

# **DRAFT**

# **Valley View Glades**

# **Natural Area**

## **Ten-Year Area Management Plan**

### **FY 2015-2024**



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## OVERVIEW

- **Official Area Name:** Valley View Glades Natural Area, # 8213
- **Year of Initial Acquisition:** 1982
- **Acreage:** 225 acres
- **County:** Jefferson
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**
  - A. Strategic Direction**

Manage the high quality glade and woodland communities to preserve biodiversity while providing opportunities for diverse public use.
  - B. Desired Future Condition**

The desired future condition of Valley View Glades Natural Area (NA) is a healthy, diverse and sustainable mosaic of glade and woodland that maintains species diversity and provides opportunities for the public to study, hike and enjoy the area.
  - C. Federal Aid Statement**

N/A

## GENERAL INFORMATION AND CONDITIONS

### I. Special Considerations

- A. Priority Areas:** Valley View Glade Terrestrial Conservation Opportunity Area, Big River Fisheries Priority Watershed, Jefferson County Glades The Nature Conservancy Priority Area
- B. Natural Areas:** Valley View Glades NA is a representation of a dolomite glade natural community with adjacent dolomite woodlands that occurs in a large complex of dolomite glades starting near Morse Mill and extending east to Festus and then south to Ste. Genevieve County in a band about 2 to 5 miles wide. The glades develop on thin soils with bedrock outcrops formed from the Jefferson City-Cotter dolomite formation.

### 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:** Occurs in the Big River Dolomite Glade/Oak Woodland Low Hills Landtype Association. This landtype consists of low hills associated with the

Jefferson City-Cotter Formation. Historically, glade/woodland complexes were interspersed with an oak woodland matrix (Nigh & Schroeder, 2002).

**III. Existing Infrastructure**

- 1 parking lot
- 2.5 mile Valley View Glades Trail (non-interpretive)

**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:** None
- D. Cultural Resources Findings:** No known cultural resources.
- E. Hazards and Hazardous Materials:** None observed.
- F. 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.
- G. Boundary Issues:** None
- H. Other:** Follow all guidelines in the Missouri Natural Areas Procedures Manual (Missouri Department of Conservation, 2010).

**MANAGEMENT CONSIDERATIONS**

**V. Terrestrial Resource Management Considerations**

**Challenges and Opportunities:**

- 1) Control early infestations of invasive plants currently found on the area (e.g., Japanese honeysuckle, sericea lespedeza and tall fescue), and the threat of future invasive plant infestations.
- 2) Use prescribed fire to reverse impacts of wildfire removal from natural communities. Impacts of wildfire removal may include:
  - Invasion of eastern red cedar and sugar maple in glades and woodlands;
  - Shift in tree species composition to shade tolerant, fire intolerant species in woodlands; and
  - Decrease in diversity and abundance of ground layer herbaceous vegetation.

- 3) Enhance wildlife habitat and maintain biological diversity by maintaining open glades and woodlands with canopy gaps, allowing sunlight to reach the ground level herbaceous layer.
- 4) Monitor occurrence and relative abundance of as many species as possible on the area.

**Management Objective 1:** Maintain healthy glades with management emphasis on biological diversity.

**Strategy 1:** Monitor glades for invasive vegetation. Mechanically or chemically suppress any infestations to acceptable levels.

**Strategy 2:** Use prescribed fire to maintain glade openings and suppress invasions of eastern red cedar and sugar maple, while stimulating herbaceous vegetation in glades.

**Strategy 3:** Mechanically or chemically remove any eastern red cedar and sugar maple that is not controlled by prescribed fire, but that would have been controlled historically by wildfire.

**Management Objective 2:** Maintain healthy woodlands with management emphasis on biological diversity.

**Strategy 1:** Monitor woodlands for invasive exotic vegetation. Mechanically or chemically suppress any infestations.

**Strategy 2:** Reduce tree stocking in woodlands to desired stocking levels and to desired hardwood tree species mixes using mechanical or chemical non-commercial thinning methods.

**Strategy 3:** Use prescribed fire in woodlands to stimulate herbaceous vegetation and increase oak regeneration.

**Management Objective 3:** Monitor biological diversity over time.

**Strategy 1:** Maintain list of all known species occurrences on the area with dates of documentation. This will be coordinated by the Natural History Biologist and will be conducted in partnership with The Native Plant Society, The Botanical Garden, Webster Groves Nature Study Society, Missouri Prairie Foundation, The Nature Conservancy and other interested groups.

**Strategy 2:** Monitor the relative abundance of species of conservation concern on the area every five years. This will be coordinated by the Natural History Biologist.

## VI. Aquatic Resource Management Considerations

### **Challenges and Opportunities:**

Maintain a healthy riparian corridor in the headwater streams of the Big River Watershed.

**Management Objective 1:** Maintain riparian corridors along streams.

**Strategy 1:** Monitor density of trees in drainages and ensure adequate stocking is maintained to minimize soil erosion. If stocking is inadequate, exclude fire from riparian corridors until seedlings are allowed to recruit into the overstory and become resistant to top kill by prescribed fire.

## VII. Public Use Management Considerations

### **Challenges and Opportunities:**

- 1) Deter illegal uses in the area, including the collection of flora and fauna, rock flipping, all-terrain vehicle use and trash dumping at the parking lot.
- 2) Offer valuable recreational opportunities such as nature viewing/study, hiking and hunting.
- 3) Regularly maintain the area for a variety of intensive public uses.
- 4) Build relationships with neighboring land owners and partners such as The Native Plant Society, The Botanical Garden, Webster Groves Nature Study Society, Missouri Prairie Foundation and The Nature Conservancy.

**Management Objective 1:** Deter illegal activities from the area.

**Strategy 1:** Post informative signage at the parking lot, in accordance with area regulations to encourage users to report illegal activities such as poaching, soil disturbance and digging, and unauthorized collection of rocks, plants and wildlife. Post contact information to report violations.

**Strategy 2:** Perform regular area inspections and patrols.

**Strategy 3:** Utilize open communication with Conservation Agents about activities on area and address issues as they are reported.

**Management Objective 2:** Provide public hunting and wildlife viewing opportunities.

**Strategy 1:** Maintain healthy habitat for a variety of plants and animals.

**Strategy 2:** Ensure that public hunting opportunities are advertised in the annual hunting regulation booklets, Missouri Conservation Atlas and Area brochure.

**Management Objective 3:** Maintain parking lot and maintain/enhance the trail system to provide aesthetics and high-quality hiking opportunities to the public.

**Strategy 1:** Perform routine maintenance on trails and parking lot.

**Strategy 2:** Perform routine trash pickup, painting and other maintenance activities.

**Strategy 3:** Work with Design and Development to explore methods to repair or replace parking lot surface.

**Management Objective 4:** Cultivate and maintain a good working relationship with neighboring land owners and natural resource partner groups.

**Strategy 1:** Work with neighbors to minimize boundary, trespass or any other issues affecting the natural area.

**Strategy 2:** Promote habitat management on neighboring landowner properties. This will be done by the Resource Forester and Private Land Conservationist in Jefferson County.

**Strategy 3:** Foster communication with partner groups to maintain area species occurrence list.

## VIII. Administrative Considerations

### **Challenges and Opportunities:**

- 1) Keep area users informed with up-to-date information about the area.
- 2) Respond to the numerous requests received for research and collection of flora and fauna on this area.
- 3) Acquire larger tracts of land (100+ acres) that border the natural area and occur within the Valley View Glade Terrestrial Conservation Opportunity Area.

**Management Objective 1:** Ensure public information about the area is accurate and up-to-date.

**Strategy 1:** Perform annual review of Missouri Atlas data and Area brochures.

**Management Objective 2:** Regulate pressure from scientific research on the area.

**Strategy 1:** Maintain moratorium on research projects at discretion of Department Heritage Biologists and the Area Manager.

**Management Objective 3:** Maintain well marked, accurate boundary lines and area signs.

**Strategy 1:** Paint boundary trees and maintain signs along boundary lines every four years, or as needed.

**Strategy 2:** Paint and maintain area signs.

**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:

	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
<b>Terrestrial Resources Management</b>										
<i>Objective 3</i>										
Strategy 2				X					X	
<b>Administrative Considerations</b>										
<i>Objective 3</i>										
Strategy 1				X				X		

## APPENDICES

### Area Background:

Valley View Glades Natural Area is in central Jefferson County and was acquired in 1982. It was designated a natural area Aug. 24, 1982. The 225-acre area is a high quality representation of a large complex of dolomite glades starting just east of the Big River, near Morse Mill and extending eastward and beyond Hillsboro and Desoto, to Festus, then south into Ste. Genevieve County. This large complex of glades occurs in a band 2 to 5 miles wide. These glades are principally on Jefferson City-Cotter dolomite of Ordovician age.

The glades are commonly found on south and southwest-facing slopes with wooded ridges and are characterized by thin soil and bedrock at or near the surface. Water saturates the ground in winter and spring, but soils become droughty in summer and fall. These glades have been only lightly disturbed by human activity.

The plants and animals here are similar to what were here at the time of European settlement. The glades are dominated by little bluestem, Indian grass, big bluestem and prairie dropseed. Non-grass species, although not as dominant as the grasses, provide good wildlife food and add beautiful color to the glades during seasonal peaks of blooming.

The occurrence of both small intermittent streams and ephemeral streams, which drain the glades, adds diversity to the area. For such a small area, existing features such as stream ledges, waterfalls, overhangs and pools are remarkable.

### Current Land and Water Types:

Land/Water Type	Acres	Feet	% of Area
Woodland	135		60
Dolomite Glade	90		40
<b>Total</b>	<b>225</b>		<b>100</b>
Stream Frontage		4,041	

### Public Input:

Prior to drafting this plan, we reached out to groups who frequently use this area or have interest in the area. Input was sought from The Native Plant Society, The Botanical Garden, Webster Groves Nature Study Society, and The Nature Conservancy.

**References:**

Missouri Department of Conservation. (2010). *Missouri natural areas procedures manual version 1.0*.

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

**Maps:**

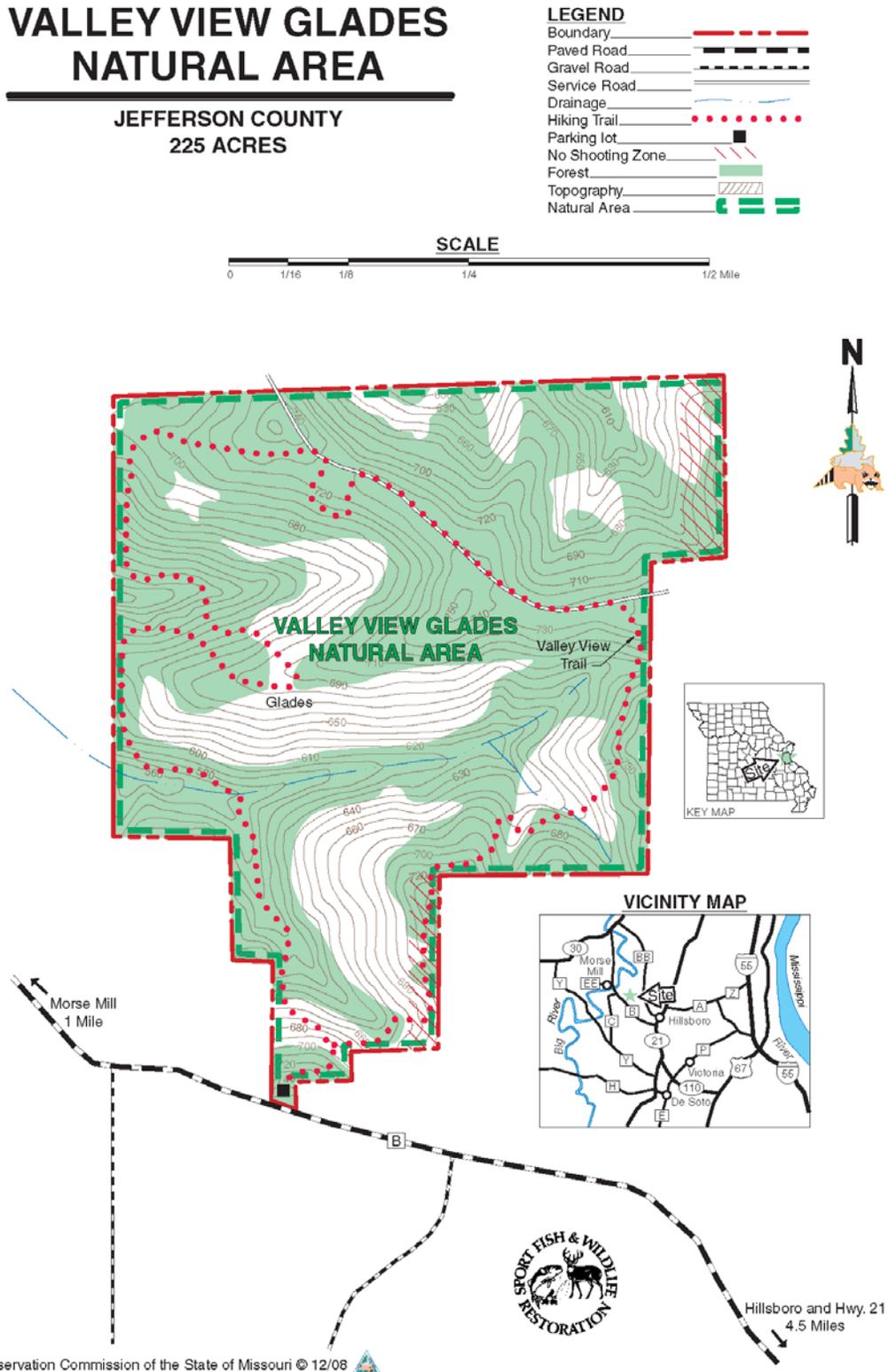
Figure 1: Area Map

Figure 2: Aerial Map

Figure 3: Topographic Map

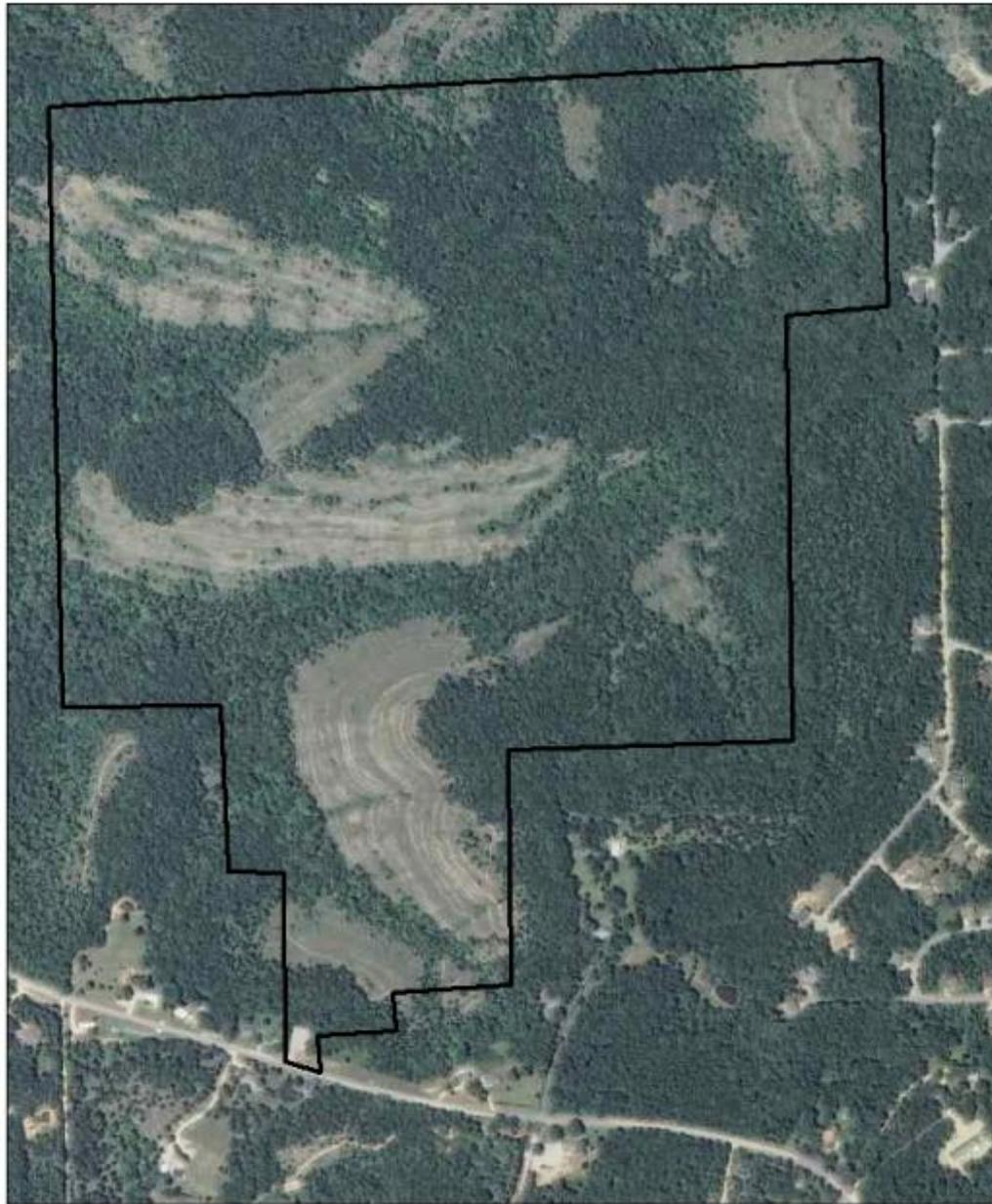
Figure 4: Current Vegetation Map

Figure 1: Area Map



**Figure 2: Aerial Map**

## Valley View Glades NA

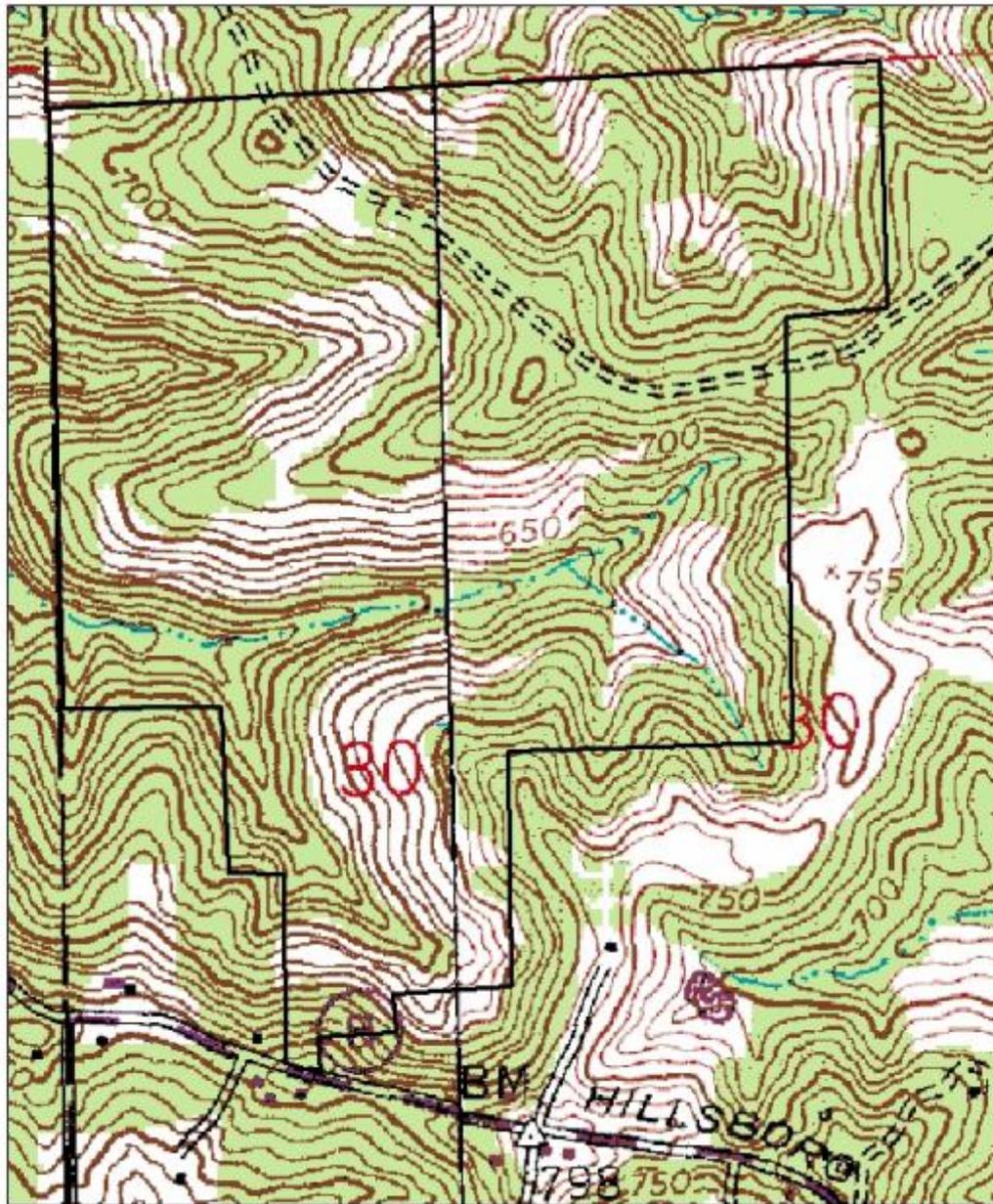


0 0.05 0.1 0.2 0.3 0.4 Miles



Figure 3: Topographic Map

### Valley View Glades NA

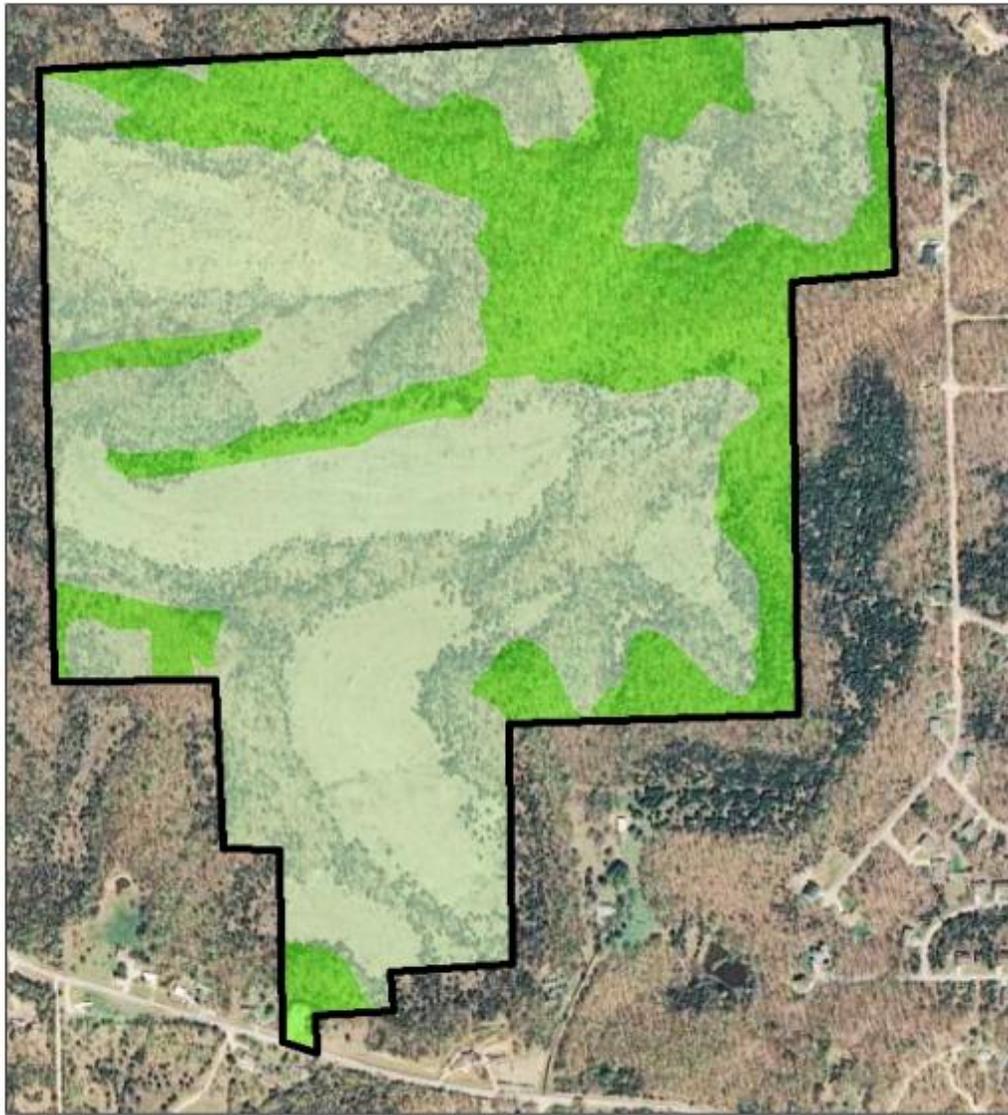


0 0.05 0.1 0.2 0.3 0.4 Miles



Figure 4: Current Vegetation Map

### Valley View Glades NA



**Legend**

-  Glade/Woodland Complex
-  Upland Woodland
-  MDC property boundary



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