

DRAFT

Burnt Mill Cave

Conservation Area

25-Year Area Management Plan
FY2020-2044



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OVERVIEW

- **Official Area Name:** Burnt Mill Cave Conservation Area, #200902
- **Year of Initial Acquisition:** 2009
- **Acreage:** 320 acres
- **County:** Camden
- **Region:** Central
- **Division with Administrative Responsibility:** Wildlife
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**
 - A. Strategic Direction**

The area management team will promote diverse wildlife habitat and compatible recreational opportunities at Burnt Mill Cave Conservation Area (CA).
 - B. Desired Future Condition**

The desired future condition of Burnt Mill Cave CA is landscape of diverse forest, woodland, glade, and riparian natural communities that provide habitat for wildlife and support a variety of recreational opportunities for the public.
 - C. Federal Aid Statement**

The area, or a portion thereof, was acquired with Endangered Species Act funds to protect and conserve habitats and ecosystems critical to endangered species and threatened species in perpetuity.

GENERAL INFORMATION AND CONDITIONS

- I. Special Considerations**
 - A. Priority Areas:** Burnt Mill Cave CA is located within the Little Niangua River Priority Geography, Little Niangua River Glade Conservation Opportunity Area, Little Niangua River Forest and Woodland Conservation Opportunity Area, Little Niangua River Stream Reach Conservation Opportunity Area, and Little Niangua River Fisheries Priority Watershed.
 - B. Natural Areas:** The Little Niangua River Natural Area is designated as 254 acres within Burnt Mill Cave CA. It includes approximately 20 acres of riverine habitat along the Little Niangua River. This segment of the Little Niangua River supports high quality fish habitat with a diverse native darter community. Much of the 220 upland acres contain excellent examples of Ozark woodland and glade habitats.

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 MDC natural history biologist.
- B. Caves:** Yes, records are 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 the implementation of MDC's White-nose Syndrome Action Plan that limits public access to protect bats.
- C. Springs:** Yes, records kept with MDC natural history biologist.
- D. High Quality Natural Communities:** Yes, records kept with MDC natural history biologist.
- E. Other:**
- **Woodland/Glades:** The area is comprised of high-quality woodland and glade communities. Some portions of the glades have been actively managed with cedar removal while other sections remain overstocked with cedar. The woodlands have been thinned in some locations and remain overstocked in others. Both communities require periodic fire to enhance and maintain quality.
 - **Aquatic Natural Communities:** The most notable aquatic feature of this area is the permanent water course of the Little Niangua River. Kolb Branch is also present and contributes to the high-water quality of the Little Niangua River.

III. Existing Infrastructure

- One parking lot
- One gravel access road (approximately 1 mile)

IV. Area Restrictions or Limitations

- A. Deed Restrictions or Ownership Considerations:** None
- B. Federal Interest:** This land must be used to conserve habitats and ecosystems critical to endangered species in perpetuity. 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:** None
- D. Cultural Resources Findings:** None
- 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 MDC natural history biologist.

- F. Boundary Issues:** Establishing accurate and identifiable boundary markers is a priority for this property. The approximate 50-acre parcel of land to the south across the Little Niangua River should be marked with every scheduled boundary marking of the area.

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

Challenges and Opportunities:

- 1) Monitor and manage the area's natural/existing features and sensitive communities (forest, woodland, and glade complexes).
- 2) Support healthy wildlife populations to provide public outdoor recreational opportunities.
- 3) Monitor and suppress invasive species and woody vegetation succession that threaten the quality of open land habitat conditions.
- 4) Protect Missouri species of conservation concern.
- 5) Protect cave and spring communities.

Management Objective 1: Enhance and maintain the structure and diversity of the area's high-quality woodlands and glades.

Strategy 1: Conduct forest inventory with an estimated re-entry time of 15 years, or as needed. Existing forest inventory data will be current through FY2027.

(Forestry)

Strategy 2: Use forest inventory information to identify and manage landscape-scale management units that encompass woodland and glade complex units.

(Wildlife, Forestry)

Strategy 3: Using existing and future forest inventory prescriptions, identify overstocked woodlands and glades. Conduct thinning treatments and prescribed fire management to promote, enhance, and maintain the biological diversity in these woodland and glade communities, using MDC staff and contractors. (Wildlife, Forestry)

Strategy 4: Utilize a variety of sustainable forest management techniques to promote healthy forest, woodland, and glade communities including, but not limited to, tree planting, forest thinning, firewood cutting, salvage cuttings, and seeding. (Wildlife, Forestry)

Strategy 5: Maintain a diversity of tree 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)

Management Objective 2: Monitoring for and control invasive species.

Strategy 1: Monitor the area for infestations of bush honeysuckle, sericea lespedeza, autumn olive, and other potentially invasive species. (Wildlife)

Strategy 2: Apply appropriate herbicides to herbaceous and woody invasive species. (Wildlife)

Management Objective 3: Protect cave communities and resources that occur on the area.

Strategy 1: Continue to monitor populations of federally endangered or threatened species, on five-year intervals. (Wildlife, Resource Science)

Strategy 2: Use care in conducting natural community management practices (such as mechanical thinning and prescribed burning) to avoid altering resources used by endangered or threatened species, including cave entrances and tree canopies within 150' of these entrances. (Wildlife, Forestry)

Strategy 3: Adhere to any current and future MDC Guidelines for species of concern. (Wildlife, Forestry)

VI. Aquatic Management Considerations

Challenges and Opportunities:

- 1) Protect water quality along with riparian and instream habitat.
- 2) Protect Missouri aquatic species of conservation concern.

Management Objective 1: Establish and maintain forested riparian corridors along area streams.

Strategy 1: Maintain the minimum 150-foot riparian zone along the Little Niangua River and Kolb Branch. (Wildlife, Forestry)

Strategy 2: Maintain/expand riparian corridors along the Little Niangua River, Kolb Branch Creek and associated tributaries on Burnt Mill Cave CA per MDC stream management guidelines (2009). (Wildlife, Forestry)

Strategy 3: Identify riparian corridors that need to be widened and establish appropriate vegetation using tree planting, direct seeding, or allowing natural regeneration. (Wildlife, Forestry)

Management Objective 2: Maintain and enhance water quality and diverse stream fauna.

Strategy 1: Protect watersheds by utilizing best management practices, as described in MDC's *Watershed Protection Practices* booklet (2014b). (Wildlife, Forestry)

Strategy 2: Evaluate the low-water stream crossing on Kolb Branch annually and consider if it is functioning well as is, or if it needs modifications to maintain its use. (Wildlife)

Strategy 3: Ensure management practices do not cause excessive siltation to Kolb Creek or Little Niangua River. (Wildlife)

Management Objective 3: Protect and maintain quality instream habitat for federally endangered or threatened species.

Strategy 1: Continue to monitor populations of federally endangered or threatened species on three-year intervals. (Fisheries, Resource Science)

VII. Public Use Management Considerations

Challenges and Opportunities:

- 1) Provide area users with varied recreational opportunities (e.g., hunting, fishing, and nature/wildlife viewing).
- 2) Provide public information regarding Burnt Mill Cave CA.
- 3) Protect cave resources.

Management Objective 1: Provide area users with compatible and inviting multi-use recreational opportunities.

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

Strategy 2: Promote compatible recreational opportunities (e.g., fishing, hunting, and nature/wildlife viewing). (Wildlife)

Strategy 3: Provide special use permits to coordinate varied area uses. (Wildlife)

Management Objective 2: Protect Lower Burnt Mill Cave from public use disturbance.

Strategy 1: Post signage at cave gates and area bulletin boards to communicate to the public that access to MDC caves is limited. (Wildlife)

Strategy 2: Monitor the Lower Burnt Mill cave gate for signs of vandalism or damage, and repair as needed. (Wildlife)

VIII. Administrative Considerations

Challenges and Opportunities:

- 1) Maintain positive relations with neighboring landowners.

- 2) Enforce area and MDC regulations.

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

Strategy 1: Inspect and maintain boundaries every five years or as needed.

(Wildlife, Forestry)

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

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

Strategy 1: 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)

Strategy 2: 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)

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:

The 320 acres comprising Burnt Mill Cave CA was acquired by MDC in 2009. The primary purpose for acquiring the property was to protect and enhance habitats for threatened and endangered species recovery.

The Little Niangua River Natural Area is 254 acres within Burnt Mill Cave CA. The approximately 20 acres of riverine habitat is the central focus of this natural area. The additional 234 acres are excellent examples of riverfront forests, woodlands, and glades that buffer the river segment. The area has one designated parking lot that accommodates approximately five vehicles.

Wildlife habitat management on the area includes conducting practices to enhance the natural communities that exist on the area’s woodland and glades, forest management, riparian habitat restoration, protections for caves and karst features, and endangered species management.

Current Land and Water Types:

Land/Water Type	Acres	% of Area	Miles
Bottomland/Upland Forest	122	38	
Woodland	94	29	
Glade	55	17	
Old Fields/Upland Fields	40	13	
Stream/Open Water	9	3	
Total	320	100	
Stream Frontage – Kolb Branch			0.5
Stream Frontage – Little Niangua River			0.6

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. (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.

Maps:

Figure 1: Burnt Mill Cave Conservation Area Map

Figure 2: Boundary of Burnt Mill Cave CA and Little Niangua River Natural Area

Figure 3: Little Niangua River Priority Geography










Figure 4: Land Cover Map

Figure 1: Burnt Mill Cave Conservation Area Map

BURNT MILL CAVE CONSERVATION AREA

CAMDEN COUNTY
320 ACRES

LEGEND

- Boundary 
- Gravel Road 
- Drainage 
- Parking Lot 
- Forest 
- Topography 
- Natural Area 
- Area Access Trail 
- Glade 

VICINITY MAP

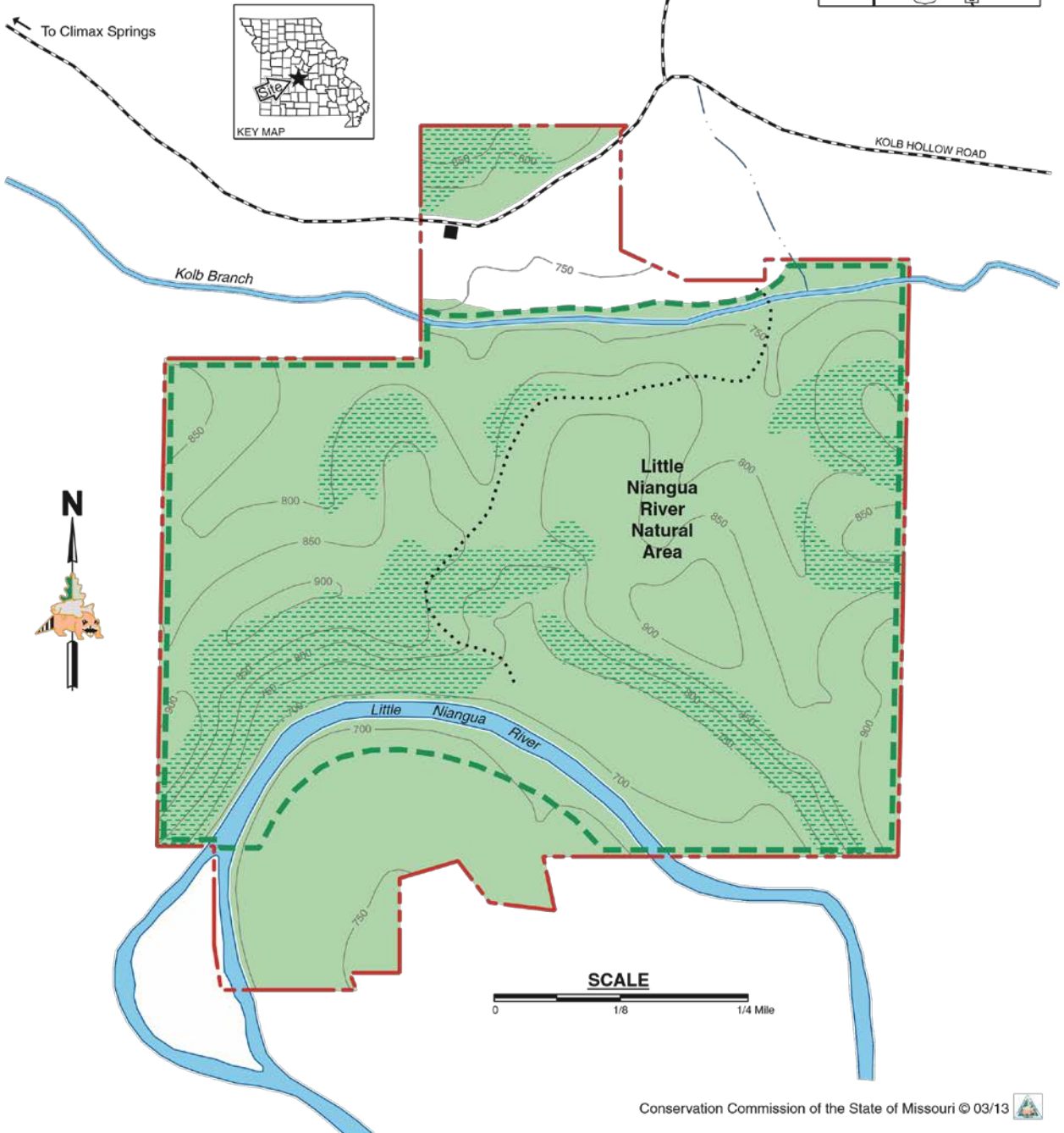
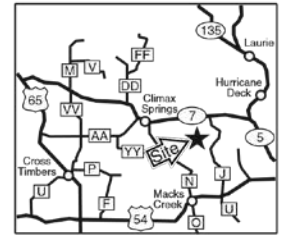


Figure 2: Boundary of Burnt Mill Cave CA and Little Niangua River Natural Area

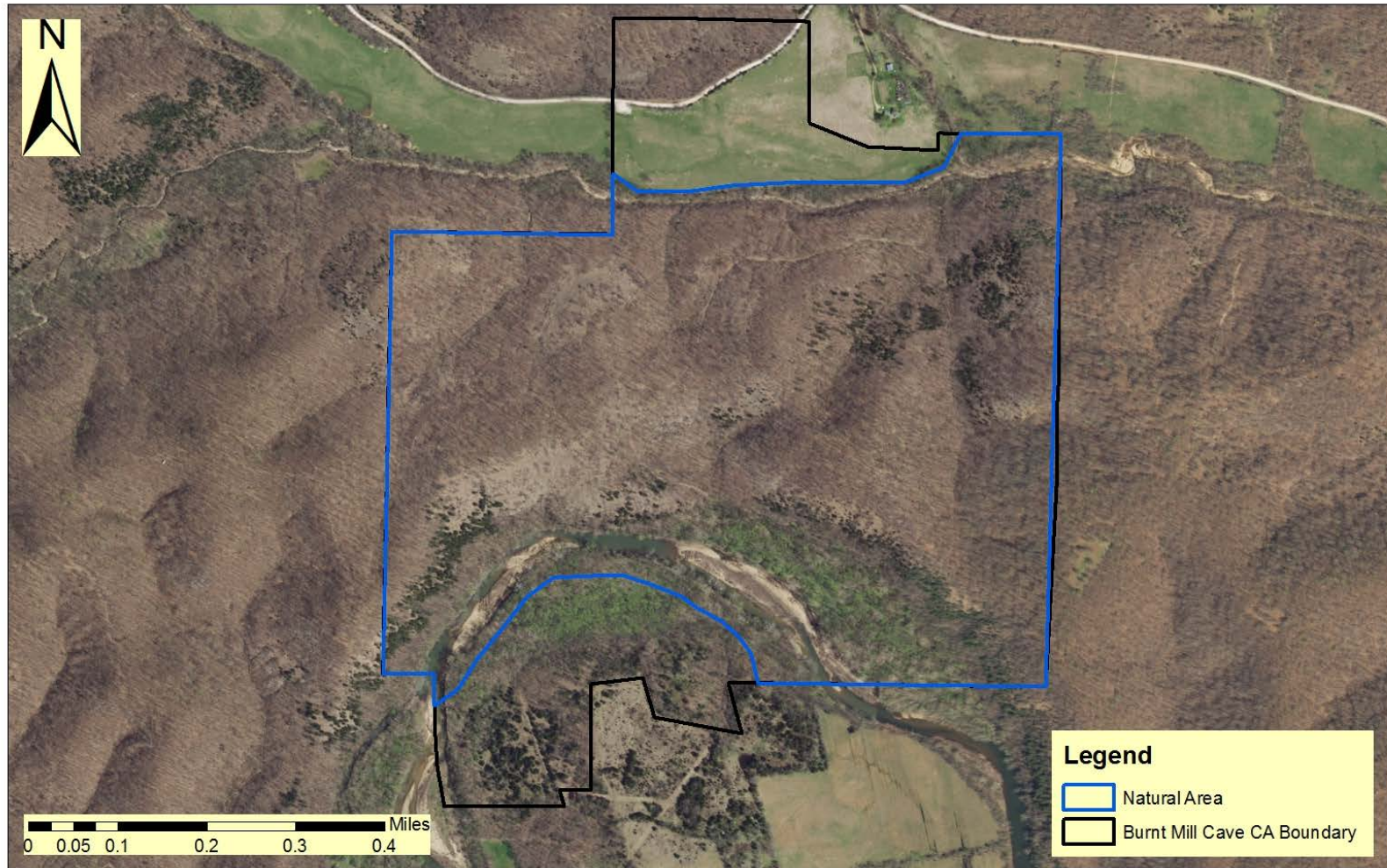


Figure 3: Little Niangua River Priority Geography

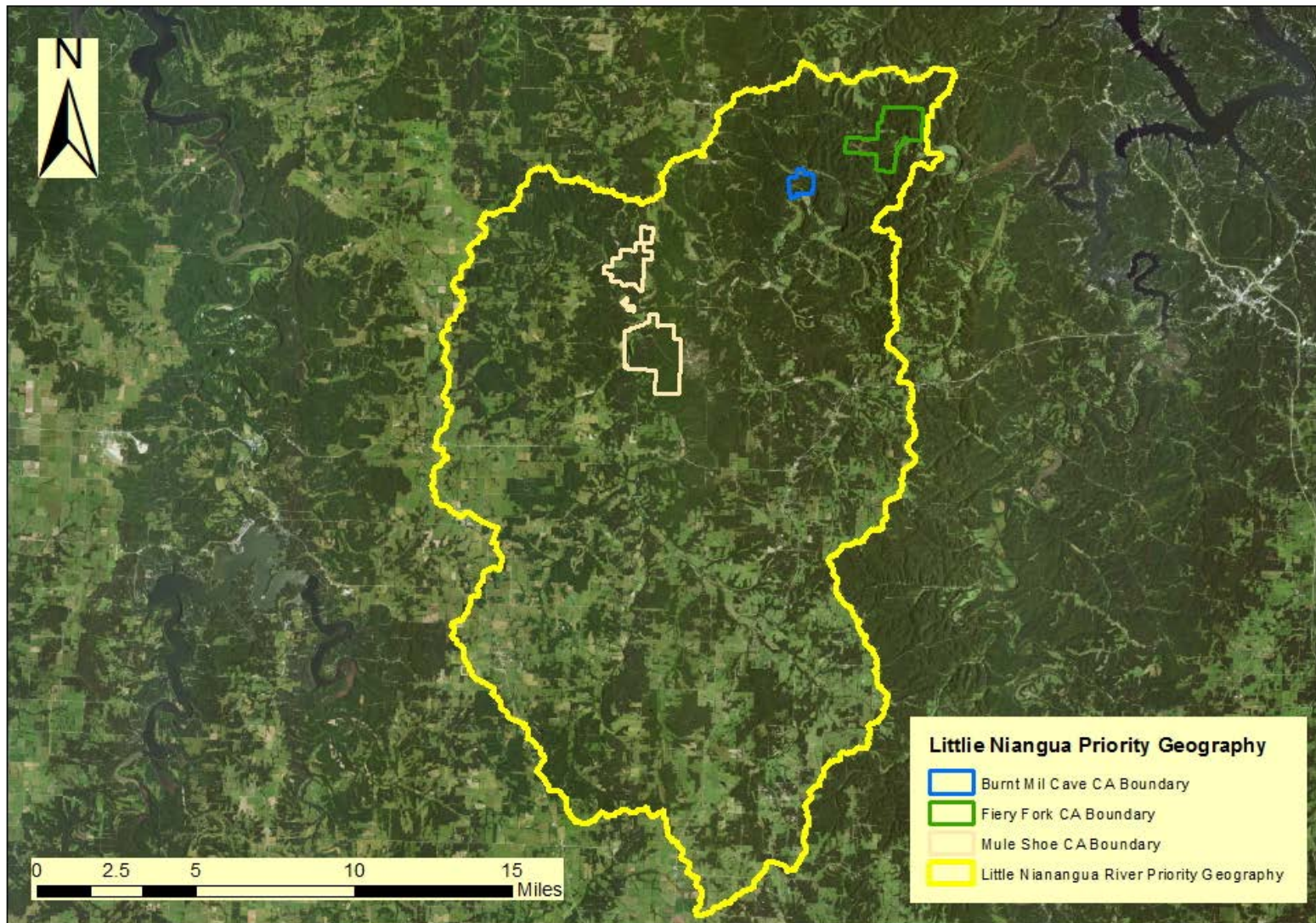
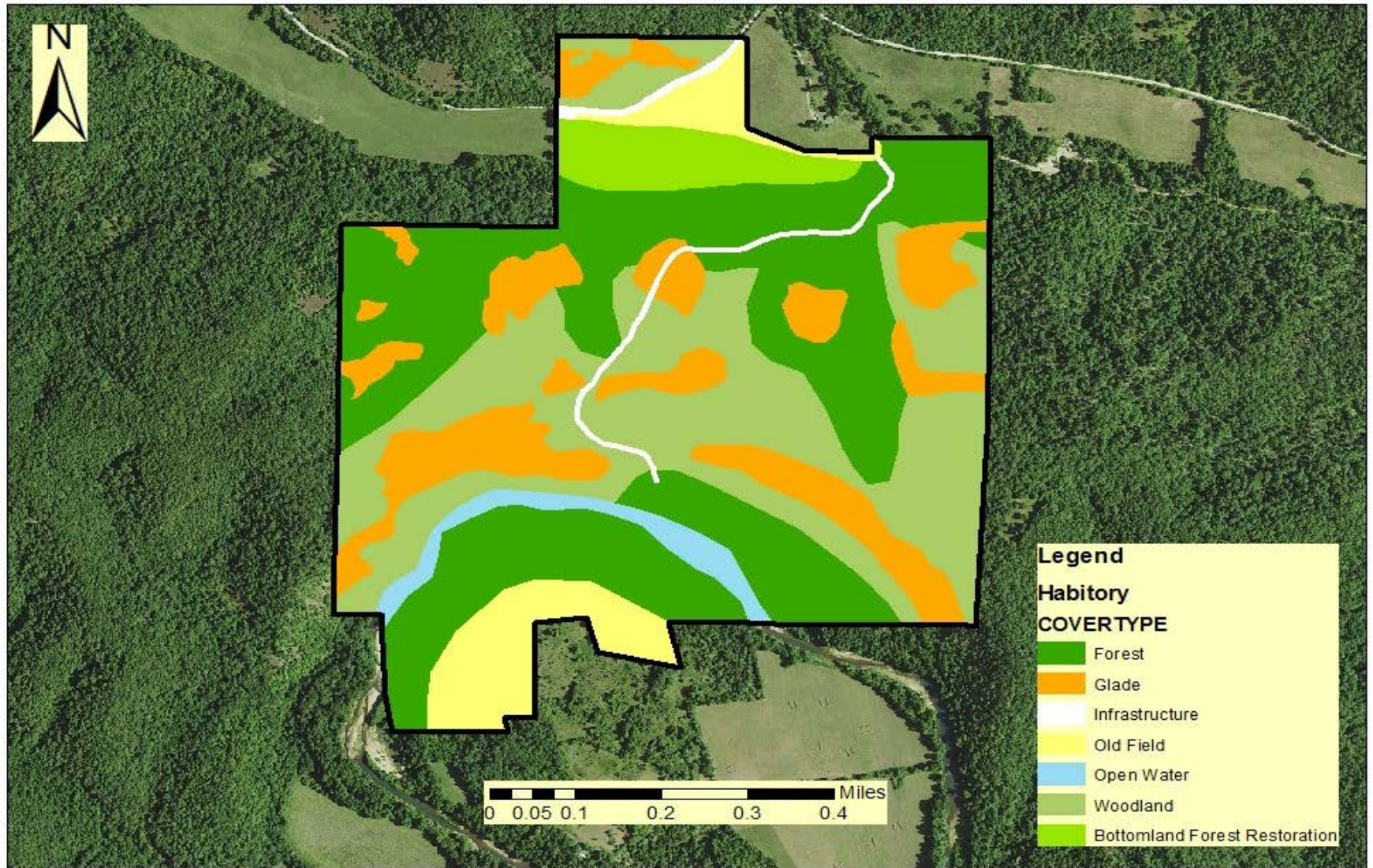


Figure 4: Land Cover Map



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