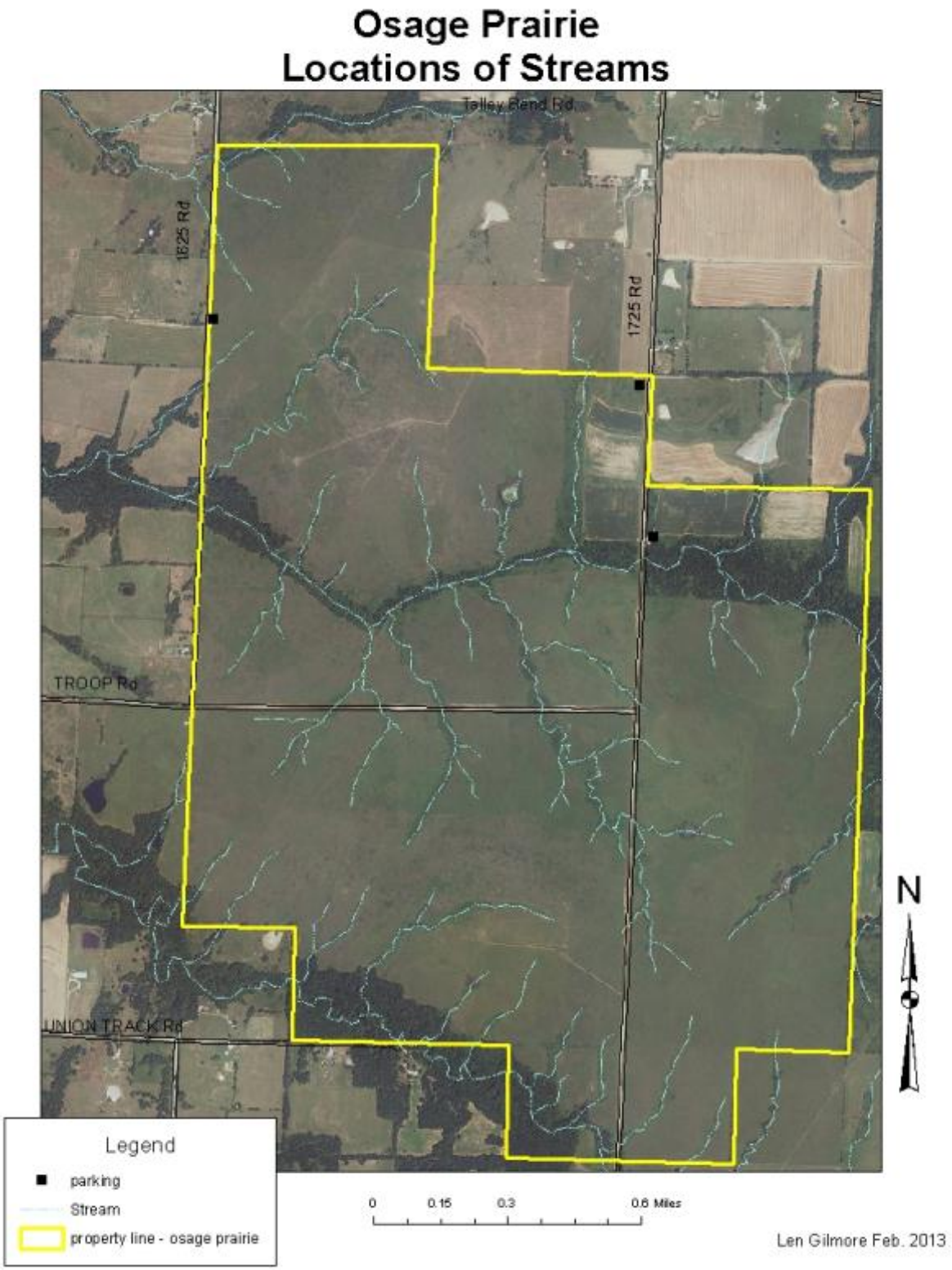
Appendix 27: Osage Prairie CA Area Map



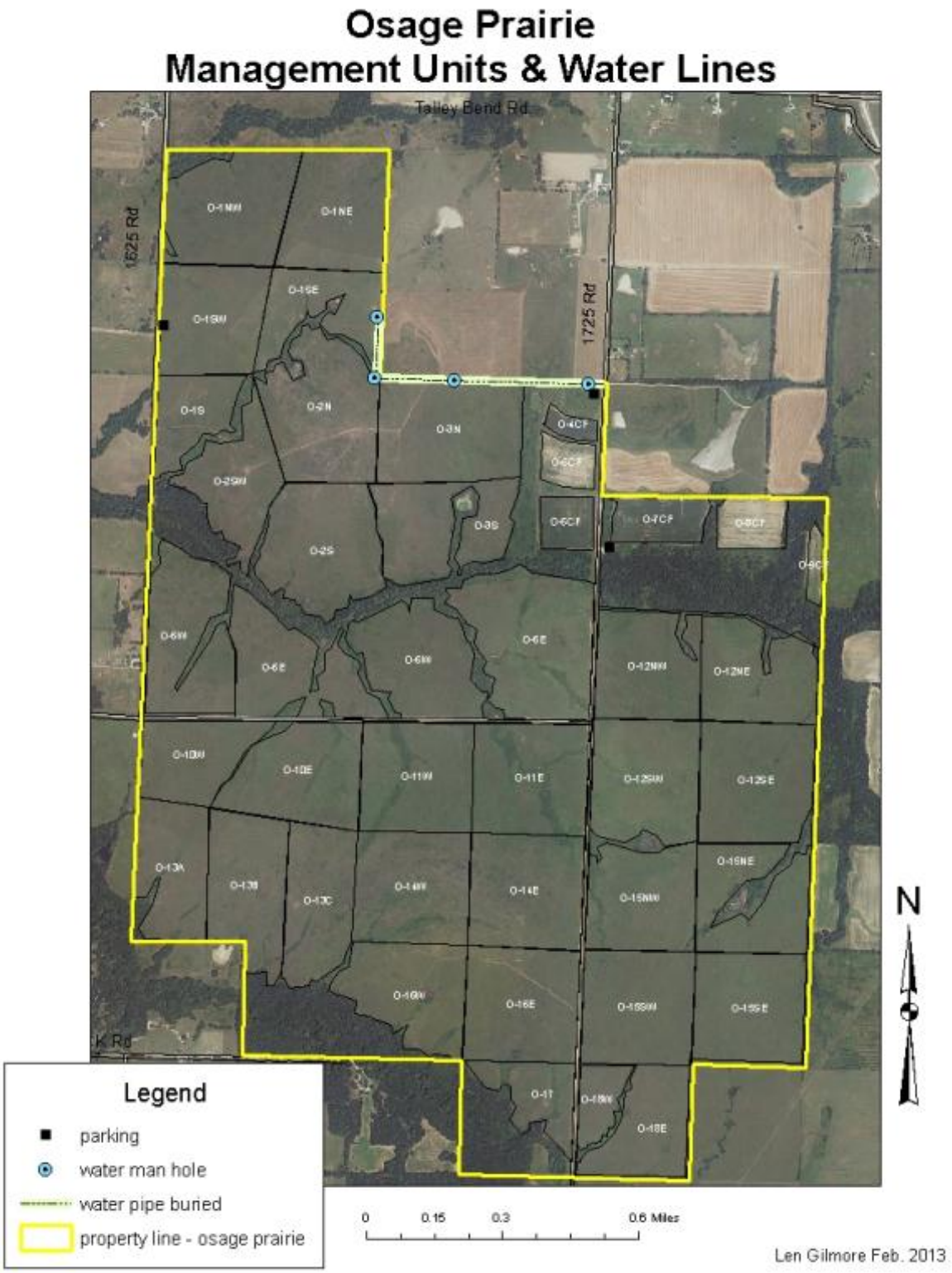
Appendix 28: Osage Prairie 2013 Land Cover



Appendix 29: Osage Prairie Locations of Streams



Appendix 30: Osage Prairie Management Units and Water Lines



Appendix 31: Little Osage Prairie Area Background

Little Osage Prairie was purchased by the TNC in 1972 with funds from Miss Katherine Ordway. The area was named as a smaller unit of Osage Prairie which was named for the major Indian tribe of the region. Elevations range from 820 to 860 feet above MSL.

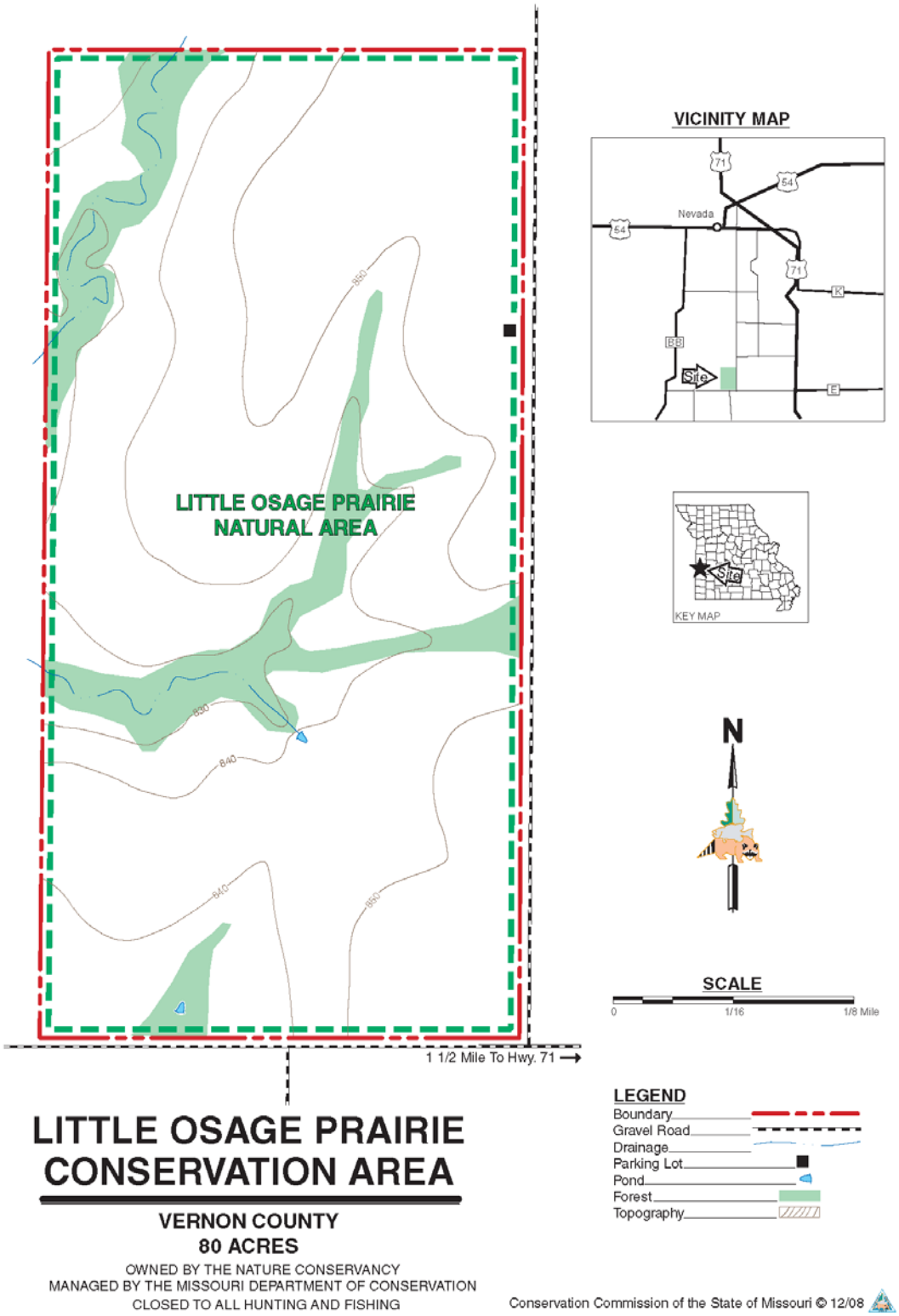
Prior to purchase the area was annually hayed with some light grazing. Since purchase a rest-cut-hay rotation has been conducted with periodic prescribed burning. A parking lot was installed just off the county road on the east boundary.

The area was designated as a Missouri Natural Area Aug. 26, 1975.

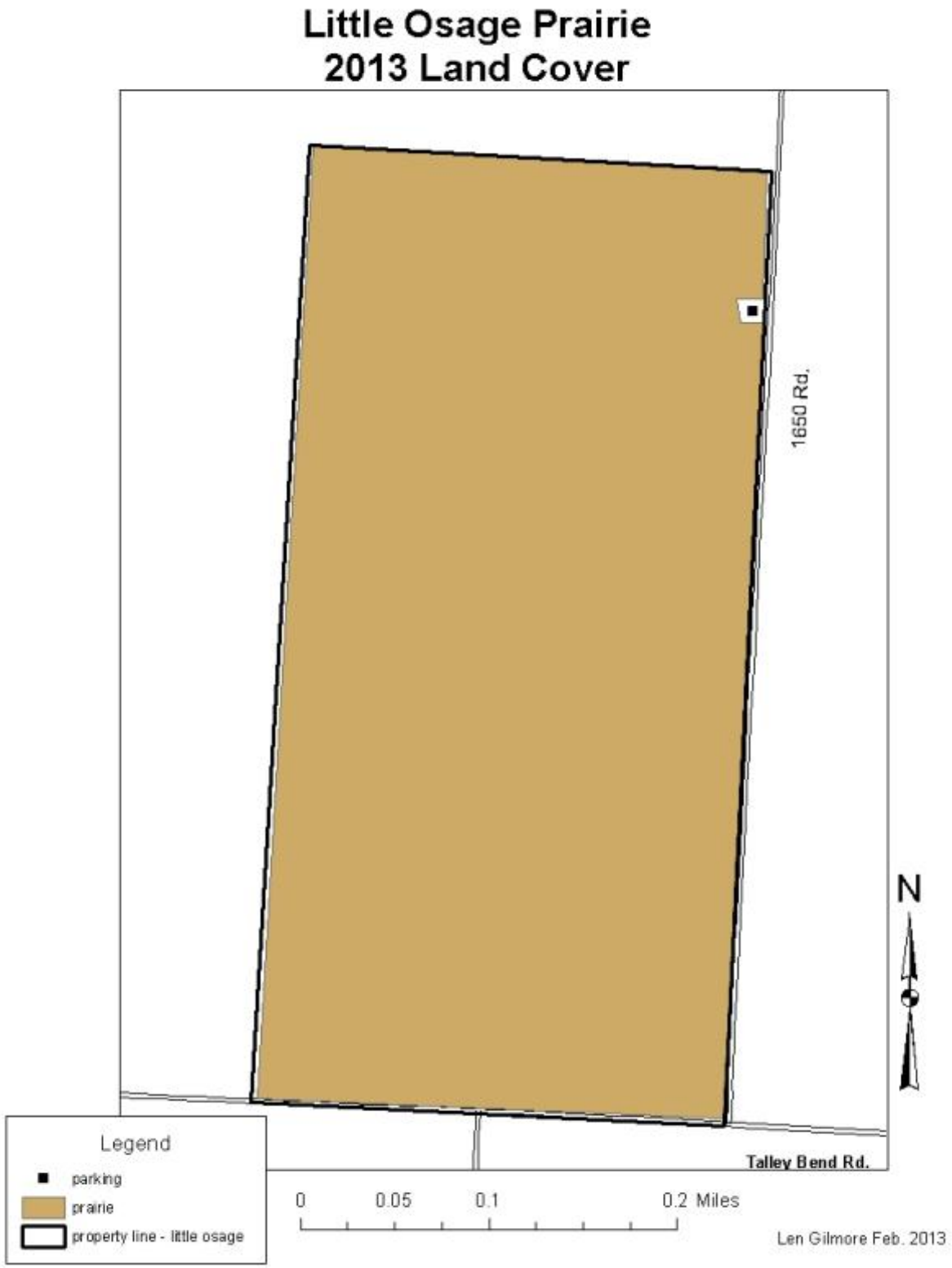
Current Land and Water Types

Land/Water Type	Acres	Feet	% of Area
Native Prairie	80		100
Total	**80**		**100**
Stream Frontage		4,628	

Appendix 32: Little Osage Prairie Conservation Area Map

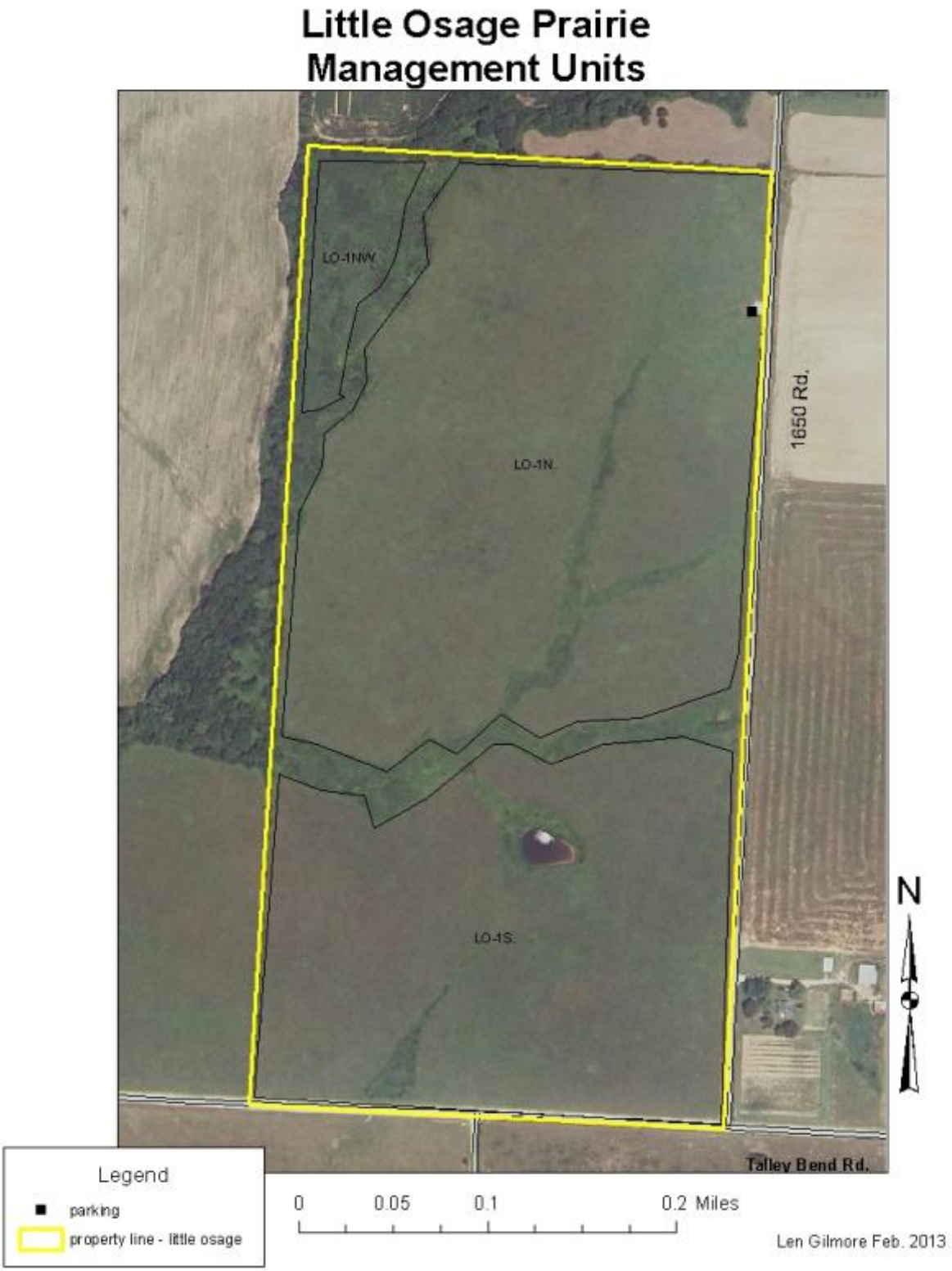


Appendix 33: Little Osage Prairie 2013 Land Cover



Appendix 34: Little Osage Prairie Locations of Streams

Appendix 35: Little Osage Prairie Management Units



Appendix 36: Draft Upper Osage Prairie Conservation Areas Management Plan Public Comments

Received during public comment period (June 1-30, 2014)

Please manage any area that was originally prairie as prairie. Restore and reconstruct the original MO habitat as much as possible in all areas of the state.