

**DRAFT**

**Robert M. White II**

**Conservation Area**

**Fifteen-Year Area Management Plan**

**FY 2017-2031**



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## OVERVIEW

- **Official Area Name:** Robert M. White II Conservation Area, # 8710
- **Year of Initial Acquisition:** 1986
- **Acreage:** 1,163 acres
- **Counties:** Audrain, Monroe
- **Division with Administrative Responsibility:** Wildlife
- **Division with Maintenance Responsibility:** Wildlife
- **Statements of Purpose:**
  - A. Strategic Direction**

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

The desired future condition of Robert M. White II Conservation Area (White CA) is restored woodland and grassland communities with reduced amounts of invasive plant species.
  - C. Federal Aid Statement**

N/A

## 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:** 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:** The southern portion of the conservation area occurs on the fringe of the Grand Prairie/Prairie Plain Subsection of the Claypan Till Plains Landtype Association. The distinguishing feature of this landtype is the presence of claypan soils on a flat glacial till plain. The area was historically mostly prairie with narrow bands of timber along the streams. The northern portion of the area is in the Salt River Woodland/Forest Hills Subsection of the Central Dissected Till Plain Section, which consists of broadly rolling loess and till-covered uplands that give way to moderately steep slopes and broad valleys cut into till

and cherty limestones. Historically, there were oak savannas and prairies that graded into oak and mixed-hardwood woodlands and forests (Nigh & Schroeder, 2002).

### III. Existing Infrastructure

- Three parking lots
- White Lake, 15-acre fishing lake
- Boy Scout Lake, 3-acre fishing lake
- 21 fishless ponds
- Three campsites

### 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:** telephone, electric, pipeline
- D. **Cultural Resource Findings:** None
- E. **Endangered Species:** None observed.
- F. **Boundary Issues:** None

## MANAGEMENT CONSIDERATIONS

### V. Terrestrial Resource Management Considerations

White CA sits on a transition zone of a flat prairie landscape to the south and wooded rolling hills to the north. Grasslands, crop fields, old fields, and pockets of timber along the drainages and fencerows are the dominant cover types on the southern portion of the property. Approximately 90 acres of native warm-season grasses were planted on the area in the 1980s. These stands have some showy forbs, but generally have become extremely dense stands of native grasses infested with invasive species, such as fescue, sericea lespedeza, and autumn olive. A few small isolated pockets of remnant prairie remain. The pockets on the western portion of the area are of good quality, but those on the east have significant sericea lespedeza invasion. Seventy-five percent of the 238 farmed acres are on the southern portion of area. The historic vegetative community on the northern portion of the area would have been oak savanna and mixed hardwood woodlands and forests. However, due to grazing and fire suppression, these communities have become degraded into undesirable cool-season pasture and overstocked woodlands. A forest

inventory was completed in 2011. Since Fiscal Year 2012, woodland thinning has been conducted annually by contractors to restore woodlands on the northern portion of the area. This work was completed in Fiscal Year 2014.

**Challenges and Opportunities:**

- 1) Identify and restore woodland, savanna, and forest communities.
- 2) Manage for diverse grassland and old field habitats.
- 3) Reduce farming by converting 100 acres of crop fields to native grasses and forbs.
- 4) Control invasive plant species impacts (e.g., bush honeysuckle, garlic mustard, fescue, and *Sericea lespedeza*).

**Management Objective 1:** Manage forested acres with emphasis on natural community management.

**Strategy 1:** Implement forest management practices described in the 2011 inventory prescription, including harvesting potential forest products, where possible. (Forestry)

**Strategy 2:** Use prescribed fire and other techniques to develop and maintain woodland and savanna habitats. (Wildlife)

**Management Objective 2:** Manage for diverse grassland and old field habitats.

**Strategy 1:** Use prescribed fire as a management tool on a three to five year rotation. (Wildlife)

**Strategy 3:** Enhance edge habitats by cutting trees and shrubs to maintain small game cover. (Wildlife)

**Strategy 4:** Diversify plant communities by inter-seeding native forbs. (Wildlife)

**Management Objective 3:** Convert 100 crop acres to native grasses and forbs by FY2025.

**Strategy 1:** Annually budget to purchase local eco-type native seed. (Wildlife)

**Strategy 2:** Use herbicide treatments by permit farmer to prepare fields for planting. (Wildlife)

**Strategy 3:** Overseed native grasses and forbs into soybean stubble each winter. (Wildlife)

**Management Objective 4:** Control invasive plant species impacts.

**Strategy 1:** Reduce invasive plant species (e.g., bush honeysuckle, garlic mustard, fescue, and *Sericea lespedeza*) to levels that will have negligible impacts to natural communities. Work to keep invasive plants from establishing in new

areas. Extensive control and follow-up treatment are needed on large acreages.  
(Wildlife)

## **VI. Aquatic Resource Management Considerations**

### ***Area Lakes and Ponds***

The area includes one 13.2-acre fishing lake (White Lake) and 21 ponds that total 5.3 acres. Boy Scout Lake (at 3 acres) is the largest area pond. The remaining ponds are less than 0.5 acres in size and primarily serve as wildlife watering holes and amphibian and reptile habitat.

The lake and area ponds have been open to public fishing since 1986. Fish species present in White Lake (as of 2014) include largemouth bass, bluegill, channel catfish, green sunfish, golden shiners, white crappie, and hybrid sunfish (bluegill/green sunfish cross). A few of the larger ponds have bass and bluegill populations with fair fisheries (Ponds 5, 7, 10, 14, and 17). Pond 9 contains only green sunfish and the rest of the ponds are fishless.

Recent sampling results still indicate the presence of a high density slow growing bass population with most bass between 10 and 13 inches and a satisfactory bluegill population with most bluegill between 6 and 6.5 inches. Very few larger bass have been sampled in the lake. However, there is a good channel catfish population with most fish between 18 and 20 inches and several larger fish over 24 inches. Very few white crappie are present in the lake and most are between 8 and 10 inches in length.

Fish habitat in White Lake consists of aquatic plants, brush piles, and a few stumps. The most dominant aquatic plants are American pondweed and southern naiad; other species present include cattails, spike rush, chara, and filamentous algae. There is an appropriate amount of aquatic vegetation in the lake, but some of the ponds contain excessive amounts of vegetation. Hard cover, such as brush piles and stumps, is limited in the lake and needs to be increased. Some of the larger ponds are also in need of more woody cover for fish, amphibians, and reptiles.

Water quality in the lake and ponds fluctuates seasonally, but is generally good. Runoff from nearby crop fields occasionally results in excessive soil and nutrient inputs.

### ***Area Streams***

White CA includes 5.35 stream miles, including three first-order intermittent streams (2.3 miles) and two fourth-order permanently flowing streams (Young's Creek, and Long Branch). Young's Creek is the longest stream on the area and flows west to east for 2.2

miles through the bottomland forest stands. Young's Creek, which bisects the area, is a direct tributary of Long Branch; their confluence is approximately 0.7 miles northeast of the area. Long Branch borders 0.8 miles of the far northern boundary. Sandstone and limestone cliffs and out-crops border the entire length of the northern and southern sides of the streams. Long Branch is a direct tributary of the South Fork of the Salt River and forms part of the area's northern boundary.

Both Young's Creek and Long Branch contain healthy in-stream habitat and riparian corridors. However, there are opportunities to expand the riparian corridors at portions of some of the smaller area streams. The riparian corridors at these sites should be widened to meet Missouri Department of Conservation (Department) guidelines for forest management (Missouri Department of Conservation, 2014) and watershed and stream management (Missouri Department of Conservation, 2009). There are no serious stream degradation problems on the area. In fact, stream health in the conservation area is very good compared to most other streams in the region. Water quality appears to be good based on the wide diversity of fish and aquatic invertebrates present. The fish communities in Young's Creek and Long Branch appear to be characteristic of prairie headwater streams having diverse habitat and good water quality.

**Challenges and Opportunities:**

- 1) Maintain a productive fishery in White Lake and Boy Scout Lake.
- 2) Maintain aquatic communities and habitat in area streams.
- 3) Maintain fishless ponds for reptiles, amphibians, and other wildlife.
- 4) Implement and/or maintain best watershed management practices.

**Management Objective 1:** Maintain a productive fishery in White Lake and Boy Scout Lake.

**Strategy 1:** Monitor lake fisheries and recommend changes to creel limits, as needed. (Fisheries)

**Strategy 2:** Maintain a slot length limit of 12 inches to 15 inches and a daily limit of six largemouth bass, unless desirable population indices cannot be met. (Fisheries)

**Strategy 3:** Maintain the daily creel limit of 20 sunfish, unless desirable population indices cannot be met. (Fisheries)

**Strategy 4:** Maintain the daily creel limit of four catfish, unless desirable population indices cannot be met. (Fisheries)

**Strategy 5:** Construct fish attractors near select bank fishing locations. (Fisheries)

**Management Objective 2:** Implement appropriate stream management strategies, as needed, to provide healthy aquatic resources and stream habitat.

**Strategy 1:** Inventory stream fish populations every five to seven years, or as needed. (Fisheries)

**Strategy 2:** Monitor streams for erosion problems. (Fisheries)

**Management Objective 3:** Maintain fishless ponds for wildlife.

**Strategy 1:** Monitor fishless ponds for fish and remove as needed. (Fisheries)

**Management Objective 4:** Implement and/or maintain best watershed management practices.

**Strategy 1:** Maintain fields, field borders and riparian corridors in native vegetation to limit erosion. (Wildlife)

## **VII. Public Use Management Considerations**

### **Challenges and Opportunities:**

- 1) Provide for hunting, fishing, and wildlife viewing opportunities.
- 2) Provide accessibility to area users with mobility disabilities.
- 3) Build relationships with neighboring landowners.
- 4) Maintain area infrastructure at current levels.

**Management Objective 1:** Provide for hunting, fishing, and wildlife viewing opportunities.

**Strategy 1:** Conduct annual management activities that will provide for a diversity of species. (Wildlife)

**Strategy 2:** Continue to allow vehicle access to White Lake from May 10 to August 31. (Wildlife)

**Strategy 3:** Maintain trails that provide easy access to area users. (Wildlife)

**Management Objective 2:** Provide an area that is accessible for anglers and hunters with disabilities by Special Use Permits.

**Strategy 1:** Continue to allow vehicle access for anglers and hunters with mobility disabilities through issuing Special Use Permits. (Wildlife)

**Management Objective 3:** Build relationships with neighboring landowners.

**Strategy 1:** Work with neighbors to minimize boundary issues, trespass, or any other issues affecting the conservation area or adjoining private property (Wildlife)

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

## **VIII. 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 infrastructure at Level 1 according to the 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. (Wildlife)

## **MANAGEMENT TIMETABLE**

All strategies for this management plan are considered ongoing.

## APPENDICES

### **Area Background:**

The Robert M. White II Conservation Area (White CA) is in Audrain and Monroe counties, approximately 11 miles north and east of Mexico, Missouri. On October 31, 1986, the Department paid \$233,500 for 1,038 acres from Mr. Robert M. White II. Mr. White donated the other half of the purchase price. A land trade with Mr. Ken Roth in January 1991 netted an additional 125 acres, bringing the area to its current acreage of 1,163 acres.

Prior to settlement, the conservation area was occupied by tall grass prairie and oak-hickory savanna/woodlands. After settlement it was used intensively for cropping and grazing livestock. Some of the timber was cleared and much of the prairie was cropped. The pastures that remained were converted to fescue.

Mr. White acquired the property over a period of 10 years and worked with the Soil Conservation Service and the Department to protect the soil and improve wildlife habitat. He constructed waterways, terraces, and the two largest lakes on the area. In addition, he planted trees, shrubs, warm-season grasses, and protected the timber and fence rows from grazing.

White Lake's construction was completed in 1978 prior to acquisition by the Department. White Lake was originally built for irrigation, but it was never used for that purpose. There is a 12-inch welded steel drain pipe with an inlet 3 feet below the spillway level that allows for water manipulation up to 3 feet. The lower end of this pipe, where it exits the back of the dam, became structurally unstable and was replaced in 2011. An eroded section at the base of the dam, where the drain pipe exited, was also repaired at the same time.

The lake and area ponds were opened to public fishing in 1986. At that time, the fisheries in the lake and most of the fishing ponds were comprised of largemouth bass, bluegill, channel catfish, green sunfish, and hybrid sunfish (bluegill green sunfish cross). The fisheries in the areas lakes and ponds have not changed much since the conservation area was acquired. Boy Scout Lake was constructed in 1975. There are no records showing when the rest of the ponds were built.

**Current Land and Water Types:**

<b>Land/Water Type</b>	<b>Acres</b>	<b>Miles</b>	<b>% of Area</b>
Forest	617		53
Crop	238		20
Old field	153		13
Grassland	122		10
Lake/ponds	19		2
Stream	13		1
Infrastructure	1		<1
<b>Total</b>	<b>1,163</b>		<b>100</b>
Stream Frontage		5.35	

**References:**

Johnson, Paul. 2011. Robert M. White Forest Inventory Prescript.

Missouri Department of Conservation. (2009). *Watershed and stream management guidelines for lands and waters managed by Missouri Department of Conservation*. Jefferson City, Missouri: Missouri Department of Conservation.

Missouri Department of Conservation. (2014). *Missouri watershed protection practice recommended practices for Missouri forests 2014 management guidelines for maintaining forested watersheds to protect streams*. Jefferson City, Missouri: Conservation Commission of the State of Missouri.

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

**Maps:**

Figure 1: Area Map

Figure 2: Land Cover Types

Figure 3: Aquatic Resources Map

Figure 4: Topographic Map

Figure 5: Forestry Management Prescriptions Map

Figure 6: Forest Community Types Map

Figure 7: Easement Map

Figure 1: Area Map

# ROBERT M. WHITE II CONSERVATION AREA

AUDRAIN AND MONROE COUNTY  
1,163 ACRES

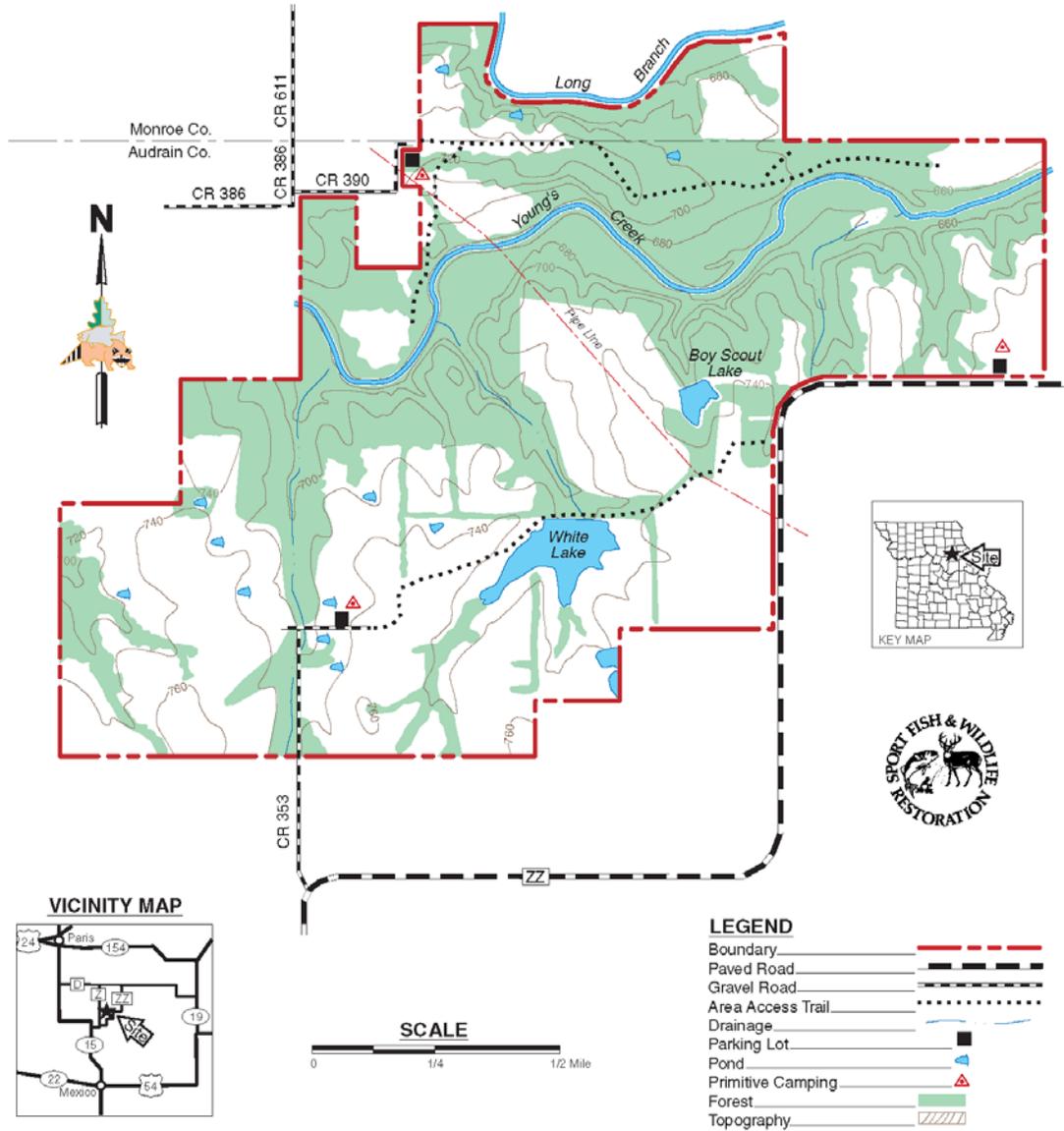


Figure 2: Land Cover Types

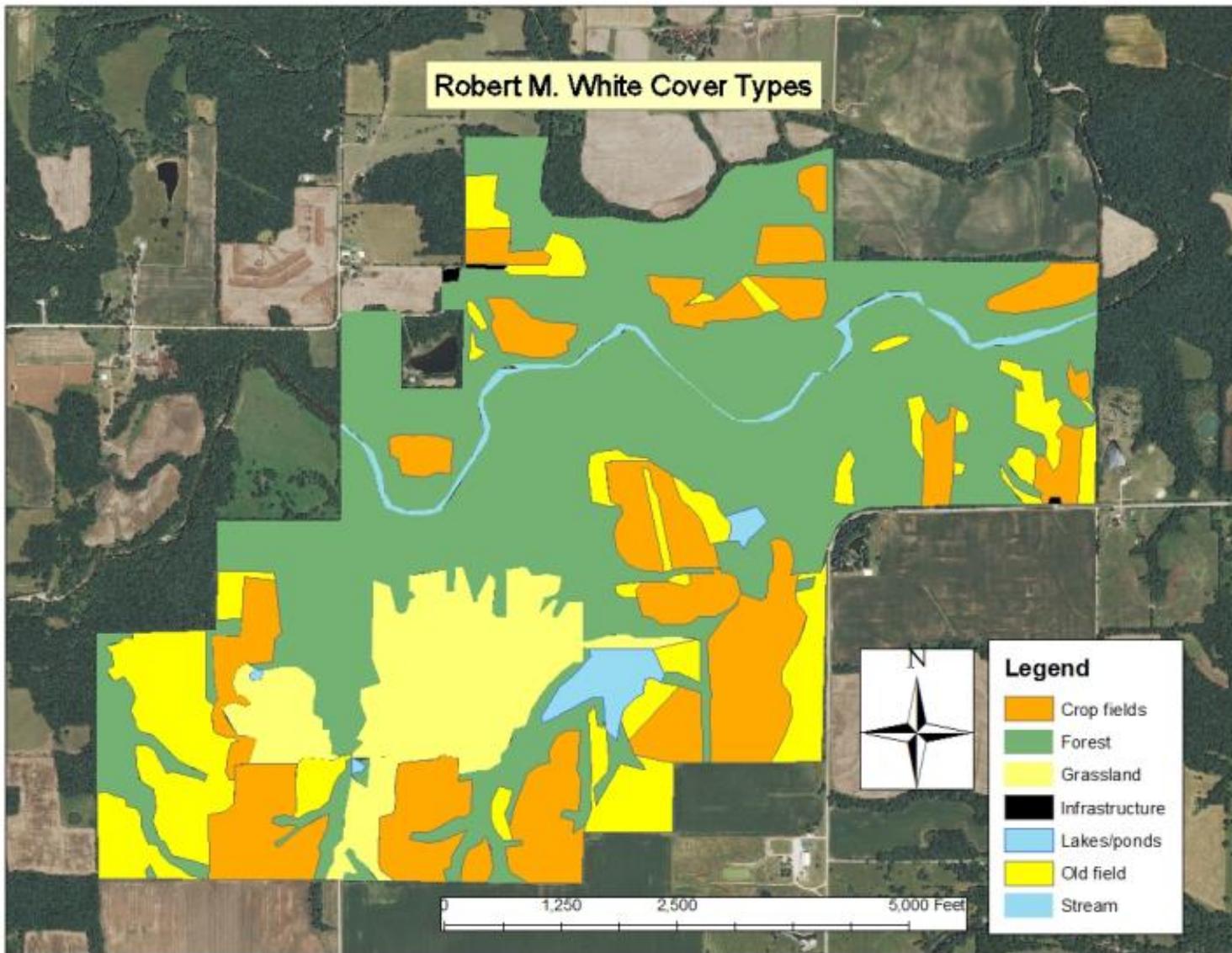


Figure 3: Aquatic Resources Map

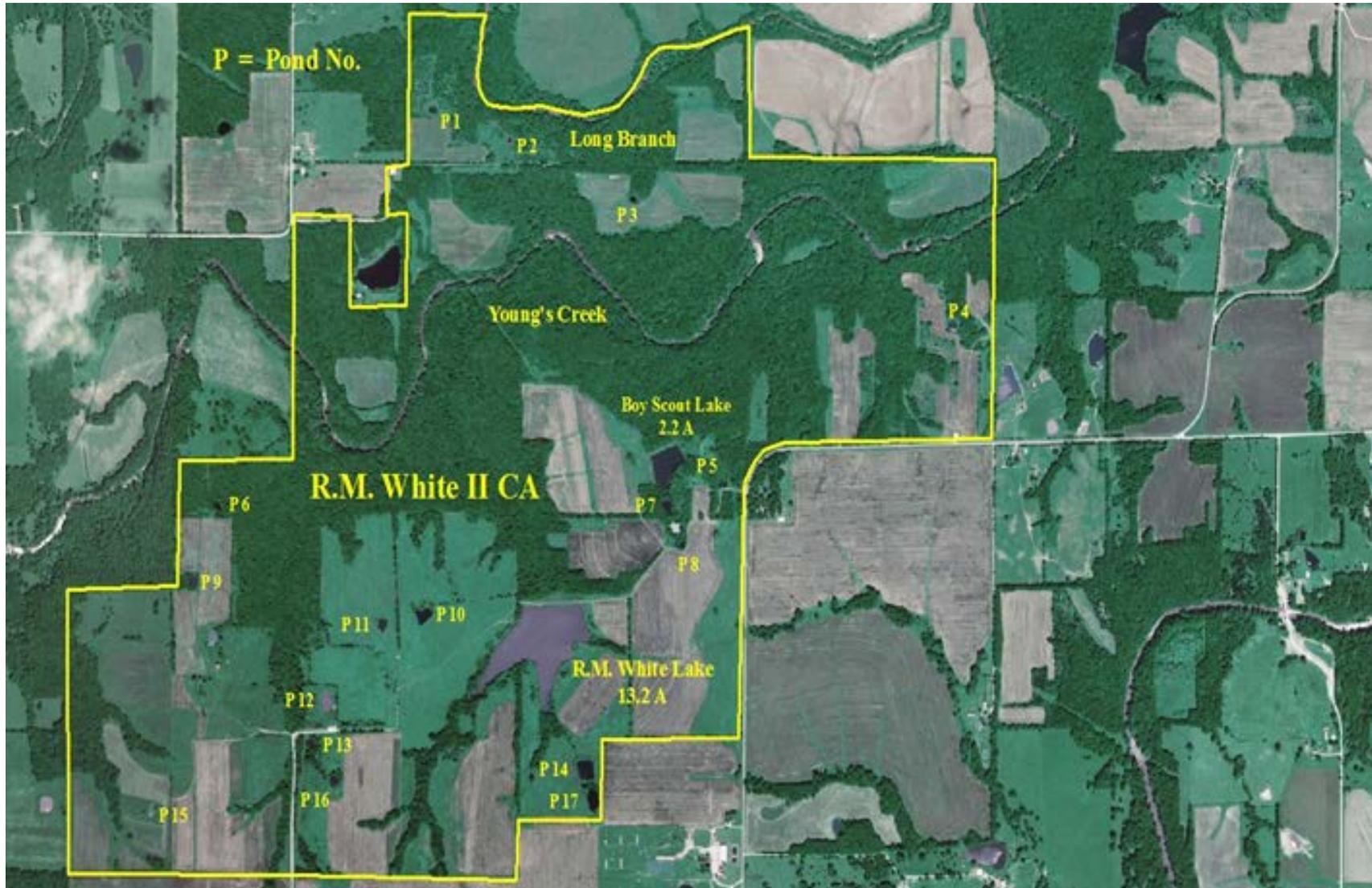


Figure 4: Topographic Map

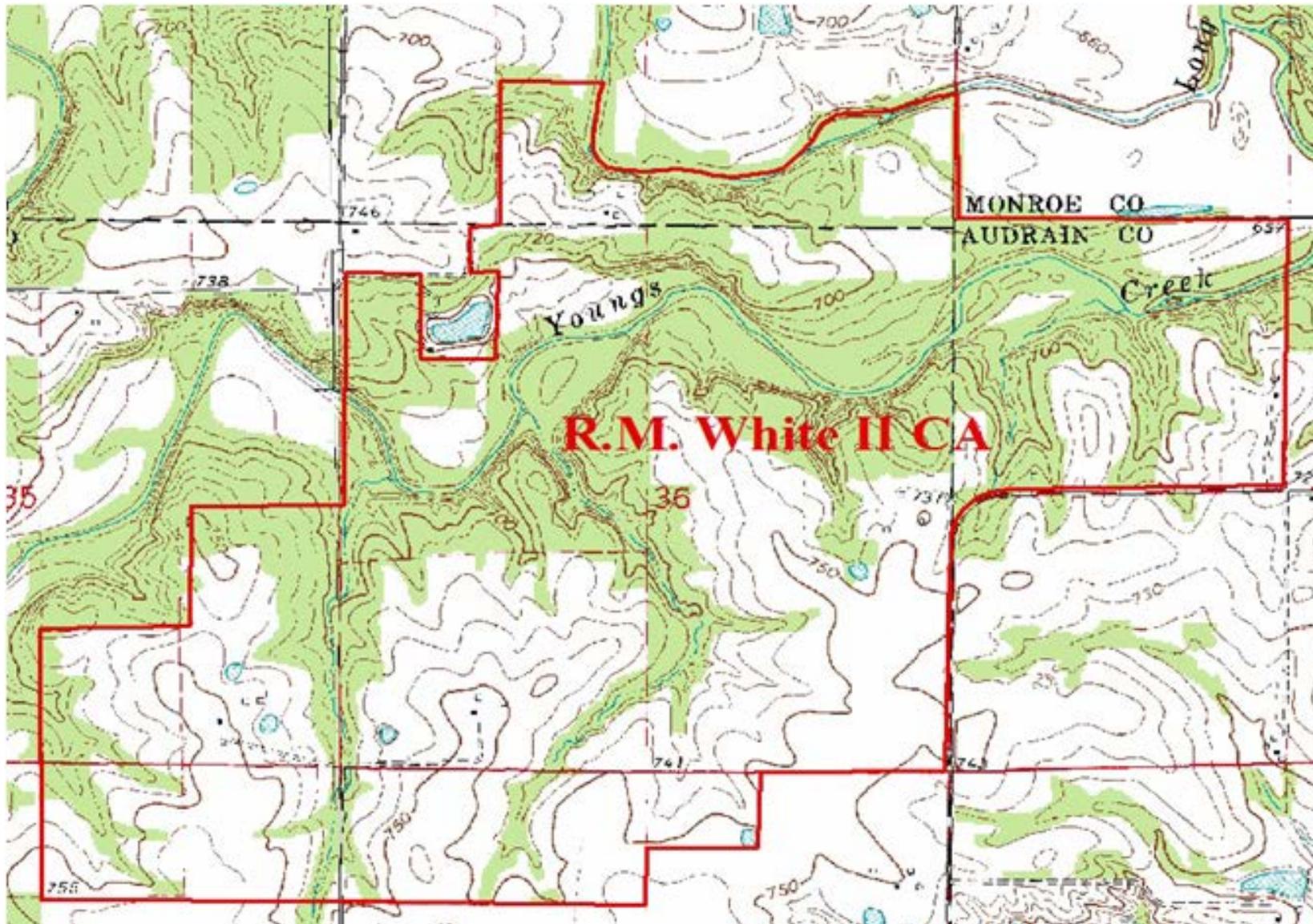


Figure 5: Forestry Management Prescriptions Map

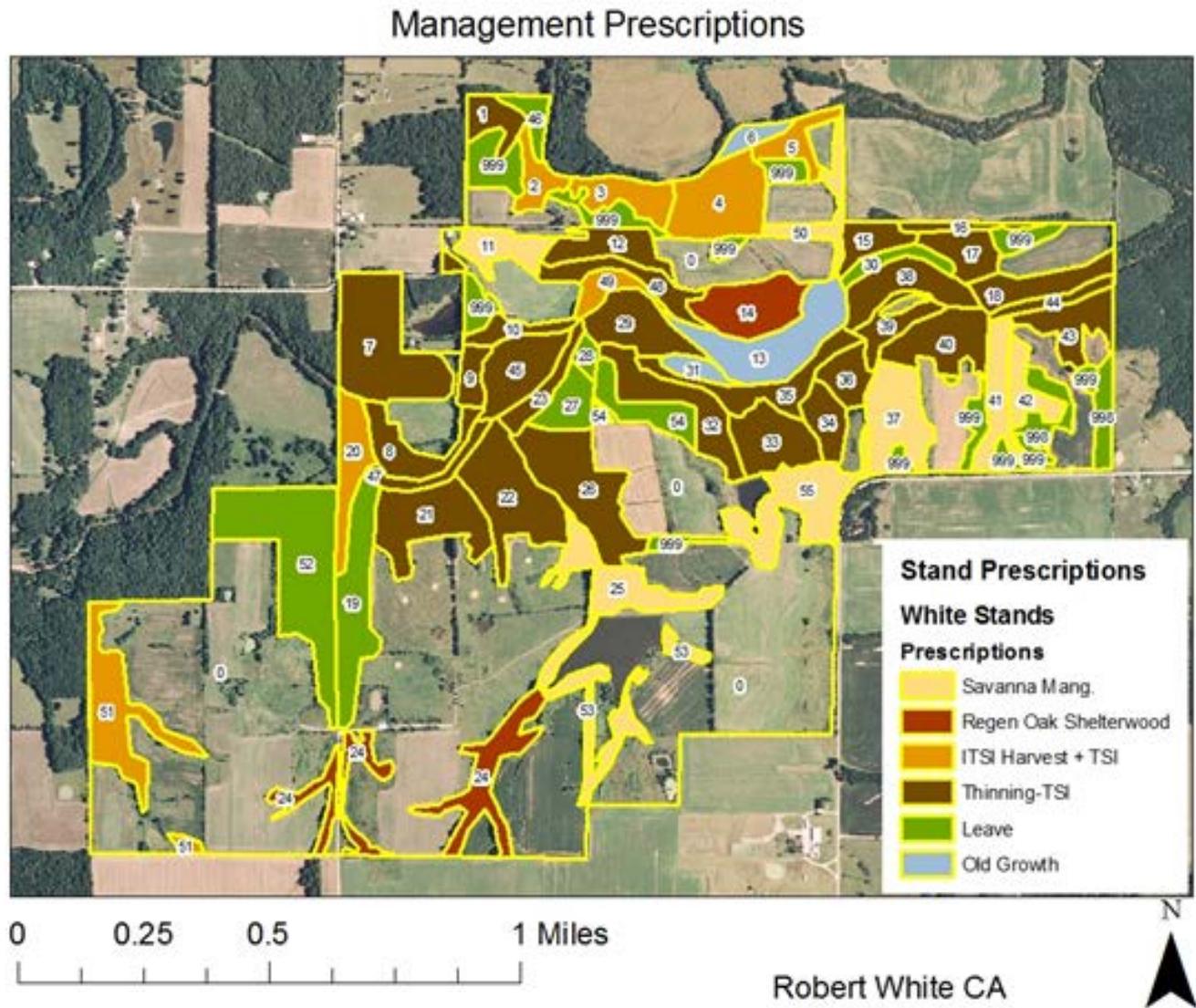


Figure 6: Forest Community Types Map

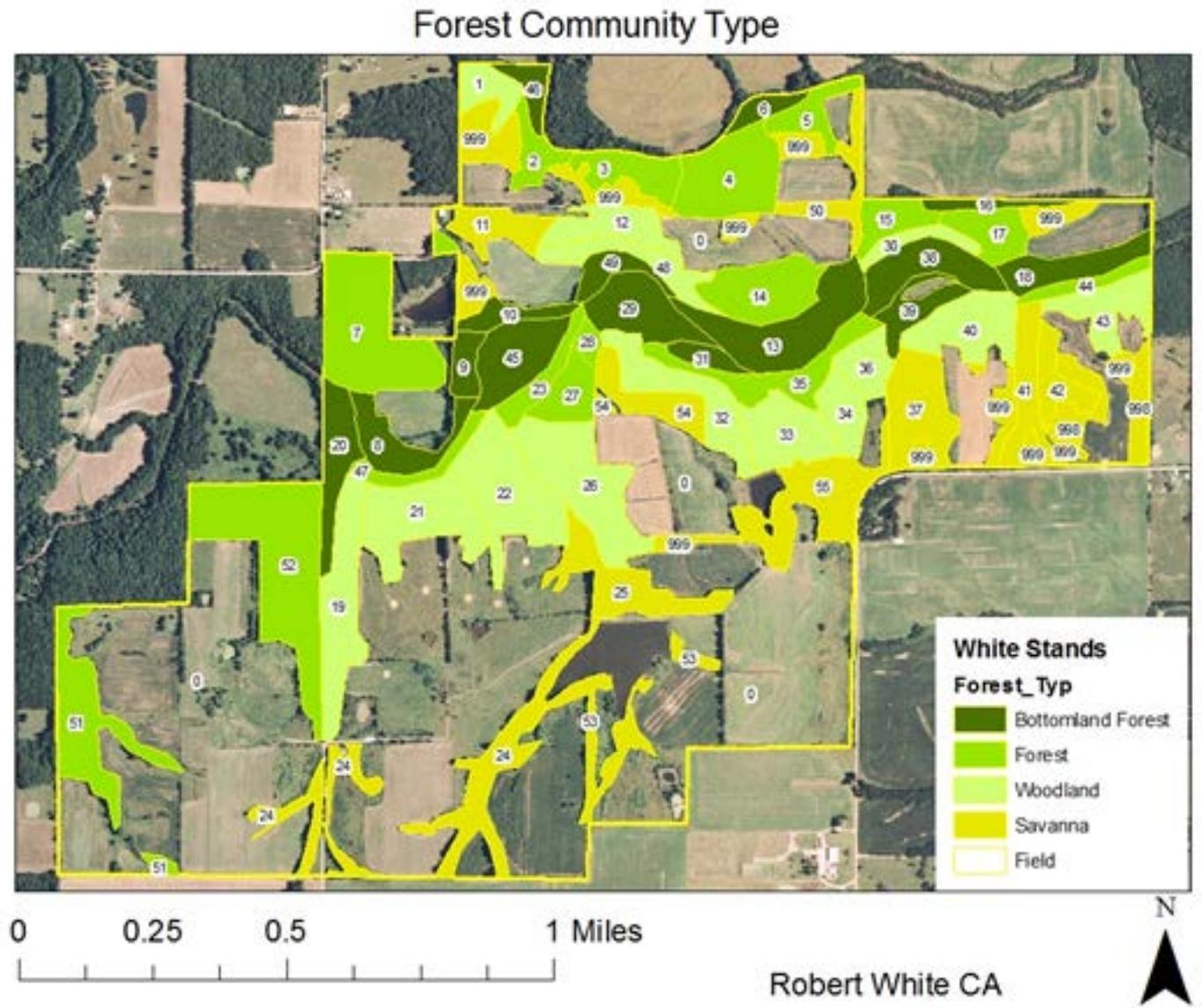
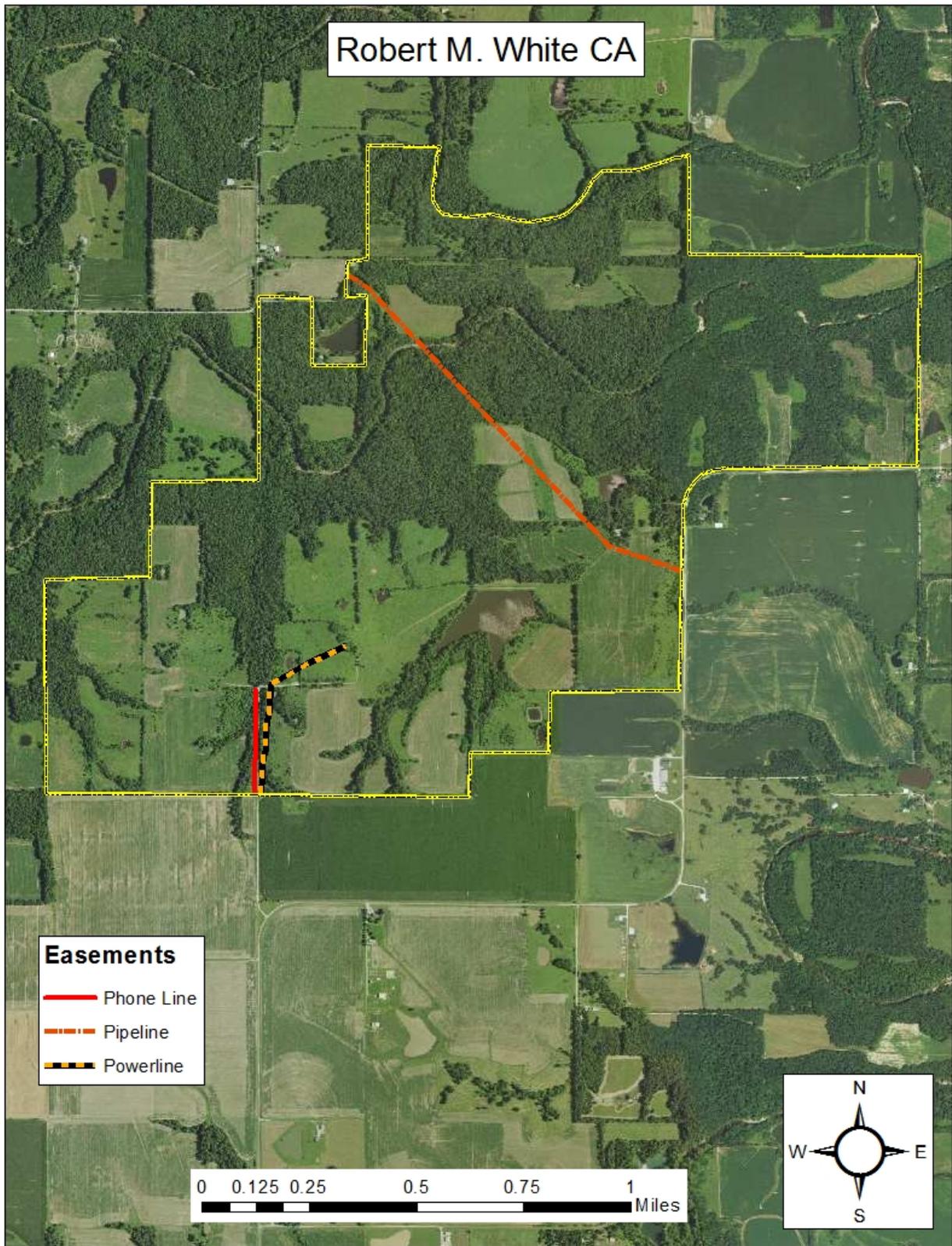


Figure 7: Easement Map



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