

CONSERVATION BANKING AND ENDANGERED SPECIES RECOVERY EFFORTS

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What is Mitigation Banking?



Mitigation banking is the **preservation, enhancement, restoration or establishment of a wetland, stream, or habitat conservation area** which offsets, or compensates for, adverse impacts to similar nearby ecosystems ahead of the impacts.

In exchange for ecological and financial assurances to the agencies, the bank operator can provide these credits to offset third party impacts.

When Do We Mitigate?

- Mitigation is the third step in an environmental sequence
 - **Avoid** impacts
 - **Minimize** impacts
 - **Compensate** for impacts
- Compensation will be “in-kind”
 - Watershed, ecoregion, critical habitat analysis
 - Landscape context and sustainability



Compensatory Mitigation Options



Permittee Responsible Mitigation (PRM) and Turn-keys

- Single use for specific purpose



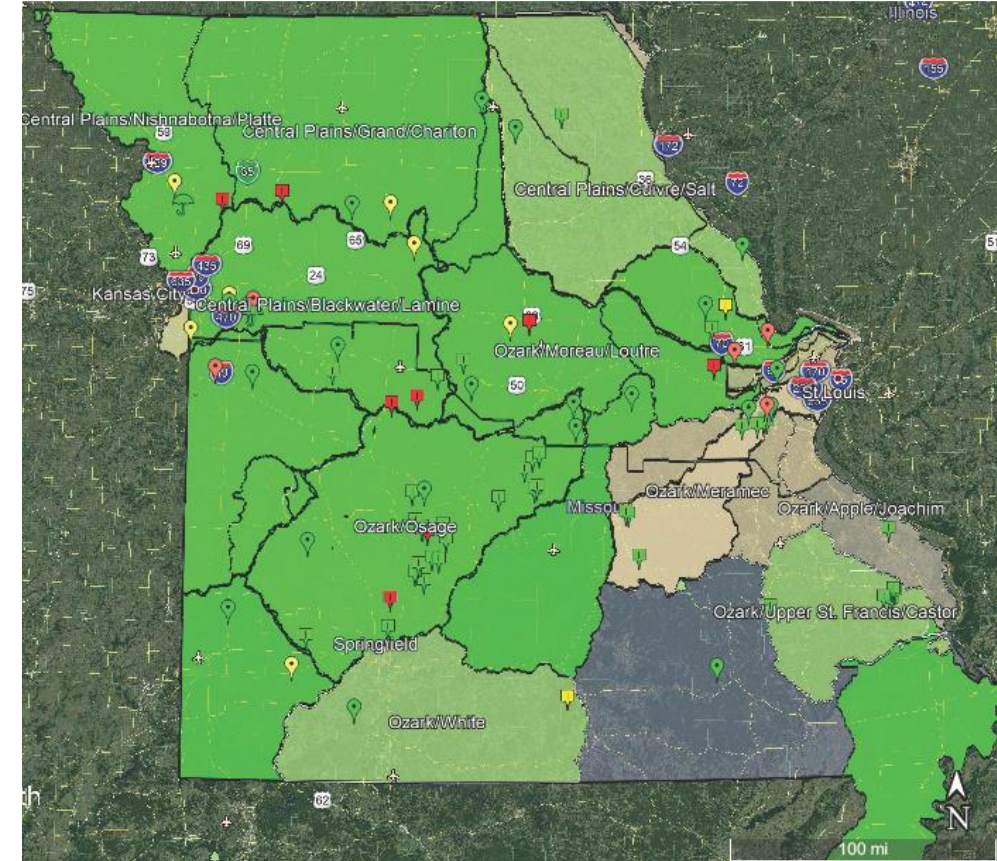
In-Lieu Fee (ILF) Programs

- Govt and non-profit offsets



Bank Credits

- Third party offsets



Mitigation Project Inputs

Site Identification and Control	Entitlement	Implementation	Interim Maintenance and Monitoring	Long-Term Management Perpetuity
<p>Landowner interest</p> <p>Analyze biology, hydrology, soils</p> <p>Purchase contracts</p> <p>Title, boundaries, easements, minerals, water</p>	<p>Design, permitting, supporting studies</p> <p>Legal and financial securities</p> <p>Negotiation of easement and interim, long-term management and performance standards</p>	<p>Construction/restoration</p> <p>Securities release</p> <p>Credit release</p> <p>Conservation easement, endowment funding</p>	<p>Restoration activities</p> <p>Managing biological performance and making corrections</p> <p>Agency reporting and evaluation</p>	<p>Site management</p> <p>Corrective actions</p> <p>Maintenance</p> <p>Reporting</p>

Using Credits to Offset Impacts



- 1** Contact us to discuss potential project needs and credit contracting options
- 2** Include credits in discussions with USFWS
- 3** Upon concurrence of USFWS, Permittee pays for credits and is done – Burns & McDonnell takes care of USFWS notices, ledger, endowment, and biological obligations

First Indiana Bat Conservation Bank



USFWS and Burns & McDonnell find connection between biological and development needs



Multiple meetings with USFWS Columbia to optimize project



Thorough property search and analysis



Conservation Bank Instrument signed July 2018

Indiana Bats in Missouri



Guidelines for Avoiding and Minimizing Impacts to Federally-Listed Bats on Missouri Department of Conservation Lands



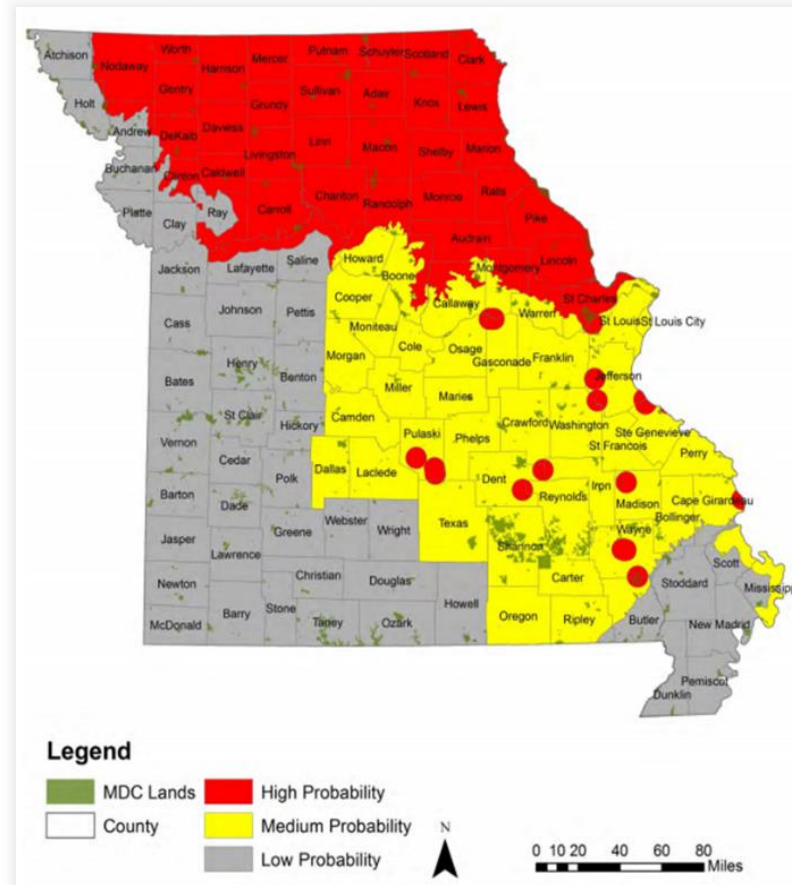
March 15, 2016


Robert L. Zieher, Director

May 13, 2016
Date


Tom A. Draper, Deputy Director

April 26th, 2016
Date

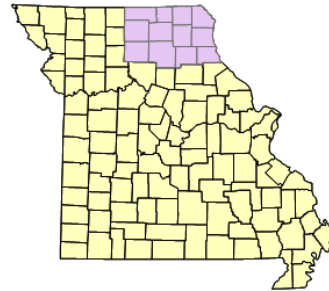


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INTERACTION SYMPOSIUM

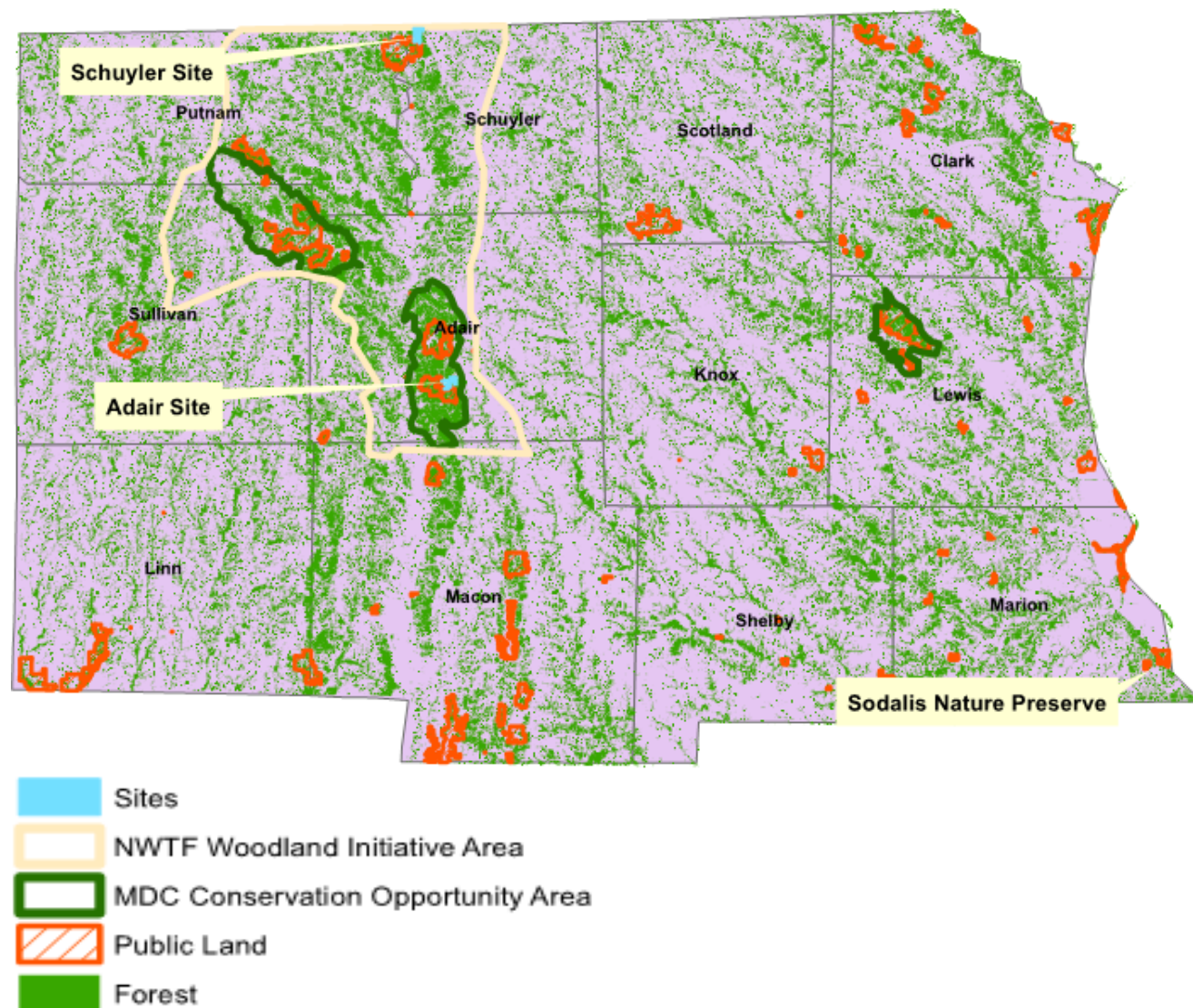
Property Search

- Searched for properties in 12 Northeast Missouri counties
- High concentration of Indiana bat maternity records – proximity to Sodalis Nature Preserve



Property Search

- Prioritized proximity to protected lands, waterways, amount of surrounding forest
- Focused on areas identified by conservation groups for woodland conservation
- Several properties were initially identified
- Conducted quantitative habitat assessments to determine suitability
 - Forest plots, stratified random sample of forest/woodland habitat types



Bat Surveys

- Netting/acoustic surveys conducted in Summer 2017 and 2018
- Reproductive female Indiana bats and northern long-eared bats were captured on both properties
- Follow-up acoustic analysis documented presence of little brown bat at the Adair site

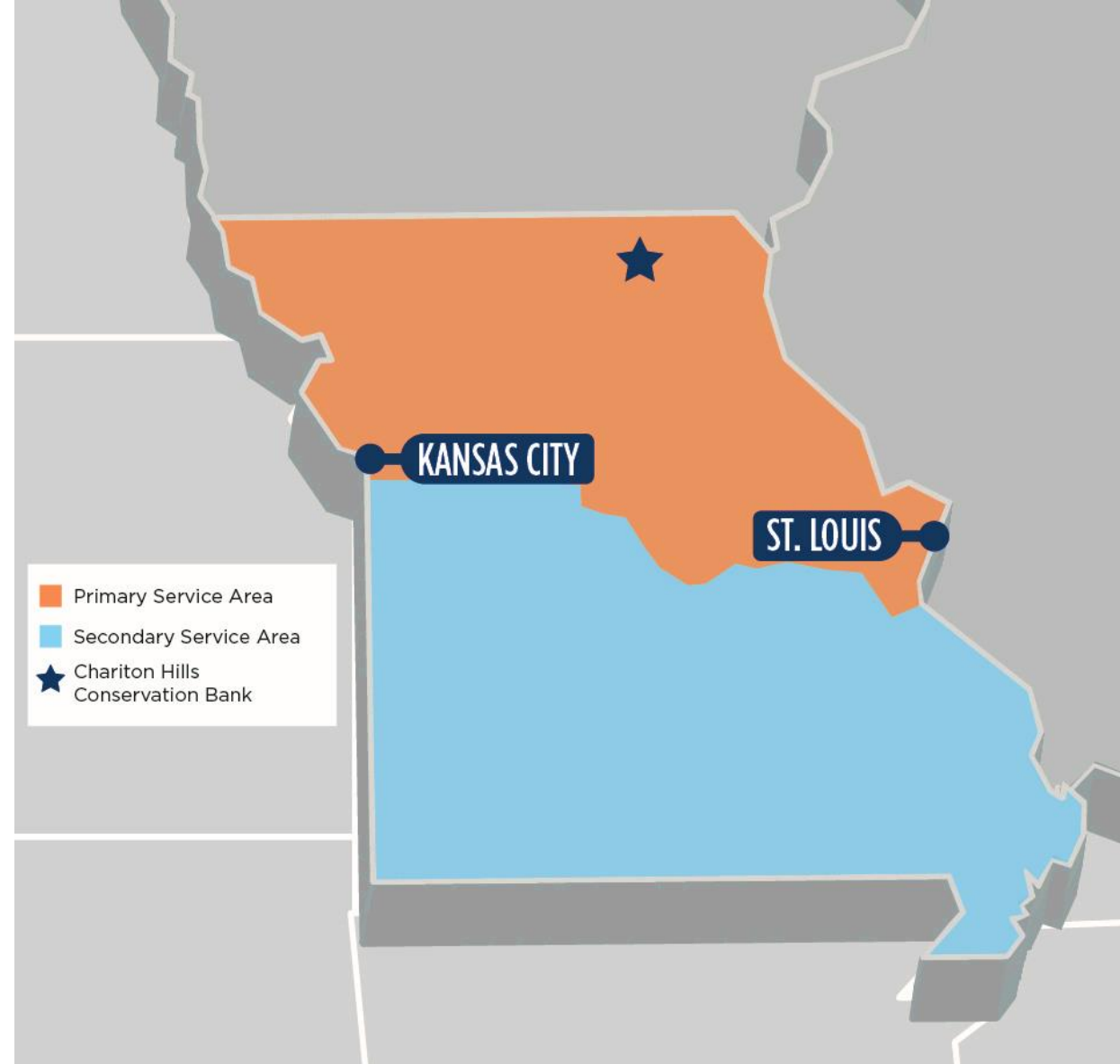


Roles and Responsibilities



Chariton Hills Conservation Bank

- 1,300 +/- acres contiguous with State of Missouri Conservation Areas
- Indiana, northern long-eared bat, and little brown bat credits
- Primary service area: Northern Missouri
- Secondary service area: Southern Missouri



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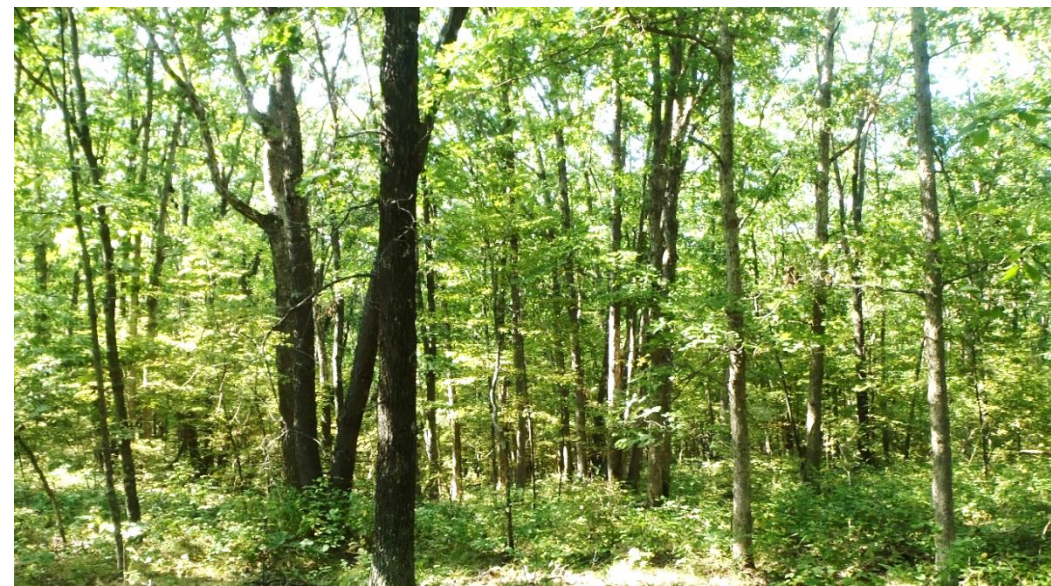
Management Overview



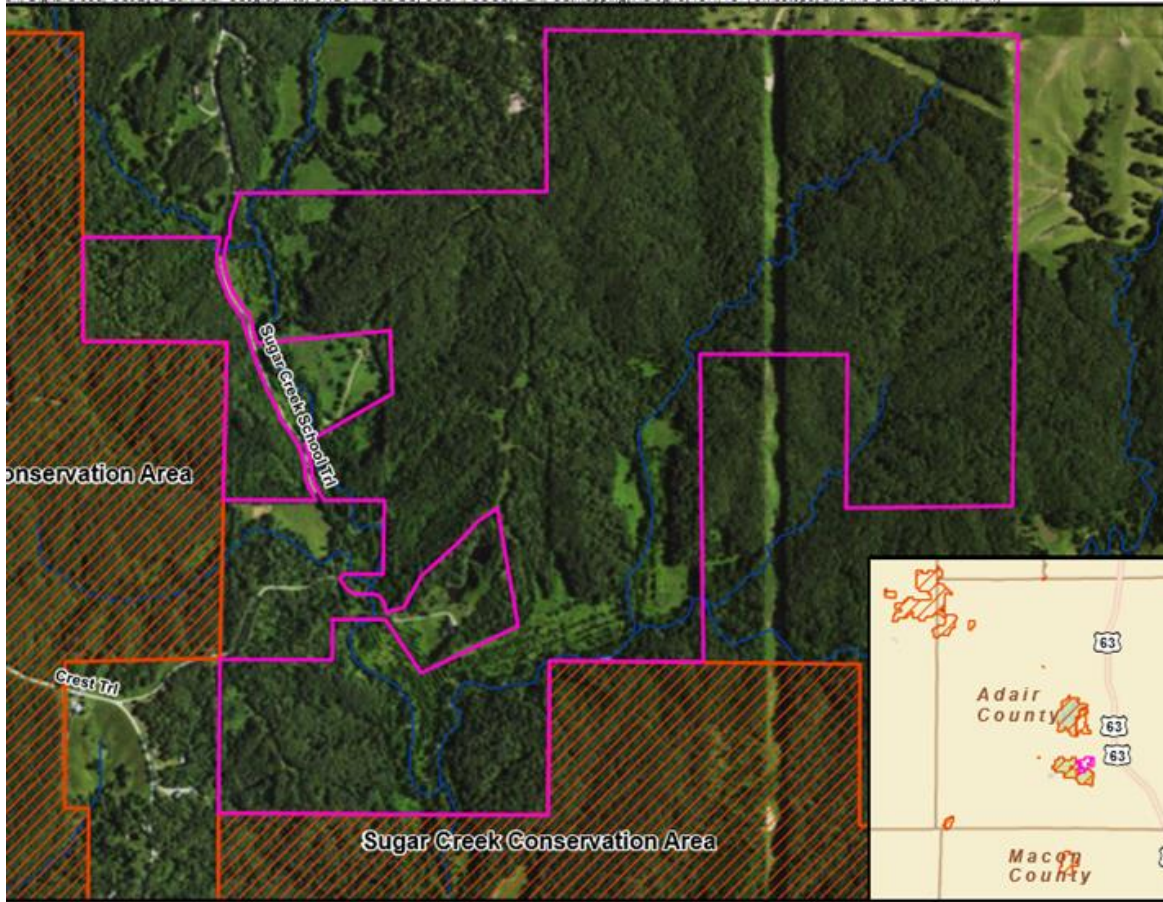
- Management actions outlined in the ILTMP
- Timeline divided into “interim” and “long-term” management
 - Interim: bank establishment until 3 years after endowment is fully funded
 - Long-term: begins at end of interim, continues in perpetuity
- Management focused on maintaining or improving habitat for bats long-term
 - Trees of various species and sizes, both living and dead
- Secondary goal of returning land to historical habitat types
 - Mix of forest and woodland with diverse understory

Woodland Management

- Northeast MO historically mix of forests, woodlands, and savannas
- Forests: closed canopy, thick understory but few forbes or grasses
- Woodlands: moderate canopy, dominance of ground-level forbes and grasses
- Fire suppression has led to conversion of woodlands to forests
- Parts of the CHCB properties can be returned to woodlands through fire



Adair Property



- Approximately 650 acres
- Adjacent to Sugar Creek Conservation Area
- Strategically located summer foraging and roosting habitat
- Planned management activities: prescribed burns, thinning, and invasive species removal

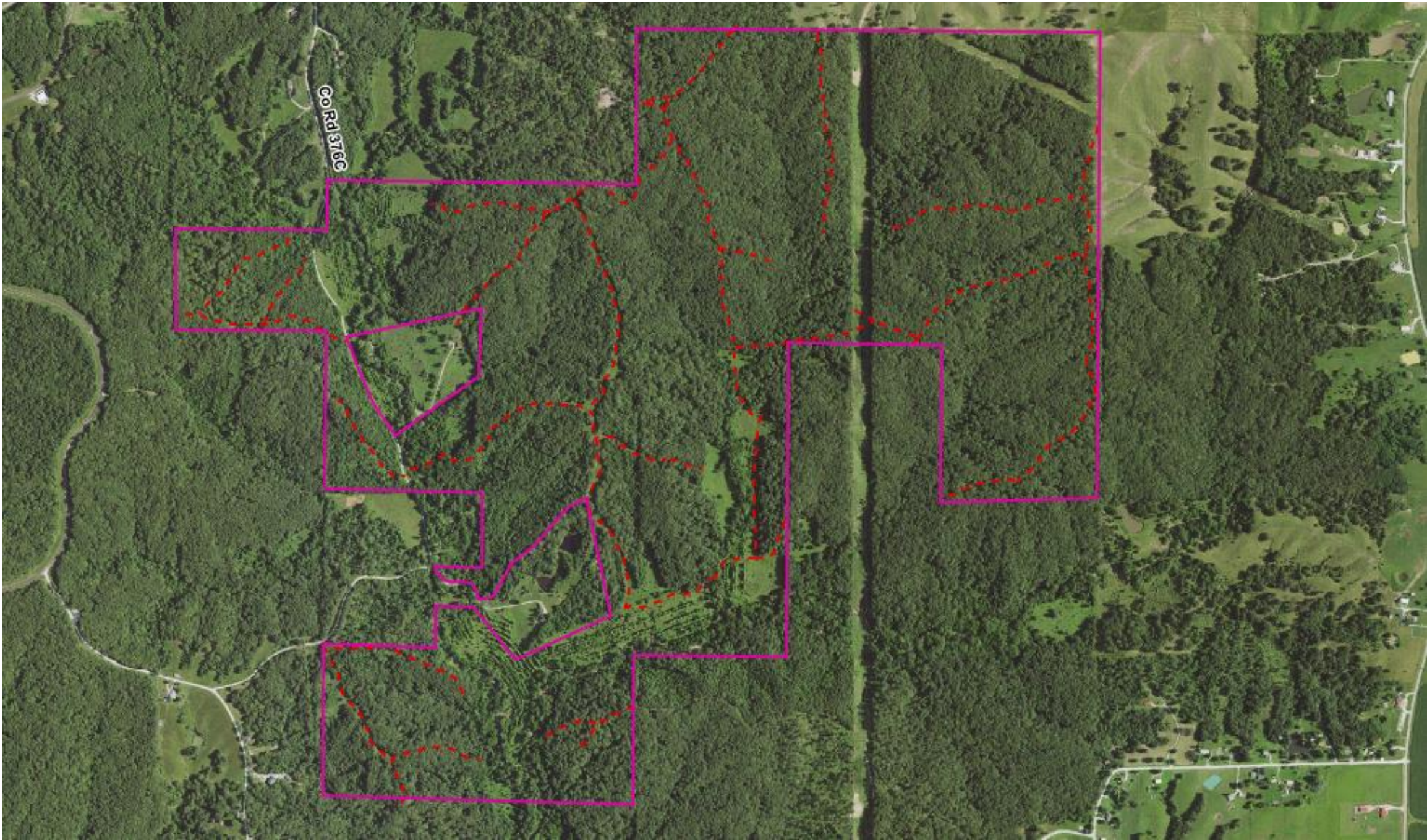
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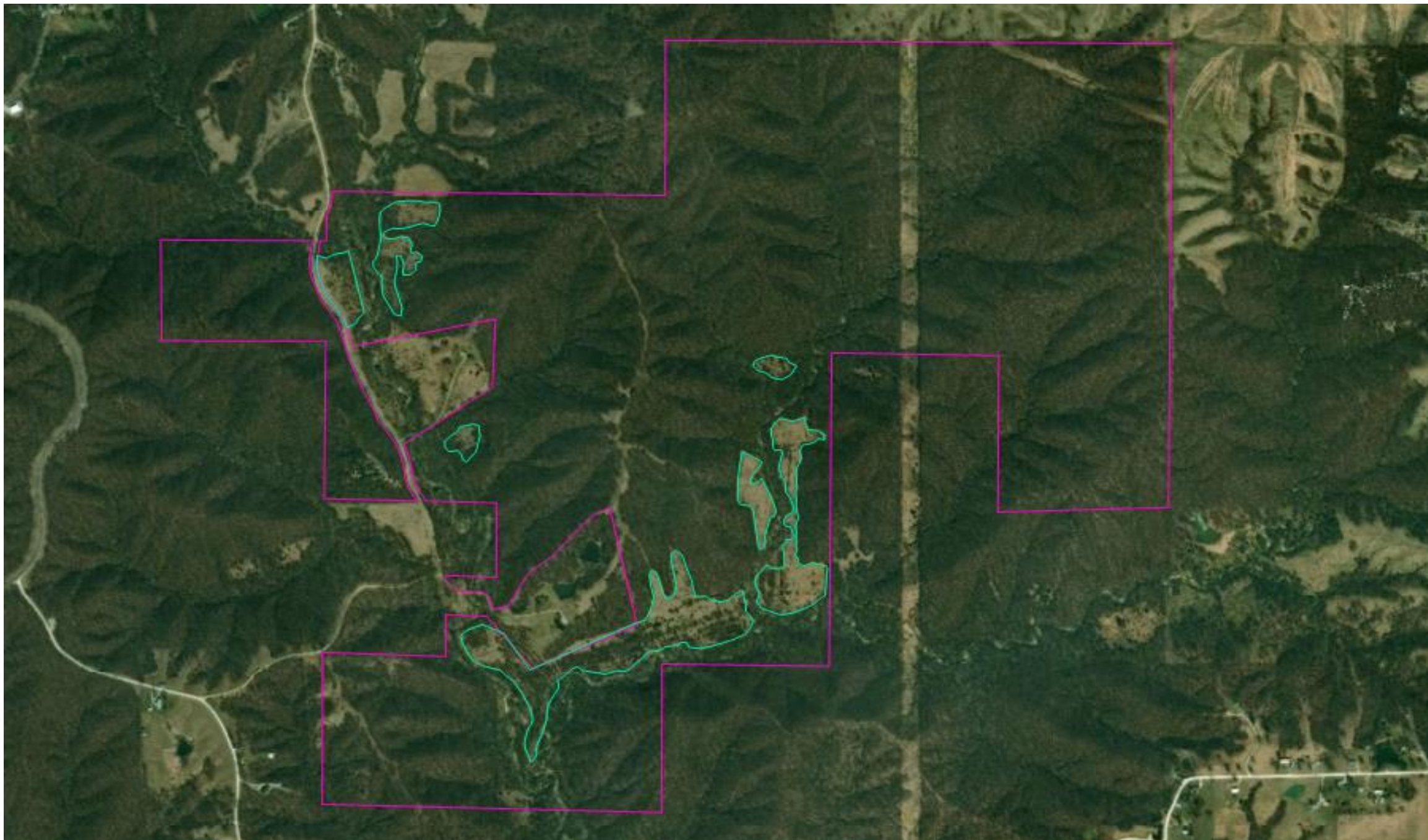
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Adair Property



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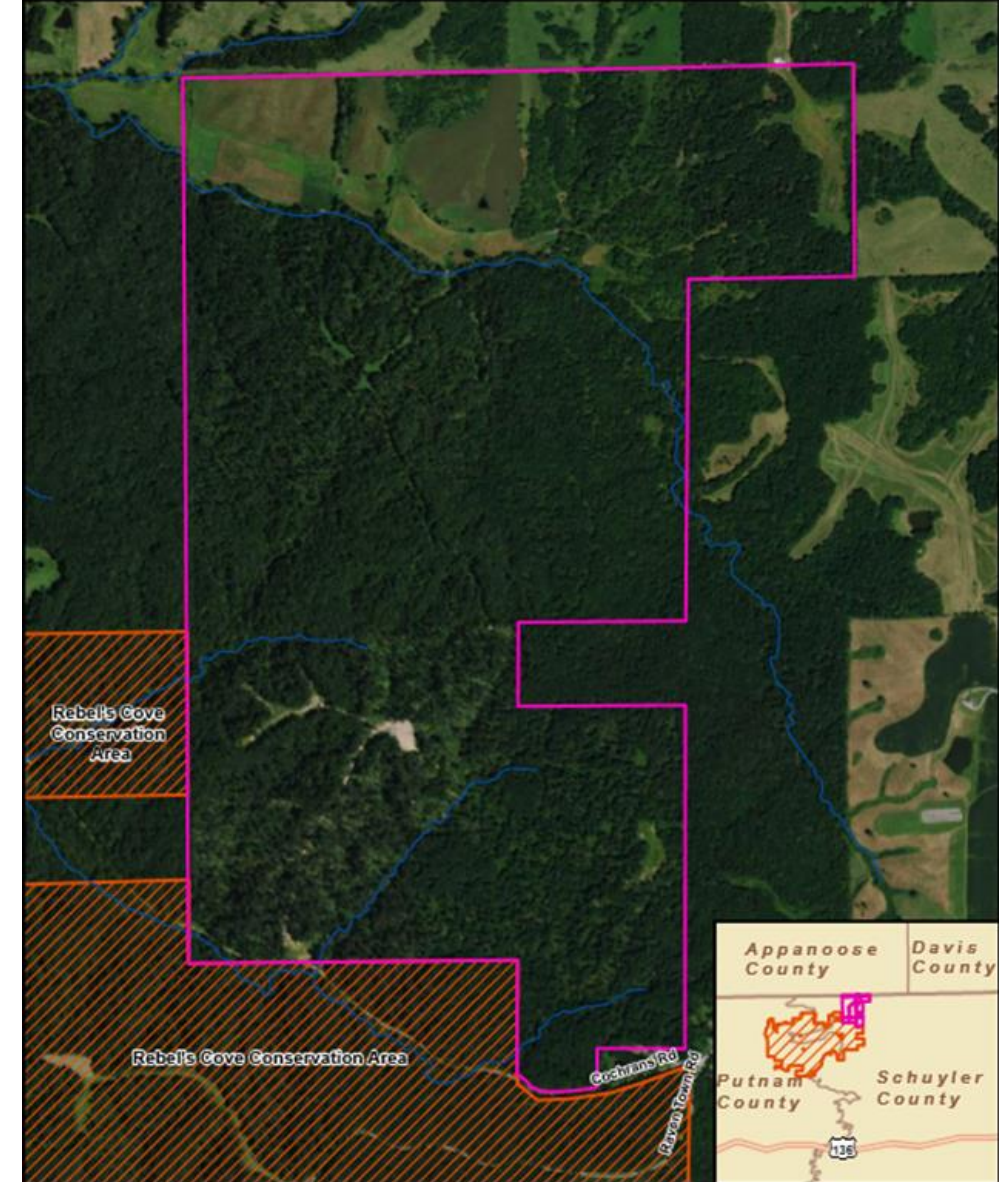






Schuyler Property

- Approximately 680 acres in Missouri
- Adjacent to Rebel's Cove Conservation Area
- Strategically located forested summer foraging and roosting habitat
- Planned management activities: prescribed burns, grassland management, and tree planting



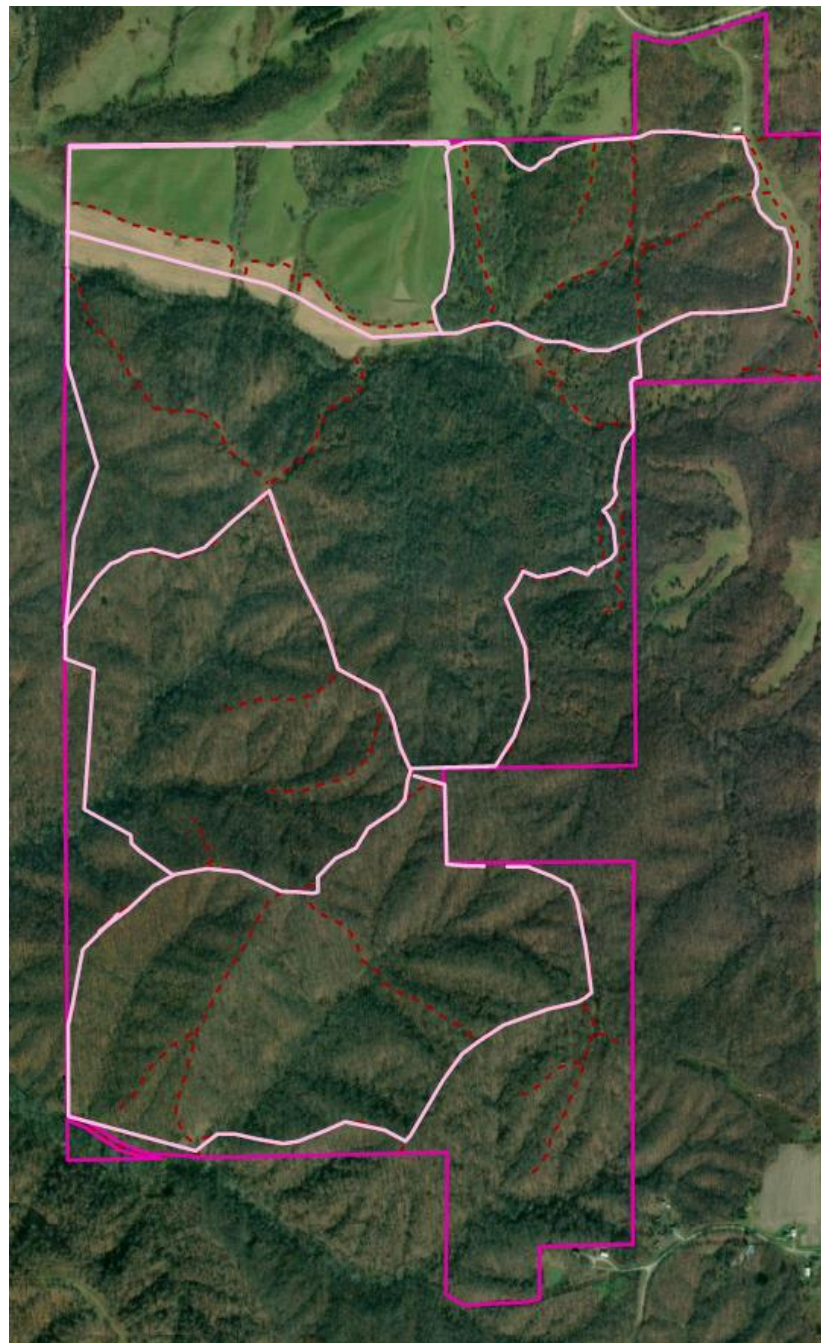
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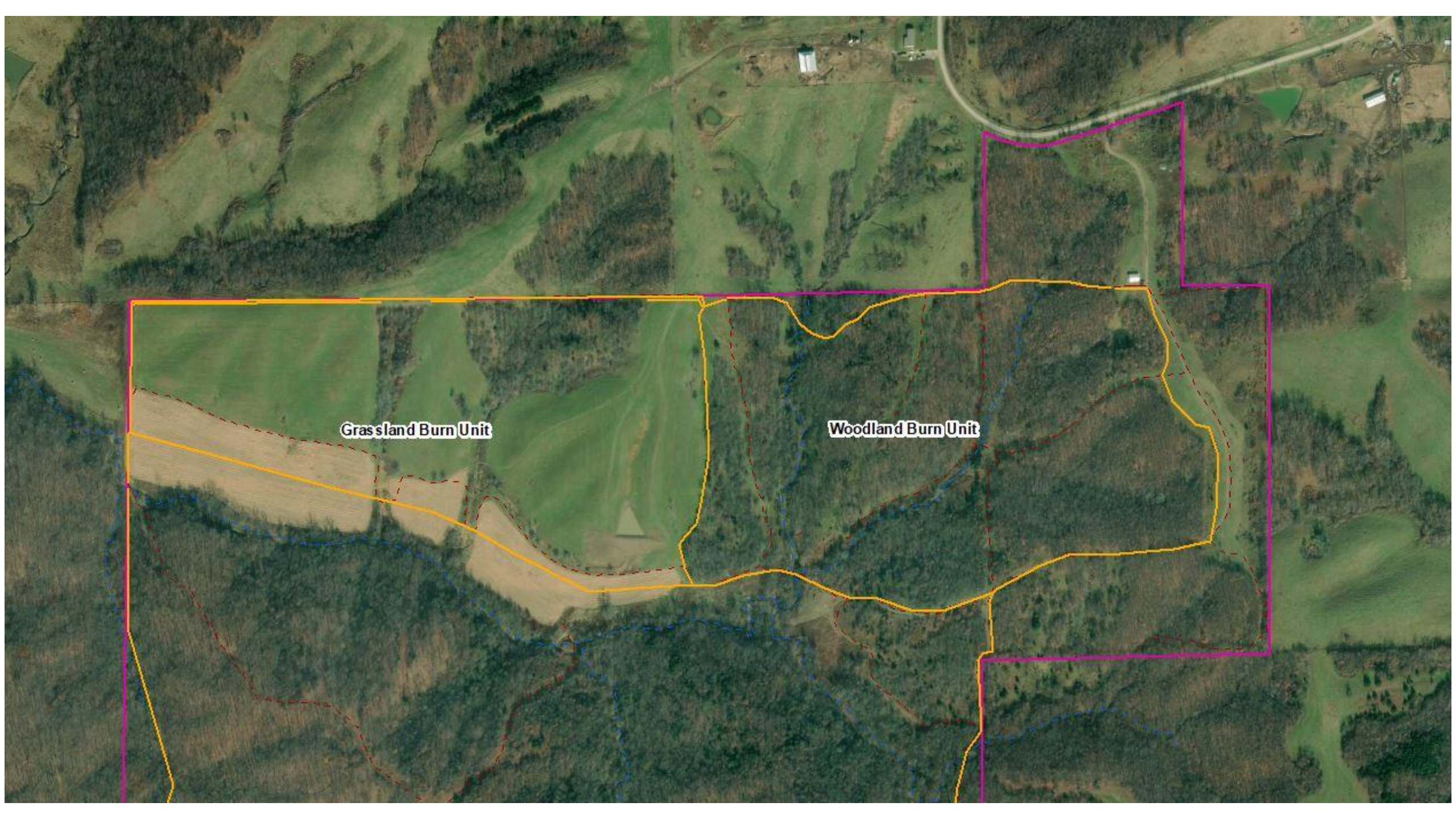
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Schuyler Property



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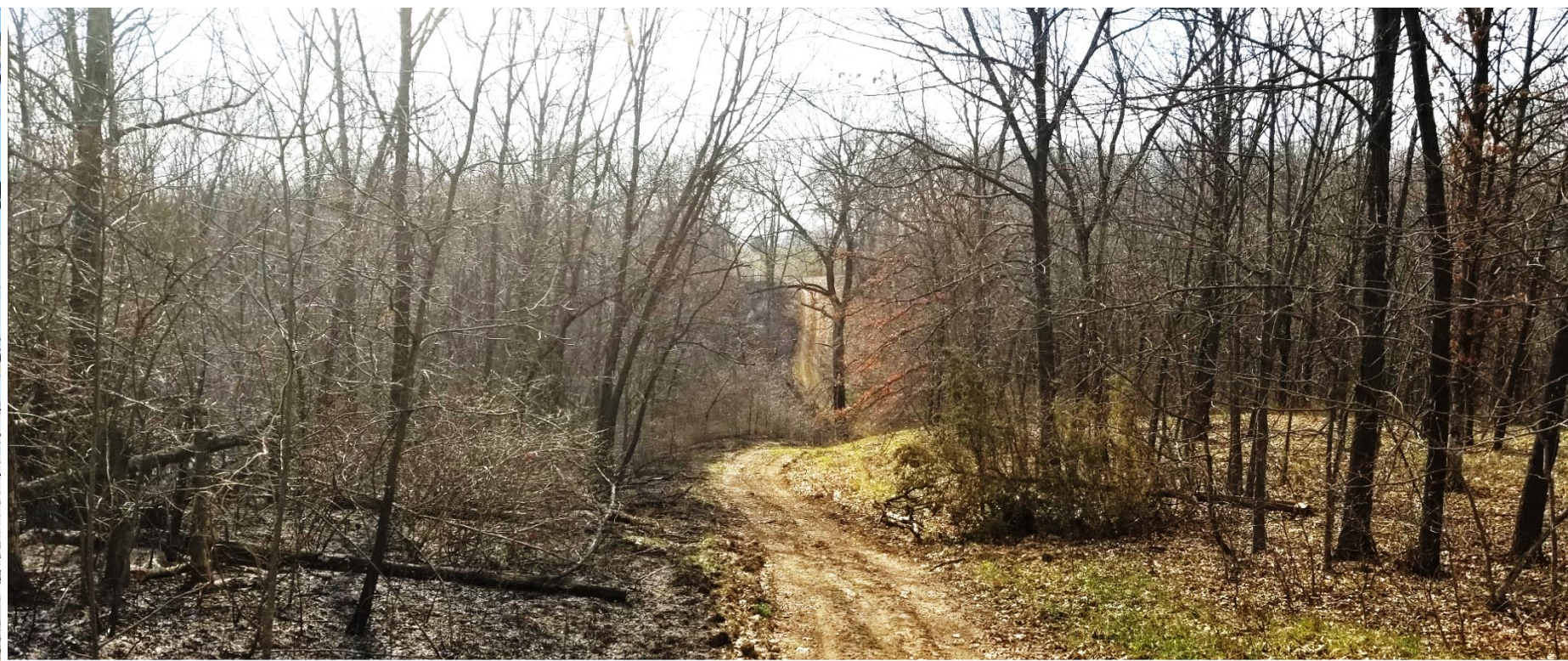
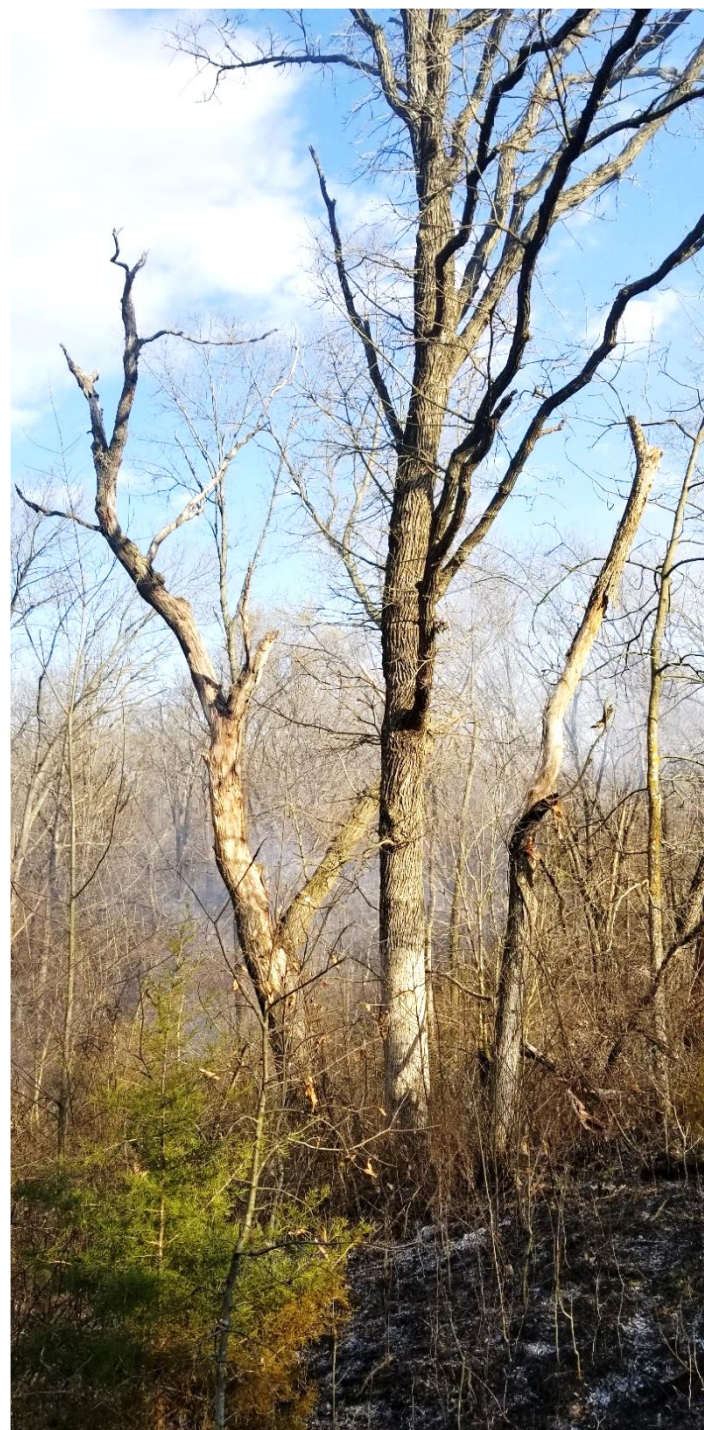


Grassland Burn Unit

Woodland Burn Unit





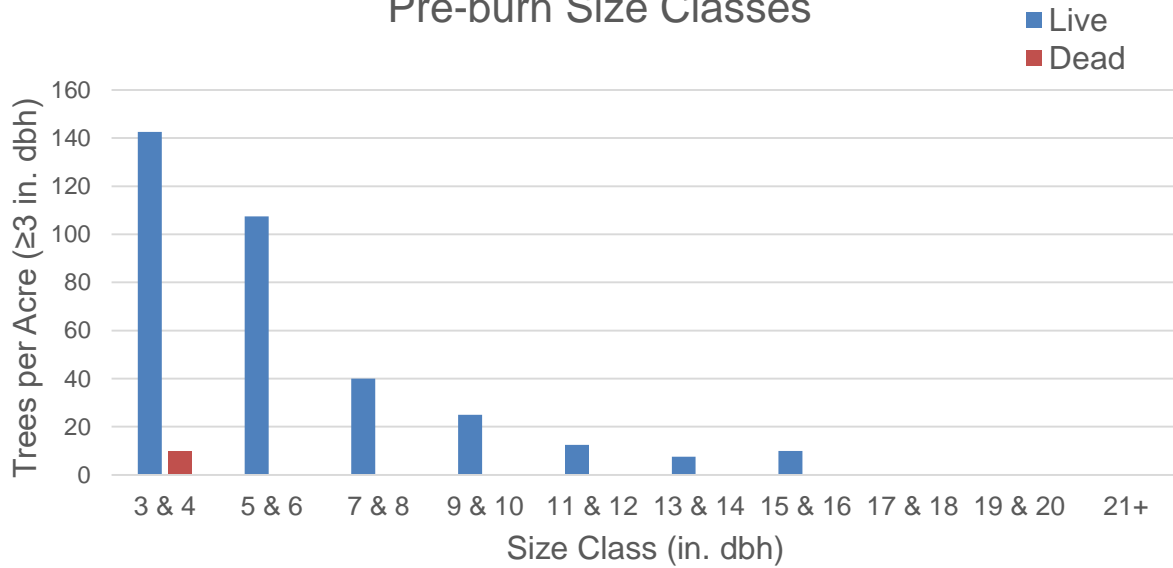




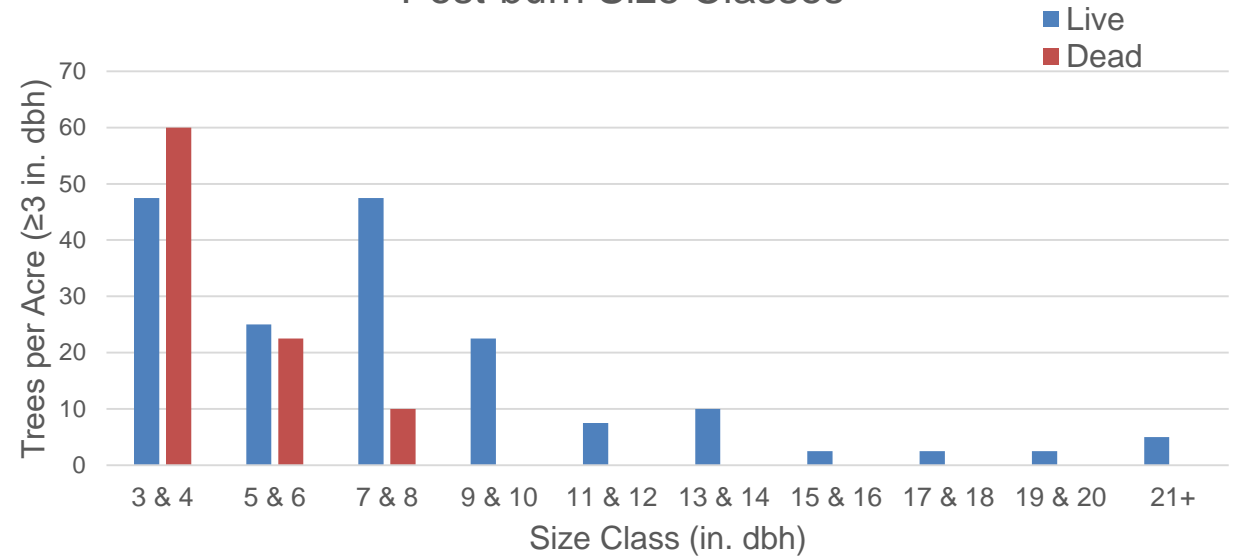
Prescribed Burn Habitat Effects



Pre-burn Size Classes



Post-burn Size Classes



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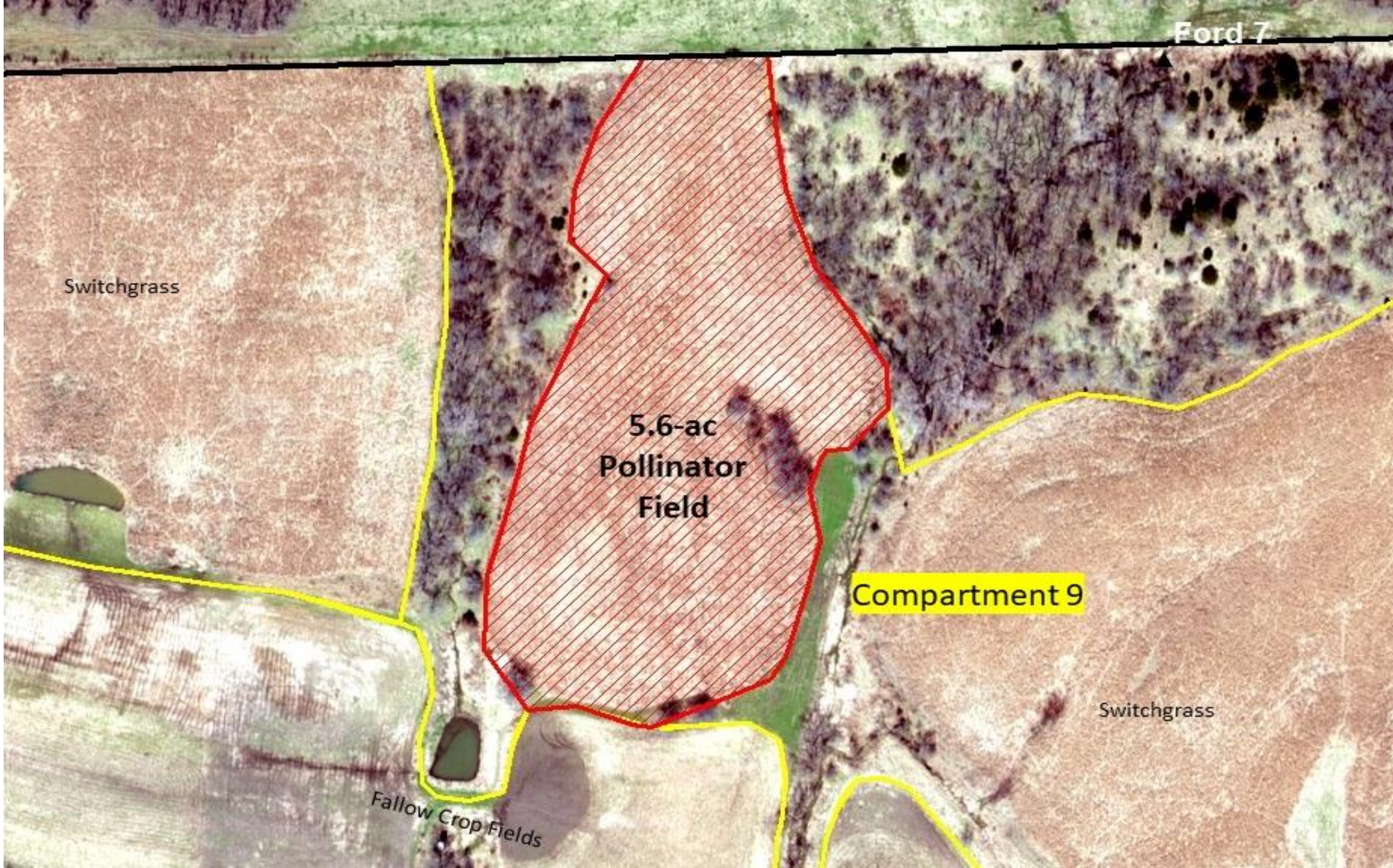
Switchgrass

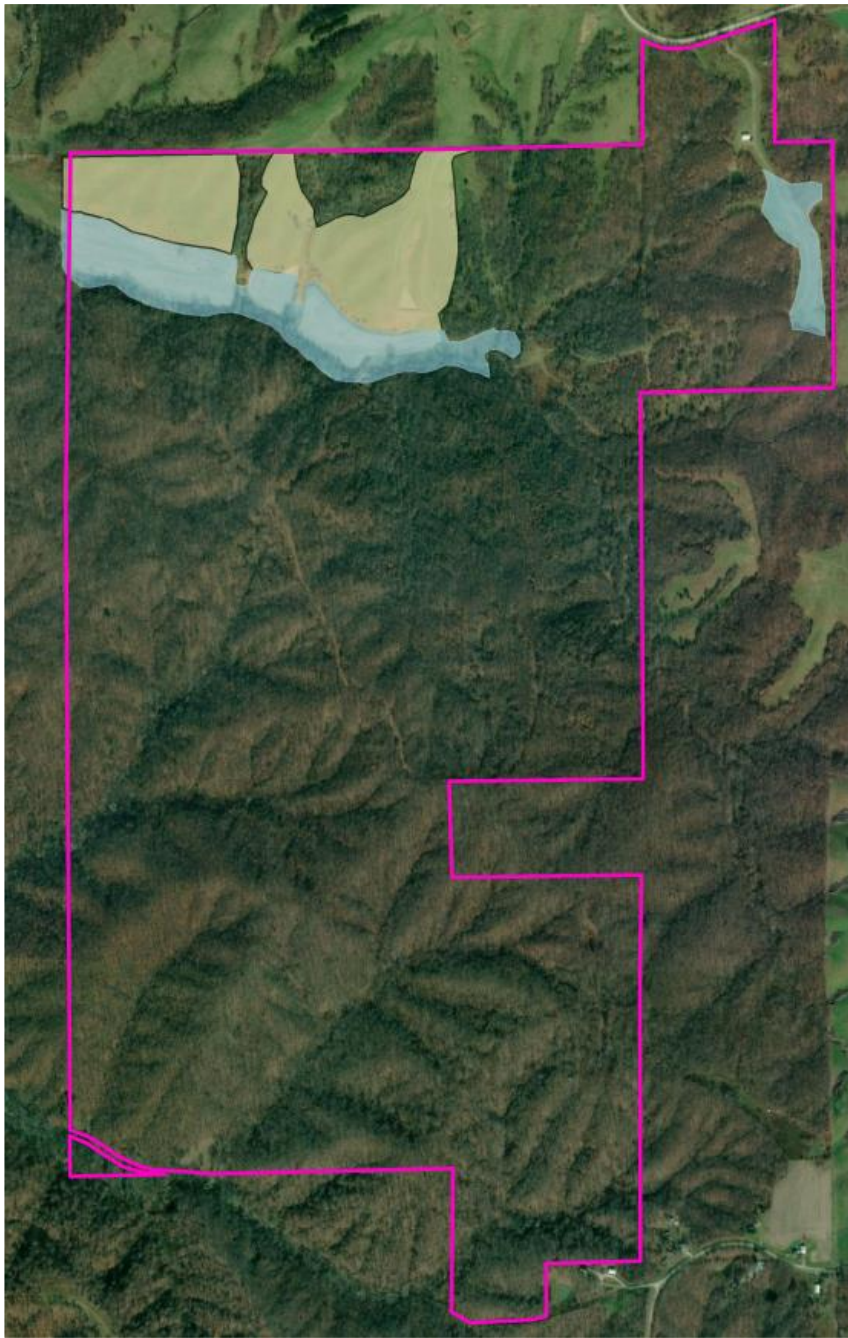
5.6-ac
Pollinator
Field

Compartment 9

Switchgrass

Fallow Crop Fields





Bank Credits are the Whole Package



For Project Developer

- Pre-approved credits provide mitigation certainty
- Less internal staff time spent on developing mitigation solution
- Banks have been shown to reduce permit timeframes
- No interim, long term site management or ledger tracking
- Third-party credits sever mitigation liability

For Agencies

- Saves time
- Reduces review time for permit decisions
- Consolidates mitigation
- Permanent protection of resources