

Reform Conservation Area

Fifteen-Year Area Management Plan FY 2018-2032





Wildlife Division Chief

14 FEB 2018

Date

OVERVIEW

- **Official Area Name:** Reform Conservation Area, #7501
- **Year of Initial Acquisition:** Leased from Ameren Missouri starting in 1975
- **Acreage:** 6,726 acres
- **County:** Callaway
- **Division with Administrative Responsibility:** Wildlife
- **Division with Maintenance Responsibility:** Wildlife
- **Statements of Purpose:**
 - A. Strategic Direction**

Reform Conservation Area (CA) is managed to display areas of agricultural production and to promote diverse grasslands, glades, woodlands, and forests. The protection of the area's existing soil, water, cultural, plant, and animal resources is the highest priority. The area is managed for area users to enjoy diverse outdoor recreational activities, such as hunting, bird watching, hiking, nature photography, and wildflower viewing. Activities that reduce the quality of the natural communities or interfere with Ameren Missouri operations will not be permitted.
 - B. Desired Future Condition**

The desired future condition of Reform CA is a complex of agricultural production areas combined with quality forests, woodlands, glades, and grasslands in the proper locations to match the landforms and soils on the area.
 - C. Federal Aid Statement**

N/A

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

- A. Priority Areas:** The majority of the area lies within the Missouri River Hills – Forest and Woodland Conservation Opportunity Area and the Missouri River Hills – Glade Conservation Opportunity Area. This area has been recognized as part of the largest contiguous block of woodlands and forests north of the Missouri River in Missouri.
- 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:** Reform CA is located within the northern edge of the Ozark Highlands in the Outer Ozark Border Subsection (Nigh & Schroeder, 2002). The area is subdivided by two landtype associations: the Central Missouri Savanna/Woodland Dissected Plain on the northern half and the Central Missouri Oak Woodland/Forest Hills on the

southern half. The area's southern hilly portion has long, narrow loess covered ridges that give way to moderately steep slopes and were historically oak woodlands on top and sides that transition into mixed hardwood forests in the bottoms. Limestone glade-woodland complexes are common, especially in the Devonian limestone.

III. Existing Infrastructure

- Fourteen gravel parking lots
- Twenty fishless ponds (8 acres total)
- Four fishing ponds (16 acres total)
- Storage building

IV. Area Restrictions or Limitations

- A. Deed Restrictions or Ownership Considerations:** This area is owned by Ameren Missouri and leased to the Department. Ameren Missouri maintains some areas close to their infrastructure that are closed to all public use.
- 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:** Ameren utility easements for pipelines and powerlines; water and ingress/egress easement held by private landowner
- 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:** None observed.
- F. Boundary Issues:** None

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

Challenges and Opportunities:

1. High-quality natural communities are found on portions of the conservation area. These require periodic disturbance to maintain their structure and species diversity.
2. Control invasive species (sericea lespedeza, autumn olive, fescue, honey locust, black locust, Johnson grass, multiflora rose, eastern red cedar, sugar maple).
3. Maintain the openlands on Reform CA as working agricultural lands, grasslands, and old fields.
4. Improve and maintain healthy forest, woodland, and glade natural communities.

Management Objective 1: Maintain structure and floristic diversity of high-quality woodlands, forests, and glades.

Strategy 1: Use current compartment level inventory, aerial photography, and on-site inspections to identify landscape-scale management units that encompass a complex of natural communities that can be easily managed as a single unit. (Wildlife, Forestry)

Strategy 2: Conduct forest and woodland prescriptions according to results of forest inventories (upon written agreement with Ameren Missouri) to promote diverse natural communities. (Forestry, Wildlife)

Strategy 3: Utilize prescribed burning to maintain plant diversity and control undesirable woody plant species in appropriate natural communities. (Wildlife)

Management Objective 2: Control invasive species.

Strategy 1: Monitor the area for bush honeysuckle, sericea lespedeza, autumn olive, tall fescue, Johnson grass, and any other potential invasive species. (Wildlife)

Strategy 2: Apply appropriate herbicides to herbaceous and woody invasive species. (Wildlife)

Strategy 3: Implement forest management practices, as prescribed by the detailed forest inventory process, which may include woodland or forest thinning of species such as eastern red cedar and sugar maple. (Forestry, Wildlife)

Management Objective 3: Maintain openlands as grassland and old field habitats.

Strategy 1: Utilize prescribed burning to maintain diversity and control undesirable woody encroachment in grasslands and old fields. (Wildlife)

Strategy 2: Use mechanical means (chain saw and tree shear) to disturb overgrown shrub groups, fence rows, and brushy draws. (Wildlife)

Strategy 3: Use foliar and basal treatments to disturb overgrown shrub groups. (Wildlife)

Strategy 4: Edge feather timbered habitats by use of chain saw and/or tree shear. (Wildlife)

Management Objective 4: Improve and maintain healthy forest, woodland, savanna, and glade natural communities.

Strategy 1: Conduct forest inventory with an estimated re-entry time of 15 years, or as needed. The next inventory is scheduled for FY23. (Forestry)

Strategy 2: Implement forest management practices, as prescribed by an agreement with Ameren Missouri, thru a detailed forest inventory. (Forestry)

Strategy 3: Utilize best management practices to protect soil, water, and visual integrity. (Forestry)

Strategy 4: Conduct prescribed burns, as needed, to maintain desired basal area and promote native forbs and grasses. (Wildlife, Forestry)

Strategy 5: Evaluate the need for tree regeneration and recruitment into the overstory in the woodland natural communities. When new tree recruitment into the overstory is needed, implement strategies that will accomplish this goal. (Forestry, Wildlife)

VI. Aquatic Resource Management Considerations

Aquatic resources on Reform CA consist of permanent and intermittent streams, 20 fishless ponds, and four ponds (18 acres total) that are managed to provide quality fisheries for public use. The fishless ponds are managed to provide habitat for amphibians and reptiles. The ponds that are managed for public fishing contain largemouth bass, bluegill, green sunfish, and channel catfish.

The primary stream resources on Reform CA include Logan Creek, Mud Creek, and the Missouri River. The Missouri River forms the area's southern boundary. Logan Creek is the area's largest stream, starting on the northeast corner as a first-order stream, traveling off the area, then returning across the area before it finally leaves the area as a fifth-order stream. Mud Creek is a fourth-order stream and is the second largest stream on the area. Most of the other streams on the area are smaller and are classified as intermittent streams. No rare, endangered, or exotic species of fish were found during a recent fish survey of Logan Creek. The stream corridor of the sampled reach is adequate in most areas, but is less than 50 feet wide along County Road 468.

Challenges and Opportunities:

1. Protect, enhance, and maintain area stream resources to support diverse aquatic biota.
2. Maintain and enhance the forested riparian corridor along all streams on the area. Riparian corridors within the area are very good along most of the stream reaches. Maintaining and enhancing riparian corridors on ephemeral and headwater streams, which are most prevalent within the area, is a high priority.
3. Maintain area ponds for wildlife watering and semi-aquatic wildlife use.
4. Control nuisance aquatic plants that threaten the integrity or function of the ponds.

Management Objective 1: Manage fish populations to enhance diversity and quality of all stream aquatic resources.

Strategy 1: Inventory the area's stream fish communities by electrofishing and seining to determine species composition and status. Sample streams as needed to monitor status of fish community. (Fisheries)

Management Objective 2: Establish and maintain a riparian corridor of trees along all stream drainages.

Strategy 1: Plant native bottomland tree species or use natural regeneration along streams, where needed, to widen the existing riparian corridor to a more functional and protective width. A minimum riparian corridor width of 100 feet on each side of the stream will be established on all area streams. Re-inspect streams as needed. (Fisheries, Wildlife)

Management Objective 3: Manage stream resources to maintain and enhance water quality and diverse stream fauna.

Strategy 1: Improve in-stream habitat and consider inventorying and monitoring biotic and abiotic data for all stream resources. (Fisheries)

Strategy 2: Be prepared to develop and implement management recommendations for streambank erosion and nutrient loading problems, if they are discovered. Inspect all streambank stabilization practices annually for three years after completion and undertake appropriate corrective and maintenance activities if deemed necessary. (Fisheries)

Strategy 3: Develop and implement management recommendations, as needed, for area streams with water quality, or fish/macroinvertebrate community problems. (Fisheries)

Management Objective 4: Manage the fishless ponds on the area for amphibian and wildlife benefits.

Strategy 1: Chemically renovate ponds, when needed, and maintain as fishless to promote amphibians, reptiles, and other wildlife. (Fisheries)

Strategy 2: Continue to maintain/enhance aquatic habitat in area ponds by establishing desirable aquatic vegetation, planting trees around shorelines for amphibians and reptiles, reducing siltation, and maintaining good water quality. (Fisheries)

Management Objective 5: Treat nuisance aquatic plants as needed.

Strategy 1: Appropriate chemical, biological, or mechanical methods will be used depending on the plant coverage and species being controlled. (Fisheries)

Management Objective 6: Minimize impacts of area ponds on area streams.

Strategy 1: Maintain and improve fishless ponds to allow for more natural hydrologic flow in area streams. (Fisheries)

VII. Public Use Management Considerations

Challenges and Opportunities:

1. Provide opportunities for a variety of public uses.
2. Provide access to area information and regulations.

Management Objective 1: Provide area users with a variety of compatible public recreational opportunities.

Strategy 1: Promote compatible uses of hunting, birding, hiking, wildflower viewing, and nature photography. (Wildlife)

Strategy 2: Monitor and document user conflicts or concerns. Identify potential timing/seasonal use conflicts and modify special use permit conditions and dates, as needed, to minimize concerns. (Wildlife)

Management Objective 2: Provide up-to-date area information for the public that is readily available.

Strategy 1: Maintain accurate area information and regulations through the Atlas database, area brochures, posted information, and staff contacts with area users. (Wildlife)

VIII. Administrative Considerations

Challenges and Opportunities:

1. Infrastructure should be inviting for public use.
2. Maintain and enforce delineation of area boundary.
3. Deter restricted activities, such as littering, all-terrain vehicle trespass, vegetation damage, vandalism, etc. from occurring on the area.
4. Consider acquisition of land, when available.
5. Continually communicate and coordinate with Ameren Missouri about activities and management of the area as well as updating the area plan and lease as needed.

Management Objective 1: Maintain area infrastructure.

Strategy 1: Maintain infrastructure on an as-needed basis to ensure that signage and parking lot are in good shape. (Wildlife)

Strategy 3: Review problems and solutions with Design and Development. (Wildlife, Design and Development)

Strategy 4: Budget and implement as able. (Wildlife)

Management Objective 2: Deter area users from trespassing on adjacent landowners.

Strategy 1: Monitor and post area boundaries as needed. (Wildlife)

Strategy 2: Continue maintenance of area boundary fences throughout the year. Plan work days to cut blow-downs and clear debris from fences. (Wildlife)

Strategy 3: Maintain close communication with area neighbors to be proactive against any trespass issues. (Wildlife)

Management Objective 3: Deter restricted activities from occurring on the area.

Strategy 1: Maintain good communication with neighbors and Department staff to ensure that restricted activities are noted and necessary steps are taken to remedy and eliminate them. (Wildlife, Protection)

Strategy 2: Enforce area regulations. (Protection)

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 Missouri Department of Conservation (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:

	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Terrestrial Resource Management															
<i>Objective 4</i>															
Strategy 1						X									
Aquatic Resource Management															
<i>Objective 1</i>															
Strategy 1		X					X					X			

APPENDICES

Area Background:

The land that comprises Reform Conservation Area (CA) has a unique history. The northern portion of Reform CA encompasses the bulk of Coats’ Prairie. Coats’ Prairie, named after Reverend William Coats, was one of the earlier settlements in Callaway County. William Coats settled on the Prairie in 1817, and by 1830 most of the Prairie was occupied by several families with small homesteads (40 to 160 acres). Consequently, most of Coats’ Prairie has a long history of conversion from native prairie to agriculture and development. The southern portion of Reform CA, which was primarily a matrix of prairie, woodland, and forest, was generally settled by the 1860s and, although not as extensively, has also undergone conversion from natural communities to agriculture and other development.

The “town” of Reform, formerly located in the northeastern portion of the conservation area, was settled in 1830. Although Reform was never officially platted as a town, by 1884 the area had mail service, three churches, a saw and flour mill, a general store, blacksmith, wagon maker, population of 150, and boasted of shipping tobacco, grain, wool, and livestock. Through the 19th and 20th Centuries, agriculture played an important role on the Coats’ Prairie area.

In the early 1970s, Union Electric (now Ameren) purchased much of the Coats’ Prairie region to begin developing a nuclear power plant. By 1975, Union Electric had completed the purchase of present day Reform CA for the construction of its Callaway Nuclear Power Plant. In 1975, Union Electric entered into a cooperative agreement with the Department to manage the majority of the property as a public use area. The initial plan called for development and implementation of fish, forest, and wildlife management plans and several forms of public recreation. This cooperative arrangement has continued to the present time.

Current Land and Water Types:

Land/Water Type	Acres	Miles	% of Area
Woodland	2,558		38
Agricultural Production	1,709		25
Forest	743		11
Old field	701		10
Grassland	449		7
Glade	342		5
Infrastructure	122		2
Open Water	102		2
Total	6,726		100
Stream Frontage		0.9	

Public Input Summary:

The draft Reform Conservation Area Management Plan was available for a public comment period Oct. 1–31, 2017. The Missouri Department of Conservation received three comments from three respondents (Appendix A). The Reform Conservation 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 Reform Conservation Area Management Plan public comment period.

Opposes mountain biking on the conservation area.

Bicycles are permitted only on roads open to the public for vehicular use. On Reform CA, these are graveled county roads, parking lots, and two paved state highways. Any violation should be reported to the local authorities.

Suggests providing guided managed youth hunts on the area.

The Department fully supports and continues to hold managed youth hunts locally and in adjacent counties. We have held a youth dove hunt at Reform CA in the past and currently put on a clinic and hunt at Whetstone Creek CA (15 miles north). Other examples of hunts that are held by the Department or other conservation organizations are Delta Waterfowl youth duck hunt at Eagle Bluffs, National Wild Turkey Federation Governor's Youth Turkey Hunt, the Department's youth deer hunt near Ashland, and the Department's youth turkey hunt near Ashland.

Suggests developing 10 to 12 miles of multi-use (equestrian) trails on Reform CA.

Adding multi-use trails for horseback riding could increase interference with existing area uses and could negatively impact sensitive habitats on the area. Horseback riders can pursue this recreational opportunity on Mark Twain National Forest in Callaway and Boone County (15 miles away).

References:

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: Ecological Site Descriptions

Figure 3: Current Land Cover Types

Figure 4: Aquatic Resources

Figure 5: Forest Resources

Figure 6: Area Infrastructure

Additional Appendices:

Appendix A: Draft Reform Conservation Area Management Plan Public Comments

Figure 1: Area Map

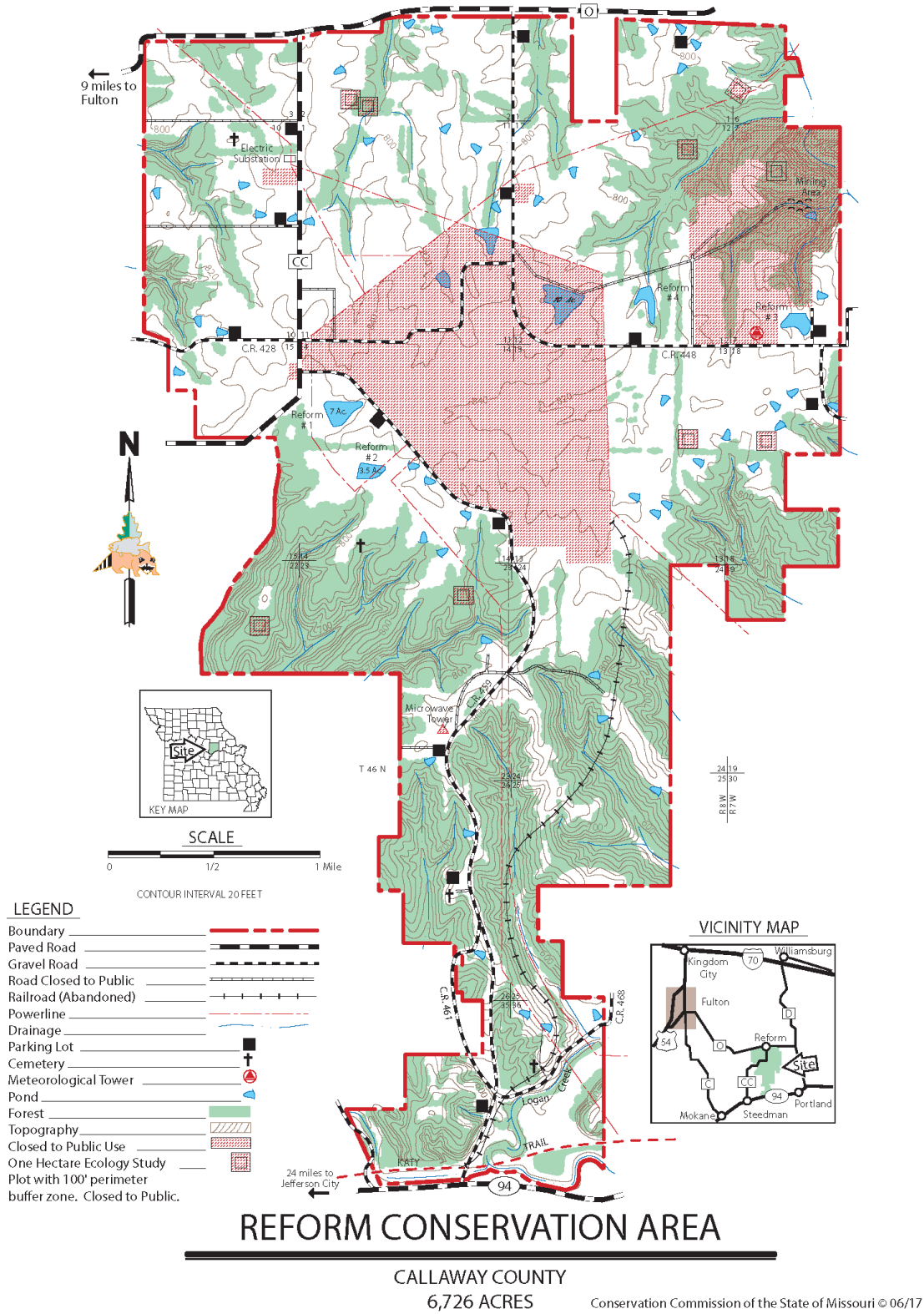


Figure 2: Ecological Site Descriptions

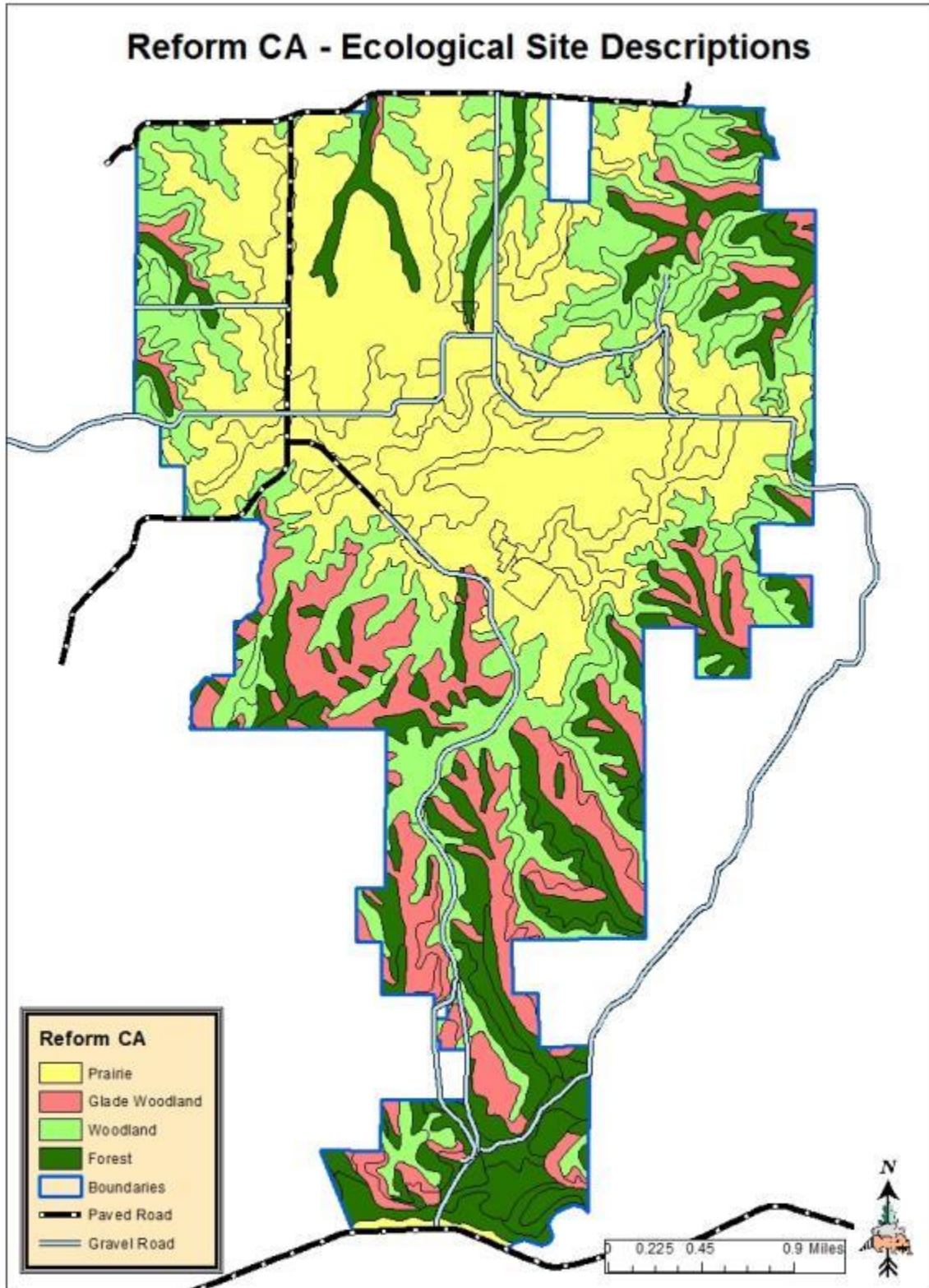


Figure 3: Current Land Cover Types

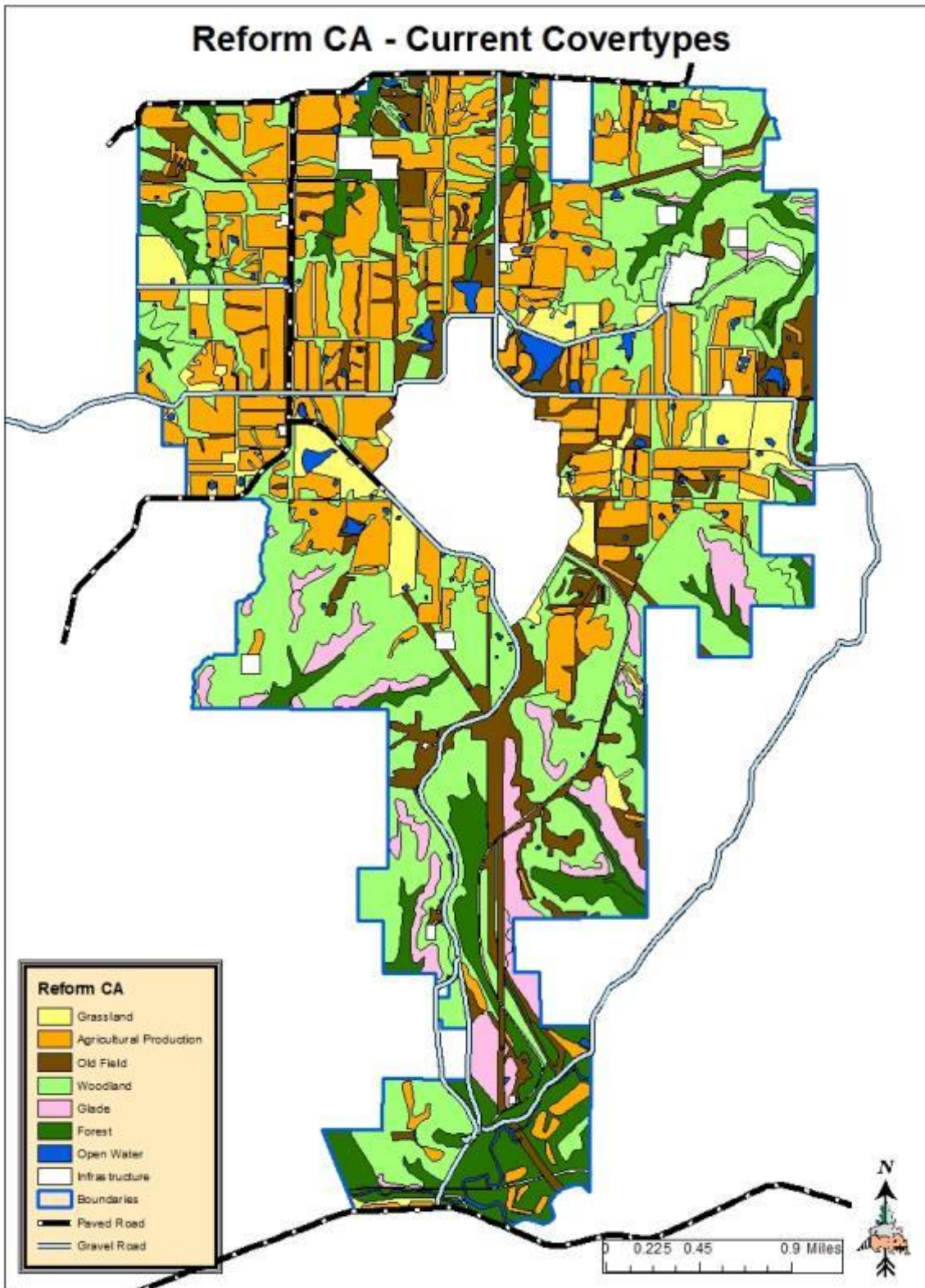


Figure 4: Aquatic Resources

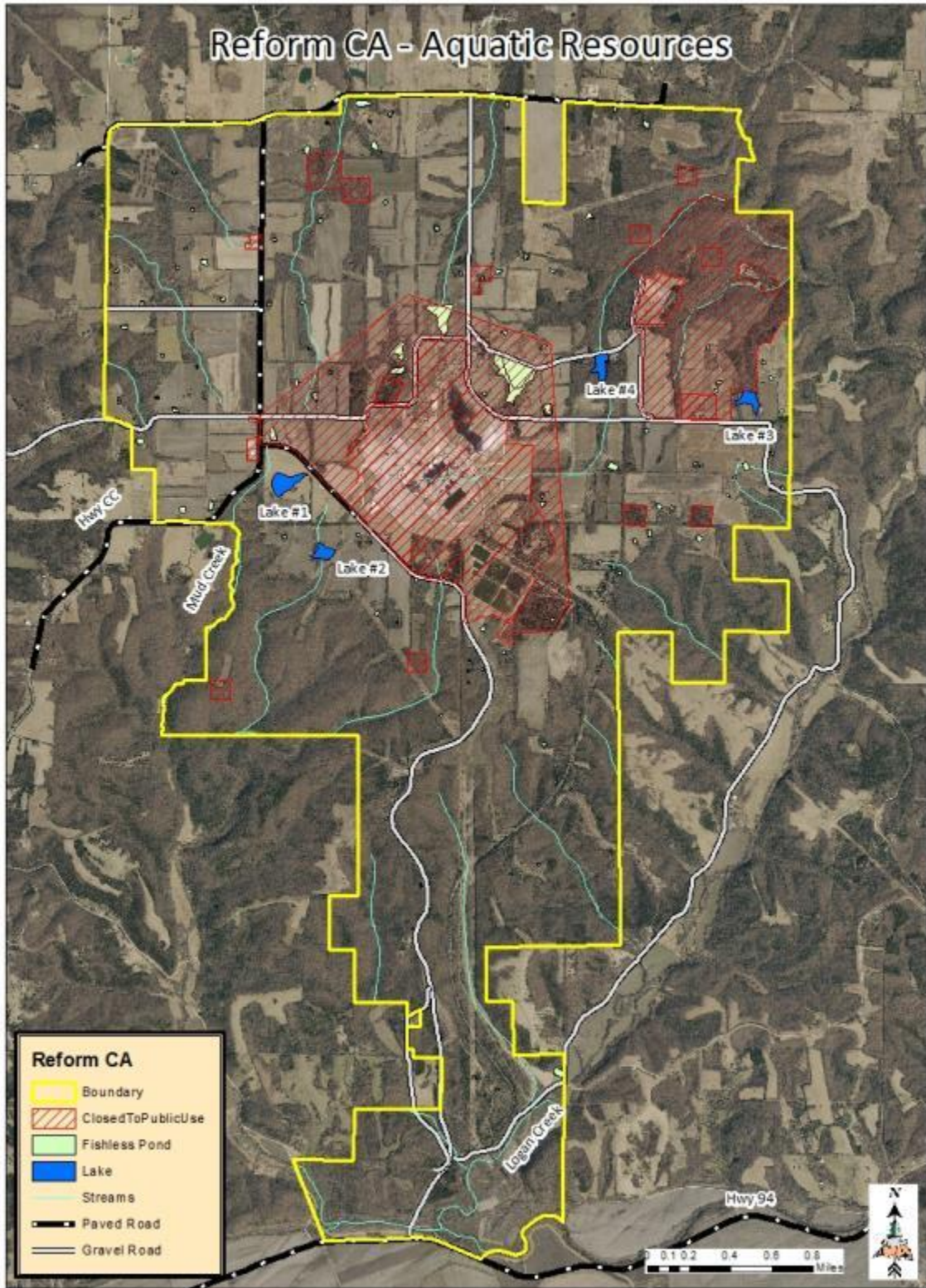


Figure 5: Forest Resources

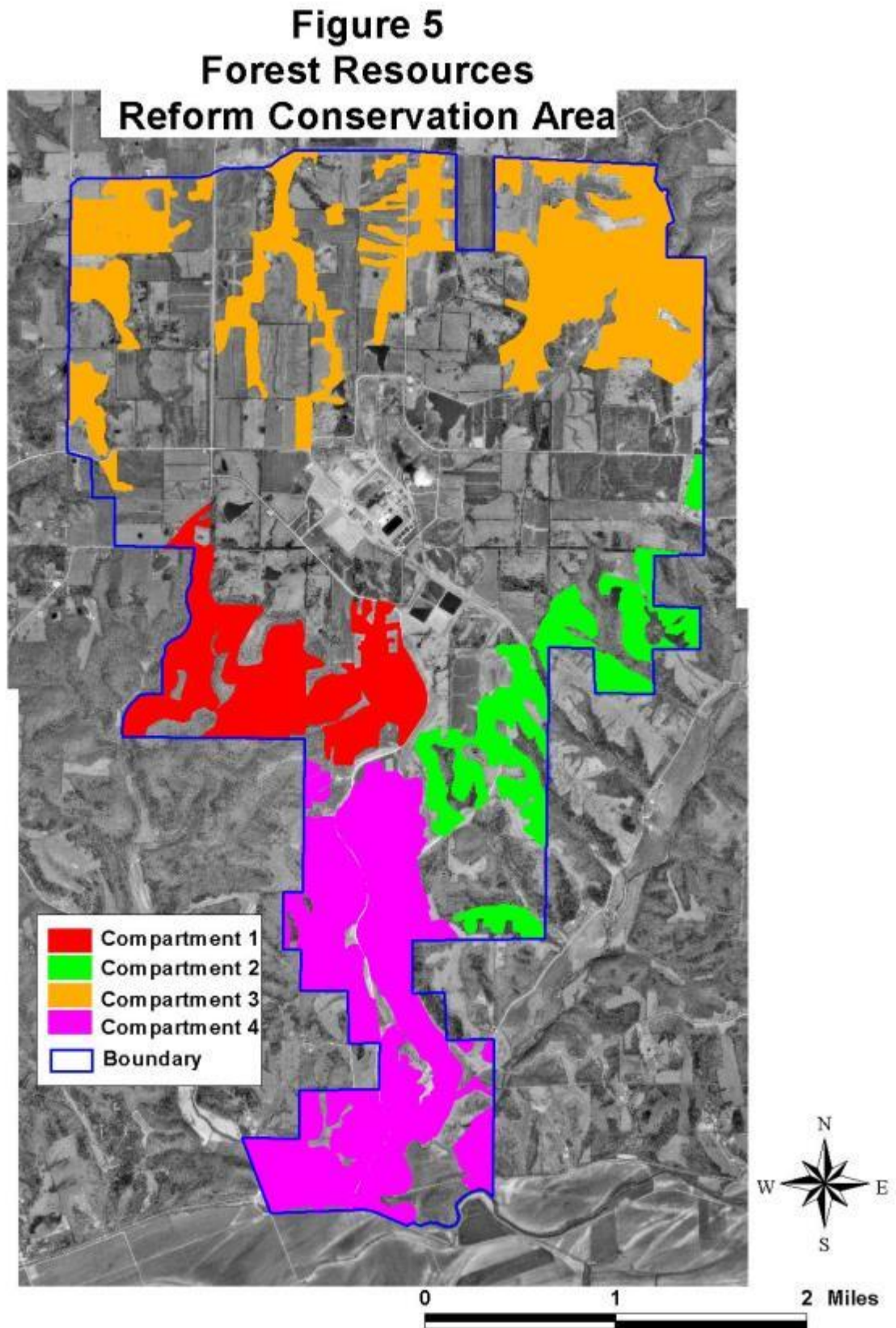
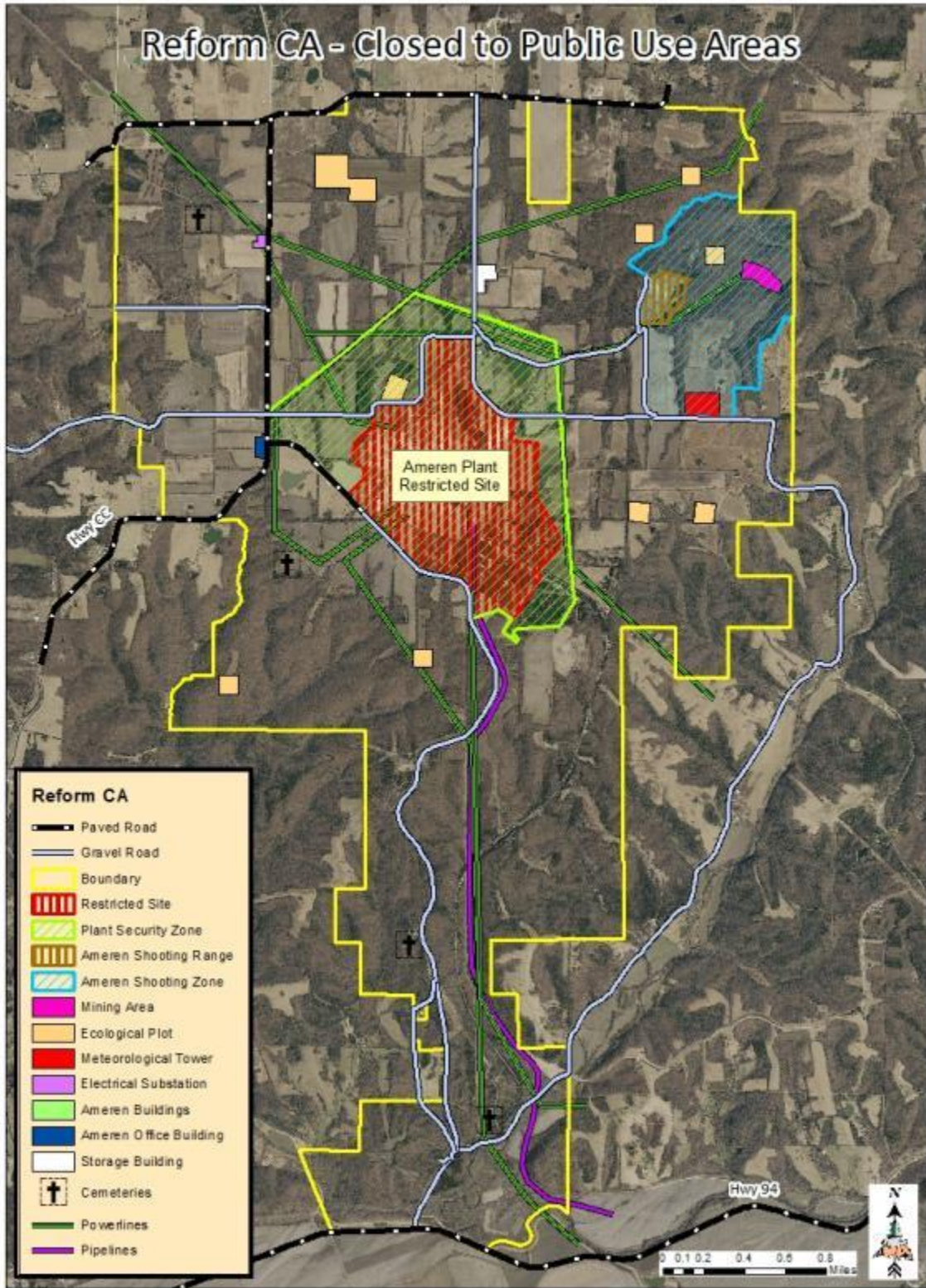


Figure 6: Area Infrastructure and Easements



Appendix A: Draft Reform Conservation Area Management Plan Public Comments

Received during public comment period (Oct. 1–31, 2017):

Bicycles should not be allowed in any natural area. They are inanimate objects and have no rights. There is also no right to mountain bike. That was settled in federal court in 1996: <http://mjvande.info/mtb10.htm> . It's dishonest of mountain bikers to say that they don't have access to trails closed to bikes. They have EXACTLY the same access as everyone else -- ON FOOT! Why isn't that good enough for mountain bikers? They are all capable of walking....

A favorite myth of mountain bikers is that mountain biking is no more harmful to wildlife, people, and the environment than hiking, and that science supports that view. Of course, it's not true. To settle the matter once and for all, I read all of the research they cited, and wrote a review of the research on mountain biking impacts (see <http://mjvande.info/scb7.htm>). I found that of the seven studies they cited, (1) all were written by mountain bikers, and (2) in every case, the authors misinterpreted their own data, in order to come to the conclusion that they favored. They also studiously avoided mentioning another scientific study (Wisdom et al) which did not favor mountain biking, and came to the opposite conclusions.

Those were all experimental studies. Two other studies (by White et al and by Jeff Marion) used a survey design, which is inherently incapable of answering that question (comparing hiking with mountain biking). I only mention them because mountain bikers often cite them, but scientifically, they are worthless.

Mountain biking accelerates erosion, creates V-shaped ruts, kills small animals and plants on and next to the trail, drives wildlife and other trail users out of the area, and, worst of all, teaches kids that the rough treatment of nature is okay (it's NOT!). What's good about THAT?

To see exactly what harm mountain biking does to the land, watch this 5-minute video: <http://vimeo.com/48784297>.

In addition to all of this, it is extremely dangerous: http://mjvande.info/mtb_dangerous.htm .

For more information: <http://mjvande.info/mtbfaq.htm> .

The common thread among those who want more recreation in our parks is total ignorance about and disinterest in the wildlife whose homes these parks are. Yes, if humans are the only beings that matter, it is simply a conflict among humans (but even then, allowing bikes on trails harms the MAJORITY of park users -- hikers and equestrians -- who can no longer safely and peacefully enjoy their parks).

The parks aren't gymnasiums or racetracks or even human playgrounds. They are WILDLIFE HABITAT, which is precisely why they are attractive to humans. Activities such as mountain biking, that destroy habitat, violate the charter of the parks.

Even kayaking and rafting, which give humans access to the entirety of a water body, prevent the wildlife that live there from making full use of their habitat, and should not be allowed. Of course those who think that only humans matter won't understand what I am talking about -- an indication of the sad state of our culture and educational system.

Open up some of the land for guided managed youth hunts for first time hunters. It's tough finding a public access to take youth out to experience a hunt with all the pressure on federal/public land.

First, thank you for the opportunity to comment on the Reform CA Draft Management Plan. Equestrian trail riders in Audrain, Boone, Montgomery, and Callaway Counties are underserved with respect to public land riding opportunities. To address this lack of opportunity Reform CA is on a priority list of Conservation Areas recommended for multi-use trail development in the 2015 "Expanding Public Land Multi-Use Trails in Missouri" proposal by Back Country Horsemen of Missouri. This is consistent with the purpose of providing area users with the opportunity to enjoy diverse outdoor recreational activities as stated in the draft plan Statement of Purpose, Strategic Direction. Providing opportunity for equestrian users is also consistent with the part of Public Use Management Objective 1: providing area users with a variety of compatible public recreational opportunities; allowing equestrian use would also make those opportunities available to a number of persons with disabilities.

Reform CA exhibits most desirable characteristics for development of a multi-use trail system. The CA is of adequate size for development of a minimum of 10-12 miles of trails. Topography and landscape (upland), a variety of cover types, and a minimum of conflicting uses also represent positive features. Trails should be located to maintain adequate separation from the fishing lakes, and they must be located carefully to minimize issues with erodible and seasonally saturated soils—all quite easily done. The location, off Missouri Routes 94, CC and O, would provide safe and convenient access to the CA.

BCHMO offers our services (availability of volunteers permitting) to help decide on the best location and then clear and mark the trails. We further offer to assist the Area Manager to develop a partnership with local trail users to assist with development and maintenance with the trails and associated infrastructure.

Thank you again for the opportunity to comment.