Allred Lake
Natural Area

Ten-Year Area Management Plan
FY 2017-2026

Troia B. Allen
Forestry Division Chief

9-1-16
Date

Allred Lake Natural Area Management Plan Approval Page

PLANNING TEAM

Mark Pelton, Resource Forester

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SOUTHEAST REGION

RCT Chair

Signature 8-8-16 *Date*

FORESTRY DIVISION

Forestry Management Chief

John Turtle *Signature* 8/30/16 *Date*

OVERVIEW

- **Official Area Name:** Allred Lake Natural Area, # 7946
- **Year of Initial Acquisition:** 1981
- **Acreage:** 160 acres
- **County:** Butler
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**
    - **A. Strategic Direction**
      The area was purchased to protect one of the best remaining examples of a natural pond and bald-cypress swamp/slough complex in Missouri. Manage to protect and maintain wildlife, lowland forest resources; and pond, bald-cypress/swamp-tupelo swamp/slough communities.
    - **B. Desired Future Condition**
      The desired future condition of Allred Lake Natural Area (NA) is a healthy wetland/lowland forest complex.
    - **C. Federal Aid Statement**
      N/A

GENERAL INFORMATION AND CONDITIONS

I. <u>Special Considerations</u>

A. Priority Areas: Coon Island Aquatic Conservation Opportunity Area, Big Cane-Alluvial Plain Terrestrial Conservation Opportunity Area and Big Cane-Sand Ridge Terrestrial Conservation Opportunity Area

B. Natural Areas: Even though the name of the area is Allred Lake Natural Area, only the east half of the area (76 acres) is a designated Missouri Natural Area. This area is one of the best remaining natural pond and bald-cypress swamp/slough complexes in Missouri.

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: Most of the area occurs in the Black River Silty Lowland land type association. This landtype association consists of low lying silty alluvial plains originally drained by sloughs and slow-moving, meandering streams and historically

had mixed bottomland hardwood forests interspersed with marsh and swamps. (Nigh & Schroeder, 2002).

III. <u>Existing Infrastructure</u>

- One parking lot
- 200-foot gravel footpath to boardwalk
- 75-foot metal boardwalk and attached 12'x16' floating viewing platform
- Hiking trail (0.2 miles)

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

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: Yes, 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.

E. Hazards and Hazardous Materials: None observed.

F. Endangered Species: Endangered 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.

G. Boundary Issues: None

MANAGEMENT CONSIDERATIONS

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

Bald-cypress swamp forests dominate the vegetation around the perimeter of Allred Lake and along Little Hunting Slough (above and below the lake). Some of the large bald-cypress trees are estimated at over 500 years old. Most of the very large bald-cypress and swamp-tupelo trees are hollow and exhibit large fire scars. The rest of the lowland forest area consists of wet and wet-mesic bottomland forest. Dominant tree species are Nuttall's oak, pin oak, overcup oak, willow oak, red maple, sugarberry and slippery elm. Less common tree species are cherry bark oak, water hickory, cedar elm, water locust, swamp cottonwood, planer tree, water oak and green ash.

Most of the area was logged about 75 years ago. The higher ground has been reforested through tree planting and natural regeneration, and includes cherry bark oak, swamp chestnut oak, pin oak, willow oak, winged and American elm, silver and red maple and eastern red cedar tree species.

On account of the large block of forest joining the area on the south side, wildlife populations are abundant compared to other wooded tracts within the Mississippi Lowlands. The area provides habitat for deer, turkey, squirrels, bobcat, cottontail and swamp rabbits, and many other species typically found in bottomland forests. Allred Lake and Little Hunting Slough also provide waterfowl habitat.

Challenges and Opportunities:

1. Manage high quality bottomland forest and the pond/bald-cypress swamp-tupelo slough community management.
2. Protect the plants and animals associated with the bottomland ecosystem, especially endangered, rare or uncommon species.

Management Objective 1: Provide bottomland forest and bald-cypress swamp habitat for a diversity of species, characteristic of the natural communities found on the area, including habitat suitable for rare and endangered species.

Strategy 1: Complete a forest inventory of the area by fiscal year (FY) 2017 and place Allred Lake NA in the region's 20-year inventory cycle. (Forestry)

Strategy 2: Allow the area to develop naturally. No active vegetation manipulation will occur on the area (except for the old field tree plantings and removal of exotics), unless the Natural History Biologist and Forestry Division personnel determine it is necessary for enhancing or protecting the natural qualities of the area. Red oak regeneration will be periodically monitored and, if notable levels of red oak regeneration occur, a suitable treatment plan will be initiated. No vegetation manipulation should take place in the Missouri Natural Area (east 76 acres) without the approval of the Department Natural Areas Committee. (Forestry, Wildlife)

Management Objective 2: Protect the natural quality of Allred Lake and the bald-cypress/swamp-tupelo swamp/slough community.

Strategy 1: Grant special-use trapping permits to aid in control of beaver populations. (Forestry)

Strategy 2: Remove beaver dams or place perforated pipes in dams that are impeding water flow into or out of the lake and slough. (Forestry)

Strategy 3: Maintain cooperation with adjacent landowner (Black Lumber Company) in controlling beaver dams in the lower section of Little Hunting Slough that could impact Allred Lake NA. (Forestry)

Management Objective 3: Monitor tree plantings and natural succession in the 36 acres of old fields on the west side of the area until a bottomland forest of desirable species is achieved.

Strategy 1: Plant additional appropriate bottomland tree species seedlings if necessary. (Forestry)

Strategy 2: Continue pre-commercial thinning or release crop trees through forest thinning as crowns begin to close. (Forestry)

Management Objective 4: Continue to monitor and control invasive plant species such as Japanese honeysuckle and autumn olive.

Strategy 1: Monitor annually and control as necessary. (Forestry)

VI. Public Use Management Considerations

Challenges and Opportunities:

1. Provide appropriate public use and viewing opportunities.
2. Improve educational and interpretive opportunities.

Management Objective 1: Provide appropriate use and interpretation of Allred Lake NA.

Strategy 1: Maintain the existing trail to the lake, boardwalk, and viewing platform for visitor use. (Forestry)

Strategy 2: Maintain the watchable wildlife signs at the parking lot and along the trail to the lake. Maintain the interpretive sign at the parking lot bulletin board. (Forestry)

Management Objective 2: The area is closed to, fishing, camping and swimming. Non-motorized boats only are permitted on Allred Lake and must be removed daily.

Strategy 1: Post no fishing signs in parking lot and in appropriate sites throughout area. (Forestry)

Strategy 2: Area boundaries will be posted with Department signs. The 76-acre natural area will be posted with Missouri Natural Area signs. (Forestry)

VII. Administrative Considerations

Challenges and Opportunities:

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

Management Objective 1: Maintain area infrastructure at current levels.

Strategy 1: Maintain area infrastructure in accordance with Department guidelines. (Wildlife)

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 2										
Strategy 2	X		X		X		X		X	
Objective 3										
Strategy 2			X			X			X	

APPENDICES

Area Background:
The Department purchased this 160-acre tract of land in 1982. It contains one of the best quality examples of lowland swamp and bottomland forest in Missouri.

A 76-acre portion of the area is designated as a Missouri Natural Area and is managed and protected for its outstanding educational and scientific values.

The area's bottomland forests support bald-cypress, swamp-tupelo, water locust, sweet gum, willow oak, overcup oak, water hickory, swamp chestnut oak, water elm, swamp privet and many other species. A 7-acre natural lake, near the center of the area, is ringed with cypress-tupelo swamp. Some of the bald cypress trees are over 500 years old.

The lake contains several swamp species of conservation concern.

A boardwalk and platform have been constructed on the western side of the lake for nature viewing and photography.

Tree seedlings and acorns have been planted in most open fields to help restore the diverse forest communities that the land once supported. Over time, these areas will add to the dwindling supply of lowland bottomland forests.

Current Land and Water Types:

Land/Water Type	Acres	% of Area
Bottomland forest	114	71
Tree plantings (old fields)	36	23
Water (lake and slough)	10	6
Total	**160**	**100**

Public Input Summary:
The draft Allred Lake Natural Area Management Plan was available for a public comment period January 1–31, 2016. The Missouri Department of Conservation received comments from one respondent (Appendix A). The Allred Lake 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.

Department responses to themes and issues identified through the Allred Lake Natural Area public comment period

Suggests adding trails around the lake and throughout the area.
The Allred Lake Natural Area planning team appreciates this suggestion, and it is an idea that we have considered. When we upgraded the boardwalk and viewing platform in 2013, we considered building a trail/boardwalk/viewing platform from the parking lot to the large twin bald cypress trees located in Little Hunting Slough on the north side of Allred Lake. It was determined that because of annual flooding, so much of this trail would require an elevated boardwalk that it was cost prohibitive. The entire area floods to the depth of the current viewing platform 3-8 times per year. Although some people do walk around the lake perimeter during the fall dry season, any constructed trail would be impossible to maintain with the amount of flood siltation and debris accumulation that develops.

References:
Nigh, T. A., & Schroeder, W. A. (2002). *Atlas of Missouri ecoregions*. Jefferson City, Missouri: Missouri Department of Conservation.

Maps:
Figure 1: Area Map
Figure 2: Current Vegetation Map

Additional Appendices:
Appendix A: Allred Lake Natural Area Management Plan Public Comments

Figure 1: Area Map

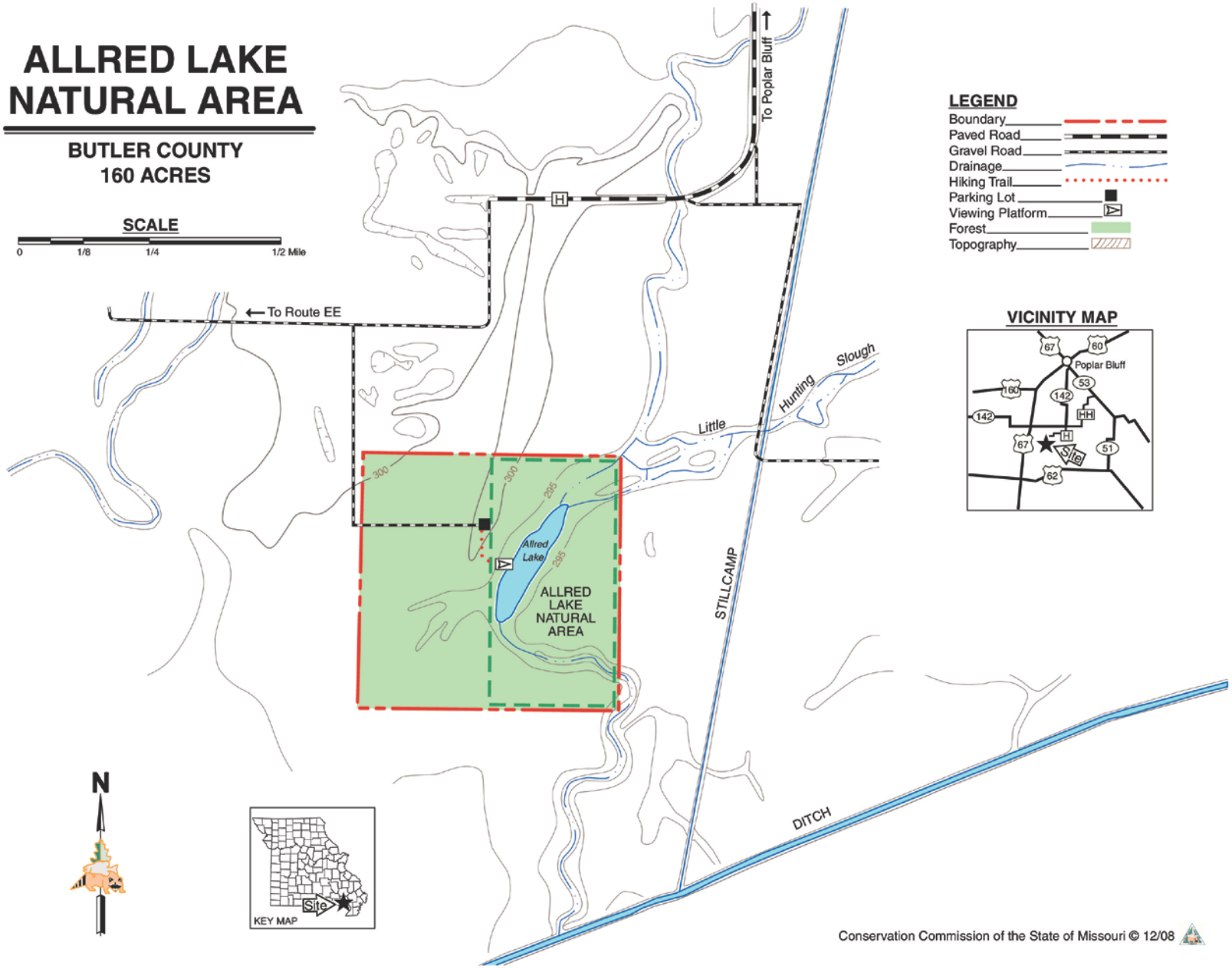
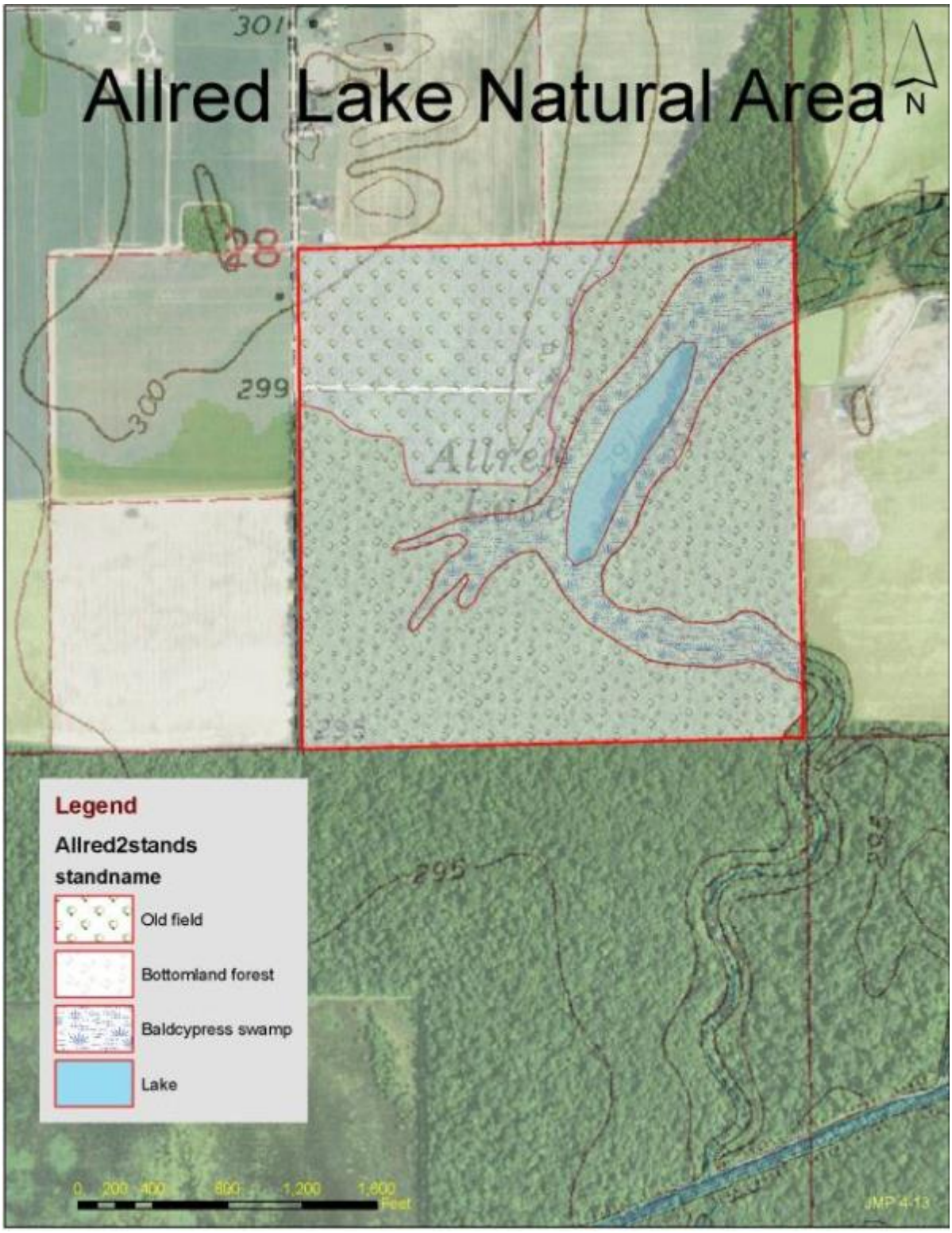


Figure 2: Current Vegetation Map



Appendix A: Allred Lake Natural Area Management Plan Public Comments

Received during public comment period (January 1-31, 2016):

Would it be possible to have a trail around the lake. Also it seems there could be other trail in the area.