

DRAFT

Indian Trail

Conservation Area

Fifteen-Year Area Management Plan
FY 2017-2031



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OVERVIEW

- **Official Area Name:** Indian Trail Conservation Area, # 6201
- **Year of Initial Acquisition:** 1937
- **Acreage:** 13,503 acres
- **County:** Dent
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**
 - A. Strategic Direction**

Manage for healthy wildlife, forests, woodland resources, and compatible recreational opportunities for current and future generations.
 - B. Desired Future Condition**

The desired future condition for Indian Trail Conservation Area (CA) consists of healthy forest and woodland communities that provide compatible recreational opportunities for the public, while meeting other public expectations that are consistent with the Missouri Department of Conservation (the Department)'s mission.
 - C. Federal Aid Statement**

N/A

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

- A. Priority Areas:** Indian Trails Dissected Plains Terrestrial Conservation Opportunity Area, Indian Trails Hills Terrestrial Conservation Opportunity Area, Meramec River Watershed Important Bird Area, Middle Meramec River Priority Watershed, Priority Forest Landscape (the Upper Ozark Landowner Cooperative)
- B. Natural Areas:** Indian Trail CA contains the Indian Trail Natural Area. The natural area is broken up into two natural area units, totaling 686 acres: (East Unit and West Unit. These two units lie within the natural community focus area, which is 2,449 acres. Indian Trail Natural Area contains a mix of high-quality dolomite glade and dry to dry-mesic woodlands on cherty and dolomite derived soils that are characteristic of the Meramec River Hills region. Adding to the diversity of these upland natural communities are the headwaters of Fishwater Creek and an associated spring and fen.

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. Caves: None

C. Springs: Yes, records kept with the Department natural history biologist.

III. Existing Infrastructure

- Five primitive group camping areas
- Two privies (Americans with Disabilities Act (ADA) accessible)
- One firearms shooting range, with 12 concrete shooting benches and 4 shade covers (ADA accessible)
- 11 buildings, which includes area residence
- One fire tower
- Three parking lots (ADA accessible)
- One boat ramp with ADA accessible floating dock
- 58 fishless ponds
- One 35-acre lake (Blackwell Lake)

IV. Area Restrictions or Limitations

A. Deed Restrictions or Ownership Considerations: None known.

B. Federal Interest: Federal funds were used in the development of this area, or a portion thereof. The Department must maintain the developed project throughout its useful life. 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: Yes, records kept with Department environmental compliance specialist. Managers should follow Best Management Practices for Cultural Resources found in the Department 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

Indian Trail CA consists of approximately 11,343 of forests and woodlands, 75 acres of old fields/wildlife food plots, 2,015 acres of glades/savannas/woodlands, and 70 acres of ponds/lake/raceways and streams. Management will be directed at maintaining healthy natural communities for wildlife habitat according to the 15-year cycle inventories completed on each of the 19 compartments.

Challenges and Opportunities:

- 1) Manage forest and woodland communities.
- 2) Maintain healthy and diverse habitats on open ground.
- 3) Maintain the natural community focus area and the two natural areas.

Management Objective 1: Maintain healthy trees and woodlands for forest resources and wildlife habitats.

Strategy 1: Implement recommendations and practices, as recommended in the compartment inventories, within three years of the inventory. (Forestry)

Strategy 2: Monitor forests and woodlands for invasive vegetation, diseases and insects. Strive to suppress any infestations that may develop. (Forestry)

Strategy 3: Protect riparian zones for maintaining streams and watersheds. (Forestry)

Strategy 4: Modify management prescriptions, where needed, to provide adequate buffer zones to protect aesthetics and natural features. (Forestry)

Management Objective 2: Maintain open land management program to sustain healthy habitats and sustain wildlife food sources.

Strategy 1: Monitor the open land for invasive species. Suppress any infestations that may develop. (Forestry)

Strategy 2: Maintain habitat diversity, as directed in compartment inventories. (Forestry)

Strategy 3: Maintain food plots by planting as necessary. (Forestry)

Management Objective 3: Maintain natural community focus area and the two natural areas.

Strategy 1: Use prescribed fire and/or mechanical thinning, as needed, to reduce and maintain the woodland canopy to 40 to 90 percent to increase the diversity and abundance of native plants and animals. (Forestry, Wildlife)

Strategy 2: Weather and staffing levels permitting, maintain burn units according to burn schedule, within the natural community focus area. (Forestry, Wildlife)

Strategy 3: Evaluate the response of each unit to management. (Forestry, Wildlife)

Strategy 4: Monitor for invasive vegetation and animals, diseases and insects. Suppress any infestations that may develop. (Forestry, Wildlife)

VI. Aquatic Resource Management Considerations

Indian Trail CA contains portions of Crooked Creek, Fishwater Creek, and Hutchins Creek watersheds. These three streams join the upper Meramec River off the area. The watersheds also contain Blackwell Lake (35 acres), a retired fish hatchery and 58 fishless

ponds (totaling 6 acres) considered wildlife watering holes. Three named springs are found in these watersheds, but discharge contribution to stream flow is minimal. Therefore, sound land management practices with appropriate best management practices to reduce runoff and decrease sediment disturbance will ultimately improve the aquatic habitats found on Indian Trail CA and keep these watersheds healthy.

Challenges and Opportunities:

- 1) Protect headwater stream and riparian communities.
- 2) Maintain a quality sport fishery in Blackwell Lake.
- 3) Maintain fishless ponds and fens as quality wildlife habitat.

Management Objective 1: Provide quality angling on Blackwell Lake. Consult the lake management plan for more details on Blackwell Lake management.

Strategy 1: Sample fish population every other year and adjust regulations appropriately to allow for quality panfish and largemouth bass populations. (Fisheries)

Strategy 2: Control excessive aquatic vegetation on lower end of lake to allow bank fishing in multiple locations. (Fisheries, Forestry)

Management Objective 2: Follow *Watershed and Stream Management Guidelines for Lands and Waters Managed by Missouri Department of Conservation* (Missouri Department of Conservation, 2009) to decrease sediment deposits and disturbance, and to maintain healthy watersheds.

Strategy 1: Maintain the recommended amount of trees in stream management zones during management activities. When conducting timber harvests on the area, install best management practices to prevent soil erosion on temporary access roads, log landings, and skid trails according to the *Missouri Watershed Protection Practices: 2014 Management Guidelines for Maintaining Forested Watersheds to Protect Streams* (Missouri Department of Conservation, 2014). (Forestry)

Strategy 2: During maintenance of all unimproved road/stream crossings, take care not to go below grade when clearing accumulated gravel. This will reduce additional gravel deposition. (Design and Development)

Strategy 3: Establish and maintain herbaceous cover on all road shoulders. This will reduce runoff velocities, trap sediment, and reduce erosion of road shoulders and ditches. (Design and Development)

VII. Public Use Management Considerations

Challenges and Opportunities:

1. Provide hunting and viewing opportunities.
2. Maintain and improve recreational opportunities.
3. Improve educational and interpretive opportunities.
4. 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 diversity of species. (Forestry)

Strategy 2: Conduct annual management activities that will provide an enjoyable hike or driving experience. (Forestry)

Management Objective 2: Maintain and improve recreational opportunities.

Strategy 1: Create and maintain openings around Blackwell Lake to allow better access for bank fishing. (Forestry)

Strategy 2: Work with geocachers to maintain current geocaches, and possibly add more to the area. (Forestry)

Strategy 3: Annually maintain the four-lane firearms shooting range for area users. (Forestry)

Strategy 4: Annually maintain five designated camping areas for year-round primitive camping. (Forestry)

Management Objective 3: Improve educational and interpretive opportunities.

Strategy 1: Create a driving brochure that depicts various routes and provides information regarding ecological, historical, cultural, and commercial aspects of the area. (Forestry, Outreach and Education)

Strategy 2: Every three or four years, host a landowner workshop to increase conservation awareness and demonstrate various forest, woodland, glade, and food plot management techniques. (Forestry)

Management Objective 4: Facilitate good working relationships with neighboring landowners.

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

Strategy 2: Continue the current five-year re-entry to maintain painted boundary lines and replace signs as needed. (Forestry)

Strategy 3: Promote habitat management on neighboring landowner properties. (Private Land Services, Forestry)

VIII. Administrative Considerations

Challenges and Opportunities:

- 1) Maintain area infrastructure at current levels.
- 2) Improve existing structures.
- 3) Consider land acquisition, when available.

Management Objective 1: Maintain area infrastructure at current levels.

Strategy 1: Maintain area infrastructure in accordance with Department guidelines. (Design and Development, Forestry)

Management Objective 2: Improve existing structures.

Strategy 1: As need arises, consider improvements that can be made to existing area structures. (Design and Development, Forestry)

Strategy 2: Explore improvements to existing structures to improve energy efficiency, reduce maintenance, and increase structure longevity. (Design and Development, Forestry)

Strategy 3: Explore improvements that can be made to existing structures to repurpose them or increase current usage. (Design and Development, 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. (Forestry)

MANAGEMENT TIMETABLE

Strategies are considered ongoing unless listed in the following table:

	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
Terrestrial Resource Management															
<i>Objective 1</i>															
Strategy 1- Compartment	2, 5	6	16,17	7	10	8, 11	19	15	3	9	18	14	1	4, 13	12
Aquatic Resource Management															
<i>Objective 1</i>															
Strategy 1		X		X		X		X		X		X		X	
Public Use Management															
<i>Objective 2</i>															
Strategy 1	X			X			X			X			X		
<i>Objective 3</i>															
Strategy 1	X														
Strategy 2	X				X				X				X		
<i>Objective 4</i>															
Strategy 2	X			X	X	X			X	X	X			X	X
Administrative Considerations															
<i>Objective 2</i>															
Strategy 1			X			X			X			X			X
Strategy 2		X		X		X		X		X		X		X	
Strategy 3			X			X			X			X			X

APPENDICES

Area Background:

Indian Trail Conservation Area is approximately 13,503 acres. The main entrance is off highway 19, 14 miles north of Salem. It is in the northeast corner of Dent County.

During Indian Trail CA's early history there was extensive abuse of the area forests and wildlife. Sligo Iron Works in Sligo, Missouri owned much of the conservation area until 1906. During this period, pit kilns were dug on the area to produce charcoal for smelting furnaces at Sligo. Indian Trail CA was a primary source of cordwood for the kilns. Heavy cutting continued until 1918, when the scarcity of wood for charcoal forced the iron works to shut down. The area was then purchased from the Sligo Iron Company by private owners in 1906, who utilized the area as open range for livestock. Although cordwood cutting ceased around 1918, grazing along with annual burning to encourage grass continued until the State assumed ownership. The State of Missouri began acquiring Indian Trail CA, largely as a method of instituting wildfire control, in 1924 and continued acquisition through 1927. The tracts acquired ranged in size from 100 to 10,000 acres and were purchased at an average cost of \$2.50 per acre. Since this early acquisition period, several small inholdings have been acquired, bringing the acreage up to its current total of 13,503 acres.

In 1926, responsibility for administration of the area was assigned to the Missouri Fish and Game Department. By 1937 the Conservation Commission was formed, and the land was assigned to the Department of Conservation's (the Department's) Wildlife Division. From 1930 until 1960, the area was classified as a game refuge and was used to raise deer and turkey for the State's restocking program. In the 1960s, responsibility for administration and management of Indian Trail CA was transferred to the Department's Forestry Division. Shortly thereafter the area was opened to hunting. Heavy hunting pressure and an onslaught of poaching reduced the deer population to low levels and the area had to be closed to firearms deer hunting in 1967. In the late 1980s, the area was reopened for firearms deer hunting, but was restricted to bucks only. The deer population responded well and in 2006 the area was opened to statewide regulations.

After the State acquired ownership, grazing was halted and fire protection steadily improved. A vigorous program of low quality forest stand improvement, involving oak conversion to pine, was augmented. Then, in 1967, the Department's Forestry Division instituted a program of even-aged management coupled with forest wildlife habitat requirements. Today the forest is managed by intensive application of a coordinated effort by the Department's Forestry, Wildlife, Fisheries, and Outreach and Education Divisions.

Two Civilian Conservation Corps camps were located at Indian Trail CA from 1933 to 1946. During this period, the crews were responsible for constructing most of the 55 miles of access

roads, hatchery building, rearing beds and lake, centralized shop building; and planting many open areas to pine.

Indian Trail CA lookout tower, the second tower to be built in Missouri, is located near the center of the area. A dwelling for the towerman and one shop building are located near the tower.

Overlapping sections of the White River Trace and the Trail of Tears trails (routes used by Native Americans) passed through Indian Trail CA. Markers and plaques depict the Indians’ ordeal. The area derived its name from these trails.

Indian Trail CA lies along the rim of the Salem Plateau. The area is moderately dissected and characterized by stony soils and is approximately 85 to 90 percent forested. The remaining 10 to 15 percent is open land divided between food plots and glade/savanna/woodlands. Mixed oak is the predominant cover, but stands of other hardwoods exist in several of the major drainages. One stand of approximately 70 acres of natural shortleaf pine remains on the tract.

Indian Trail CA provides a unique opportunity to demonstrate the potential to manage a diverse wildlife population, manage high quality natural communities, and maintain the natural beauty of a forest setting, as well as produce quality wood products. Indian Trail CA can be an excellent proving ground to demonstrate a balance between vegetative management and aesthetic appreciation.

Current Land and Water Types:

Land/Water Type	Acres	Miles	% of Area
Forest	12,143		90
Glade/Savanna/Woodland	1,200		9
Old Field/Wildlife Food Plots	110		<1
Lake/Ponds/Hatchery Beds	50		<1
Total	13,503		100
Permanent Stream Frontage		4.5	

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.

Maps:

Figure 1: Area Map

Figure 2: Compartment Map

Figure 3: Natural Community Focus Area Map

Figure 4: Current Land and Water Types Map

Figure 1: Area Map

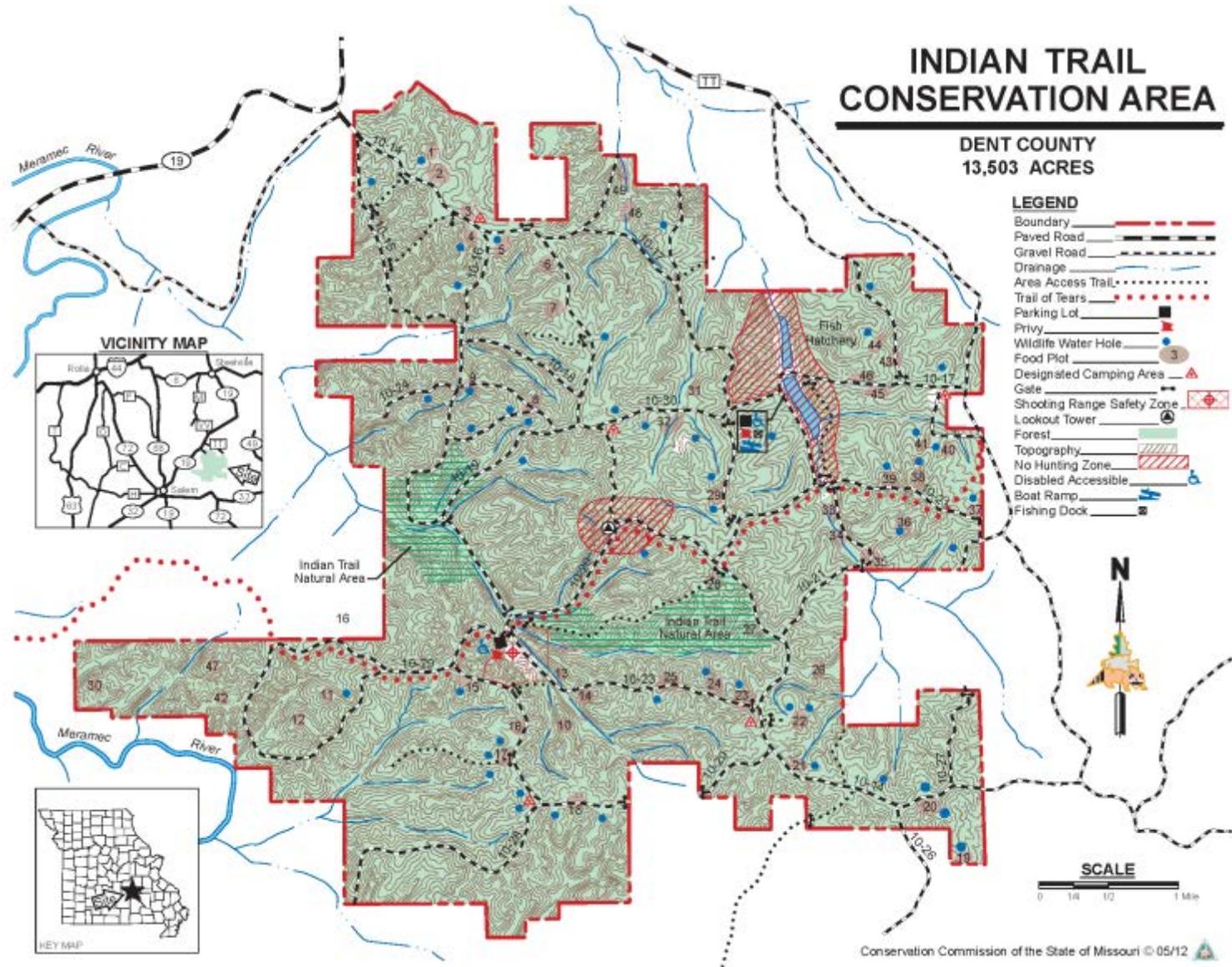
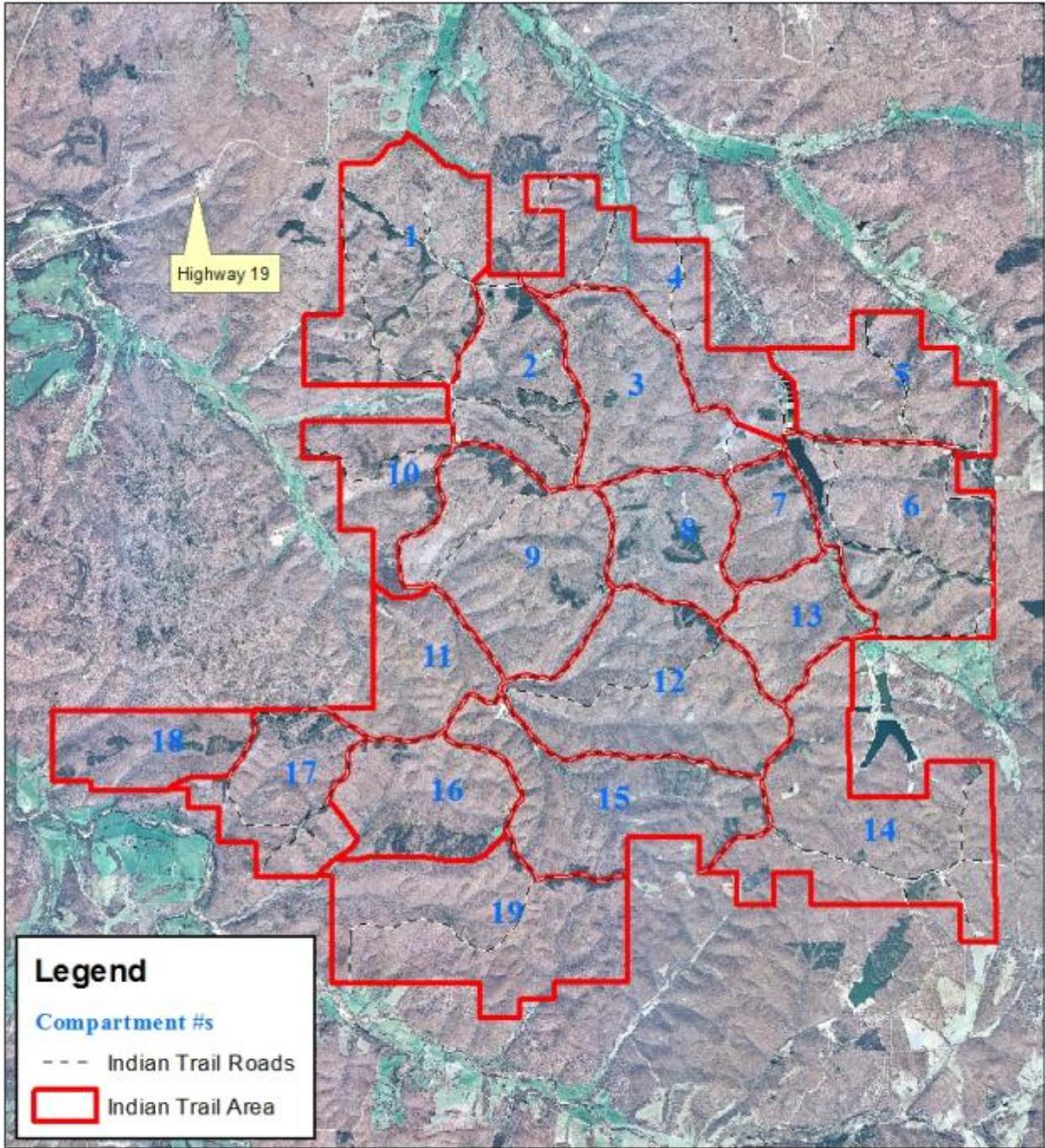


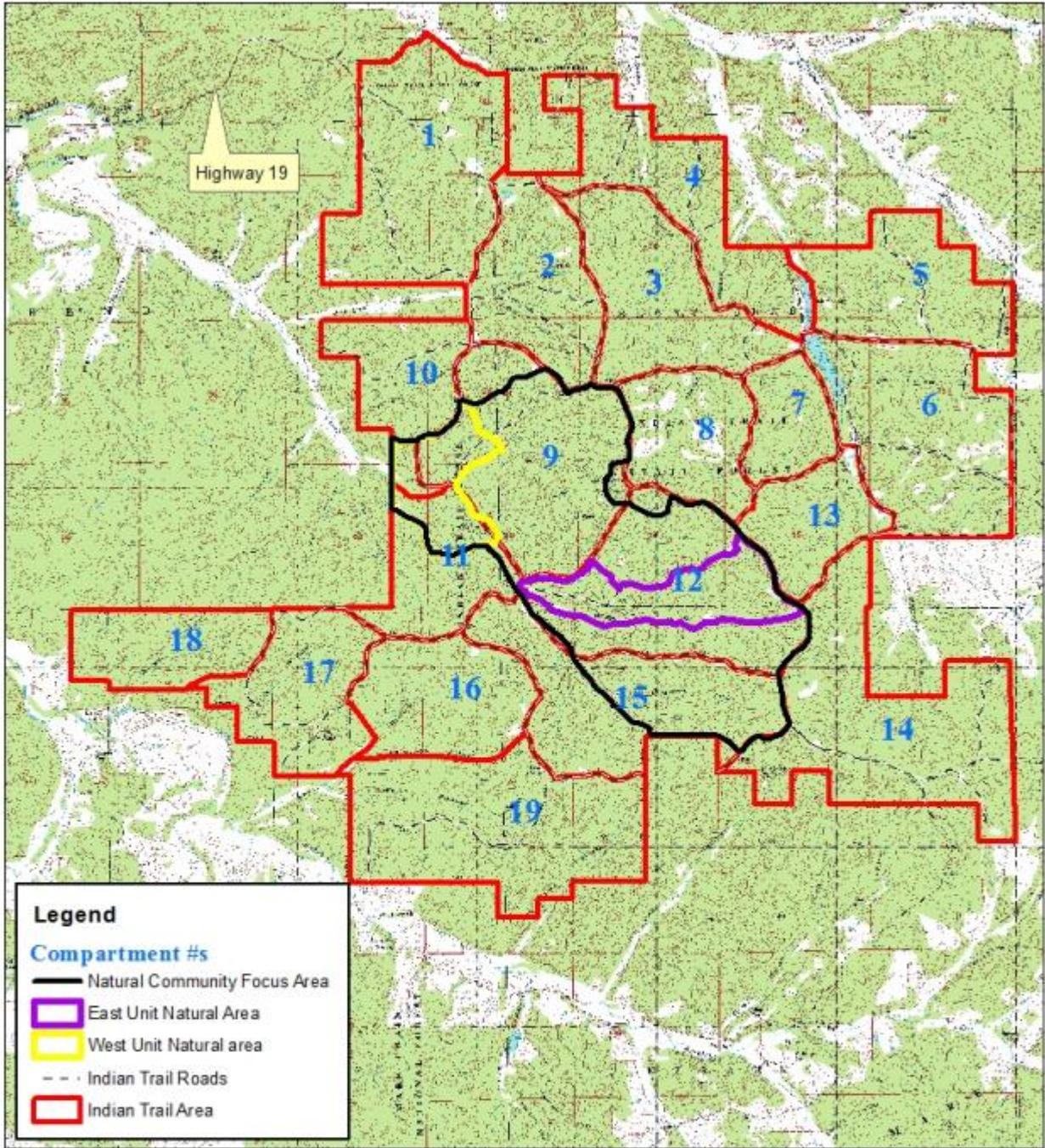
Figure 2: Compartment Map



Indian Trail CA
13,503 Acres
Dent County.



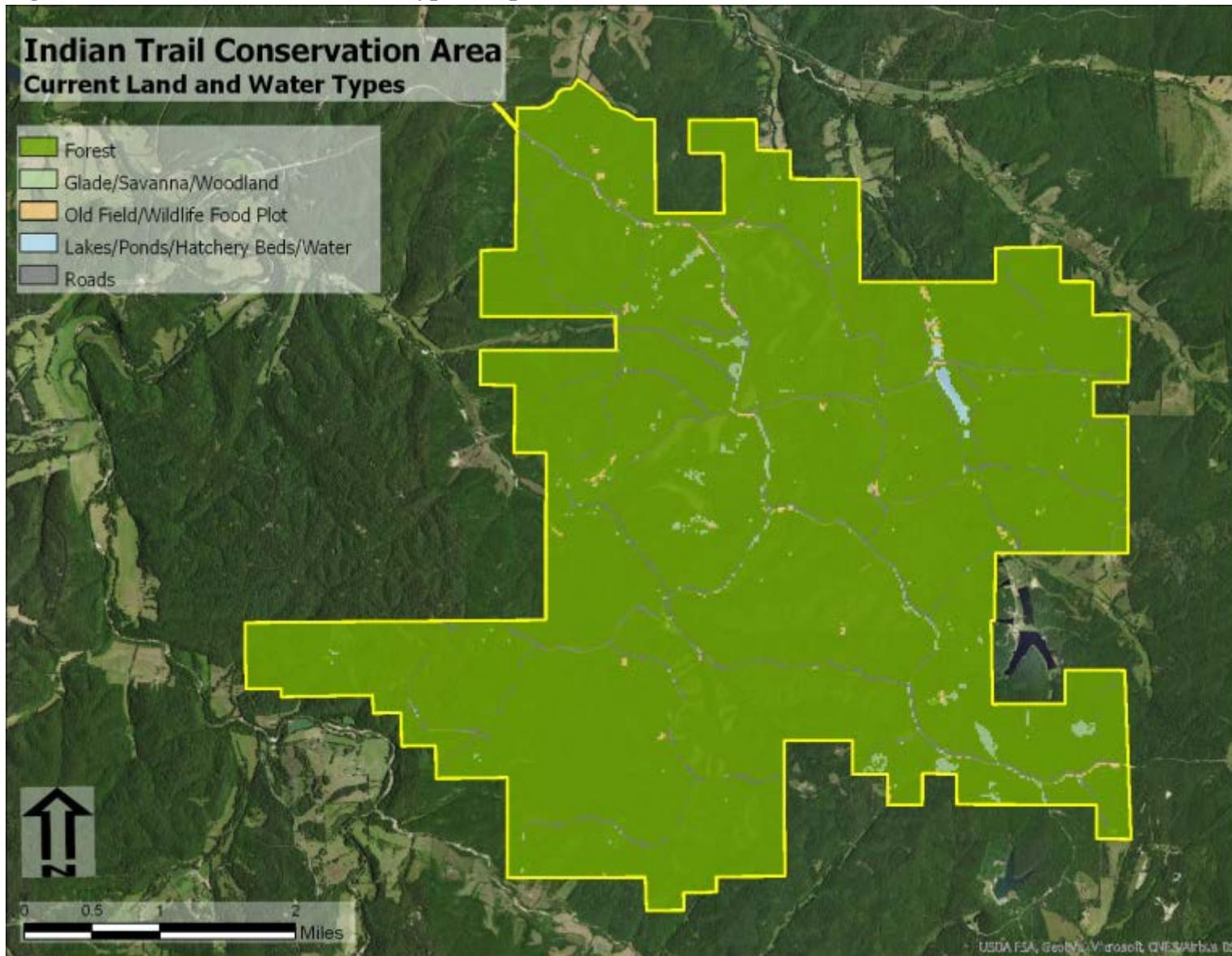
Figure 3: Natural Community Focus Area Map



Indian Trail CA
13,503 Acres
Dent County.



Figure 4: Current Land and Water Types Map



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