Grand Bluffs Conservation Area

Ten-Year Area Management Plan

FY 2017-2026

Lisa D. Allen
Forestry Division Chief

8-08-16
Date

Grand Bluffs Conservation Area Management Plan Approval Page

PLANNING TEAM

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CENTRAL REGION

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FORESTRY DIVISION

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OVERVIEW

- **Official Area Name:** Grand Bluffs Conservation Area, #9133
- **Year of Initial Acquisition:** 1991
- **Acreage:** 236 acres
- **County:** Montgomery
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Wildlife
- **Statement of Primary Purpose:**
  - **A. Strategic Direction**
    Grand Bluffs Conservation Area (CA) was purchased to restore and maintain forest, woodland, glade, cliff, and talus natural communities; and to provide compatible recreational opportunities.
  - **B. Desired Future Condition**
    The desired future condition of Grand Bluffs CA is a landscape composed of healthy woodland, glade, cliff, and talus natural communities, with a small amount of mesic forest plantation of healthy black walnuts.
  - **C. Federal Aid Statement**
    N/A

GENERAL INFORMATION AND CONDITIONS

I. <u>Special Considerations</u>

A. Priority Areas: Missouri River Hills Conservation Opportunity Area and Priority Forest Landscape

B. Natural Areas: A 160-acre portion of the area was designated as Grand Bluffs Natural Area in 1998. The most outstanding features of this natural area are the fluted, dry dolomite cliffs that rise above the Missouri River floodplain. A 3/4 mile stretch of bluffs tower over 300 feet high to provide scenic views of the river, floodplain, and river hills of Montgomery and Gasconade counties. These cliffs are recognized as the highest quality occurrence of a dolomite cliff community north of the Missouri River. Topping the cliffs are patchy dolomite glades interspersed among dry dolomite woodlands.

II. <u>Important Natural Features and Resources</u>

A. Species of Conservation Concern: None observed.

B. Caves: None

C. Springs: None

D. Other: Exceptional or Significant natural features include dry dolomite cliffs, dolomite talus, dolomite glades, dry dolomite woodlands, and mesic dolomite forest.

III. Existing Infrastructure

- Two fishless ponds maintained for wildlife
- Two gravel parking lots
- One wooden overlook platform
- A 1-mile non-loop hiking trail, from the south parking lot to the overlook; 3,200 feet of the trail occurs on an easement through adjacent private land

IV. Area Restrictions or Limitations

A. Deed Restrictions: 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 on the Conservation Area. The Missouri Department of Conservation (The Department) purchased a permanent 30' wide easement through the Greg and Rozanna Benz property on November 4th, 2002, which connects the south parking lot to the southern portion of Grand Bluffs CA. This easement now serves as the hiking trail for area users.

D. Cultural Resources: Yes, records kept with the Department Environmental Compliance Specialist. Managers should follow best management practices for Cultural Resources found in the Department Resource Policy Manual.

E. Endangered Species: None observed.

F. Boundary Issues: None

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

Challenges and Opportunities

1) Improve and maintain healthy forest and woodland natural communities.
2) Improve and maintain healthy glade natural communities.
3) Monitor for invasive species and apply appropriate eradication measures.
4) Update Department records for amphibians, birds, and rare plants.

Management Objective 1: Improve and maintain healthy forest and woodland natural communities.

Strategy 1: Conduct forest inventory by compartment with an estimated re-entry time of 15 years, or as needed. Compartment 2 was inventoried in FY13, and Compartment 1 was inventoried in FY16; both will be re-inventoried beyond the scope of this 10-year area plan in FY28 and FY31. (Forestry)

Strategy 2: Implement forestry practices as prescribed by the detailed forest inventory process. (Forestry)
Strategy 3: Implement walnut plantation management practices as prescribed by the detailed forest inventory process. (Forestry)
Strategy 4: Conduct periodic prescribed burns in the woodland sites to maintain a reduced basal area and promote diverse native forbs and grasses**.** (Forestry)
Strategy 5: Utilize best management practices to maintain soil, water, and visual integrity during management activities as described in the Department's manuals: *Missouri Watershed Protection Practice manual* (Missouri Department of Conservation 2014) and the *Missouri Forest Management Guidelines (Missouri Department of Conservation 2014).* (Forestry)

Management Objective 2: Improve and maintain healthy glade and prairie natural communities.

Strategy 1: Utilize Department staff and contracting to reduce woody vegetation and increase the abundance and diversity of herbaceous vegetation using prescribed fire, mechanical, and or chemical methods to promote diverse native forbs and grasses. (Forestry)
Strategy 2: Monitor and evaluate results of management to determine fire frequency. (Forestry)
Strategy 3: If necessary, consider over-seeding native ecotype forbs to supplement natural community plant response. (Forestry)

Management Objective 3: Maintain healthy cliff and talus natural communities.

Strategy 1: Utilize Department staff and contracting to increase the abundance and diversity of herbaceous vegetation using prescribed fire to promote diverse native forbs and grasses. (Forestry)
Strategy 2: Monitor and evaluate results of management to determine fire frequency. (Forestry)
Strategy 3: Discourage public climbing and rappelling to prevent disturbance. (Forestry and Protection)

Management Objective 4: Monitor for invasive species and apply appropriate eradication measures.

Strategy 1: Monitor old fields for undesirable invasive species and take appropriate management actions when feasible to eradicate. (Forestry)
Strategy 2: Monitor forests and woodlands for undesirable invasive species and take appropriate management action when feasible to eradicate. (Forestry)

Strategy 3: Monitor for undesirable invasive species along the KATY Trail corridor and take appropriate management action when feasible to eradicate. (Forestry)

Management Objective 5: Update Department records for amphibians, birds, and rare plants on the area.

Strategy 1: Inventory the area for species of conservation concern. (Forestry and Wildlife)

Strategy 2: Monitor and update the Department's natural community records, as needed. (Forestry and Wildlife)

VI. Aquatic Resource Management Considerations

Challenges and Opportunities:

1) Maintain two small area ponds for wildlife watering and semi-aquatic wildlife use.
2) Protect water quality in Synthianna Creek.

Management Objective 1: Maintain area ponds for wildlife watering and semi-aquatic wildlife use.

Strategy 1: Monitor existing amphibian populations within the ponds and work with Fisheries staff to maintain them as fishless for use by amphibians. (Forestry, Wildlife, and Fisheries)

Strategy 2: Work with regional Natural History Biologist, state Herpetologist, and Fisheries staff to explore building additional fishless ponds in appropriate locations to provide breeding habitat for forest amphibian species. (Forestry, Wildlife, Resource Science, and Fisheries)

Management Objective 2: Protect water quality in Synthianna Creek.

Strategy 1: Maintain service trail creek crossing, utilizing soil and water quality best management practices (Forestry)

Strategy 2: Maintain the existing wooded riparian corridor, through natural regeneration, on all lands bordering Synthianna Creek. (Forestry)

Strategy 3: Follow the *Watershed and Stream Management Guidelines for Lands and Waters Managed by the Missouri Department of Conservation* (Missouri Department of Conservation, 2014) for all management activities on the area. (Forestry)

VII. Public Use Management Considerations

Challenges and Opportunities:

1) Maintain hiking trail for recreation and access for area users.
2) Maintain scenic overlook deck.
3) Promote compatible and safe opportunities for outdoor recreation.

Management Objective 1: Provide quality outdoor recreational opportunities for area users.

Strategy 1: Maintain hiking trail for recreation and access for area users. (Wildlife)
Strategy 2: Monitor trail use and document conflicts with area use. Consider options, when feasible, to minimize and resolve potential conflicts with timing and seasonal considerations, and/or by special use permit. (Forestry)
Strategy 3: Maintain scenic overlook deck by monitoring wood planks for degradation and make timely repairs. (Forestry and Design and Development)
Strategy 4: Monitor interpretive sign at the scenic overlook deck for degradation and/or outdated information. (Forestry and Outreach and Education)

Management Objective 2: Promote compatible and safe opportunities for outdoor recreation.

Strategy 1: Maintain accurate area information and regulations through the Atlas Database, area brochures, posted information, and staff contacts with area users. (Forestry)
Strategy 2: Monitor area for illegal use. (Forestry and Protection)

VIII. Administrative Considerations

Challenges and Opportunities:

1) Maintain good relationships with neighboring landowners
2) Consider acquiring land, when available.

Management Objective 1: Maintain clearly identified property boundaries.

Strategy 1: Paint boundaries with standard blue boundary marking paint. (Forestry)
Strategy 2: In appropriate high use areas, maintain signage that informs the public of "End of Public Use Area." (Forestry)
Strategy 3: Work with Department staff to determine if boundary lines need to be resurveyed and adjusted. (Forestry)

Management Objective 2: Improve adjoining private landowner relationships and awareness of conservation activities on the area.

Strategy 1: Inform neighboring landowners of natural resource management work on the area. (Forestry, Fisheries, and Wildlife)

Strategy 2: Provide education and cost-share opportunities to adjoining landowners that wish to become engaged in land management activities. (Forestry and Private Land Services)

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**
Terrestrial Resource Management										
Objective 1										
Strategy 4		X	X		X	X		X	X	
Objective 2										
Strategy 1			X			X			X	
Objective 5										
Strategy 1				X						
Aquatic Resource Management										
Objective 1										
Strategy 1				X						
Administrative Considerations										
Objective 1										
Strategy 1	X									X

APPENDICES

Area Background:
Grand Bluffs Conservation Area (CA) is located about 9 miles east of the town of Portland and 5 miles west of Rhineland on Montgomery County Road 291 (Bluffton Road), which is off Missouri Highway 94.

On Jan. 25, 1991, the Conservation Commission approved the purchase of 160.75 acres from Ms. Lorna Rice. This purchase was made with Department funds. The Rice property consisted of two separate tracts. The primary tract contains 160 acres located atop the bluffs east of Bluffton, Missouri. The second tract is a three-quarter acre lot, which is now the location of the south parking lot and serves as the hiking trail head. This lot is located 1.2 miles west of the primary property. One June 26, 1991, the Conservation Commission approved the purchase of 62.14 acres from Elmer Gregory. These two tracts were purchased to secure and protect the three-quarter-mile stretch of Rhineland (Bluffton) Bluffs and to provide recreational opportunities compatible with the natural resources of the area. In 2011, 20 additional acres were purchased from the Ellerman family that is situated between the south boundary of Grand Bluffs CA and the Katy Trail State Park. The acquisition brought the majority of the bluffs from which the Grand Bluffs CA derives its name under Department ownership.

Most of the area was likely forested prior to settlement, excluding the bluffs and the associated glades. Today, the area contains an old field that has reforested, a fescue pasture that has been converted to native warm-season grass, as well as glades, forests, woodlands, and small patches of hilltop prairie. The cliffs tower 300 feet above the Missouri River floodplain and are recognized as the best quality occurrence of a dolomite cliff community north of the Missouri River.

Long-term management efforts include maintaining or improving the glades and woodlands, which will increase the diversity and abundance of the native plants. Natural resource management practices designed to improve wildlife habitat, maintain watershed quality, restore natural communities, and enhance tree growth and species composition are often implemented on the area. Wildlife habitat management practices woodland thinning followed by prescribed burning to open up the woodland canopy. Woodland thinning, which results in forage and cover for wildlife, is an important element in habitat management at Grand Bluffs CA.

Current Land and Water Types:

Land/Water Type	Acres	Feet	% of Area
Forest (including plantation)	70.7		30
Woodland	135.6		57
Cliff/talus	15.3		6
Glade	8		3
Old field	6.9		3
Prairie	<1		<1
Ponds	<1		<1
Total	**236**		**100**
Stream Frontage (Synthianna Creek)		950	

Public Input Summary:

The draft Grand Bluffs Conservation Area Management Plan was available for public comment May 1-31, 2016. The Missouri Department of Conservation received no comments during this time period.

References:

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.

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.

Maps:

Figure 1: Grand Bluffs CA Area Map

Figure 2: Infrastructure of Grand Bluffs CA

Figure 3: Terrestrial Cover Types of Grand Bluffs CA

Figure 4: Aquatic Features of Grand Bluffs CA

Figure 1: Grand Bluffs CA Area Map

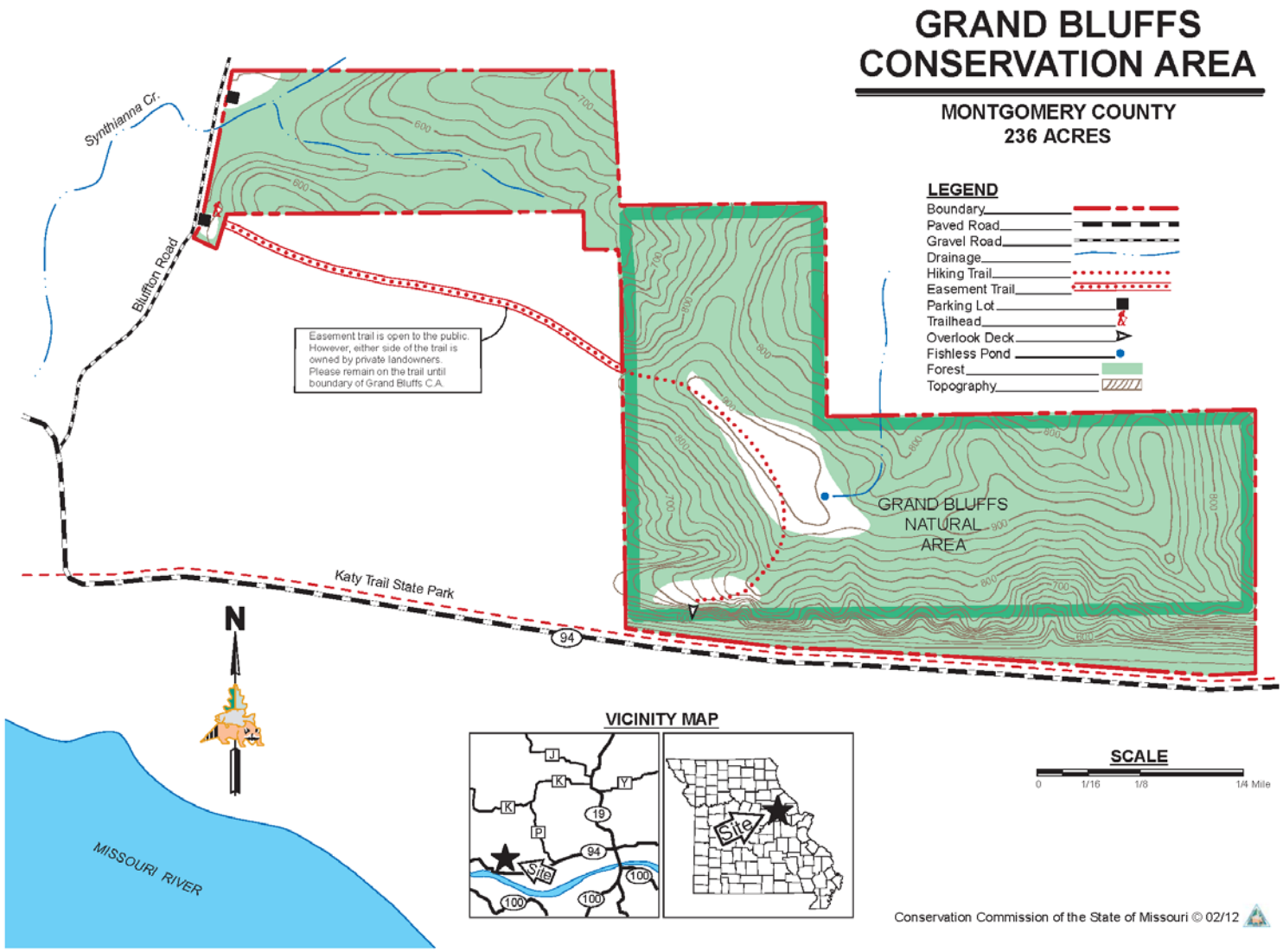

Figure 2: Infrastructure of Grand Bluffs CA

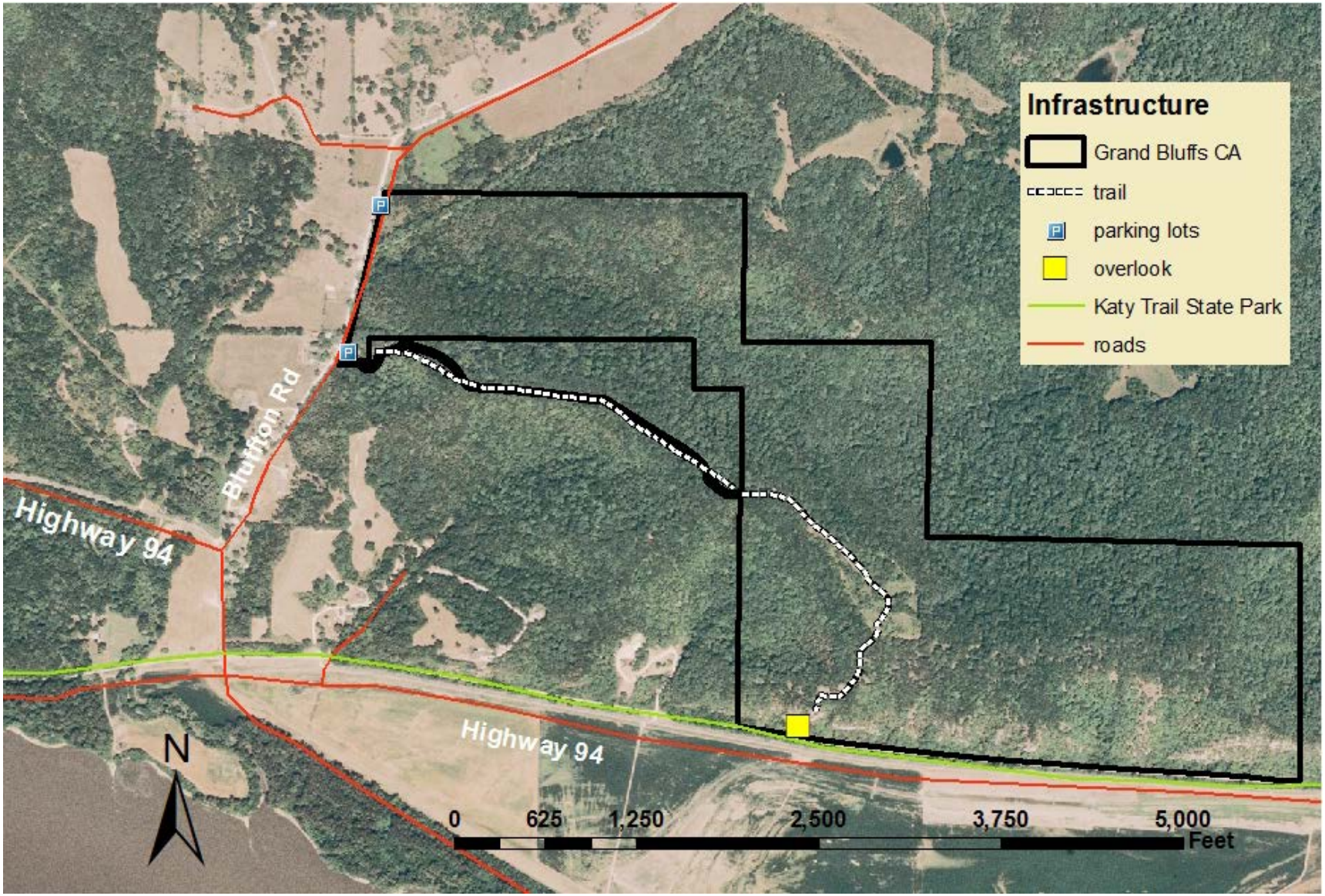

Figure 3: Terrestrial Cover Types of Grand Bluffs CA

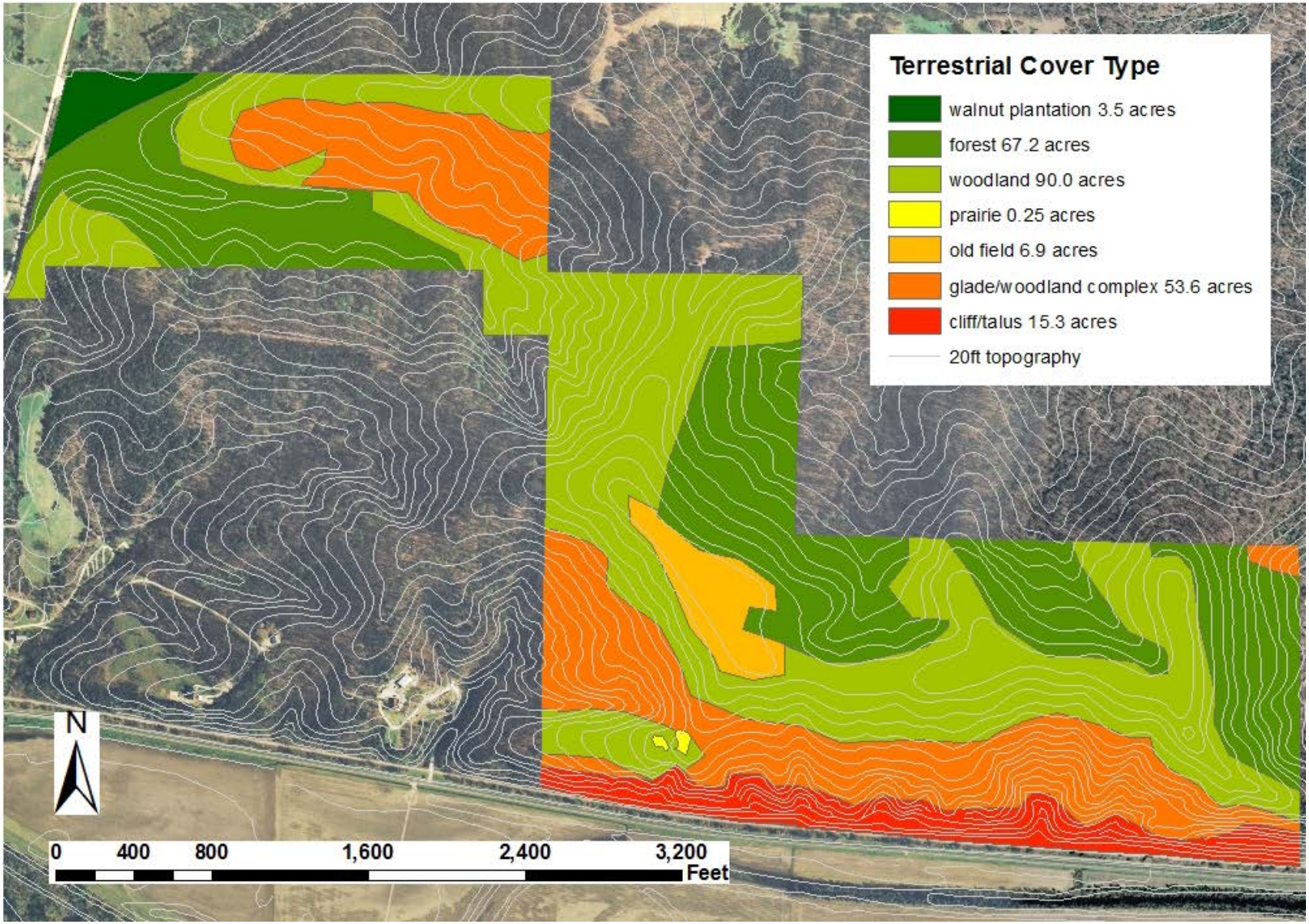
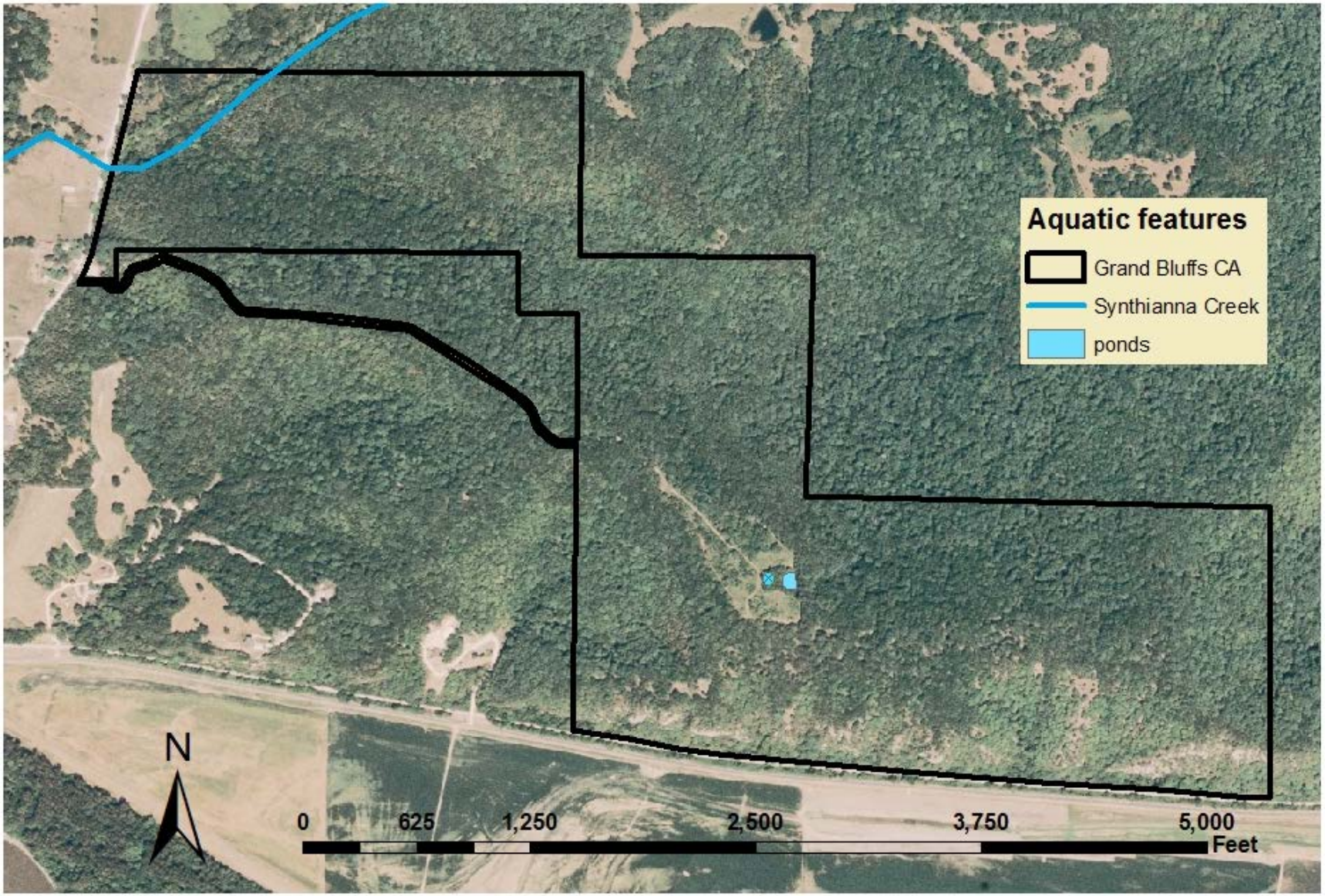
Figure 4: Aquatic Features of Grand Bluffs CA