

**DRAFT**

**St. Clair County Glades**

Dave Rock CA  
Lichen Glade CA

**Ten-Year Area Management Plan**  
**FY 2017-2026**



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## OVERVIEW

Area Name	Area Number	Year Acquired	Acreage	County	Administrative Responsibility	Maintenance Responsibility
Dave Rock Conservation Area	8253	1982	133	St. Clair	Wildlife	Wildlife
Lichen Glade Conservation Area	7806	1970 <sup>1</sup>	26	St. Clair	Wildlife	Wildlife

<sup>1</sup> Owned by The Nature Conservancy and leased to the Missouri Department of Conservation (the Department) starting in 1975. The lease automatically renews in 10-year increments; the current lease period runs from January 9, 2016 to January 8, 2026.

### Statements of Purpose:

#### A. Strategic Direction

Manage glades, savannas, and woodlands to preserve diversity of plants and animals while providing opportunities for the public to enjoy these unique areas.

#### B. Desired Future Condition

The desired future condition of Dave Rock CA and Lichen Glade CA is a healthy, diverse, and sustainable mosaic of sandstone glade, sandstone/shale savanna, and sandstone woodland that maintains species diversity and provides opportunities for the public to study, hike and enjoy the areas (Nelson, 2005).

#### C. Federal Aid Statement

N/A

## GENERAL INFORMATION AND CONDITIONS

### I. Special Considerations

Area Name	Priority Areas	Natural Areas
Dave Rock CA	None	Dave Rock Natural Area (44 acres) <sup>1</sup>
Lichen Glade CA	None	Lichen Glade Natural Area (26 acres) <sup>2</sup>

<sup>1</sup> Dave Rock Natural Area contains a large and scenic outcrop of Pennsylvanian age sandstone – one of the largest sandstone glades in the Osage Plains ecoregion.

<sup>2</sup> Lichen Glade Natural Area contains a large expanse of massive sandstone outcrops and associated dry sandstone woodlands with old growth black jack oaks aged at over 150 years.

### II. Important Natural Features and Resources

Area Name	Species of Conservation Concern	Caves	Springs
Dave Rock CA	None	None	None
Lichen Glade CA	None	None	None

**III. Existing Infrastructure**

Area Name	Parking Area #	Other
Dave Rock CA	1	1 pond dam; 1 fishless pond (0.25 acres)
Lichen Glade CA	1	N/A

**IV. Area Restrictions or Limitations**

Area Name	Deed Restrictions	Federal Interest	Easements	Cultural Resources	Endangered Species	Boundary Issues
Dave Rock CA	None	Yes <sup>2</sup>	None	None known	None observed	None
Lichen Glade CA	Yes <sup>1</sup>	Yes <sup>2</sup>	None	None known	None observed	None

<sup>1</sup>This area is owned by The Nature Conservancy and leased to the Department. The 10-year lease agreement runs from January 9, 2006 to January 8, 2016.

<sup>2</sup>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.

**MANAGEMENT CONSIDERATIONS**

**V. Terrestrial Resource Management Considerations**

**Challenges and Opportunities:**

- 1) Quality remnant glade, savanna, and woodland exist. Some require only maintenance, while others are in need of restoration.
- 2) Numerous invasive plants such as sericea lespedeza, crown vetch, and Japanese honeysuckle are established on the areas.
- 3) There are old fields on Dave Rock CA that can be managed for early successional habitat.

**Management Objective 1:** Maintain a diverse sandstone glade and savanna natural community.

**Strategy 1:** Survey and monitor areas for species of conservation concern.  
(Wildlife)

**Strategy 2:** Monitor for invasive species and, if found, eradicate them using tools including but not limited to prescribed fire, mechanical removal, and herbicide.  
(Wildlife)

**Strategy 3:** Stimulate growth of grasses and forbs and maintain glade openings using tools including but not limited to mechanical tree removal and prescribed fire. (Wildlife)

**Management Objective 2:** Maintain a dry sandstone woodland natural community.

**Strategy 1:** Survey and monitor areas for species of conservation concern.  
(Wildlife)

**Strategy 2:** Reduce canopy cover to increase sunlight and, subsequently, stimulate herbaceous vegetation. (Wildlife, Forestry)

**Strategy 3:** Monitor oak regeneration in dry sandstone woodland natural community to assure oak sprouts are moving up into progressively larger size classes. (Wildlife & Forestry)

**Management Objective 3:** Maintain open fields on Dave Rock CA.

**Strategy 1:** Plant annual small grain crops and legumes to provide a food source for wildlife and annual vegetation for brood habitat in idle years. (Wildlife)

**Strategy 2:** Maintain native warm-season grass plantings with prescribed fire or other techniques to control woody encroachment and improve structure.  
(Wildlife)

## VI. Aquatic Resource Management Considerations

### **Challenges and Opportunities:**

- 1) Lichen Glade CA is bordered by 0.3 miles of Salt Creek on the west. Dave Rock CA includes 0.3 miles of stream, which is a tributary to Panther Creek.
- 2) Intact natural communities prevent erosion and buffer the streams from negative inputs.

**Management Objective 1:** Maintain healthy natural communities to protect watersheds.

**Strategy 1:** Use best management practices that minimize soil disturbance.  
(Wildlife)

**Strategy 2:** Maintain a protected riparian corridor along streams, as described in *Watershed and Stream Management Guidelines for Lands and Waters Managed by the Missouri Department of Conservation* (Missouri Department of Conservation, 2009). (Wildlife)

**Strategy 3:** Evaluate pond and consider managing for amphibians. (Fisheries)

## VII. Public Use Management Considerations

**Challenges and Opportunities:**

- 1) These two areas offer numerous public use opportunities, including hunting (Dave Rock CA only), plant and wildlife viewing opportunities, photography, and exploring unique geology.
- 2) Continue good relationships with neighboring landowners.
- 3) Improve educational and interpretive opportunities. This is a rural part of the state and many local small schools are looking for educational opportunities outside of the classroom environment.

**Management Objective 1:** Provide opportunities for hunting, exploring and wildlife viewing.

**Strategy 1:** Maintain parking lots and trails throughout the areas. (Wildlife)

**Strategy 2:** Conduct management activities that will provide habitat for a diversity of species. (Wildlife)

**Management Objective 2:** Continue good relationships with neighboring landowners.

**Strategy 1:** Work with neighbors to minimize boundary and trespass issues. (Wildlife, Protection)

**Strategy 2:** Promote habitat management on neighboring landowners' properties. (Wildlife, Private Land Services)

**Strategy 3:** Enter into fencing agreements with neighbors when necessary to replace boundary fences. (Wildlife)

**Management Objective 3:** Improve educational and interpretive opportunities.

**Strategy 1:** Provide up-to-date maps and information to promote recreational opportunities to the public. (Wildlife)

**Strategy 2:** Communicate to teachers and other youth leaders the possibilities for educational programs on the areas including exploring the unique geologic features and plant communities. (Outreach and Education)

**VIII. Administrative Considerations**

**Challenges and Opportunities:**

- 1) Evaluate land offered as additions to these areas.

**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:

	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
<b>Terrestrial Resource Management</b>										
<i>Objective 1</i>										
Strategy 3			X			X			X	
<i>Objective 2</i>										
Strategy 2		X				X				
<i>Objective 3</i>										
Strategy 2		X			X			X		

## **APPENDICES**

### **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.

Nelson, P. W. (2005). *The Terrestrial Natural Communities of Missouri, Revised Edition*. Jefferson City, MO: The Missouri Natural Areas Committee.

### **Appendices:**

Appendix 1: St. Clair County Glades Vicinity Map

Appendix 2: Dave Rock Conservation Area Background

Appendix 3: Area Map of Dave Rock Conservation Area

Appendix 4: Aerial Map of Dave Rock Conservation Area

Appendix 5: Topographic Map of Dave Rock Conservation Area

Appendix 6: Dave Rock Conservation Area Land Cover

Appendix 7: Lichen Glade Conservation Area Background

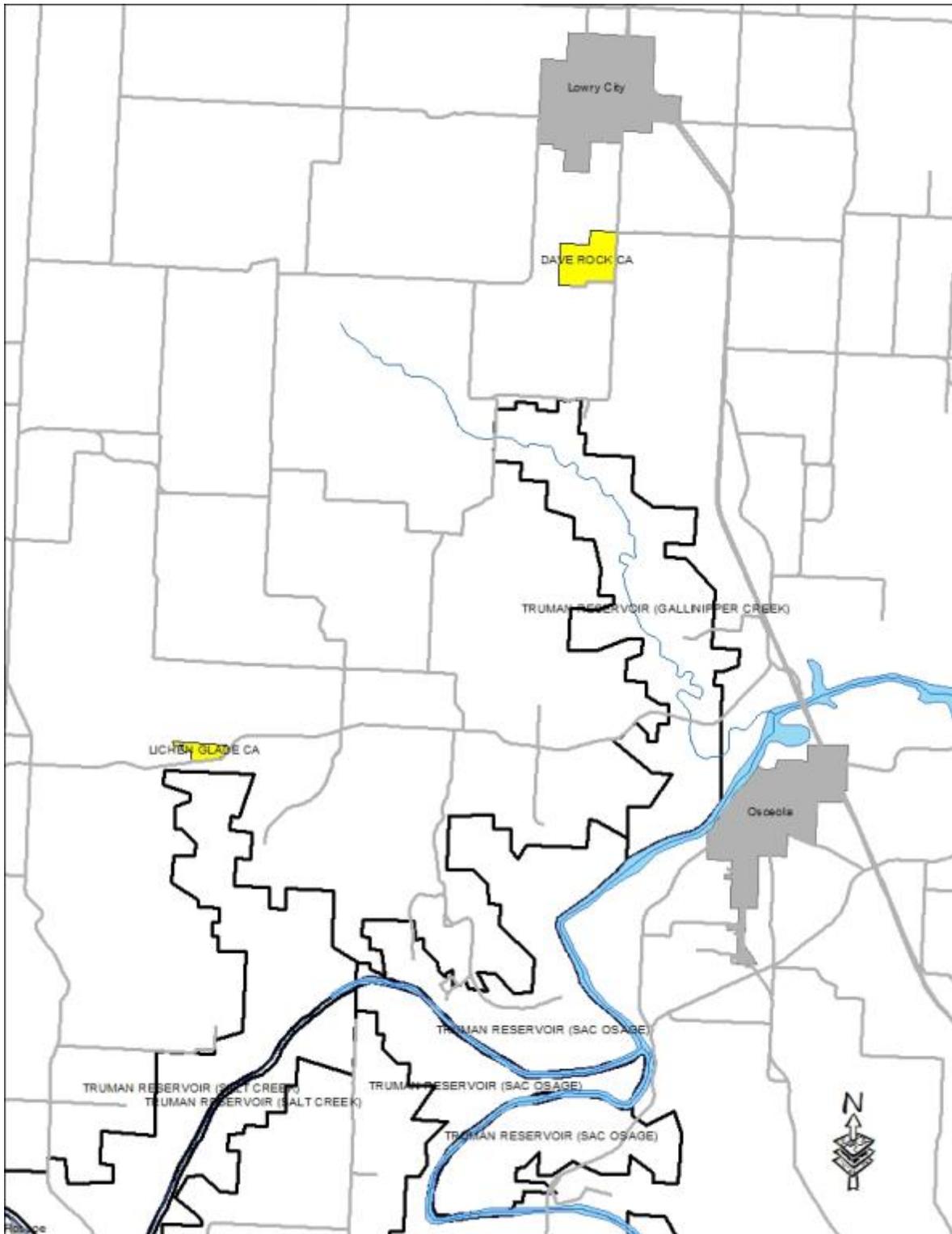
Appendix 8: Area Map of Lichen Glade Conservation Area

Appendix 9: Aerial Map of Lichen Glade Conservation Area

Appendix 10: Topographic Map of Lichen Glade Conservation Area

Appendix 11: Lichen Glade Conservation Area Land Cover

**Appendix 1. St. Clair County Glades Vicinity Map**



**Appendix 2. Dave Rock Conservation Area Background**

Dave Rock Conservation Area (CA) was purchased in 1982 (previously named Dave Rock Natural History Area) primarily to preserve the unique sandstone glade which is one of the largest in Missouri. Intact sandstone glade, savanna, and woodland natural communities are the highlight of the area. A 44-acre portion of the area is designated as Dave Rock Natural Area.

More than one-half of Dave Rock CA is wooded. The remainder is made up of glade, savanna, warm-season grass plantings, and open fields used for annual grain plots and legumes.

The sandstone glade is composed of bare rock covered with a wide variety of lichens and mosses. In areas where soil developed on the glade, there is a gradual progression of plants from small glade-adapted species to stunted post oak trees. The adjoining seep forest is also of interest because of the unusual species composition due to the lack of drainage from the underlying sandstone rock. Because the soil is continuously wet this allows more bottomland species to exist where upland oak-hickory would normally be found.

Location: Township 39 North, Range 26 W, Section 25.

Area Location: From Lowry City, take Highway 13 south 1 mile, then NE700 west 1 mile and NE301 south.

**Current Land and Water Types:**

<b>Land/Water Type</b>	<b>Acres</b>	<b>Miles</b>	<b>% of Area</b>
Forest	64		48
Woodland	33		25
Glade	14		10
Crop	12		9
Grassland	10		8
<b>Total</b>	<b>133</b>		<b>100</b>
Stream (Panther Creek)		0.25	

Appendix 3. Area Map of Dave Rock Conservation Area

# DAVE ROCK CONSERVATION AREA

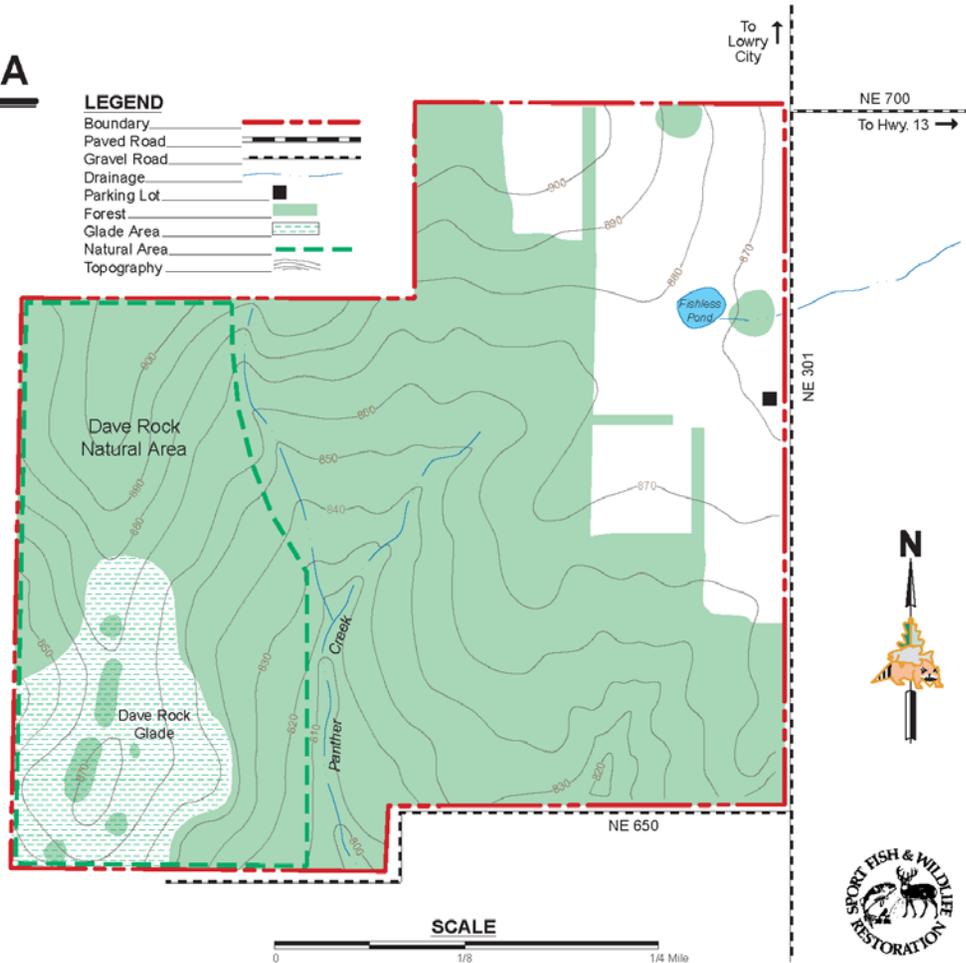
ST. CLAIR COUNTY  
133 ACRES

VICINITY MAP



**LEGEND**

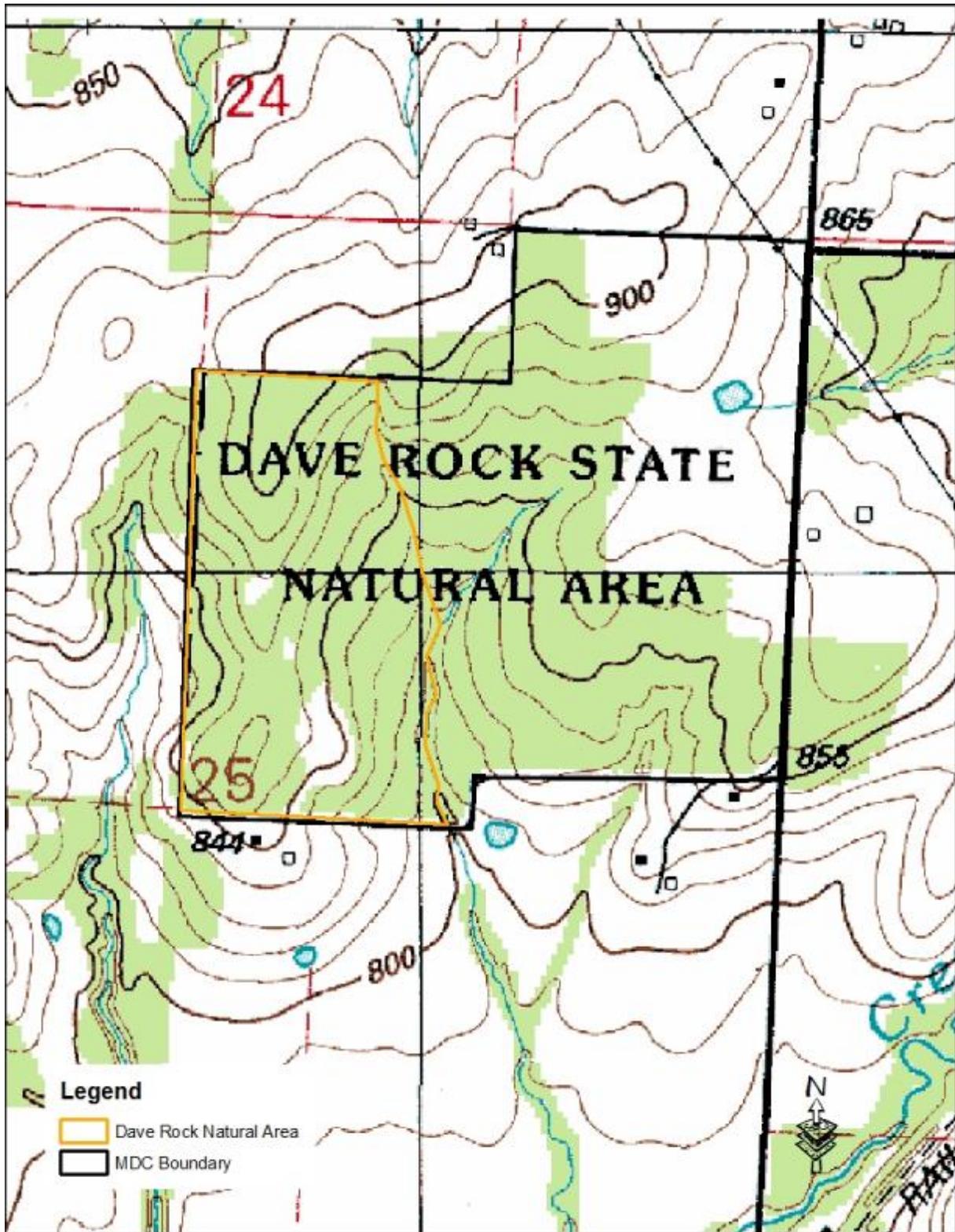
- Boundary: Red dashed line
- Paved Road: Black dashed line
- Gravel Road: Black solid line
- Drainage: Blue line
- Parking Lot: Black square
- Forest: Green hatched area
- Glade Area: Green solid area
- Natural Area: Green dashed outline
- Topography: Brown contour lines



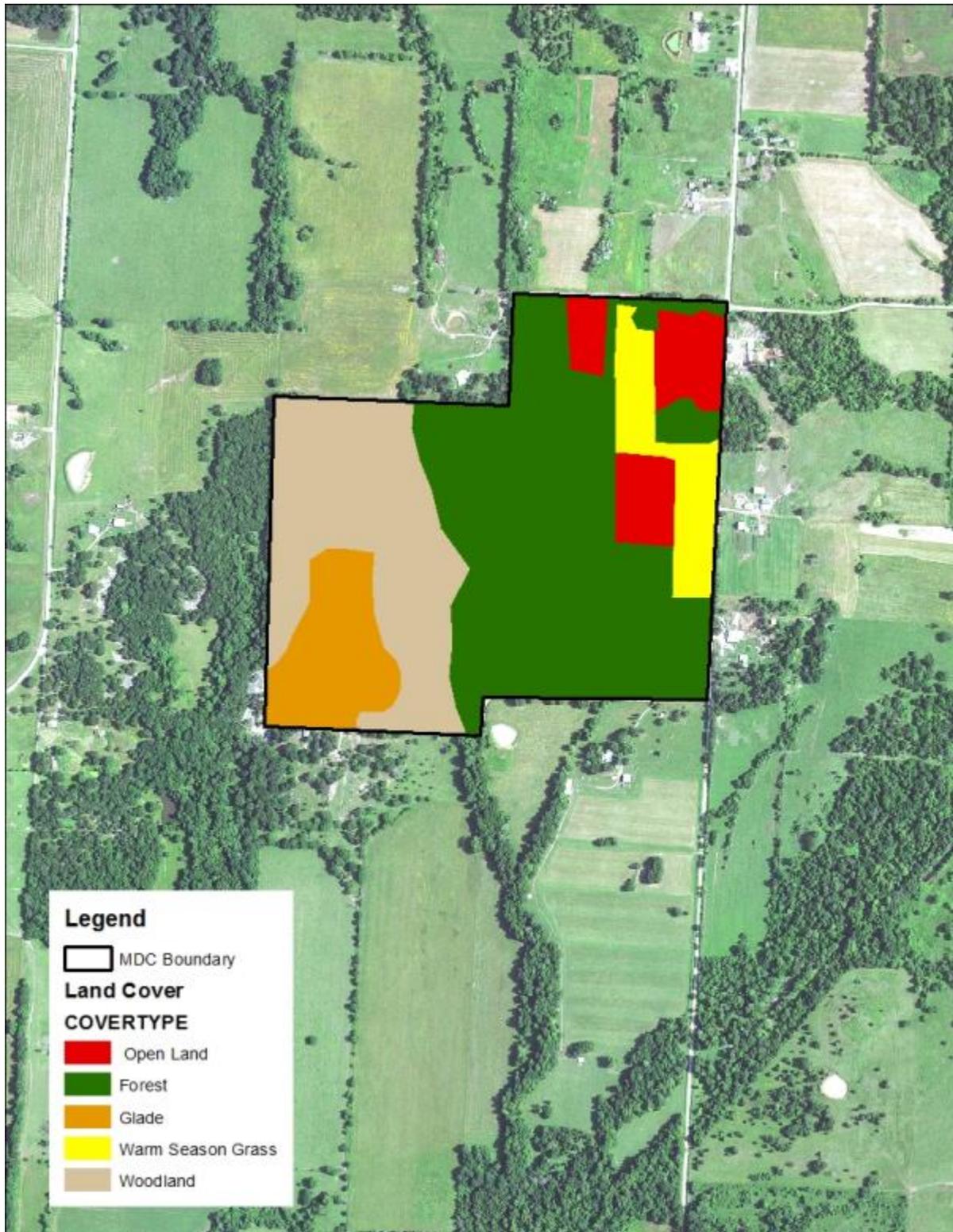
**Appendix 4. Aerial Map of Dave Rock Conservation Area**



Appendix 5. Topographic Map of Dave Rock Conservation Area



**Appendix 6. Dave Rock Conservation Area Land Cover**



**Appendix 7. Lichen Glade Conservation Area Background**

The first 15-acre tract of Lichen Glade Conservation Area (CA) was purchased by The Nature Conservancy in 1970. The Nature Conservancy added 11 more acres in 1974. The Department entered into a management lease with The Nature Conservancy for Lichen Glade CA in 1975 and the area has been managed by the Department since then. The entire 26 acres encompassing this conservation area are designated as Lichen Glade Natural Area.

Lichen Glade CA contains a matrix of sandstone glade and dry sandstone woodland. Stunted post and blackjack oak (adapted to dry, shallow soil conditions) can be found growing in the shallow soils of the glade portion with larger trees in the woodland where soils are deeper. An abundance of native grasses and forbs can be found on the area including big bluestem, little bluestem, spiderwort, sensitive briar, goats rue, and lead plant. There is a sandstone bluff that overlooks the Salt Creek floodplain on the west side of the area.

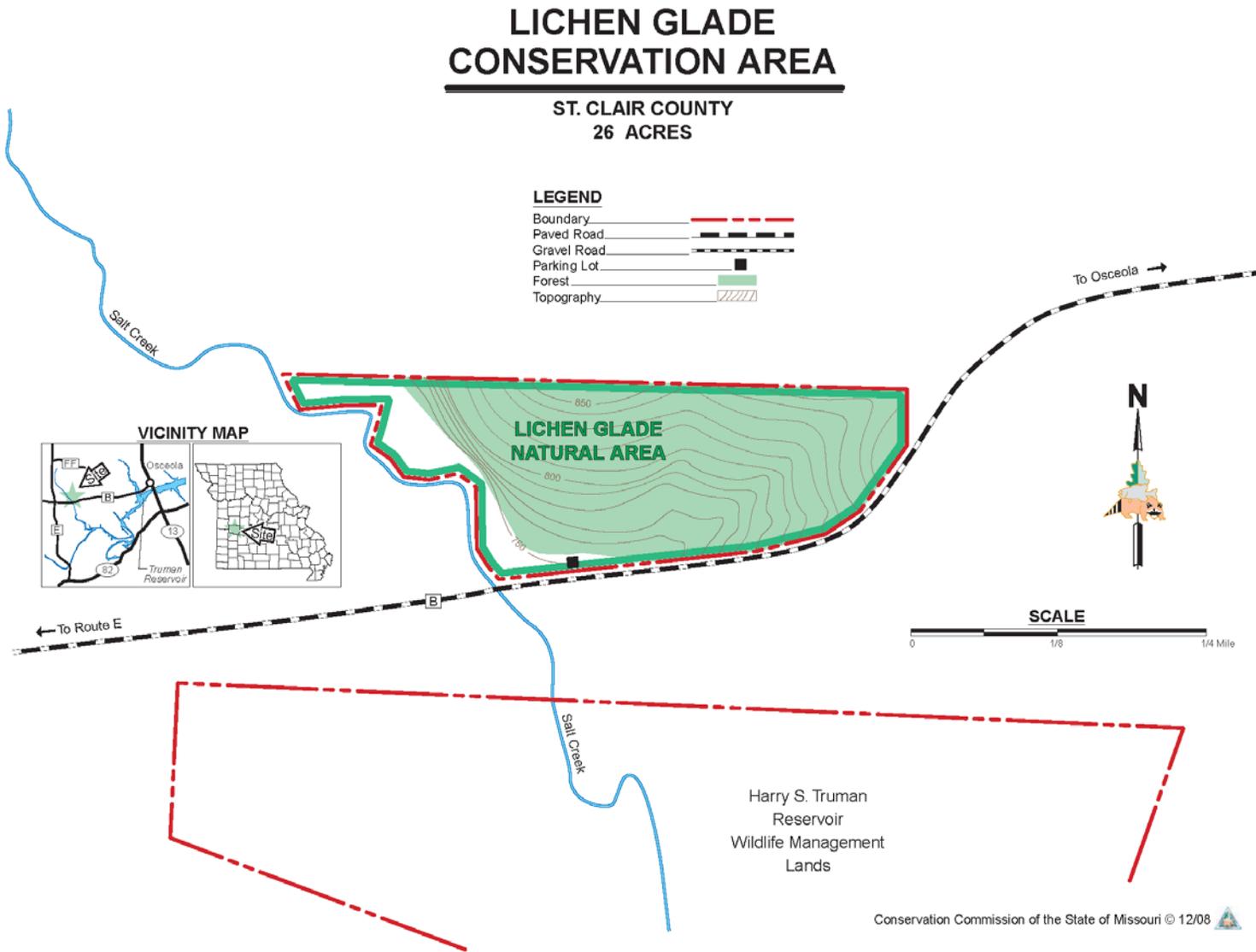
Legal Description: Township 37 North, Range 26 W, Section 16.

Area Location: From Osceola, take Route B west 6 miles.

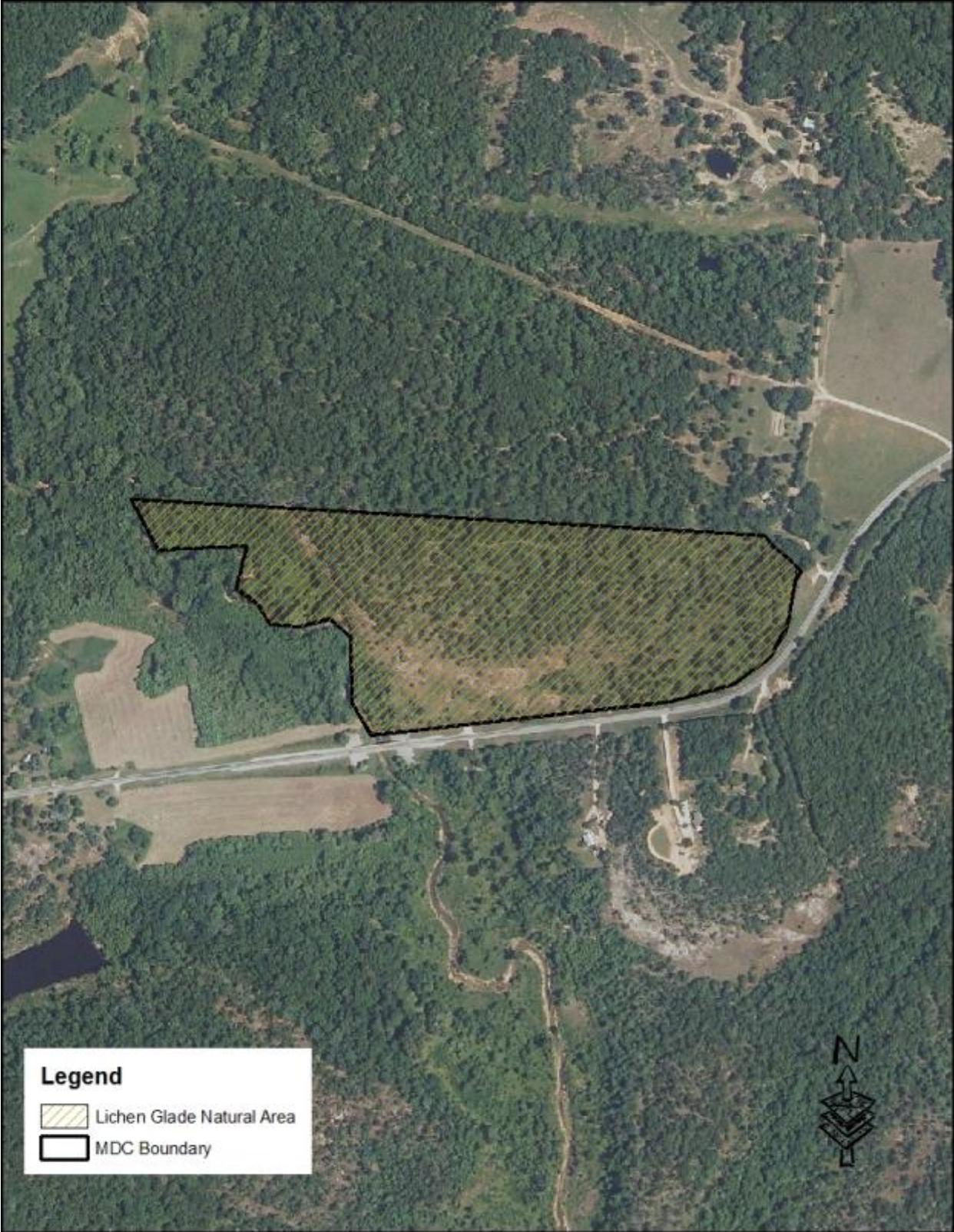
**Current Land and Water Types:**

<b>Land/Water Type</b>	<b>Acres</b>	<b>Miles</b>	<b>% of Area</b>
Woodland	18		69
Glade	8		31
<b>Total</b>	<b>26</b>		<b>100</b>
Stream (Salt Creek)		0.25	

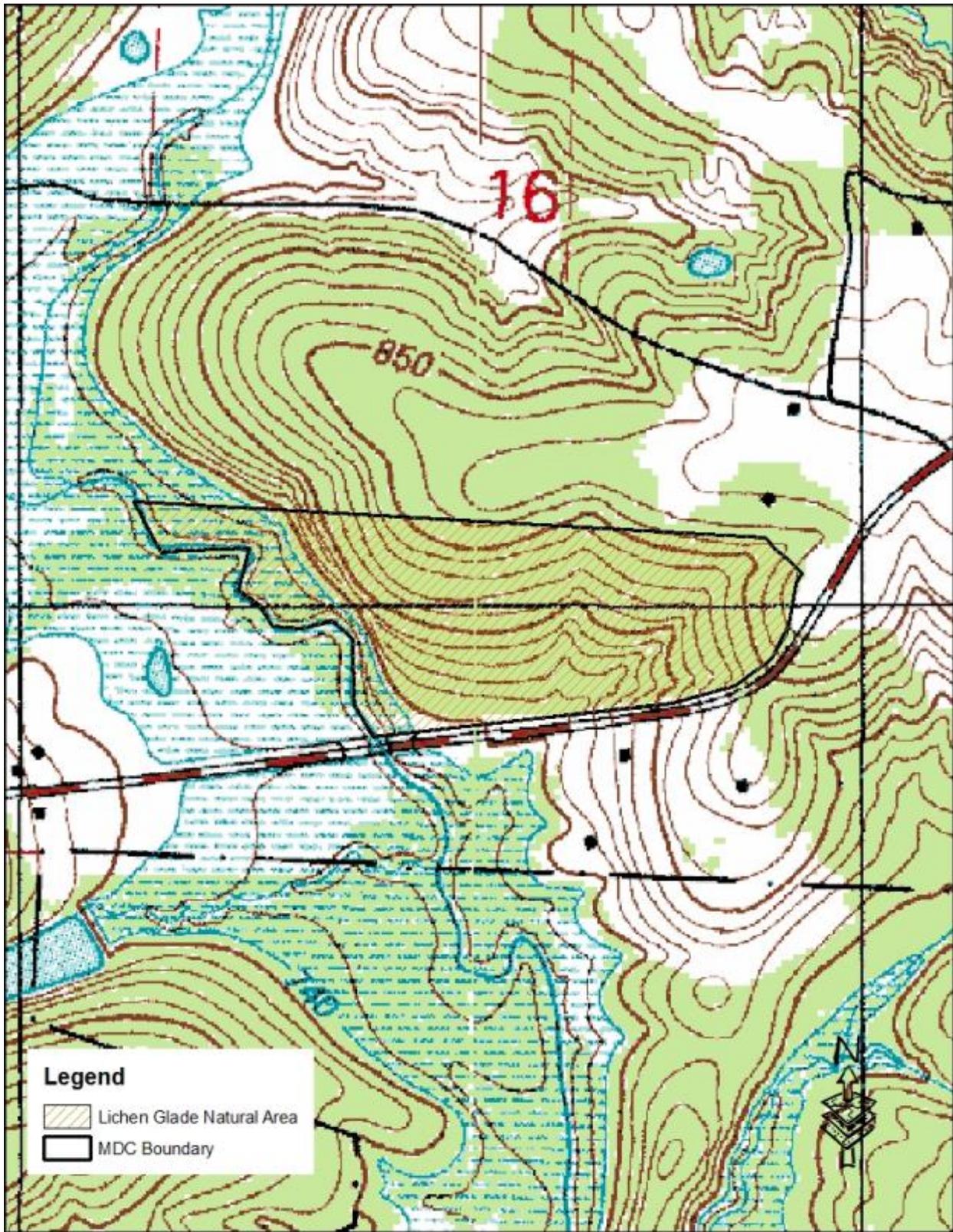
Appendix 8. Area Map of Lichen Glade Conservation Area



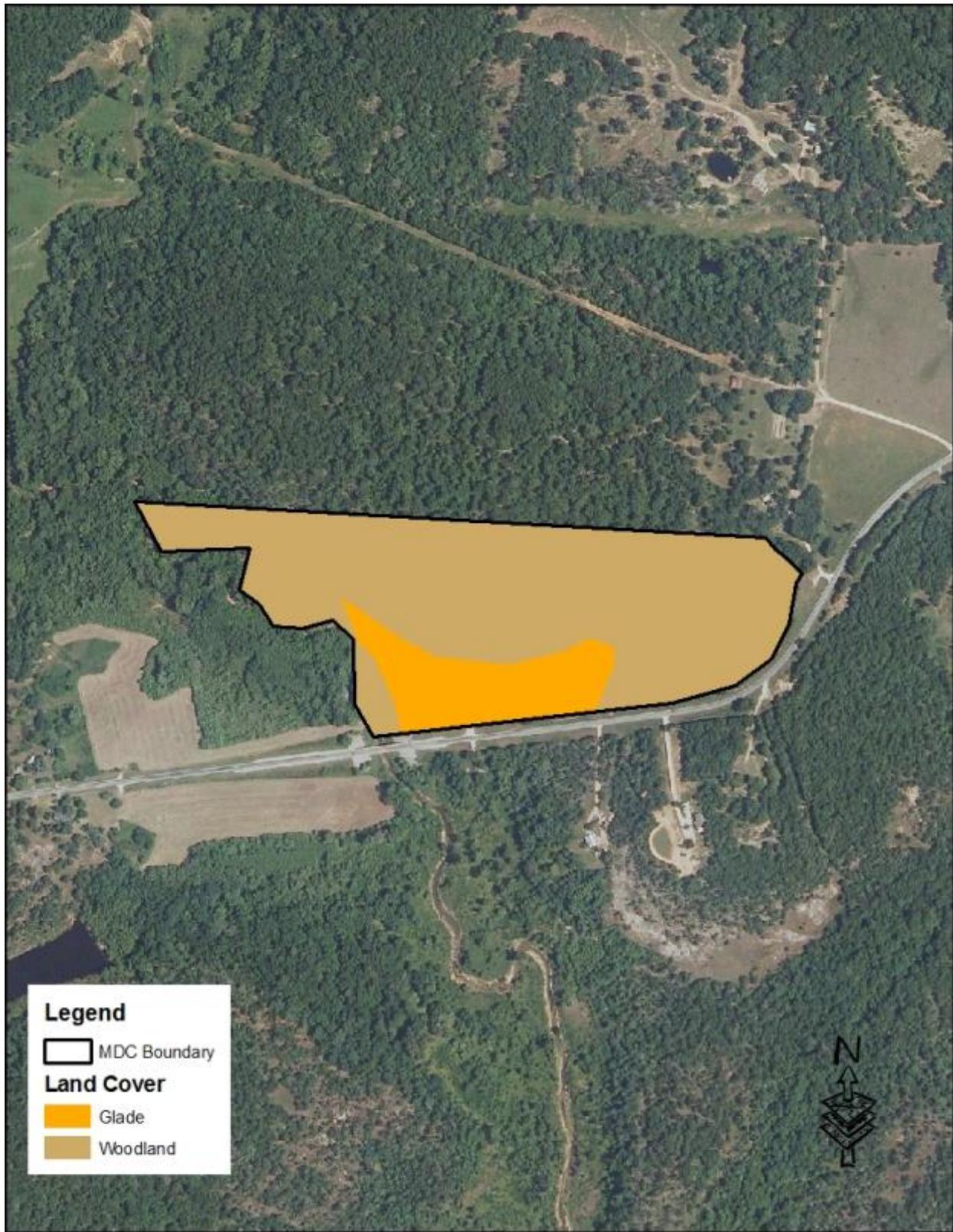
Appendix 9. Aerial Map of Lichen Glade Conservation Area



**Appendix 10. Topographic Map of Lichen Glade Conservation Area**



**Appendix 11. Lichen Glade Conservation Area Land Cover**



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