

Meramec Conservation Area

25-Year Area Management Plan FY 2020-2044



Justine Gartner

Forestry Division Chief

8/21/2019

Date

Meramec Conservation Area Management Plan Approval Page

PLANNING TEAM

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OVERVIEW

- **Official Area Name:** Meramec Conservation Area, #6202; and Arthur G. Heyne Memorial Annex, #8148
- **Year of Initial Acquisition:** The Arthur G. Heyne Memorial Annex and Meramec Conservation Area (CA) were deeded to the Missouri Department of Conservation (MDC) in 1980 and 1981, respectively.
- **Acreage:** 4,045 acres
- **Counties:** Franklin
- **Region:** St. Louis
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**
 - A. **Strategic Direction**

Manage for a healthy, diverse, and sustainable mosaic of forests, woodlands, and aquatic resources that provide habitat to a wide variety of plants and animals; and provide opportunities for the public to hunt, hike/bike/horse-ride on multi-use trails, and view, study, or learn about nature/conservation.
 - B. **Desired Future Condition**

The desired future condition of Meramec CA is a healthy forest/woodland complex along the Meramec River, with associated karst features.
 - C. **Federal Aid Statement**

N/A

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

- A. **Priority Areas:** Middle Meramec River Fisheries Priority Watershed, Meramec River Stream Reach Conservation Opportunity Area, Hellbender Priority Stream Reach, The Nature Conservancy (TNC) Meramec Hills Priority Area, Cave Karst Conservation Opportunity Area, and Meramec River Watershed Audubon Important Bird 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. **High Quality Natural Communities:** None

- 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:** Yes, records kept with Natural History Biologist.
- E. Other:** According to the *Atlas of Missouri Ecoregions* (Nigh & Schroeder, 2002), the area:

Occurs in the Meramec Oak Forest Breaks/Rugged Hills and the East Meramec Oak Woodland/Forest Hills Landtype Associations. The Meramec Oak Forest Breaks/Rugged Hills consist of steep hills and narrow ridges along the Meramec River corridor. The East Meramec Oak Woodland/Forest Hills Landtype Association consists of broad ridges and moderate slopes that give way to narrow ridges and steeper slopes near streams. Historically, oak woodland and forest with scattered glade/woodland complexes dominated.

III. Existing Infrastructure

- Ten developed gravel parking lots, including one lot with an Americans with Disabilities Act (ADA) accessible concrete pad
- Five gravel public access roads (~6.4 miles)
- One divided privy (ADA accessible)
- J. Avery Ruble Memorial hike/bike/horse trail (10.4-mile looped trail)
- Woodland Trail (1.3-mile ADA-accessible trail)
- CCC Trail (0.1-mile interpretive hiking trail)
- Old Reedville School Trail (6.1-mile hiking trail)
- Two scenic overlooks
- Two gravel service roads (~4.6 miles)
- Three footbridges
- Six road pipes
- Four gates
- Twenty-three wildlife watering holes (~2 acres total)
- Meramec Workstation (MDC office)

IV. Area Restrictions or Limitations

- A. Deed Restrictions or Ownership Considerations:** The Arthur G. Heyne Memorial Annex tract consists of 166 acres donated to MDC by Dorothy L. Hill. The provisions of the deed for this tract are: 1) The property shall be maintained and managed in its natural state for the benefit of the forest, fish, and wildlife resources. 2) The property

shall be named the “Arthur G. Heyne Memorial Annex to Meramec State Forest.” Should the provisions not be fulfilled, the property shall revert to the donor or her heirs and successors.

- 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:** Crawford Electric Powerline easement
- D. Cultural Resources Findings:** Yes, records kept with the MDC environmental compliance coordinators. Managers should follow best management practices for cultural resources found in the MDC 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) Maintain healthy woodland, upland forest, and bottomland forest on Meramec CA. Woodland restoration thinning occurred in Compartment 4 in 2013 and in Compartment 3 in 2015. A large burn unit was delineated in Compartment 3 and a prescribed burn occurred in the spring of 2016. In 2014, two timber sales were marked in Compartment 4, with both sales being sold in 2016. The goal of the sales was to thin crowded and overstocked forest stands. Before this sale being marked, shade-tolerant species, such as sugar maple and red maple, were treated in the sale units with herbicide to allow more sunlight to the understory and to give oak seedlings a competitive edge against the shade-tolerant species. Other forest compartments have received periodic timber management, with records dating back to the late 1950s.
- 2) Protect terrestrial resources by managing invasive plant species. MDC has been proactive with managing invasive plant populations and has aggressively treated bush honeysuckle, Japanese honeysuckle, autumn olive, tree of heaven, and sericea lespedeza that have been found on the area.

Management Objective 1: Maintain healthy forests, woodlands, and glades.

Strategy 1: Monitor forests, woodlands, and glades for invasive vegetation, diseases, and insects; control, as needed. (Forestry)

Strategy 2: Conduct forest/woodland inventories as needed. Formulate prescriptions (e.g., harvesting, non-commercial thinning, prescribed fire, etc.) and carry out prescriptions to maintain forests and woodlands in a healthy, sustainable, and wildlife-friendly condition. (Forestry)

Strategy 3: During forest management activities, follow best management practices according to the *Missouri Watershed Protection Practice Recommended Practices for Missouri Forests* (MDC, 2014) guidelines and *Watershed and Stream Management Guidelines for Lands and Waters Managed by Missouri Department of Conservation* (MDC, 2009). (Forestry)

VI. Aquatic Resource Management Considerations

Challenges and Opportunities:

- 1) The Meramec River is the main aquatic feature on Meramec CA. The east bank of the river fronts the area for 4.8 miles, with a long, steep bluff face that limits walk-in or boating access.
- 2) There are several miles of headwater streams with high gradients, long riffles, short pools, and intermittent surface flows. On some of these streams, MDC owns only a small portion of the watershed, and subsequently, the streams are subject to degradation from past and current instream practices and incompatible land uses in the watershed.
- 3) Several karst features are present on Meramec CA (caves, sinkholes, and a spring). Conservation of karst resources requires maintaining appropriate vegetated buffers around sensitive drainages and recharge areas.

Management Objective 1: Maintain or improve stream function and karst function, including riparian corridor areas and the supply and transport of sediments and gravel.

Strategy 1: Maintain or improve terrestrial natural communities in the riparian areas of streams to the extent possible (see Terrestrial Resource Management Considerations) throughout the duration of this plan. (Forestry)

Strategy 2: Assess the integrity of stream channels and drainage ways, and the need to implement stabilization projects or repair stream-crossing structures. (Fisheries, Design and Development)

Strategy 3: Maintain vegetative buffers around karst features. (Forestry)

VII. Public Use Management Considerations

Challenges and Opportunities:

- 1) Meramec CA consists of a large contiguous block of woods and provides excellent opportunities for deer hunting, turkey hunting, and small game hunting.
- 2) Hunting is currently restricted in portions of Meramec CA due to a large section of the area along the Meramec River being designated as a wildlife refuge. There may be opportunity to open some of these areas to hunting.
- 3) A large network of multi-use trails is present on Meramec CA, which allows multiple user groups the opportunity to enjoy the area; but can also potentially lead to conflict between different user groups.
- 4) The length of the multi-use trail system has made maintaining the trail system difficult at times, especially during times of inclement weather (floods, wind, etc.) and when staff is immersed in other projects.

Management Objective 1: Provide high-quality hunting opportunities.

Strategy 1: Conduct long-term and annual management activities that will provide habitat for a diversity of wildlife species, as explained in Terrestrial Resource Management Objective 1. (Forestry)

Strategy 2: Consult with regional staff, evaluate options, and make a recommendation to change area regulations to (1) allow additional hunting opportunities in a portion of the area identified as a wildlife refuge zone, and (2) establish a smaller no-shooting zone within a section of this area, such as along a portion of the river and above Meramec State Park Campground. (Forestry)

Management Objective 2: Provide horseback riding, hiking, and biking opportunities.

Strategy 1: Maintain multiple-use trails in a safe and accessible condition that invites public use. (Forestry)

Strategy 2: Maintain signage that states when trails are open or closed (to non-hunting use during hunting seasons). (Forestry)

Management Objective 3: Look for opportunities to streamline maintenance of trail system.

Strategy 1: Look for areas that have erosion issues and consider regrading, adding geo-synthetic material, or rerouting the trail to mitigate the issue. (Forestry)

Strategy 2: Work with stakeholders and groups that have established a Memorandum of Agreement with MDC to assist in maintaining the trail system. (Forestry)

VIII. Administrative Considerations

Challenges and Opportunities:

- 1) Maintain and clearly demarcate area boundary lines.
- 2) Maintain all area infrastructure.
- 3) Evaluate land offered as additions to the area.

Management Objective 1: Clearly identify area boundaries.

Strategy 1: Maintain area boundary lines by repainting lines every five to six years and addressing issues as needed. (Forestry)

Management Objective 2: Maintain all area infrastructure to MDC standards.

Strategy 1: Conduct maintenance as required or needed on all area infrastructure. (Forestry, Design and Development)

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.

MANAGEMENT TIMETABLE

Strategies are considered ongoing unless listed in the following table:

	Fiscal Year																									
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	
Administrative Considerations																										
<i>Objective 1</i>																										
Strategy 1			X					X					X					X						X		

APPENDICES

Area Background:

Meramec CA is in Franklin County. The area is about 5 miles east of Sullivan on Highway 185.

The site was used extensively by Shawnee Indians in pre-settlement times. When the pioneers arrived, a small village was established from 1840-1850. During this time, lead and barite were mined, and timber was harvested from the site. Between 1925 and 1930, most of the area was purchased from 12 settlers and deeded to the State of Missouri.

During the 1930s, a Civilian Conservation Corps (CCC) camp was constructed along what is now Highway 185. The camp ran from 1934-1942 and housed about 220 men during each six-month enrollment period. Throughout the life of the camp, some 2,000 enrollees fought wildfires; engaged floodwaters; constructed trails and fire towers; and built a nursery where tree seedlings were raised and planted throughout the region. Evidence of the camp and its work can still be seen throughout Meramec CA. On the west end of the area along Highway 185, many of the foundations from the barracks and mess hall are still present. Several nursery plantations occur along the area's main entrance road across from the scenic overlook. Plantations include rows of white pine, shortleaf pine, jack pine, eastern red cedar, tulip poplar, and sweet gum. A few large plantings dominated by shortleaf pine are also present along Spanish Claim Road. During this time, the CCC erected the Lone Hill Fire Tower for fire surveillance.

Once the MDC was created, the area was jointly managed by MDC and the Missouri Department of Natural Resources until 1981, when 3,891 acres were deeded to MDC. An additional 166 acres were donated to MDC by Dorothy Hill in 1980 in memory of Arthur Heyne.

Forest management activities, with a goal of restoring natural communities and improving wildlife habitat, have occurred at Meramec CA since the late 1950s. As of 2013, woodland restoration thinnings and prescribed burns have been implemented to improve diversity and wildlife habitat. Two timber sales have also occurred, with the goal of thinning crowded and overstocked forest stands and creating variability in stand structure.

The area is open to the public from 4 a.m. to 10 p.m. daily.

Current Land and Water Types:

Land/Water Type	Acres	% of Area	Miles
Woodland	2,334	58	
Upland Forest	1,272	31	
Bottomland Forest	435	11	
Developed	4	<1	
Total	4,045	100	
Permanent Stream Frontage – Meramec River			4.8

Public Input Summary:

The draft Meramec Conservation Area Management Plan was available for a public comment period Oct. 1–31, 2018. MDC received comments from eight respondents (Appendix A). The Meramec 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.

MDC responses to themes and issues identified through the Meramec Conservation Area Management Plan public comment period.

Terrestrial Resource Considerations

Supports ongoing efforts to remove invasive species at Meramec CA.

MDC continues to treat invasive species populations and continues to scout for new populations when involved with other forest management and recreation management activities. The heaviest population of invasive plants is around the equestrian parking lot and along the ADA trail. These two areas are targeted for treating a variety of invasive plants, but particularly multi-flora rose, Japanese honeysuckle, and bush honeysuckle. Last fiscal year (FY18) the Meramec CA work team treated approximately 47 acres of invasive plants at Meramec CA.

Public Use Considerations

Trails

Suggests adding more trails to the area, including more trails for horse-riding and trails for bird watching.

Meramec CA has a 10.5-mile multi-use loop trail that covers most of the area and runs along most of the major ridgetops on the area. Aside from this, Little Indian Creek CA (located 5 miles to the east) has 12 miles of multi-use trail and Long Ridge CA (located 6 miles to the northwest)

has 9 miles of multi-use trail. The Meramec CA work team spends a substantial amount of time on trail repair and maintenance. Adding more trail to an already lengthy trail system would be impractical. While no trails are specifically designated as bird watching trails, there are plenty of opportunities to bird watch in a variety of different habitats along the 10.5-mile multi-use trail, the 6.1-mile Reedville School Hiking Trail, the 1.3-mile woodland ADA trail, as well as the miles of service roads that traverse Meramec CA.

Suggests designating some trails as equestrian-only trails and some trails as hiking-and-biking-only trails to improve safety of trails.

The 10.5-mile multi-use trail is a multiple use trail system that provides recreational opportunities for multiple different user groups. Creating more trails specifically for bikes, while maintaining a trail specifically for horses, would be impractical. Splitting the trail into a section only for horseback riding, and a section only for biking, would also be confusing and impractical.

Suggests connecting Meramec CA trails to the Ozark Trail system.

If the opportunity were to present itself, MDC would work with the Ozark Trail Association and would assess the feasibility of using the existing trail; and consider creating a section of trail to allow the Ozark Trail to work its ways through Meramec CA. Meramec State Park on the west side of the Meramec River may also present an opportunity to expand the Ozark Trail.

Hunting

Opposes opening wildlife refuge areas for hunting.

MDC could locate any information in our records, which details when and for what reason the area highlighted as a wildlife refuge was set aside as such. The purpose of a refuge is to allow wildlife a place to rest away from hunting pressure. The state park to the west of the Meramec River provides a 6,000-acre refuge not open to hunting. We do not believe providing additional acreage refuge acreage on Meramec CA is necessary. Furthermore, with the increased number of chronic wasting disease cases near Sullivan, it is not beneficial for the deer herd to leave a large section of public ground available for deer to be concentrated and spread disease. There may be small portions of the original refuge that are maintained as “no shooting zones,” such as areas around buildings, as well as the ADA trail and scenic overlook that sit on the opposite side of the Meramec River above the state park campground.

Opposes decreasing acres of refuge. If some of the refuge acres become hunting areas, suggests adding refuge acres elsewhere.

As stated in the above comment, it does not make sense to leave a large portion of conservation ground for the deer population to concentrate in. Making areas that were previously open to hunting now closed to hunting, would also lead to confusion about area regulations. There may

be small portions of the original refuge that are maintained as “no shooting zones,” such as areas around buildings, as well as the ADA trail and scenic overlook that sit on the opposite side of the Meramec River above the state park campground.

Suggests making the area an archery-only hunting area.

The area will remain as an area that allows firearms hunting. Archery methods are also allowed on the area.

Camping

Suggests adding primitive camping sites to the area. Suggests providing camping areas where horses are permitted.

Camping is permitted at Meramec State Park on the opposite side of the Meramec River from Meramec CA. If this opportunity were to disappear, then we may consider adding camping opportunities. As MDC does not offer primitive camping on Meramec CA, similarly equestrian camping will not be offered. Equestrian camping opportunities can be found on the Mark Twain National Forest, specifically at the Berryman Loop trail system located 28 miles south of Meramec CA.

River Access

Suggests providing river access to allow for bank-fishing and wading at the area.

Meramec CA lies across the Meramec River from Meramec State Park, which provides concrete and gravel surface boat launching areas, as well as walk-in, day use areas with gravel bars for wading, swimming, and bank fishing. Much of the Meramec CA side of the river has steep terrain and bluffs making this sort of access unfeasible. The exception to this is the ADA trail which lies on flat ground adjacent to the Meramec River. There are a number of openings with benches along the ADA trail that allow access to the river. If the publicly available river access infrastructure on the state park side of the river were to disappear, then MDC would likely explore replacing these opportunities as long as a suitable site could be identified.

Administrative Considerations

Suggests increasing advertising and signage for Meramec CA to increase awareness of the area and increase area use. The area is underutilized and has the potential for a lot more use.

Meramec CA has a cantilever style welcome sign at the main entrance of the area as well as a welcome sign along the Heyne Memorial entrance road. MDC signage is also present along roadways through MDC property and on parking lots. The area can also be found on the MDC

discover nature Places To Go page. We will explore highlighting Meramec CA in the *Missouri Conservationist* magazine under the Places To Go section.

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. (2014). *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.

Maps:

Figure 1: Area Map

Figure 2: Aerial Map

Figure 3: Topographic Map

Figure 4: Land Cover Map

Figure 5: Easement Map

Figure 6: Forestry Compartment Map

Additional Appendices:

Appendix A: Meramec Conservation Area Management Plan Public Comments

Figure 1: Area Map

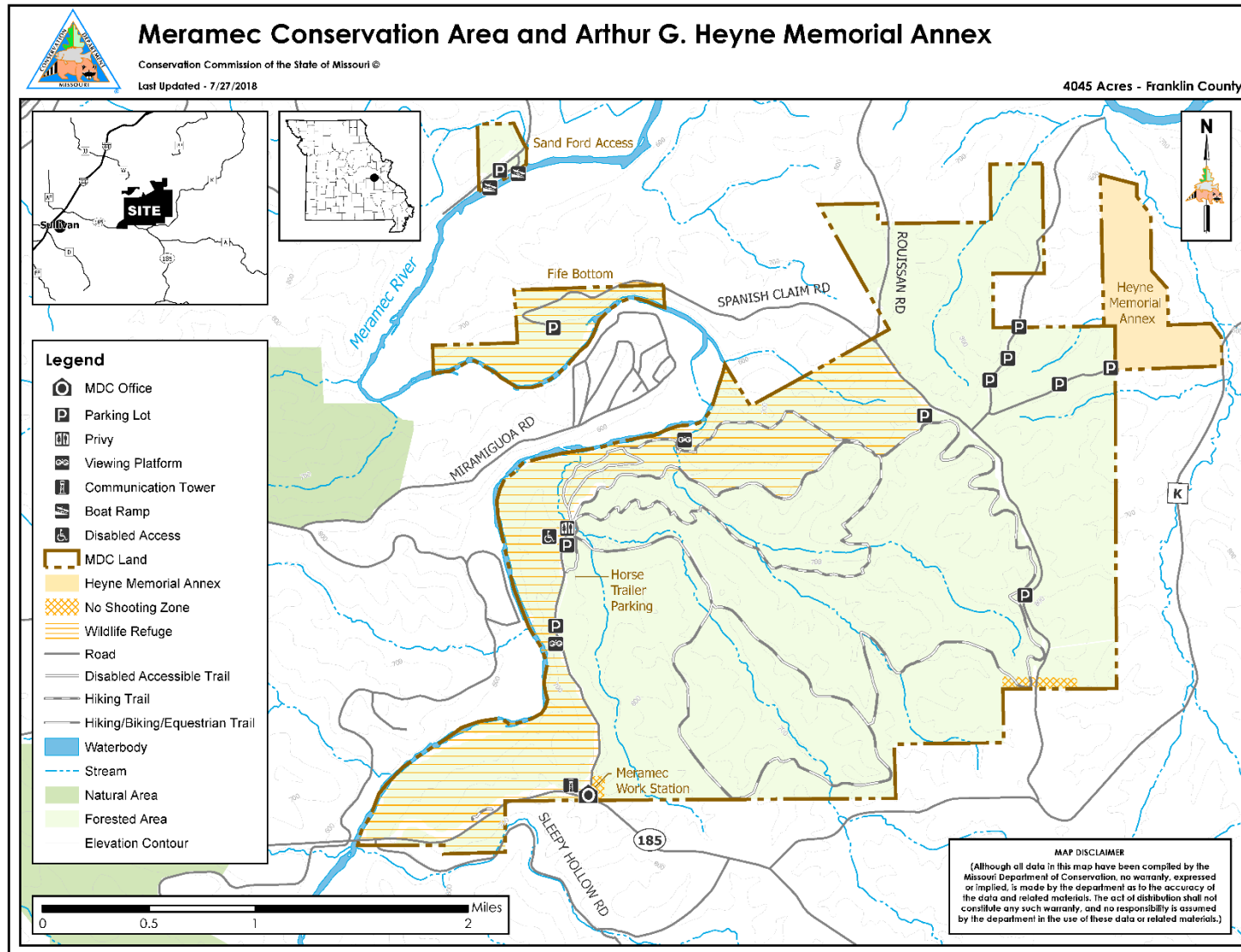


Figure 2: Aerial Map

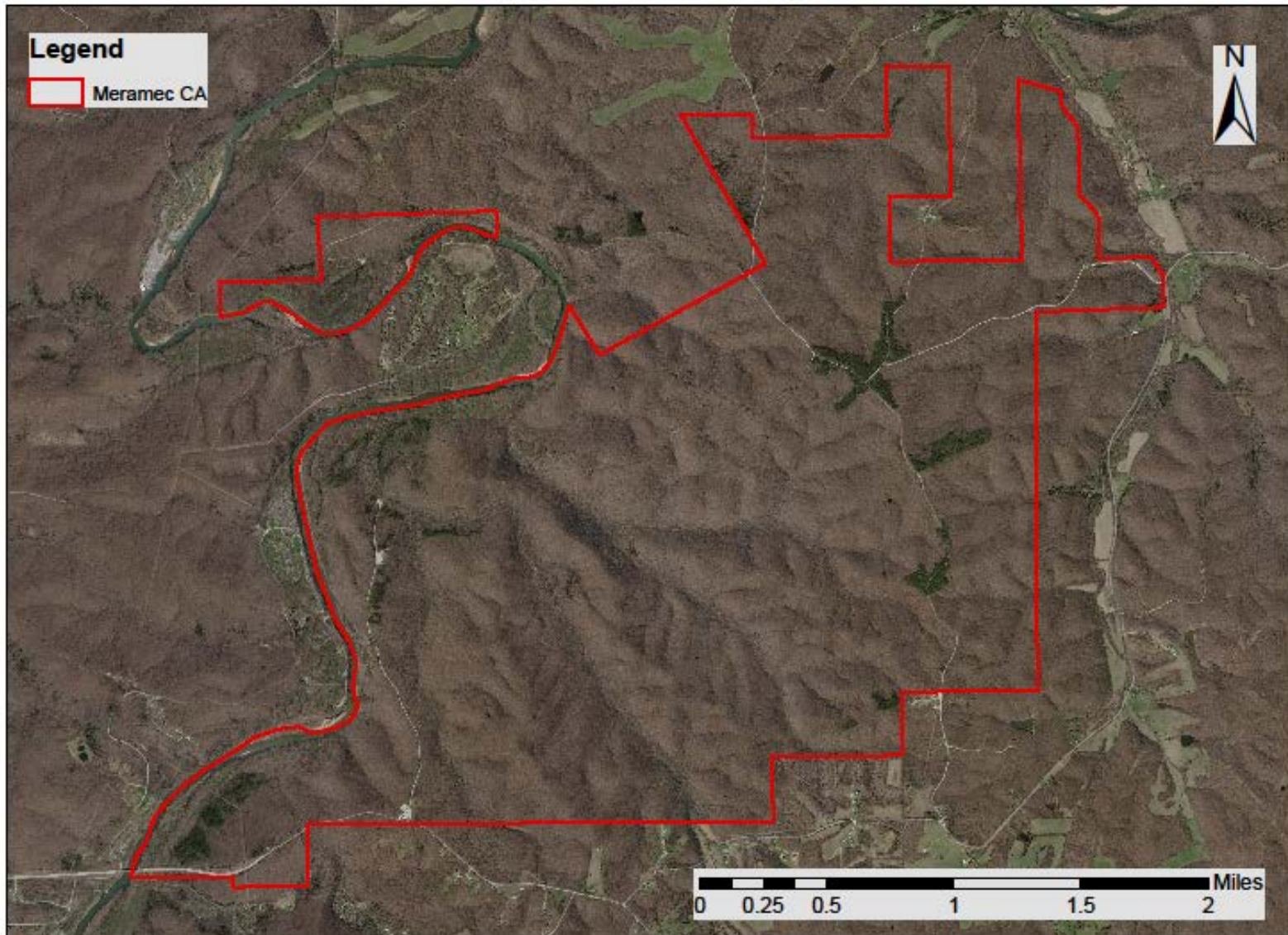


Figure 3: Topographic Map

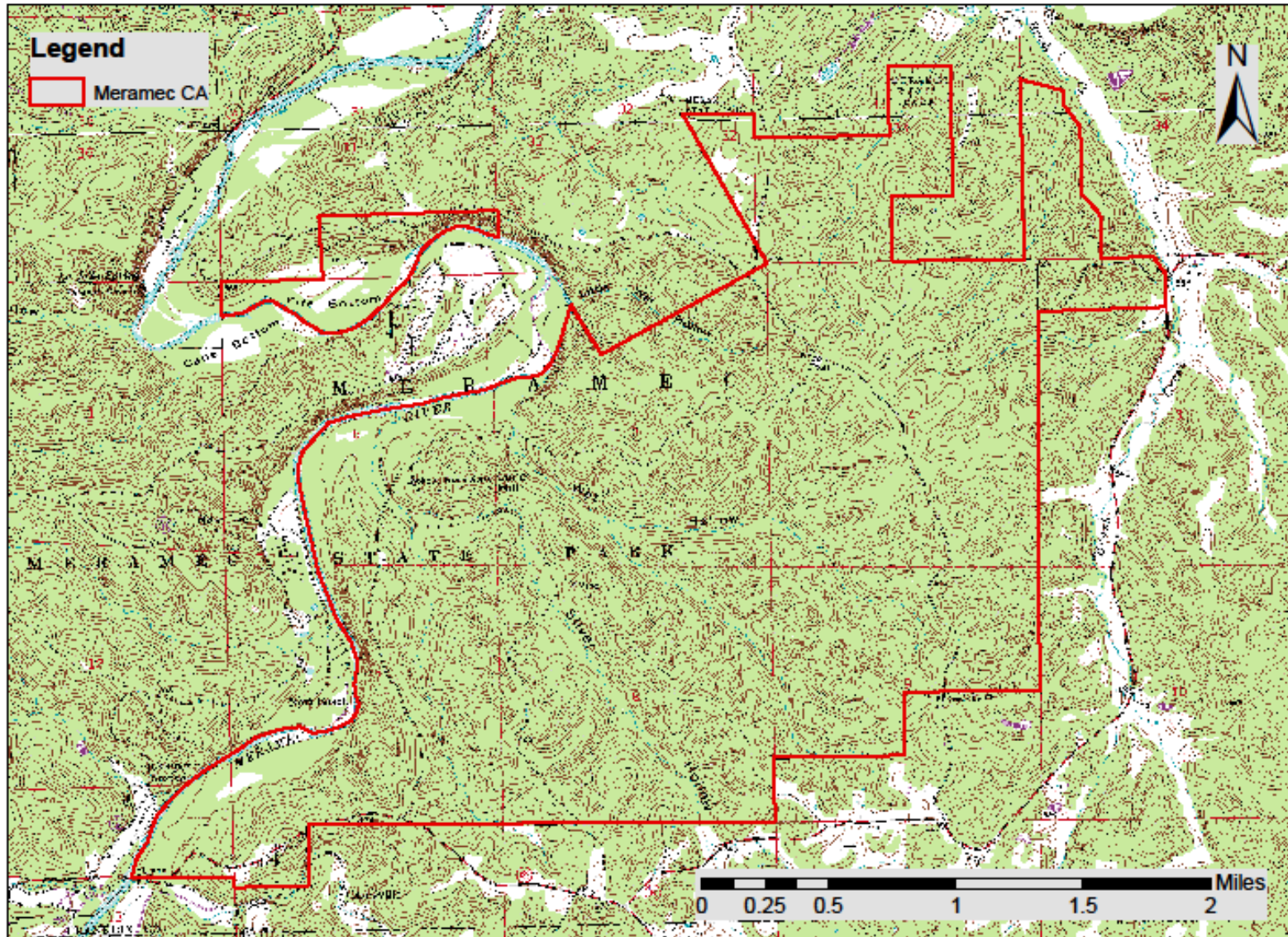


Figure 4: Land Cover Map

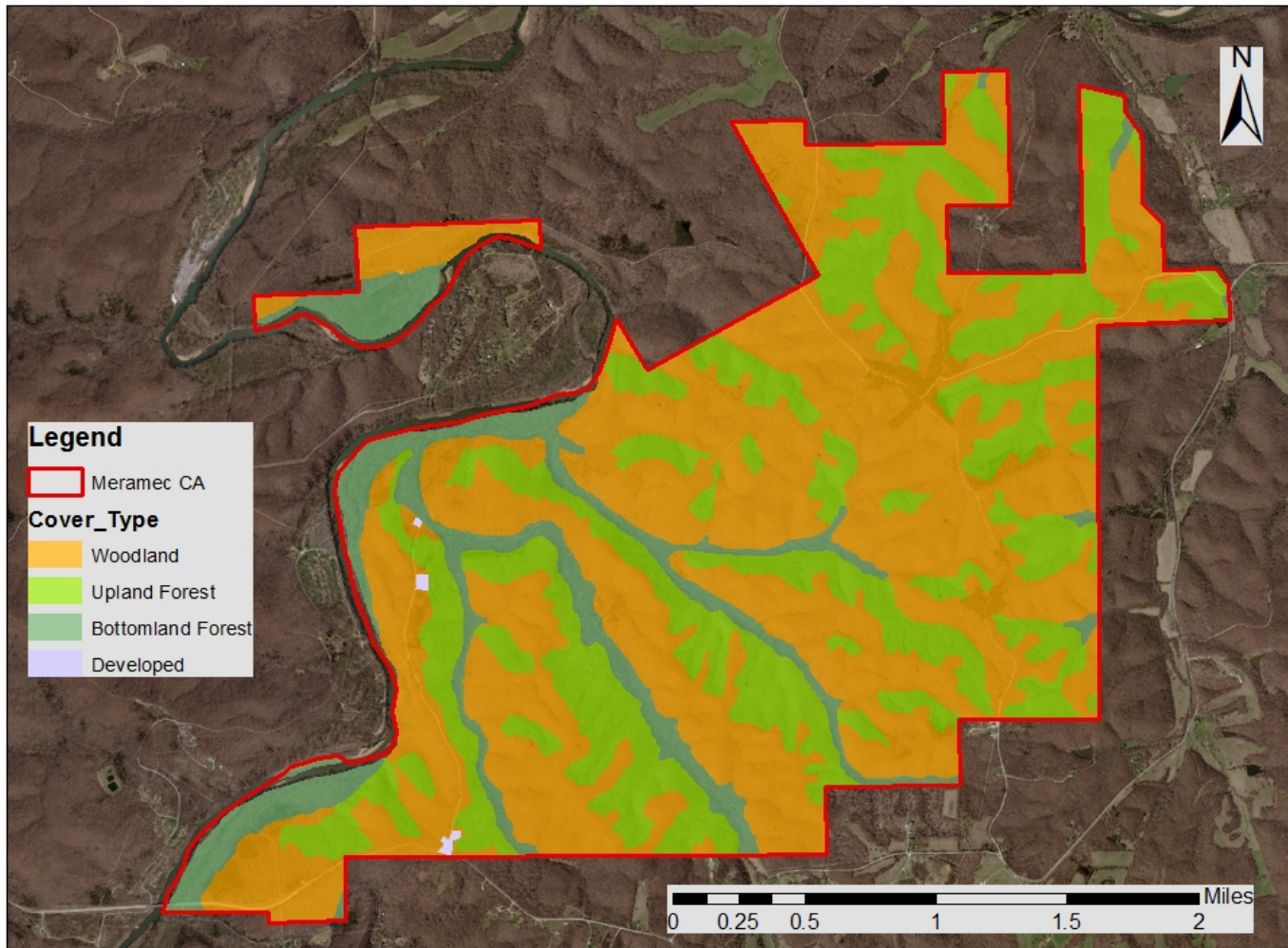


Figure 5: Easement Map

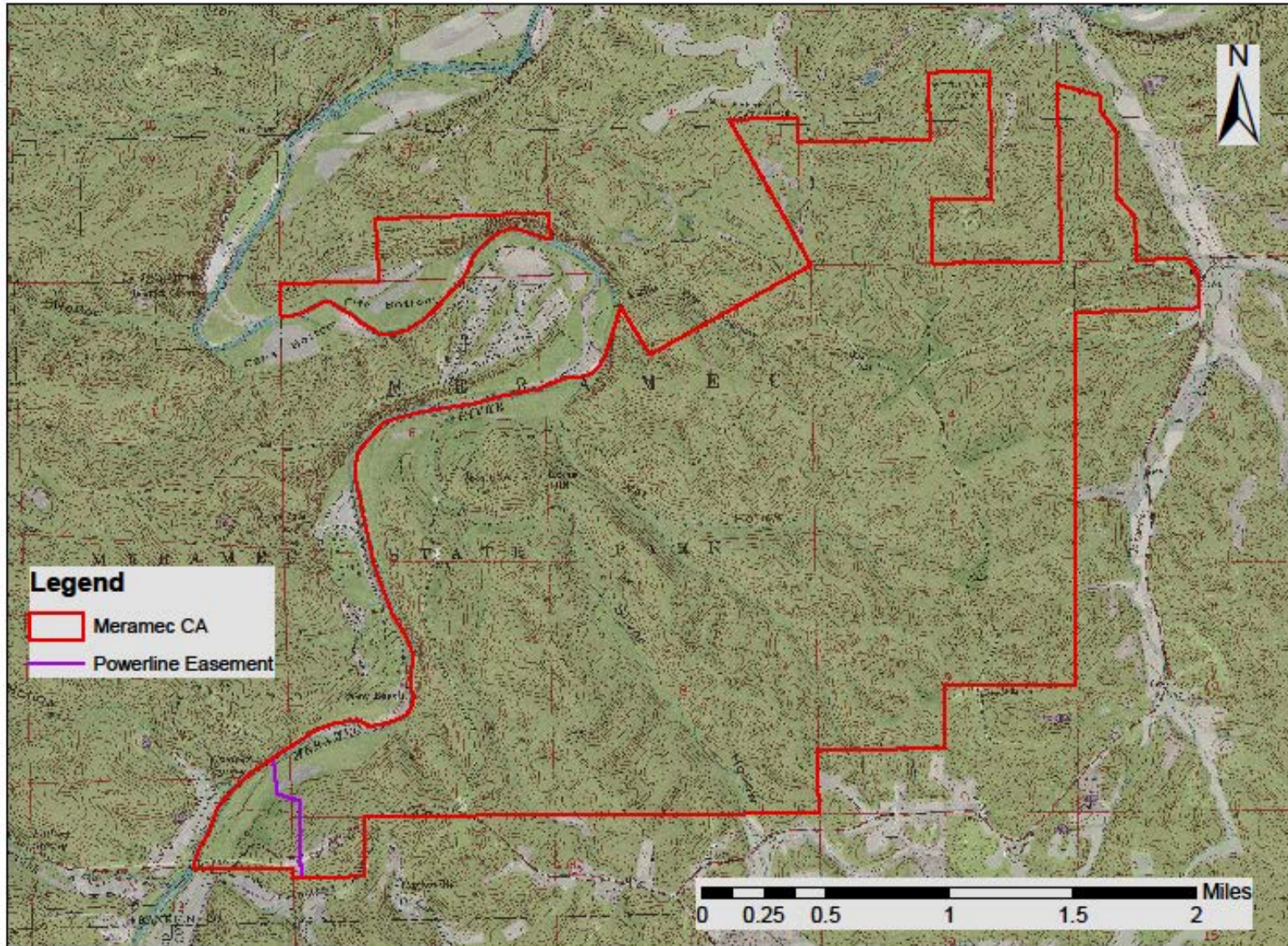
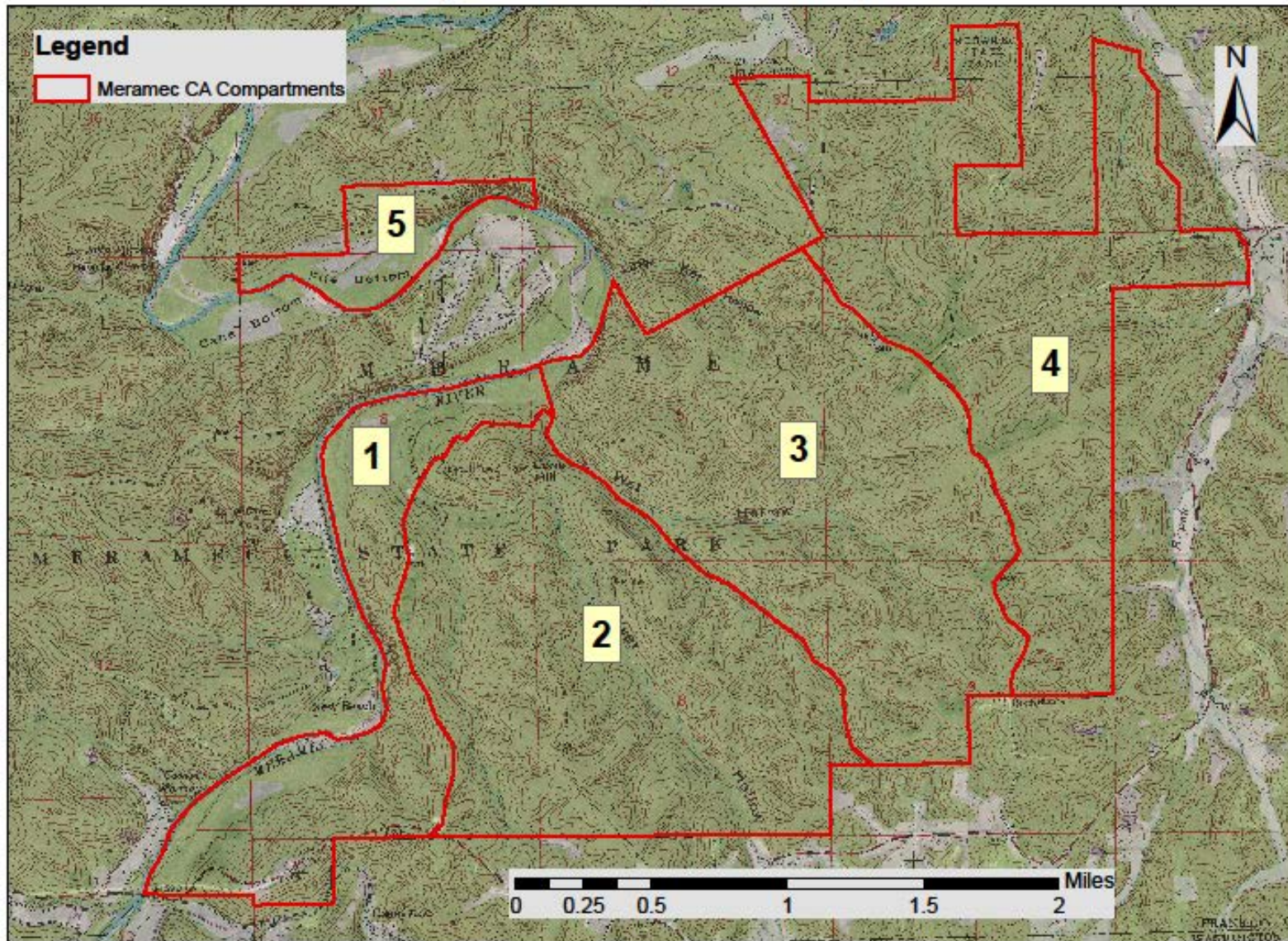


Figure 6: Forestry Compartment Map



Appendix A: Meramec Conservation Area Management Plan Public Comments

Received during public comment period (Oct. 1–31, 2018).

<p>I would like to see a trail developed for bird watching. Keep up the attack on the invasive species.</p>
<p>I do not feel that the areas that are wildlife refuges should be opened to any type of hunting at all. I would like to see the area turn into Archery only deer hunting, similar to Woodson K. Woods. Thank You Dan</p>
<p>Horseback trails should be expanded and areas to camp with horses should be included or improved.</p>
<p>Please continue to maintain the equestrian trails. Please STRONGLY consider dedicating certain trails for use for equestrians only (and also sections for hikers / bikers "only"). This will GREATLY improve safety on the trails and reduce opportunities for conflict. If you've ever ridden a horse around people on bikes, who are generally NOT educated well on right-of-way yielding to large, unpredictable animals, you would understand why this is important. Thank you for your consideration of this input.</p>
<p>The fact that this area exists is very poorly advertised and therefore under utilized. I have been going to Meramec State Park (across the river from this CA) for about 40 years and I had no idea this area mentioned was a MDC CA. I would like to see this land be better utilized by Missouri citizens which may mean providing better signage, advertising, and providing better river access. Thank you.</p>
<p>My suggestion would be to maintain the same amount of area as a wildlife refuge as is currently mapped. One of the opportunities mentioned in the plan is to potentially open part of the refuge up for hunting, in which case I think another currently non-refuge but similarly sized part of the conservation area adjacent to it, should then in turn become part of the refuge area.</p>
<p>Trails are always a good addition. I realize there are some in this CA now, but adding more would be great. I'm not sure how easy it is to access the river for fishing or wading or just walking along the bank. This too would be a plus and add to the enjoyment of the area.</p>
<p>Would like to see primitive camping sites similar to Meramec State Park sites.</p>
<p>Would like to see the trails tied into the Ozark Trail system.</p>
<p>Would like to see the area promoted more. I have lived adjacent to it for 30 years and so many people I talk to have no idea it is here. I have hiked it in the winter for that long also and hardly ever see another person. This is nice on one hand but there is so much more potential for this area, especially considering how close the St. Louis are is.</p>