

Ben Branch Lake Conservation Area

Ten-Year Area Plan
FY 2017-2026





Wildlife Division Chief

15 FEB 2017
Date

Ben Branch Lake Conservation Area Management Plan Approval Page

PLANNING TEAM

Adam Jones, Wildlife Management Biologist

Brian McKeage, Fisheries Management Biologist

Seth Barrioz, Private Land Conservationist

Steve Kistner, Conservation Agent

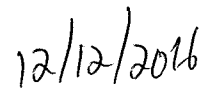
Aaron Holsapple, Resource Forester

Brian Flowers, Outdoor Skills Specialist

CENTRAL REGION

Central RCT Chair

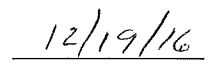

Signature


Date

WILDLIFE DIVISION

Wildlife Management Chief


Signature


Date

OVERVIEW

- **Official Area Name:** Ben Branch Lake Conservation Area, #7824
- **Year of Initial Acquisition:** 1978
- **Acreage:** 563 acres
- **County:** Osage
- **Division with Administrative Responsibility:** Wildlife
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**

A. Strategic Direction

The primary purpose of Ben Branch Lake Conservation Area (CA) is to provide recreational opportunities to the public, including fishing, bird watching, hiking, hunting, outdoor photography, wildlife viewing, and camping. The area is managed for the restoration and maintenance of natural communities (forests and woodlands), habitat for healthy wildlife populations, and diverse public recreational opportunities. Public use is to be inviting and encouraged, particularly in regards to the existing infrastructure surrounding the main lake.

B. Desired Future Condition

The desired future condition of Ben Branch Lake CA is a woodland/forest complex with an interspersion of early successional old fields and shrubby edge habitats to benefit upland wildlife. Focus should be made on the restoration and maintenance of the dominant woodland natural communities.

C. Federal Aid Statement

N/A

GENERAL INFORMATION AND CONDITIONS

I. Special Consideration

- A. **Priority Areas:** None
- B. **Natural Areas:** None

II. Important Natural Features and Resources

- A. **Species of Conservation Concern:** Species of conservation concern are not known from this site, but are found in the surrounding area. Area managers should consult annually with the natural history biologist.
- B. **Caves:** None
- C. **Springs:** None

D. Other:

- **Woodlands:** The area is comprised of woodlands of varying quality. Some of the woodlands have been actively managed with thinning and burning, while others remain overstocked and lack fire disturbance. Woodlands were historically maintained by fire (Nelson, 2010) and all of the woodlands on Ben Branch Lake CA need periodic burn disturbances to enhance and maintain their quality.
- **Ecological Subsection:** Ben Branch Lake CA is located within the Inner Ozark Border Subsection of the Ozark Highlands Ecological Section (Nigh & Schroeder, 2002). This subsection was historically dominated by oak savannas, woodlands, and forest with scattered prairie/glade openings. Today the region is dominated by cleared fescue pasture, and overgrown woodlands due to the absence of fire.

III. Existing Infrastructure

- Concrete boat ramp
- Primitive campground
- Fishing jetty/platform, Americans with Disabilities Act (ADA) accessible
- Five parking lots (one ADA accessible)
- Three privies/restrooms (ADA accessible privy is near the boat ramp)
- Beaver Pond, 2-acre fishing pond
- Ben Branch Lake, 39-acre fishing lake
- Fishing pond, 1-acre

IV. Area Restrictions or Limitations

- A. Deed Restrictions or Ownership Considerations:** None
- 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:** None
- D. Cultural Resources Findings:** No known cultural resources.
- E. Endangered Species:** None observed.
- F. Boundary Issues:** Establishing accurate and identifiable boundary markers is a priority for this property.

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

Challenges and Opportunities:

- 1) Monitor and manage the area's natural features (woodland complexes, forests, and riparian corridors).
- 2) Support healthy wildlife populations to provide public outdoor recreation opportunities.
- 3) Suppress invasive species and woody vegetation succession that threaten the quality of open land habitat conditions.

Management Objective 1: Restore, enhance, and maintain existing natural features (woodland complexes, forests, and riparian corridors).

Strategy 1: Conduct forest inventory by compartment with an estimated re-entry time of 15 years, or as needed. Existing forest inventory data will be current through Fiscal Year (FY) 2026. (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, timber stand improvement, firewood cutting, salvage cuttings, tree planting, seeding and prescribed burning. (Wildlife/Forestry)

Strategy 3: Maintain a diversity of timber age classes that will provide both a diversity of wildlife habitat as well as resiliency to living and non-living (fire, weather, and climate) damaging agents. (Forestry)

Strategy 4: Utilize Best Management Practices during timber harvest as described in the Department's manuals: *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 *Missouri Forest Management Guidelines: Voluntary Recommendations for Well-Managed Forests* (Missouri Department of Conservation, 2014). (Forestry)

Management Objective 2: Manage open lands to provide quality upland wildlife habitat, while maintaining them in the desired successional state.

Strategy 1: Use haying, mowing, prescribed fire, disking, planting, herbicide applications, or other techniques to enhance existing grassland structure, to maintain early successional conditions, or as tools for conversion to diverse native plant species. (Wildlife)

Strategy 2: Maintain and rotate food plots to provide public use hunting/wildlife viewing opportunities. (Wildlife)

Management Objective 3: Reduce and or eliminate invasive species.

Strategy 1: Prioritize, monitor, and plan for control of invasive species.
(Wildlife)

Strategy 2: Implement invasive species control with priority given to areas delineated during monitoring. (Forestry/Wildlife)

VI. Aquatic Resource Management Considerations

The 39-acre Ben Branch Lake provides fishing opportunities for largemouth bass, bluegill, and channel catfish. Only electric motors are permitted. There is a disabled-accessible fishing jetty. Beaver Pond (2 acres) also provides fishing for largemouth bass, bluegill, and channel catfish.

Challenges and Opportunities:

- 1) Manage fish population in Ben Branch Lake.
- 2) Manage fish population in Beaver Pond.
- 3) Enhance diversity and quality of aquatic resources.
- 4) Protect water quality and habitat in streams.

Management Objective 1: Monitor and manage Ben Branch Lake to provide sustainable and diverse fishing opportunities; maintain water quality; and maintain accessibility for users of all abilities.

Strategy 1: Annually conduct spring electrofishing to monitor populations of largemouth bass and bluegill. (Fisheries)

Strategy 2: Conduct hoop-netting for catfish as needed. (Fisheries)

Strategy 3: Maintain current creel and length limits unless desired population indices are not met for three years. (Fisheries)

Management Objective 2: Monitor and manage Beaver Pond to provide sustainable and diverse fishing opportunities; maintain water quality; and maintain accessibility for users of all abilities.

Strategy 1: Conduct electrofishing in spring as needed. (Fisheries)

Strategy 2: Conduct hoop-netting for catfish as needed. (Fisheries)

Strategy 3: Maintain current creel and length limits unless desired population indices are not met in three consecutive samples. (Fisheries)

Management Objective 3: Enhance diversity and quality of aquatic resources.

Strategy 1: Monitor and control nuisance aquatic plants. (Fisheries)

Strategy 2: Maintain aquatic vegetation below 30 percent coverage. (Fisheries)

Strategy 3: Plant native species from seed to improve diversity as needed. (Fisheries)

Strategy 4: Construct evergreen brush piles as needed. (Fisheries)

Management Objective 4: Implement and maintain beneficial riparian corridor practices,

Strategy 1: Maintain riparian corridors on Ben Branch Lake CA. (Wildlife)

Strategy 2: Identify riparian corridors that need to be widened and establish appropriate vegetation using tree planting, direct seeding or allowing natural regeneration. (Forestry)

VII. Public Use Management Considerations

Challenges and Opportunities:

- 1) Provide area users with varied recreational opportunities (e.g., fishing, hunting, hiking, camping, and nature viewing).
- 2) Provide public information regarding Ben Branch Lake.

Management Objective 1: Provide area users with compatible and inviting multiple-use opportunities for recreation.

Strategy 1: Maintain accurate area information and regulations through the Atlas database, area brochures, posted information, and staff contacts with area users. (Wildlife)

Strategy 2: Annually distribute a fishing report in *Fishing Prospects at Selected Missouri Lakes and Streams*. (Fisheries)

Strategy 3: Promote compatible and safe recreational opportunities (e.g., fishing, hunting, birding, hiking, camping, and nature photography). (Wildlife)

Strategy 4: Monitor and manage potential multiple-use conflicts through special use permits and coordination of seasonal uses. (Wildlife)

Strategy 5: Mow, as needed, to provide accessibility for bank fishing. (Forestry)

VIII. Administrative Considerations

Challenges and Opportunities:

- 1) Maintain cooperation and good relations with neighboring landowners.
- 2) Enforce area and statewide regulations to ensure protection for area users and resources.
- 3) Maintain dam structure and associated infrastructure.

Management Objective 1: Maintain area boundaries and access roads to reduce any potential conflicts and confusion with neighboring landowners.

Strategy 1: Monitor area boundaries on an annual basis to ensure proper signage. (Wildlife)

Strategy 2: Continue maintenance and signage on access roads. (Wildlife)

Management Objective 2: Monitor and administer area and statewide regulations to ensure public safety and satisfaction.

Strategy 1: Monitor and mitigate vandalism and illegal activities by seasonally closing some area restrooms. (Forestry)

Strategy 2: Ensure all special use permit users and contractors are following standards set within the contractual agreement, and confront any violations in a punctual manner. (Wildlife/Protection)

Strategy 3: Work in cooperation with conservation agents and other law enforcement to enforce and investigate violations of the *Wildlife Code of Missouri* and other state laws. (Wildlife/Protection)

Management Objective 3: Monitor and maintain lake infrastructure.

Strategy 1: Maintain lake dam to ensure it meets standards of Missouri Department of Natural Resources inspection. (Forestry)

Strategy 2: Maintain area infrastructure in accordance with Department guidelines and at currently identified maintenance level (2). (Forestry)

Lands Proposed for Acquisition:

When available, inholdings and/or 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 Department priorities, as identified in the annual Department land acquisition priorities, may be considered.

MANAGEMENT TIMETABLE

All strategies for this management plan are considered ongoing.

APPENDICIES

Area Background:

Ben Branch Lake Conservation Area is in Osage County, 10 miles north of Linn and west of Missouri Highway 89. The Department purchased 512 acres in 1978. Since then, additional land was purchased and the area is now 563 acres.

In 1983, 39-acre Ben Branch Lake was constructed. The lake began filling in October of that year and was opened to fishing in 1985.

Approximately 478 acres (83 percent) of the area is heavily wooded. On the better soils of the area white and black oak are supported. Post oak and black oak dominate the poorer soils. Facilities on the lake include a (12-vehicle) pull-off camping area, a fishing jetty, and privy accessible to persons with disabilities, and two large parking areas.

Visitors to Ben Branch Lake Conservation Area may view various land management practices intended to improve the forest resource and enhance the woodland and savanna natural communities. They may see that trees are being thinned or prescribed burning has taken place. They might even notice cropping in the flatter areas below the dam. This kind of vegetation management will provide improved wildlife habitat. All practices are implemented to maintain the water quality of Ben Branch Lake's watershed. Visitors watching for vegetation changes over the years will see plant communities changing and local wildlife responding to those changes.

Current Land and Water Types:

Land/Water Type	Acres	% of Area
Woodland	306	54
Upland Forest	109	19
Old Fields/ Upland Fields	54	10
Impounded Water	42	8
Bottomland/Riparian Forest	40	7
Open Land	12	2
Total	563	100

Public Input Summary:

The draft Ben Branch Lake Conservation Area Management Plan was available for a public comment period August 1–31, 2016. The Missouri Department of Conservation received comments from three respondents (Appendix A). The Ben Branch Lake 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 Ben Branch Lake Conservation Area Management Plan public comment period.

Supports invasive species removal. Suggests washing mowing and farming equipment before moving to other areas.

Invasive species control is an ever growing task that our staff works with on a nearly daily basis. The planning team shares your concern for native plant systems, and also the vectors that lead to new infestations of invasive species. Some of these vectors are under our control, while some are beyond what we can prevent. It's important to understand that prioritization of invasive species treatment is made at the district level, and as many acres are treated as are feasible with budgets/hours available. Many conservation areas were heavily infested with invasive species before land purchases by the Department were made. Those long lived populations are more difficult to control than newly discovered infestations. The Missouri Department of Conservation is committed to preventing and removing established populations of invasive species, especially on natural areas and native prairie. When moving from these areas, our staff routinely washes, blows out radiators, and removes all seed from trucks and equipment when moving from one area to another.

Suggest installing and maintaining wood duck nest boxes.

When properly maintained, wood duck boxes can provide quality nesting opportunities for wood ducks. However, the nesting success of the wood ducks takes annual maintenance of bedding material, box quality, and box placement. Area staff would be happy to do the initial installation of the boxes; however the annual maintenance can be difficult with limited staff time. This would certainly be a possible volunteer opportunity for the future. Contact the area manager for further details.

Concerned that lake is overfished. Suggests managing some lakes for trophy bass fishing only.

Unfortunately, Ben Branch Lake is less fertile and less productive than other Missouri lakes. As a result, the lake supports fewer fish per acre with slower growth rates than other more fertile lakes. Therefore, trying to manage for a trophy bass fishery at Ben Branch Lake would not be a sound management decision because it would eventually lead to a stunted bass population. We do have other lakes in the Central Region which currently support trophy bass fisheries such as Peters Lake in Fayette and Teal Lake in Mexico.

Suggests stocking more redear sunfish or bluegill to supplement existing panfish population.

Unfortunately, Ben Branch Lake is less fertile and less productive than other Missouri lakes. As a result, the lake supports fewer fish per acre with slower growth rates than other more fertile lakes. Stocking more bluegill in the lake would only lead to more competition for food and even slower growth rates. Provided they have adequate spawning habitat, redear sunfish and bluegill are able to produce self-sustaining populations after they are initially stocked into a lake. The only fish species that needs to be maintained through stocking at Ben Branch Lake is channel catfish. Channel catfish are stocked annually in Ben Branch Lake to maintain that population.

Suggests building more lakes like Ben Branch Lake throughout Missouri.

Naturally flowing streams are important to aquatic life. The Department is no longer constructing new lakes on conservation areas. However, we are pleased to partner with cities and counties through the Community Assistance Program to provide additional public fishing opportunities on existing ponds and lakes.

References:

Missouri Department of Conservation. (n.d.). *Natural heritage database*. Jefferson City, MO: Missouri Department of Conservation.

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

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.

Nelson, P. W. (2010). *The terrestrial natural communities of Missouri*. Jefferson City, MO: Missouri Natural Areas Committee.

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

Figures:

Figure 1: Area Map

Figure 2: Existing Covertypes

Figure 3: Modeled Ecological Site Classes and Prescribed Fire Units

Figure 4: Area Roads and Facilities

Additional Appendices:

Appendix A. Ben Branch Lake Conservation Area Management Plan Public Comments

Figure 1: Area Map

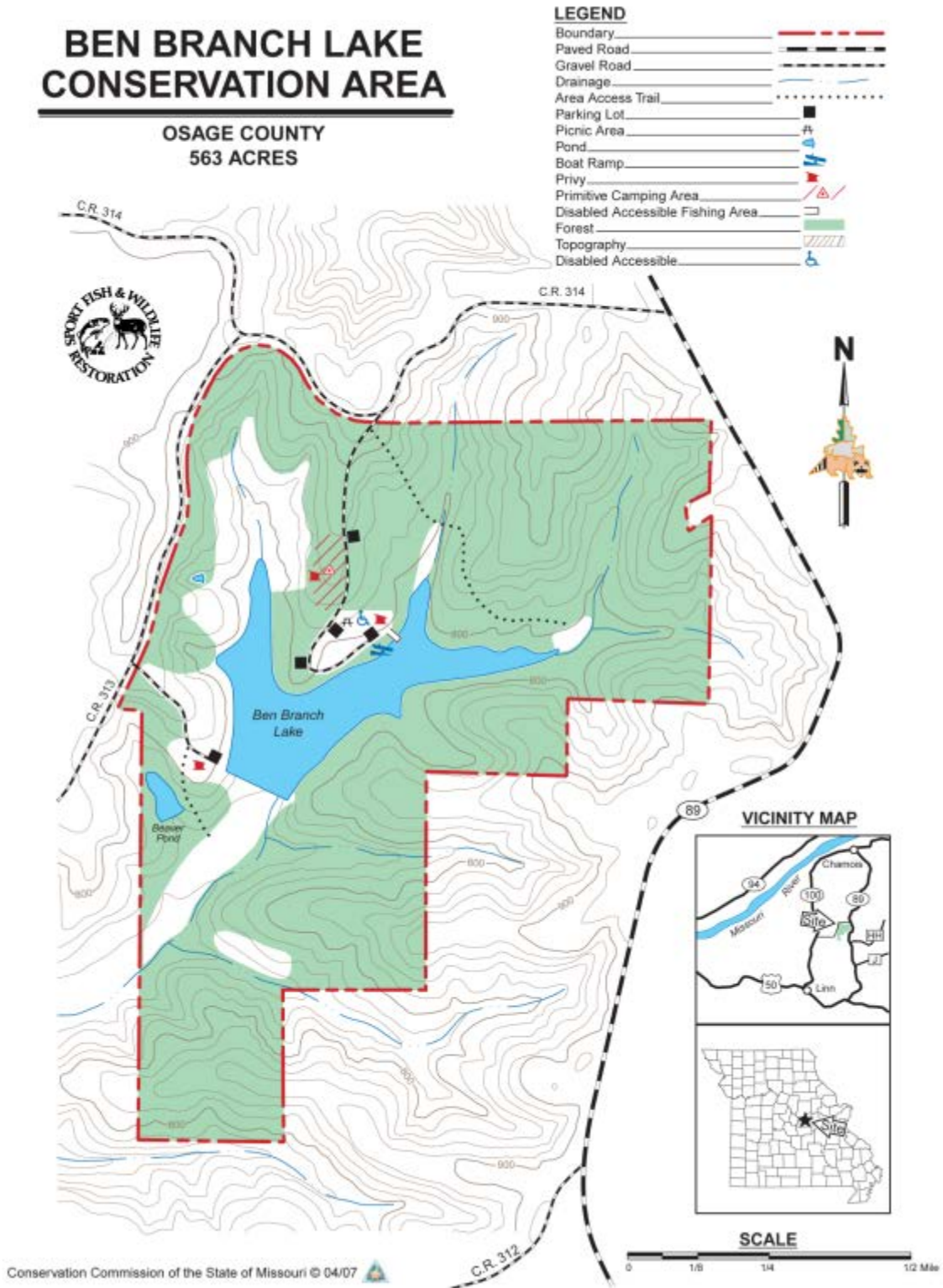


Figure 2: Existing Covertypes

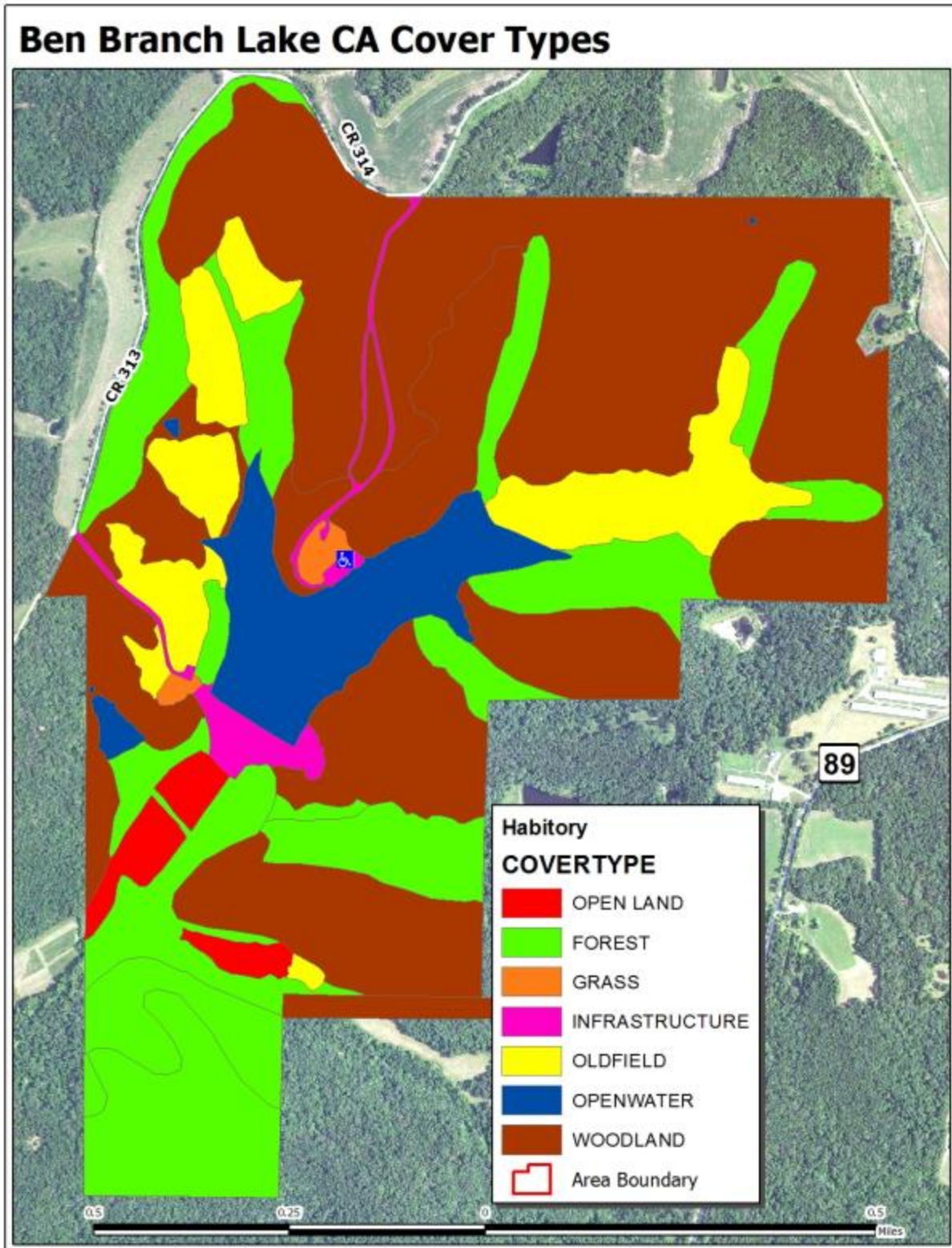


Figure 3: Modeled Ecological Site Classes and Prescribed Fire Units

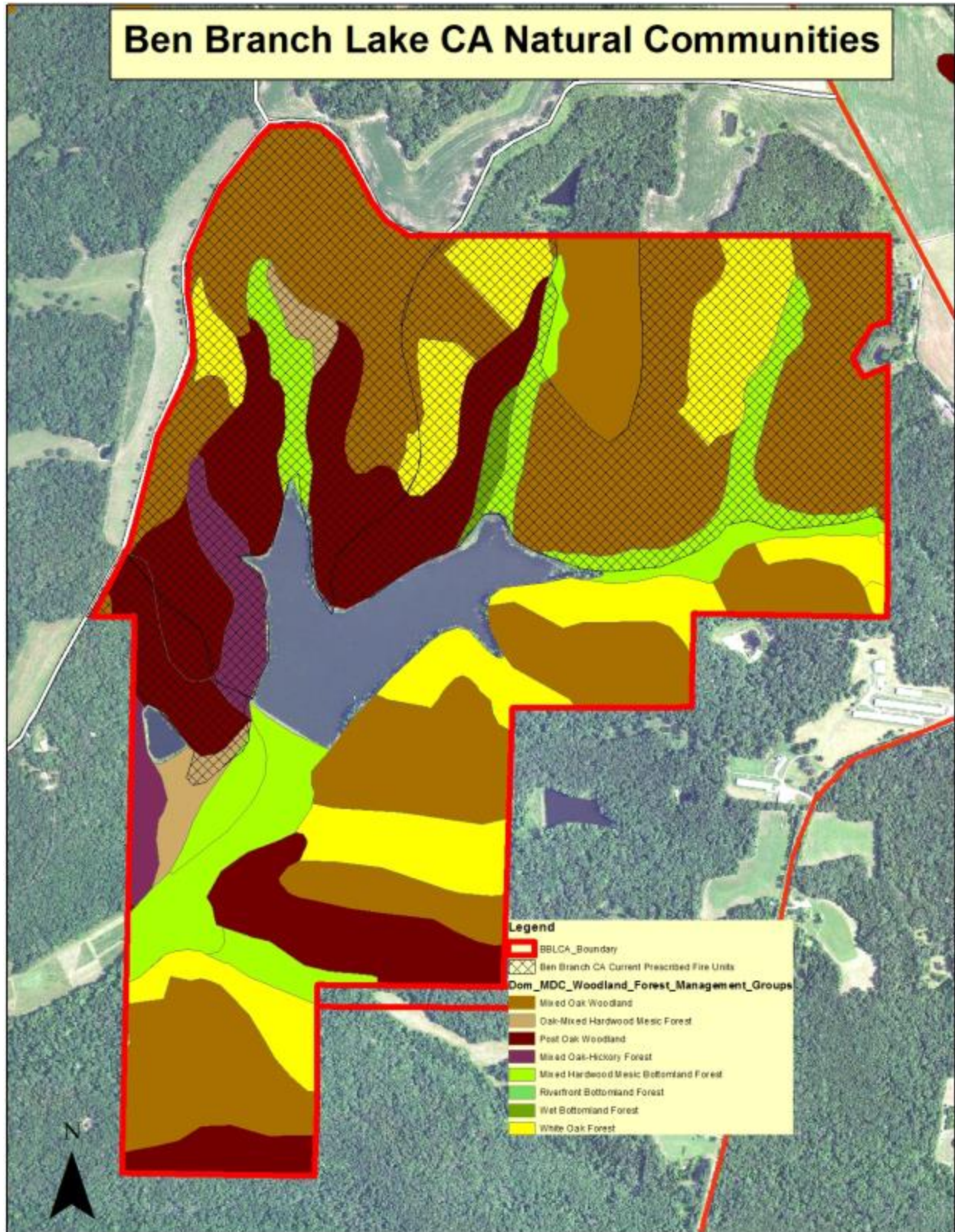
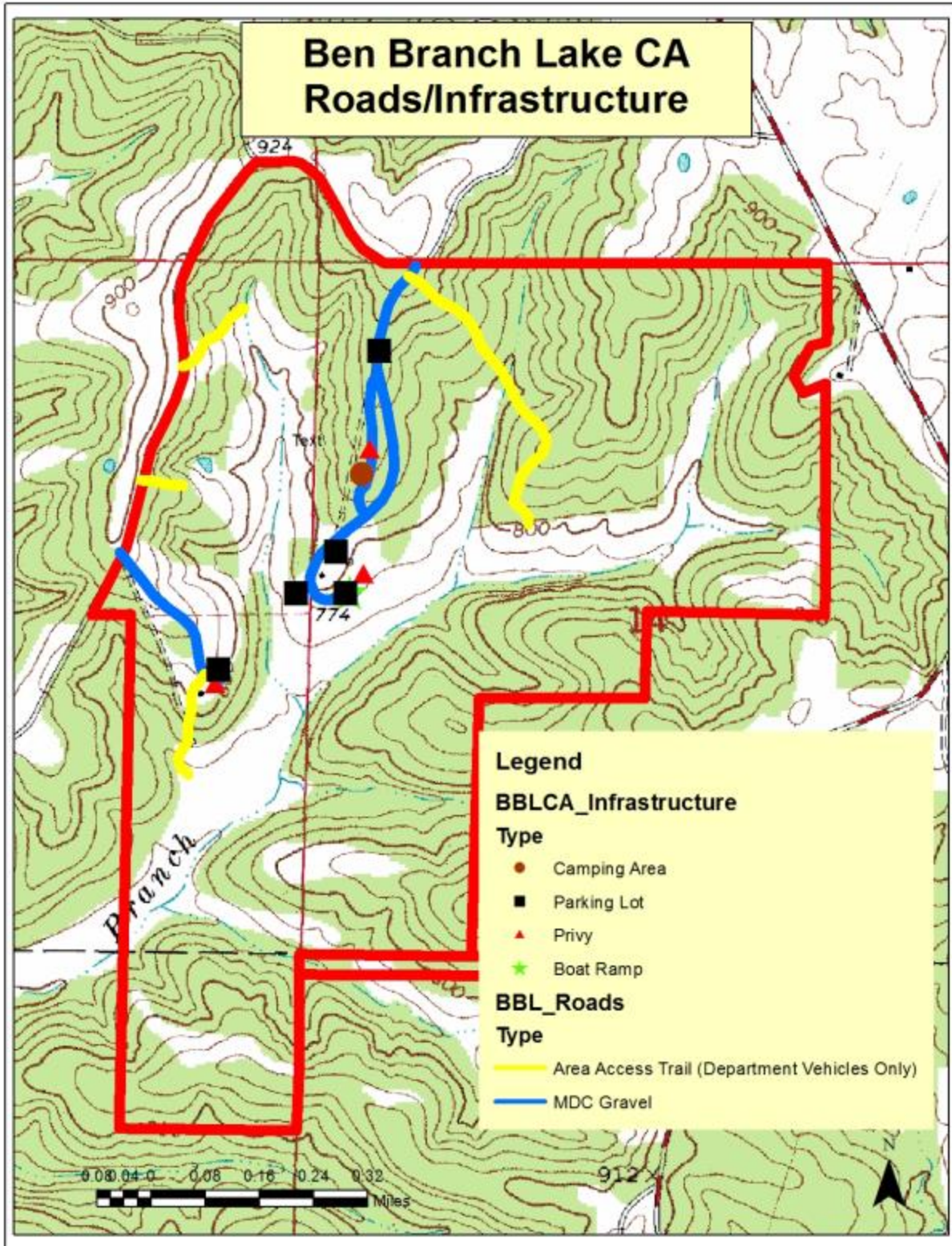


Figure 4: Area Roads and Facilities



Appendix A. Ben Branch Lake Conservation Area Management Plan Public Comments

Received during public comment period (August 1-31, 2016):

Some of the MDC lands are incredible with native species diversity while others are dominated by non-native species. The number one Management need is the control or reduction of non-native species. It is imperative that mowers and farmers wash their equipment before moving into a new area. There must be an active role in the control of exotic species. If there is not more of an active role then the remaining pristine sites will subcumb to exotic species and degrade ecological integrity.

Respectfully,

Can we please build more lakes like Ben Branch in Missouri? This is a very nice lake but is over fished like many of these small public lakes. By the time a bass reaches 12" long it's already in someone's frying pan. Can we do a better job of policing what is taken out of these lakes? Can we regulate some of these lakes as trophy bass fishing only?

- 1; consider stocking red ear sunfish or hybrid bluegill to supplement existing panfish population.
- 2; Provide wood duck nest boxes and maintain in appropriate locations.