

Russell B., Hazel S., and Arnold L. VanDyke Conservation Area

Fifteen-Year Area Management Plan FY 2018-2032





Wildlife Division Chief



Date

**Russell B., Hazel S., and Arnold L. VanDyke Conservation Area Management
Plan Approval Page**

PLANNING TEAM

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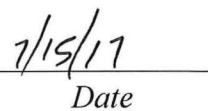
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WILDLIFE DIVISION

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OVERVIEW

- **Official Area Name:** Russell B., Hazel S., and Arnold L. VanDyke Conservation Area, #200102
- **Year of Initial Acquisition:** 1999
- **Current Size of Area:** 315 acres
- **County:** Mercer
- **Division with Administrative Responsibility:** Wildlife
- **Division with Maintenance Responsibility:** Wildlife
- **Statements of Purpose:**

A. Strategic Direction

The primary purpose of the Russell B., Hazel S., and Arnold L. VanDyke Conservation Area (VanDyke CA) is to protect and restore fish, forest, and wildlife habitats representative of the Central Dissected Till Plains Physiographic Area. Management emphasis is placed on developing habitat that supports grassland and open woodland wildlife species. Management benefits eastern wild turkey and white-tailed deer. Other species of management consideration include bobwhite quail, eastern wood-pewee, and red-headed woodpecker.

B. Desired Future Condition

The desired future condition of VanDyke CA is to return existing non-cropped open lands to diverse native grassland, and forested areas to diverse woodland communities, representative of historical conditions in the Central Dissected Till Plains Physiographic Area (Figure 3).

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:** None observed.

B. **Caves:** None

C. **Springs:** None

D. **Other:** VanDyke CA is in the Central Dissected Till Plains Section, Grand River Hills Subsection, and Medicine Creek Prairie/Woodland Hills Landtype Association. Historically, the landtype association had extensive, tallgrass upland prairies that graded into oak savannas and woodlands on lower sideslopes and bottoms (Nigh &

Schroeder, 2002). Past land use practices have greatly altered the landscape from this historical description.

III. Existing Infrastructure

- One parking lot
- One 0.5-acre fishing pond
- Three wildlife watering holes
- Approximately 2.3 miles of field access trails

IV. Area Restrictions and Limitations

A. Deed Restrictions or Ownership Considerations: None known.

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: Water and phone public utilities along county road right of way (Figure 4)

D. Cultural Resources: No known cultural resources.

E. Endangered Species: None observed.

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

Over the past 80 years, much of the open land cover was converted to non-native cool-season grasses and legumes, such as orchard grass, timothy, smooth brome, clover, and more recently, tall fescue (Figure 2). Tall fescue has greatly reduced cover suitability for early-successional ground-dwelling wildlife species. Much of the forested area has been logged and/or grazed in the past, leaving it in a degraded condition. Undesirable species, including honey locust, Osage orange, eastern red cedar, elm, and shingle oak, occur throughout the area. Other species present include red oak, black oak, bur oak, white oak, shagbark hickory, green ash, hackberry, black walnut, cottonwood, and silver maple.

Challenges and Opportunities:

- 1) The relatively small size and remote location of the VanDyke CA limits the ability to efficiently manage the property.
- 2) Much of the forested area has been logged and/or grazed in the past, leaving it in a degraded condition. The remaining forest type is primarily upland oak-hickory interspersed with honey locust, cedar, elm, and ash.

- 3) Tall fescue and undesirable woody vegetation (such as honey locust, autumn olive, black locust, Osage orange, red cedar, shingle oak and elm) have encroached into once open areas, reducing the value of these areas to wildlife, especially grassland-dependent species.
- 4) The primary methods of managing herbaceous and forested cover on the VanDyke CA is mechanical tree removal, herbicide application, food plot management, and prescribed fire (on an infrequent basis).

Management Objective 1: Improve open lands for the benefit of grassland/early-successional wildlife species.

Strategy 1: Monitor and treat undesirable herbaceous and woody cover (fescue, sericea lespedeza, autumn olive, etc.) through the use of mechanical tree removal, herbicide application, planting, and prescribed fire. (Wildlife)

Strategy 2: Manage currently cropped open land through a combination of farming, planting of food plots, and fallowing of fields. (Wildlife)

Management Objective 2: Create and maintain open woodland plant communities. Management recommendations for all forested stands will be developed in coordination with the Forestry Division.

Strategy 1: Utilize a variety of sustainable forest management techniques to promote healthy forest and woodland communities including, but not limited to, timber harvesting, forest thinning, firewood cutting, salvage cuttings, tree planting, seeding, and prescribed burning. (Forestry)

Strategy 2: Maintain a diversity of timber age classes that will provide both a diversity of wildlife habitat as well as resiliency to living and non-living (fire, weather, climate) damaging agents. (Forestry)

Strategy 3: Utilize Best Management Practices during 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* manual (Missouri Department of Conservation, 2014) and the *Missouri Forest Management Guidelines: Voluntary Recommendations for Well-Managed Forests* (Missouri Department of Conservation, 2014). (Forestry)

Strategy 4: Identify tracts best suited for woodland management in FY18. (Forestry)

Strategy 5: Opportunistically manage woodland units for low basal area (<60ft²) and a diverse native herbaceous component. (Forestry)

VI. Aquatic Resource Management Considerations

Approximately 1,700 feet of Medicine Creek flows along a portion of the western boundary of the VanDyke CA (Figure 1). Aquatic resource management opportunities are very limited on VanDyke CA.

Challenges and Opportunities:

- 1) Three of the ponds on the conservation area are considered wildlife watering holes (unnumbered ponds in Figure 1) and are generally unable to support sportfish populations. Wildlife watering holes serve as important areas for amphibians, reptiles, aquatic invertebrates, and wetland plants. In addition, they provide dispersed water sources for terrestrial wildlife species.
- 2) The area has one remote pond (the northern most pond in Figure 1) with marginal depths to support fish. Given the low potential for use by anglers and high potential for chronic fish kills, this pond is not actively managed for fishing, but it may occasionally offer the opportunity to catch quality-sized fish.
- 3) Stream resources on the area are limited to a short, relatively inaccessible, stretch of Medicine Creek and small intermittent drainages. Since these areas are not significant fisheries, they serve as additional wildlife watering holes and habitat for a variety of aquatic organisms.
- 4) Riparian corridors are mostly contiguous and of sufficient width to provide diverse wildlife habitat and serve as travel corridors, and natural floodplains.
- 5) Severe erosion along much of the bank of Medicine Creek restricts access from the creek to the conservation area.

Management Objective 1: Maintain a healthy riparian corridor along Medicine Creek and the area's unnamed tributaries.

Strategy 1: Maintain or establish an adequate width on all wooded riparian corridors along creek and tributaries to promote stable stream banks and provide beneficial floodplain functions in accordance with the Department's *Watershed and Stream Management Guidelines for Lands and Waters Managed by Missouri Department of Conservation* (Missouri Department of Conservation, 2009). (Fisheries)

Strategy 2: Control undesirable woody vegetation (e.g., honey locust, autumn olive, black locust, Osage orange, red cedar, shingle oak, and elm) within riparian corridor. (Wildlife)

Management Objective 2: Improve stability of eroded creek banks.

Strategy 1: Maintain and/or install rock crossings on the tributaries to provide grade control, where needed, to significantly enhance management capabilities. (Design and Development)

VII. Public Use Management Considerations

VanDyke CA is managed for upland game and non-game wildlife species. The majority of public use is from deer and turkey hunters. Only one fishable pond is located on the area, but it is not actively managed for fishing due to its remote location and low potential to support a quality fishery. Limited fishing activity occurs on Medicine Creek, which is difficult to access on this area.

Challenges and Opportunities:

- 1) Due to VanDyke CA's remote location, undesirable plant species are difficult to aggressively manage.
- 2) Provide deer harvest strategies that enhance public use opportunities while maintaining a quality deer population.

Management Objective 1: Manage VanDyke CA to provide quality hunting opportunities for deer and turkey, while maintaining public use opportunities for other activities such as mushroom hunting, bird watching, and sightseeing.

Strategy 1: Annually review area regulations, particularly as they relate to deer hunting. (Wildlife, Protection)

Strategy 2: Maintain interior field access trails to provide easy and unrestricted foot traffic by area users. (Wildlife)

VIII. Administrative Considerations

Challenges and Opportunities:

- 1) VanDyke CA has a county road bisecting the area for approximately 0.5 miles. Additional administrative duties may result from working with the local Mercer County governments in maintaining these road rights of way.
- 2) Consider land acquisition, when available.

Management Objective 1: Maintain county rights of way bordering Missouri Department of Conservation (Department) areas.

Strategy 1: Work with county authorities as needed. (Wildlife)

Management Objective 2: Maintain adequate boundary fencing.

Strategy 1: Work with neighboring landowners to maintain property boundaries as needed. (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)

APPENDICES

Area Background:

VanDyke Conservation Area was obtained by the Department in 1999 from Mr. Ronald VanDyke and named after his relatives. It consists of approximately two-thirds hardwood timber in various age and size classes and one-third old fields and native grasses. A portion of Medicine Creek runs for approximately 0.3 miles along the western boundary of the area.

Current Land and Water Types:

Land/Water Type	Acres	Miles	% of Area
Forest/Woodland	254		80
Old Field	45		14
Open Lands	16		6
Total	315		100
Stream Frontage - Medicine Creek		0.3	

Public Input Summary:

The draft VanDyke Conservation Area was available for a public comment period March 1-31, 2017. The Missouri Department of Conservation received no comments during this time period.

References:

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 forest management guidelines voluntary recommendations for well-managed forests*. Jefferson City, MO: Conservation Commission of the State of Missouri.

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: Area Cover Types

Figure 3: Historic Vegetation Communities

Figure 4: Easement Map

Figure 1: Area Map

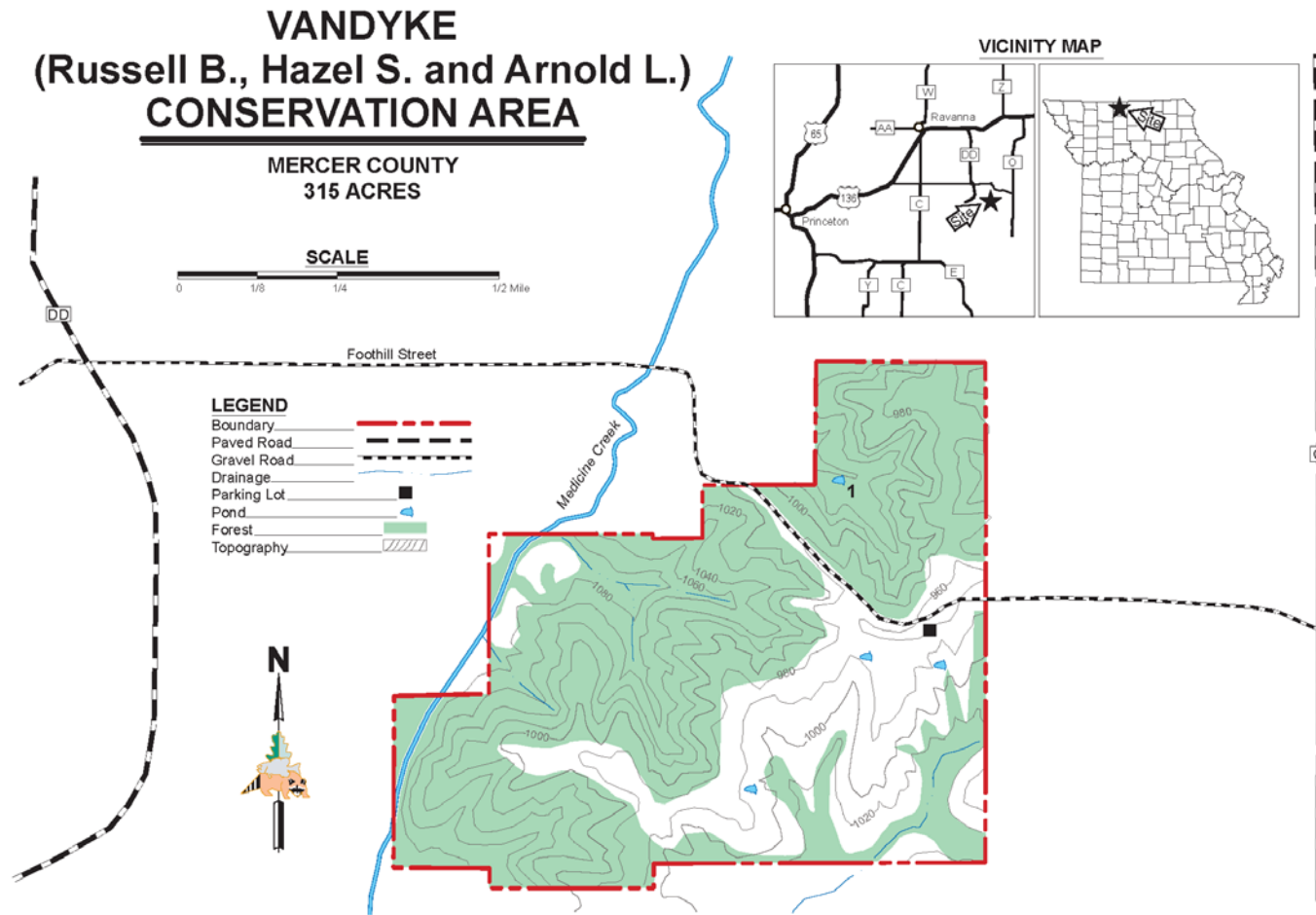


Figure 2: Area Cover Types

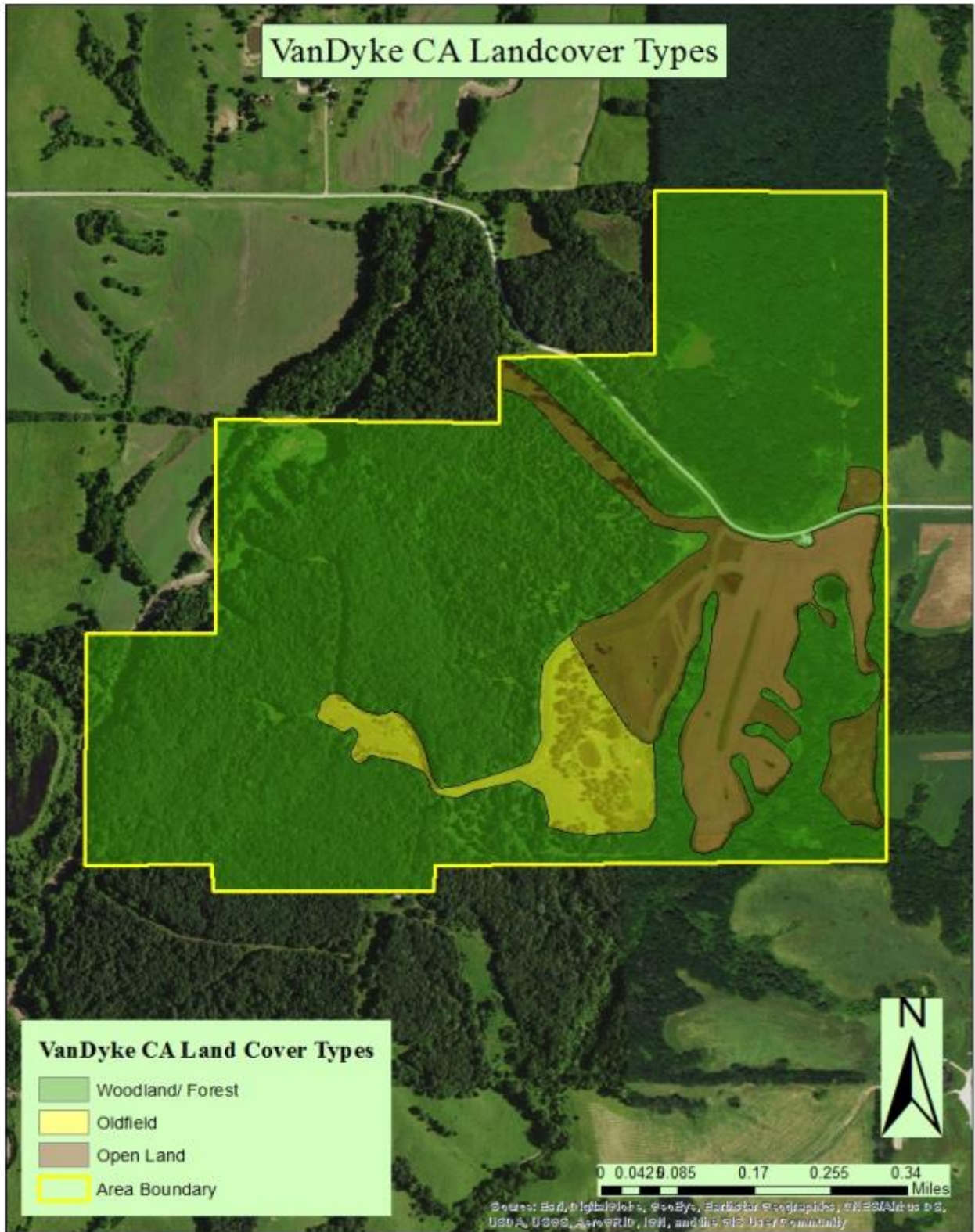


Figure 3: Historic Vegetative Communities

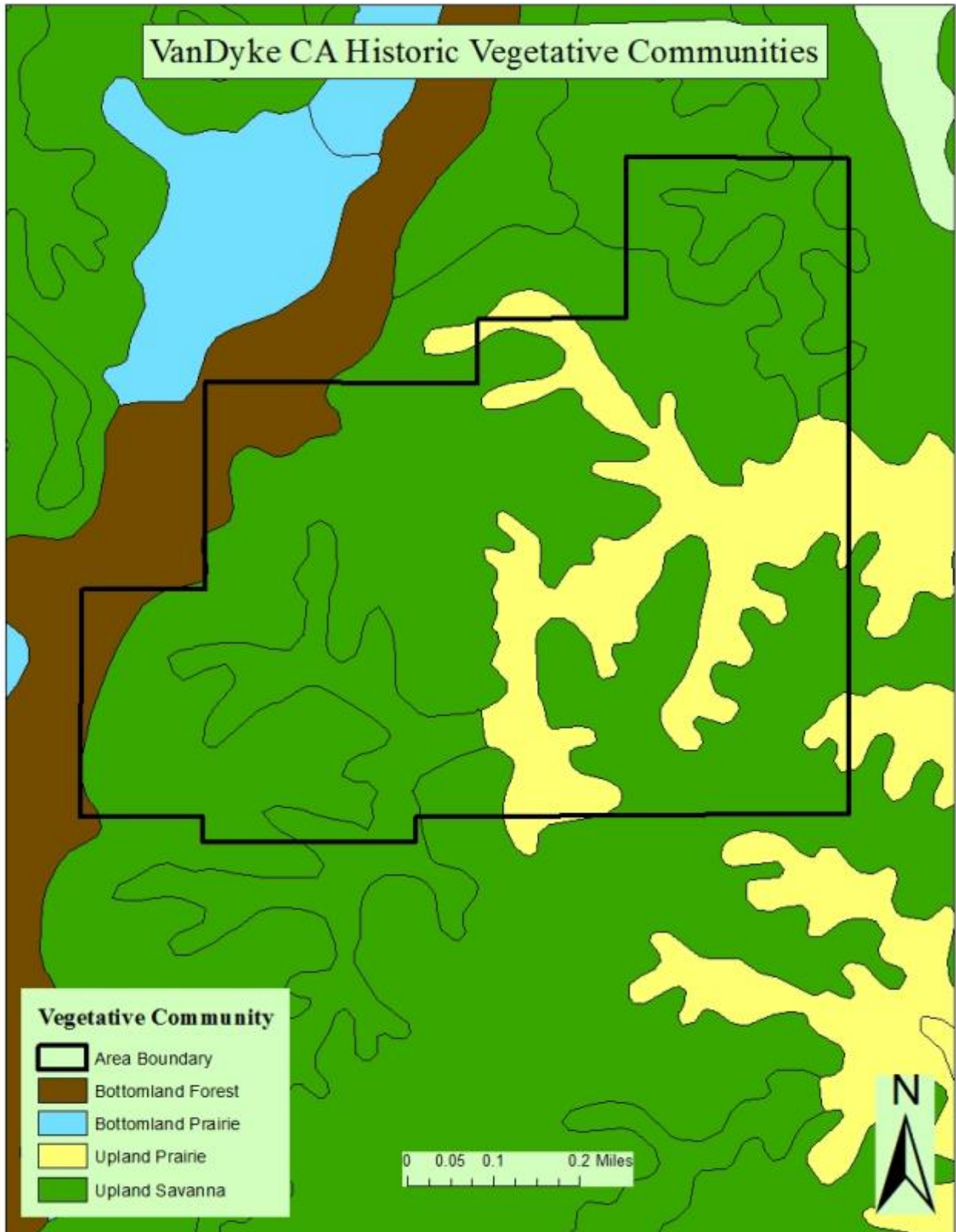


Figure 4: Easement Map

