

DRAFT Hardin Conservation Area

Fifteen-Year Area Management Plan FY 2017-2031



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OVERVIEW

- **Official Area Name:** Hardin Conservation Area, # 9618
- **Year of Initial Acquisition:** 1996
- **Acreage:** 239 acres
- **County:** Ray
- **Division with Administrative Responsibility:** Wildlife
- **Division with Maintenance Responsibility:** Wildlife
- **Statements of Purpose:**
 - A. Strategic Direction**

Manage for wildlife, forest, woodland, and wetland resources with emphasis on woodland and wetland species and compatible recreational opportunities.
 - B. Desired Future Condition**

The desired future condition of Hardin Conservation Area (CA) is an ecologically functional system of forest/woodlands, wetlands, and riparian habitats.
 - C. Federal Aid Statement**

This area, or a portion thereof, was acquired with Emergency Wetland Reserve Program funds as part of the buy-out of eligible farmland affected by the 1993 Flood to provide wetland habitat.

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

- A. **Priority Areas:** None
- B. **Natural Areas:** None

II. Important Natural Features and Resources

- A. **Species of Conservation Concern:** None observed.
- B. **Caves:** None
- C. **Springs:** None
- D. **Other:** Occurs in the Wakenda Missouri River Alluvial Plain Landtype Association. This landtype association consists of an exceptionally broad bottom enclosed by low bluffs mostly in Pennsylvanian shales. Historically, the entire landtype association was dominated by wet prairie and marshland. Poorly drained soils on the northern side of the river formerly supported one of the most extensive bottomland prairies on the Missouri River (Nigh & Schroeder, 2002).

III. Existing Infrastructure

- One parking lot
- Two water control structures
- One access trail to Crooked River
- One camping area (no amenities)

IV. Area Restrictions or Limitations

- A. Deed Restrictions or Ownership Considerations:** Hardin CA has approximately 235 acres enrolled into two U.S. Department of Agriculture, Natural Resource Conservation Service Emergency Wetland Reserve Program easements. Management and maintenance activities are governed by the area's conservation plan/schedule of operation, and Natural Resource Conservation Service Compatible Use Agreement. The Compatible Use Agreement is valid until December 31, 2018.
- B. Federal Interest:** The wetland conservation easements permanently prohibit use of the affected land as cropland and require permanent maintenance of the wetland conditions, except in the case of natural disaster. After the easement has been perfected, no change will be made in the easement without a written request by the participant and the written consent of the Natural Resources Conservation Service Chief. 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.
- C. Easements:** Two Emergency Wetland Reserve Program easements, one road right of way easement (Figure 3)
- 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. Endangered Species:** None observed.
- F. Boundary Issues:** None

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

Challenges and Opportunities:

- 1) Manage natural communities in accordance with the conservation plan/schedule of operations and the Compatible Use Agreement.

- 2) Maintain healthy wetland habitats.

Management Objective 1: Maintain healthy trees and woodlands with management emphasis on wildlife habitat.

Strategy 1: Conduct an inventory of the wooded acreage to determine management needs. (Forestry)

Strategy 2: Based on the findings of the inventory, implement management recommendations using a variety of sustainable forest management techniques to promote healthy forest and woodland communities, including, but not limited to, harvesting, forest thinning, firewood cutting, salvage cuttings, tree planting, seeding, and prescribed burning. (Forestry)

Strategy 3: Utilize best management practices during forest and woodland management as described in the Department's manuals: *Missouri Watershed Protection Practices Recommended 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). (Forestry)

Strategy 4: Monitor for invasive vegetation, diseases, and insects. Suppress any infestations that may develop. (Forestry)

Management Objective 2: Maintain healthy wetland habitats.

Strategy 1: Monitor the wetland areas for invasive species. Suppress any infestations that may develop. (Wildlife)

Strategy 2: Maintain native vegetation and promote early successional plant communities, where feasible, using a combination of techniques, including, but not limited to, prescribed burning, mechanical tree removal, disking, mowing, planting of annual grain food plots and overseeding. All practices must follow guidelines set forth in the area's Compatible Use Agreement by the Natural Resources Conservation Service. (Wildlife)

Strategy 3: Renew Compatible Use Agreement with the Natural Resources Conservation Service before December 31, 2018. (Wildlife)

VI. Aquatic Resources Management Considerations

Challenges and Opportunities:

- 1) Establish and maintain adequate riparian corridors.
- 2) Manage native aquatic vegetation.

Management Objective 1: On riparian and streamside habitats, implement and maintain good riparian corridor practices, as outlined in the Department's *Watershed and Stream Management Guidelines for Lands and Waters Managed by Missouri Department of Conservation* (Missouri Department of Conservation, 2009) (Figure 5).

Strategy 1: Periodically monitor habitat conditions of area streams. (Fisheries, Forestry)

Strategy 2: Identify riparian corridors that need to be widened and establish appropriate vegetation using tree planting, direct seeding, or allowing natural regeneration. (Forestry)

Strategy 3: All management activities on Hardin CA should follow the *Watershed and Stream Management Guidelines for Lands and Waters Managed by the Missouri Department of Conservation* (Missouri Department of Conservation, 2009). (Wildlife)

Management Objective 2: Manage for native aquatic vegetation.

Strategy 1: Conduct native vegetation plantings (e.g., of water willow, water lily) as needed. (Fisheries)

Strategy 2: Treat aquatic nuisance species using control techniques, including, but not limited to, herbicide application. (Fisheries)

VII. Public Use Management Considerations

Challenges and Opportunities:

- 1) Provide for hunting, bank fishing and wildlife viewing opportunities.
- 2) Improve educational and interpretive opportunities.
- 3) Build relationships with neighboring landowners.

Management Objective 1: Provide public hunting and wildlife viewing opportunities.

Strategy 1: Conduct annual management activities, as permitted by existing Compatible Use Agreement that will provide habitat for a diversity of species. (Wildlife)

Strategy 2: Mow, as needed, to provide accessibility for bank fishing. (Wildlife)

Management Objective 2: Improve educational and interpretive opportunities on Hardin CA.

Strategy 1: Communicate to the public recreational opportunities (e.g., using brochures, Atlas database). (Wildlife)

Strategy 2: Communicate to teachers, students, scout groups, and youth groups the uniqueness of the area and promote as a possible destination for ecology classes, school programs, and workshops. (Outreach and Education)

Management Objective 3: Facilitate good working relationships with neighboring landowners.

Strategy 1: Work with neighbors to minimize any boundary, trespass, or any other issues affecting Hardin CA or private property. (Wildlife)

Strategy 2: Promote habitat management on neighboring landowner properties. (Private Land Services)

VIII. Administrative Considerations

Challenges and Opportunities:

- 1) Maintain area infrastructure at current levels.
- 2) Consider acquisition of land, when available.

Management Objective 1: Maintain area infrastructure at current levels.

Strategy 1: Maintain area infrastructure (parking lot and access trail) in accordance with Department guidelines and existing Compatible Use Agreement with Natural Resources Conservation Service. (Wildlife)

Management Objective 2: 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)

Strategy 3: Determine and clearly mark all area boundaries. (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.

APPENDICES

Area Background:

Hardin Conservation Area (CA) is located in Ray County, about 0.75 miles south of Hardin (Figure 1). The Missouri Department of Conservation (Department) acquired this area in 1996 and manages it to preserve forested and wetland habitat while providing public opportunities for hunting, fishing, and wildlife viewing.

The original purchase included two individual tracts of land that were enrolled into two separate perpetual Emergency Wetland Reserve Program easements with the Natural Resources Conservation Service. One easement tract is 97.6 acres and the other is 137 acres.

Two water control structures were placed to return some level of natural hydrology to the site. The pools in both easements are estimated to be 26 acres. As part of the conservation plan outlined by the Natural Resources Conservation Service, fields were allowed to naturally regenerate to bottomland hardwood forest.

The 238-acre area, named after the town of Hardin, is located in the Missouri River floodplain. The area is 75 percent forested and includes a 40-acre scour hole created from the Flood of 1993.

The 40-acre open scour/blue hole adds to the diversity of wetland habitat on the area. Wood ducks, blue-winged teal, mallards, neo-tropical passerines, shorebirds, wading birds, and other migratory bird species are known to be seasonally abundant at Hardin CA. Muskrat, beavers, raccoon, mink, and other mammals commonly associated with Missouri wetland and forested habitats are frequently seen here, along with a variety of reptiles and amphibians.

Current Land and Water Types:

Land/Water Type	Acres	Feet	% of Area
Woodland	180		75
Wetlands	40		17
Old Field	15		6
Infrastructure	4		2
Total	238		100
Stream Frontage		3,960	

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: Missouri Department of Conservation.

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

Maps:

Figure 1: Area Map

Figure 2: Infrastructure and Public Use Facilities Map

Figure 3: Area Easements Map

Figure 4: Habitat Cover Types Map

Figure 5: Streams and Fishing Ponds Map

Figure 6: Topographic Map

Figure 7: Soils Map

Figure 1: Area Map

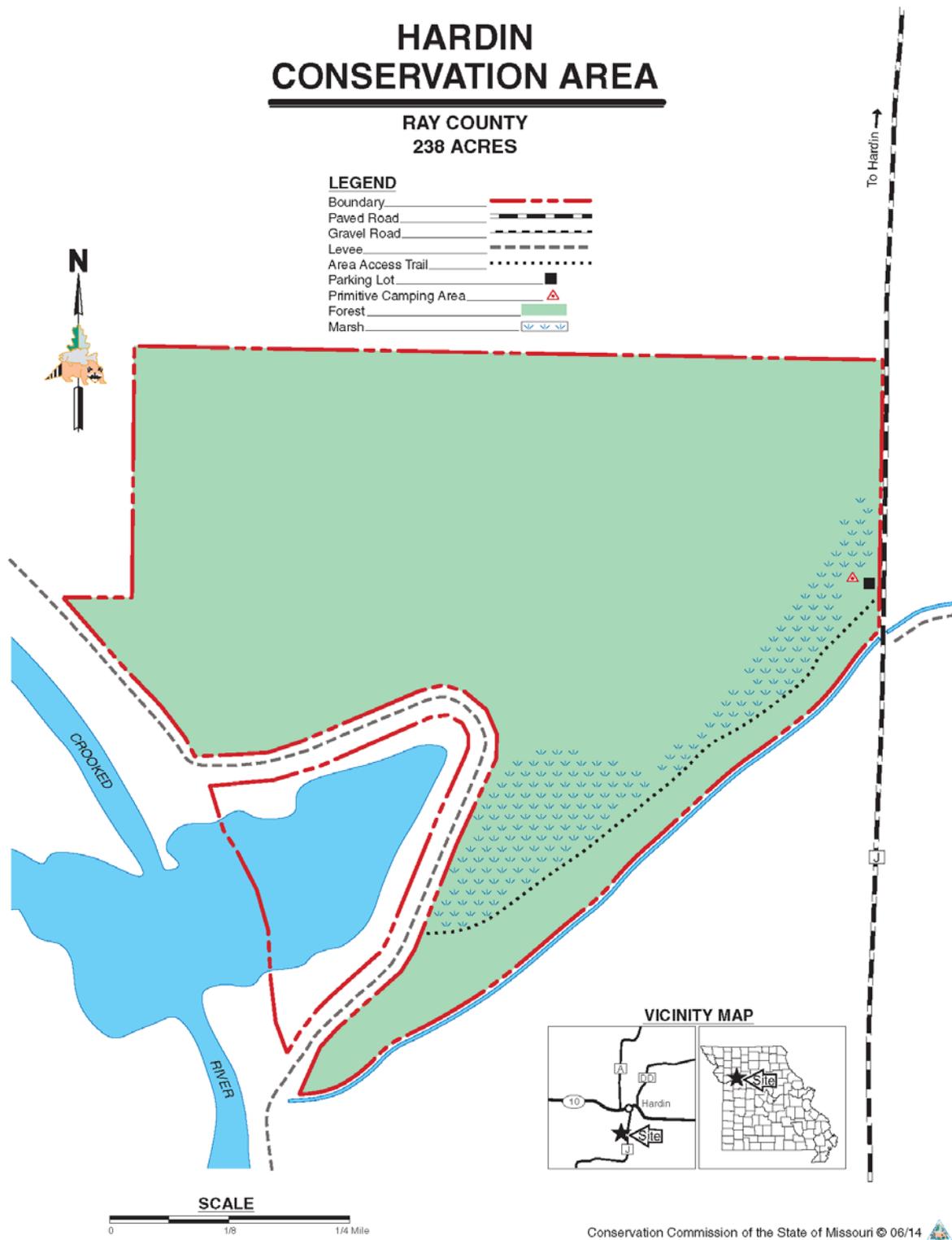
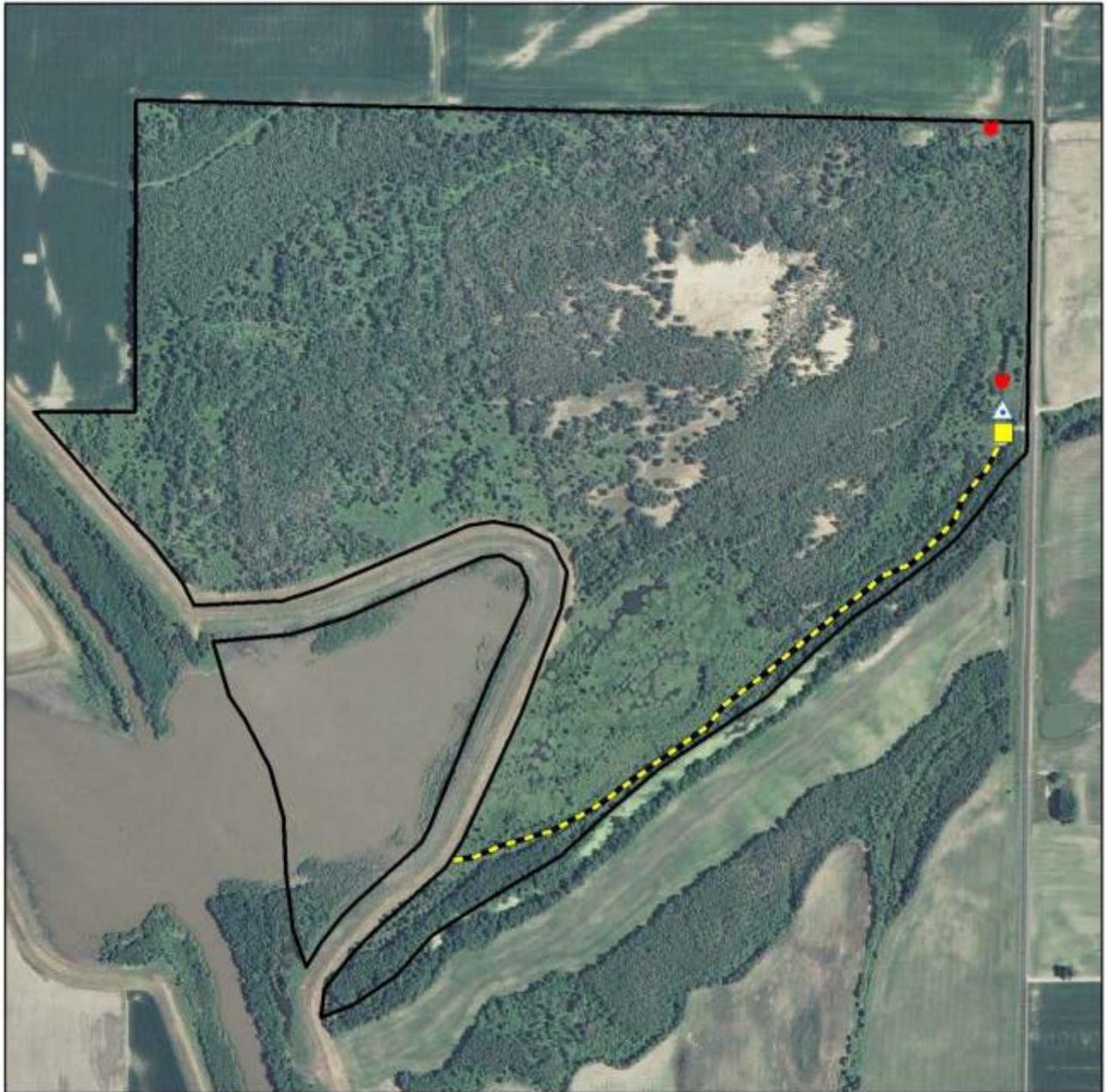


Figure 2: Infrastructure and Public Use Facilities Map

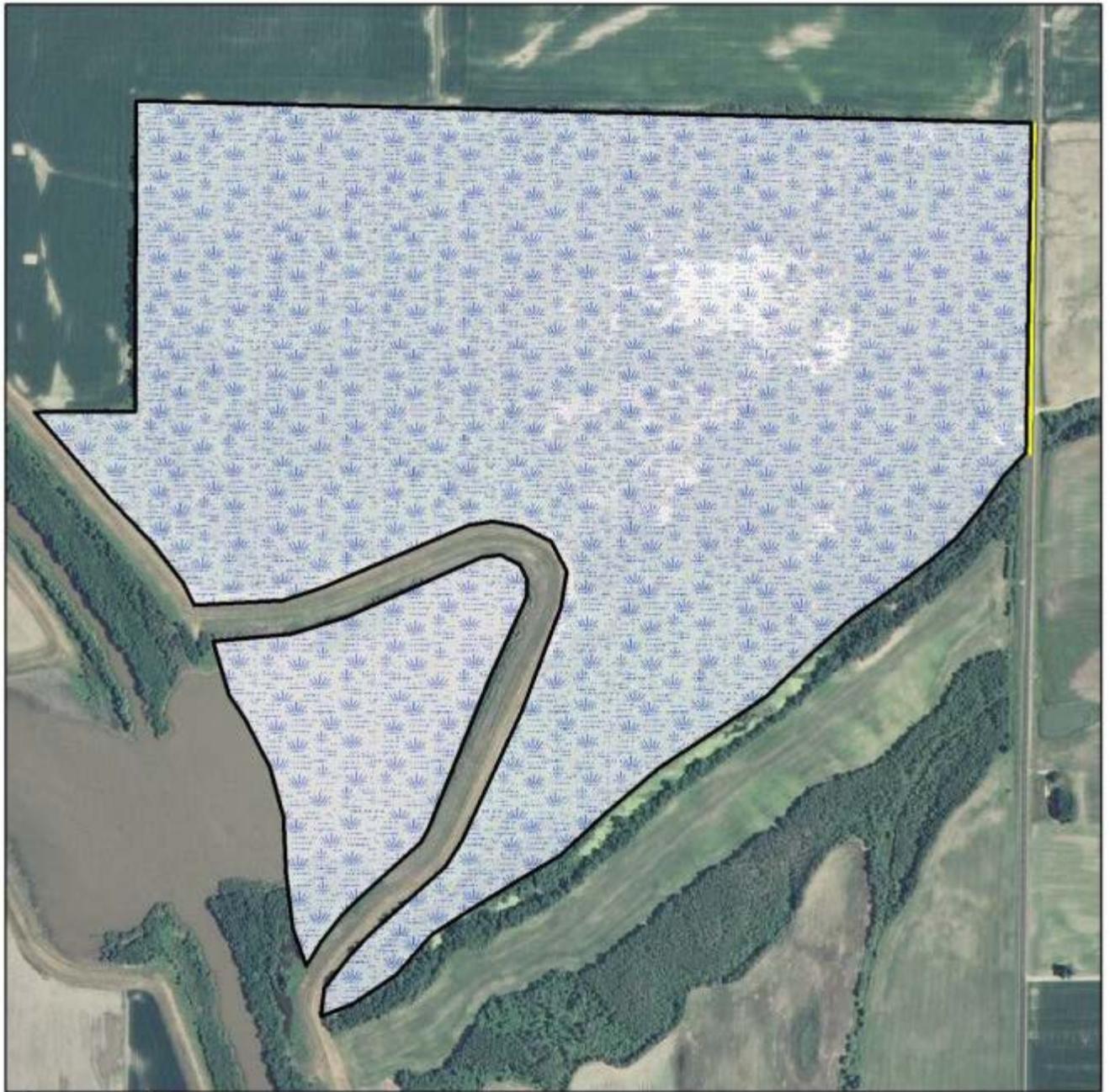


Legend

- | | |
|---|--|
|  Parking Lot |  Access Trail |
|  Primitive Camping |  Hardin CA Boundary |
|  Water Control Structure | |



Figure 3: Area Easements Map



Legend

-  EWRP Easement
-  Road Right of Way Easement
-  Hardin CA Boundary



Figure 4: Habitat Cover Types Map

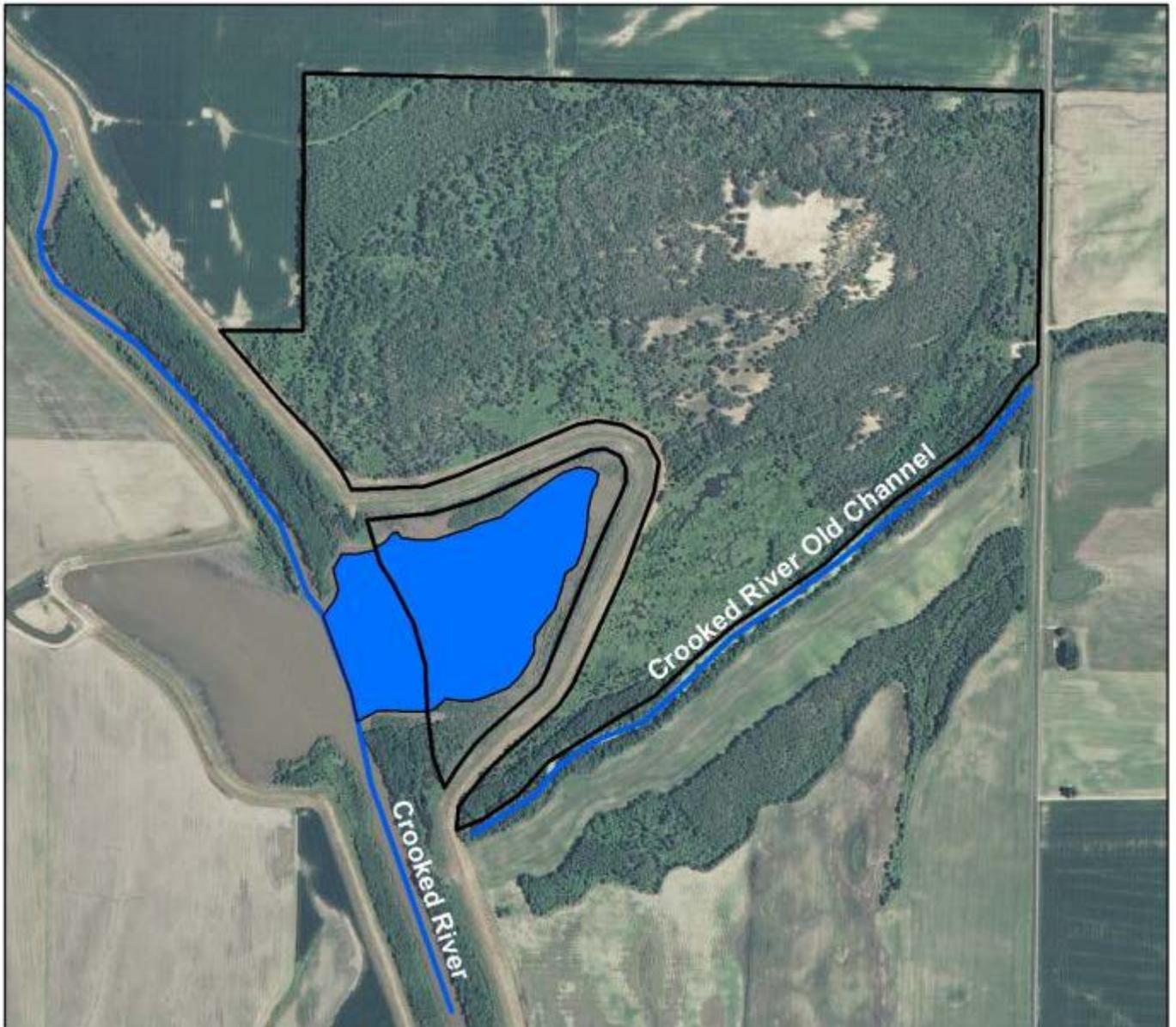


Legend

Habitat Cover Types		Permanent Water	
	Woodland		Infrastructure
	Old Field		Wetland
			Hardin CA Boundary



Figure 5: Streams and Fishing Ponds Map



Legend

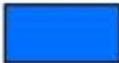
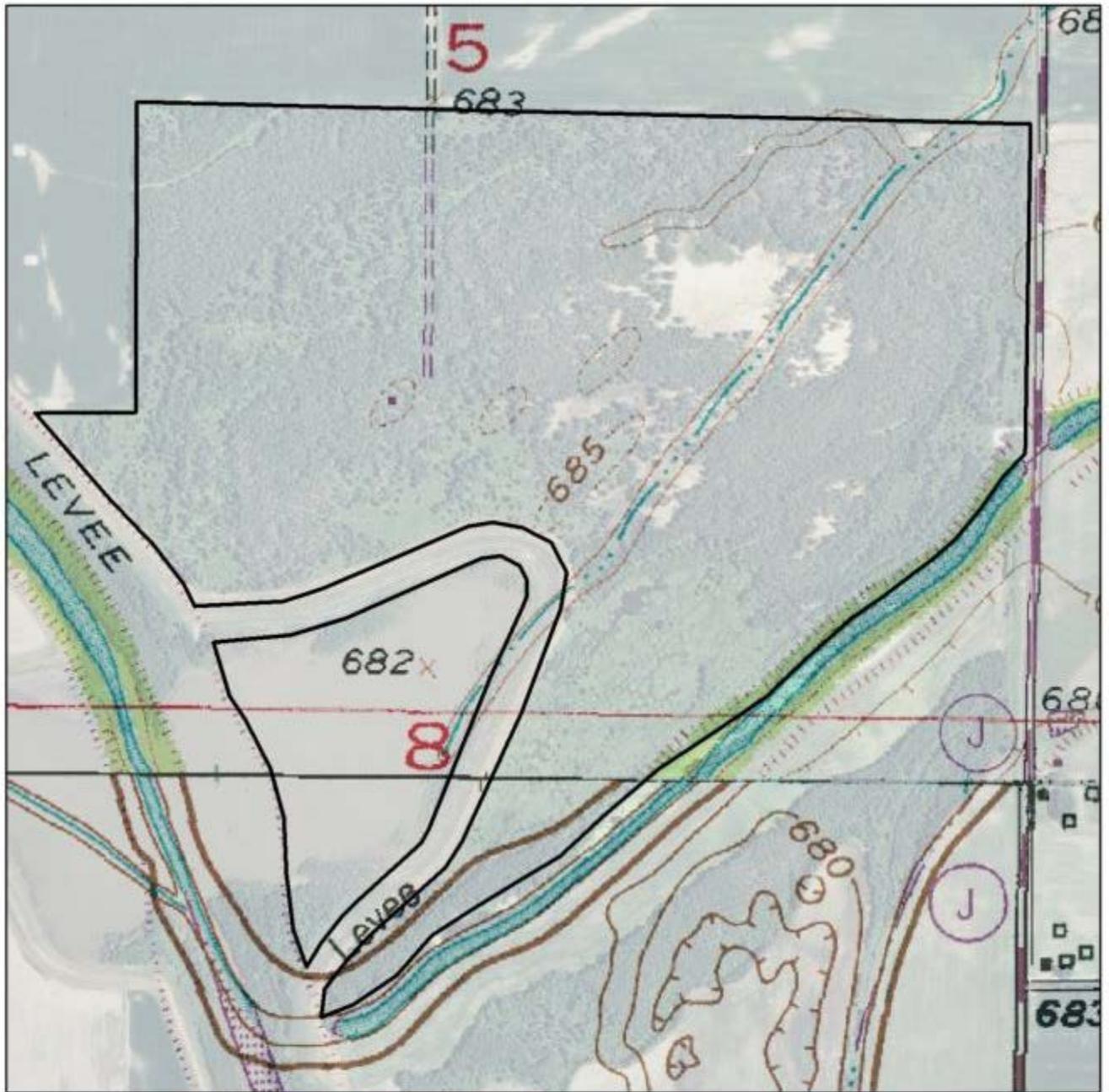
-  Scour Hole
-  Streams
-  Hardin CA Boundary



Figure 6: Topographic Map



Legend

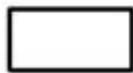
 Hardin CA Boundary



Figure 7: Soils Map



Legend

Hardin CA Soils

- | | |
|--|--|
|  72 Dockery silt loam |  81 Waldron silty clay loam |
|  73 Leta silty clay |  82 Parkville silty clay |
|  74 Levasy silty clay |  W Water |
| |  Hardin CA Boundary |



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