

DRAFT

Mint Spring

Conservation Area

Ten-Year Area Management Plan

FY 2018-2027



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OVERVIEW

- **Official Area Name:** Mint Spring Conservation Area, # 8110
- **Year of Initial Acquisition:** 1981
- **Acreage:** 42 acres
- **County:** Gasconade
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**
 - A. Strategic Direction**

Manage for wildlife, forest, and wetland resources with emphasis on glade, woodland, and seep species and compatible recreational opportunities.
 - B. Desired Future Condition**

The desired future condition of Mint Spring Conservation Area (CA) is a healthy glade, woodland, forest, and seep complex.
 - C. Federal Aid Statement**

N/A

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

- A. Priority Areas:** Middle Bourbeuse River Fisheries Priority Watershed
- B. Natural Areas:** Yes, Mint Spring Natural Area - This natural area features an acid seep community which is uncommon in Missouri. This seep is the result of water flowing through the Roubidoux formation sandstone which is exposed here due to a geologic fault line. A variety of fern and moss species can be found in the seep area.

II. Important Natural Features and Resources

- A. Species of Conservation Concern:** None observed.
- B. Caves:** None
- C. Springs:** None
- D. Other:**
 - Occurs in the Bourbeuse River Oak Woodland Dissected Plain Landtype Association. This landtype association consists of gently to moderately sloping dissected plain underlain by Pennsylvanian sandstone. Relief is 100-150 feet and soils are highly acidic. Overall this landtype association is a nearly even mix of fescue pasture and second growth oak forest (Nigh & Schroeder, 2002).

- An acid seep natural community is present on this area. Area managers should consult the Natural Heritage Database annually and review all management activities with the natural history biologist.

III. Existing Infrastructure

- One parking lot
- 100 foot footpath

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:** None

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

Mint Spring CA contains 42 acres of various cover types. Management will be directed at maintaining healthy natural communities. During the spring rainy season, an acid seep natural community, located near the south boundary, saturates the natural area. Tree species, such as pin oak, swamp white oak, river birch, and red maple, thrive in the acidic and sandy soils.

Mint Spring CA can be described in three general stands/areas:

- 1) Woodland: Large pole and small sawlog diameter post oaks, shagbark hickory, black oak, and elm dominate the canopy in Stands 1 and 3, of the conservation area. The understory consists of perennial forbs and aromatic sumac, with small tree sized hickory, eastern red cedar, and elm present.
- 2) Glade: Stand 2 consists primarily of a sandstone glade with small, scattered, post oak and black jack oaks intermixed with highbush huckleberry. Warm-season grasses and a few other forbs fill in the gaps that were created through red cedar removal.
- 3) Forest: Mature upland hardwood forest in Stand 4 diminishes into immature bottomland hardwoods in Stand 5, which contains the natural area.

Challenges and Opportunities:

- 1) Manage the glade and woodland community.
- 2) Maintain a healthy forest.
- 3) Maintain the Mint Spring Natural Area.

Management Objective 1: On appropriate sites, manage forest, glade and woodland communities to provide healthy and diverse habitats for forest, glade, and woodland-dependent wildlife.

Strategy 1: Conduct inventory of area to develop prescriptions for ecological and silvicultural treatments. (Forestry)

Strategy 2: Monitor for invasive vegetation such as autumn olive. (Forestry)

Strategy 3: Utilize a variety of sustainable forest management techniques to promote healthy glade and woodland communities including, but not limited to, forest thinning, tree planting, seeding, and prescribed burning. Use of prescribed fire and forest thinning will be useful in preventing red cedar and red maple from shading out more beneficial forbs and wildflowers. Use of prescribed fire and other management techniques will help prevent hardwood trees and shrubs from gaining a foothold in the glade. (Forestry)

Strategy 4: 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. This includes maintaining an old growth population of white, red, and black oak along with other hardwoods while suppressing red maple in the understory. (Forestry)

Strategy 5: Utilize Best Management Practices during management as described in the Department's manuals: *Missouri Watershed Protection Practice* manual (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 the natural communities found in the natural area to provide healthy and diverse habitats for wildlife.

Strategy 1: Monitor for invasive insect, diseases, and plants. (Forestry)

Strategy 2: Control red maple and red cedar using a variety of management techniques, including, but not limited to, forest thinning and prescribed burning to promote bryophytes, mosses, and liverworts. (Forestry)

VI. Aquatic Resource Management Considerations

A small, spring-fed stream flows year-round from the south end of the natural area toward the Bourbeuse River, even in periods of drought (although the U.S. Geological Society shows the stream as intermittent).

Challenges and Opportunities:

- 1) Maintain the quality of area stream.

Management Objective 1: Maintain quality of area stream.

Strategy 1: Monitor for presence of exotic or invasive species and treat as needed. (Forestry)

Strategy 2: Maintain adequate riparian corridors along streams and waterways. (Forestry)

Strategy 3: Management of natural resources in the riparian areas will follow best management practices (as outlined in the publication, the *Missouri Watershed Protection Practices Recommended for Missouri Forests: 2014 Management Guidelines for Maintaining Forested Watersheds to Protect Streams* (Missouri Department of Conservation, 2014)). (Forestry)

VII. Public Use Management Considerations

Challenges and Opportunities:

- 1) Provide wildlife viewing opportunities.
- 2) Improve educational and interpretive opportunities.
- 3) Build relationships with neighboring landowners.

Management Objective 1: Provide public hunting and viewing opportunities.

Strategy 1: Conduct annual management activities that will provide habitat for a diverse suite of wildlife species. (Forestry)

Management Objective 2: Improve educational and interpretive opportunities on Mint Spring CA.

Strategy 1: Maintain the forestry courses for annual Area 14 Future Farmers of America forestry contest. (Forestry)

Strategy 2: Communicate to teachers, students, scout groups, and youth groups the uniqueness of the area to facilitate as a possible destination for ecology classes, school programs, and workshops. (Outreach and Education).

Strategy 3: Communicate to the general public the uniqueness of the area and the recreational opportunities found there (e.g., using brochures, Atlas database). (Forestry, Outreach and Education)

Management Objective 3: Facilitate a good working relationship with neighboring landowners.

Strategy 1: Work with neighbors to minimize any boundary, trespass or any other issues affecting Mint Spring CA or private property. (Forestry)

Strategy 2: Promote habitat management on neighboring landowner properties. (Forestry)

VIII. Administrative Considerations

Challenges and Opportunities:

- 1) Maintain area infrastructure at current levels
- 2) Consider any potential land acquisition opportunities that may arise.

Management Objective 1: Maintain area infrastructure in a manner that invites public use.

Strategy 1: Maintain area infrastructure in accordance with the Department guidelines. (Forestry)

Strategy 2: Inspect area infrastructure regularly, and work to resolve any issues. (Forestry)

Strategy 3: Maintain boundary lines as needed. (Forestry)

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 Department priorities, as identified in the annual Department land acquisition priorities, may be considered.

MANAGEMENT TIMETABLE

Strategies are considered ongoing unless listed in the following table:

	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27
Terrestrial Resource Management										
<i>Objective 1</i>										
Strategy 2				X				X		
Strategy 3				X				X		

APPENDICES

Area Background:

Mint Spring Conservation Area is in Gasconade County, about 8 miles south of Owensville on State Road EE. The Missouri Department of Conservation acquired this area in 1981 and manages it to preserve its natural seep and provide the public opportunities for viewing and studying plants and animals native to oak-hickory forest.

The 42-acre area, named for natural springs in the vicinity, is just south of the Bourbeuse River. The area is 95 percent forested and includes a small glade that was, until recently, engulfed in trees.

This property is almost entirely forested except for the sandstone glade in the northwest corner. Otherwise, woodlands and forests composed of oak and hickory dominate the landscape. Typical upland game species for this region are deer, turkey, squirrel, and rabbit. Except for the bottomland on both sides of the creek, there is very little understory vegetation due to the dense canopy. In spring, when the seep is at maximum flow, the bottomland becomes saturated and branches into several small streams. Various springs upstream from the property feed the stream that flows year-round and eventually feeds the Bourbeuse River.

The area is open to the public from 4 a.m. to 10 p.m. daily. Special facilities include a parking lot and a footpath to the spring-fed natural waterfall. Four hundred feet north of the property boundary is Mint Spring Access, which provides launching opportunities to the Bourbeuse River.

Current Land and Water Types:

Land/Water Type	Acres	Feet	% of Area
Forest	23		53
Woodland	14		33
Glade	6		14
Total	42		100
Stream Frontage		1,457	

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 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.

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: Current Vegetation Map

Figure 1: Area Map

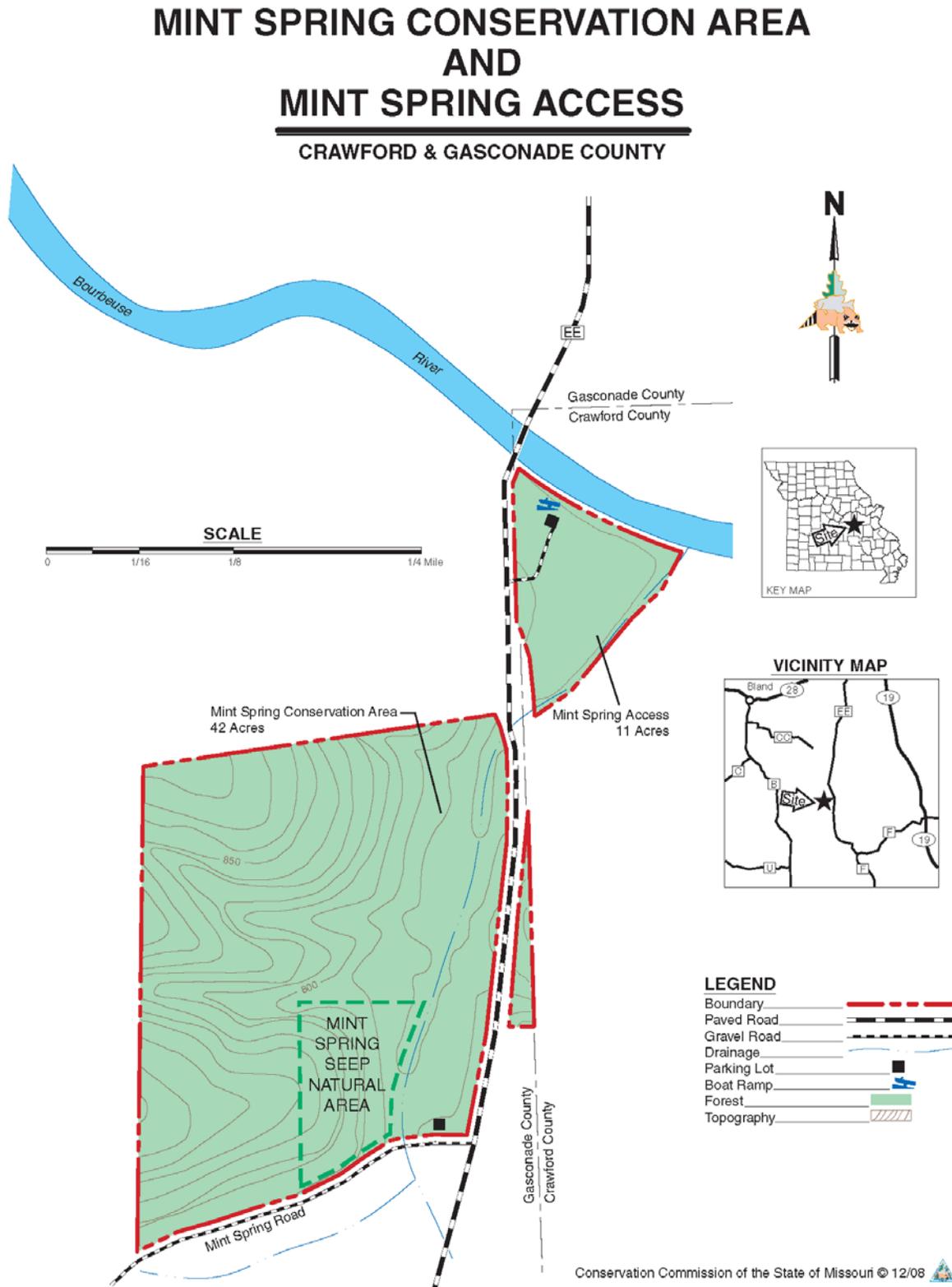


Figure 2: Aerial Map



Figure 3: Topographic Map

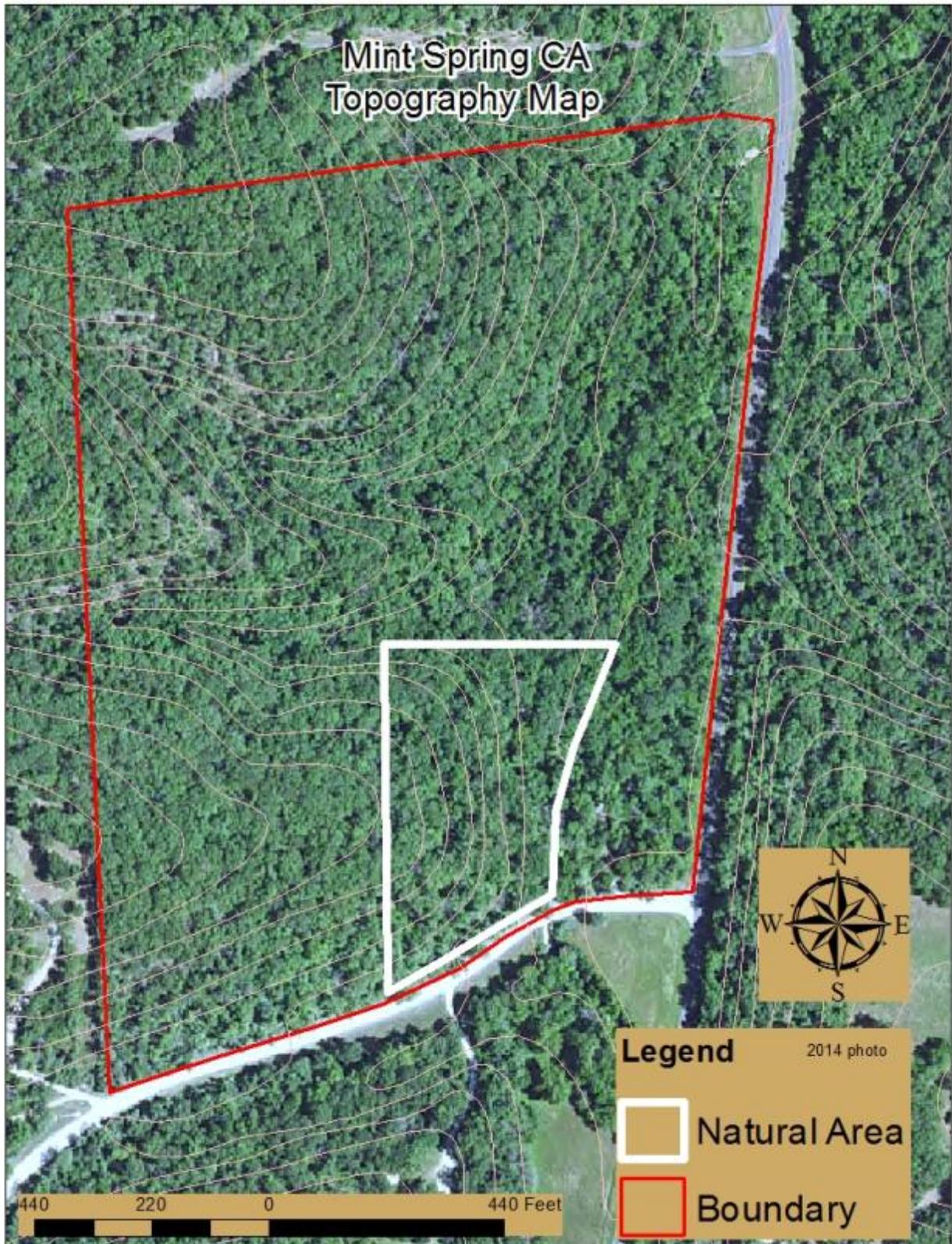
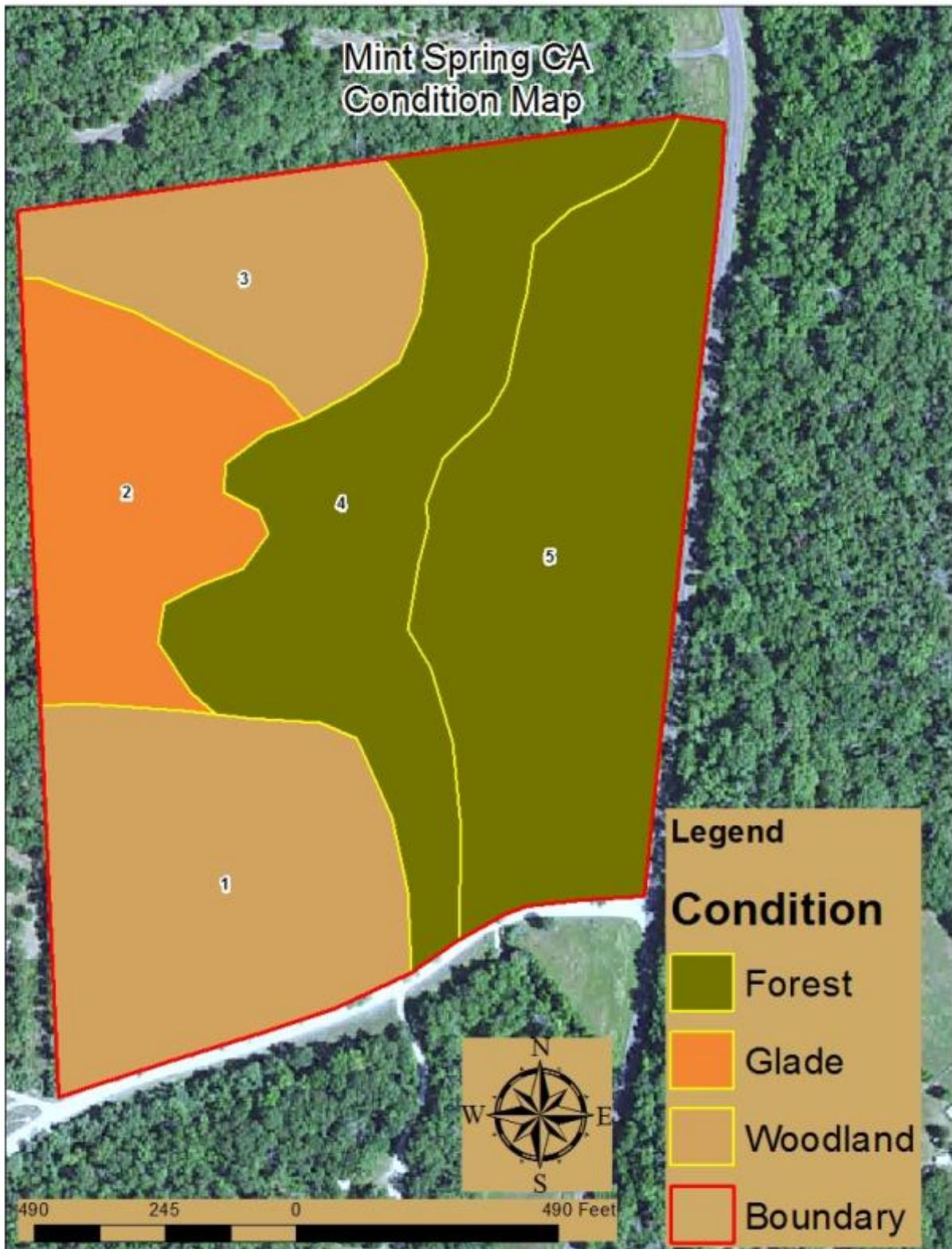


Figure 4: Current Vegetation Map



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