

# Pomme de Terre Lake Management Lands

## 25-Year Area Management Plan

FY 2019-2043



Joel W. Porath

6/18/2019

---

**Wildlife Division Chief**

**Date**

## Pomme de Terre Lake Management Lands Management Plan Approval Page

### PLANNING TEAM

Kevin Hedgpeth, Wildlife Management Biologist

Craig Fuller, Fisheries Management Biologist

Guerric Good, Resource Forester

Rhonda Rimer, Natural History Biologist

Tim Pratt, Conservation Agent

Keith Wollard, Conservation Agent

Landry Jones, Private Land Conservationist

### SOUTHWEST REGION

RCT Chair

Jason Dickey

6/13/2019

---

*Signature*

---

*Date*

### WILDLIFE DIVISION

Wildlife Management Chief

Alan W. Leary

6/17/2019

---

*Signature*

---

*Date*

## OVERVIEW

- **Official Area Name:** Pomme de Terre Lake Management Lands, #200613
- **Year of Initial Acquisition:** Licensed to Missouri Department of Conservation (MDC) by the U.S. Army Corps of Engineers (USACE) in 2006.
- **Acreage:** 4,804 acres
- **County:** Hickory, Polk
- **Division with Administrative Responsibility:** Wildlife
- **Division with Maintenance Responsibility:** Wildlife
- **Statements of Purpose:**
  - A. Strategic Direction**

Manage for wildlife, woodland, grassland, old field, and glade resources with emphasis on old field and glade species and compatible recreational opportunities.
  - B. Desired Future Condition**

The desired future condition of Pomme de Terre Lake Management Lands is a healthy grasslands, old fields, woodland, and glade complex.
  - C. Federal Aid Statement**

N/A

## GENERAL INFORMATION AND CONDITIONS

### I. Special Considerations

- A. Priority Areas:** None
- 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. High Quality Natural Communities:** Yes, records kept with MDC natural history biologist.
- C. Caves:** Yes, records kept with MDC natural history biologist. Managers should follow the Cave Management policy found in the MDC Resource Policy Manual. All caves on this and other conservation areas are closed or restricted to public access. The fungus that causes White-nose Syndrome in bats has been documented in Missouri, resulting in MDC's White-nose Syndrome Action Plan that limits public access to protect bats.
- D. Springs:** None
- E. Other:** Occurs in the Ozark Highlands, Springfield Plain (Nigh & Schroeder, 2002).

**III. Existing Infrastructure**

- One 20-mile multiuse (hike/bike/horse) trail
- McCracken Bridge Access (gravel boat ramp to Pomme de Terre River)
- Sleepy Hollow Access (gravel boat ramp for canoe access only)
- Twelve gravel parking lots (three are maintained by MDC)
- Two Americans with Disabilities Act (ADA) accessible fishing docks (dock at Bolivar Access is maintained by MDC)
- One wildlife watering hole (0.5 acres)

**IV. Area Restrictions or Limitations**

- A. Deed Restrictions or Ownership Considerations:** Pomme de Terre Lake Management Lands are managed under a long-term license agreement with the USACE (USACE, 2006).
- B. Federal Interest:** Federal funds may be used in the management of this land. Fish and wildlife agencies may not allow recreational activities and related facilities that would interfere with the purpose for which the State is managing the land. Other uses may be acceptable and must be assessed in each specific situation.
- C. Easements:** Two powerline easements exist.
- D. Cultural Resources Findings:** Yes, records kept with MDC environmental compliance coordinators. Managers should follow best management practices for cultural resources found in the MDC Resource Policy Manual.
- E. Endangered Species:** None observed.
- F. Boundary Issues:** None

**MANAGEMENT CONSIDERATIONS**

**V. Terrestrial Resource Management Considerations**

Pomme de Terre Lake Management Lands are managed primarily for upland wildlife habitat. Emphasis is placed on early successional habitat manipulation with target species of quail and turkey and other ground-nesting birds. Deer, dove, and rabbits also benefit from this type of management and provide the public with hunting opportunities. The area can accommodate large numbers of hunters and other users due to the distribution of management lands around the lake and the associated network of access locations.

**Challenges and Opportunities:**

- 1) Invasive species on the area include sericea lespedeza, tall fescue, Johnson grass, and eastern red cedar.

**Management Objective 1: Maintain healthy forest and woodlands with management emphasis on wildlife habitat.**

Strategy 1: Monitor woodlands for invasive vegetation, diseases, and insects.

Suppress any infestations that may develop. (Forestry, USACE)

Strategy 2: Retain and protect existing den trees. (Forestry, USACE)

Strategy 3: Assist USACE with emergency timber sales and cleanup, as needed for storms, tornado damage, and wildfire. (Forestry)

Strategy 4: Restore woodlands by thinning, sales, tree shear, and prescribed burns as needed. (Forestry)

Strategy 5: Utilize a variety of sustainable forest management techniques to promote healthy forest and woodland communities including, but not limited to, timber harvesting, timber stand improvement, firewood cutting, salvage cuttings, tree planting, seeding, and prescribed burning. (Forestry)

Strategy 6: Utilize best management practices during forest management, as described in MDC's manuals: *Missouri Watershed Protection Practice* manual (MDC, 2014b) and the *Missouri Forest Management Guidelines: Voluntary Recommendations for Well-Managed Forests* (MDC, 2014a). (Forestry)

**Management Objective 2: Improve wildlife habitat by creating, establishing, and/or maintaining adequate nesting, brood-rearing, and escape cover.**

Strategy 1: Establish a three-year prescribe burn rotation for native warm-season grasslands, glade, and old fields. (Wildlife)

Strategy 2: Establish food plots and early succession old field and grassland management. (Wildlife)

Strategy 3: Complete edge development along old fields and tree shear work on invasive species in old fields. Mechanically remove and apply herbicides to remove cedar along fence and hedge rows. (Wildlife)

**Management Objective 3: Create habitat for wildlife and amphibian use.**

Strategy 1: Identify sites for wildlife watering holes. (Wildlife)

Strategy 2: Utilize Natural Resources Conservation Service and Soil and Water District to identify soils conducive to holding water. (Wildlife)

Strategy 3: Monitor the area for invasive species. Suppress any infestations that may develop using appropriate methods. (Wildlife)

Strategy 4: Assess feral hog populations and eliminate under current policy. (Wildlife, Protection)

**Management Objective 4: Restore and manage glades to provide habitat for glade specific species.**

Strategy 1: Remove undesirable species from glades through herbicide, tree shear, and hand removal by contract, MDC, and USACE personnel. (Wildlife, USACE)

Strategy 2: Use prescribed burning to maintain and restore glades, as needed, on a three-to-five-year rotation. (Wildlife, USACE)

## VI. Aquatic Resource Management Considerations

### **Challenges and Opportunities:**

- 1) Pomme de Terre Lake Management Lands is located in the Pomme de Terre River basin. Aquatic features on the area consist of at least five shallow ponds (wildlife watering and herpetofauna habitat), 35 miles of reservoir frontage, and 4 miles of stream frontage.
- 2) Fishing opportunities abound with many foot access points, two gravel boat ramps, and two public fishing docks.

### **Management Objective 1: Enhance and maintain fishing access.**

Strategy 1: Polk County has upgraded and maintains the road to the McCracken Bridge access. MDC and USACE will investigate the feasibility of improving the boat ramp and parking lot facilities. MDC and USACE will develop a cooperative agreement if it is feasible to improve the access by enhancing the boat ramp and parking lot facilities. (Fisheries, USACE)

Strategy 2: MDC and USACE will each maintain one courtesy fishing dock. MDC will manage the dock at the Bolivar Access. (Fisheries, USACE)

### **Management Objective 2: Establish and maintain riparian corridors, according to MDC's *Watershed and Stream Management Guidelines* (2009).**

Strategy 1: Enhance riparian corridors by allowing natural regeneration or by planting suitable native woody vegetation in areas where riparian corridors do not meet MDC guidelines (MDC, 2009). (Forestry, Fisheries, Wildlife, USACE)

Strategy 2: Ensure survival of riparian plantings by controlling competing vegetation within the corridor. (Forestry, Fisheries, Wildlife, USACE)

Strategy 3: Implement stream best management practices on all area streams. (Forestry, Fisheries, Wildlife, USACE)

### **Management Objective 3: Implement appropriate watershed best management practices on all MDC managed areas.**

Strategy 1: Glade/woodland restoration and associated management activities on the area will be done according to *Missouri Forest Management Guidelines: Voluntary Recommendations for Well-Managed Forests* (MDC, 2014a). (Forestry, Fisheries, Wildlife, USACE)

Strategy 2: Roads and trails will be managed according to appropriate best management practices to minimize runoff and sedimentation into stream resources. (Forestry, Fisheries, Wildlife, USACE)

## **VII. Public Use Management Considerations**

### **Challenges and Opportunities:**

- 1) Pomme de Terre Lake Management Lands has two fishing docks and one 20-mile multiuse hike/bike/horse trail that is popular with equestrian users and hikers.
- 2) The private land considerations associated with the Pomme de Terre Lake Management Lands include educational opportunities for private landowners to observe various early successional habitat practices that could be implemented on their land, and to expand the habitat work on adjoining and nearby private landowner properties, resulting in a larger landscape of quality upland habitat.
- 3) Pomme de Terre Lake Management Land is surrounded by private lands and have had unauthorized all-terrain vehicle use in the past.

### **Management Objective 1: Provide public hunting and viewing opportunities.**

Strategy 1: Conduct annual management activities that will provide habitat for a diversity of species. (Wildlife)

### **Management Objective 2: Improve educational and interpretive opportunities on Pomme de Terre Management Lands.**

Strategy 1: Communicate to the public recreational opportunities (e.g., using area brochures and MDC area information page on web). (Wildlife, Outreach and Education)

Strategy 2: Provide educational and cost-share opportunities to adjoining landowners and those within the Pomme de Terre River Watershed. (Private Land Services, Outreach and Education)

### **Management Objective 3: Work with neighboring landowners to practice sound conservation practices.**

Strategy 1: Provide adjoining landowners with information on the licensed land management practices. (Wildlife, USACE, Private Lands Division)

Strategy 2: Promote habitat management on neighboring landowner properties. (Private Land Services)

### **Management Objective 4: Cooperatively patrol Pomme de Terre Lake Management Lands for unauthorized activities.**

Strategy 1: Coordinate group patrols to saturate all-terrain vehicle site problem areas. (Protection, USACE Park Rangers)

Strategy 2: Utilize law enforcement agreement with Hickory and Polk County Sheriff's Office to increase patrols in licensed areas. (Protection, USACE park rangers, Missouri State Highway Patrol Water Division)

Strategy 3: Post the Pomme de Terre Management Lands (Bolivar Access) multipurpose trail with signs saying, "Closed to horseback riding during fall firearms deer seasons." (Wildlife, USACE)

## VIII. Administrative Considerations

### **Challenges and Opportunities:**

- 1) Cooperative management of lands under this license agreement is both an opportunity and challenge in coordinating management plans with different agencies and divisions within MDC.
- 2) One of the biggest opportunities for managing the Pomme de Terre Lake Management Lands is that MDC has the ability to partner with the USACE and cooperatively manage this great resource to benefit all types of users.

### **Management Objective 1: Promote and continually improve communication with USACE regarding management of the Pomme de Terre Lake Management Lands.**

Strategy 1: Provide the USACE with an abbreviated annual management plan in accordance with the licensing agreement (Wildlife, Fisheries, Forestry, Protection)

Strategy 2: The MDC interdisciplinary planning team will work with the USACE every year to develop and update an Operational Management Plan (USACE) in accordance with the licensing agreement. (Wildlife, Fisheries, Forestry, Protection, USACE)

Strategy 3: Provide the USACE with a copy of the annual Pomme de Terre Lake fisheries management report. (Fisheries)

### **Lands Proposed for Acquisition:**

When available, adjacent land may be considered for acquisition from willing sellers. Tracts that improve area access, provide public use opportunities, contain unique natural communities and/or species of conservation concern, or meet other MDC priorities as identified in the annual MDC land acquisition priorities may be considered.





## APPENDICES

### **Area Background:**

Pomme de Terre Lake is located in the rugged, tree-covered hills of the west central Missouri Ozarks on the Pomme de Terre River (Figure 1). The Pomme de Terre Project was authorized by Congress in 1938 as part of a comprehensive flood control plan for the Missouri River Basin. Project planning was initiated in 1947 and actual construction began in 1957. The lake was completed in 1961 at a cost of \$14,946,784. Pomme de Terre Lake covers 7,820 acres and can expand to as much as 16,100 acres during periods of heavy rain, as excess runoff is impounded to prevent downstream flooding. Pomme de Terre Lake works in conjunction with several other USACE operated lakes to provide flood protection for the Osage River Basin and the lower Missouri and Mississippi rivers. Other benefits of the lake include recreation, fish and wildlife management, and water quality improvement.

According to legend, the French explorer La Salle gave the Pomme de Terre River its name when he crossed the Ozarks in 1682. It is unlikely, however, that La Salle explored this far from the Mississippi River. The phrase "pomme de terre" is French for "apple of the earth" or potato. The river probably was named by early French trappers and fur traders for plants resembling potatoes that grew on its banks. This plant was probably potato bean (*Apios americana*) and was used as food by Native Americans.

Substantial settlement began in Polk and Hickory counties in the 1830s. The Pomme de Terre River was the dividing line between the Native Americans and settlers until 1835. Agriculture, lead and zinc mining, and lumbering played important parts in the economy during the early years of settlement.

Pomme de Terre Lake's resource areas, known as the Pomme de Terre Lake Management Lands (Figures 2 and 3), are cooperatively managed by the USACE and MDC. The USACE and MDC utilize a variety of resource management strategies to improve wildlife habitat and provide excellent hunting opportunities. Hunters will find a variety of game, including rabbit, dove, squirrel, turkey, deer, and waterfowl. Hunting is permitted in all areas of the project, with the exception of the park areas and administration areas. All federal and state regulations pertaining to hunting methods, limits, and hours apply on the waters and lands of Pomme de Terre Lake Management Lands.

The Pomme de Terre Multipurpose Trail is located at the Bolivar Access. The trail provides enjoyment for horseback riding, mountain biking, and hiking. This scenic trail is nearly 20 miles long and varies in terrain, making it a challenge for users (Figure 4).

**Current Land and Water Types:**

<b>Land/Water Type</b>	<b>Acres</b>	<b>% of Area</b>	<b>Miles</b>
Woodland	3,153	66	
Open Land	801	16	
Old Fields/Upland Fields	486	10	
Warm-Season Grass Fields	250	5	
Glade	98	2	
Infrastructure	11	<1	
Impounded Water	5	<1	
<b>Total</b>	<b>4,804</b>	<b>100</b>	
Stream Frontage (first-order and above)			4

**Public Input Summary:**

The draft Pomme de Terre Lake Management Lands Area Management Plan was available for a public comment period Nov. 1–30, 2018. MDC received comments from eight respondents (Appendix A). The Pomme de Terre Lake Management Lands 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.

MDC responses to themes and issues identified through the Pomme de Terre Lake Management Lands Area Management Plan public comment period.

**Appreciates the horse-riding trails on this area. Trails are beautiful, quiet, and safe. Please continue to maintain these trails for horse-riding.**

Trails are maintained by Back Country Horsemen of Missouri volunteers and the USACE.

**Appreciates the relationship between MDC and equestrian users. Equestrian users help maintain the trails and do their best to pickup debris found on the area.**

Trails are maintained by Back Country Horsemen of Missouri volunteers and the USACE. Thank you for providing the volunteers to maintain the trail and remove debris found on the area.

**Would like to know why trails that are closed to equestrian use in the fall (due to firearms deer season) are not closed for other recreational uses. Suggests closing trails to hikers and bicyclists during firearms deer season due to safety concerns.**

Signage installed at the Bolivar Access was posted by USACE and reads “Trail Closed During all portions of the firearms deer seasons 2018 October 27 & 28, November 10-20, November 23-25, November 30-December 02, December 22-January 01.” The signs posted do not single out horseback riders. To further clarify, the MDC public website does not single out any users. It

states, “Trails Closed during all portions of the firearms deer seasons.” It is intended for all users to reduce user conflict during those short periods of time.

**Suggests keeping trails open to all users (specifically, equestrian users).**

Trails are closed to avoid user conflicts during the firearms portions of deer seasons and periodically as the lake backs up and blocks trail crossings.

**Suggests adding more horse-riding trails to the area.**

The multiuse trails on Pomme de Terre Lake Management Lands are maintained by USACE. Any expansion of facilities is under the authority of the USACE’s Pomme de Terre Project Office.

**Suggests improving visibility of wires on trails. Almost ran horses into two unmarked wires that were stretched across the trail.**

Cable gates are used to provide agency management access for wildlife habitat improvement projects and/or the USACE’s agriculture/grazing leases. To clarify, no barbed wire is used to install gates on these service roads. Standard smooth-cable are used for gating roads/trails, which are placed and maintained by the USACE. MDC will work with USACE to recommend increasing visibility of their cable gates with PVC pipe sleeves.

**Suggests providing equestrian camping areas.**

Private camping facilities are available along the trail. The USACE campground at the Bolivar Access was closed years ago in a consolidation effort to reduce that USACE’s maintenance and infrastructure costs on areas with low demand/low visitation. The multiuse trails on Pomme de Terre Management Lands are maintained by the USACE. Any expansion of facilities is under the authority of the USACE’s Pomme de Terre Project Office.

**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. (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 practice recommended practices 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.

U.S. Army Corps of Engineers. (2006). *Pomme de Terre Lake management license agreement*. U.S. Army Corps of Engineers.

**Maps:**

Figure 1: Vicinity Map

Figure 2: Area Map

Figure 3: Special Considerations Features Map

Figure 4: Easement Map

Figure 5: Land Cover Map

**Additional Appendices:**

Appendix A: Pomme de Terre Lake Management Lands Area Management Plan Public Comments

**Figure 1: Vicinity Map**

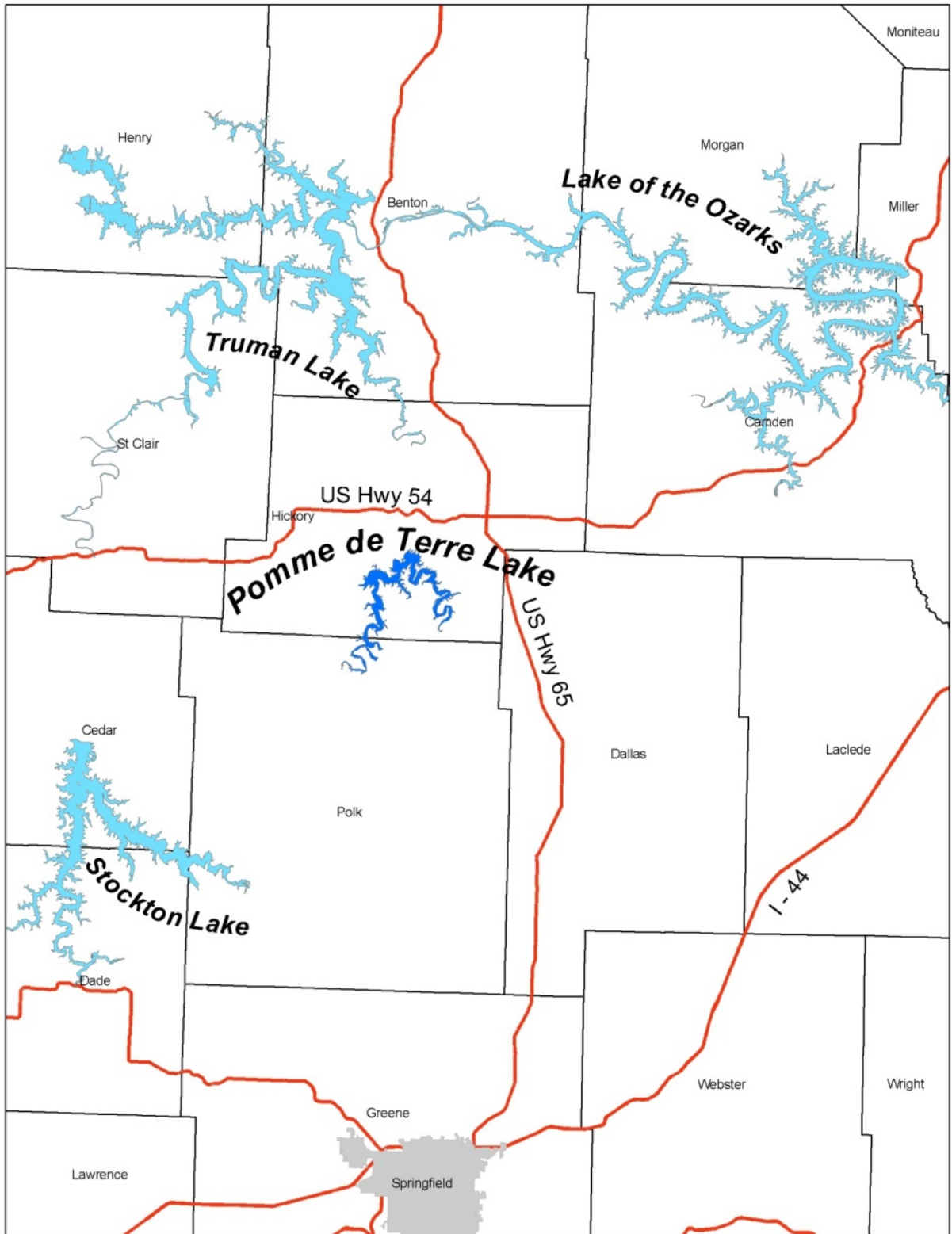


Figure 2: Area Map

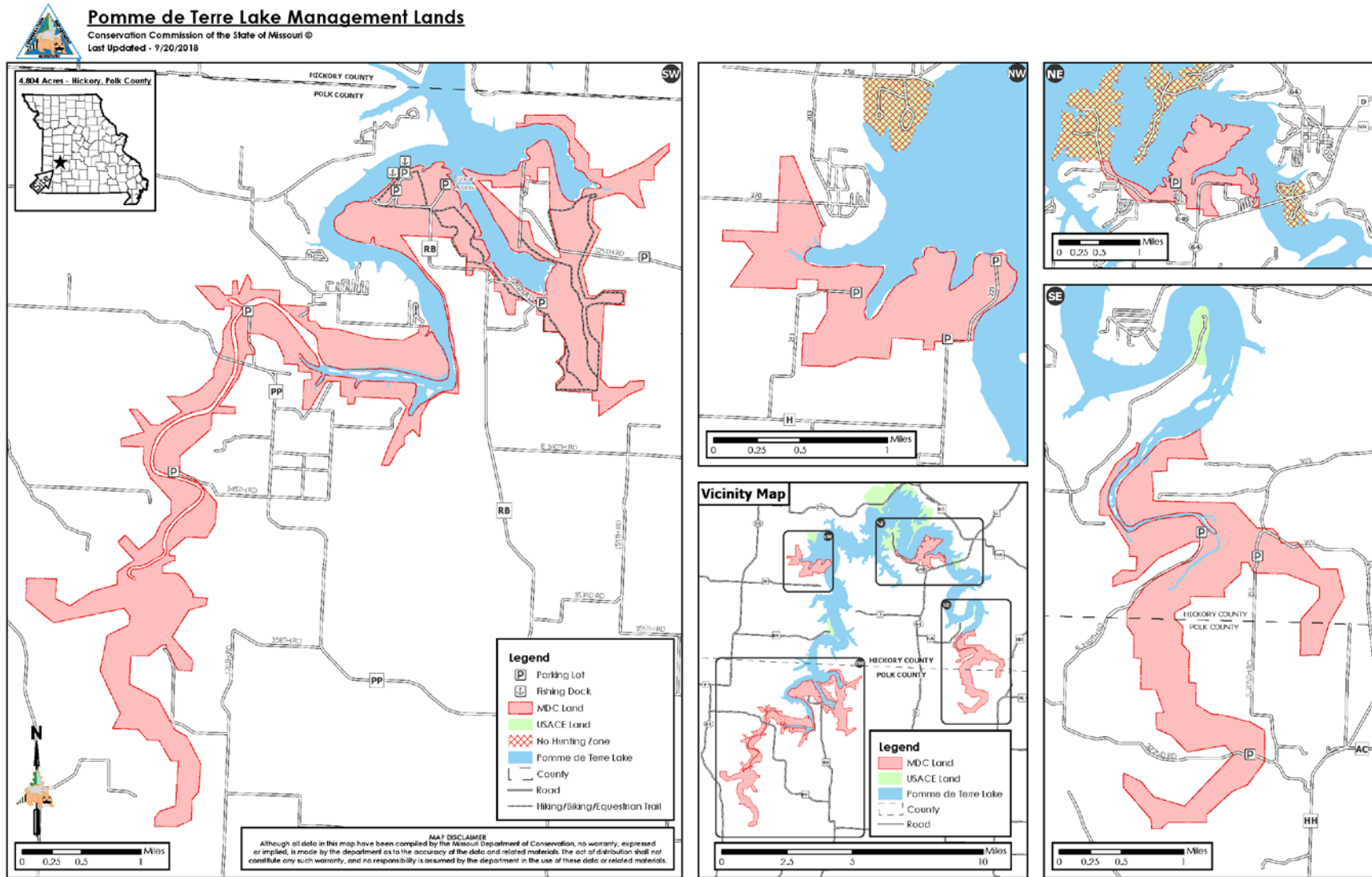
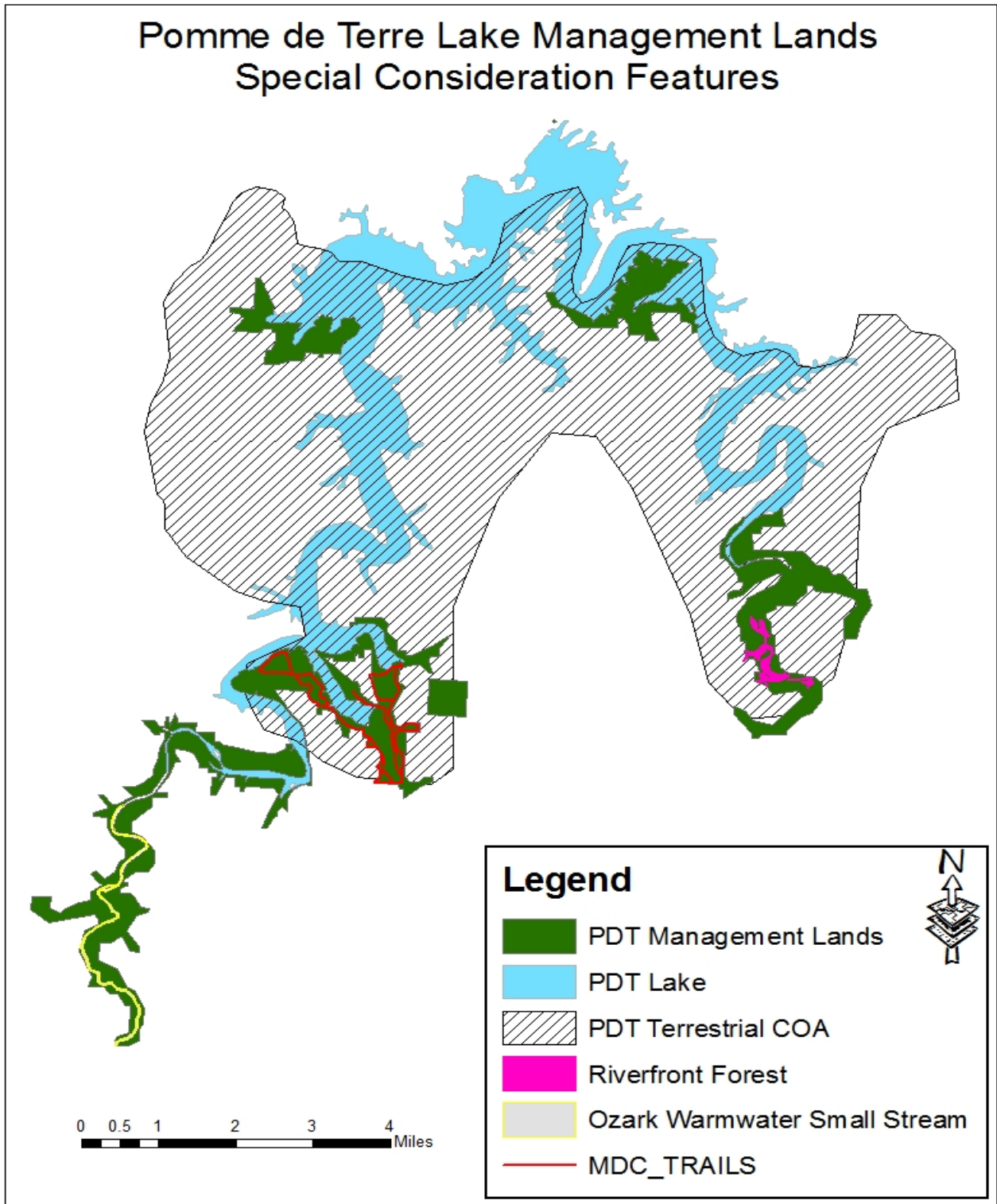
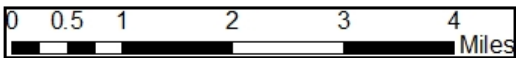
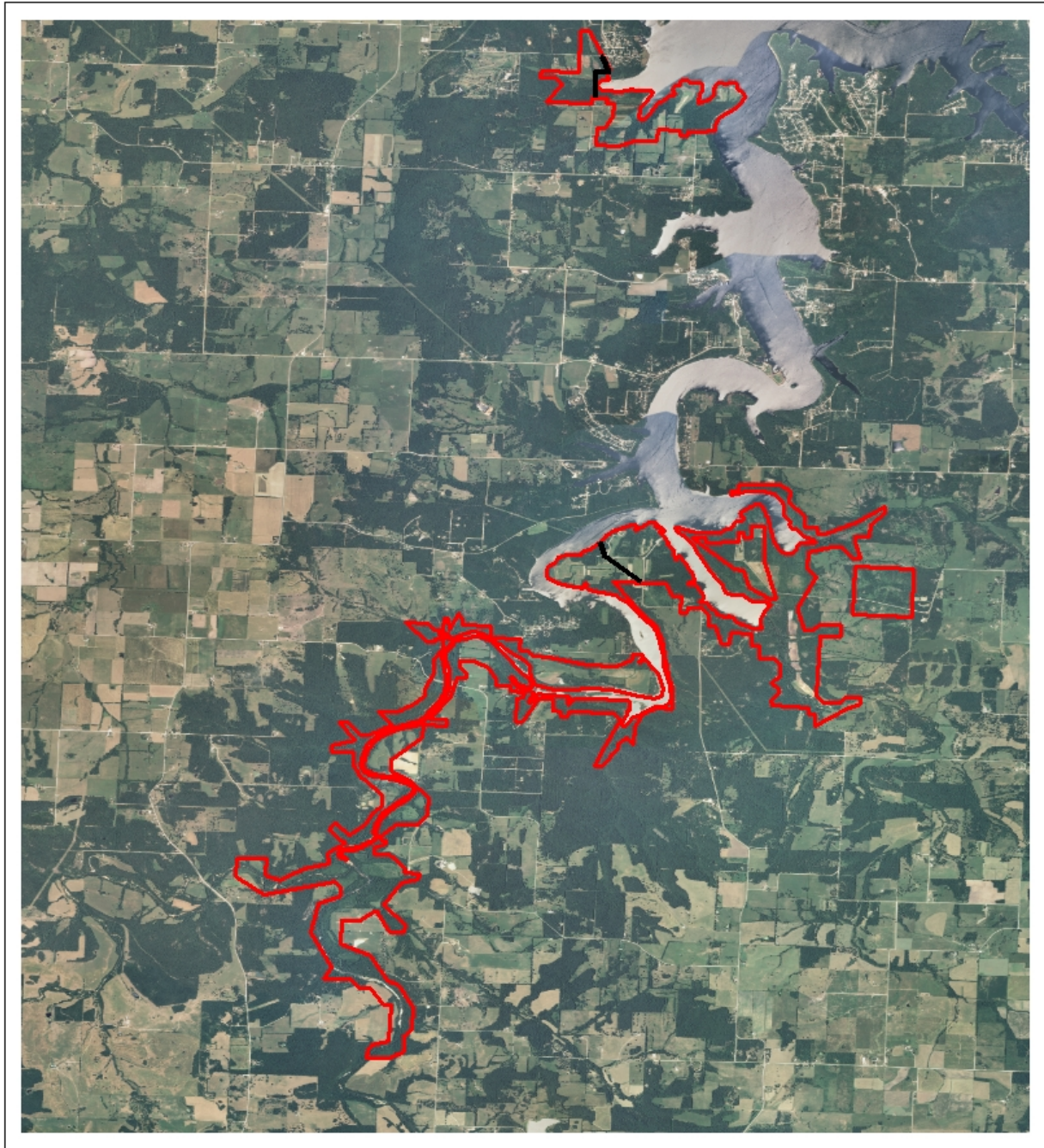


Figure 3: Special Consideration Features Map





**Figure 4: Easement Map**



**Legend**



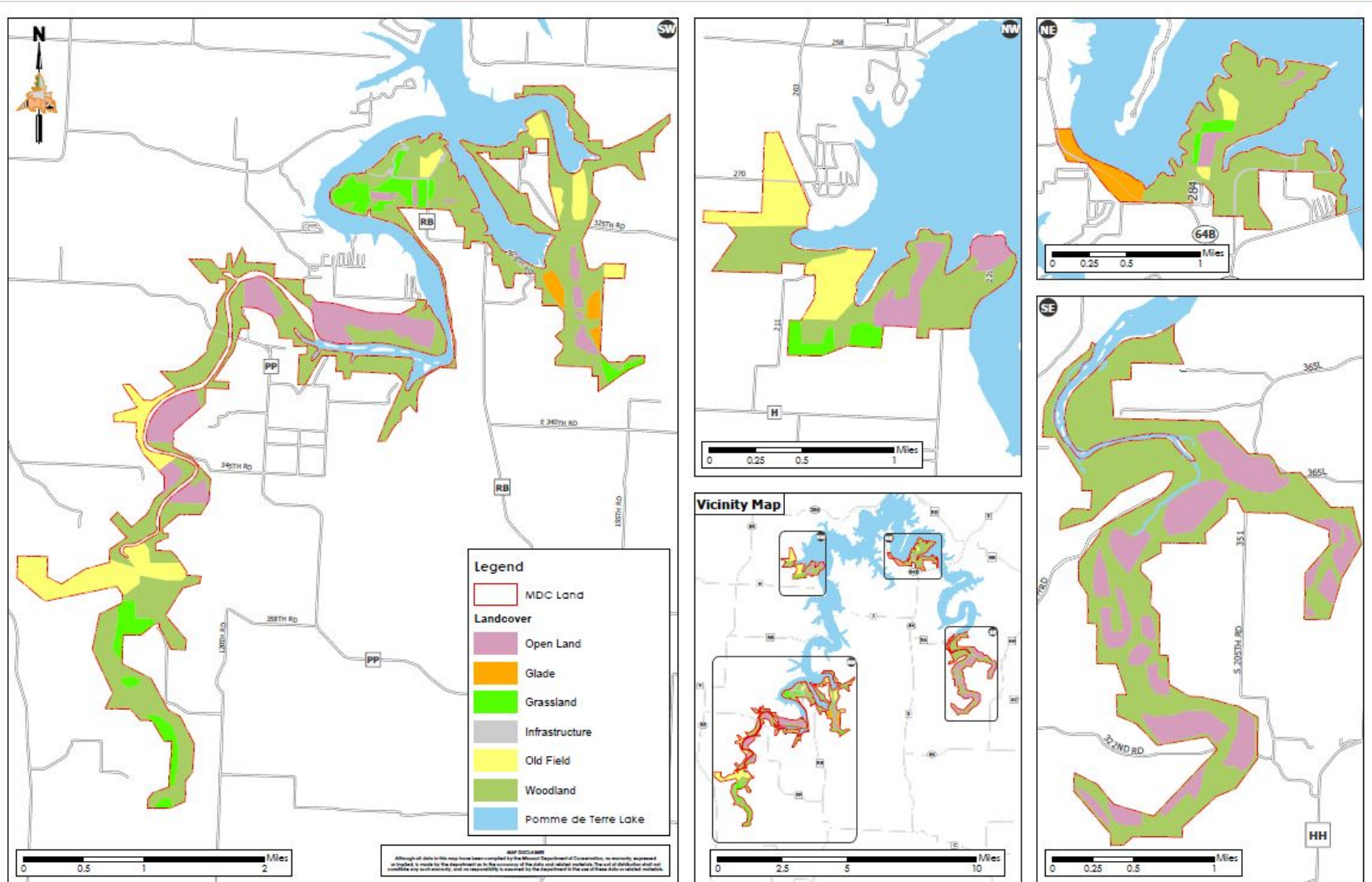
-  Pomme de Terre Lake Management Lands
-  Powerline Easement

Figure 5: Land Cover Map



**Appendix A: Pomme de Terre Lake Management Lands Area Management Plan Public Comments**

Received during public comment period (Nov. 1–30, 2018):

We enjoy riding our horses on this conservation area. We try to pick up trash and alert the horse camp if there is a problem with the trails. It is beautiful, quiet, safe and close to home. This Fall, however, we almost ran our horses into two unmarked wires stretched across the trail (narrow but well used trail) in two spots. We removed them after looking for signs etc. My husband thought it had something to do with deer hunters (mid Sept., before deer season). thanks!

I want to encourage MDC to continue to keep a good relationship with equestrian users of the trails at Pomme de Terre Lake managed lands. Service organizations such as Back County Horsemen of Missouri are working hard to keep the trails in this area free of trash and debris. As efficient and well operating as MDC is, all four of the management objectives under Public Use Management should be able to be collectively managed and conducted simultaneously. A "management" question- When posting the multi use trail with signs saying "Closed to horseback riding during fall firearms deer season" (Management Objective 4, Strategy 3). I am curious about the reasoning of this designated trail use restriction but not the closure of the recreational trail itself. Is this a safety issue? Is the trail closed to hiking and bicycle riders at that time not also a concern? If not, why not? Most responsible equestrian users are not going to use the trail during rifle deer season due to safety and they do not want to cause problems with those that are deer hunting. However, concerns with those same safety issues, disturbing the deer in the area, and angering local hunters are still present with those that may be recreationally hiking or bicycling on the trail during rifle season. Thank you for your consideration.

please keep trails open to all users. As an equine user we need as much public land as possible for trails so they won't be over used. I do help keep trails clean and open. Thanks \*\*\*\*\*

I am a member of the Tri Lakes Back Country horseman group which assists in maintenance of the 20 miles of trail and trail head. Being an equestrian who works to maintain my vested interested and to benefit the other users, (hiking and mountain biking) request the continuation of equestrian trail usage. A local equestrian horse camp/business also benefits from the equestrians and make it easier to access the use area due to the distance I have to travel to enjoy this area. I sincerely appreciate the MDC having equestrian use trails since this isn't the main purpose of the organization, however many of our members are hunters and our organization of volunteers help keep trails open to all in this changing group of outdoor enthusiasts.

In reading your draft concerning unauthorized use, p. 7; Management Objective 4; Strategy 3, I find it disturbing you would target horseback riders instead of all recreational users when considering closing trails during deer season. Very few horseback riders ride during deer season

on any public lands due to safety concerns. Not addressing hikers and bicyclists use during this time is very shortsighted on your department's part. Hikers and bicyclists are much more likely to be in danger of getting mistaken for wildlife than someone on horseback. Hikers are quiet and more deerlike in movement. Bicyclists are moving fast and mostly quiet. Horses are easy to see with riders usually in small groups and much less disturbing to wildlife as horses are prey animals and emit the non-predator smell. I am not advocating to ride during deer season but really take issue with only horseback riding being singled out. It should be all recreational riders or none.

The Pomme de Terre 20 mile multiple use trail is one of the few places I feel comfortable trail riding alone. Please continue to maintain the existing trail and please add more miles for horseback riding.

Equestrians appreciate having designated trails on MDC lands and while I agree riding during firearms deer seasons is dangerous so I do not ride, the management plan should not single out horseback riding closed but include all users of the trails for recreational use closed (which includes hikers and bicycles) or let all use at their own risk.

Strategy 3: Post the Pomme de Terre Management Lands (Bolivar Access) multipurpose trail with signs saying, "Closed to horseback riding during fall firearms deer seasons." (Wildlife, USACE)

Thank you for working diligently to protect our land. Our group enjoys riding this area but it's disheartening to see all of the trash left by people. As long as horses are allowed to ride these trails we will continue to do our best to keep them clean and in the best condition possible.