

DRAFT

University Forest Conservation Area

Ten-Year Area Plan
FY 2019-2028



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OVERVIEW

- **Official Area Name:** University Forest Conservation Area, #8850
- **Year of Initial Acquisition:** 1988
- **Acreage:** 7,149 acres
- **County:** Butler, Wayne
- **Region:** Southeast
- **Administrative Responsibility:** Forestry
- **Maintenance Responsibility:** Forestry
- **Statement of Primary Purpose:**
 - A. **Strategic Direction**

To manage and sustain the existing forest and woodland natural communities and enhance the quality of wildlife habitat for a variety of species through forest/woodland management. Emphasis is on managing forest and woodland wildlife and providing opportunities for public use and recreation.
 - B. **Desired Future Condition**

The desired future condition of University Forest Conservation Area (CA) is a diverse upland forest and woodland habitat that will support and sustain all of the area's natural communities and associated wildlife; and provide opportunities for the public to use and enjoy the area's natural resources.
 - C. **Federal Aid Statement**

N/A

GENERAL INFORMATION AND CONDITIONS

- I. **Special Considerations**
 - A. **Priority Areas:** Priority Forest Landscape, Audubon Missouri Important Bird Area
 - 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
 - C. **Other:** University Forest CA is in the Wappapello Oak-Pine Woodland/Forest Hills Landtype Association (Nigh & Schroeder, 2002). Natural communities on this area include upland oak-hickory forests and woodlands. Shortleaf pine oak-pine forest and pine-oak woodland occur in the northern part of the area, primarily on Compartment 9.

III. Existing Infrastructure

- Nine gravel parking lots
- Multi-use hike/bike/horse trails, 19 miles
- Gravel road, 12 miles
- Eight pipe gates
- 29 fishless ponds (less than 0.25 acres each)

IV. Area Restrictions or Limitations

- A. Deed Restrictions or Ownership Considerations:** Chaonia Volunteer Fire Department has a 99-year lease on 2 acres at the junction of Missouri Highways W and 172.
- 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:** Butler County road easement, Doniphan Telephone Company utility easement, and the State of Missouri right of way easement (Figure 4)
- D. Cultural Resources Findings:** No known cultural resources.
- E. 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.
- F. Boundary Issues:** Establishing accurate and identifiable boundary markers is a priority for this property.

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

The area is divided into nine management compartments (Figure 2). Initial forest management from 1989 through 2000 included conducting about 800 acres of even-aged regeneration harvests with some intermediate thinning harvests scattered across the nine compartments. Since 2000, each of the nine compartments has had some uneven-aged harvests, where the most serious red-oak decline has occurred.

Challenges and Opportunities:

- 1) Sustain and restore a diverse forest structure that provides for enhanced wildlife habitat.
- 2) Sustain and restore some oak woodlands and pine-oak woodlands for enhanced wildlife habitat. Wildlife populations are secure and abundant because of the large block of forested cover. Wildlife species using the area are typical of most

southeast Missouri upland oak-hickory and oak-pine forests and woodlands. Deer, turkey, squirrel, both migrant and resident songbirds, amphibians, reptiles, and some bats use the area.

- 3) Protect existing research areas and promote the use of area for demonstration and teaching. With the purchase of University Forest CA, the Missouri Department of Conservation (Department) agreed to allow the University of Missouri access and use of the area for its teaching, research, and education activities. Several areas on the forest have had university sponsored forest research and some of these areas are maintained and dedicated as research areas (Figure 5).

Objective 1: Manage the forest for tree species mixes and diverse forest canopy structure characteristic of the appropriate natural community for the site.

Strategy 1: Follow the Southeast Region Forest Inventory schedule and inventory each compartment on a 10-to-20-year re-entry as scheduled. (Forestry)

Strategy 2: Develop and implement forest management actions (harvest and forest thinning) from inventory data, as budget and time constraints allow. (Forestry)

Strategy 3: Both even-aged and uneven-aged (or all-aged) harvests and forest thinning will be used to create forest habitat conditions suitable for upland forest wildlife species. (Forestry)

Strategy 4: Continue the “Old Growth” designation for approximately 10 percent of the acreage in each compartment. (Forestry)

Strategy 5: Continue pre-commercial thinning on all 20-to-25-year old regeneration stands. (Forestry)

Objective 2: Maintain and restore oak woodland and oak pine woodlands.

Strategy 1: Use tree thinning and prescribed fire as tools to restore woodlands. (Forestry, Wildlife)

Strategy 2: Manage the six woodland restoration units that occur on 550 acres in Compartments 2, 5, 6, 8, and 9 (Figure 2). These units are on a three-to-five-year prescribed burn rotation. (Forestry)

Strategy 2: Consider adding more woodland restoration units based on identification in forest inventory. Add as budget and time constraints allow in the future. (Forestry, Wildlife)

Objective 3: Continue to protect existing research areas and facilitate the use of area for teaching and research.

Strategy 1: Protect and assist with existing research areas until University of Missouri and the Department decide the use of area is no longer needed. (Forestry)

Strategy 2: Facilitate the use of area for future University of Missouri research that is mutually agreeable to the Department. (Forestry)

VI. Aquatic Resource Management Considerations

Fisheries management potential is limited on the area. The area includes two intermittent streams: Bluewater Creek flows through the area for 0.25 miles and Asher Creek flows through the area for 0.5 miles. Twenty-nine wildlife watering holes (less than 0.25 acres each) were constructed on the area in 1992. These are very small fishless ponds. Three older small ponds occur on the area, but are too small to manage for fish populations. There are substantial year-round fishing opportunities on nearby Wappapello Lake.

Challenges and Opportunities:

- 1) Reduce sedimentation in all streams by establishing and protecting riparian corridors. There are no known erosion problems along the area streams.
- 2) Maintain stream crossings on access roads.

Objective 1: Protect and enhance the riparian corridor on all streams on the area.

Strategy 1: Minimize sedimentation into streams from all land management practices and access roads. Follow practices recommended in the Department's *Missouri Watershed Protection Practice: 2014 Management Guidelines for Maintaining Forested Watersheds to Protect Streams* (2014). (Forestry)

Strategy 2: Maintain a riparian corridor with a minimum of 50 feet from the top of the bank on each side of stream orders one and two, as recommended in the Department's *Watershed and Stream Management Guidelines* (2009). (Forestry)

Strategy 3: Maintain armored crossings on service roads in Compartments 5 and 8. (Forestry)

VII. Public Use Management Considerations

Challenges and Opportunities:

- 1) Maintain University Forest CA as a walk-in hunting area for area users.
- 2) A 19-mile hike/bike/horse multi-use trail was constructed with the help of a local equestrian club in 1992-1995. Maintain the trail as a horseback riding, hiking, and biking trail.
- 3) Maintain area infrastructure.

Objective 1: Maintain current hunting and recreational access.

Strategy 1: Maintain the area as a walk-in only hunting area. Camping is not permitted. (Forestry)

Strategy 2: Maintain the 19 miles of multi-use trail and 12 miles of two-track gravel roads for public use. All trails are open for hiking, biking, and horse-riding. (Forestry)

Objective 2: Maintain area infrastructure in accordance with Department standards.

Strategy 1: Maintain current parking lots and 12 miles of gravel road. (Forestry, Design and Development)

Strategy 2: Maintain area boundary lines on a rotating five- to seven-year schedule. (Forestry)

VIII. Administrative Considerations

Challenges and Opportunities:

- 1) Consider land acquisition, when available.

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:

	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Terrestrial Resource Management										
<i>Objective 1</i>										
Strategy 1	X		X		X		X		X	

APPENDICES

Area Background:

This 7,149-acre area was originally endowed to the University of Missouri by the federal government as part of the Agriculture College Act of 1862. The School of Forestry, Fisheries, and Wildlife took responsibility for the area in the early 1900s and in 1946 began managing the area for research and as a forestry student summer camp.

University Forest CA was purchased from the University of Missouri in 1988. At that time, little forest disturbance and management had occurred since the exploitation era (prior to 1947) of overharvesting, open livestock range, and wildfires. By 1988, many of the forest stands had matured and much of the red oak component of the forest was declining. A large area of similar mature forests predominates in U.S. Forest Service and U.S. Army Corps of Engineers Wappapello Lake public lands that surround University Forest CA.

The area has been managed to provide public woodland recreational opportunities, provide a place for forest research and teaching, and serve as a demonstration area for the effects of forest management on forest products and wildlife habitat.

The area primarily consists of oak-hickory forest and woodlands and some shortleaf pine forest and woodlands. The forest provides habitat for deer, turkey, woodpeckers, squirrels, songbirds, and other typical Ozark wildlife.

Current Land and Water Types:

Land/Water Type	Acres	Miles	% of Area
Forest and woodland	7,139		100
Ponds and water	10		<1
Total	7,149		100
Stream Frontage (Intermittent) – Bluewater Creek		0.25	
Stream Frontage (Intermittent) – Asher Creek		0.50	

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. (2014). *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.

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

Maps:

Figure 1: Area Map

Figure 2: Management Compartments Map

Figure 3: Land Cover Map

Figure 4: Easement Map

Figure 5: Research Reserve Map

Figure 1: Area Map

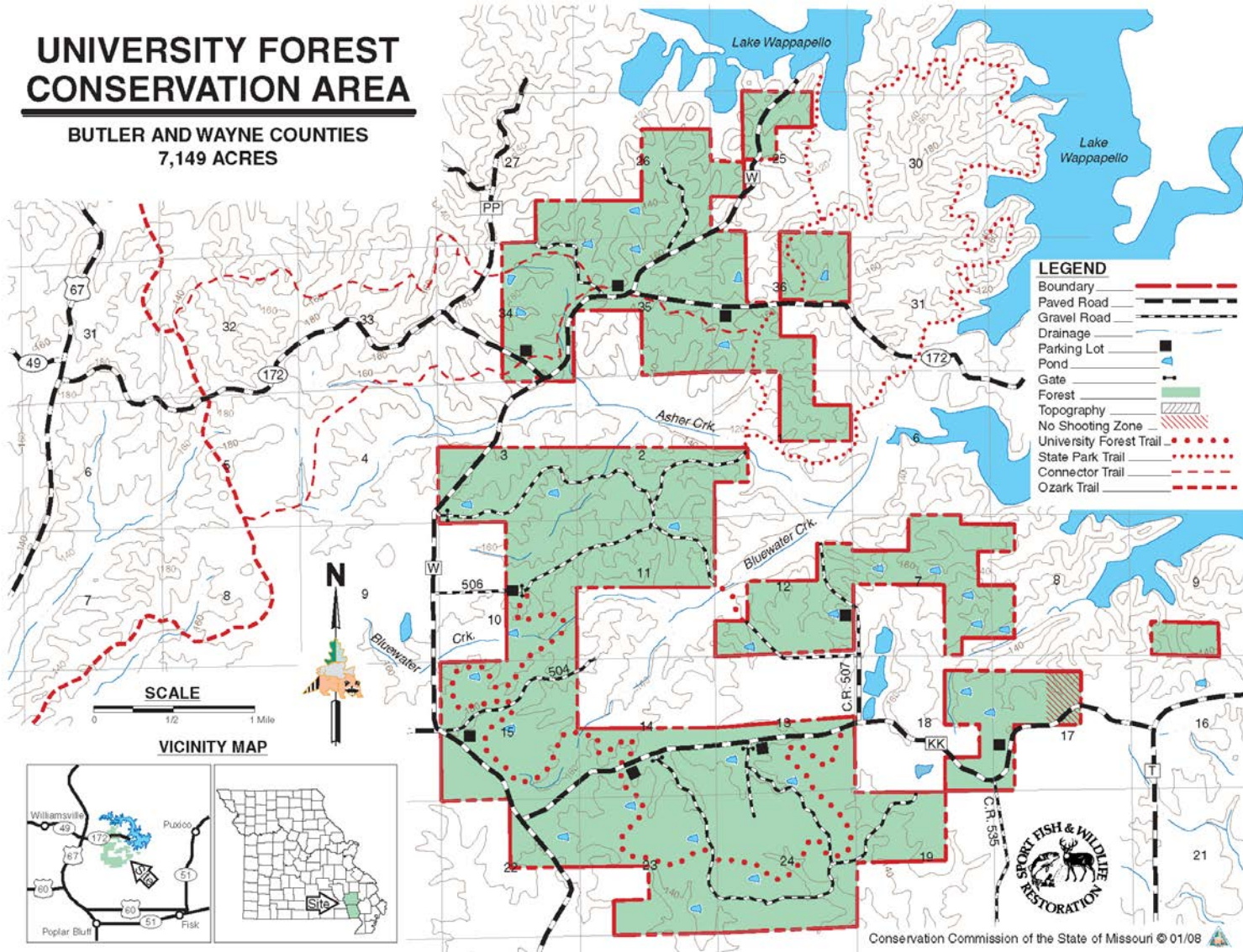


Figure 2: Management Compartments Map

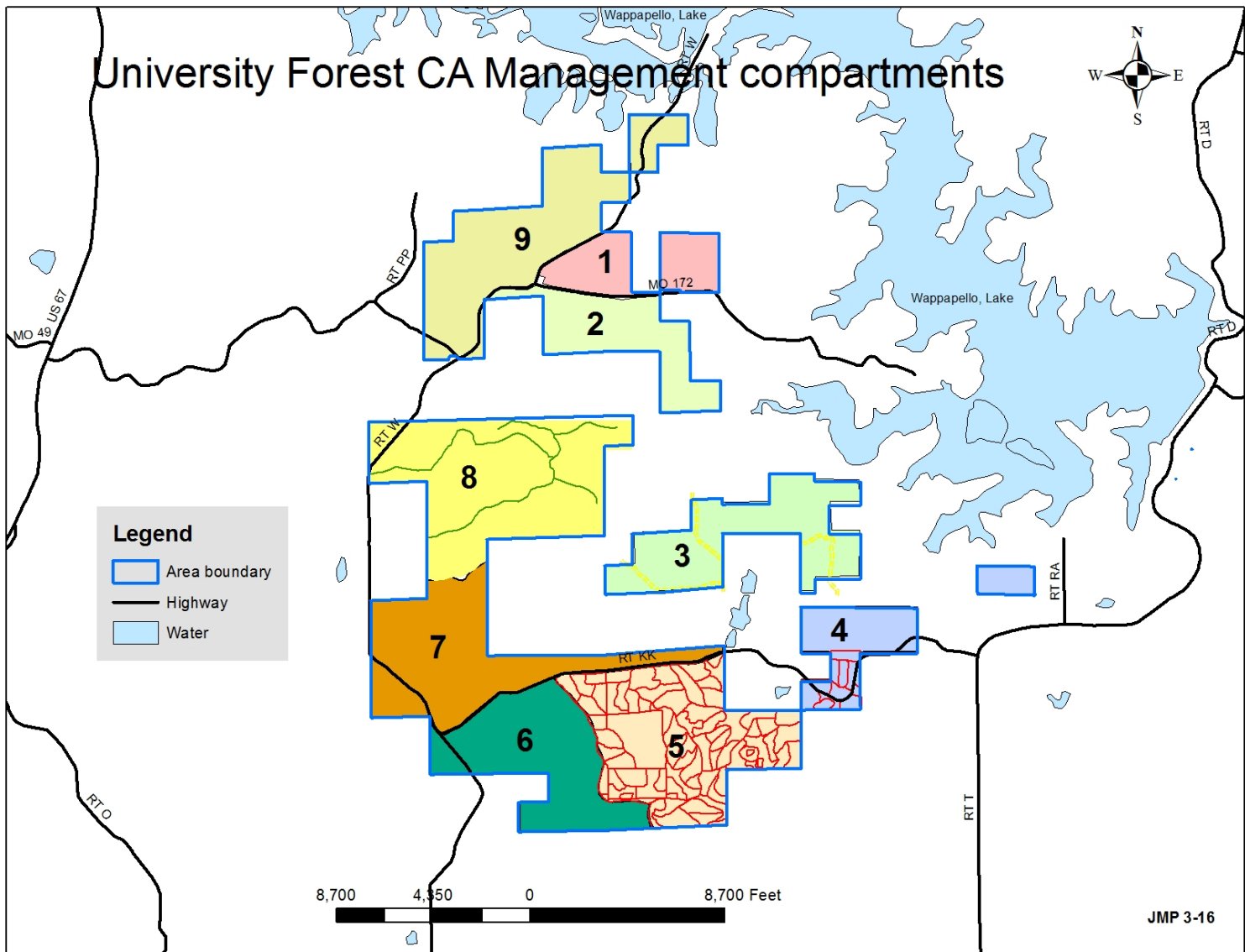


Figure 3: Land Cover Map

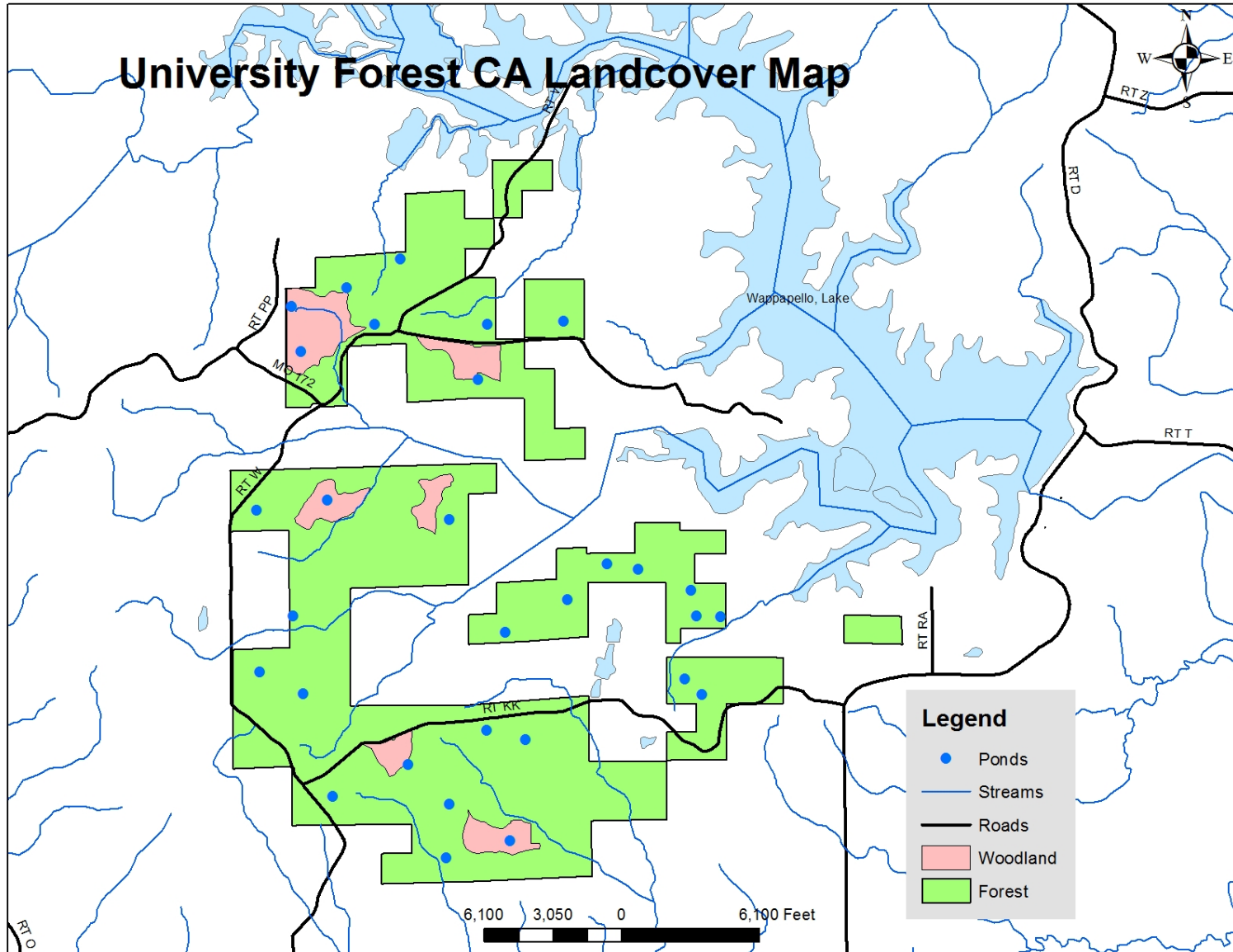


Figure 4: Easement Map

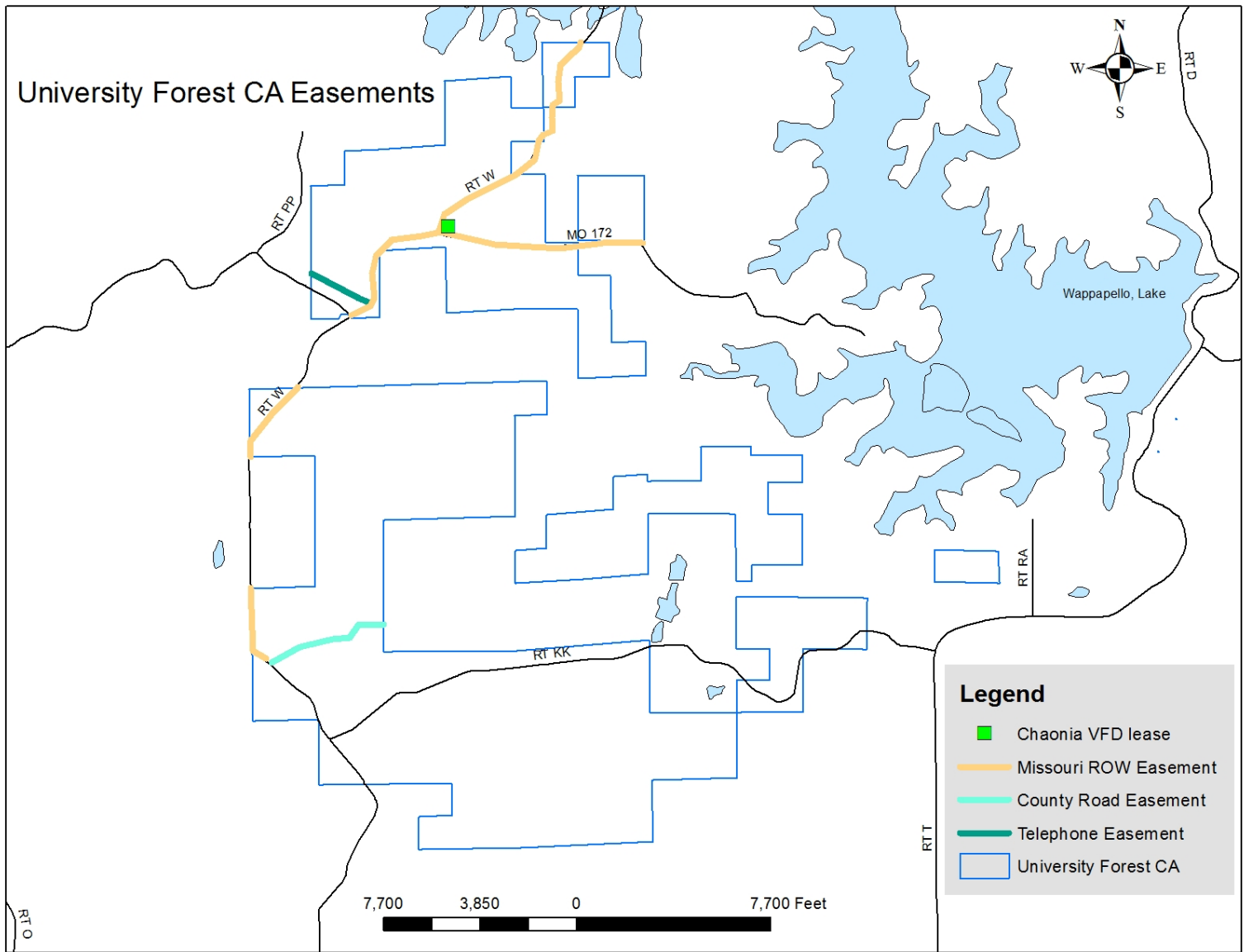
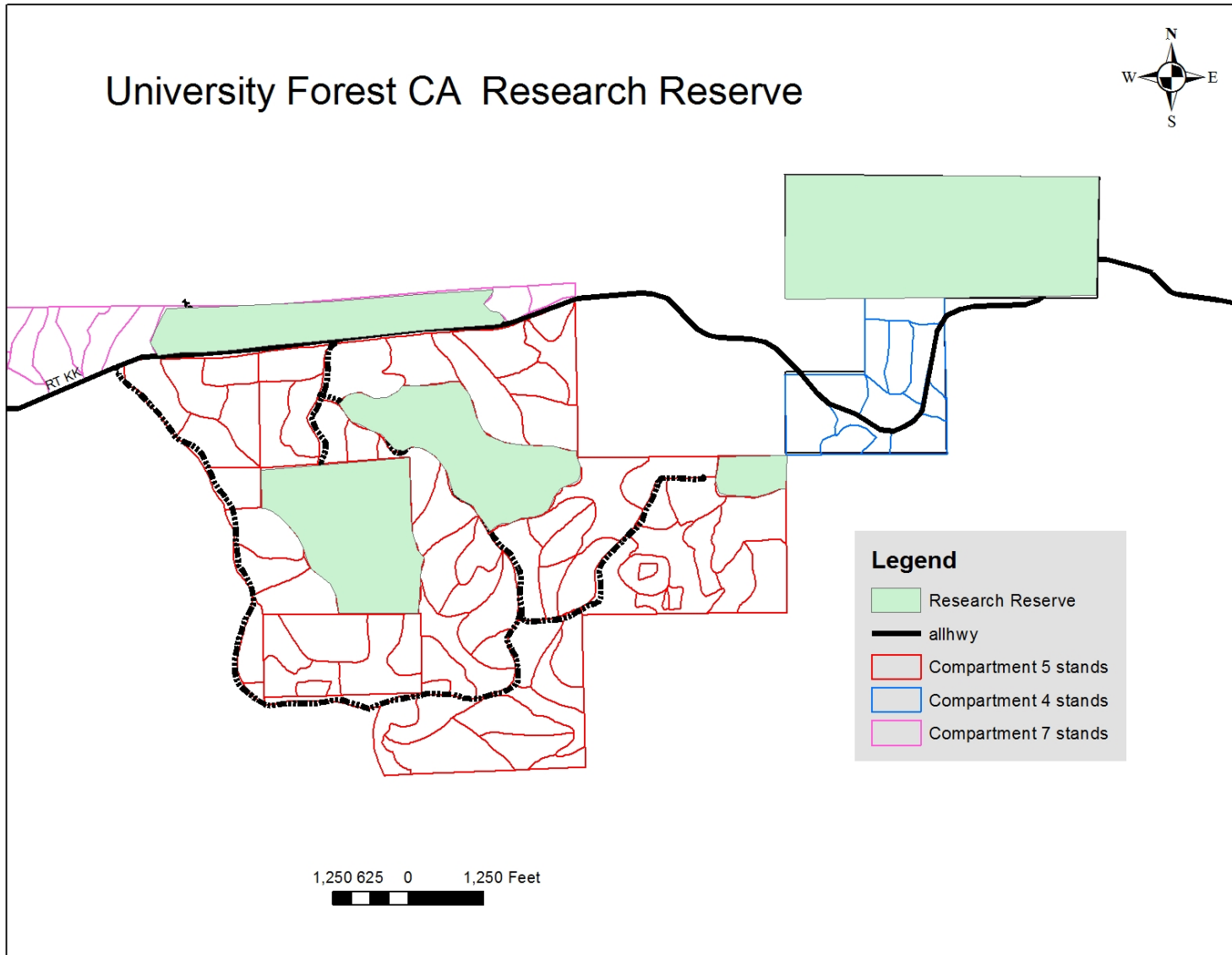


Figure 5: Research Reserve Map



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