Pickle Springs Natural Area

Ten-Year Area Management Plan

FY 2016-2025

Lisa D. Allen
Forestry Division Chief

6-16-16
Date

Pickle Springs Natural Area Management Plan Approval Page

PLANNING TEAM

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SOUTHEAST REGION

SE RCT Chair _____ *Signature* 5/25/16 *Date*

FORESTRY DIVISION

Forestry Management Chief John Tuttle *Signature* 6/6/16 *Date*

OVERVIEW

- **Official Area Name:** Pickle Springs Natural Area, # 8509
- **Year of Initial Acquisition:** 1985
- **Acreage:** 256 acres
- **County:** Ste. Genevieve
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**
  - **A.** Strategic Direction
    Protect the unique geological, aquatic and botanical features at Pickle Springs Natural Area (NA) and provide the public an opportunity to see and enjoy these features.
  - **B. Desired Future Condition**
    The desired future condition of Pickle Springs NA is healthy forest, woodland, glade and riparian ecosystems that provide a variety of public use opportunities.
  - **C. Federal Aid Statement**
    N/A

GENERAL INFORMATION AND CONDITIONS

I. <u>Special Considerations</u>

A. Priority Areas: Pickle Creek Aquatic Conservation Opportunity Area, Hawn State Park/Pickle Springs Terrestrial Conservation Opportunity Area

B. Natural Areas: Pickle Springs Natural Area - This scenic 180 acre natural area contains fascinating sandstone rock formations including box canyons and wet weather waterfalls. Besides the geology, this site supports over 250 vascular plant species including many uncommon species that are considered glacial relicts. The cool, moist conditions of the canyon walls support over 40 species of liverworts – one of the most diverse spots for these primitive plants in Missouri. A good number of mosses and lichens also grow on the sandstone rocks. In the waters of Pickle Springs a type of crustacean, an amphipod, has been described that is known only from here. The site is also registered as a National Natural Landmark by the National Park Service.

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

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: None

D. Other: Dry Sandstone Glade and Woodland, Dry Chert or Sandstone Woodland, Dry-Mesic Sandstone Woodland and Glade

III. Existing Infrastructure

- 1 parking lot
- 1 picnic table
- 2-mile hiking trail

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: None observed.

E. Endangered Species: Endangered species are not known from this site, but are found in the surrounding area. Area Managers should consult annually with the Natural History Biologist.

F. Boundary Issues: None

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

Pickle Springs NA contains approximately 256 acres of forest and woodlands. Woodland and forest management is focused on maintaining a natural community while providing for a variety of recreational opportunities. The designated natural area contains 180 acres, which is the portion of the area considered most unique.

Challenges and Opportunities:

1) Invasive exotic plants are a concern on this area. Invasive plants are not as healthy for area wildlife as the native plants that they displace.
2) Maintaining a healthy forest/woodland ecosystem, balancing the needs of the unique plant and animal species found here, and the recreational use of the area, will continue to be a management challenge.

Management Objective 1: Maintain and enhance terrestrial communities.

Strategy 1: Monitor the area for invasive exotic species. Suppress any infestations that may develop using appropriate methods (Forestry).

Strategy 2: Monitor for forest health issues (Forestry).

Strategy 3: Monitor the areas known species of conservation concern, and report any new findings. (Forestry and Wildlife)
Strategy 4: Use sound forest management practices to improve forest/woodland health, wildlife habitat, and native plant communities. (Forestry)

VI. Aquatic Resource Management Considerations

Challenges and Opportunities:

1) Maintaining the riparian corridors.
2) Any natural resource management near Pickle Creek and Bone Creek would be a challenge due to the areas unique ecosystem and geology.

Management Objective 1: Maintain adequate riparian corridors along streams and waterways.

Strategy 1: Management of natural resources in the riparian areas will follow best management practices (as outlined in the publication, the 2014 *Missouri Watershed Protection Practice).* (Forestry)

VII. Public Use Management Considerations

Challenges and Opportunities:

1) Encouraging educational and interpretive opportunities will increase knowledge and appreciation of unique ecosystems.
2) Maintenance and erosion control on the popular hiking trail is an issue.
3) Building relationships with neighboring landowners is an opportunity that would benefit the area.

Management Objective 1: Improve educational and interpretive opportunities on Pickle Springs NA.

Strategy 1: 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).
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).

Management Objective 2: Maintain the hiking trail for user access.

Strategy 1: Keep hiking trail clear of brush, downed trees, and litter. (Forestry)
Strategy 2: Explore methods to reduce soil erosion on the trail (Forestry and Design and Development).

Strategy 3: Keep trail properly blazed to improve the ability of users to navigate the trail (Forestry).

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

Strategy 1: Work with neighbors to minimize any boundary, trespass, or other issues affecting Pickle Springs NA or neighboring private property (Forestry).

VIII. <u>Administrative Considerations</u>

Challenges and Opportunities:

1) Maintain area infrastructure at current levels.
2) Acquisition of land.

Management Objective 1: Maintain area infrastructure in accordance with Department guidelines. (Forestry)

Strategy 1: Inspect area infrastructure regularly, and work to resolve any issues.
Strategy 2: Maintain boundary lines (Forestry).

Management Objective 2: As funding allows, acquire adjacent land when available.

Strategy 1: 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, protect the watershed, or meet other Department priorities (as identified in the annual Department land acquisition priorities), may be considered.

MANAGEMENT TIMETABLE

All strategies for this management plan are considered ongoing.

APPENDICES

Area Background:
Pickle Springs was named for William Pickle who purchased the land in 1848. The spring and associated forest land has an interesting history. Some timber was removed to provide lumber for the Plank Road that operated in the 1850s. Another harvest took place during the 1950s. Pickle Springs' unique geological and botanical features attracted biologists and geologists to study and catalog its ancient character. The area was also used as a commercial tourist attraction.

The area containing Pickle Springs was acquired by the Department in 1984 and a 2-mile hiking trail was officially dedicated and opened to the general public in 1986.

In 1987, two additional tracts were acquired to buffer the natural area and hiking trail. One 75-acre tract was harvested several years prior to the Department's acquisition. A second tract of 5 acres provided additional county road frontage.

Current Land and Water Types:

Land/Water Type	Acres	% of Area
Forest and Woodland	251	98
Glade	5	2
Total	256	100

Public Input Summary:
The draft Pickle Springs Natural Area Management Plan was available for a public comment period October 1–31, 2015. The Missouri Department of Conservation received comments from 14 respondents (Appendix A). The Pickle Springs Natural Area Planning Team carefully reviewed and considered these ideas as they finalized this document. A brief summary of public input themes, including how they were incorporated or why they were not, can be found below. Rather than respond to each individual comment, comments are grouped into general themes and are addressed collectively.

<u>Department responses to themes and issues identified through Pickle Springs Natural Area public comment period</u>

Supports invasive species removal.
The Missouri Department of Conservation strives to promote healthy native plant communities. Invasive exotic species are a constant threat, and we work hard to remove these species where possible. This is a seemingly endless task as more exotic plants and animals are introduced into the native ecosystems. We appreciate the support of our area visitors in these endeavors.

Concern with erosion from extra paths developed by people going off-trail.
Since the Pickle Springs Trail was first constructed many years ago, the amount of use has steadily increased. This increased use has compounded the issues of highly erodible sandy soils. We are currently looking into new ways of protecting the trail. This will take time to plan and to budget for labor and resources, which are limited. People creating their own paths is another issue that is difficult to address. We will look into ways of curtailing this problem.

Suggests adding/improving trail markers.
Many times the problem is people removing signs or creating unsanctioned trails, which can confuse visitors. We will look into the need for new/better trail markers.

Suggests adding a restroom/privy at parking area.
We will look into the possibility of adding a privy as time and budgets allow.

Suggests adding additional picnic tables and/or small picnic shelter near parking area.
We will look into adding another picnic table as time and budgets allow. A picnic shelter is not feasible at this time. Cost and restricted space are issues, as is area disturbance.

Supports no hunting on this area.
Pickle Springs Natural Area has always allowed small game hunting, but does not allow deer or turkey hunting. This will not change in the foreseeable future.

Supports acquiring additional land, if available.
When available, and as budgets allow, adjacent land may be considered for acquisition from willing sellers. Only tracts that further Department priorities, as outlined in this plan, will be considered.

Appreciates area.
Pickle Springs Natural Area is a unique and beautiful area, and we do our best to be good stewards. The Missouri Department of Conservation is grateful for the support of its Missouri residents and all area visitors.

References:
Missouri Department of Conservation. (2014). *Watershed and Stream Management Guidelines for Lands and Waters Managed by Missouri Department of Conservation*. Jefferson City, Missouri: Missouri Department of Conservation.

Maps:

Figure 1: Area Map
Figure 2: Aerial Map
Figure 3: Topographic Map
Figure 4: Current Vegetation Map

Additional Appendices:

Appendix A. Pickle Springs Natural Area Management Plan Public Comments

Figure 1: Area Map

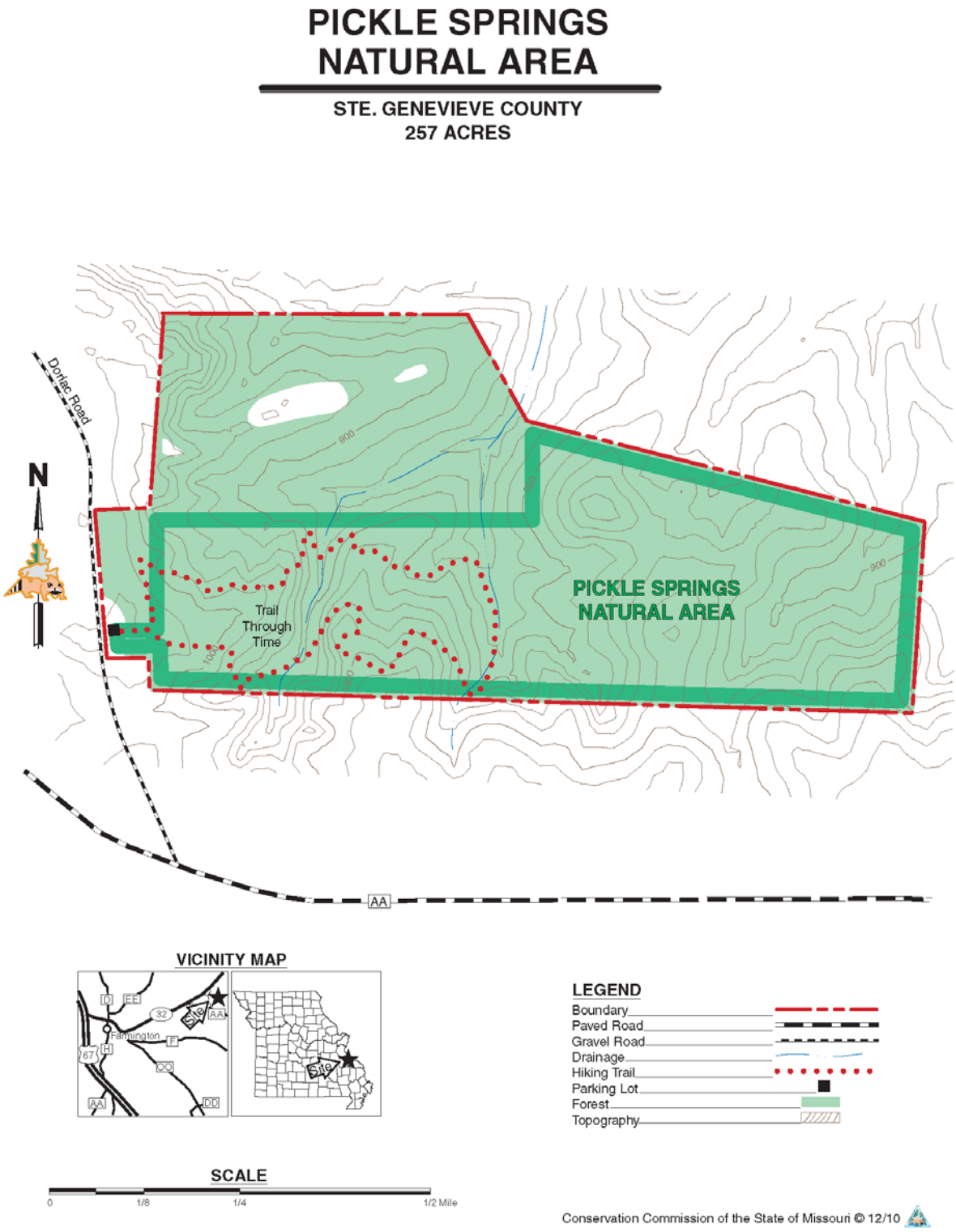


Figure 2: Aerial Map

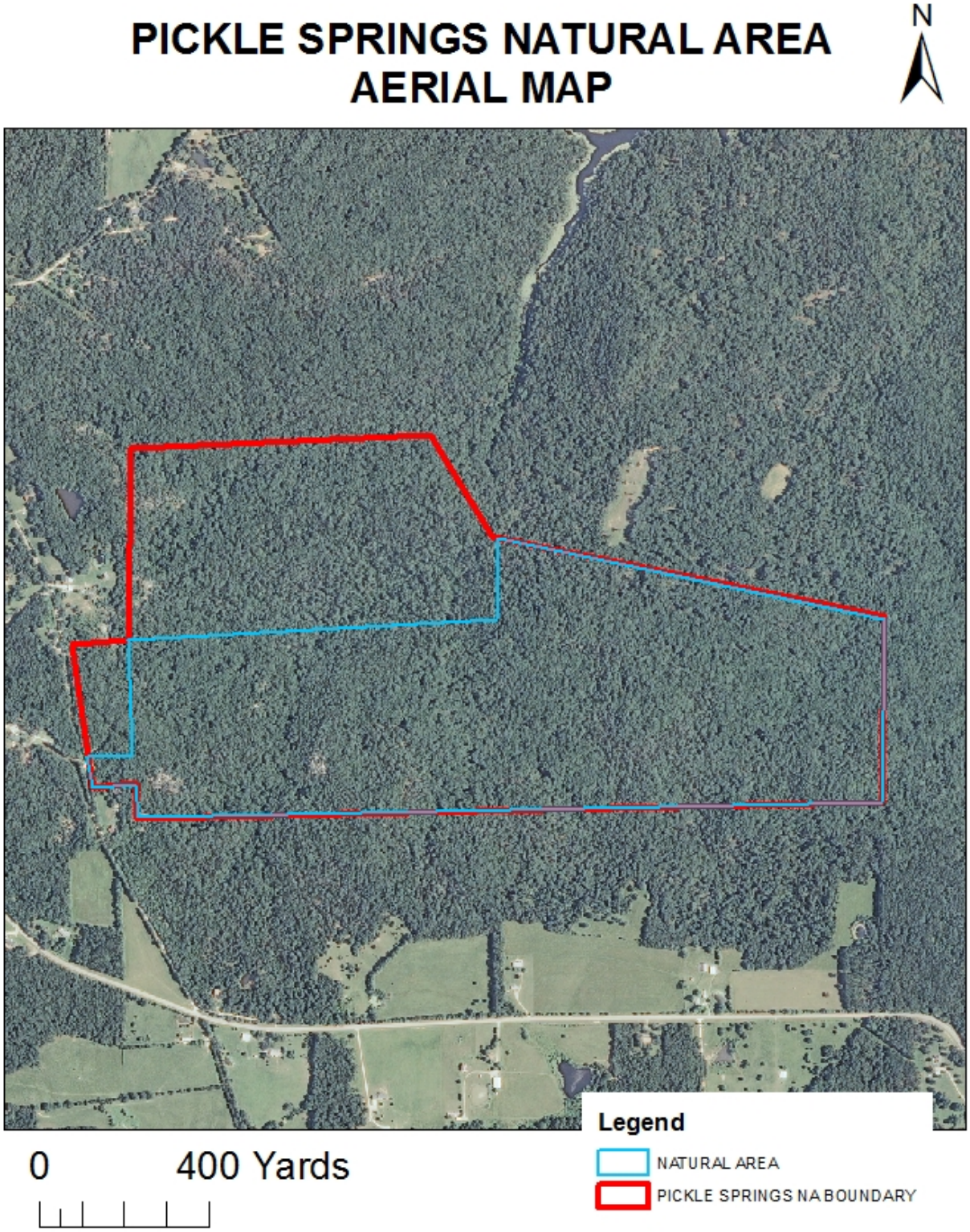


Figure 3: Topographic Map

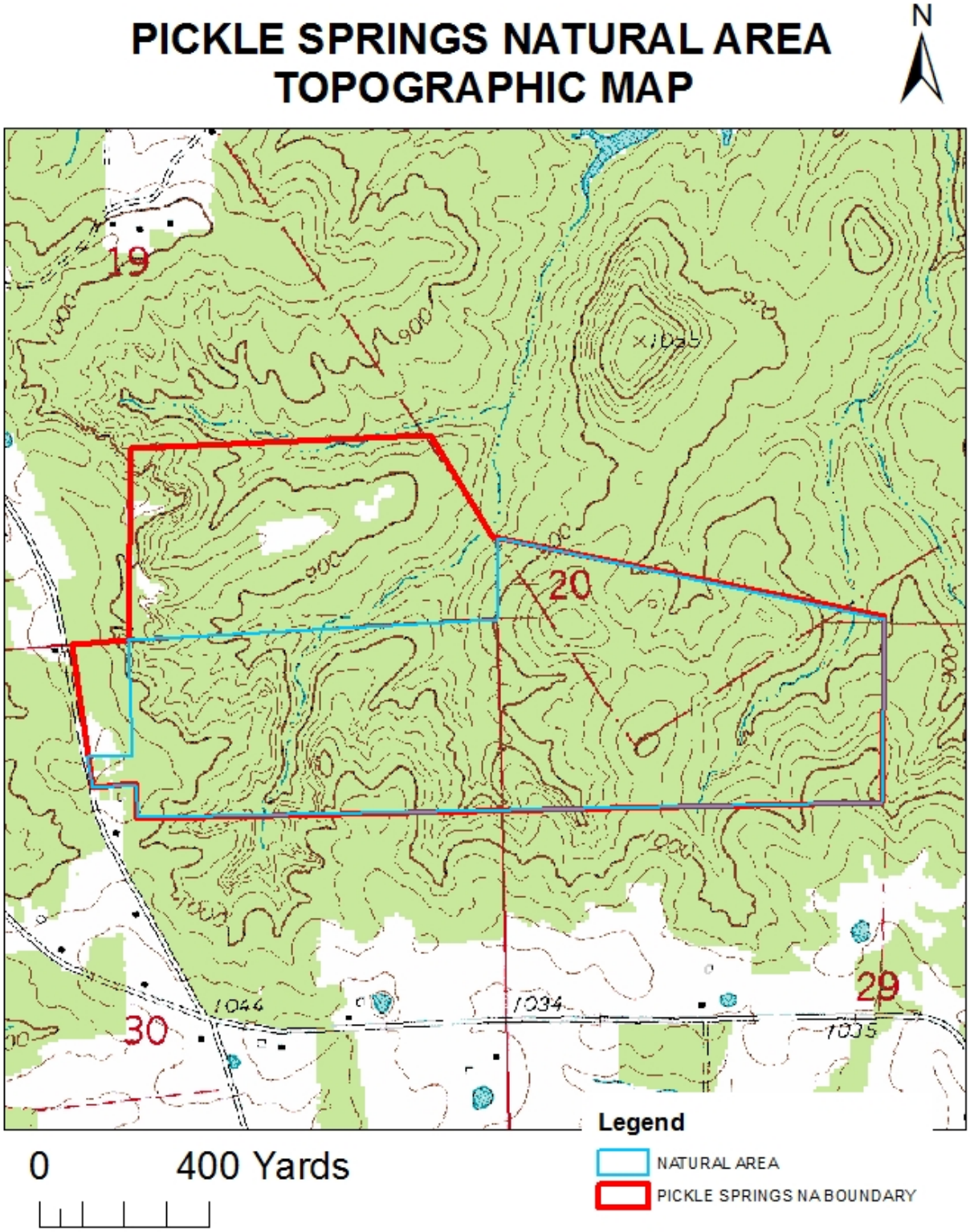
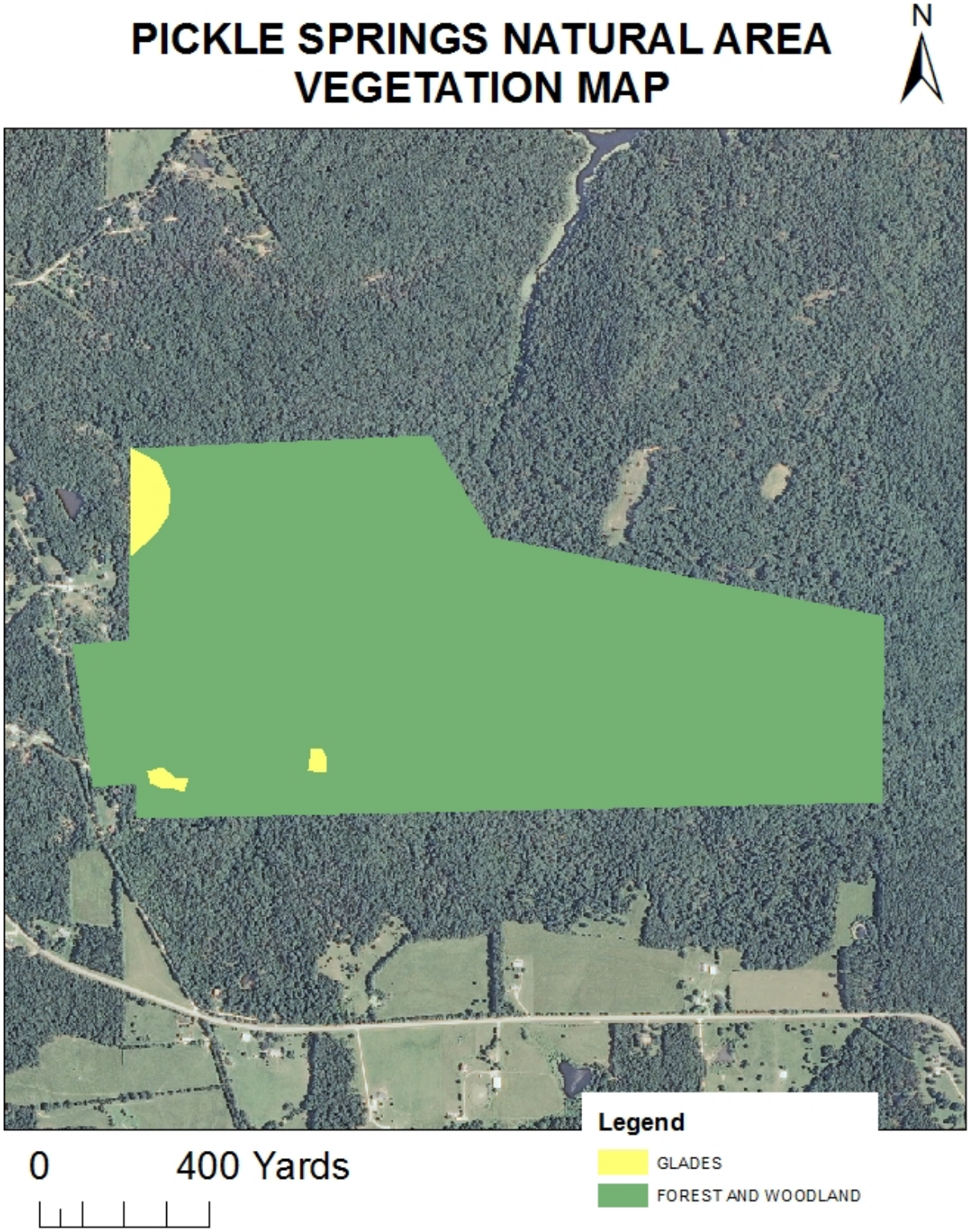


Figure 4: Current Vegetation Map



Appendix A. Pickle Springs Natural Area Management Plan Public Comments

Received during public comment period (October 1-31, 2015):

I have been visiting this NA for years. It is a special place. Thanks for taking care of it. Making it larger would be nice if there are willing sellers. Parts of the trail show heavy use.
We enjoyed this area. Our biggest issue was trail markings and paths. In several areas it was very difficult to determine where the actual path was. Trail markings were not noticeable or removed via nature or man.
Sounds like a good plan. Keep it the way it is and keep exotics out. You all do a great job for Missouri!
Any possibility of adding restroom to parking area?
It's been a couple of years since I've visited this gem, so maybe this problem has been addressed: I noticed that some paths are being worn directly uphill between the S-curves, which would seem to be promoting soil erosion. Could any impediments be put in place, maybe along with signage explaining the problem? Thanks.
I am a recurring visitor to Pickle Springs, first going there in 2006. I enjoy the "feel" of the area and believe you have done a good job so far. If any changes were to be made they would include, but not be limited to, adding an additional picnic area near the parking zone, better area signage and directions in the parking area, and better trail marking without damaging the ecosystem. My main purpose for going there is relaxation, and in that respect, it is a wonderful place. Thank you
Sounds like an awesome idea!
Please continue to maintain Pickle Springs as the wonderful natural area it is. Will it be possible to add a port-a-potty or a pit toilet at the parking lot? There are no facilities for 10 miles in any direction from Pickle Springs and the in-the-woods use leaves nasty spots.
My family travels to the Pickle Springs Natural Area specifically because of its obscure and untouched nature. I hope that any efforts to conserve and promote this area keep increased human traffic and its effects in mind so as to not disturb the plant and animal life that makes the area so unique and special.
I enjoy hiking there. I get lost a lot. Could you just mark the trails a little better please. Otherwise, it is fine.

The area plan sounds good to me. I like the idea of preserving the area as it is without trying to modernize it or build overlook platforms, wetlands, or whatever.....just maintain the trail thru this beautiful area. The only consideration I would offer is maybe a few picnic tables and/or maybe a small shelter in the parking area for use by those not walking the trail.
My husband, dog, and I hike Pickle Springs 2-3 times a year and enjoy bringing our exchange students and family there. Thanks for your continued efforts to keep the trail clear, prevent further erosion, maintain the boundaries, work with neighboring landowners, and increase its educational value!
Our family property borders Pickle Springs NA. In fact, we sold some of property to MDC. We have been a good neighbor. We have participated in timber management, controlled burns & other wildlife & timber improvement projects. We would like Pickle Springs to keep restricted to just a hiking area & not allow hunting on this property. We are always looking for ways to improve wildlife & maintain native plants on our property. We would not like to sell any remaining property.
We are lucky to have Pickle Springs as a public nature area! It is a wonderful place to hike year round. Thank you all for your hard work in helping maintain the area.