



BURNS  MCDONNELL®

Establishment of the Chariton Hills Conservation Bank in Northeast Missouri



Air & Waste Management
Association Meeting

April 10, 2019

WHAT IS MITIGATION?

Mitigation is the third step in an environmental sequence

- ▶ First step: avoid impacts
- ▶ Second step: minimize impacts
- ▶ Third step: compensate for impacts

Compensation should be “in-kind”

- ▶ Watershed, ecoregion, species recovery unit
- ▶ Landscape context and sustainability

COMPENSATORY MITIGATION OPTIONS

▶ In-Lieu Fee (ILF) Programs

- Governmental and non-profit natural resources management entities typically administer ILFPs
- Development pays an ILF program administrator to fulfill compensatory mitigation obligation
- Administrator has the obligation to use the funds for mitigation activities within timeframes and other conditions set in the program instrument

▶ Permittee-Responsible Mitigation (PRM)

- Classic DIY ethos
- Requires specific approval, oversight, and management
- On the hook (it's in the name!)

▶ Turn-keys

- Outsourcing your PRM to an experienced mitigation provider
- Requires specific approval, oversight, and management

▶ Bank Credits

- Pre-approved mitigation solution
- Use of bank credits provide compensation for environmental impacts
- One transaction can cover needs, credits available when needed
- Severance of liability

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.

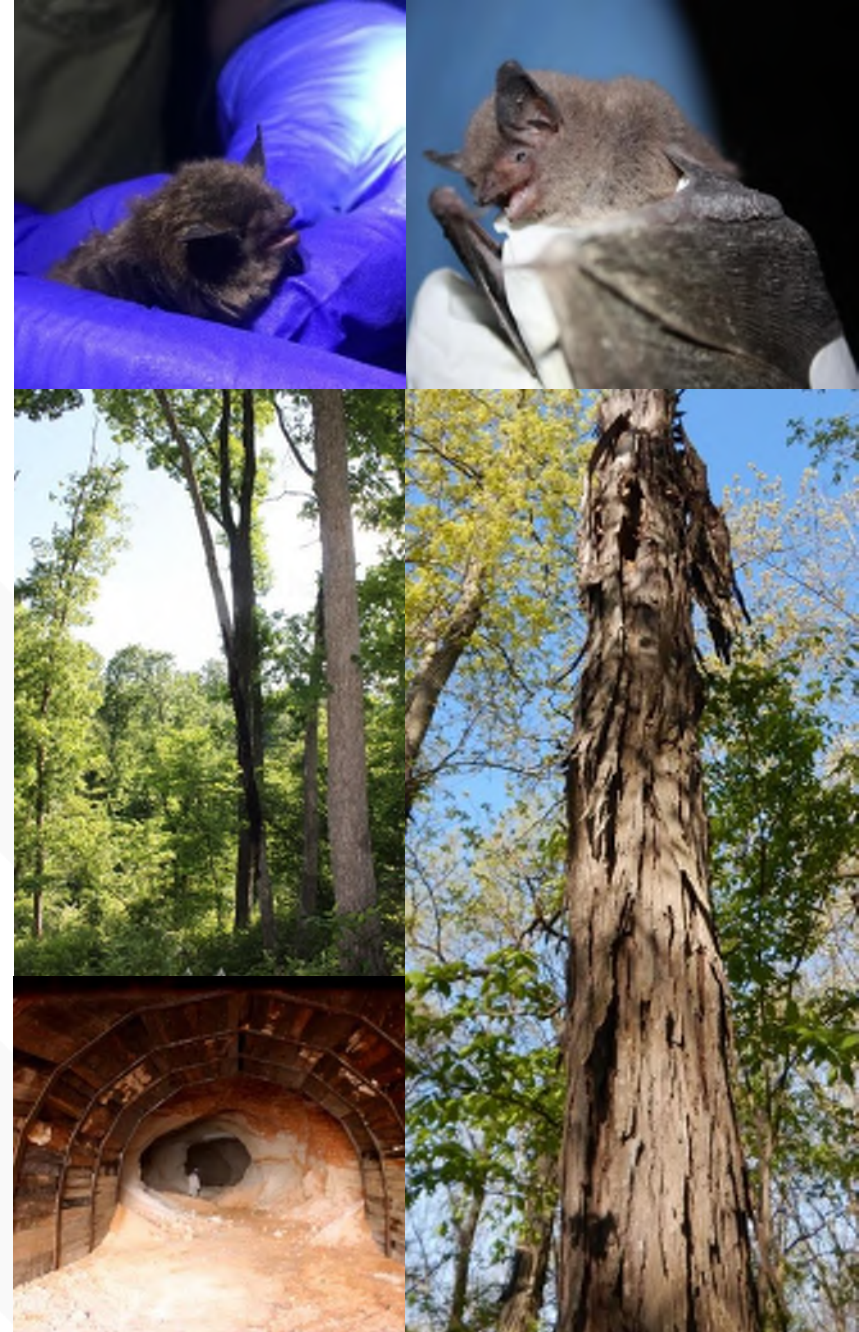
In exchange for ecological and financial assurances to the agencies, the bank operator is allowed to use these credits to offset third party impacts.

MITIGATION AND CONSERVATION BANKING

- ▶ **Mitigation banking** within specific watersheds, provides for the preservation, enhancement, restoration or creation of Waters of the U.S.
- ▶ **Conservation banking** within specific recovery areas, provides for the protection of threatened and endangered species and their habitat

Bat Development Impacts

- ▶ Federally endangered Indiana bat and threatened northern long-eared bat use forest habitat for summer roosting
- ▶ Frequent concern in Missouri
- ▶ Previously no established way to offset impacts
- ▶ Protracted negotiation with state and federal agencies
- ▶ Permittee-responsible mitigation – developers are on the hook!



ESTABLISHING A BAT CONSERVATION BANK IN MISSOURI

- ▶ Burns & McDonnell started discussing the concept with USFWS in 2016
- ▶ Multiple meetings with USFWS Columbia office to optimize project
- ▶ Focused on summer habitat protection, specifically in NE Missouri




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. Ziehm, Director


Date


Tom A. Draper, Deputy Director


Date



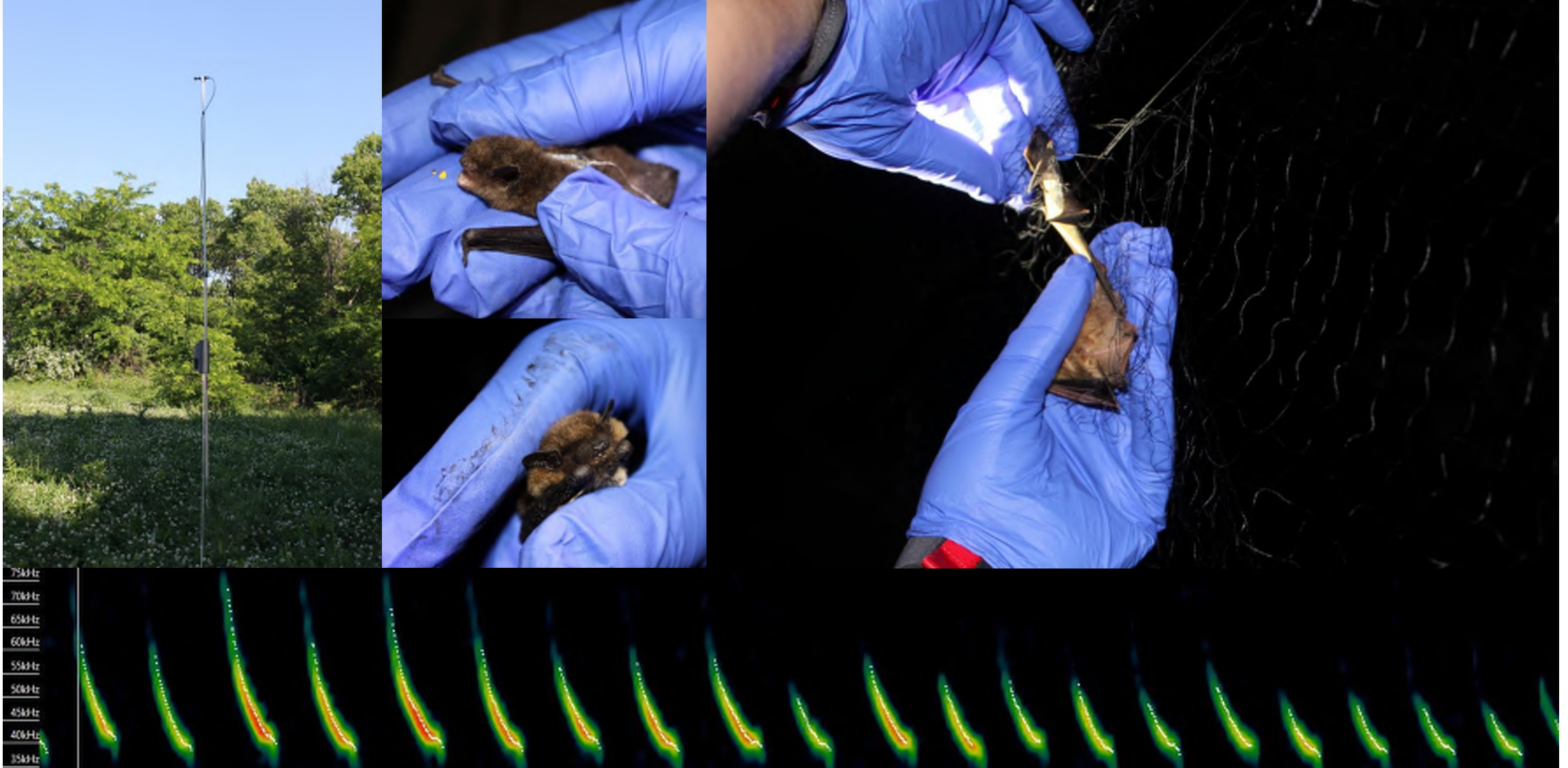
Legend

- MDC Lands
- County
- High Probability
- Medium Probability
- Low Probability



0 10 20 40 60 80 Miles

Bat Surveys



Bat surveys

- ▶ Netting/acoustic surveys conducted in Summer 2017
- ▶ Reproductive female Indiana bats were captured on both properties
- ▶ A reproductive female northern long-eared bat was captured at the Schuyler property
- ▶ Follow-up netting in Summer 2018 resulted in the capture of a reproductive female northern long-eared bat on the Adair property

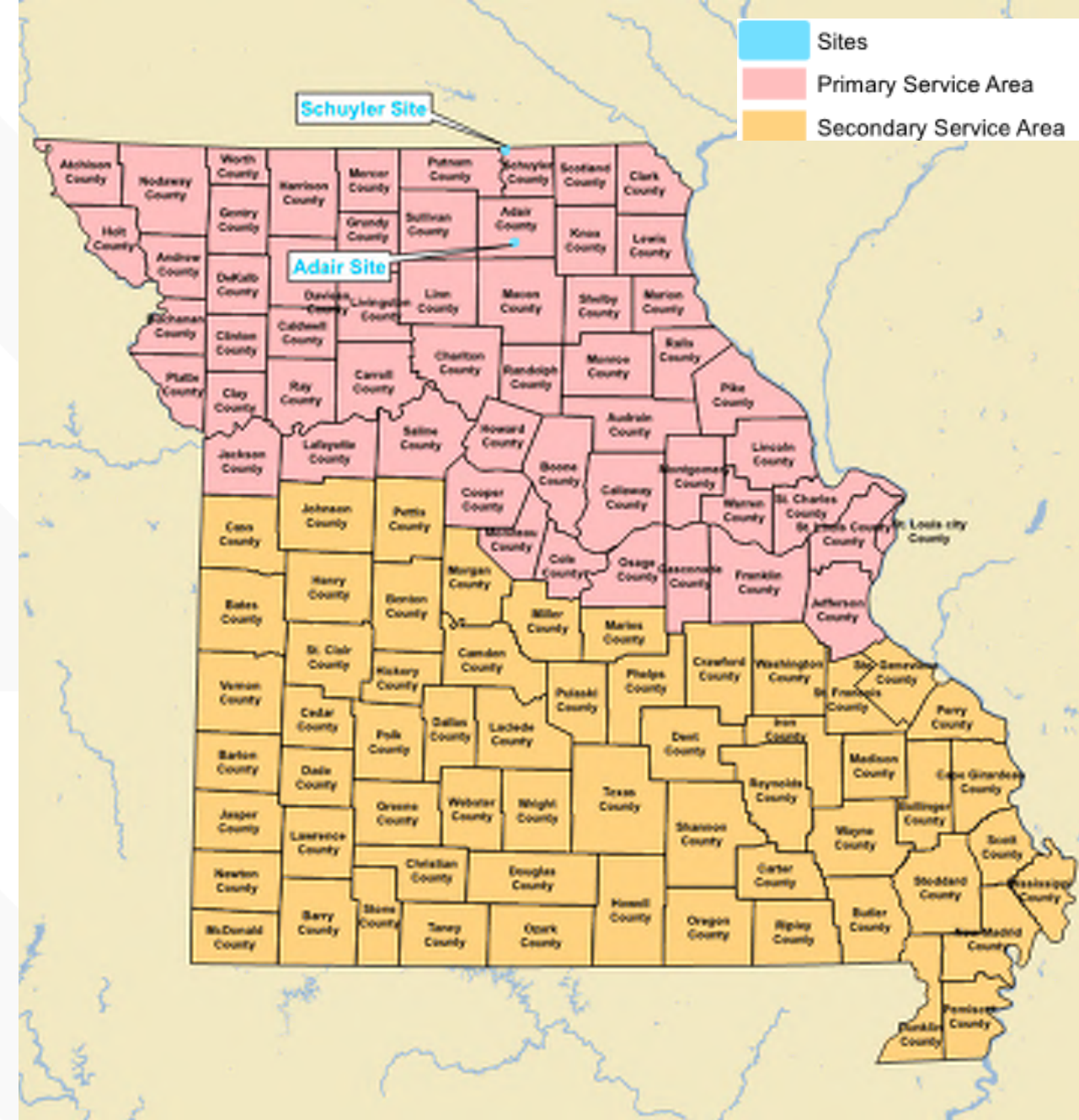


Roles & Responsibilities



CHARITON HILLS CONSERVATION BANK

- ▶ Total 1,300 +/- acres contiguous with State of Missouri Conservation Areas
- ▶ High-quality habitat for forest-dwelling bats
- ▶ Offering Indiana and northern long-eared bat credits
- ▶ Primary service area: Northern Missouri
- ▶ Secondary service area: Southern Missouri



Management Overview

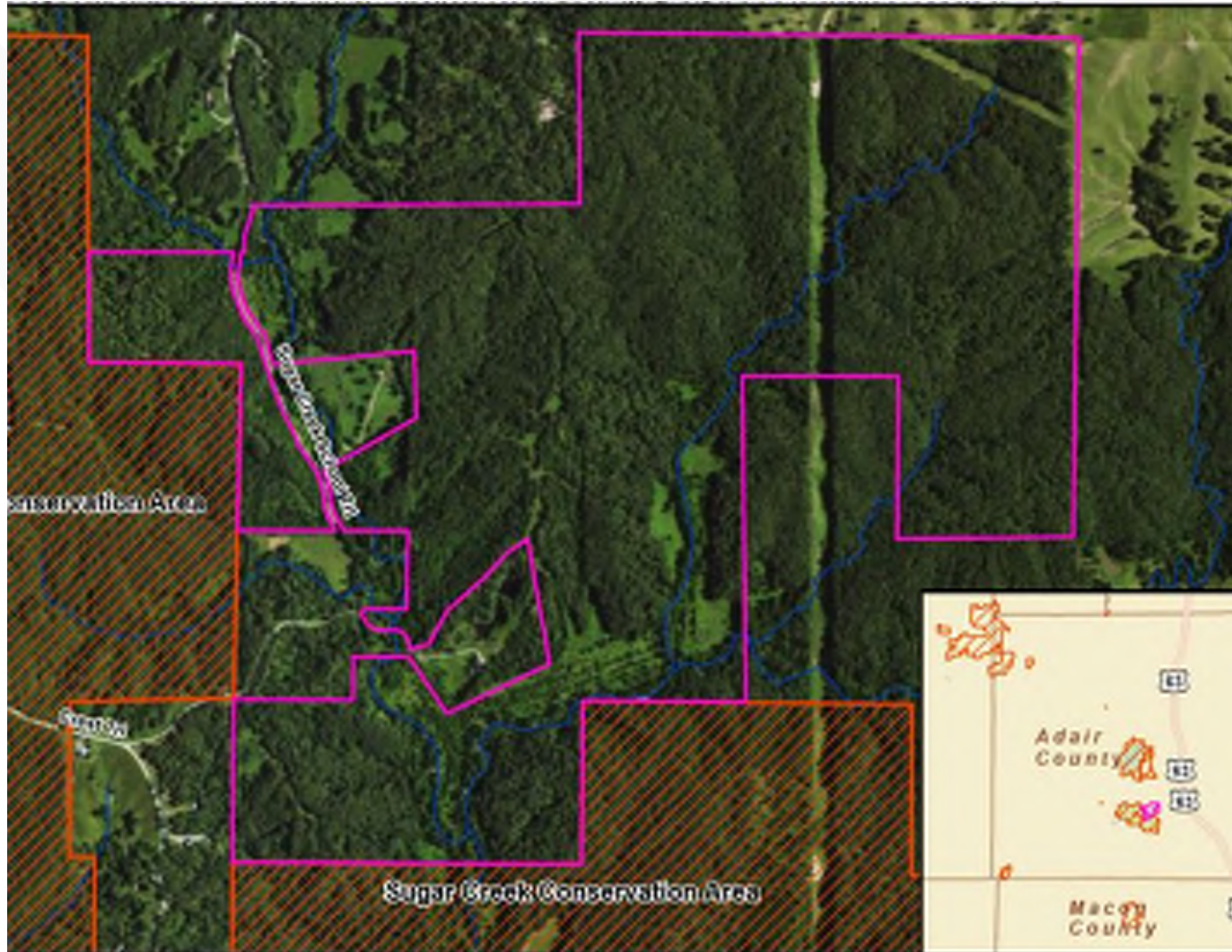
- ▶ Management actions outlined in the ILTMP
- ▶ Timeline divided into “interim” and “long-term” management
 - Interim: bank establishment until 3 years after endowment is fully funded
 - Long-term: begins at end of interim, continues in perpetuity
- ▶ Management focused on maintaining or improving habitat 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

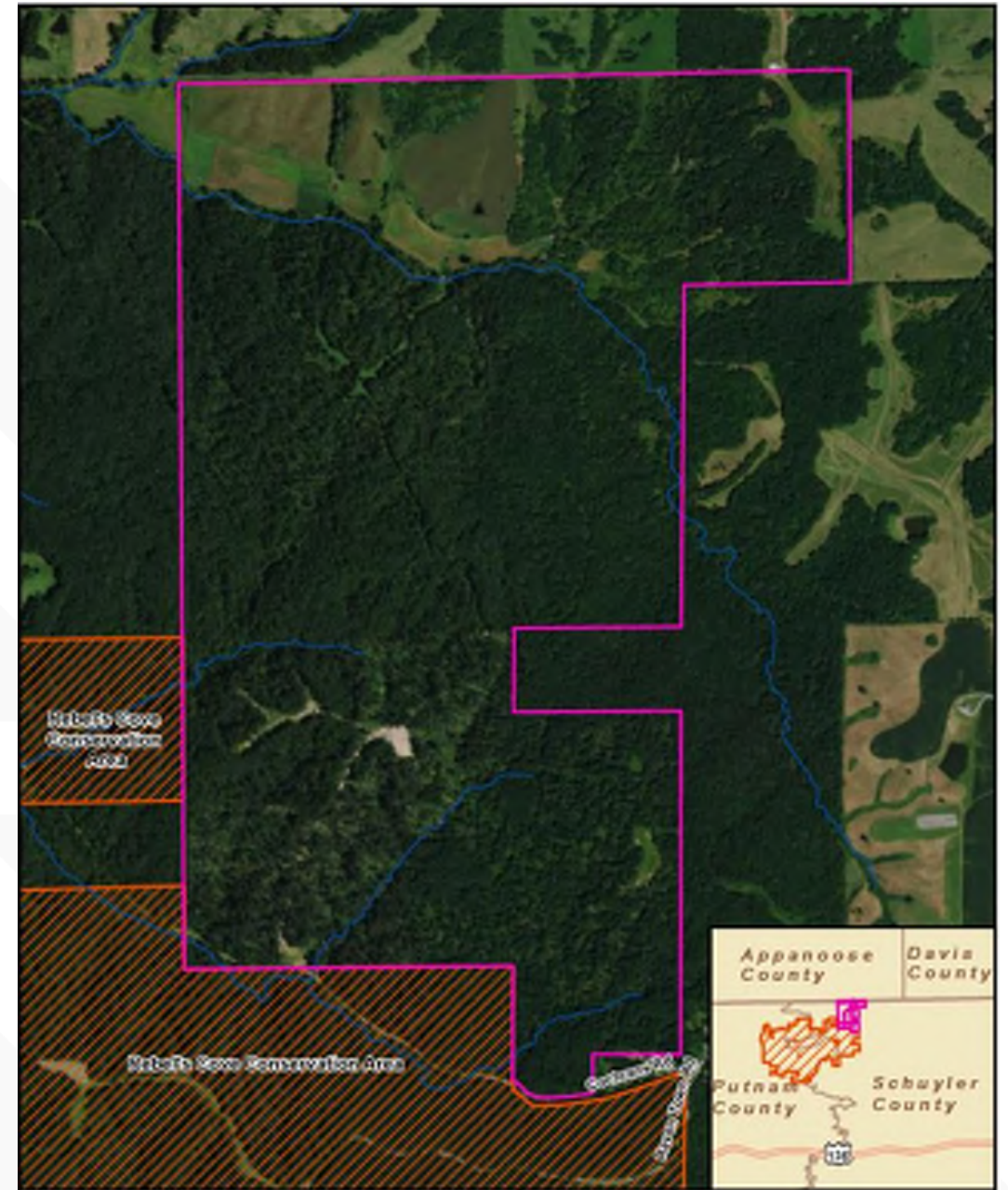
ADAIR PROPERTY





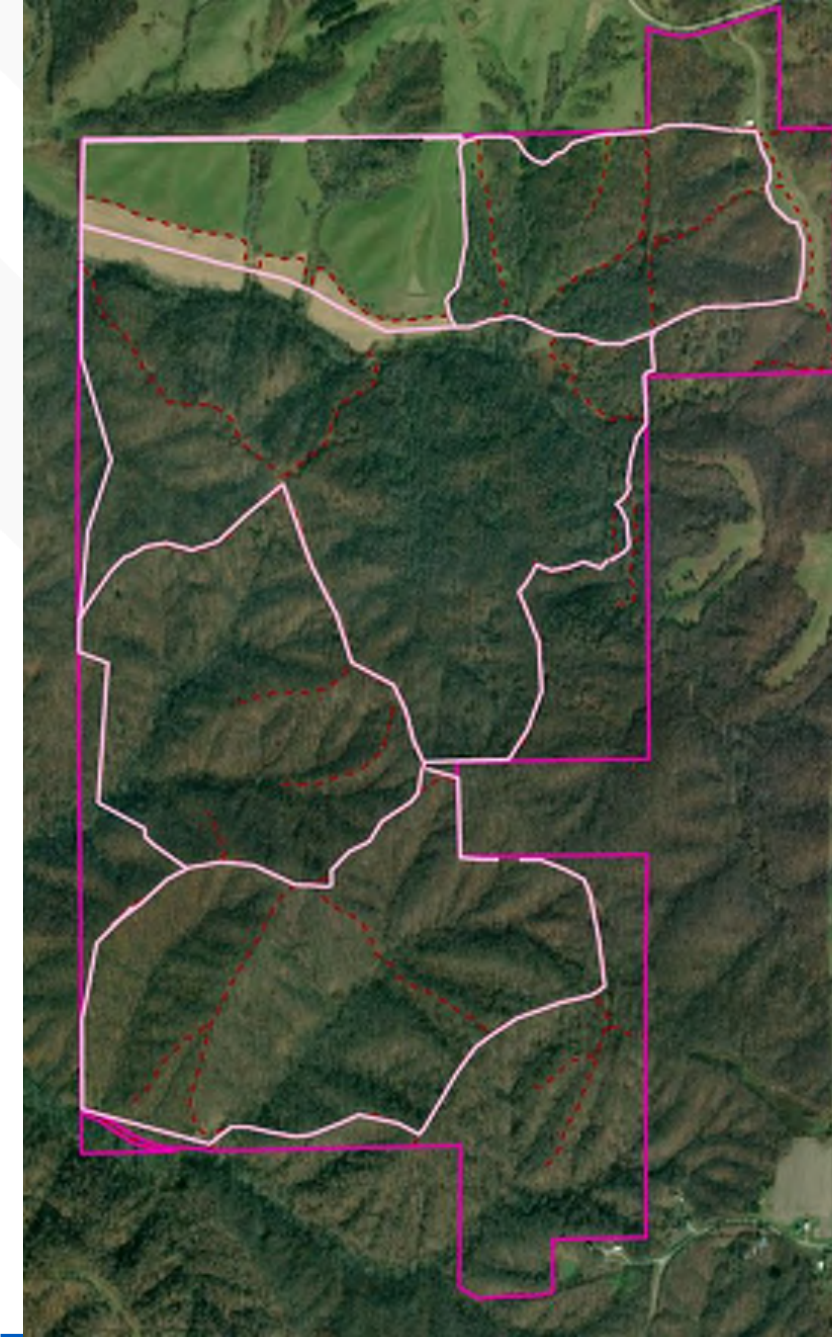
SCHUYLER PROPERTY

- ▶ 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

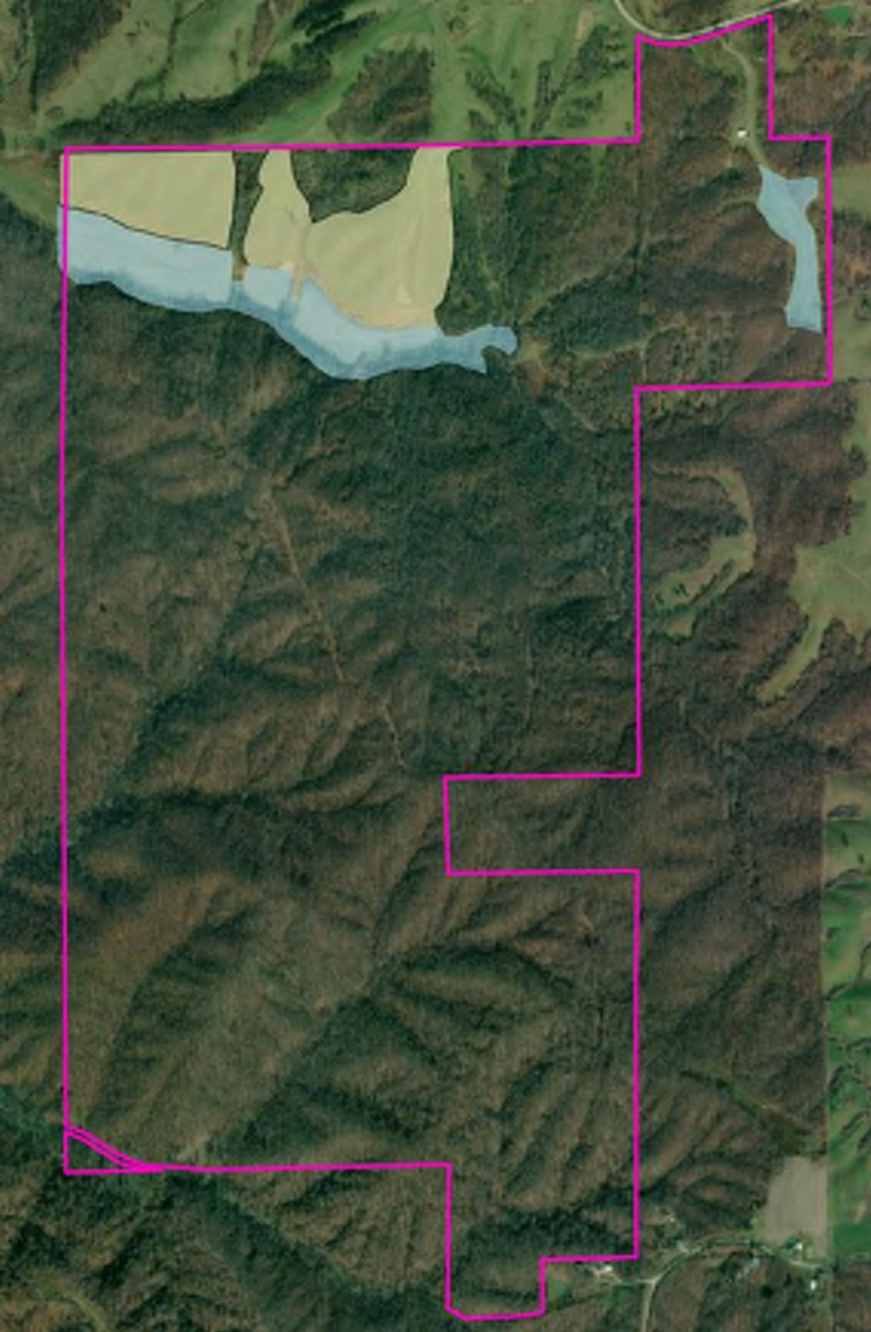


SCHUYLER PROPERTY



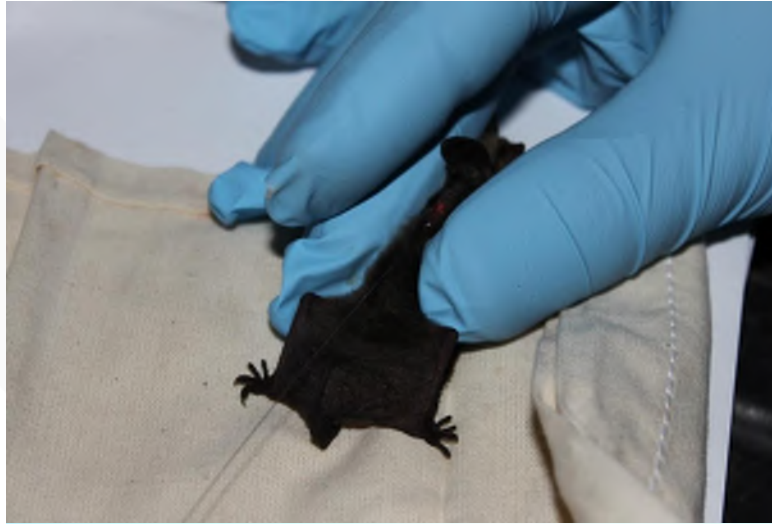






Monitoring & Adaptive Management

- ▶ Quarterly site visits
- ▶ Annual reporting
- ▶ Forest plot sampling
- ▶ Occasional bat surveys, but focused on habitat



BANK CREDITS ARE THE WHOLE PACKAGE

▶ For Project Developers

- 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

- Reduces review time and resource demands
- Consolidates mitigation

▶ For the Bats

- Mitigation ahead of impact
- Permanent protection

MITIGATION QUESTIONS?



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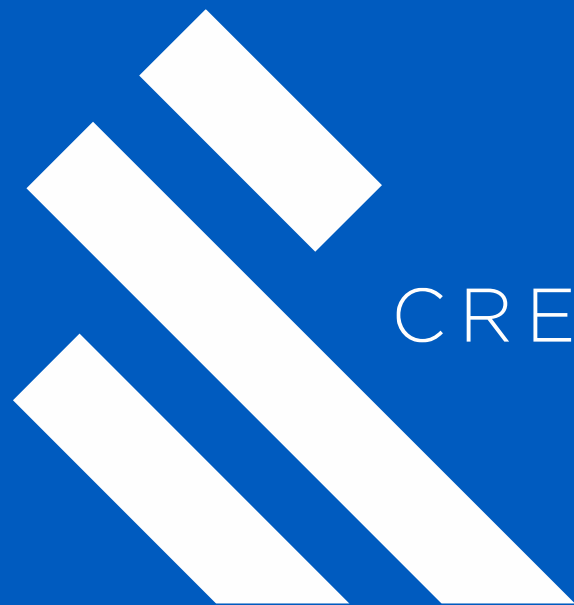


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CREATE AMAZING.