

Locust Creek Conservation Area & Sears Community Lake

Fifteen-Year Area Management Plan
FY 2018-2032




Wildlife Division

26 March 2018
Date

**Locust Creek Conservation Area & Sears Community Lake
Area Management Plan**

PLANNING TEAM

Ryan Jones, Wildlife Management Biologist

Richard Nessler, Resource Forester

Krista Noel, Natural History Biologist

Darren Thornhill, Resource Scientist

Nathan Hubbard, Private Lands Conservationist

John Lorenzen, Fisheries Management Biologist

Karen Armstrong, Education Consultant

Sean Ernst, Conservation Agent

Bob Ewigman, Construction & Maintenance Superintendent

NORTHEAST REGION

RCT Chair

Matt Coates
Signature

19 March 2018
Date

WILDLIFE DIVISION

Wildlife Management Chief

Michael W. Schwan
Signature

3/22/18
Date

OVERVIEW

Area Name	Area Number	Year Acquired	Acreage	County	Administrative Responsibility	Maintenance Responsibility
Locust Creek Conservation Area (CA)	8235	1982	3,451	Sullivan	Wildlife	Wildlife
Sears Community Lake	6117	1962	83	Sullivan	Wildlife	Wildlife

Statement of Primary Purpose:

A. Strategic Direction

Locust Creek Conservation Area (CA) and Sears Community Lake are managed to provide diverse habitat for fish and wildlife species, protect soil and water quality, demonstrate sound forestry practices, and provide recreational and educational opportunities for the citizens of Missouri.

B. Desired Future Condition

The desired future condition of Locust Creek CA and Sears Community Lake is to provide quality grassland, woodland, savanna, forest, and wetland natural communities; and provide quality public fishing opportunities.

C. Federal Aid Statement

- Locust Creek CA: This area, or a portion thereof, was acquired with Pittman-Robertson Wildlife Restoration funds to restore and manage wildlife, conserve and restore suitable wildlife habitat and provide public access for hunting or other wildlife-oriented recreation.
- Sears Community Lake: NA

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

Area Name	Priority Areas	Natural Areas	Other
Locust Creek CA	Locust Creek Stream Reach Conservation Opportunity Area, Locust/Yellow Creek Fisheries Priority Watershed	None	3 experimental stream management areas ¹
Sears Community Lake	Locust/Yellow Creek Fisheries Priority Watershed	None	None

¹In 1987, an Experimental Stream Management Area was established on Locust Creek CA to test stream management and erosion reduction techniques, document channel response to these techniques, and to provide a demonstration area to educate the public and other agency personnel. Results from these areas help guide stream channel restoration in other parts of Missouri.

II. Important Natural Features and Resources

Area Name	Species of Conservation Concern	Caves	Springs
Locust Creek CA	Yes ¹	None	None
Sears Community Lake	None observed	None	None

¹Species 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.

III. Existing Infrastructure

Area Name	Concrete Ramp	Privy	Parking Area #	Lakes/Ponds	Wetland Levees and Structures	Buildings
Locust Creek CA	None	1 ¹	14	5 fishing ponds (9.85 acres), 7 fishless ponds (7 acres)	8	Shop building
Sears Community Lake	1	None	1	1 (19 acres)	1	None

¹Americans with Disabilities Act (ADA) accessible

IV. Area Restrictions or Limitations

Area Name	Deed Restrictions	Federal Interest	Ease-ments	Cultural Resources	Endangered Species	Boundary Issues
Locust Creek CA	None	Yes ¹	Yes ³	Yes ⁴	Yes ⁵	None
Sears Community Lake	None	Yes ²	None	Yes ⁴	None observed	None

¹Uses of land acquired with federal funds may not interfere with the purpose for which it was acquired. 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.

²Federal 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.

³Waterline easement with Public Water Supply District #1; and utility easement with Black River Electric Cooperative

⁴Yes, records kept with Missouri Department of Conservation (Department) environmental compliance specialist. Managers should follow best management practices for cultural resources found in the Department Resource Policy Manual.

⁵Endangered 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.

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

Challenges and Opportunities:

- 1) Manage a wetland-forest complex that protects the unchannelized portion of Locust Creek.
- 2) Manage quality grassland, woodland, savanna, and forest natural communities.
- 3) Control invasive species.

Management Objective 1: Manage old fields not contracted under an Ag Crop permit and the Department planted food plot program to provide early successional habitat.

Strategy 1: Remove undesirable woody vegetation from old fields using mechanical and chemical techniques. (Wildlife)

Strategy 2: Use management techniques, including, but not limited to, prescribed fire to maintain early successional habitat and inhibit woody encroachment. (Wildlife)

Management Objective 2: Manage forest and woodland areas to provide quality natural communities at Locust Creek CA and Sears Community Lake.

Strategy 1: Complete forest inventories and forest management plans for Locust Creek CA and Sears Community Lake. (Forestry)

Strategy 2: Implement management prescriptions from forest management plans within five years of the inventory completion, utilizing a variety of sustainable forest management techniques to promote healthy forest and woodland communities including, but not limited to, timber harvesting, forest thinning, firewood cutting, salvage cuttings, tree planting, seeding and prescribed burning, with priority given to the stands that will meet the management emphasis of each area. (Forestry, Wildlife)

Strategy 3: Utilize best management practices during forest management as described in the Department's manuals: *Missouri Watershed Protection Practice Recommended Practices for Missouri Forests: 2014 Management Guidelines for Maintaining Forested Watersheds to Protect Streams* (Missouri Department of Conservation, 2014b) and the *Missouri Forest Management Guidelines: Voluntary Recommendations for Well-Managed Forests* (Missouri Department of Conservation, 2014a) when conducting silvicultural operations. (Forestry, Wildlife)

Strategy 5: Continuously monitor forests and woodlands for the presence of tree insect and disease outbreaks, and take appropriate actions as needed. (Forestry, Wildlife)

Management Objective 3: Provide cereal grain, oil seed, and green browse food plots to enhance small and large game habitat at Locust Creek CA.

Strategy 1: Continue to work with the Ag Crop program to ensure that a mixture of food is available for wildlife and best management practices to protect soil are being implemented. (Wildlife)

Strategy 2: Plant cover crops in sunflower fields annually. (Wildlife)

Strategy 3: Maintain approximately 250 acres of open fields through Ag Crop program and Department planted food plots. (Wildlife)

Strategy 4: Annually disk or leave idle the previous year's food plots to provide early successional habitat. (Wildlife)

Management Objective 4: Opportunistically manage shallow-water wetland resources at Locust Creek CA.

Strategy 1: Control woody invasion and reed canary grass in the wetland units using a variety of management techniques, including, but not limited to, mechanical removal, prescribed fire and chemical application. (Wildlife)

Strategy 2: Promote early successional wetland plant species through timely drawdowns and by disking when conditions allow. (Wildlife)

Strategy 3: Investigate feasibility of increasing surface water input into selected wetland units. (Wildlife)

Strategy 4: Consideration for ecological flow of Locust Creek will be given when managing water levels in wetland pools. (Wildlife, Fisheries)

Management Objective 5: Monitor terrestrial species of conservation concern at Locust Creek CA.

Strategy 1: Monitor every five years the populations of all listed species and habitats to maintain current records in the Department's Heritage Database. (Wildlife)

Strategy 2: Based on monitoring results, implement or adjust habitat management, such as timing of prescribed fire and tree thinning, control of invasive species, etc. to enhance listed natural community and species habitat. (Wildlife)

Management Objective 6: Reduce invasive plants on the area.

Strategy 1: Use an aggressive combination of prescribed fire, mechanical removal, and herbicide applications to reduce invasive plants, such as sericea

lespedeza, fescue, reed canary grass, garlic mustard, spotted knapweed, and birdsfoot trefoil. (Wildlife)

VI. Aquatic Resource Management Considerations

Challenges and Opportunities:

- 1) Maintain fishing opportunities for future generations.
- 2) Maintain water quality and quantity of the streams and ponds to support a healthy ecosystem.
- 3) Maintain the extensive survey monument system, and continue to build long-term flow and remote sensing data sets for the Experimental Stream Management Area at Locust Creek.

Management Objective 1: Maintain self-sustaining largemouth bass and bluegill fisheries in Locust Creek CA Ponds 1, 2, 3, 4, and 5.

Strategy 1: Control excessive aquatic macrophytes chemically or biologically to promote efficient foraging by largemouth bass. (Fisheries)

Strategy 2: Survey Ponds 1, 2, 3, 4, and 5 every 5-10 years, and evaluate fish communities beginning in FY18. (Fisheries)

Management Objective 2: Maintain a put-grow-and-take fishery for channel catfish in Locust Creek CA Ponds 1, 2, 3, 4, and 5.

Strategy 1: Stock Ponds 1, 2, 3, 4, and 5 with channel catfish every three years beginning in FY18. (Fisheries)

Management Objective 3: Maintain the designated bait pond at Locust Creek CA as a source of baitfish for area anglers.

Strategy 1: Control excessive aquatic macrophytes chemically or biologically to provide adequate access for bait collectors. (Fisheries)

Management Objective 4: In fishless ponds and ponds lacking viable fish populations, provide suitable habitat for amphibians and reptiles at Locust Creek CA.

Strategy 1: Maintain current conditions in fishless ponds and do not stock ponds with fish. (Fisheries)

Strategy 2: Explore the feasibility of chemically removing fish from ponds lacking viable fish populations, and, if feasible, chemically remove fish by FY18. (Fisheries)

Management Objective 5: Improve long-term stream stability and ecological function of Locust Creek and its tributaries on Locust Creek CA, according to Department guidelines (Missouri Department of Conservation, 2009).

Strategy 1: Maintain, and monitor a minimum 200-foot wide, wooded riparian corridor on all lands bordering Locust Creek. (Wildlife, Fisheries)

Strategy 2: Establish, maintain, and monitor a minimum 50-foot wide, permanently vegetated riparian corridor on all lands bordering Locust Creek tributaries on Locust Creek CA. (Wildlife, Fisheries)

Strategy 3: Follow *Watershed and Stream Management Guidelines for Lands and Waters Managed by the Missouri Department of Conservation* (Missouri Department of Conservation, 2009), as appropriate. (Forestry, Wildlife)

Strategy 4: Inspect all stream crossings to ensure they meet design specifications for light equipment crossings. Crossings that do not meet specifications should be eliminated or corrected through the budget process. (Wildlife, Fisheries)

Strategy 5: Nominate the reach of Locust Creek that flows through the conservation area for Outstanding State Water Resource status, which will give it extra protection during environmental review processes. (Fisheries)

Strategy 6: Monitor the populations of all listed fish species to maintain current records in the Department's Heritage Database, and use sampling data to guide management of the stream habitat to the extent possible. (Wildlife, Fisheries)

Management Objective 6: Continue to support the Experimental Stream Management Area on Locust Creek CA to test and document stream management and erosion reduction techniques, utilizing results to help guide stream channel restoration in other parts of Missouri.

Strategy 1: Protect and maintain the extensive survey monument system, and continue to build long-term flow and remote sensing datasets for the Experimental Stream Management Area. (Wildlife, Fisheries)

Strategy 2: Broadly share the long-term flow and remote sensing datasets from the Experimental Stream Management Area through use of print and internal communication. (Wildlife, Fisheries)

Strategy 3: Provide a demonstration area to educate the public and other agency personnel. Plans for further evaluation extend through 2026. (Wildlife, Fisheries)

Strategy 4: Extend the Experimental Stream Management Area designation on portions of Locust Creek for long-term evaluation of stream management and erosion reduction techniques. (Wildlife, Fisheries)

Management Objective 7: Maintain self-sustaining largemouth bass and sunfish fisheries in Sears Community Lake.

Strategy 1: Control excessive aquatic macrophytes chemically or biologically to promote efficient foraging by largemouth bass. (Fisheries)

Strategy 2: Survey Sears Community Lake every five years and evaluate fish communities beginning in FY18. (Fisheries)

VII. Public Use Management Considerations Both Areas

Challenges and Opportunities:

- 1) Maintain area so that it is inviting and safe for public use.
- 2) Keep the public informed of area regulations.
- 3) Provide public access to area fishing resources.
- 4) Enforce area regulations.

Management Objective 1: Maintain the current infrastructure to established maintenance standards, which invite public use and keep area users informed of regulations.

Strategy 1: Maintain current levels of area maintenance. Keep field roads mowed to improve area access. (Wildlife)

Management Objective 2: Provide improved pond-fishing access for the public to the stocked ponds on Locust Creek CA, and to shoreline anglers at Sears Community Lake.

Strategy 1: Ensure field trails leading to the dams of stocked ponds and Sears Community Lake are mowed according to area maintenance standards. (Wildlife)

Management Objective 3: Ensure regulations are enforced on areas, and provide citizens a safe environment for outdoor recreational use.

Strategy 1: Regularly patrol and enforce the *Wildlife Code of Missouri*, with emphasis on enforcing area hours of closure. (Protection)

Strategy 2: Through personal contacts, partner with neighbors in observing and reporting unauthorized uses of the areas. (Protection)

VIII. Administrative Considerations

Challenges and Opportunities:

- 1) Develop a strong positive working relationship with adjacent neighbors.
- 2) Consider land acquisition, when available.

Management Objective 1: Maintain clearly identified property lines.

Strategy 1: Inspect and maintain boundaries on a regular cycle. (Wildlife)

Strategy 2: Resolve boundary issues with adjoining landowners as they arise. (Wildlife)

Lands Proposed for Acquisition:

When available, inholdings and/or 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:

	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Aquatic Resources Management Considerations															
<i>Objective 1</i>															
Strategy 2	X					X					X				
<i>Objective 2</i>															
Strategy 1	X			X			X			X			X		
<i>Objective 4</i>															
Strategy 2	X														
<i>Objective 7</i>															
Strategy 2	X					X					X				

APPENDICES

Public Input Summary:

The draft Locust Creek Conservation Area and Sears Community Lake Management Plan was available for a public comment period Oct. 1–31, 2017. The Missouri Department of Conservation received one comment (Appendix A). The Locust Creek Conservation Area and Sears Community Lake 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.

Department responses to themes and issues identified through the Locust Creek Conservation Area and Sears Community Lake Management Plan public comment period.

Suggests developing 10 to 12 miles of multi-use (equestrian) trails at Locust Creek CA.

Adding multi-use trails for horseback riding would increase interference with existing area uses and could negatively impact sensitive natural communities. Because this area is bisected by Locust Creek, adding 10 to 12 miles of multi-use trail is not feasible or within the priorities for the area. Sugar Creek CA is located 35 miles to the east and offers 10 miles of multi-use trail.

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. (2014a). *Missouri forest management guidelines: Voluntary recommendations for well-managed forests*. Jefferson City, MO: Conservation Commission of the State of Missouri.

Missouri Department of Conservation. (2014b). *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.

Appendices:

- Appendix 1. Locust Creek Conservation Area Background
- Appendix 2. Map of Locust Creek Conservation Area
- Appendix 3. Cover Type Map of Locust Creek Conservation Area
- Appendix 4. Locust Creek Conservation Area Forestry Compartments
- Appendix 5. Locust Creek Conservation Area Easements
- Appendix 6. Sears Community Lake Background

Appendix 7. Map of Sears Community Lake

Appendix 8. Cover Type Map of Sears Community Lake

Appendix 9. Locust Creek Conservation Area & Sears Community Lake Area Plan Public
Comments

Appendix 1. Locust Creek Conservation Area Background

This 3,451-acre area is comprised of approximately 60 percent bottomland and upland forest and woodland. The remainder of the area is comprised of open field, grassland, wetland, and old-field type habitats. Locust Creek, recognized by the U.S. National Park Service as one of the last, largely unchannelized stretches of a typical prairie stream, flows along and through the area for 5.9 miles. The area was acquired in part through the Pittman-Robertson Wildlife Restoration Fund.

The Department manages the forest, fish, and wildlife resources of this area to provide for public recreation and to protect soil and water quality. Cropping, forest management, and prescribed burning are used to improve wildlife habitat. Small wetland units provide fall and spring migration habitat for waterfowl and year-round habitat for a variety of resident wetland wildlife.

In 1987, an Experimental Stream Management Area was established on Locust Creek CA to test stream management and erosion reduction techniques, document channel response to the techniques, and provide a demonstration area to educate the public and other agency personnel. Many projects were installed between 1987 and the late 1990s to meet these objectives, to establish wooded riparian corridors, and to slow the process of lateral channel migration. Evaluation of these projects has provided valuable information for development of stream restoration techniques in Missouri. Although there are no currently active evaluations, the Department continues to maintain the extensive survey monument system and to build long-term flow and remote sensing data sets. Plans for further evaluation extend through 2026.

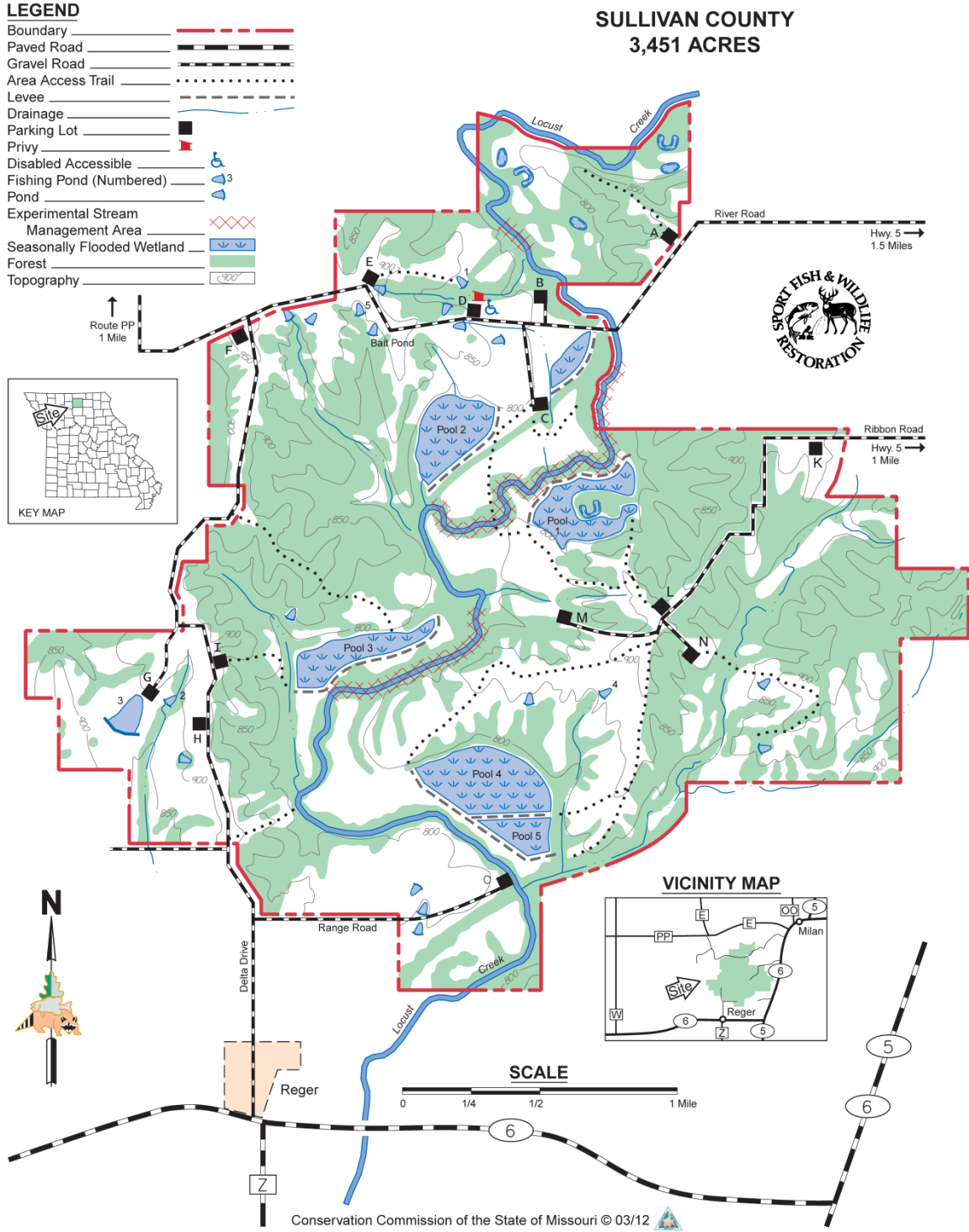
Current Land and Water Types:

Land/Water Type	Acres	Miles	% of Area
Woodland	1,443		42
Forest	530		15
Grassland	461		13
Open Field	402		12
Old Field	239		7
Wetland	175		5
Savanna	88		3
Open Water	83		2
Other	30		<1
Total	3,451		100
Stream Frontage – Locust Creek		5.9	

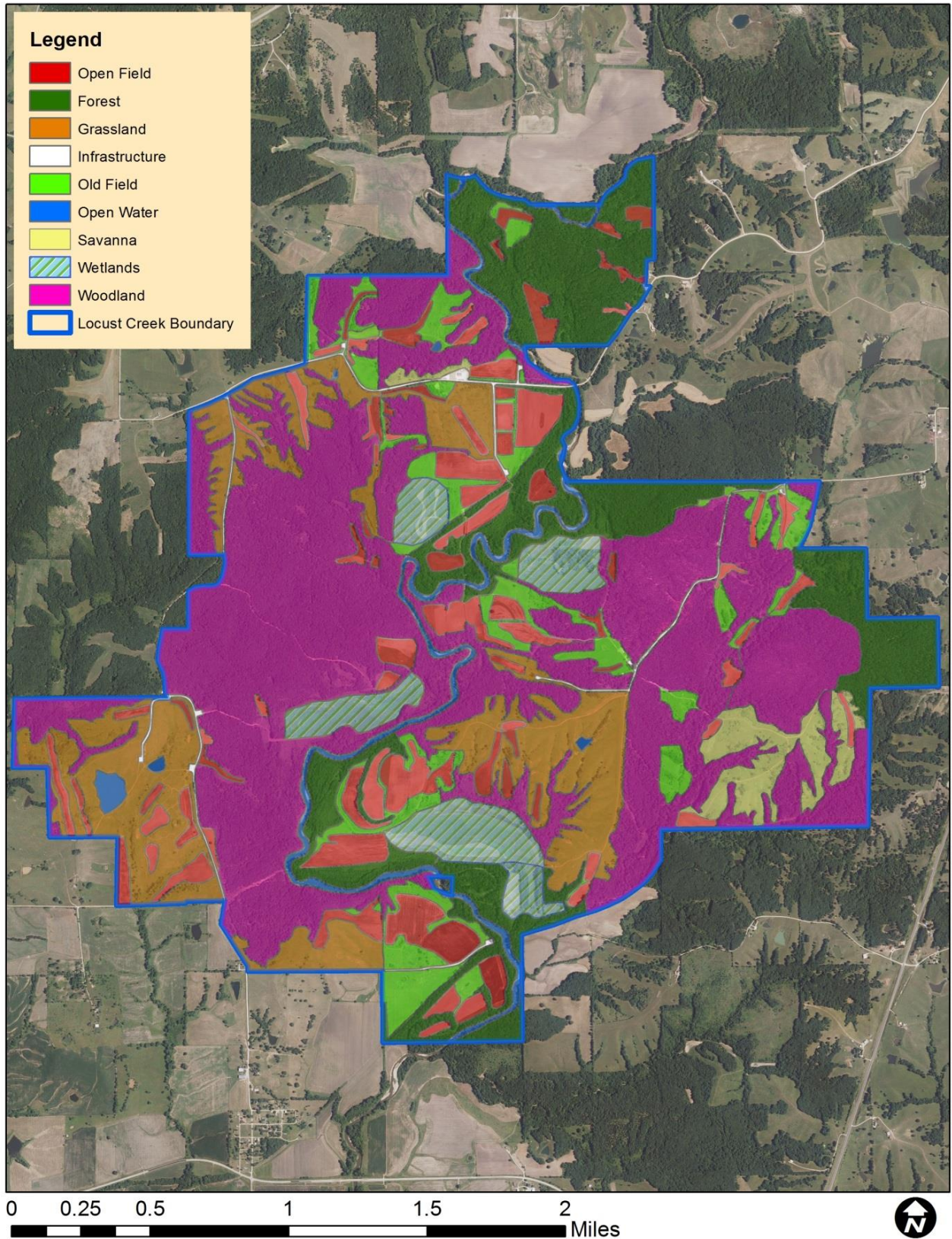
Appendix 2. Map of Locust Creek Conservation Area

LOCUST CREEK CONSERVATION AREA

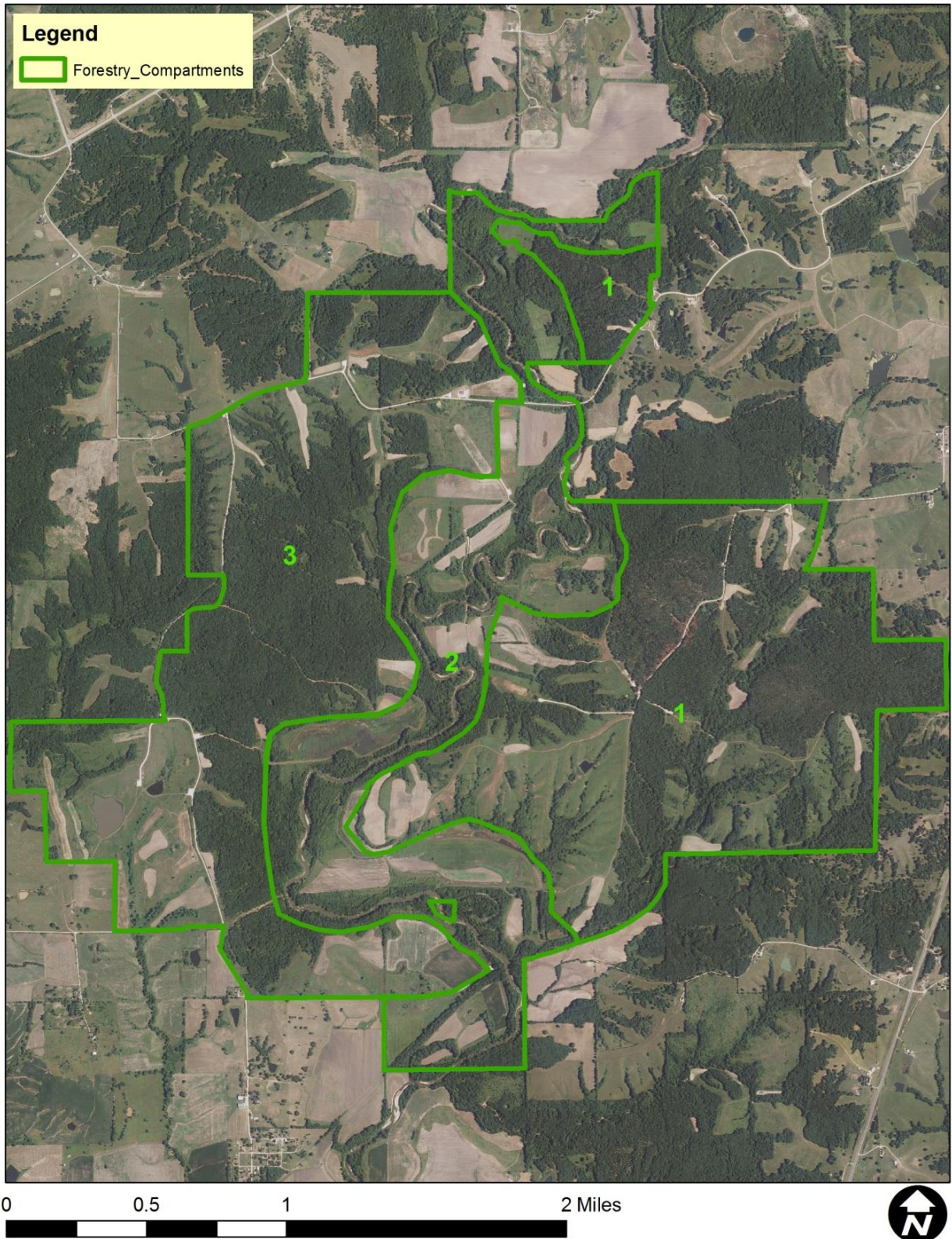
SULLIVAN COUNTY
3,451 ACRES



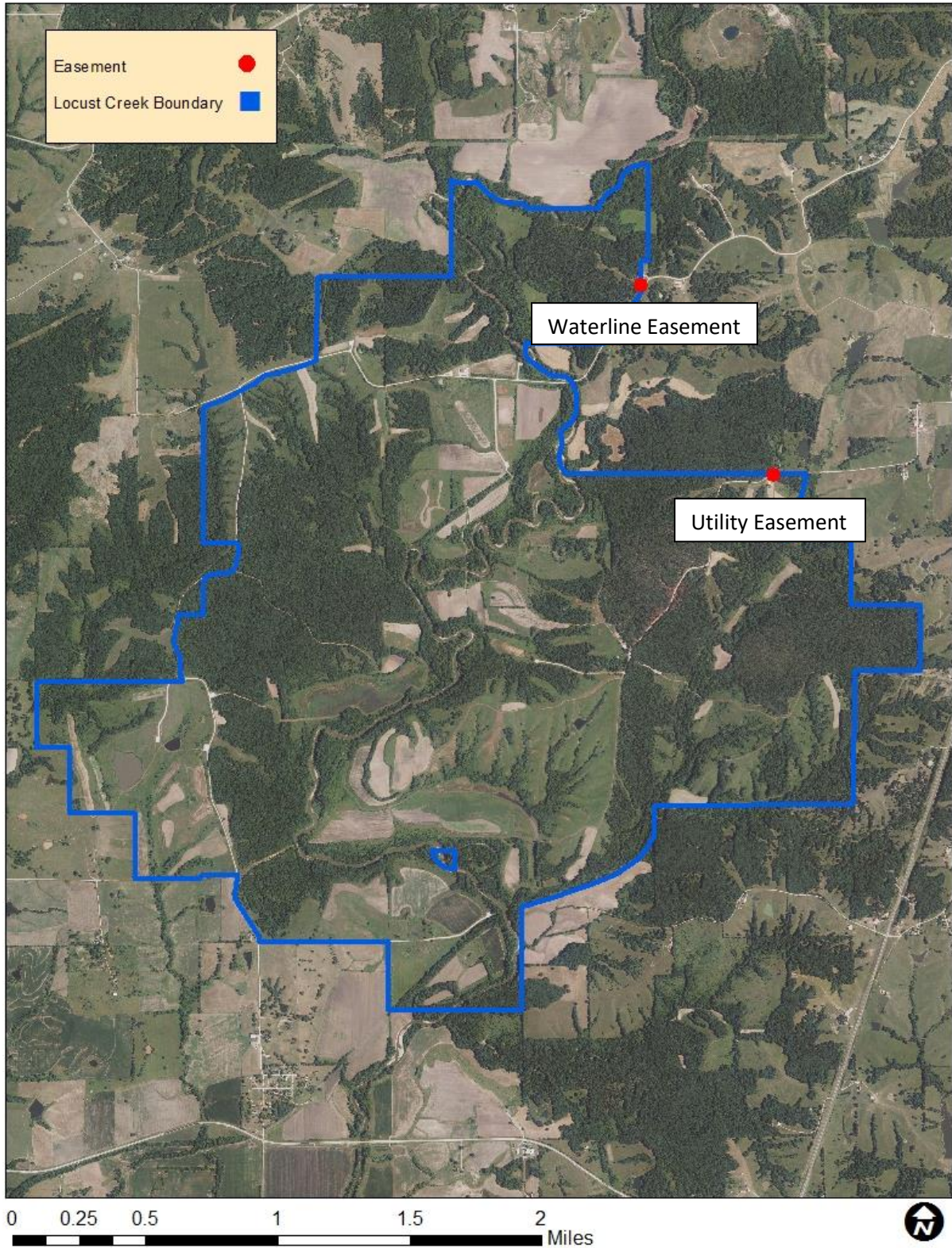
Appendix 3. Cover Type Map of Locust Creek Conservation Area



Appendix 4. Locust Creek Conservation Area Forestry Compartments



Appendix 5. Locust Creek Conservation Area Easements



Appendix 6. Sears Community Lake Background

This 100-acre area is characterized by oak-hickory wooded hills with narrow ridges. A 19-acre lake lies in the center of the area.

The Department manages the forest, fish, and wildlife resources of this area to provide for public recreation and to protect soil and water quality.

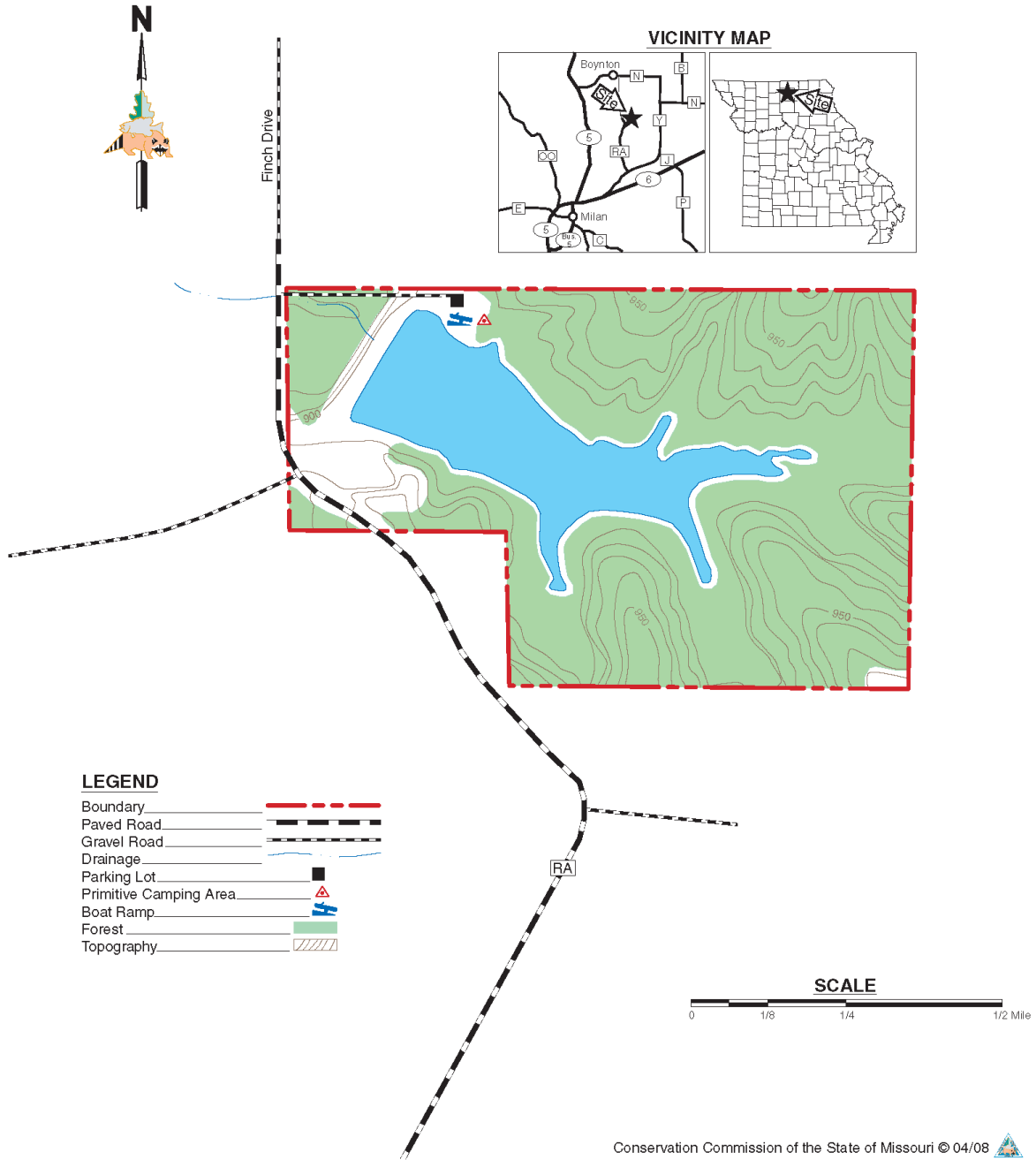
Current Land and Water Types:

Land/Water Type	Acres	% of Area
Forest	56	67
Open Water	19	23
Old Field	3	4
Woodland	3	4
Other	2	2
Total	83	100

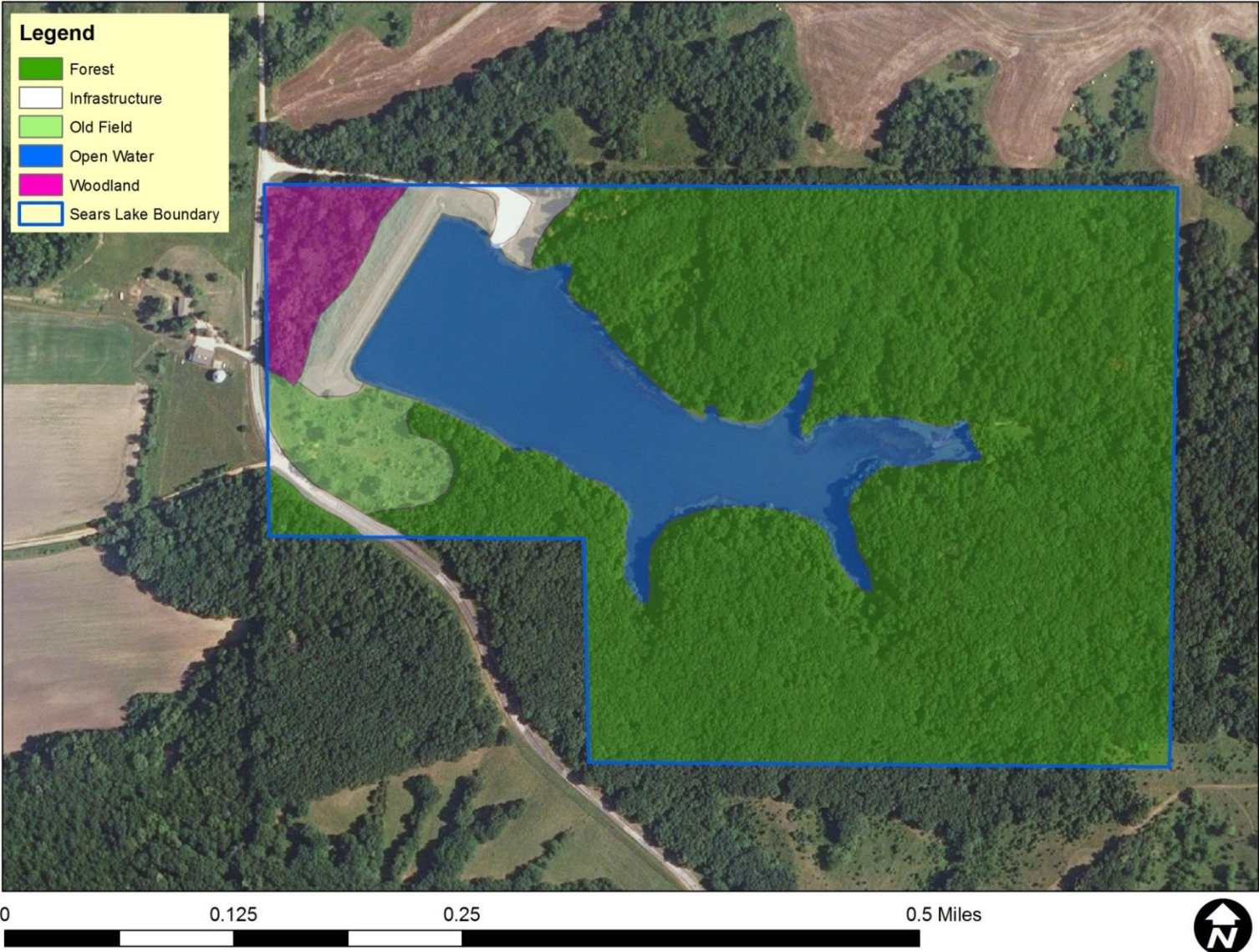
Appendix 7. Map of Sears Community Lake

SEARS COMMUNITY LAKE

SULLIVAN COUNTY
83 ACRES



Appendix 8. Cover Type Map of Sears Community Lake



Appendix 9. Locust Creek Conservation Area & Sears Community Lake Area Plan Public Comments

Received during public comment period (Oct. 1–31, 2017):

Thank you for the opportunity to comment on the Draft Locust Creek Conservation Area Management Plan.

Equestrian trail riders in Sullivan, Putnam and Macon Counties are underserved with respect to public land riding opportunities. To address this lack of opportunity Union Ridge CA and Rebel’s Cove CA are on a priority list of Conservation Areas recommended for multi-use trail development in the 2015 “Expanding Public Land Multi-Use Trails in Missouri” proposal by Back Country Horsemen of Missouri. Unfortunately the management plan for Union Ridge CA places additional restrictions on equestrian access. No horseback riding is allowed on Rebel’s Cove CA, and no plans have been announced to change that prohibition.

Locust Creek CA offers an opportunity to address the lack of public land riding opportunities in the region. This activity is compatible with item A: Strategic Direction of the Statement of Primary Purpose: provide recreational and educational opportunities for the citizens of Missouri. Equestrian use provides older adults, children, persons with mobility challenges and persons with some disabilities an opportunity to appreciate the outdoors that they would not have otherwise.

Locust Creek CA exhibits most desirable characteristics for development of a multi-use trail system. The CA is of adequate size for development of a minimum of 10-12 miles of trails. A multi-use trail network could be developed on either side of Locust Creek or both. Topography and landscape (mostly upland), a variety of cover types, and a minimum of conflicting uses also represent positive features. Trails should be located to maintain adequate separation from the fishing ponds and lakes, and they must be located carefully to minimize issues with erodible and seasonally saturated soils—all quite easily done. The location, off Missouri Routes 5 and 6, would provide safe and convenient access to the CA.

Carefully, properly located single-file multi-use trails on natural surface need not be causes of erosion or cause environmental degradation. BCHMO recommends that the Department designate 10-12 miles of multi-use trails on Locust Creek CA. Our organization offers, subject to availability of volunteers, to assist the Department to layout and mark trails and install or improve supporting infrastructure. We further offer to assist the Area Manager to develop a partnership with local trail users to assist with development and maintenance of the trails and associated infrastructure.

Thank you for your due consideration.