

DRAFT

Current River

Conservation Area

Ten-Year Area Management Plan
FY 2017-2026



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OVERVIEW

- **Official Area Name:** Current River Conservation Area, # 9515
- **Year of Initial Acquisition:** 1925
- **Acreage:** 28,000 acres
- **Counties:** Shannon, Reynolds, Carter
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**
 - A. Strategic Direction**
 1. Maintain contiguous forest and woodland cover to provide a diversity of habitat for native plants and animals.
 2. Maintain and enhance water quality in the Current and Black River watersheds.
 3. Collaborate with conservation partners such as the National Park Service, private landowners, and others to coordinate conservation efforts on adjacent areas.
 4. Continue to use the area as a study area for the Missouri Ozarks Forest Ecosystem Project (MOFEP).
 5. Maintain and enhance the area's open land and woodlands for a variety of wildlife species and contribute to elk restoration efforts.
 6. Protect the area's natural and cultural features such as Blue Spring Natural Area, Fort Barnesville, Cardareva Bluff Natural Area, and other sensitive sites.
 - B. Desired Future Condition**

The desired future condition of the Current River Conservation Area (CA) is a diverse contiguous forest/woodland landscape that provides outdoor opportunities for multiple user groups from conditions created by the application of modern conservation practices.
 - C. Federal Aid Statement**

This area, or a portion thereof (in Shannon County), 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 and other wildlife-oriented recreation.

GENERAL INFORMATION AND CONDITIONS

- I. Special Considerations**
 - A. Priority Areas:** Current River CA is a Priority Forest Landscape within the Current River Breaks Terrestrial Conservation Opportunity Area, where the Missouri Department of Conservation (the Department), National Park Service, Pioneer Forest, The Nature Conservancy, U.S. Forest Service, Missouri Department of Natural Resources, and other natural resource managers have opportunities to work together on conservation priorities on a landscape scale.

- B. Natural Areas:** Blue Spring Natural Area contains the 6th largest spring in Missouri with a discharge of 90 million gallons per day. It is also the deepest known spring in Missouri, with a primary conduit at least 300 feet deep. The spring supports cold water aquatic species including plants, fish and invertebrates, including some that are species of conservation concern (Missouri Department of Conservation, 1999). Cardareva Bluff Natural Area contains a wide range of community types from dry dolomite cliffs to mesic bottomland forest. These communities support a wide range of native plants and animals including species of conservation concern such as the cerulean warbler that utilizes the mature forests along the Current River and at the base of the bluffs
- C. Other:** Current River CA is within an Audubon Important Bird Area. The Current River/Jacks Fork River Watershed Important Bird Area was recognized for its extensive contiguous forest cover and its ability to provide nesting habitat for forest-interior songbirds.

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:** Yes, records kept with Department natural history biologist. Managers should follow the Cave Management policy found in the Department Resource Policy Manual. All caves on this and other conservation areas are closed or restricted to public access. The fungus that causes White-nose Syndrome in bats has been documented in Missouri, resulting in the Department's White-nose Syndrome Action Plan that limits public access to protect bats.
- C. Springs:** Blue Spring is located on the west side of the area. Blue Spring is among Shannon County's most popular destinations for area visitors, and is Missouri's sixth largest spring, with an average daily flow of 90 million gallons.
- D. Other:** Current River flows along the area's south-west boundary. It is an important recreational resource for the Department and National Park Service area users. The use of proper best management practices and being considerate of aesthetics along the river corridor is important to retain the area's pristine natural character. Consult the Department/National Park Service Memorandum of Understanding, when appropriate, for management guidance and or restrictions near the river. The area has a rich diversity of habitat types.
- The dominant Land Type Associations of the area are the Current and Black River Oak-Pine Woodland/Forest Hills. These forested landtypes consist of mostly even-age mixed scarlet, black, and white oak, as well as the native range of shortleaf pine. Other habitat types within the area are Ozark stream corridors,

open and semi-open dolomite glades of exposed bedrock, mesic and xeric bottomland forest, and dry forested sinkholes. (Nigh & Schroeder, 2002)

III. Existing Infrastructure

- Ellington Department Office
- Missouri Ozark Forest Ecosystem Project housing
- Two residences that are occupied by area staff (Civilian Conservation Corps [CCC] era)
- One barn (CCC era)
- One garage (CCC era)
- One historic cabin (CCC era)
- Hiking trail (1.5 miles)
- One fire tower
- Two fishing jetties/platforms
- Deer Run Archery Range (unstaffed)
- Deer Run Shooting Range (Americans with Disabilities Act [ADA] accessible, unstaffed)
- Two parking lots (ADA accessible)
- Eight picnic tables
- One privy/restroom (ADA accessible)
- One staffed office (ADA accessible)
- One radio relay and accompanying tower in cooperation with the Missouri Highway Patrol (see Figure 7)
- Buford Pond (3-acre stocked fishing pond)
- 32 wildlife watering holes (15 acres total)
- One overlook platform at Blue Spring
- Approximately 50 pipe gates/cable road closure structures

IV. Area Restrictions or Limitations

- A. Deed Restrictions or Ownership Considerations:** The Department has a Memorandum of Understanding with the National Park Service on portions of the west side of the area in regard to resource management. The Memorandum of Understanding should be consulted before conducting management activities in these areas.
- B. Federal Interest:** Uses 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.

C. Easements:

- Ozark National Scenic Riverways, scenic easement along the Current River corridor.
- Black River Electric Cooperative has an easement for an underground transmission line of 0.75 acres (Section 25, T29N, R2W).
- Ozark Border Electric Cooperative overhead transmission line runs down Paint Rock Creek, going in and out of state-owned property, to the Log Yard Access on the Ozark National Scenic Riverways.
- There are 1.26 acres located in the southeast corner deeded for school purposes (SE ¼ SE ¼ of Section 33, T29N, R1W). The school structure is no longer in existence, which would lead to the premise that the 1.26 acres would revert back to the state.
- The U. S. Geological Survey has an easement to install water flow measuring equipment in Blue Spring.
- The following county roads cross a portion of Current River CA: Shannon County Roads 539, HH-555, and the Paint Rock Road. Reynolds County Roads 620 and 626 cross portions of the area. State Highway HH crosses segments of the forest also.
- M. A. O'Brien has the full right and privilege of executing leases for oil, gas, coal, and all other minerals, totaling 1,740 acres (Section 25, 26, 27, 34, and 35, T29N, R1W).
- Black River Electric Cooperative supplies electricity to Deer Run Tower and the Radio Relay Tower.

D. Cultural Resources Findings: Yes, records kept with the Department environmental compliance specialist. Managers should follow Best Management Practices for Cultural Resources found in the Department Resource Policy Manual.

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 majority of land at the Current River CA is typical of the Ozarks. The area contains black and scarlet oak-dominated forests that evolved after decades of woods burning which was done in an attempt to maintain forage for open-range livestock production. Subsequent timber liquidation style cutting, around 1900, removed pine seed trees and merchantable hardwood, and created an even-aged forest structure. With the absence of the fire, oaks (which sprout vigorously) dominated the forest, and matured with a high stocking density. Today, most of the forests are in an even-aged condition. The area is managed with an emphasis on forest ecosystem health, tree species diversity, and to maintain or enhance wildlife habitat.

The Current River CA is the home to a portion of the Missouri Ozark Forest Ecosystem Project (MOFEP). This project is a 100-year project assigned to monitor the long-term effects of different forest management regimes covering 9,000 acres of Ozark forest and its associated plant and animal life. There are six MOFEP compartments in the Current River CA, each is approximately 1000 acres in size. The MOFEP Compartments will receive the following treatments as prescribed each 15 year inventory cycle: Two even-aged, two uneven-aged, and two control units that will be left unmanaged. The next MOFEP inventory will be conducted in 2024 and is noted on this plan. The subsequent 2025 timber sale marking and 2026 MOFEP harvest entry will be part of the 2025-2035 Current River CA Area Planning cycle.

Challenges and Opportunities:

- 1) Manage forests for a variety of habitat types, diversity of plant and animal species, and healthy forests.
- 2) Restore and maintain the natural ecosystem integrity of woodland and glade communities.
- 3) Collaborate with conservation partners to develop and maintain natural habitat that demonstrates sound natural resource management to the public.
- 4) Maintain open lands for elk habitat, as well as a suite of other animal species.
- 5) Control invasive species.
- 6) Some persistent forestry challenges are: lack of tree species diversity in a predominantly red oak forest, oak decline, poor public perceptions of timber harvesting, and difficulty with marketing suppressed small diameter trees of low vigor.

Management Objective 1: Maintain a healthy and diverse forest using a 20-year re-inventory cycle and subsequent management when necessary.

Strategy 1: Inventory compartments according to the management schedule. (Forestry)

Strategy 2: Implement forest and woodland management resulting from the forest inventory management prescriptions. Enhance tree species diversity when possible. (Forestry)

Strategy 3: Continue to challenge the local forest industry to improve by using the latest Department sale administration resources and providing staff opportunities to assist with, and/or attend Professional Timber Harvester Training, when available. (Forestry)

Management Objective 2: Implement woodland and glade community management to restore and maintain the natural ecosystem integrity on the site of application. *Missouri Department of Conservation. (2016). Draft Current River Conservation Area Woodland Management Plan – July 2016.*

Strategy 1: Restore and maintain glade and woodland communities throughout the area to provide high quality habitat. (Forestry, Wildlife)

Strategy 2: Continue to follow the work schedule set forth in the 2016 Current River Conservation Area Woodland Management Plan; 3,743 acres (See Figure 9. Woodland Management Tables). Plan specifies to monitor, and re-evaluate habitat outcomes as necessary. (Forestry and Wildlife)

Management Objective 3: Collaborate with conservation partners on developing and maintaining natural habitat that demonstrates sound natural resource management to the public.

Strategy 1: Monitor and collaborate with the National Park Service on the Booming Shoal prescribed burn to ensure that integrity remains on adjacent Department managed forests and MOFEP study sites (Resource Science, Forestry).

Management Objective 4: Manage open lands for elk habitat and a suite of other animal species, based on habitat needs identified by the area Wildlife Management Biologist, Resource Forester, and Elk Program Manager.

Strategy 1: Maintain the area's open lands in their present condition with a combination of mowing, chemical application, disking, and no-till drilling to establish and maintain legumes, as well as cool- and warm-season grasses. Consult the area's Elk Restoration Plan as needed. (Forestry, Wildlife)

Management Objective 5: Control invasive species.

Strategy 1: Control invasive species to preserve the native integrity of the forest ecosystem. (Forestry, Wildlife)

VI. Aquatic Resource Management Considerations

Challenges and Opportunities:

- 1) Continue to maintain the area's key wildlife watering holes and Buford Pond.
- 2) Protect and enhance riparian corridors along Current River, Blue Spring, and other tributaries of the Current and Black River Watersheds that occur on the area.

Management Objective 1: Continue to maintain the area's key wildlife watering holes and Buford Pond.

Strategy 1: Maintain fish and associated habitat at Buford Pond by conducting periodic fish population surveys, applying herbicide to control aquatic vegetation, and conducting annual channel catfish stockings. (Fisheries, Wildlife)

Strategy 2: Retain viability of fishless ponds and critical wildlife watering holes by removing brush from dams and enhancing amphibian habitat as needed. (Forestry, Fisheries, Wildlife)

Management Objective 2: Protect and enhance riparian corridors along Current River, Blue Spring, and other tributaries of the Current and Black River Watersheds that occur on the area.

Strategy 1: Use best management practices as defined in the *Missouri Watershed Protection Practice – 2014 Management Guidelines for Maintaining Forested Watersheds to Protect Streams* (Missouri Department of Conservation, 2014) to prevent soil erosion during timber harvests and temporary sale access road construction (Forestry, Fisheries, Design and Development)

VII. Public Use Management Considerations

Challenges and Opportunities:

- 1) Provide for hunting and nature viewing opportunities.
- 2) Provide educational and interpretive opportunities.
- 3) Build and maintain relationships with the local community.
- 4) Upgrade Blue Spring Foot Access Trail. The existing trail is frequently inundated and eroded with floodwater.

Management Objective 1: Provide optimum wildlife viewing opportunities.

Strategy 1: Use forest management treatments to enhance wildlife habitat for both game, and non-game animal species. Incorporate aesthetically pleasing viewsheds when opportunities arise, near existing open lands, and maintain open woodlands for viewing wildlife. (Forestry, Wildlife, Protection)

Management Objective 2: Provide educational and interpretive opportunities.

Strategy 1: Explore the possibility of a self-guided elk tour driving route on the area. Develop signage along the route that explains habitat management and associated wildlife for each respective habitat type. (Forestry, Wildlife, Outreach and Education)

Strategy 2: Continue to maintain Buford Pond and surrounding area for educational opportunities such as youth fishing clinics (Forestry, Fisheries).

Strategy 3: Engage the public and forest industry on the benefits of forest management by communicating the distinct difference between *managed harvests* (where the best trees are retained to provide a prescribed habitat condition) as opposed to *merchantability harvests* (where the biggest and best trees are removed with no regard to the outcome of residual habitat conditions). (Forestry)

Management Objective 3: Build and maintain relationships with the local community.

Strategy 1: Communicate the uniqueness of the area to local teachers, students, scout groups, and youth groups. Facilitate the area as a possible destination for ecology classes, school programs, university student field trips, and other workshops. (Forestry, Outreach and Education)

Management Objective 4: Maintain and upgrade the Blue Spring Foot Access Trail.

Strategy 1: Continue to explore the feasibility to upgrade the trail so that it is user-friendly and accessible to users with physical disabilities. The trail will soon require re-grading to level and the removal of tree roots. In addition, the installation of soil retaining devices is needed to fill holes that are currently a falling hazard along the river bank. (Forestry, Wildlife)

Strategy 2: Pursue the need for an improved foot access trail to Blue Spring with the National Park Service. Consider using the existing service road as a new trail route. This route would require little to no tree/shrub removal, and would reduce trail maintenance and erosion. The new route would place the new trail on ground above the floodplain, yet would still have much the same view, sounds, and character of the existing trail. (Forestry, Wildlife)

VIII. Administrative Considerations

Challenges and Opportunities:

- 1) Maintain area infrastructure at current levels.
- 2) Acquisition of land.
- 3) Maintain boundary lines and area signage.
- 4) Maintain good relationships with neighbors.

Management Objective 1: Maintain area infrastructure at current levels.

Strategy 1: Maintain area infrastructure in accordance with the Department guidelines and at the currently identified maintenance level. (Forestry, Resource Science, Design and Development)

Management Objective 2: Maintain boundary lines.

Strategy 1: Maintain the area's 87 miles of painted boundary lines. Each year a different portion of boundary lines will be maintained with blue paint on a four-year rotation. (Forestry)

Strategy 2: Re-install area signage and regulations postings, as needed (Forestry).

Strategy 3: Work to resolve any boundary line disputes, if or when they appear. (Forestry)

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:

Management Table listed by Fiscal Year (FY), and by Current River (CR) Forest Compartment										
	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
Terristrial Resources Management										
<i>Objective 1: Forest Inventory Schedule</i>										
Strategy 1	CR #3 (1,253 acres)	CR#15 (1,685 acres)	CR#4, #6 (2,125 acres)	CR#22 (1,588 acres)	CR#20 (1,251 acres)	CR#16 (1,075 acres)	CR#13 (1,412 acres)	CR#2 MOFEP2; CR#8 MOFEP3; CR#9 MOFEP4; CR#17 <u>MOFEP5</u> (4,024 acres)	CR # 14 (887 acres)	CR # 7 & 23 (1,737 acres)
Administrative Considerations										
<i>Objective 3: Boundary Line Maintenance</i>										
Strategy 1	22.25 miles	8 miles	36 miles	20.75 miles	22.25 miles	8 miles	36 miles	20.75 miles	22.25 miles	8 miles

APPENDICES

Area Background:

Current River Conservation Area (CA) was created by combining Deer Run, Carr’s Creek, Cardareva and Paint Rock State Forests (Figure 8.). The entire area encompasses approximately 28,000 acres. The Current River CA is the home of the Missouri Ozark Forest Ecosystem Project. Missouri Ozark Forest Ecosystem Project is a 100 year project assigned to monitor the long-term effects of different forest management regimes covering 9,000 acres of Ozark forest and its associated plant and animal life.

Deer Run Unit

The Deer Run Unit began as a game refuge and state park in 1925 with 6,625 acres. In 1926 the state’s first fire tower was erected to help protect Missouri’s forest land from fire. Many of the area’s roads, ponds, and food plots are the result of the Civilian Conservation Corps whose Camp was located here in 1935.

This area helped to re-establish Missouri’s deer population. Deer Run contributed 323 white-tailed deer used to restock other areas of the state at a time when Missouri’s deer herd was badly depleted. The quality of the area’s forest and its abundance of wildlife are the products of sound forest management. Deer Run has been protected from fire and grazing damage longer than any other forested tract in southern Missouri. Some 66 wildlife food plots are seeded, fertilized and mowed as needed. Water holes have been built in about 40 locations. Buford Pond provides 3 acres of fishing water. Picnic tables are kept at the lake for public use. A nature trail also connects Buford Pond with the Deer Run fire tower. The Deer Run Unit has both archery and firearms shooting range. The unmanned shooting range is ADA-accessible and provides shooters with a 25-, 50- and 100-yard shooting station, in addition to a shotgun range. The archery range is comprised of a “static” range with targets set at 20, 30, 40, and 50 yard distances.

Carr Creek Unit

The Carr Creek Unit is located in Shannon County in the Current River hills just north of the river. The forest is located halfway between Eminence and Ellington off Highway 106 and HH. The area was expanded during the early 1990s with the acquisition of former Kerr-McGee Chemical Corporation property. Blue Spring Natural Area is part of this unit. This is the sixth largest spring in Missouri with an average daily flow of 90 million gallons. It is also the deepest spring in Missouri. Native cane, blue mist flower and cardinal flower grow along its banks. Resurrection ferns and mistletoe are found in the trees. This is near the northern limit of the range of these two southern species.

Cardareva Unit

The Cardareva Unit was named after Cardareva Mountain, which lies in the middle of the unit. The forest lies north of the Current River, and south of Highway 106. It is a large block of land that connects the Carr Creek and Deer Run units. This area was significantly expanded with the acquisition of a tract of land formerly owned by Kerr-McGee Chemical Corporation in the early 1990s. The Cardareva Unit also contains the 880-acre Cardareva Bluff Natural Area. The natural area includes the shoreline and gravel bars of the Current River, backwater sloughs, flood plain forest, upland forest, dolomite glades and tall slopes. The forest offers excellent hunting opportunities for deer, wild turkey and squirrels.

Paint Rock Unit

The Paint Rock Unit was named after the landmark dolomite bluff located on the beautiful Current River. Other natural features of the area include dolomite glades, two dolomite pinnacles, a dry forested sinkhole, and an old second growth wet-mesic bottomland forest. The forest itself lies north and east of the Current River and west of Highway 21. Access to most of the area can be off Highway D near Ellington. There are several logging trails in the area that provide good access to anyone with a four-wheel-drive vehicle or by foot. Paint Rock Creek is a sinking creek with permanent pools of water. Turkey and deer hunting opportunities are excellent. The purchase of Kerr-McGee Chemical Corporation properties in the 1990s helped consolidate the once scattered tracts of the Paint Rock Unit.

Current Land and Water Types:

Land/Water Type	Acres	Miles	% of Area
Forest and Woodland	27,736		99
Old Field	180		1
Open Land	47		<1
Glade	34		<1
Impounded Water	3		<1
Total	28,000		100
Current River Frontage		3.3	

References:

Missouri Department of Conservation. (1999). *Current River Conservation Area plan*. Jefferson City, MO: Missouri Department of Conservation.

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.

Missouri Department of Conservation. (2010). *Elk restoration in Missouri*. Jefferson City, MO: Missouri

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

Missouri Department of Conservation. (2016). Draft Current River Conservation Area Woodland Management Plan.

Maps:

Figure 1: Area Map

Figure 2: Aerial Map

Figure 3: Compartment Map

Figure 4: Missouri Ozark Forest Ecosystem Project Site Map

Figure 5: Woodland Management Unit

Figure 6: Land Cover Map

Figure 7: Radio Relay Tower and Fire Tower Location Map

Figure 8: Current River CA, Past Forests Combined Map

Figure 9: Woodland Management Tables

Figure 1: Area Map

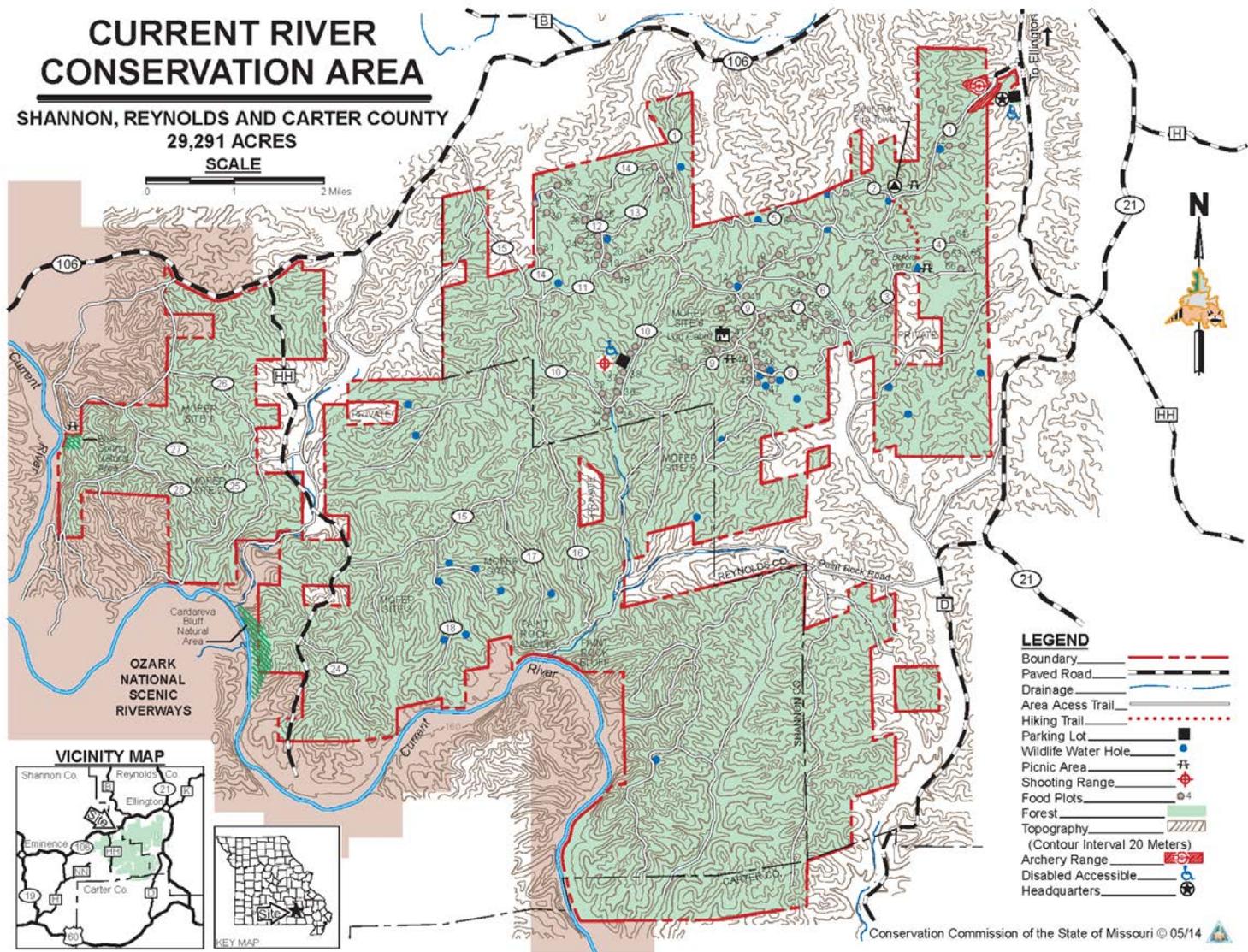


Figure 2: Aerial Map

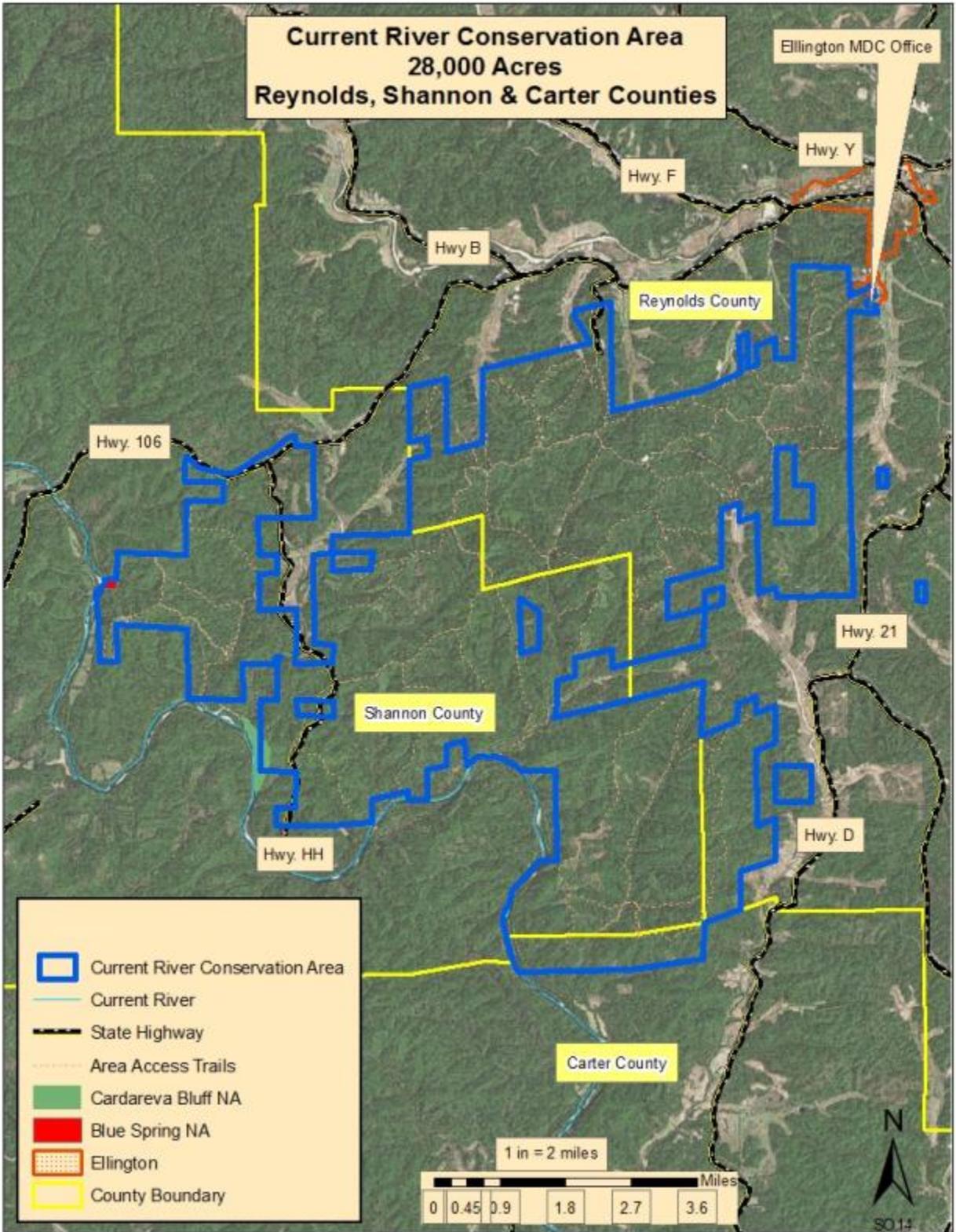


Figure 3: Compartment Map by Compartment Identification Number

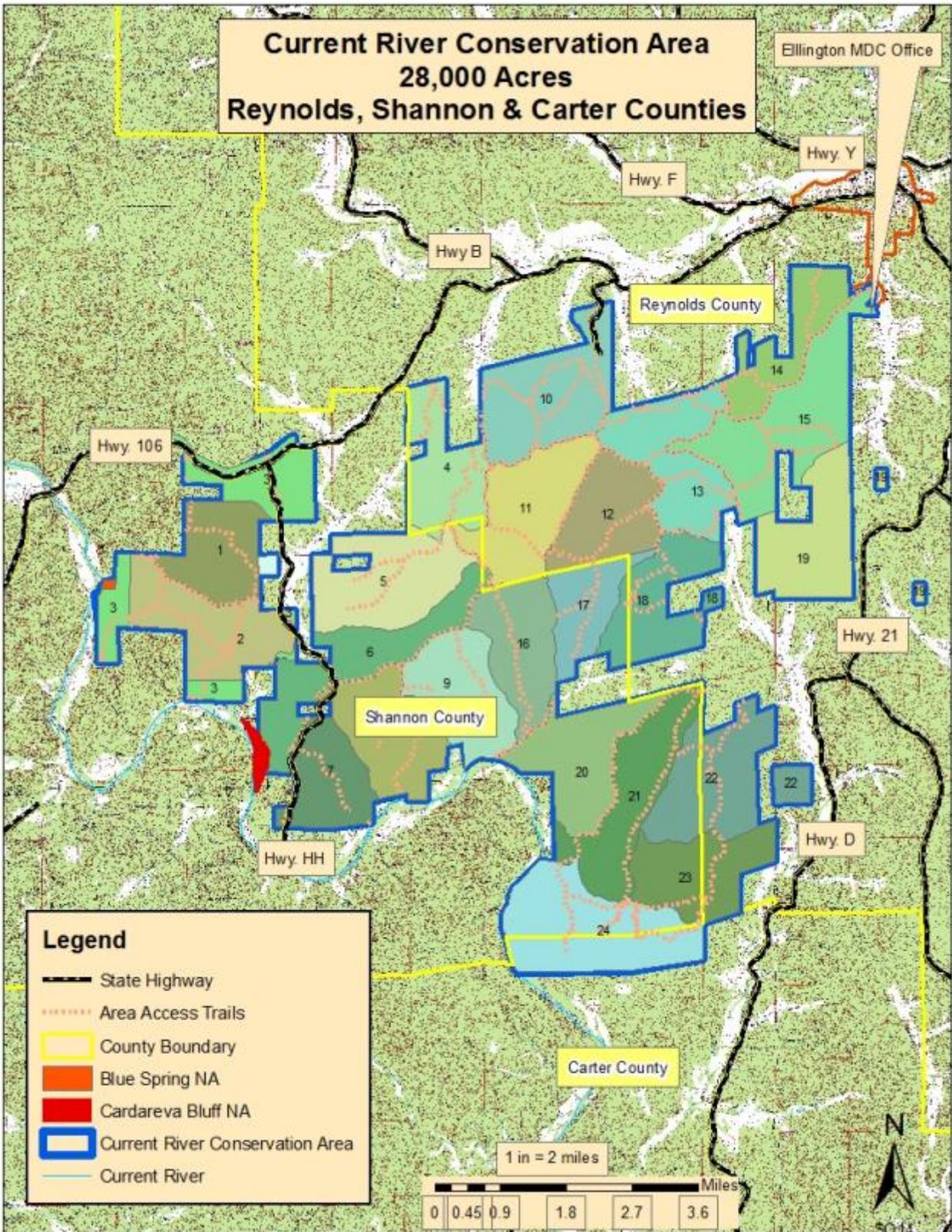


Figure 4: Current River CA Missouri Ozark Forest Ecosystem Project Site Map

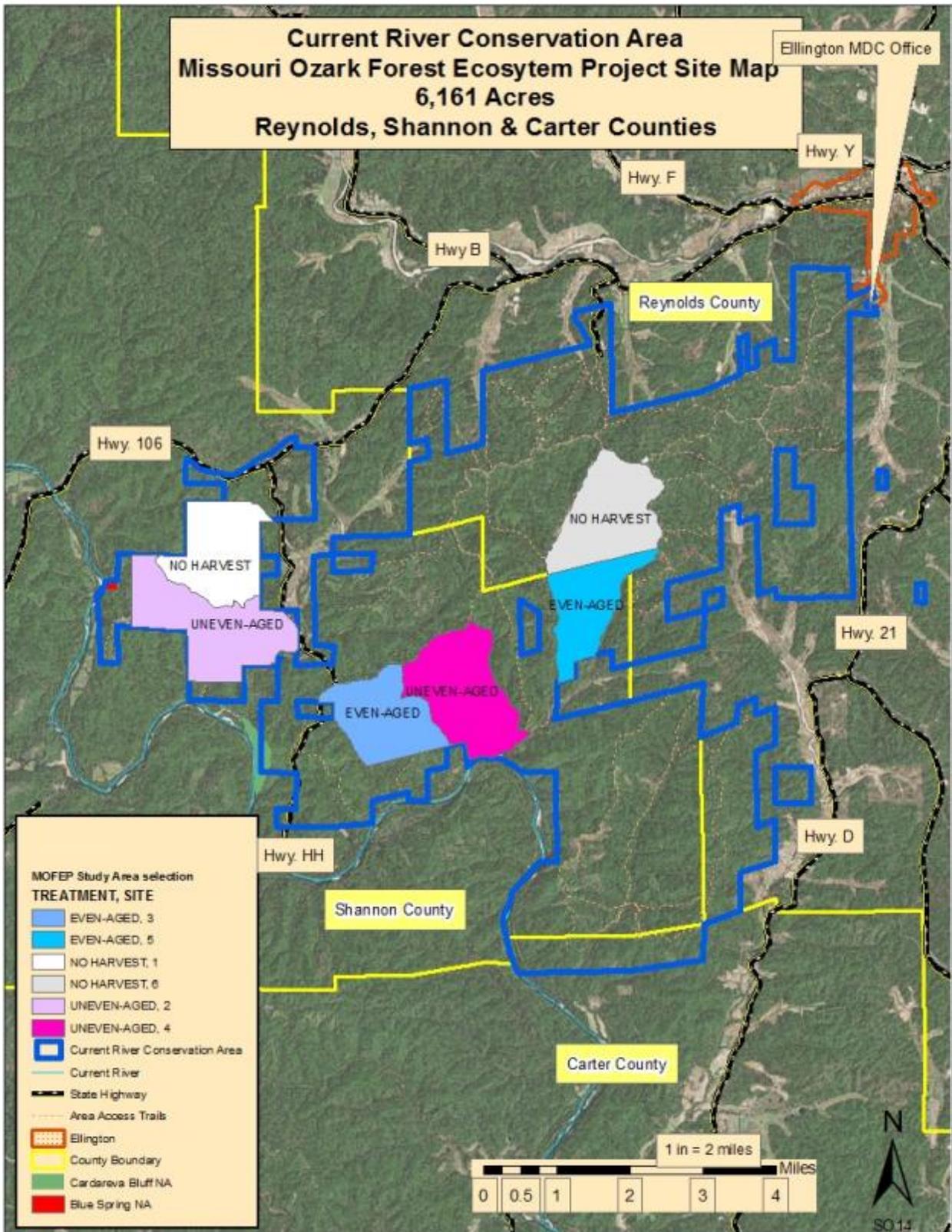


Figure 5: Current River CA Woodland Management Unit Map

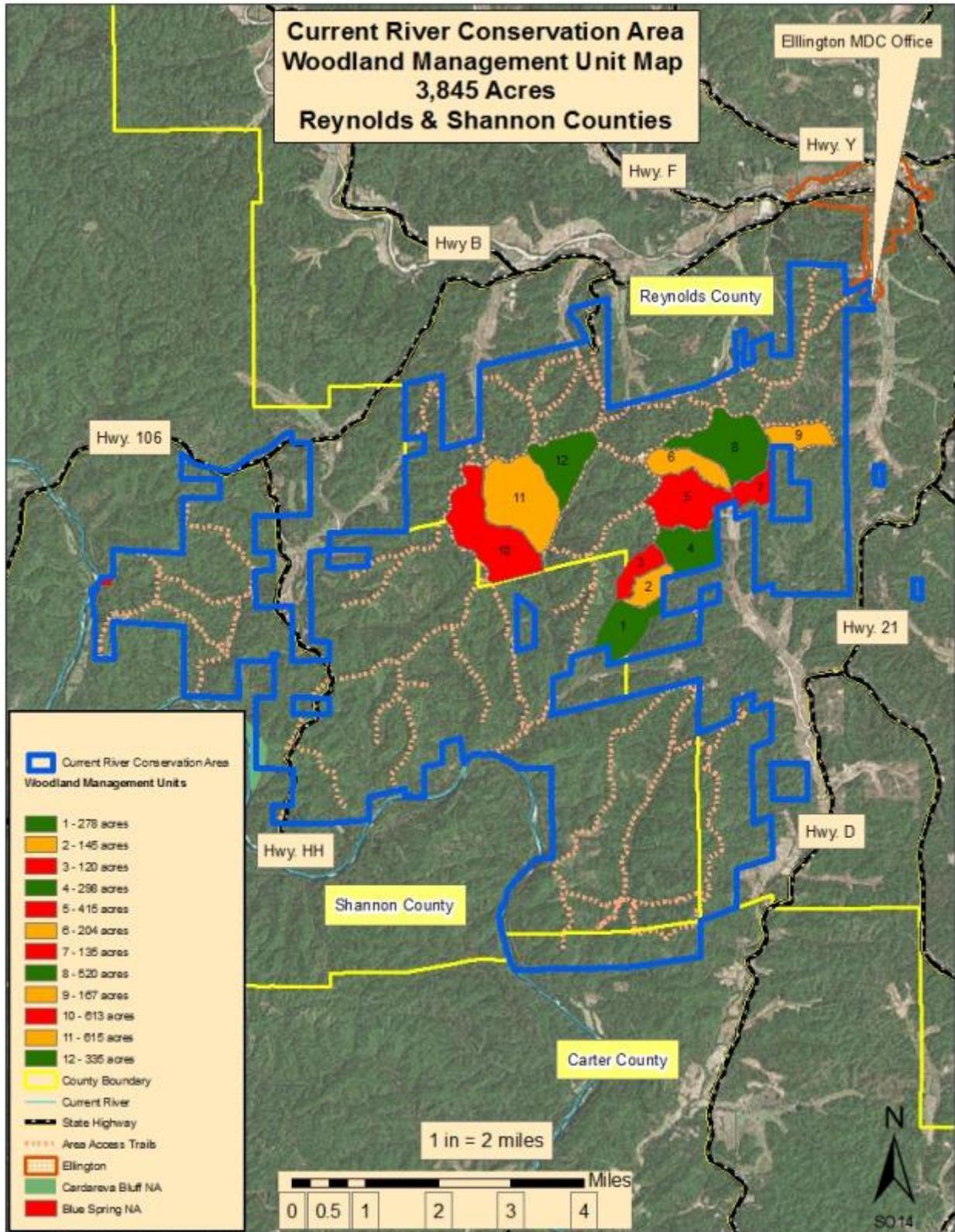


Figure 6: Current River CA Land Cover Map

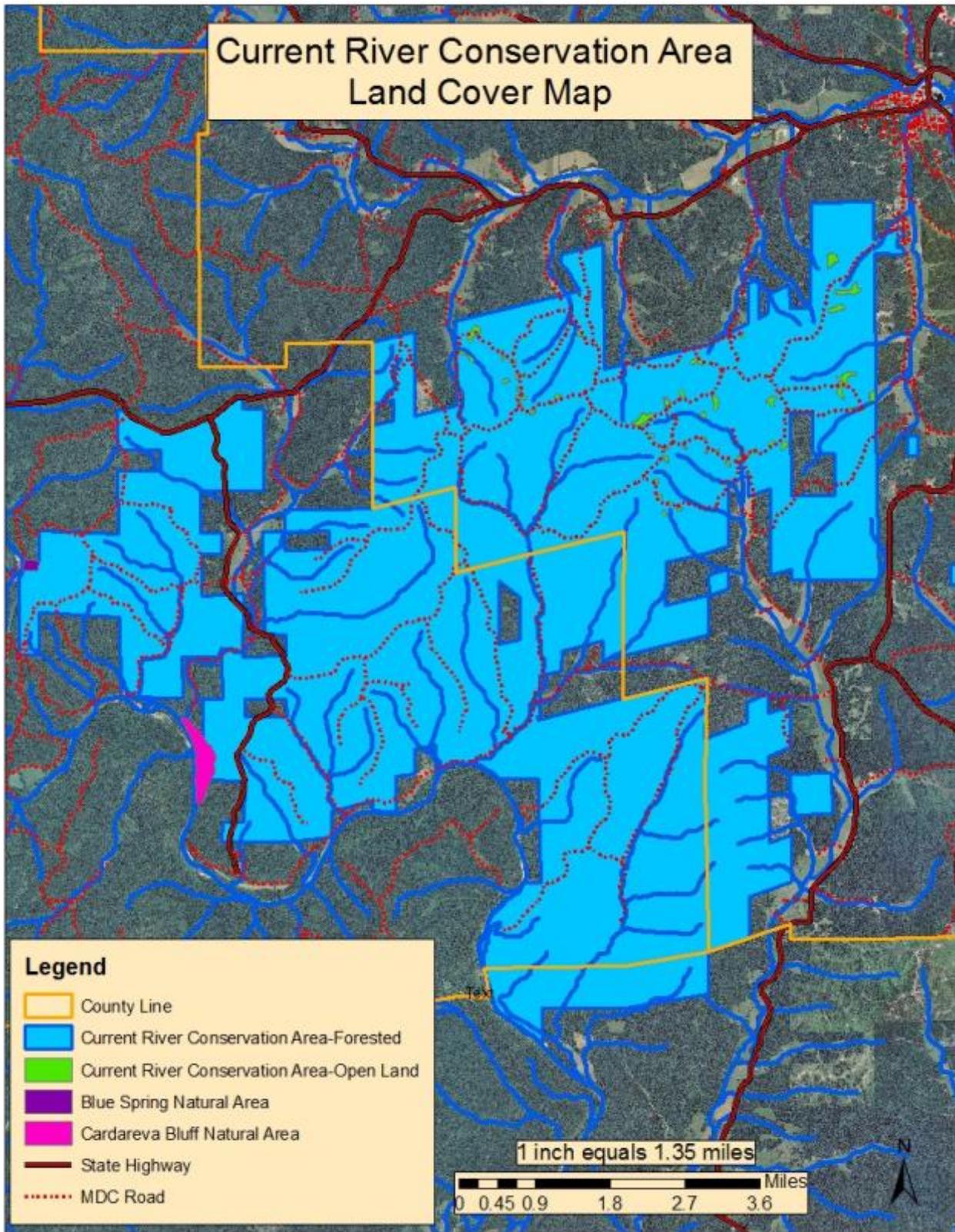


Figure 7: Radio Relay Tower and Adjacent Fire Tower Location Map

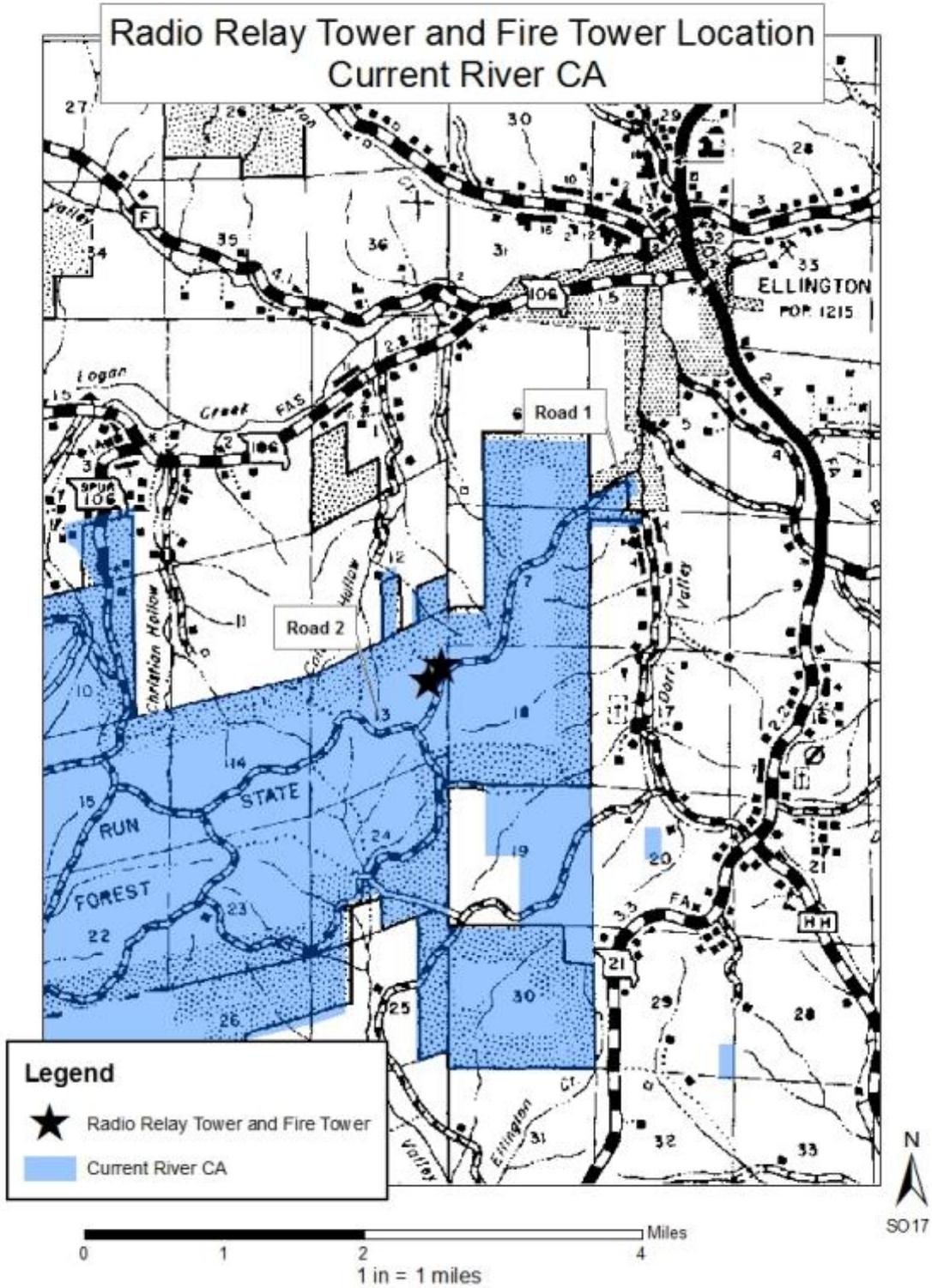


Figure 8: Current River CA, Past Forests Combined Map

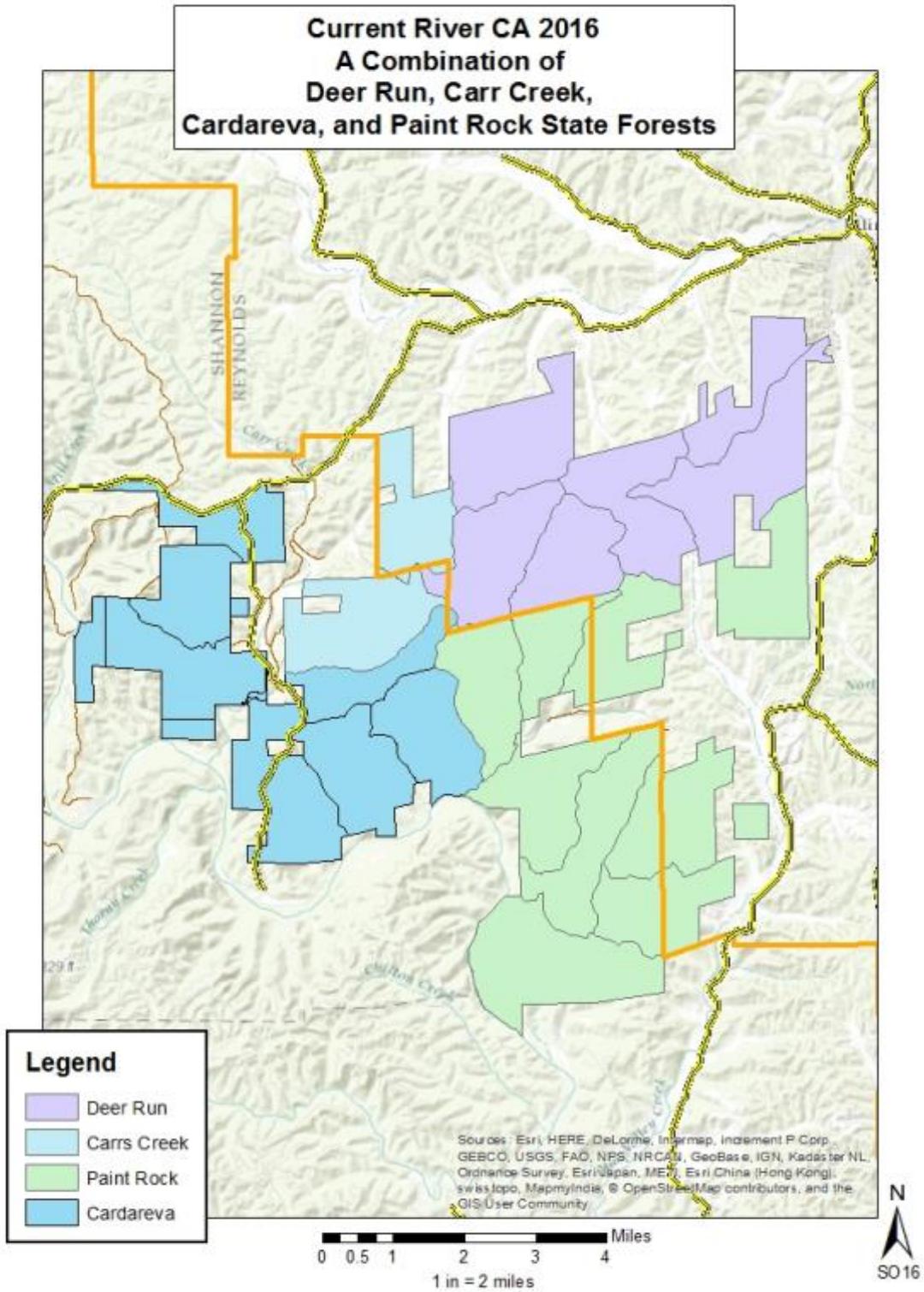


Figure 9: Woodland Management Tables

Commercial Overstory Thinning Schedule by Fiscal Year - Based on the 15 Year MDC Forest Inventory Schedule

FY	Woodland Unit/s	Acres
2016	3	77
2017	NA	
2018	7	135
2019	10	Part of 613
2020	2, 9	145, 167
2021	1,4,8	278, 298, 520
2022	5,6	415, 204
2023	NA	
2024	NA	
2025	NA	
2026	NA	
2027	NA	
2028	10,11, 12	613, 615, 335

CRCA Woodland RX Fire Management Schedule by Fiscal Year (3 Year Fire Interval)

FY	RX Treatment					
	Units	Acres	Burn 2	Burn 3	Burn 4	Burn 5
2016	2,6,9,11	1131	✓			
2017	1,4,8,12	1431	✓			
2018	3,5,7,10	1240	✓			
2019	2,6,9,11	1131		✓		
2020	1,4,8,12	1431		✓		
2021	3,5,7,10	1240		✓		
2022	2,6,9,11	1131			✓	
2023	1,4,8,12	1431			✓	
2024	3,5,7,10	1240			✓	
2025	2,6,9,11	1131				✓
2026	1,4,8,12	1431				✓
2027	3,5,7,10	1240				✓

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