General Watkins Conservation Area

Fifteen Year Area Management Plan

FY 2014-2028

Lisa G. Allen
Forestry Division Chief

11-26-14
Date

General Watkins Conservation Area Management Plan Approval Page

PLANNING TEAM

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SOUTHEAST REGION

RCT Chair

Ronnie Thurston — *Signature*

Oct. 9, 2014 — *Date*

FORESTRY DIVISION

Unit Chief

John Tuttle — *Signature*

11/11/14 — *Date*

OVERVIEW

- **Official Area Name:** General Watkins Conservation Area, #7903
- **Year of Initial Acquisition:** 1979. General Watkins Conservation Area (CA) was acquired through the purchase of five separate tracts. The first tract purchased was in 1979 and the last tract was purchased in 1991. Funding for all purchases came from Conservation Department funds.
- **Acreage:** 1107 acres
- **County:** Scott
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**
  - **A. Strategic Direction**
    Manage and conserve natural resources and to provide compatible opportunities for public use and recreation.
  - **B. Desired Future Condition:**
    The desired future condition of General Watkins Conservation Area is an uneven-aged forested landscape with multiple structured layers of tree species by age and size class. The desired future condition of the open lands is a rotation of early successional habitats using old field, grasses and row crops.
  - **C. Federal Aid Statement**
    N/A

GENERAL INFORMATION AND CONDITIONS

I. <u>Special Considerations</u>

A. Priority Areas: Swift Ditch Fisheries Priority Watershed

B. Natural Area: None

II. <u>Important Natural Features and Resource</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: Yes, records kept with MDC Natural History Biologist.

D. Other: General Watkins CA is located in the Crowley's Ridge Loess Woodland/Forest Hills Land Type Association (LTA).

III. <u>Existing Infrastructure</u>

- 1 boat ramp

- 9 parking lots
- Graveled trail system (2.5 miles in length)
- 3 picnic areas
- 1 primitive camping area
- 9 small fishing ponds
- Metal storage shed

IV. <u>Area Restrictions or Limitations</u>

A. Deed Restrictions or Ownership Considerations: The descendants of General Nathanial Watkins hold a deed reservation for burial purposes on one square acre of land (surrounding the monument of N.W. Watkins). Family members must request a Special Use Permit from the area manager prior to any burial.

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: SEMO Electric Cooperative, Scott County Road District, and two radio towers.

D. Cultural Resource Findings: The only known cultural site on the area is the Watkins Cemetery. The cemetery is a deeded 1 acre tract and is partially enclosed by a chain link fence.

E. Hazards and Hazardous Materials: None observed.

F. Endangered Species: None observed.

G. Boundary Issues: None.

MANAGEMENT CONSIDERATIONS

V. <u>Terrestrial Resource Management Considerations</u>

General Watkins CA is located on the northern arm of a unique geological feature known as Crowley's Ridge. Forming the northern and western boundaries of the Missouri Bootheel, Crowley's Ridge rises abruptly up to 300 feet above the flat, lowlands surrounding it. Crowley's Ridge forms a narrow intermittent ridge, averaging only three to 12 miles wide, which runs about 200 miles in length in a northeast to southwest direction from just south of Cape Girardeau, through Benton, Dexter, and Campbell then continues into Arkansas where it ends in the vicinity of Helena.

Crowley's Ridge once formed the eastern bank of the Mississippi River; over thousands of years, however, the river changed its course and gradually moved eastward across

what is now the Missouri Bootheel. This change in the river's position, from west to east has resulted in a unique blend of vegetation on Crowley's Ridge.

Challenges and Opportunities:

1) The majority of the area, 92 percent (1,022 acres) is in upland hardwoods. Consequently, upland woodland wildlife species such as deer, turkey, and squirrel are the main focus species. Other woodland species of importance include; timber rattlesnake, forest interior song birds, and furbearers. Although open land comprises only 4 percent (40 acres) of the area, open land management is important for enhancing woodland wildlife species as well as other open land species such as cottontail rabbit.
2) Forests cover 92 percent (1,022 acres) of General Watkins CA. The area is an upland mesic forest which resembles forests typically found in the southern Appalachian region. The forest resource consists mainly of a mix of oaks, hickories, tulip poplar, sweetgum and beech. The soils consist of windblown loess and fertile loam. These soils are deep, well drained, fertile and highly erosive. Site indexes for the entire area exceed 90. Since acquisition, about 153 acres have been reforested. Most of the reforestation occurred on the north part of the area as part of a soil erosion control project. Prior to acquisition, about 40 acres of black locust was planted in an area on the east side of the area, adjacent to the clay pits as part of a land reclamation project. Tree sizes range from saplings and poles in the plantations and regeneration areas to medium and large sawtimber over the rest of the area. Without control, invasive exotic species such as Kudzu, bush honeysuckle, Paulownia, and Japanese honeysuckle pose a threat to the forest resource. An intensive spraying program over the last seven years has eliminated Kudzu. Other exotics are monitored and treated annually.

Management Objective 1: Maintain existing acres of native warm season grass and old fields.

Strategy 1: Prescribe burn on a rotation of every two years. (Forestry)
Strategy 2: Control invasive exotic species such as sericea lespedeza, Johnson grass, bushhoney suckle and thistle with herbicides. Control invading woody species such as Paulownia ,sweetgum and sassafras with mowing, herbicides and/or disking. (Forestry)

Management Objective 2: Maintain existing wildlife food plots.

Strategy 1: Cereal grain food plots will be managed on a 4-year rotation of corn, soybeans/sunflowers, wheat followed by a year of fallow with a cover crop of legumes. (Forestry)

Strategy 2: Green browse food plots will be periodically sprayed to control invasion of fescue and other grasses. (Forestry)

Management Objective 3: Manage for species of conservation concern.

Strategy 1: Periodically monitor for species of conservation concern. (Forestry)

Strategy 2: Request management recommendations from Natural History Biologist for current and any additional listed plant and animal species located on the area. (Forestry)

Strategy 3: Improve forest habitat by applying uneven aged and even-aged forest management practices. (Forestry)

Management Objective 4: Manage for a healthy, sustainable forest with balanced size classes which will enhance biodiversity.

Strategy 1: Conduct forest inventory as dictated by the regional inventory schedule. Implement forest management practices including TSI and harvests as directed by the inventory using evenaged and uneven-age management guidelines where applicable. (Forestry)

Strategy 2: Continue to monitor and treat populations of exotic invasive species such as Kudzu, Bush honeysuckle, Paulownia and Japanese honeysuckle. (Forestry)

Management Objective 5: Protect and /or enhance riparian forest areas, unique features and high use/high visibility areas.

Strategy 1: Forest management in the riparian areas will follow best management practices as outlined in the publication, the 2006 *Missouri Watershed Protection Practice.*

Strategy 2: Only minimal impact management will take place in the high use/high visibility areas.

Strategy 3: Address exotic invasive species infestations.

VI. <u>Aquatic Resource Management Considerations</u>

Challenges and Opportunities:

1) There are nine fishable water bodies (lakes, ponds and clay borrow pits) totaling 30 acres on the area. These vary in size from 0.25 acre (#6) to 10 acres (Lookout Mountain Lake-#4). The fishable water bodies offer varying levels of access difficulty. Lakes 1, 2, 3, 6, 7, 8, and 9 are easily accessible while lakes 4 and 5 are moderately difficult to access. Lakes 3 and 6 are clay borrow pits along Highway 61. Lake 3 has a small concrete boat ramp.

2) All nine of the fishable water bodies sustain populations of largemouth bass, bluegill, catfish and crappie. Bass and bluegill have minimum length limits of 15 inches and 8 inches respectively.
3) The area is situated on the divide between the Little River system (westward draining) and the St. John's Bayou system (eastward draining). There are seven segments of first Order streams totaling 2.45 miles and one segment of second Order stream that is 0.1 mile long. All streams are intermittent. These streams have extremely high gradients ranging from 50 to 150 feet per mile.

Management Objective 1: Maintain adequate riparian areas around and along springs and streams.

Strategy 1: Aquatic Resources in the riparian areas will follow best management practices (as outlined in the publication, the 2006 *Missouri Watershed Protection Practice).* (Fisheries)

Management Objective 2: Provide lake and pond fishing opportunities.

Strategy 1: Provide bank access by maintaining trails and access points along lake and pond shorelines. (Fisheries)

Strategy 2: Manage lakes #1 thru #9 for quality fishing thru appropriate regulations, fish stocking and habitat management. (Fisheries)

VII. <u>Public Use Management Considerations</u>

Challenges and Opportunities:

1) Located between Benton, Morley and Oran, with easy access to Highway 61 and 77, General Watkins CA gets considerable public use. The area offers a diverse mix of recreational opportunities including: hunting, hiking, fishing, camping and nature viewing. The area has nine parking lots, one county road and two state highways adjacent to the area.
2) Hunting and fishing draws the largest number of users. However, other recreational users which include hikers, campers, and nature viewers have increased dramatically over recent years.
3) Over 6 miles of trails traverse General Watkins CA. Most of the trails are marked with distance markers on Carsonite posts. Much of this trail system has been graveled to reduce soil erosion.
4) The area has three picnic areas and a designated primitive camping area with picnic tables, barbecue grills and fire rings.
5) Nine lakes provide fishing opportunities on the area. One lake has a concrete boat ramp. All lakes can be located with Carsonite posts with directional arrows pointing the way.

Management Objective 1: Maintain the area so it provides an opportunity for people to enjoy and study nature.

Strategy 1: Forestry Division will be responsible for routine maintenance that keeps the area inviting to the public.

Management Objective 2: Maintain boundary lines to inhibit users from inadvertently trespassing onto adjoining landowners.

Strategy 1: Forestry division will maintain boundary lines with area signs and blue paint on a 5 year cycle.

Management Objective 3: Observe statewide hunting, fishing, and public use regulations for department areas.

Strategy 1: Protection Division will have primary enforcement responsibility for area regulations.

Strategy 2: Continue to issue Special Use Permits (SUP) to individuals and groups as requested or needed as long as the SUP is appropriate for the area, and issued in accordance with MDC policy. Area manager should consult with the local conservation agent prior to issuing SUP, and provide the agent with a copy of the permit.

VIII. Administrative Considerations

Challenges and Opportunities:

1) Acquisition of land.

Management Objective 1: Acquisition of land.

Strategy 1: When available, inholdings and 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

Forest Inventory Timetable:

Compartment #4	FY 2013
Compartment #7	FY 2014
Compartment #1 & #12	FY 2015
Compartment #6	FY 2019
Compartment #8	FY 2121
Compartment #3	FY2022
Compartment #11	FY 2023
Compartment #5	FY 2024
Compartment #10	FY 2025

Forest Management activities such as timber harvests or Timber Stand Improvement activities will take place following the compartment inventory. Compartments #9 and #2 are scheduled for their next inventories after 2028. The next Area Plan will address the Inventory in those Compartments. All other strategies for this management plan are considered ongoing.

APPENDICES

Area Background:

Ecological Classification:
Section: Mississippi River Alluvial Basin
Subsection: Crowley's Ridge
Land Type Association: Crowley's Ridge Loess Woodland/Forest Hills

Geology: General Watkins CA is located at the southern tip of the northern arm of Crowley's Ridge, the main geologic feature in the landscape. Crowley's Ridge has a complex geologic history. The underlying bedrock consists of dolomite and limestone. A fault line or fracture in the bedrock runs along the southeast flank of the area, approximately following Highway 61. The bedrock southeast of the fault is much lower than the bedrock to the northwest. This difference in bedrock elevation has largely resulted in massive drainage head cutting in the southeast portion of General Watkins CA. Geologists located the fault line in the late 1900s with shock wave technology and traced the fault line southwest from the town of Commerce where they discovered it. The bedrock is covered with alluvial materials consisting mainly of alluvial gravels and sands. On top of this layer of gravel and sand lies a thick layer of Pleistocene loess, (up to 50 feet).

Soils (Map 3): Three different soil associations are found on General Watkins CA. The Scott County soil survey identifies these associations as Adler, Memphis and Clay/Gravel mining pits. The Adler and Memphis soils are deep, well drained, fertile and highly erosive. The vast majority of General Watkins CA is in the Memphis soil type. Memphis soils are very productive soils for forest and cropland production. They are also good for lake and pond construction. A more detailed description of the soils is as follows:

> <u>31 – Adler Series</u>
> The Adler series consists of deep, moderately well drained soils that have moderate permeability. These soils are along drainages in the uplands and on old flood plains adjacent to the uplands. Slopes range from 0 to 2 percent.
> <u>52C, 52D3, & 52E3 – Memphis Series</u>
> The Memphis series consists of deep, well drained, moderately permeable soils on uplands. Slopes range from 5 to 40 percent. These soils formed in thick loess. Memphis soils is the predominate soil type found on the area.
> <u>68 – Clay/Gravel Pits</u>
> These are areas where the original soil and underlying clay and gravel have been removed by excavation. The depth of excavations usually ranges from about 6 to more than 50 feet. Slopes range from nearly level on the floor of the pit to nearly vertical on the walls. Clay/gravel pits make up less than 1 percent of the area.

Topography: The area is rolling to very steep, with narrow ridges and deep canyon like hollows. These canyons are caused by erosion in the thick loess soils. Elevations range from 380 feet to 590 feet above sea level (Map 1).

Current Land and Water Types

Land/Water Type	Acres	Feet	% of Area
Forest	1,022		92
Lakes/Ponds/Seeps/Springs	30		3
Food Plots	25		2
Native Warm Season Grasses	10		1
Roads/Trails/Parking Lots	10		1
Old Fields	5		0.5
Mined Clay/ Gravel Pits	5		0.5
Total	**1,107**		**100**
Stream Frontage		0	

Public Input Summary:
The draft General Watkins Conservation Area Management Plan was available for a public comment period May 1–31, 2014. The Missouri Department of Conservation received comments from one respondent (Appendix A). The General Watkins Conservation 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>MDC responses to themes and issues identified through General Watkins Conservation Area public comment period</u>

Suggests improved boat access to Lookout Mountain Lake #4.

The Planning Team recognizes the request for improved boat access from the west side of the Conservation Area to Lookout Mountain Lake #4. This issue has been a public concern since the Department acquired General Watkins Conservation Area.

Limited opportunities are available to purchase tracts on the west side of General Watkins CA. Many of the best logistical sites are in subdivisions. The soils on this site would require some very careful engineering to construct a public use road while taking into account Best Management Practices.

General Watkins CA is one of the only public use areas in Scott county, and it provides hunting, hiking and wildlife viewing opportunities. Allowing public access from the south and east boundaries of the area would disrupt the other outdoor pursuits that the public enjoys on General Watkins CA.

To help compensate for the lack of access to Lookout Mountain Lake #4, the Department has spent considerable effort improving habitat and access to the ponds on the south side of the area.

References:

Missouri Department of Conservation. 2006. Missouri Watershed Protection Practice: 2006 Management Guidelines for Maintaining Forested Watersheds to Protect Streams.

Maps:

Figure 1: Area Map
Figure 2: Forest Compartments Map
Figure 3: Soils Map
Figure 4: Road Easement to Conservation Area from South

Additional Appendices:

Appendix A: Draft General Watkins Conservation Area Public Comments

Figure 1: Area Map

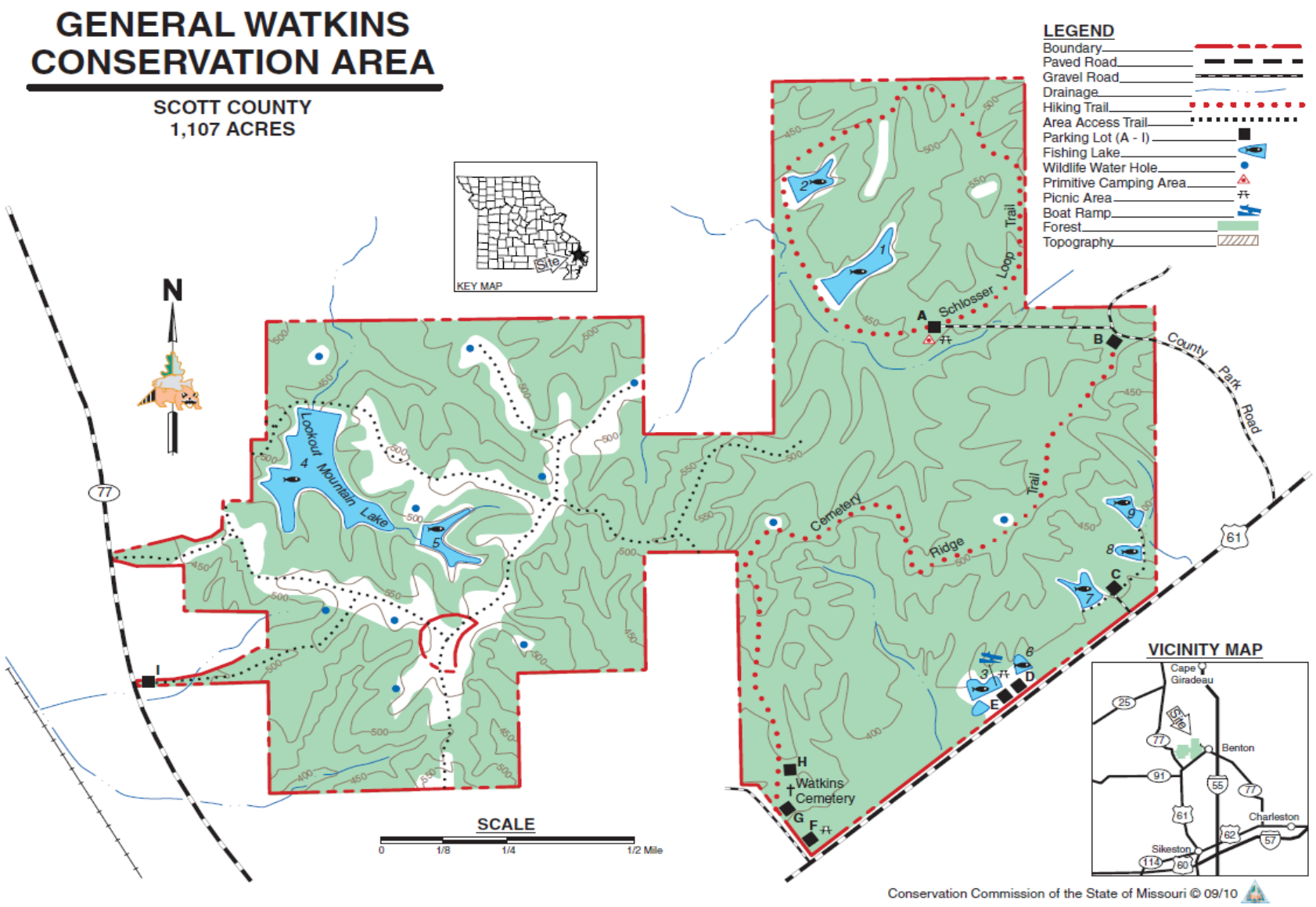


Figure 2: Forest Compartments Map

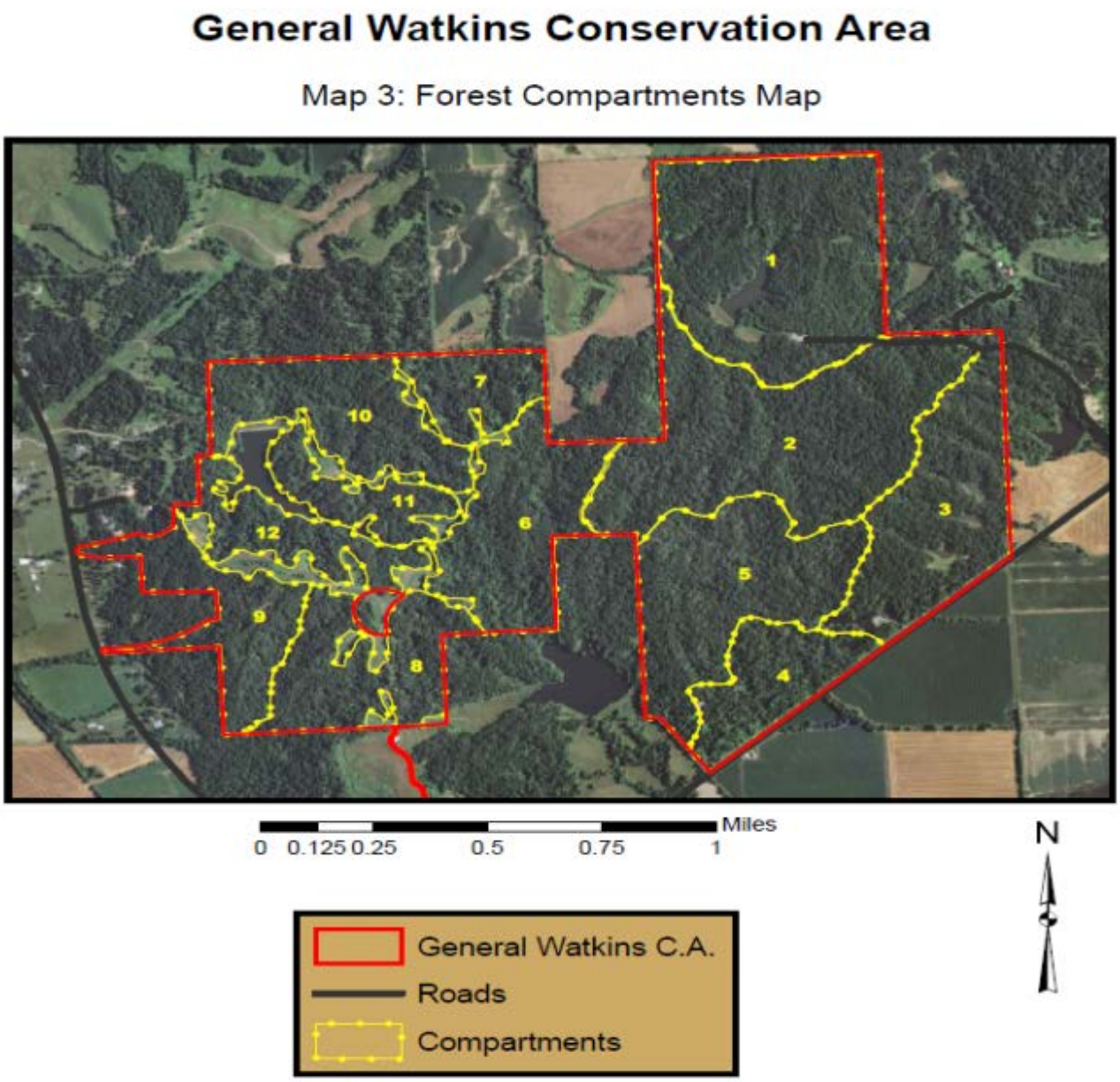


Figure 3: Soils Map

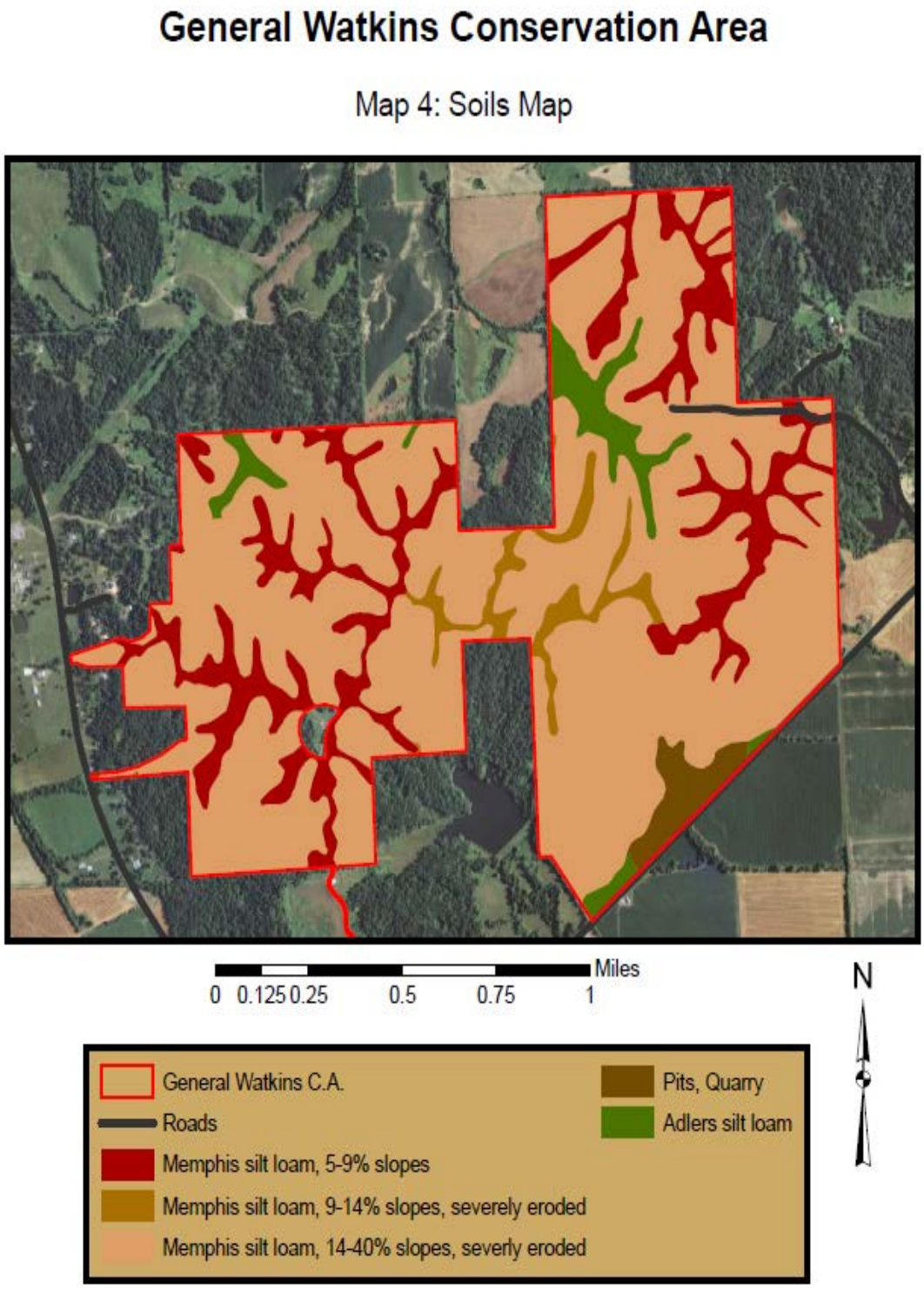
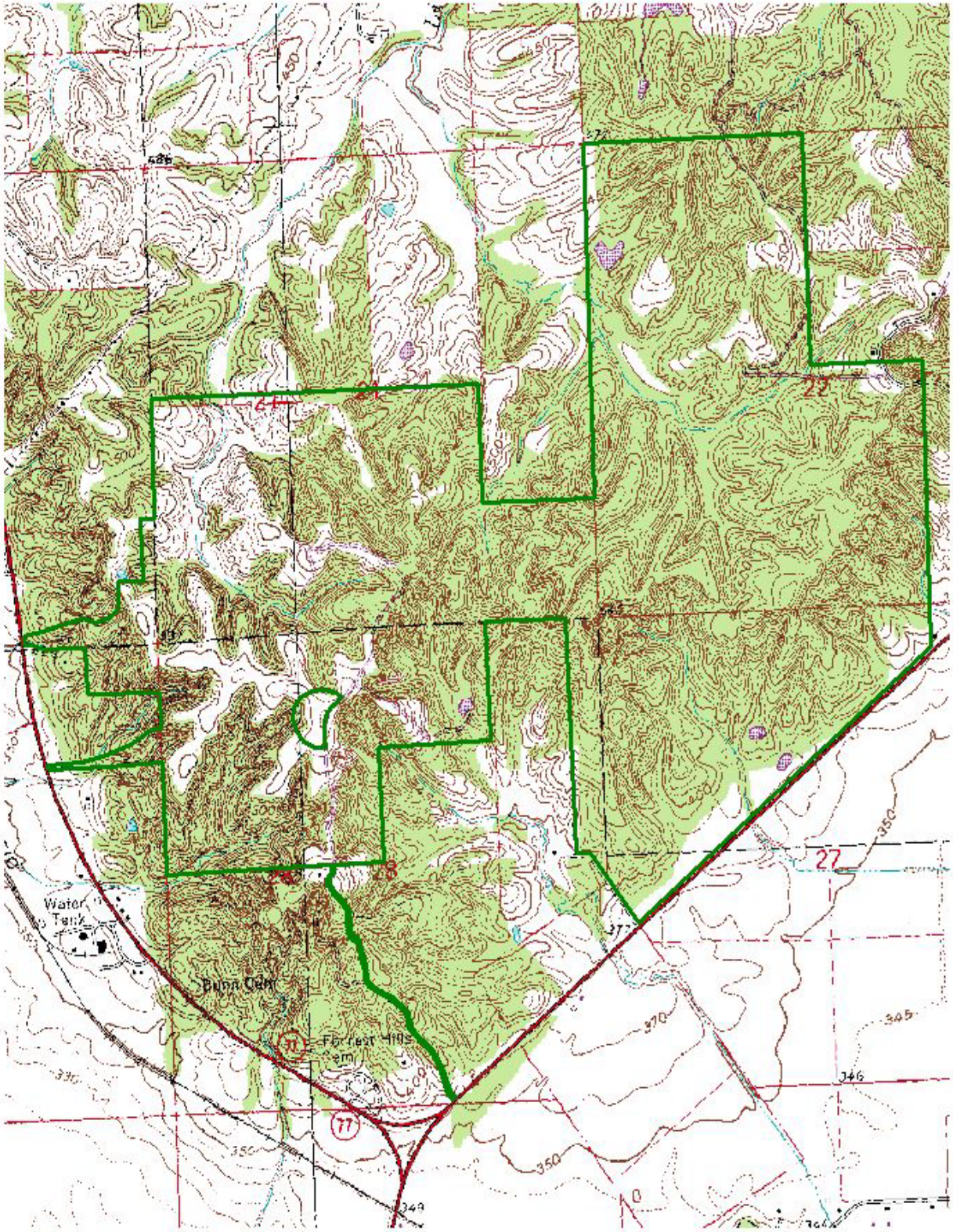


Figure 4: Road Easement to Conservation Area from South



Appendix A: Draft General Watkins Conservation Area Management Plan Public Comments

Received during public comment period (May 1-31, 2014)

Please Please Please provide better access to Lookout Mountain Lake #4. Preferably from Hwy 77 by vehicle. Have tried using the parking lot on Hwy 77 and walking up the trail, but once you get to the top of the hill and follow the signs that say "Lake" you will have to go through thick, dense wooded area. There is no maintained trail through the woods to the lake. This makes it nearly impossible to get a boat in. This is very disappointing...