

# Deer Ridge Conservation Area

## Ten-Year Area Management Plan FY 2018-2027



*Lisa M. Allen*

Forestry Division Chief

*12-11-17*

Date

## Deer Ridge Conservation Area Management Plan Approval Page

### PLANNING TEAM

Jason Jacobson, Resource Forester

Chris Williamson, Fisheries Management Biologist

Darlene Bryant, Wildlife Management Biologist

Krista Noel, Natural History Biologist

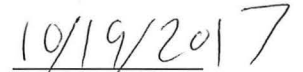
Jason Vaughn, Conservation Agent

John Pinkowski, Private Land Conservationist

### NORTHEAST REGION

RCT Chair

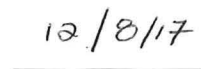
  
\_\_\_\_\_  
Signature

  
\_\_\_\_\_  
Date

### FORESTRY DIVISION

Forest Management Chief

  
\_\_\_\_\_  
Signature

  
\_\_\_\_\_  
Date

## OVERVIEW

- **Official Area Name:** Deer Ridge Conservation Area, # 5703
- **Year of Initial Acquisition:** 1957
- **Acreage:** 6,955 acres
- **County:** Lewis
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**

### A. Strategic Direction

The primary management emphasis for Deer Ridge Conservation Area (CA) is to provide diverse habitat for fish and wildlife through sound management practices, while offering the public compatible outdoor recreational opportunities.

### B. Desired Future Condition

The desired future condition of Deer Ridge CA is a mosaic of diverse forest, woodland, and wetland communities that provide high-quality habitat for a variety of wildlife species. The areas immediately surrounding the North Fabius River and Deer Ridge Lake will be healthy forest and wetland communities that contribute to healthy watersheds for each system.

### C. Federal Aid Statement

- This area, or a portion thereof, was developed with Wetland Reserve Program funds to provide wetland habitat through perpetual easements.
- This area, or a portion thereof, was also 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.
- This area, 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

A. **Priority Areas:** Deer Ridge Forest and Woodland Conservation Opportunity Area

B. **Natural Areas:** None

### II. Important Natural Features and Resources

A. **Species of Conservation Concern:** Species of conservation concern are known from this area. Area managers should consult the Natural Heritage Database annually and review all management activities with the natural history biologist.

B. **Caves:** None

**C. Springs:** None

**D. Other:** The area lies within the Wyaconda River Dissected Till Plains Subsection and includes two subsections. The subsections are the Fabius River Prairie/Woodland Dissected Plains and the Northeast Missouri Alluvial Plains Landtype Associations (Nigh & Schroeder, 2002).

### **III. Existing Infrastructure**

- Deer Ridge Lake (48-acre fishing lake)
- Concrete boat ramp
- Water hydrant
- Fishing dock (Americans with Disabilities Act [ADA] accessible)
- James B. Jenkins Shooting Range (unstaffed rifle, shotgun, and archery ranges)
- Three small picnic shelters
- Nine parking lots
- Four primitive individual campsites
- Seven privies (ADA accessible)
- 33 fishless ponds (15 acres total)
- Six wetland units enrolled in the Wetland Reserve Program (WRP)
- Multi-use hike/bike/horse trail (17.4 miles)

### **IV. Area Restrictions or Limitations**

**A. Deed Restrictions or Ownership Considerations:** None

**B. Federal Interest:**

- The wetland conservation easements permanently prohibit use of the affected land as cropland and require permanent maintenance of the wetland conditions, except in the case of natural disaster. No change can be made in the easement without a written request to and written consent by the Natural Resources Conservation Service Chief.
- 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.

**C. Easements:**

- Lewis County Rural Electric Association overhead electric lines
- Northeast Electric Cooperative overhead electric lines
- Consolidated Public Water Supply District #1 of Clark County buried water line
- Mark Twain Rural Telephone Company buried telephone line

- U.S. Department of Agriculture Natural Resources Conservation Service perpetual easement on Wetland Reserve Program sites
  - U.S. Department of Agriculture Farmers Home Administration Conservation Easement
- D. Cultural Resources Findings:** Yes, records kept with Missouri Department of Conservation (Department) environmental compliance specialist. Managers should follow best management practices for cultural resources found in the Department Resource Policy Manual.
- E. Endangered Species:** 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.
- F. Boundary Issues:** None

## MANAGEMENT CONSIDERATIONS

### V. Terrestrial Resource Management Considerations

#### **Challenges and Opportunities:**

- 1) For management purposes, the 5,800 acres of woodland and forest lands on Deer Ridge CA have been split into seven compartments (Figure 3). Each compartment is on a 15-year forest inventory cycle. Since 2003, Compartments 2, 3, 4, 6, and 7 have been inventoried.
- 2) Since 2005, 1,758 acres of Compartments 2, 3, 4, and 7 have received a combination of tree harvest and tree thinning applications. These actively managed areas have responded with increased growth of understory plants, increased early successional forest and woodland habitat, and improved tree health and growth.
- 3) Compartments 2, 4, and 6 have 810 acres of woodlands and savanna that are treated with prescribed burns every two to three years (Figure 5). The use of prescribed fire in these areas has reduced the amount of undesirable small woody plants, including invasive species such as autumn olive and honeysuckle. The reduction of small woody plants has allowed herbaceous plant species to fully develop and thrive within these areas.
- 4) Control of invasive species, such as autumn olive and honeysuckle, continues to be a challenge on the area. A large amount of effort has been expended toward the reduction of these two species. The majority of autumn olive plants that were planted in the 1970s have been bulldozed, piled up, and burned. Contractors performing forest thinning have been required to cut and spray autumn olive that is 4 feet and taller within their designated areas. Some very large thickets of

autumn olive remain in certain locations. The eradication or control of these species and other invasive species will continue to be a challenge in the future.

- 5) The open land portions of Deer Ridge CA provide the opportunity to supplement natural food supplies through cropping. Management of the open lands also provides cover for wildlife to sustain and, in some cases, attract wildlife, creating more hunting and viewing opportunities for area users. Cropping is also used to set back succession and make areas attractive for ground nesting birds. Fescue tends to invade on upland sites and reed canary grass encroaches in the bottomland.

**Management Objective 1:** Continue to improve the health of forest and woodland communities to benefit wildlife and increase diversity of natural communities.

**Strategy 1:** Inventory forest compartments according to the forest inventory schedule for Deer Ridge CA. (Forestry)

**Strategy 2:** Utilize a variety of sustainable forest management techniques to promote healthy forest and woodland communities, including, but not limited to, timber harvesting, forest thinning, firewood cutting, salvage cuttings, tree planting, seeding and prescribed burning. (Forestry)

**Strategy 3:** Implement forest management applications within five years of individual compartment inventories. (Forestry)

**Strategy 4:** Utilize best management practices during forest management, as described in the Department's manuals: *Missouri Watershed Protection Practices Recommended for Missouri Forests: 2014 Management Guidelines for Maintaining Forested Watersheds to Protect Streams Manual* (Missouri Department of Conservation, 2014b) and the *Missouri Forest Management Guidelines: Voluntary Recommendations for Well-Managed Forests* (Missouri Department of Conservation, 2014a). (Forestry)

**Strategy 5:** Maintain aesthetics near the trail, timber harvest activities should be consistent with aesthetic recommendations in the *Missouri Forest Management Guidelines: Voluntary Recommendations for Well-Managed Forests* (Missouri Department of Conservation, 2014a). (Forestry)

**Management Objective 2:** Implement management to maintain or enhance species of conservation concern on Deer Ridge CA.

**Strategy 1:** Monitor populations of all state and federally endangered species every 10 years or more, or as often as needed, to maintain current records in the Department's database. (Wildlife)

**Strategy 2:** Implement woodland and riparian best management practices specifically to benefit species of conservation concern. (Wildlife)

**Management Objective 3:** Educate area users about the benefits of healthy forest and woodland management.

**Strategy 1:** Offer educational opportunities to Department staff that are unfamiliar with forest and woodland management so they can confidently address area user questions. (Forestry)

**Strategy 2:** Post “Healthy Woods” signs adjacent to actively managed forest and woodland areas. (Forestry)

**Strategy 3:** Post general information on Atlas database about when and where to expect active forest and woodland management. (Forestry)

**Strategy 4:** Post general information on bulletin boards about why active forest and woodland management benefit conservation areas. (Forestry)

**Management Objective 4:** Utilize cropping to provide early successional habitat and high energy food sources for wildlife.

**Strategy 1:** Use permittee farmers to economically manage 425 acres of crops and food plots. (Wildlife)

**Strategy 2:** Establish food plots with a variety of crops (e.g., grain, forage, and green browse). Seek to provide food for wildlife throughout the seasons. (Wildlife)

**Strategy 3:** Utilize a variety of management techniques to eliminate or control undesirable grasses, provide bare ground, encourage annual forbs and promote areas of shrubby growth. Techniques will include, but are not limited to, spraying, prescribed burning, mechanical treatments, woody cover removal, disking, mowing, haying, grazing, planting, and seeding. (Wildlife)

**Strategy 4:** Explore the use of wildlife-friendly cover crops and incorporate them into the permittee crop system. (Wildlife)

**Strategy 5:** Establish field borders by edge feathering, applying herbicide, and/or planting grass/legume borders that would create nesting and brood-rearing cover. (Wildlife)

**Management Objective 5:** Reduce invasive species.

**Strategy 1:** Reduce invasive plants like reed canary grass, fescue, teasel, and sericea lespedeza by using appropriate control techniques, including but not limited to, increasing application of herbicide. (Wildlife)

**Strategy 2:** Extra care will be taken to clean off mower decks to minimize the movement of invasive species around the area or to other conservation areas. (Wildlife)

**Strategy 3:** Continue efforts by contractors to eradicate autumn olive and honeysuckle during forest management activities where possible. (Forestry)

**Strategy 4:** Watch for and attempt to eradicate new populations of invasive species. (Forestry, Wildlife)

**Strategy 5:** Seek opportunities to use volunteer groups to help control the spread of invasive species. (Forestry, Wildlife)

## VI. Aquatic Resource Management Considerations

### **Challenges and Opportunities:**

- 1) There are eight wetland pools, each with a concrete water control structure, located on Deer Ridge CA. Six of the pools were built through the Wetland Reserve Program prior to the Department's purchase of those tracts in the early 1990s. The other two pools were developed with Department funds. One lays within the Wetland Reserve Program easement and the other is outside the easement. These pools are flooded opportunistically with seasonal rainfall.
- 2) Deer Ridge Lake is a 48-acre impoundment located within Deer Ridge CA. The lake drains approximately 580 acres (12:1 ratio) of land, most of which lies within the boundaries of the conservation area. Average depth of the lake is 9.2 feet and maximum is 27 feet. The lake was stocked initially in 1960 and opened to fishing in 1962. Due to undesirable fish community structure and poor fishing, Deer Ridge Lake was renovated in 1995, following a drawdown of just over 10 feet.

The lake was restocked in 1996 with largemouth bass, bluegill, redear sunfish, hybrid sunfish, black crappie, and channel catfish. Golden shiners and fathead minnows were also stocked to provide additional forage. A 15-inch minimum length limit on largemouth bass was implemented with the goal of producing a quality panfish fishery. A high-density largemouth bass population quickly developed, which was the intent of the regulation. However, the panfish did not respond as predicted and a quality panfish fishery did not develop. The 15-inch minimum length limit was removed and replaced with a 12- to 15-inch slot length limit in March 2009. Today, the density of largemouth bass remains above management objectives. The bluegill population is near management objectives and provides quality angling opportunities, and after several years of increased stocking rate, the channel catfish population provides anglers a good opportunities.

- 3) There are 33 fishless ponds on Deer Ridge CA that provide important fish-free habitat for reptiles and amphibians and wildlife-watering holes.
- 4) There are 5.8 miles of stream frontage along the North Fabius River and 1 mile of stream frontage along the Middle Fabius River on the area. There are also 3.5 miles of Cooper Branch that flow through the area. The North Fabius River is degraded and characterized by shifting sand and silt beds, shallow water with



occasional deep pools, and tall eroding banks. The Middle Fabius River and Cooper Branch are less impacted and provide some angling opportunities for riverine species.

**Management Objective 1:** Manage the existing wetland units as seasonally flooded herbaceous wetlands.

**Strategy 1:** Provide habitat for migratory birds and resident wetland wildlife using management techniques, including, but not limited to, burning, disking, mowing, cropping, and water-level manipulations. (Wildlife)

**Management Objective 2:** Monitor and manage Deer Ridge Lake to provide sustainable and diverse fishing opportunities.

**Strategy 1:** Periodically inventory fish populations to assess health and recommend needed regulation changes. (Fisheries)

**Strategy 2:** Encourage harvest of small bass with the appropriate signage. (Fisheries)

**Strategy 3:** Control excessive aquatic plants chemically or biologically to promote efficient foraging by largemouth bass. (Fisheries)

**Strategy 4:** Implement strategies to maintain adequate predatory control on bluegill. (Fisheries)

**Strategy 5:** Maintain moderate density of largemouth bass to exert predatory control over small crappie to prevent overpopulation. (Fisheries)

**Strategy 6:** Encourage anglers to harvest crappie up to their daily limit of 30. (Fisheries)

**Strategy 7:** Maintain annual fall channel catfish stocking rate of 10 per acre. (Fisheries)

**Management Objective 3:** Provide suitable habitat for amphibians and reptiles in ponds with no fisheries management potential.

**Strategy 1:** Do not stock ponds that provide no long-term fisheries management options. (Fisheries)

**Management Objective 4:** Establish or maintain a forested corridor along all streams on the area.

**Strategy 1:** Maintain a forested corridor through natural regeneration or planting. A minimum width of 200 feet from top of bank should be maintained along the North Fabius and Middle Fabius rivers. A minimum width of 100 feet from top of bank along all other streams on the area should be maintained, where not limited by area boundary, access road, parking lot, or utility easement. Where access

roads or parking lots are in the stream corridor, they should be relocated outside of the corridor if feasible. (Forestry, Wildlife)

**Strategy 2:** Inspect riparian corridors along all agricultural fields every three years to determine the need for field adjustments. (Wildlife)

**Strategy 3:** All management activities on Deer Ridge CA should follow the *Watershed and Stream Management Guidelines for Lands and Waters Managed by the Missouri Department of Conservation* (Missouri Department of Conservation, 2009). Any field road stream crossings or riparian corridors not meeting these standards will be corrected by 2018. (Wildlife, Forestry)

## VII. Public Use Management Considerations

### **Challenges and Opportunities:**

- 1) Deer Ridge CA offers numerous public use opportunities, including fishing, hunting, furbearer trapping, target shooting, camping, picnicking, bird watching, hiking, biking, and horseback riding. Hunting is one of the main reasons many people visit the area in the fall. The area attracts hunters from across the country during the archery and firearms deer seasons. Spring and fall turkey seasons also attract hunters to the area. Some waterfowl hunting occurs on the area's natural and constructed wetlands. Small game hunting opportunities exist for squirrels, quail, and rabbit. Summer and early fall attract the largest number of visitors on the multi-use trail. During this time, horseback riders frequent the trail with groups ranging up to 30 people. Deer Ridge Lake provides a popular place for anglers. The fish resources are managed to offer quality fishing for largemouth bass, bluegill, black crappie, and channel catfish.
- 2) Deer Ridge CA has four camping areas with privies: Levengood Camp, Lake Camp, Fox Camp, and Horse Camp. These campgrounds have individual gravel camping pads, picnic tables, and fire rings. Potable water is provided via a hydrant at the shooting range. Three picnic shelter houses are provided near the lake.
- 3) There is an extensive network of multi-use trails on Deer Ridge CA, which are used by horseback riders, hikers, and hunters. These trails receive a low level of maintenance and are also used by staff to access remote parts of Deer Ridge CA. Recently, color coded signs were installed to better facilitate public use and best management practices have been implemented to reduce soil erosion. A few small sections of trails continue to have problems with soil erosion due to horse traffic on poorly located trails.
- 4) Deer Ridge CA is used for several special events each year, including a 4-H shooting sports event and a conservation field day for area students.

**Management Objective 1:** Provide quality hunting for a wide variety of species. Manage for a variety of small game species and waterfowl, where appropriate habitat exists.

**Strategy 1:** Manage the area's diverse habitats for a variety of wildlife species. (Wildlife)

**Management Objective 2:** Furnish target-shooting opportunities to area users.

**Strategy 1:** Maintain the firearms range according to the *2013 Shooting Range Facility Program Manual* (Missouri Department of Conservation, 2013) (Forestry, Outreach and Education, Design and Development)

**Strategy 2:** Explore ideas to improve the shooting range with the Lewis County 4-H. (Outreach and Education, Forestry)

**Strategy 3:** Evaluate the safety and accessibility of the range to all users. Submit appropriate requests for capital improvement and/or small construction projects as necessary. (Outreach and Education, Design and Development, Forestry)

**Management Objective 3:** Maintain the current facilities to a standard that invites public use and keeps area users informed of regulations.

**Strategy 1:** Annually mow the trails to maintain and prevent encroachment of brush onto trail system. Keep field roads mowed and parking lots clean and mowed. (Wildlife)

**Strategy 2:** Maintain the multi-use (hike/bike/horse) trail and hiking trail, following the appropriate best management practices outlined in the *Missouri Watershed Protection Practice Recommended Practices for Missouri Forests: 2014 Management Guidelines for Maintaining Forested Watersheds to Protect Streams* (Missouri Department of Conservation, 2014) and the appropriate standards per the *Watershed and Stream Management Guidelines for Lands and Waters Managed by Missouri Department of Conservation* (Missouri Department of Conservation, 2009). (Forestry, Wildlife)

**Strategy 3:** Inspect trails annually for excessive soil erosion. (Forestry)

**Strategy 4:** Reroute or close segments of the trail system that have unmanageable issues with soil erosion. (Forestry)

**Strategy 5:** Provide designated basic camping and picnic areas. (Forestry)

**Strategy 6:** Maintain parking lots and access points around the lake in an aesthetically pleasing level year-round and maintain remote parking lots that are used for hunting at a lower maintenance level. Prior to the hunting seasons, mow these areas so they are user-friendly and aesthetically pleasing. (Forestry)

## VIII. Administrative Considerations

### **Challenges and Opportunities:**

- 1) Public access to the southern tract of Deer Ridge CA adjacent to the Middle Fabius River has been a problem for several years. Traditionally Department staff has been able to access the tract through a private landowner. However, the public is required to park along the side of the state highway and walk down a steep incline to access the area.

**Management Objective 1:** Provide the public with inviting access to all tracts of Deer Ridge CA.

**Strategy 1:** Construct a new road access and parking lot off State Highway H near the Middle Fabius River, as approved in the FY16 Expenditure Plan. (Design and Development)

**Management Objective 2:** Facilitate a good working relationship with neighboring land owners.

**Strategy 1:** Promote habitat management on neighboring landowner properties. (Private Land Services, Forestry)

**Management Objective 3:** Maintain clearly identified property lines.

**Strategy 1:** Inspect and maintain boundaries on a regular cycle. (Forestry)

**Strategy 2:** Resolve boundary issues with adjoining landowners as they arise. (Forestry)

**Strategy 3:** Determine and clearly mark all area boundaries. (Forestry)

**Strategy 4:** Ensure this area remains on the survey list until completed. (Forestry)

**Management Objective 4:** Cooperatively patrol the area and report unauthorized activities.

**Strategy 1:** Regularly patrol and enforce the *Wildlife Code of Missouri*, with emphasis on off-trail abuse, vandalism, littering, and response to public complaints. (Protection, Forestry)

**Management Objective 5:** Inform public about area regulations.

**Strategy 1:** Maintain signs according to Department policy. (Forestry)

**Strategy 2:** Maintain accurate and timely information on the Department's Atlas Database. Review information annually. (Forestry)



## APPENDICES

### Area Background:

In the mid-1950s, local citizens in the Lewis County area collected funds to develop a community lake. These citizens went from door to door throughout the county and collected enough funds to purchase approximately 250 acres of land and built a lake. Following this success, more efforts continued by local citizens, such as James Jenkins, who searched for willing sellers who might sell additional acreage to the Missouri Department of Conservation. Over the next 20 years, the size of Deer Ridge CA grew to over 4,000 acres. Then again in the 1990s, local citizens gathered 500 signatures on a petition to show public support for the purchase of 2,000 acres of private land which later became another addition to Deer Ridge CA.

### Current Land and Water Types:

Land/Water Type	Acres	Miles	% of Area
Forest and Woodland	5,800		83
Open Land	425		6
Old Field	360		5
Wetland	225		3
Grassland (non-prairie)	93		1
Lakes/Ponds	48		1
Parking Lots, Roads and Adjacent Mowed Areas	4		<1
<b>Total</b>	<b>6,955</b>		<b>100</b>
Stream Frontage		10.3	

### Public Input Summary:

The draft Deer Ridge Conservation Area Management Plan was available for a public comment period Nov. 1–30, 2016. The Missouri Department of Conservation received comments from 12 respondents (Appendix A). The Deer Ridge Conservation Area Planning Team carefully reviewed and considered these ideas as they finalized this document. A brief summary of public input themes, including how they were incorporated or why they were not, can be found below. Rather than respond to each individual comment, comments are grouped into general themes and are addressed collectively.

Department responses to themes and issues identified through the Deer Ridge Conservation Area Management Plan public comment period.

### Suggests adding food plots near the Middle Fabius River.

At this time, the management team does not plan to add food plots close to the Middle Fabius River due to access limitations. Approximately 450 acres are currently managed with row crops,

food plots, and green browse plots to supplement the natural food sources that are provided by the healthy forest system and native grasslands that exist on Deer Ridge CA.

**Concerned area management activities (prescribed burning and mowing) may be negatively affecting wildflower populations used by pollinators and other wildlife.**

Prescribed burning is used to mimic natural disturbances that these natural plant and animal communities were designed to withstand, and even rely on, in order to remain on the landscape. It is vital that prescribed burning be used to sustain these species and also benefit pollinators throughout the duration of the growing season. To further promote pollinator species, some fall burning will be incorporated into future burning regimes and several acres of pollinator forbs are in the process of being planted along the main entrance road.

Mowing on the area is only done to maintain camping areas, access roads, and paths. This mowing keeps woody encroachment from making these roads and trails impassible. Timing and frequency of mowing is done to minimize impact to the plant and animal community.

**Wonders how many Indiana and long-eared bats would be needed to remove them from the endangered species list.**

Recovery criteria for federally-listed endangered or threatened species are established by the U.S. Fish and Wildlife Service in recovery plans that are developed for each species.

Deer Ridge CA provides some of the best known summer maternity roosting habitat for both the Indiana bat and the northern long-eared bat in Missouri. Many management strategies are used on this area to offer these threatened and endangered species with habitat conditions needed. Unfortunately, these species of bats continue to decline in numbers. Species of bats are also valued for regulating populations of insects that have potential to defoliate forests and impact agricultural crops.

White-Nose Syndrome is one of the major causes of decline in the numbers of cave roosting bats. As long as White-Nose Syndrome is a threat to bats, it is unlikely the U.S. Fish and Wildlife Service will remove cave roosting bats from the endangered species listing.

**Suggests allowing some aquatic vegetation to grow on Department lakes.**

The Department continues to maintain a balance of aquatic vegetation in the lake, with the goal of 10-20% coverage. Some years we meet this goal; others we are over or under this goal. Twenty-five grass carp were stocked in 2008 to control excessive amounts (>50% coverage) of coontail. Other than treating a few areas used frequently by bank anglers, we have not treated large areas of Deer Ridge Lake in recent years to reduce aquatic vegetation. We continue to work toward maintaining the balance to suit the needs of fish and anglers.

**Suggests adding a fish cleaning station.**

The low demand for a fish cleaning station does not justify the costs associated with this type of infrastructure.

**Appreciates multi-use trails and supports continued management of these trails. Suggests adding more multi-use (hiking and equestrian) trails.**

Current level of usage of the trail system does not warrant an expansion of the 20-mile trail system.

**Suggests rerouting or relocating trails, where needed, to control erosion.**

Maintaining a 20-mile trail system is an ongoing maintenance challenge. Having locations with constant maintenance issues cannot be tolerated and will be addressed in a timely manner as they arise.

**Offers volunteer assistance in maintaining multi-use trails.**

Thankfully a cooperative agreement is currently in the works between the Department and Show-Me Missouri Back Country Horsemen to assist with trail maintenance needs. Cutting brush back from trails, clearing fallen limbs and trees from trails, and maintenance of water bars along trails have all been identified as needs. The local Deer Ridge Saddle Club has also expressed interest with trail maintenance.

**Appreciates new watering pond near horse campground. Suggests adding potable water for campers.**

Adding potable water at the camping area is not financially feasible. A potable water hydrant was recently added at the shooting range. Area users are welcome to use this water hydrant to fill their water tanks while using the area.

**Suggests allowing firearms deer hunting at Deer Ridge CA in order to thin out the deer population.**

Maintaining a healthy deer herd is important to the Department. Part of maintaining a healthy deer herd is keeping the population of deer in check. Fall 2016 was the first deer season where archery and muzzleloader only regulation was implemented on this area. As part of the new regulation on the area, we have also opened the area up for hunters to be able to use their antlerless only tags to encourage the harvest of does. In addition, managed deer hunts with modern firearms during the antlerless portion of the firearms deer season are being considered for management of the deer herd on this area.

**Suggests expanding rifle range to 200 yards.**

Expanding the rifle range to 200 yards is not feasible at this location. Traditionally, Department shooting ranges were designed for sighting in deer rifles at 100 yards. Shooting ranges are



designed for full projectile containment with the backstop height specifications of 20 feet minimum. Expanding the range beyond 100 yards would reduce the ability for full projectile containment and require increasing the height of the backstop. Increasing the yardage beyond 100 yards will also increase the potential of skipping of bullets off the range floor and potentially over the backstop. Restricting shooting ranges to 100 yards is based on safety factors.

**Suggests creating additional parking for area users and shares concern about driveway being blocked by hunters.**

An additional parking area near the Middle Fabius River is being discussed. However, due to limited resources and time, no definitive timeline can be offered.

**Suggests informing adjacent landowners about upcoming management on Deer Ridge CA and encouraging management on adjacent private land.**

Management of Deer Ridge CA is an ongoing activity. It is a diverse area with management happening in many areas. Staff work year-round on forest and woodland management, fisheries management, and old fields management, which are managed with an array of activities including mowing, discing, burning, and planting. Crop fields are managed for a host of species from songbirds, quail, and doves to larger animals, such as deer and turkey; edges of all fields are managed to provide habitat for quail, rabbits, and non-game animals. Landowners adjacent to Department land and those who do not adjoin a conservation area are encouraged to manage their property for wildlife. The Department also contacts landowners whose properties are adjacent to timber harvesting areas before these activities take place. The Department has staff (private land conservationists) in place, who are dedicated to helping private landowners manage their property for wildlife. Private land conservationists can be contacted at your local U.S. Department of Agriculture office.

**Supports the Deer Ridge CA management plan.**

Thank you!

**References:**

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

Missouri Department of Conservation. (2013). *2013 shooting range facility program manual*. Jefferson City, MO: Missouri Department of Conservation.

Missouri Department of Conservation. (2014a). *Missouri forest management guidelines: Voluntary recommendations for well-managed forests*. Jefferson City, MO: Conservation Commission of the State of Missouri.

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

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

**Maps:**

Figure 1: Area Map

Figure 2: Multi-use Trails

Figure 3: Aerial Map with Forest Management Compartments

Figure 4: Natural Community Types Map

Figure 5: Prescribed Burn Areas

Figure 6: Land Type Map

Figure 7: Wetland Map

Figure 8: Easements Map

**Additional Appendices:**

Appendix A: Deer Ridge Conservation Area Management Plan Public Comments

Figure 1: Area Map

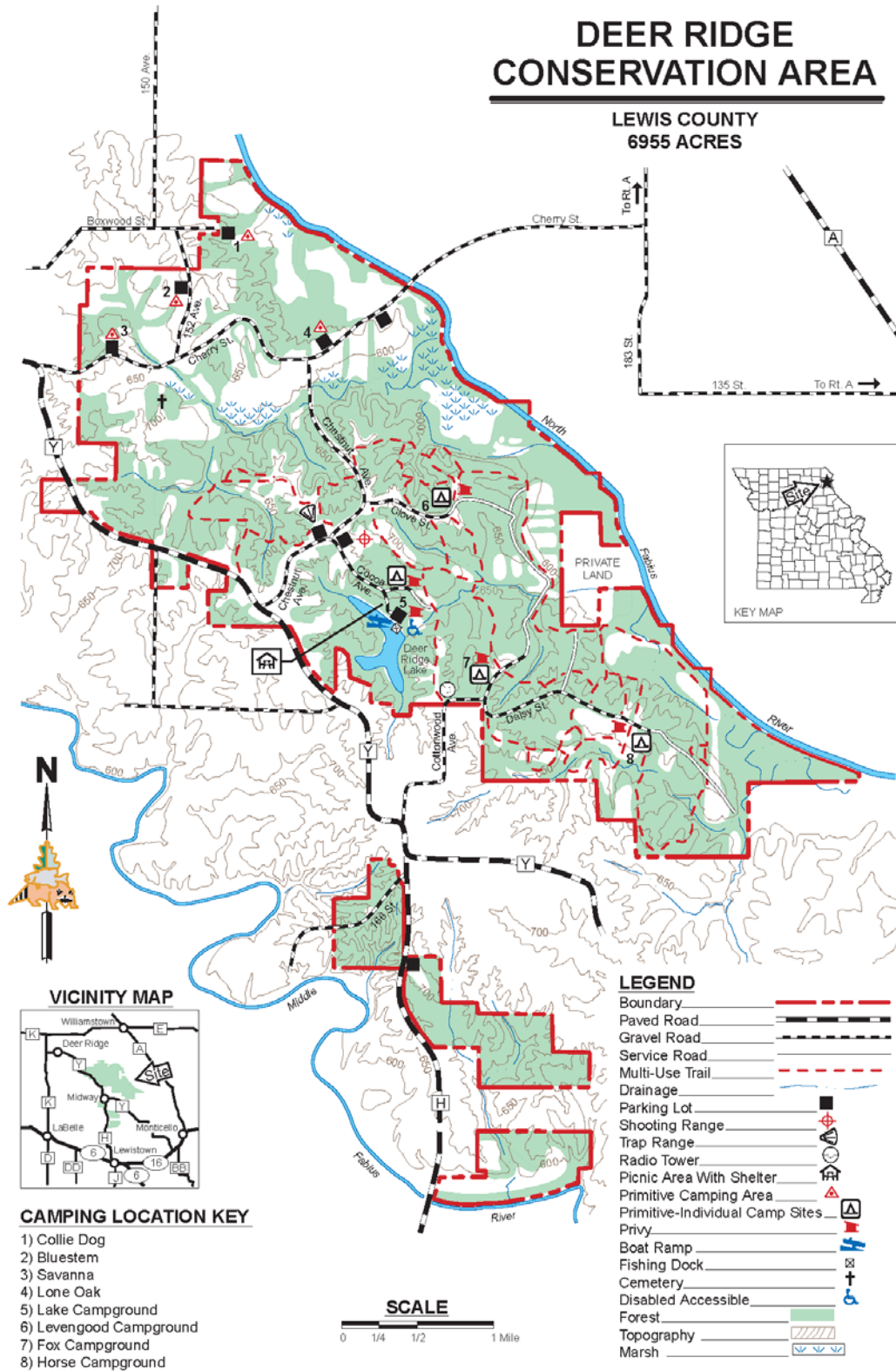
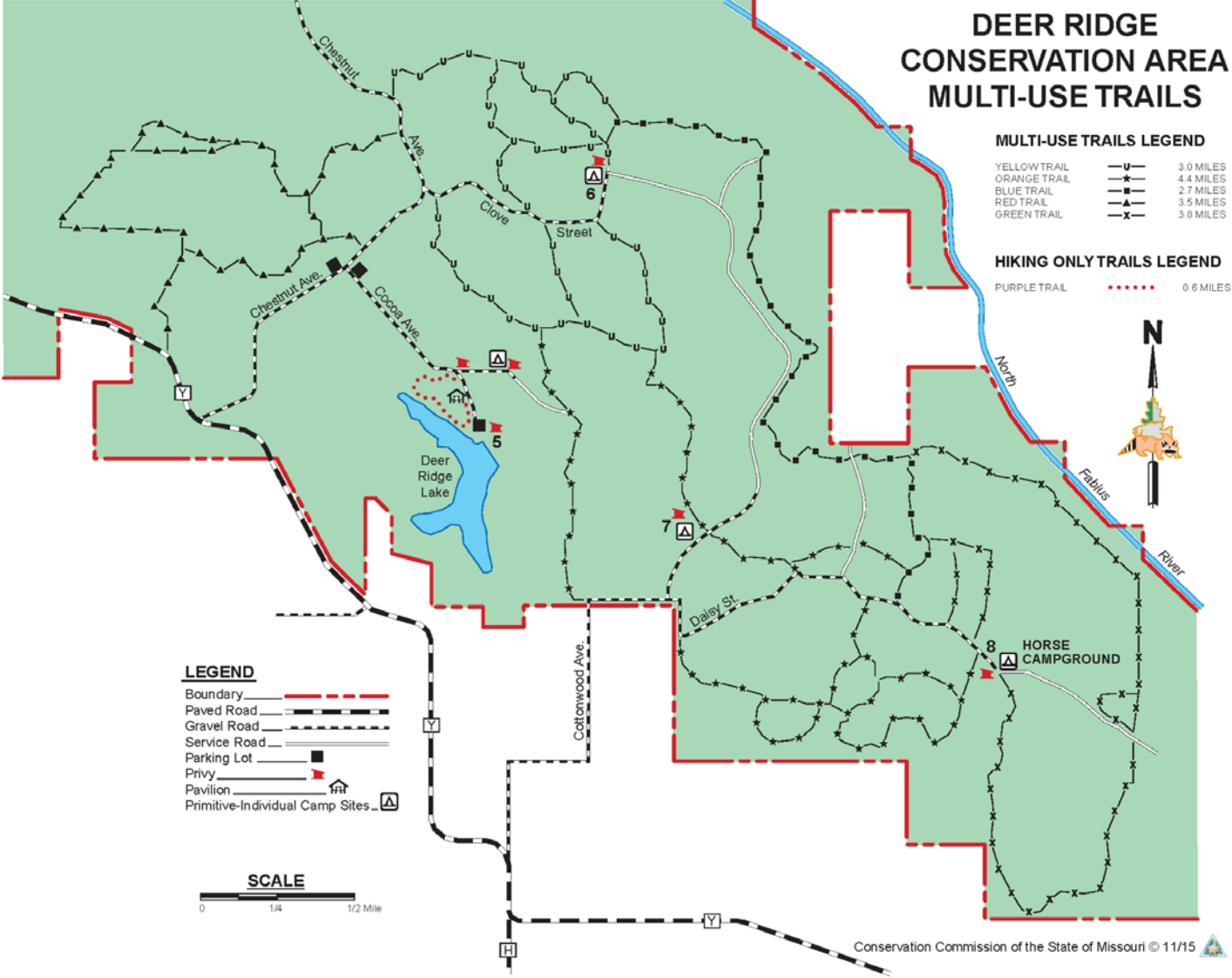


Figure 2: Multi-Use Trails



**Figure 3: Aerial Map with Forest Management Compartments**

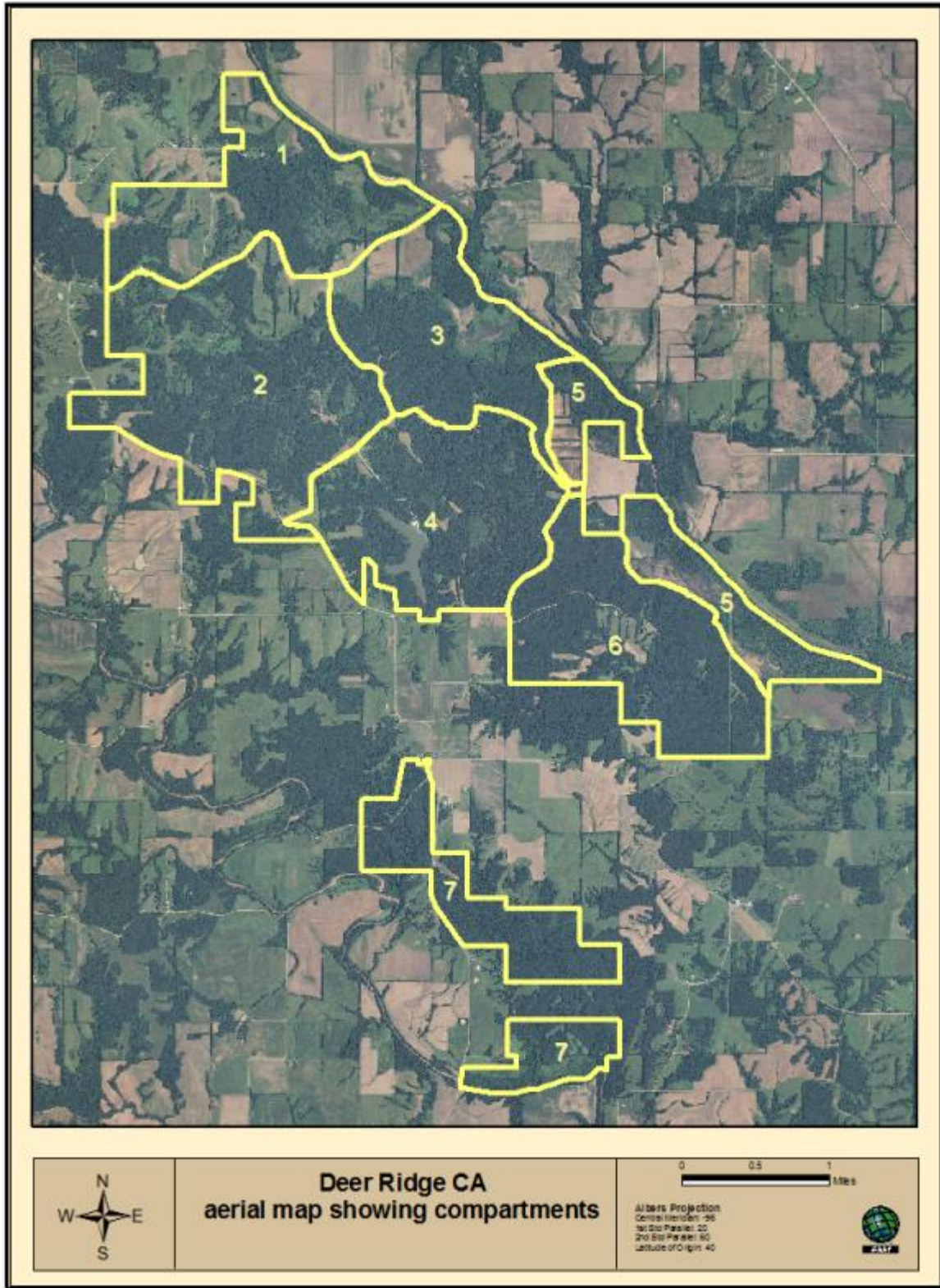
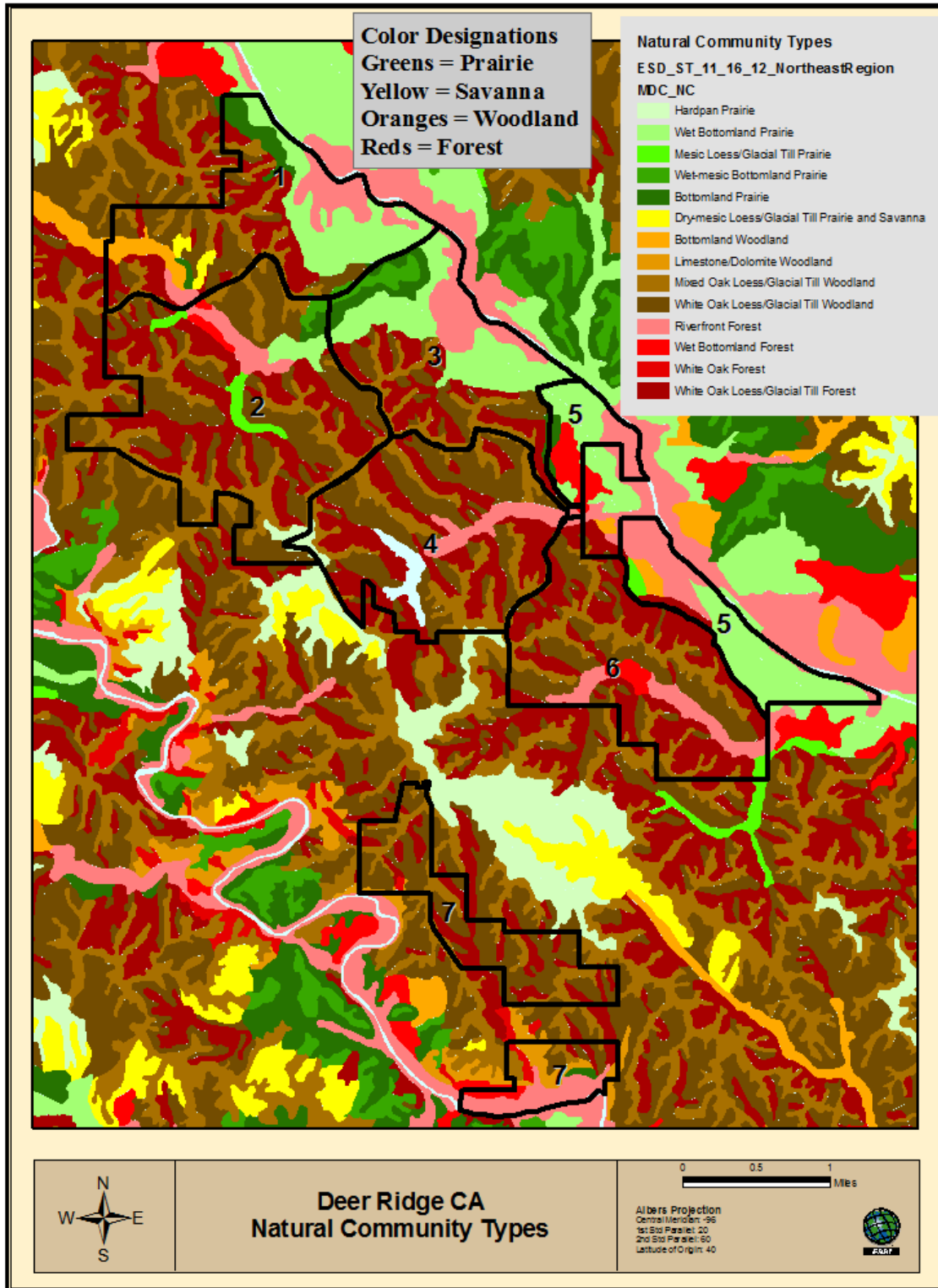


Figure 4: Natural Community Types



**Figure 5: Prescribed Burn Areas**

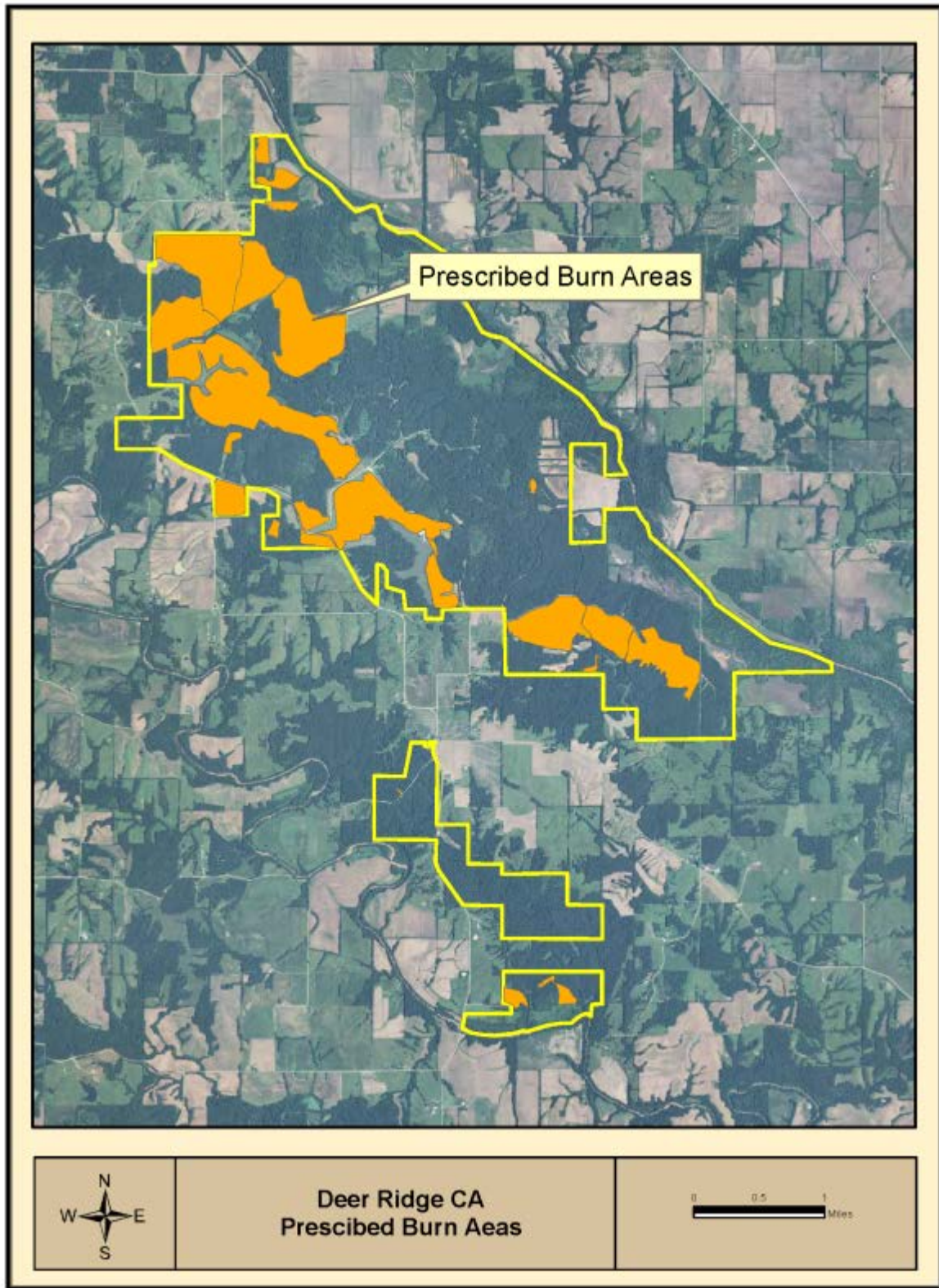


Figure 6: Land Types

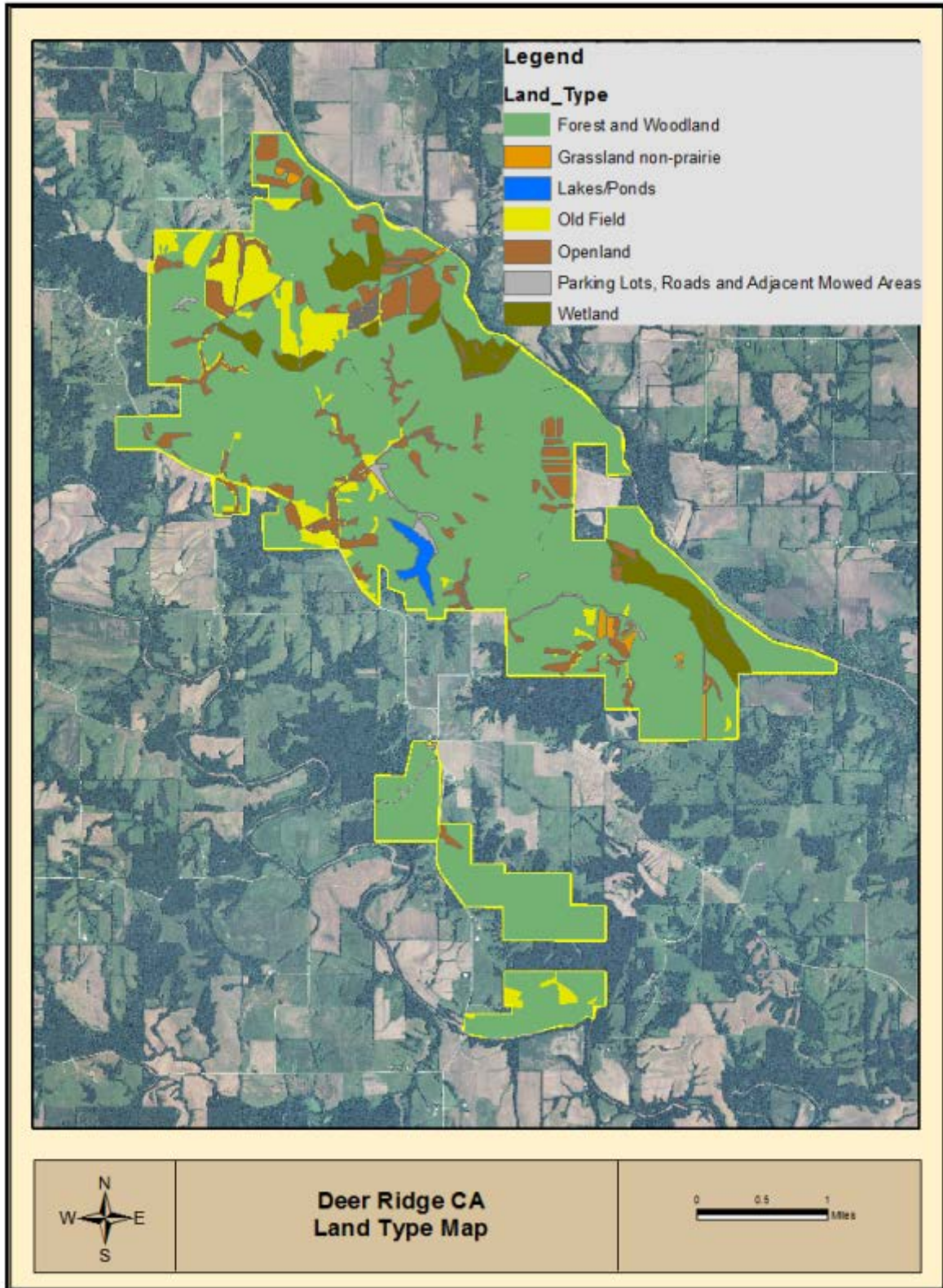




Figure 7: Wetland Map

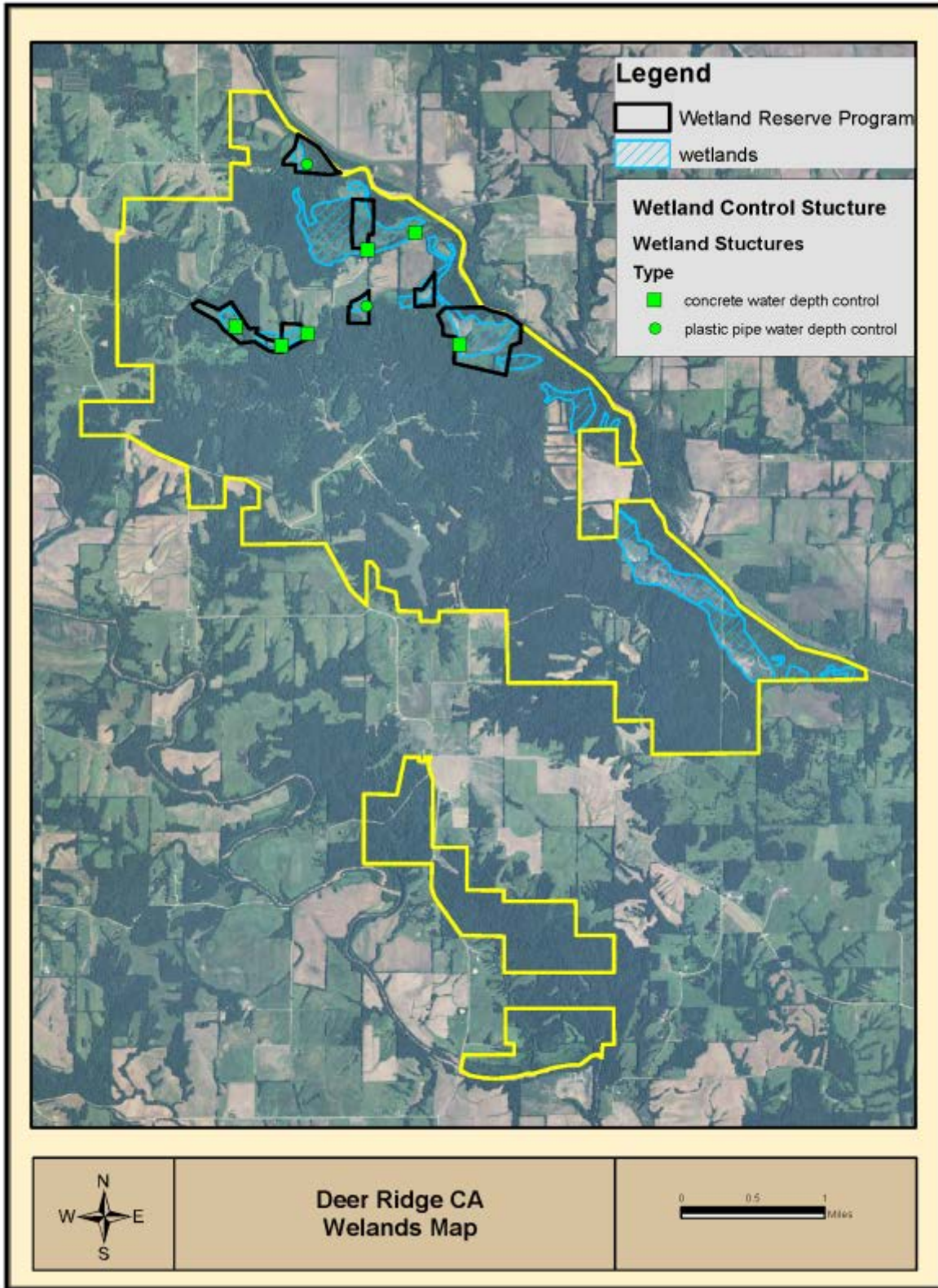
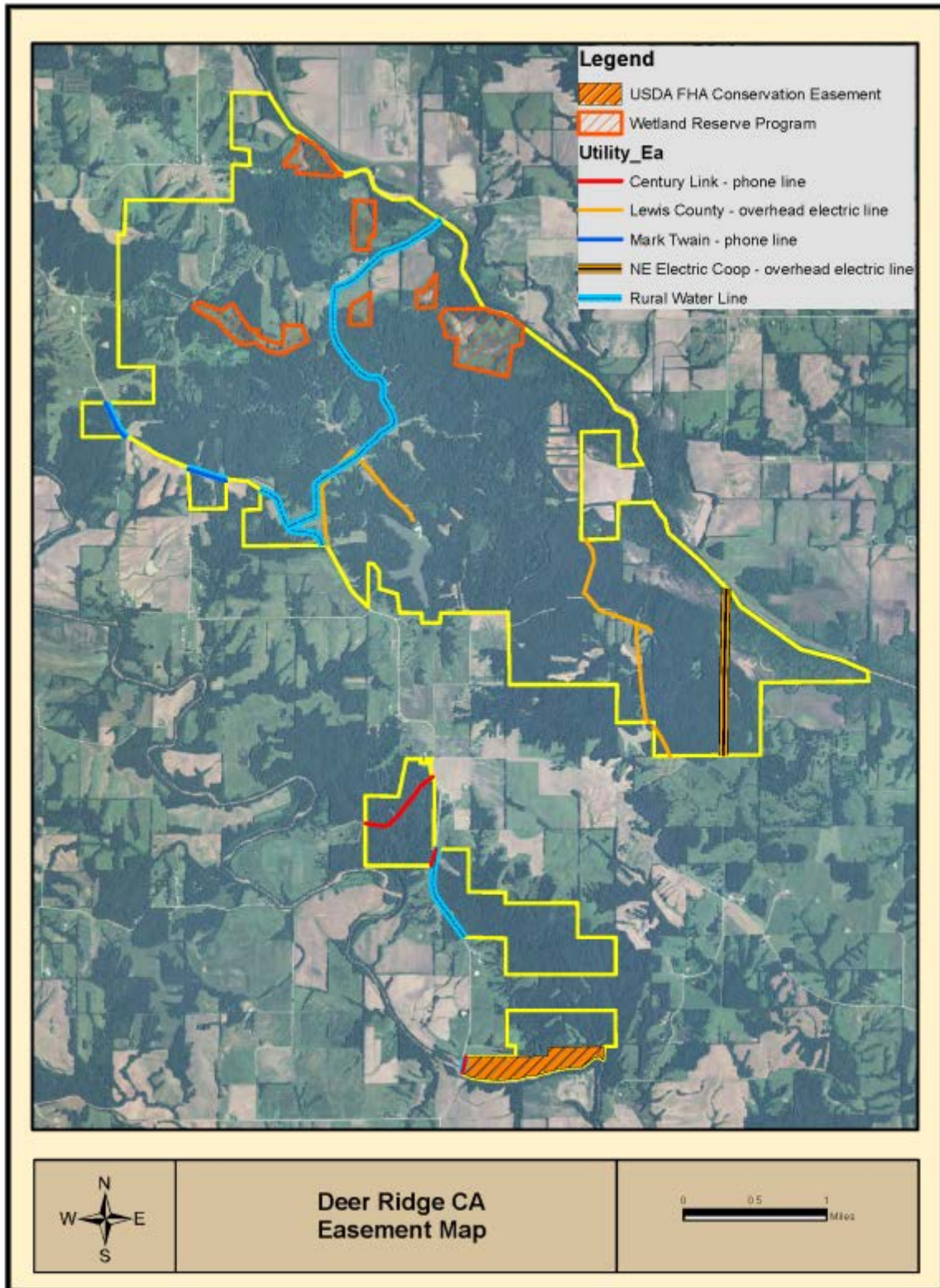


Figure 8: Easements Map



**Appendix A: Deer Ridge Conservation Area Management Plan Public Comments**

Received during public comment period (Nov. 1-30, 2016):

<p>Please include more hiking / equestrian trails in all possible management plans. Thank you.</p>
<p>It is my opinion that the department needs to allow more aquatic plants to survive. Deer ridge is completely void of vegetation. I miss the days when Henry Seiver had plenty of coontail and lotus pads. The same for Labelle lake and Hunewell lake. I wish that you could control instead of eradicate all aquatic vegetation. Thank you for all the excellent work that you do,</p>
<p>I would like to complement the efforts of anyone who makes the horse trails nice at Deer Ridge. 2 weeks ago I spent the night there with my horse and everything was mowed and the roads were very good shape. The new watering pond at the horse camp is a very nice improvement. Thank you for all you do.</p>
<p>Deer Ridge CA is slightly over an hour's drive time for me, so I visit it at least a couple of times a year to ride on the multi-use trails. I appreciate having trails open to horses there. I noticed in reading the Ten Year Plan, and have observed personally, that some trails are poorly located, and therefore are eroded. Be aware that Show-Me Missouri Back Country Horsemen's (SMMBCH) mission is to keep trails open through service, education, and advocacy, and there are several members in the Lewis County area. Thank you for the opportunity to comment on the Deer Ridge CA Ten Year Plan.</p>
<p>The horse trails are great. Many riders in Northeast Missouri and beyond use them. The overall plans look good. Of course we hope the horse trails will be a prominent feature for many years to come.</p>
<p>Thank you for allowing us to comment on your Area Management Plans.          Deer Ridge Conservation area is very well known for it's equestrian trails. I know that logging has been utilized in the area to accommodate revitalization and healthy growth of the woodlands. I also am aware that there is much use of the trails in the area, and therefore, there is a need to work together, (both with the logging company, and the area land manager), in order to assure that the trails are preserved, and can be maintained without a massive amount of manpower. As a member of the Show-Me Missouri Back Country Horsemen, I understand the importance of building sustainable trails. I recently attended a Trail Skills College, hosted by the USFS, and was in the Trail Design and Layout course. Where possible, rerouting/relocating a poorly situated trail, is preferable to dealing with the problem after the fact. Therefore, it's vital that problem areas be identified, analyzed and addressed properly, in order to minimize damage to soils and waterways, and maintain the integrity of the trail.          I am offering support to your local land manager, Jason Jacobson, and your Wildlife Management Biologist, Darlene Bryant, hoping that we can work together to insure the trails are allowed to remain open as Multi-Use trails.          I am hoping that, at some time, the opportunity will arise to allow a water source to be installed in the campground area. It's vital for equestrian campers to have a nearby, clean water source,</p>

not only for themselves, but for their horses/mules.

I would like to express my appreciation for allowing equestrian use on the trails at Deer Ridge, and advocating continued trail access.

Ref: Page 11, Section VIII, Challenges and opportunities, Management Objective 1 and 2.

As you have already mentioned the parking opportunities for hunters in this area are virtually non-existent. On several occasions we have had our drive blocked by hunters parked vehicles. I would offer any assistance I can provide to help with this issue. Additionally, I continue to welcome access to the Missouri Conservation Department personnel at any time.

I think the plan is a very well thought out plan the timberlands look good after the thinning and management that have been going on, I would like to see some food plots on the parts that is on the mid-fabie river that is on road h on the lower part like sorghum or millet for the turkeys the 8 point rule has made a very good for the size of the deer herd and now that we have muzzle only is a good approach for top quality deer herd, very well done, I think the resource forester is doing a top notch job with a very large area with limited funds, thanks for a great service,

Thank you for allowing the opportunity to comment on the Deer Ridge Conservation Area Management Plan.

I also want to thank you for the multi-use trails that are in place at Deer Ridge.

I understand that with cost restraints in your department, maintaining the trails can be a challenge.

I'd like to offer assistance in the general maintenance, and where needed, more in depth help. I attended the first 'Trail Skills College' sponsored by the USFS, in Black, MO in October, and was fortunate enough to be in the Trail Design and Layout class. I promise you that I will never look at a trail the same way I did before I attended the class. I'm so much more aware of building trails on the contour; avoiding soils that will encourage soil erosion; designing trails that work WITH Mother Nature and not against her.

I know many equestrians that ride at Deer Ridge, and I feel that there is enough interest in the trails to see an increase in useage, if they are properly managed and maintained.

Again, thank you for the opportunity to express my support of continued use of the multi use trails.

It would be great to have a fish cleaning station at deer ridge with a hand pump. I fish there and camp a lot it is great place keep up the good work.

Thank you for letting the adjacent landowners comment on the Deer Ridge Plan. I think what the plan as proposed will do an outstanding job of promoting animals and public use. My suggestion would be to expand the rifle range out to 200 yards. Also, I recommend keeping adjacent landowners up to date on what is happening on Deer Ridge - especially on parts of Deer Ridge that might affect their land. Especially, if there is a way to "piggy back" off of what is happening on Deer Ridge so that they same process could concurrently take place on the private land. I look forward to seeing the progress in the years to come.

I would like you to open deer ridge CA up to firearms again to thin the population. The welfare deer cross the river to eat my crops. Also I would like to know the number of Indiana and long eared bats it would take to get off of the endangered species list.

Thank you for the opportunity to comment on the Deer Ridge Conservation Area Draft Management Plan. Show-Me Missouri Back Country Horsemen commends the Department for allowing equestrian use of the multi-use trails on Deer Ridge CA, and we appreciate the intent to continue that permission.

Regarding Public Use Management Considerations, Management Objective 3, Strategies 2, 3, and 4: we agree that portions of some existing trails are eroding excessively and have other issues affecting sustainability. Having some training and experience with trail layout and maintenance, we offer, subject to availability of volunteers, to assist the Department to assess such trail segments, determine appropriate remediation or corrective action, and assist to mark and clear rerouted trails and other corrective measures as needed.

We also support the development of partnerships with local groups of equestrians and other trail users for the purpose of maintaining and improving multi-use trails and supporting infrastructure. We are in contact with Manager Jason Jacobson to form such a partnership including willing riders in the area and members of our local chapter.

Thank you again for the opportunity to comment.

Just need to share some of my thoughts about Deer Ridge. I have been hiking the horse trails there since Fall of 1978, when I moved to Lewis County. This year I have hiked more than 80 days at Deer Ridge. I am a wildflower enthusiast and get sad at the thoughtless things that happen. First, you always conduct woodland burns in the spring, just as the spring bloom is starting. Thus, no spring bloom to speak of. A certain spot use to have hundreds of hepatica, the only location in the area where they bloom, you create fire, now there are usually only a dozen or so blooming hepatica. I have not read of other places doing woodland burns, usually those are called forest fires and are suppressed. You mow too much. When you mow a large patch of purple coneflower , just in bloom, think of all of the pollinators that no longer have the food source. I have seen monarch, fritillaries, bees, and a host of other pollinators that use the coneflowers that you mow. You mow the only spot in Lewis County where we have found sand phox. I can understand your need to mow right by the road so everyone can drive fast on the gravel, but really, to mow all the way to the woods edge? You have taken out a large squaw weed community. You mow a large patch of blazing star, every year! Fewer and fewer come up. I do not understand why a conservation land can't be about pollinators as well as deer and turkey. You mention you are working on erosion problems, um, why on earth do you scrape bare the hills of the horse trails, leave vegetation on the hills, then erosion won't be so extreme. Then there are the fields, it is amazing that you plow a field of bergamot, germander and allow a giant patch of ragweed. A small field, out of the way of any of your projects, it held 15 different

wildflowers one day, four days later, plowed! I understand allowing the farmers to put in corn or beans, no problem, but the fields of grass instead of leaving for nature...an agent told me that Illinois bundle weed was a nuisance though it is encouraged for wildlife elsewhere. Also, perhaps you could tell horse riders not to ride when it has been extremely wet, I know other conservation areas put a small sign up to that effect. Your signage is extreme...all of the ones that says something about a healthy forest...have you watched a deer run and run trying to duck into the woods because you push up the brush to the forest edge and there is no place for it to escape ...many places that you have worked on are so impenetrable a person, or animal can not move through. By the way, Deer Ridge wasn't even an option to submit to the draft plan....