

SUPPLEMENTAL SHELTER FOR WILDLIFE

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Activity F - Providing Supplemental Shelters

There are **seven** practices to choose from:

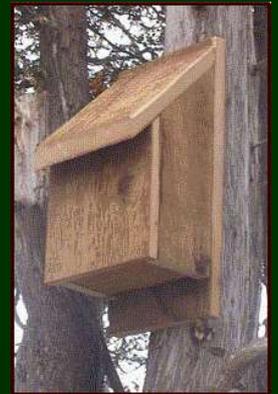
1. Nest Boxes, Bat Boxes - Birds and Mammals
2. Brush Piles & Slash Retention
3. Fence Line Management
4. Hay Meadow, Pasture, & Cropland Management
5. Half Cutting Trees & Shrubs
6. Woody Plant/Shrub Establishment
7. Natural Cavity/Snag Development

Activity F - Providing Supplemental Shelters

Practice # 1



Nest Boxes, Bat Boxes



Number of nest boxes *required* per acre is dependent on the species of wildlife targeted

Nest Boxes

Boxes benefit many species including bluebird, wrens, chickadees, warbler and woodpeckers, owls, ducks

Different birds require boxes of different dimensions or structures

Cedar is a durable, easy acquired material for wooden boxes

Mount boxes almost anywhere -5'-8'



Mount roughly 12-25 feet above
the ground

May take several years for the
bats to locate and use the houses

Insect control - some bats can eat
as many as 600 mosquitoes in just
one hour



Bat Houses

Bat Houses

Place houses within 1/4 mile of water

Houses should receive at least 6 hours of sunlight daily



When an adequate number of den trees are lacking - squirrel population can be *Doubled* with nest boxes

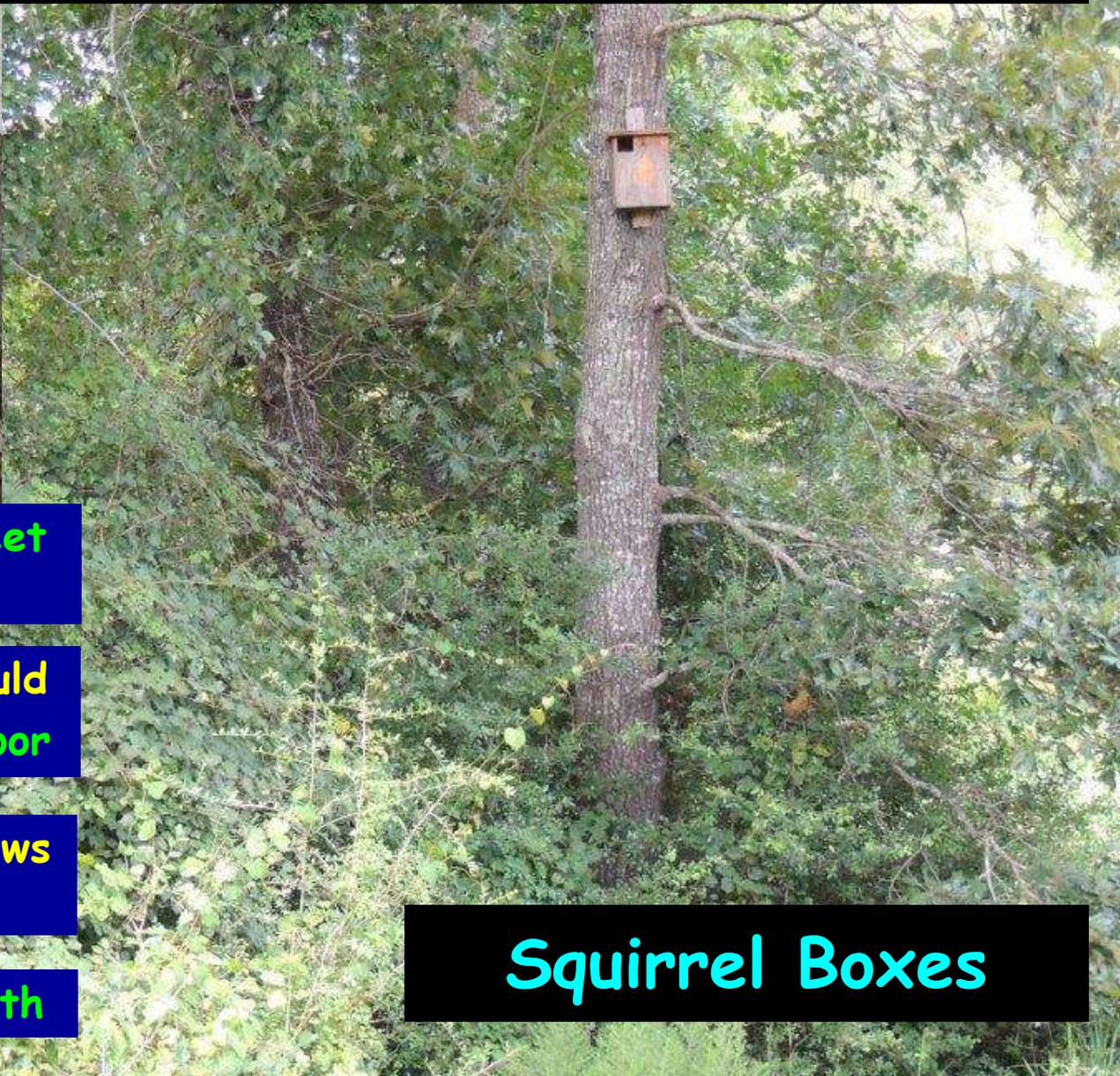


Mount boxes 20- 25 feet above ground

Dry leaves or straw should be placed in nest box floor

$\frac{1}{2}$ " wire mesh floor - allows waste to filter

Entrance hole facing south



Squirrel Boxes

Wood Duck Boxes

Wood ducks nest from January to August -
install boxes by early winter

Boxes should be placed adjacent to shallow
marshes, swamps, beaver ponds, meandering
streams, or ponds and lakes

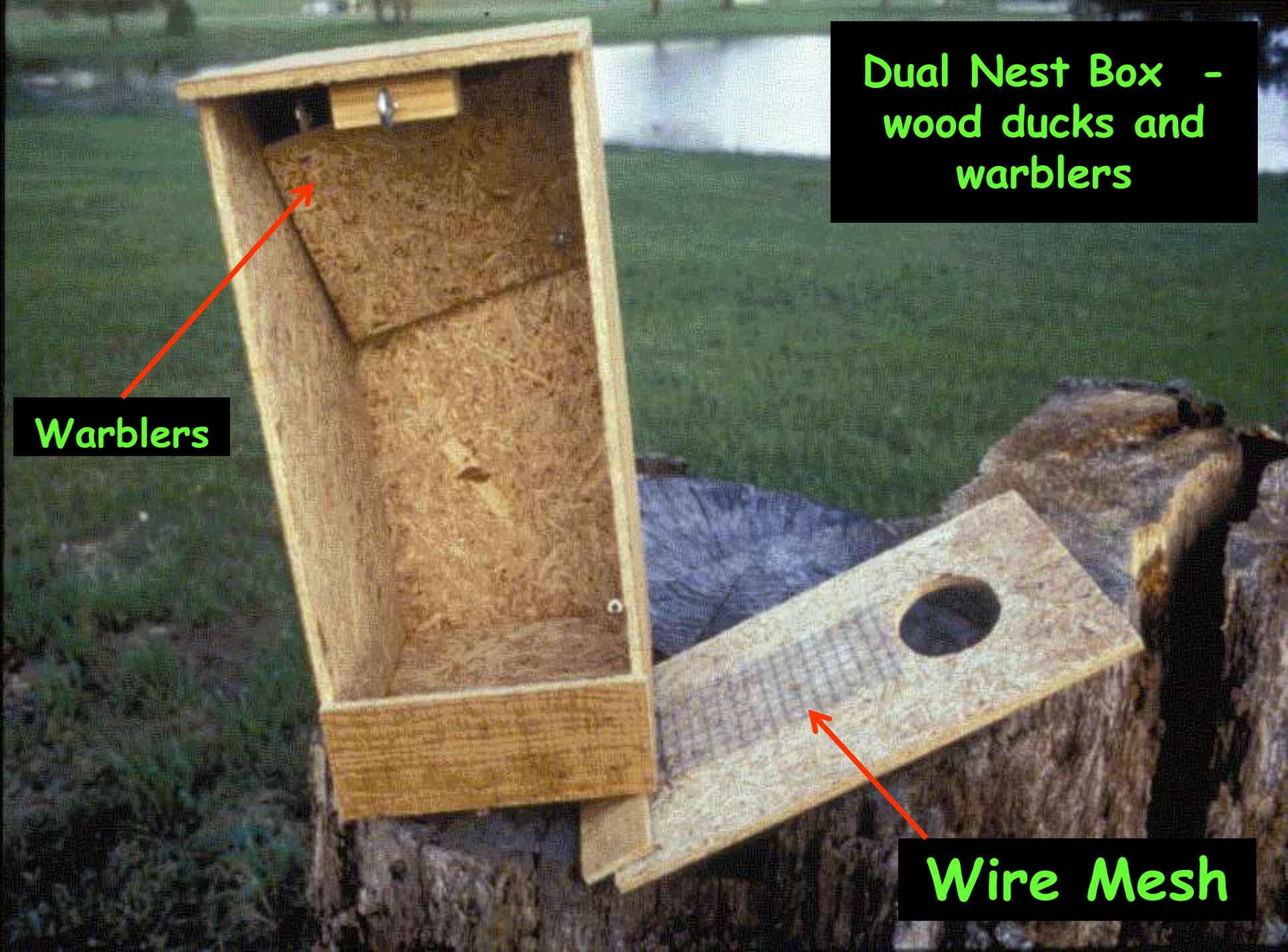
Large, open bodies of water with clean
shorelines do not provide brooding habitat



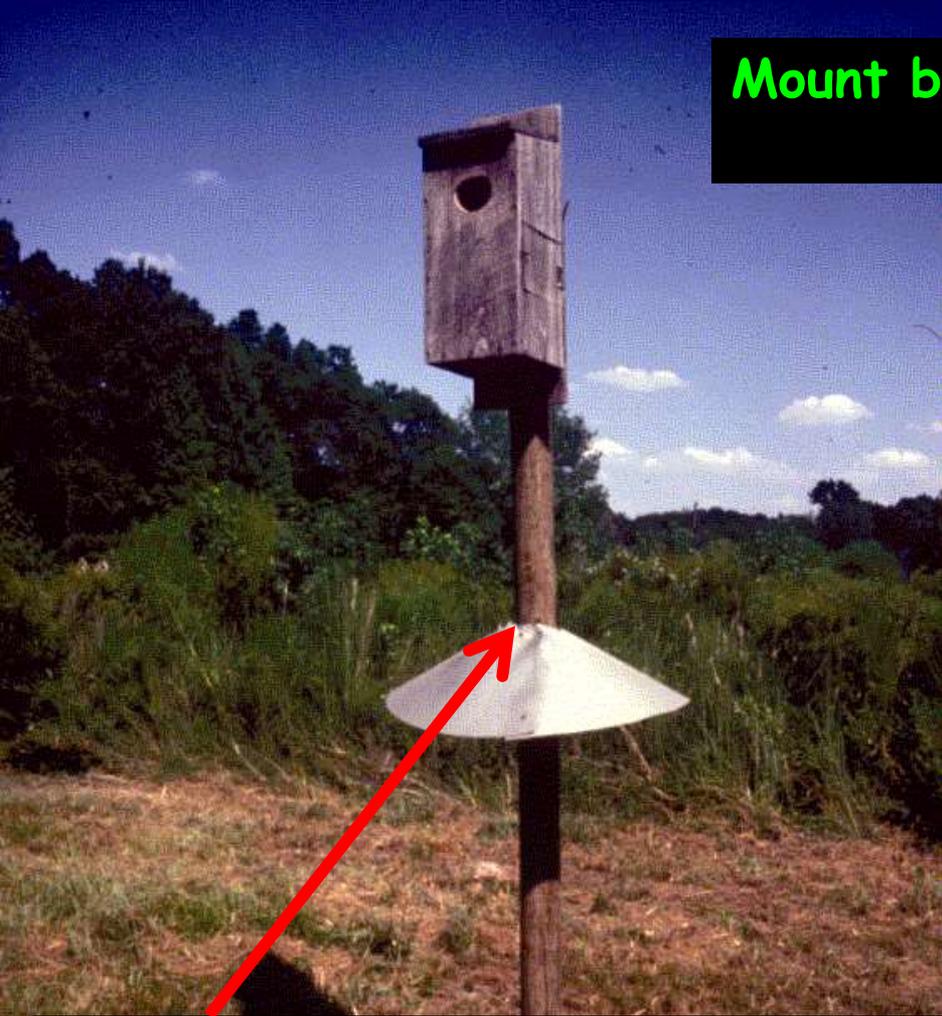
**Dual Nest Box -
wood ducks and
warblers**

Warblers

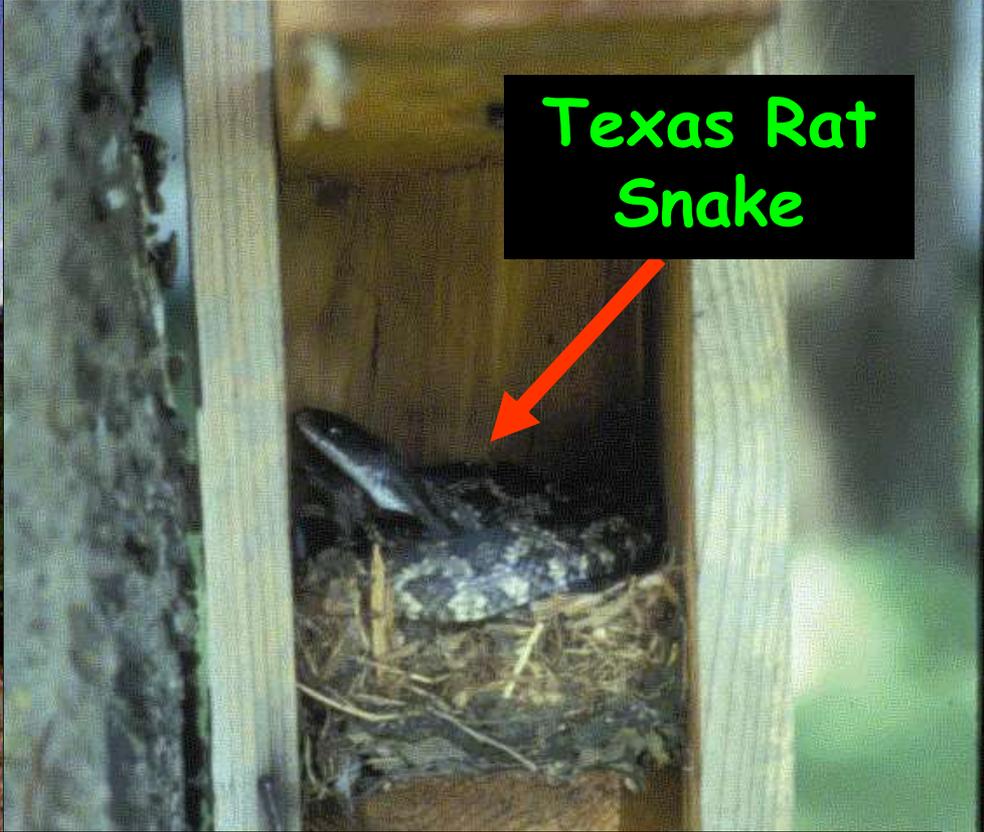
Wire Mesh



Mount boxes seven or eight feet above the ground or water



Texas Rat Snake



A two foot wide band of pest barrier such as Tanglefoot should be applied directly below the box of the support poles

Without a pest barrier a nesting box becomes a "death trap" to predators ----- mainly rat snakes

Practice # 2

Brush Piles and Slash Retention

This Practice Includes:

1. Placement and/or retention of brush piles

“One per acre in areas where woody plant reproduction is inadequate”

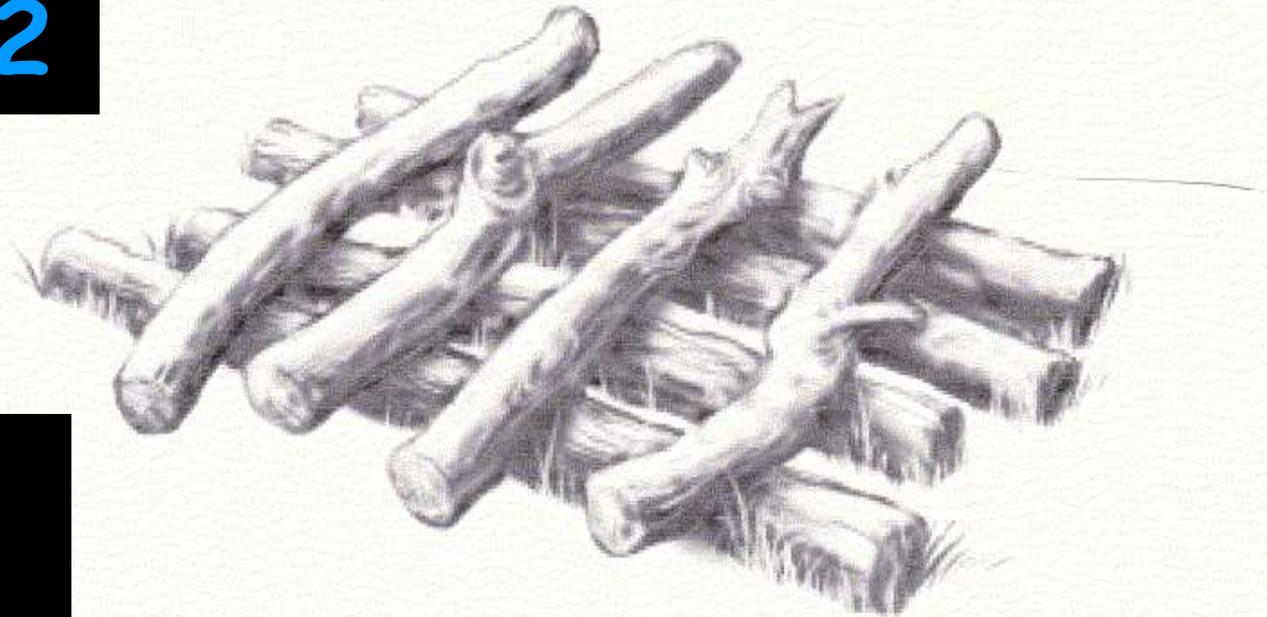
2. Slash retention, or leaving dead brush on the ground where it is cut or uprooted

“A minimum of 1 percent of the designated area must be treated annually”

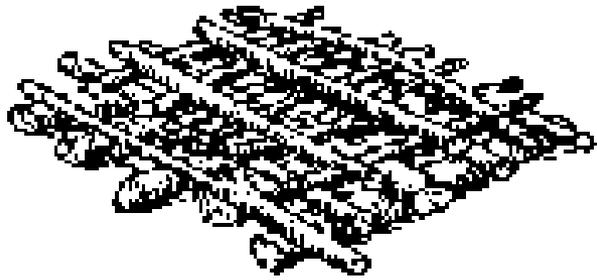
Brush pile base should consist of sturdy trunks or limbs at least 10-12 inches in diameter and 6 feet long or greater

Log placed about 10 inches apart within each layer

Practice # 2



Brush Pile
Construction

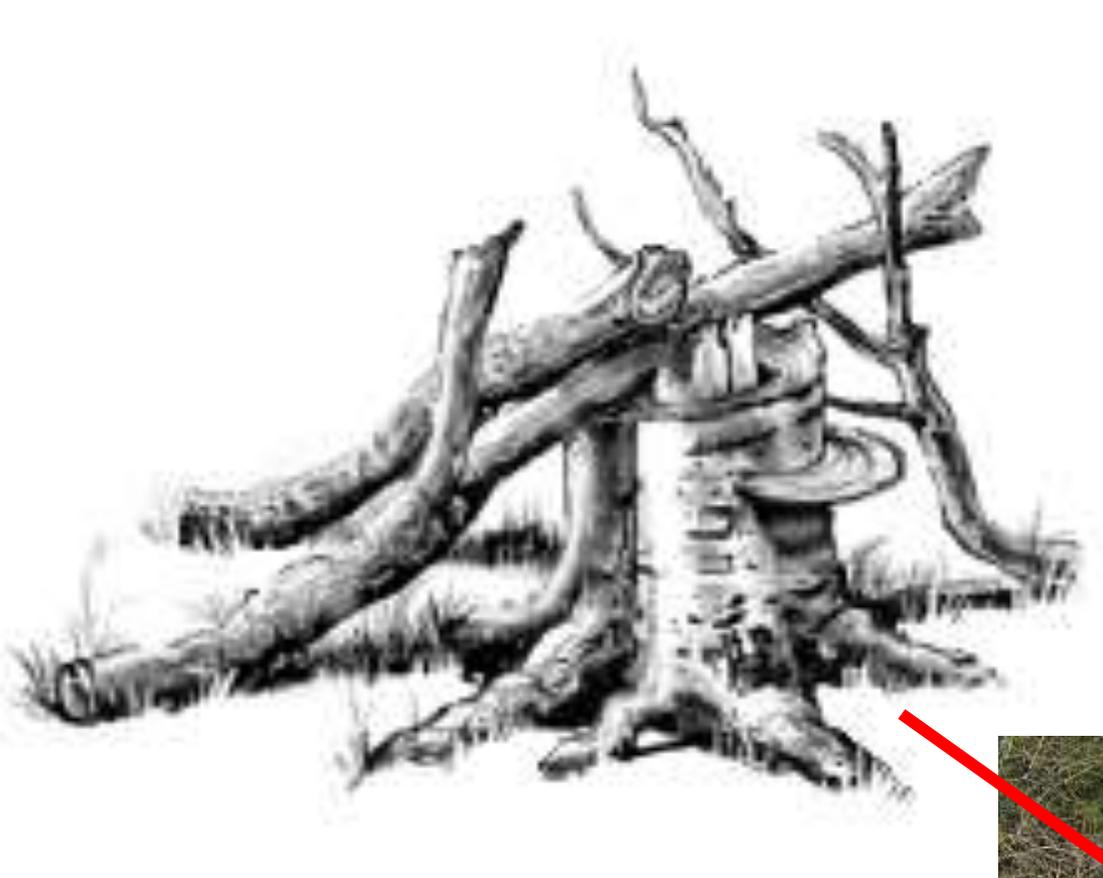


Activity # 2

Brush piles should be 4 to 5 feet tall and 10 to 20 feet in diameter.

Brush Pile Construction





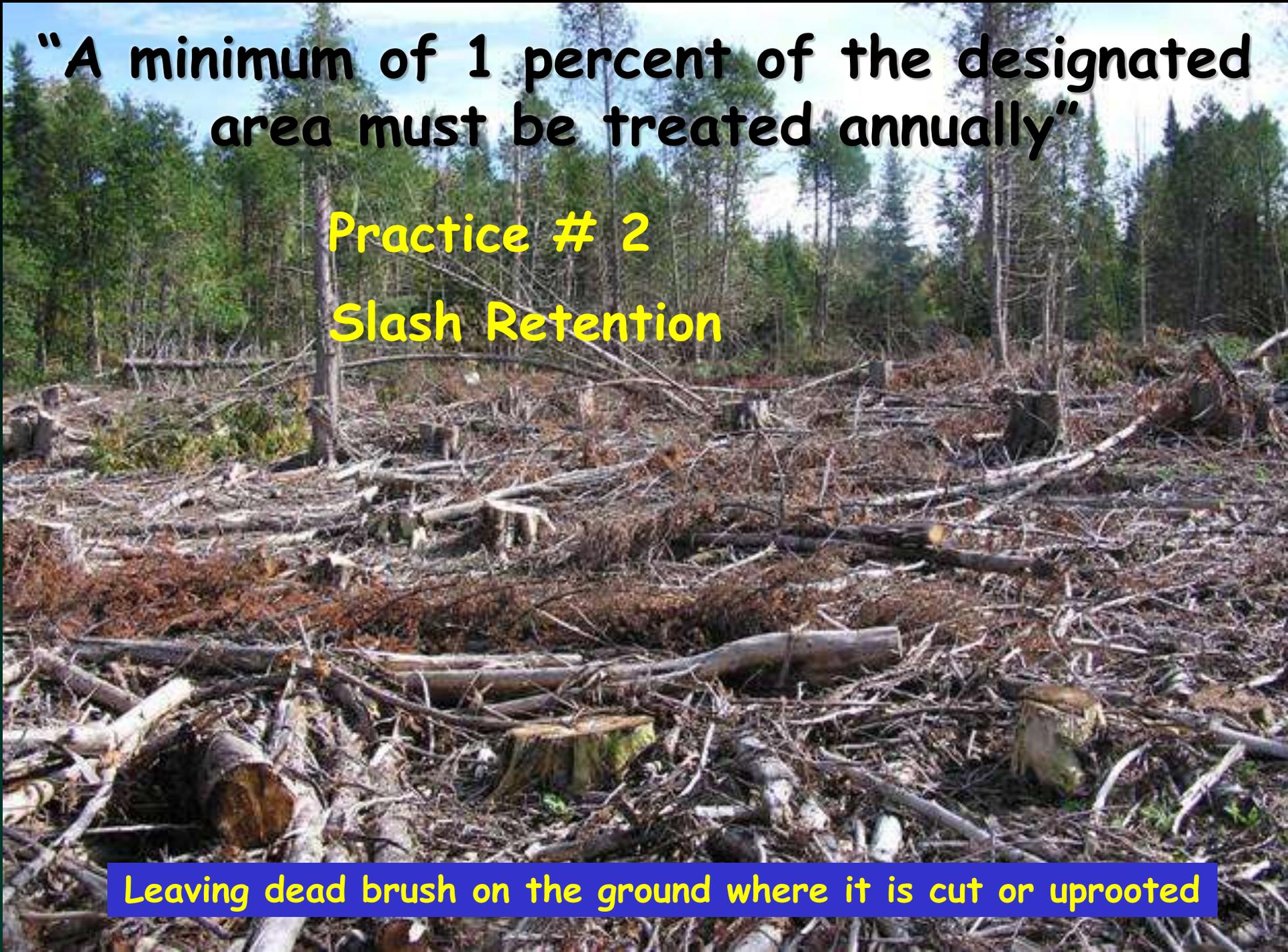
**Tree Stump
Brush Pile**

“A minimum of 1 percent of the designated area must be treated annually”

Practice # 2

Slash Retention

Leaving dead brush on the ground where it is cut or uprooted



Practice # 3

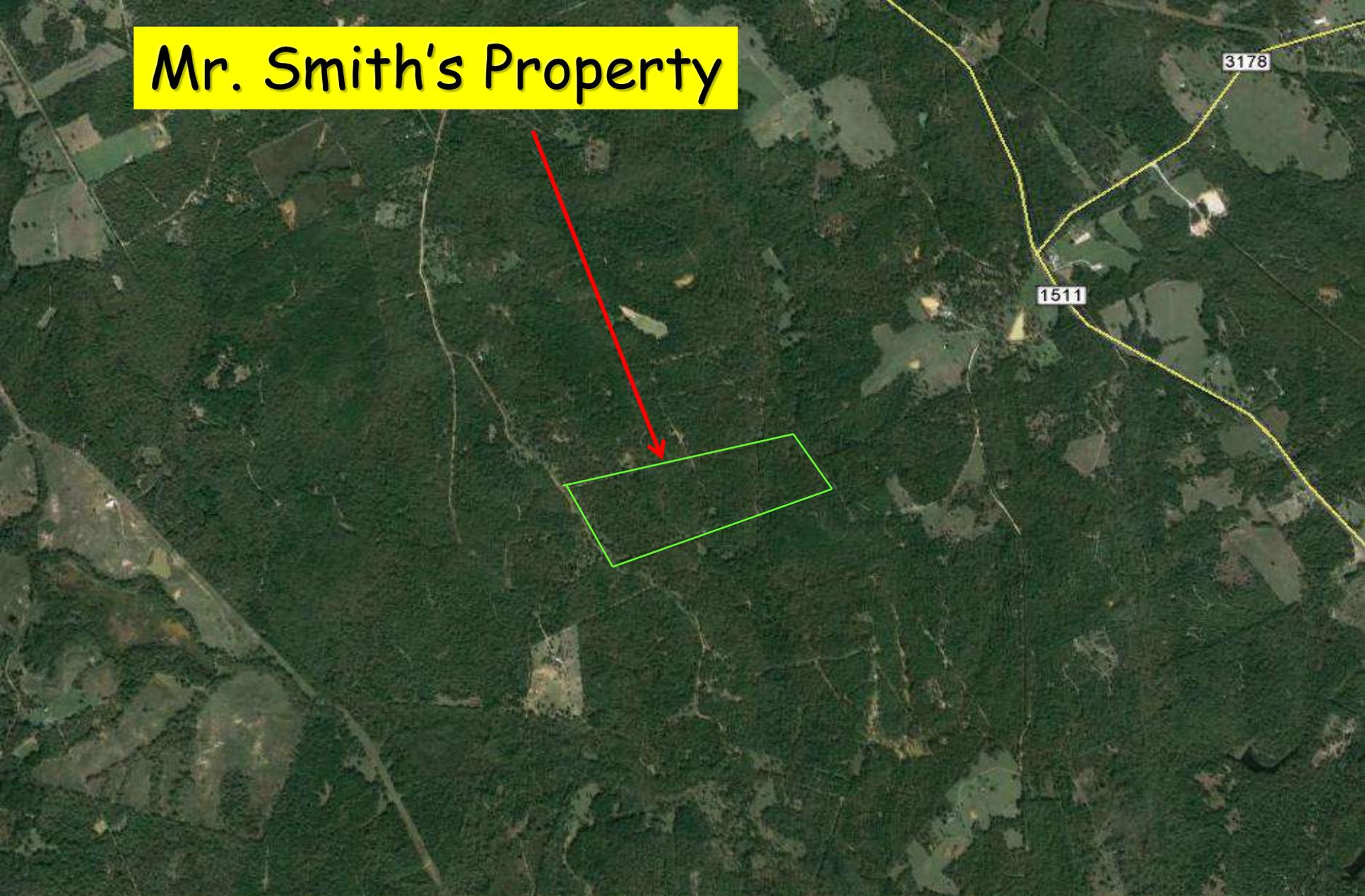
Fence Line Management

Maintain, establish, or allow the establishment of trees, shrubs, forbs, and grasses on fence lines to provide wildlife food and cover, "minimum of 30 yards wide"

A minimum length of 100 yards of per 1/4 mile of fence line is required annually to qualify

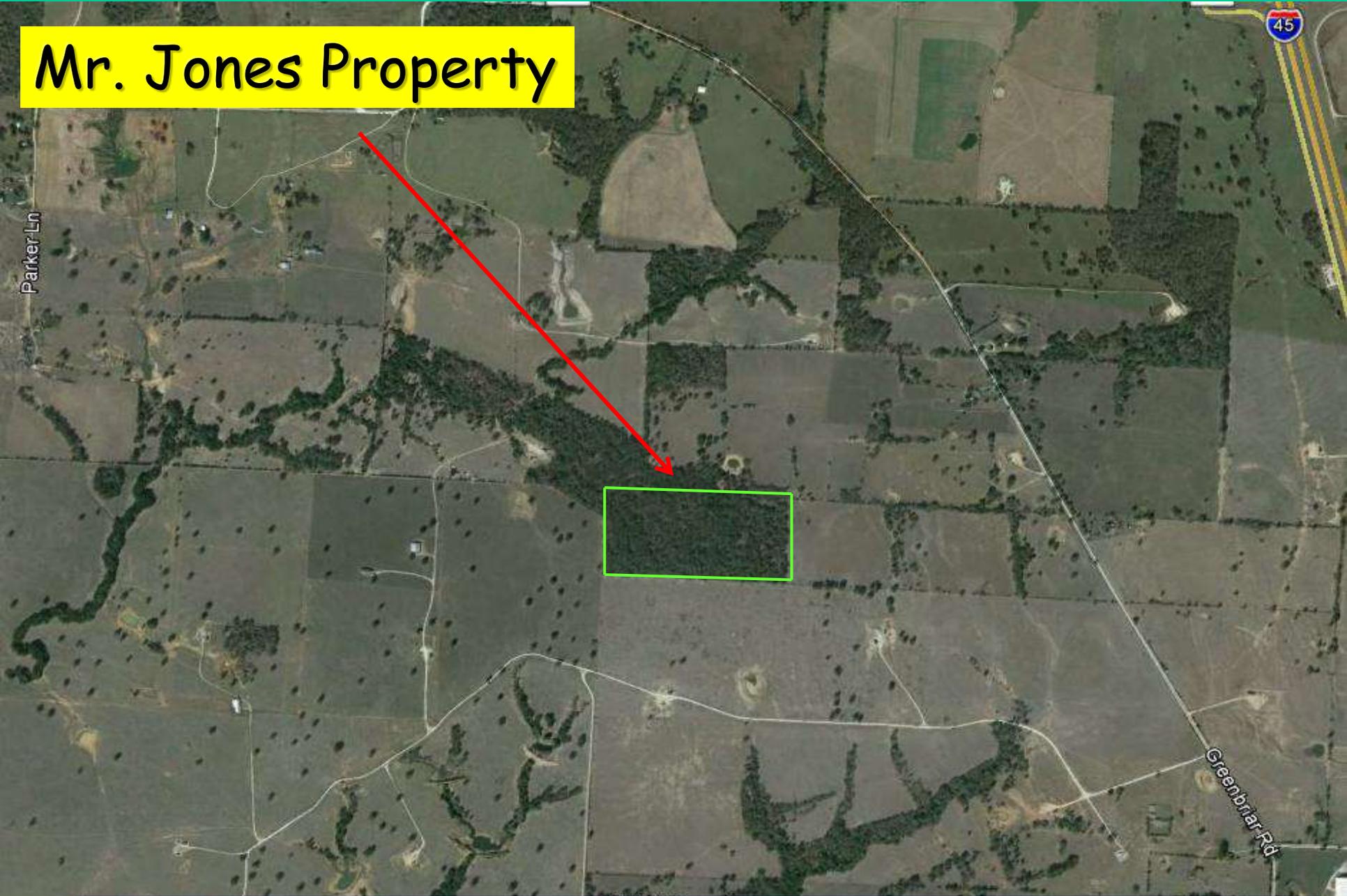
THIS PRACTICES ONLY APPLICABLE WHERE COVER IS "Limiting in the Habitat" - adjacent cropland or tame pastures

Mr. Smith's Property



Does he qualify for Fence Line Management?

Mr. Jones Property



Does he qualify for Fence Line Management?

Practice # 4

Mowing of hay fields should be postponed until after the peak of nesting/rearing periods of ground-nesting birds and mammals (July 15)



Hay Meadow, Pasture and Cropland
Management for Wildlife 4. 4. 1999

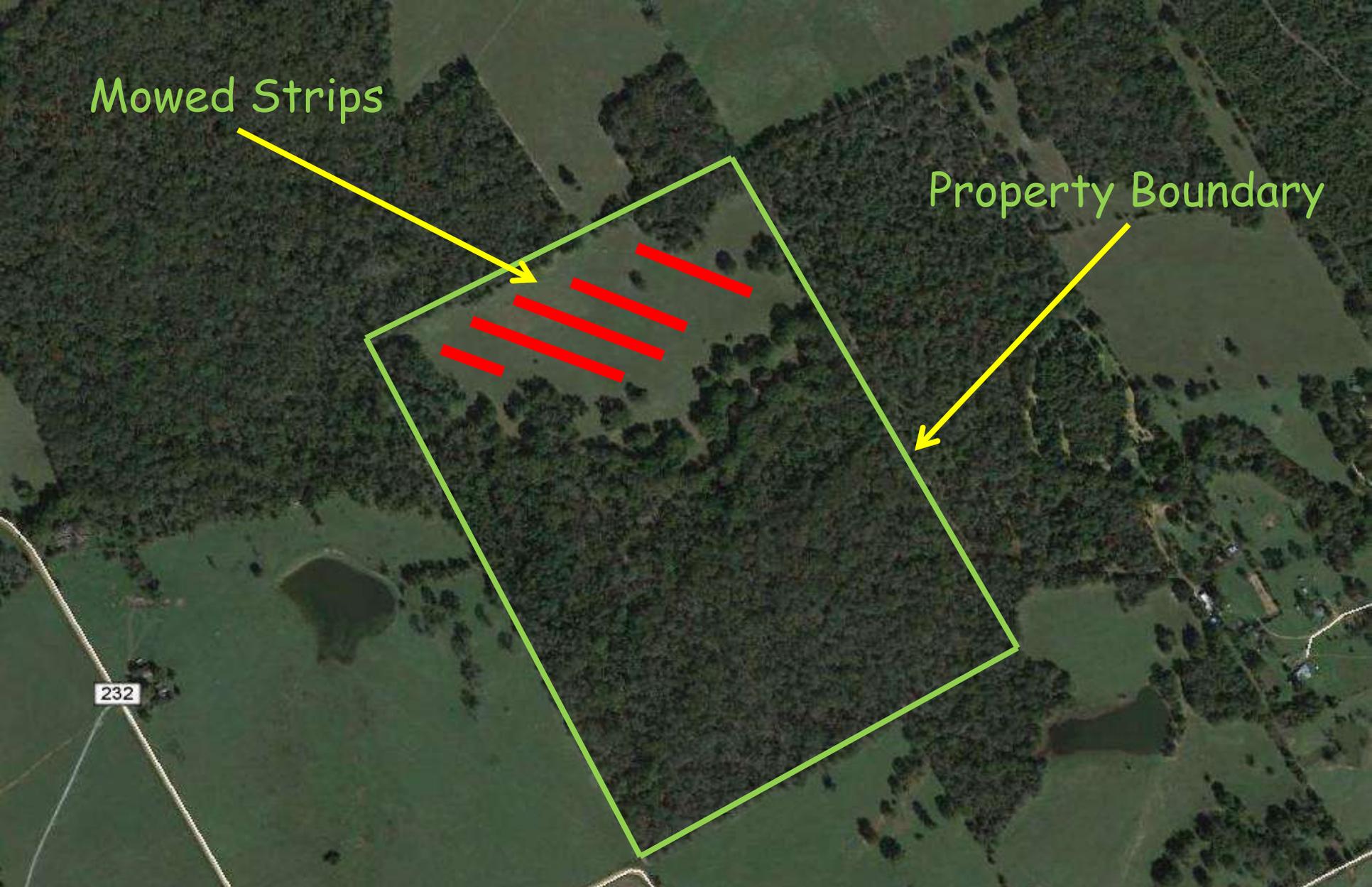
Practice # 4

Hay Meadow, Pasture and Cropland Management for Wildlife

Mow 1/3 of open areas per year, preferable in strips or mosaic types of patterns to create "edge" and structural diversity

Mowed Strips

Property Boundary



Mow 1/3 of open areas per year, preferable in strips or mosaic types of patterns to create "edge" and structural diversity

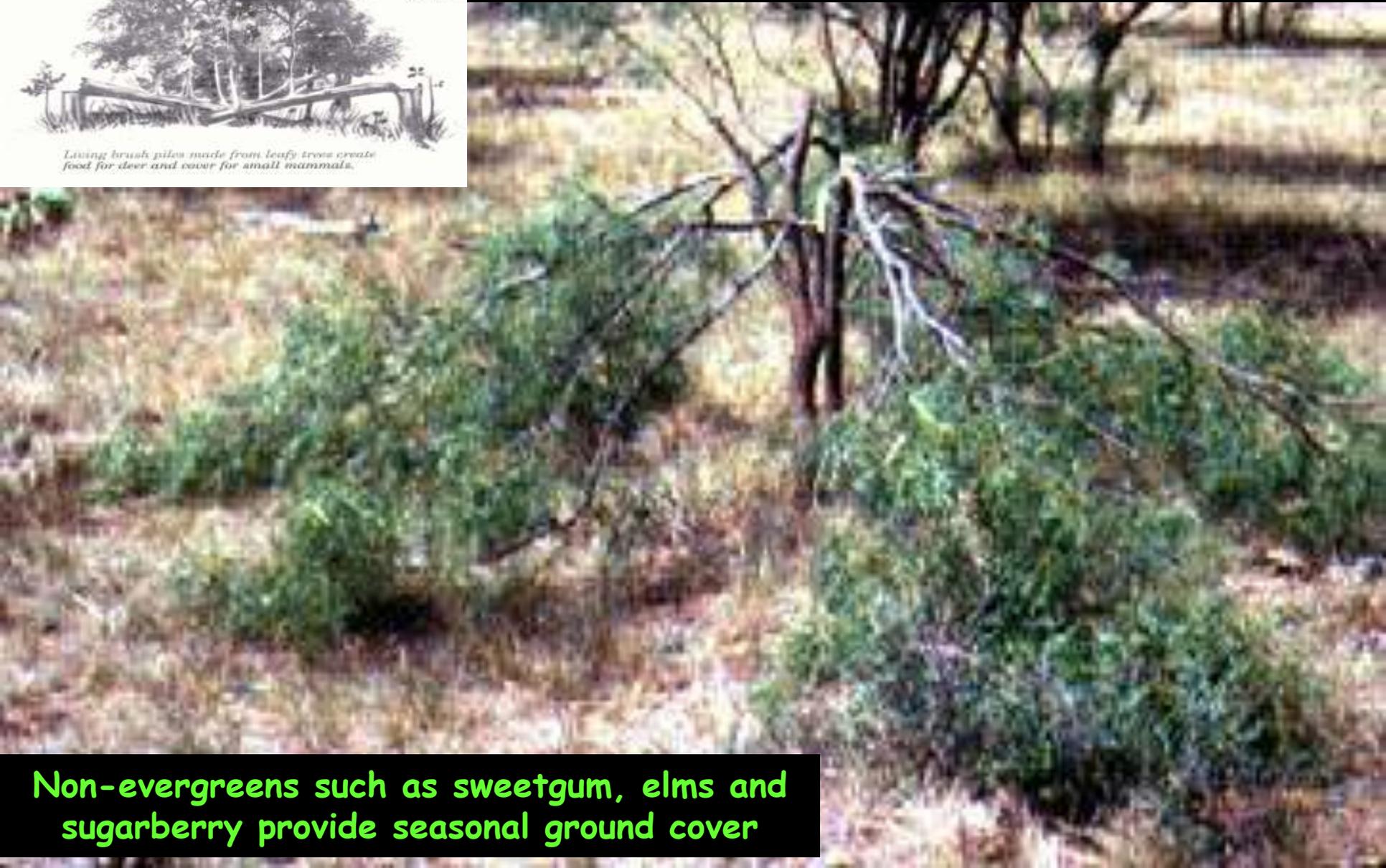
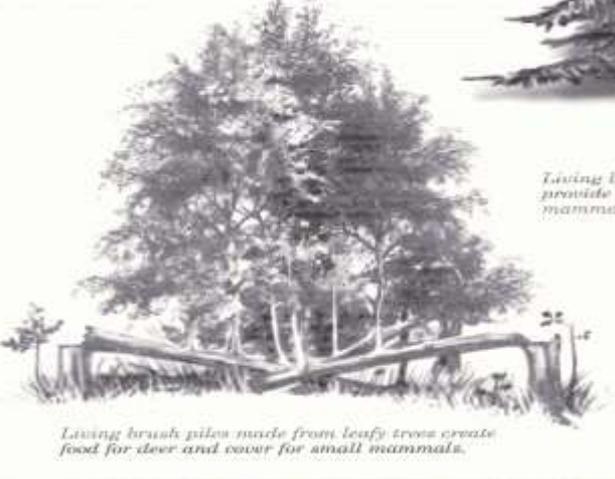
Practice # 5

Half-Cutting Trees or Shrubs

The practice of partially cutting branches of live trees or shrubs to encourage horizontal, living cover near the ground

A minimum of *one* clump of trees/shrubs *per* 100 yards on *at least* 10 percent of acreage *or* 10 acres, whichever is smaller, annually to qualify

Evergreens provide year round cover –
mesquite, cedar, yaupon,



Non-evergreens such as sweetgum, elms and
sugarberry provide seasonal ground cover

Practice # 6 -

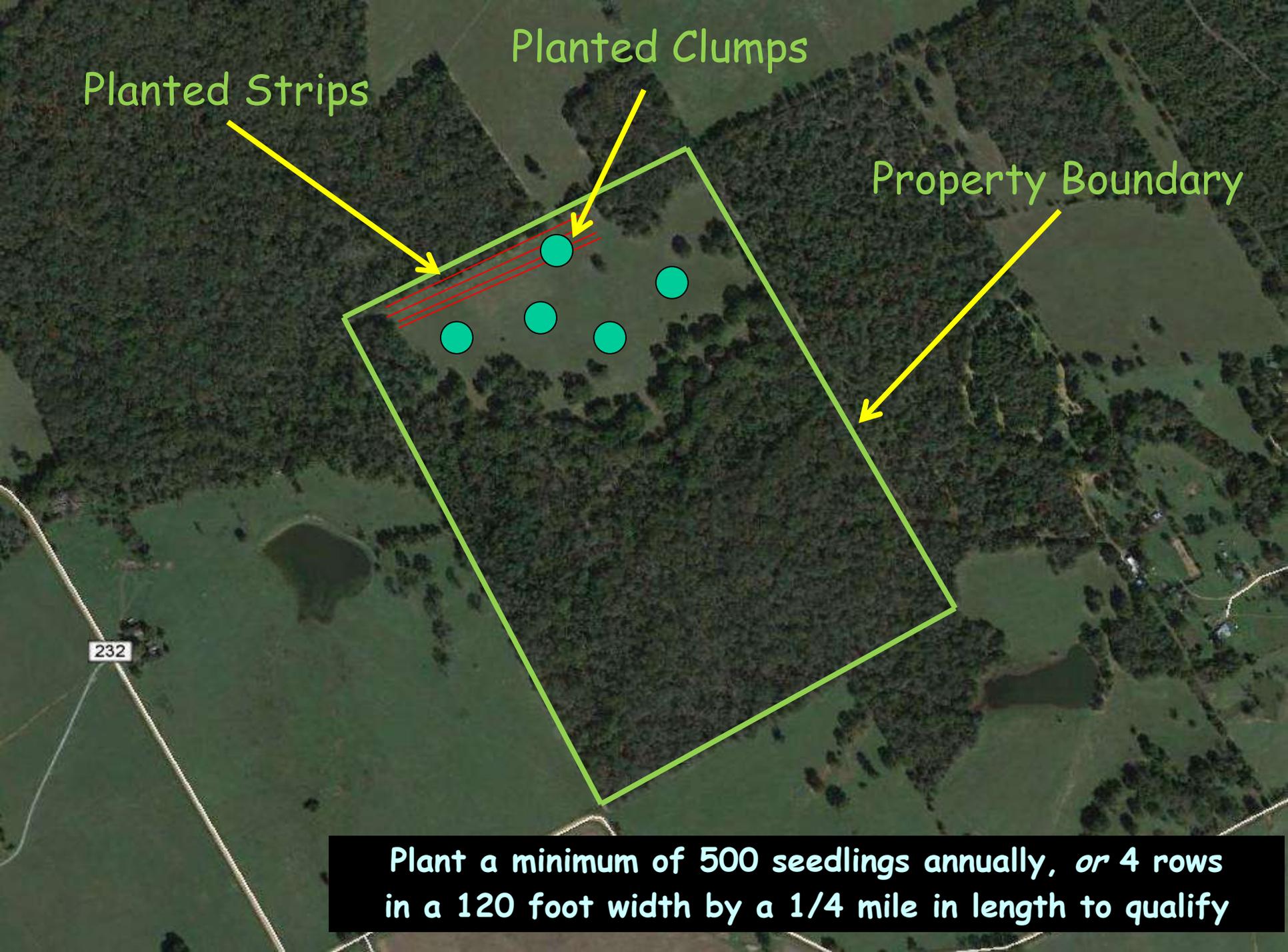
Woody Plant/Shrub Establishment

1. Planting and protecting native seedlings to establish *shrub* thickets, or

2. Restore *wooded* habitats within former croplands, or tame pastures

Plant a minimum of 500 seedlings annually, or 4 rows in a 120 foot width by a 1/4 mile in length to qualify

Plantings should consist of native trees and shrubs that produce mast, or provide nesting or escape cover



Planted Strips

Planted Clumps

Property Boundary

232

Plant a minimum of 500 seedlings annually, or 4 rows in a 120 foot width by a 1/4 mile in length to qualify

What are desirable shrub and tree species to plant?

Water Oak



Other Excellent Species Include:

Wild Apple

Wild Pear

Wild Plum

Elderberry

May Haw

Grape Trellis - Mustang and

Muscadine

Trees:

Pecan

Hickory

Black Walnut

Native Pine

American Beautyberry



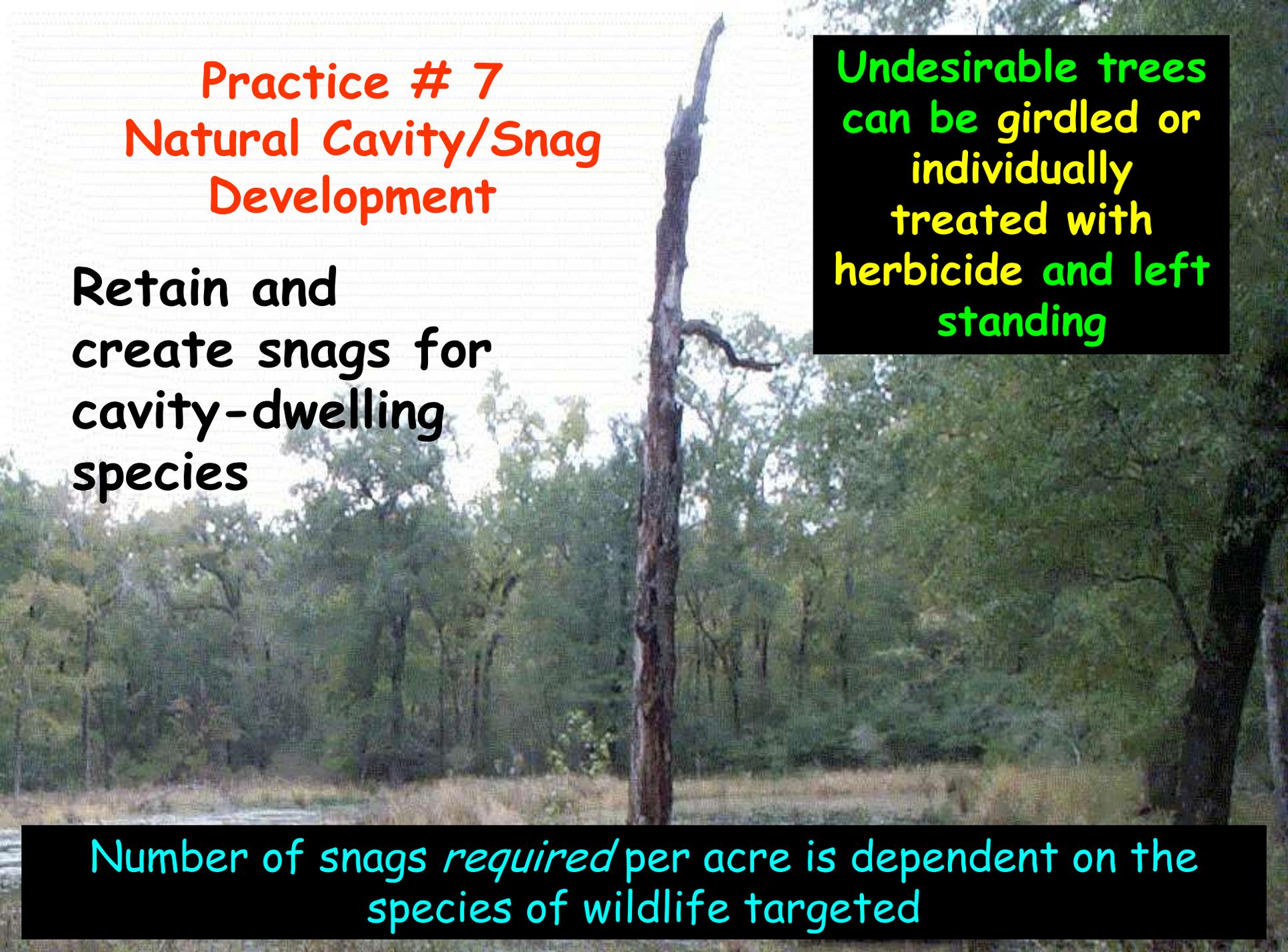
Chickasaw Plum

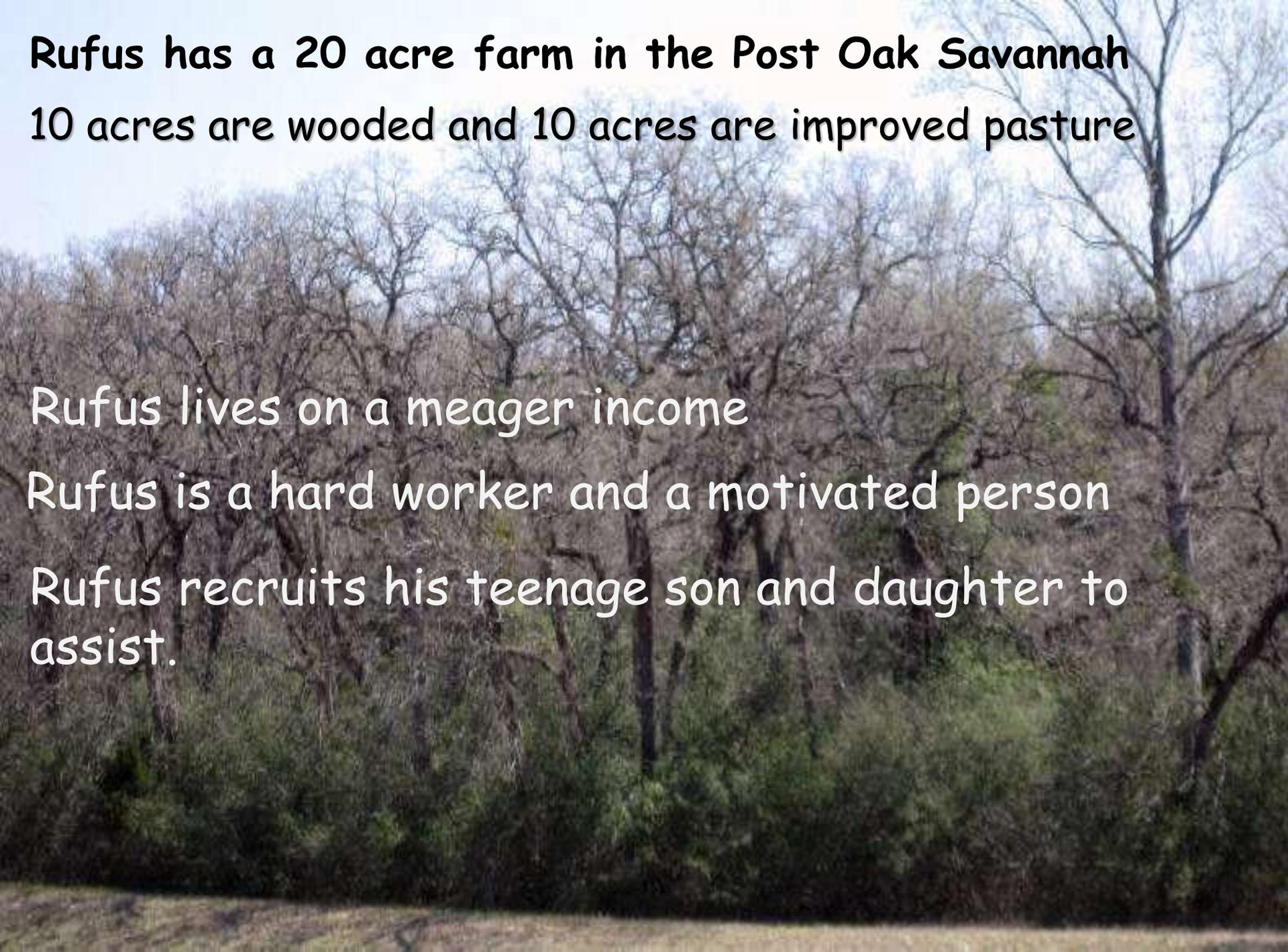
Practice # 7 Natural Cavity/Snag Development

Retain and
create snags for
cavity-dwelling
species

Undesirable trees
can be girdled or
individually
treated with
herbicide and left
standing

Number of snags *required* per acre is dependent on the
species of wildlife targeted



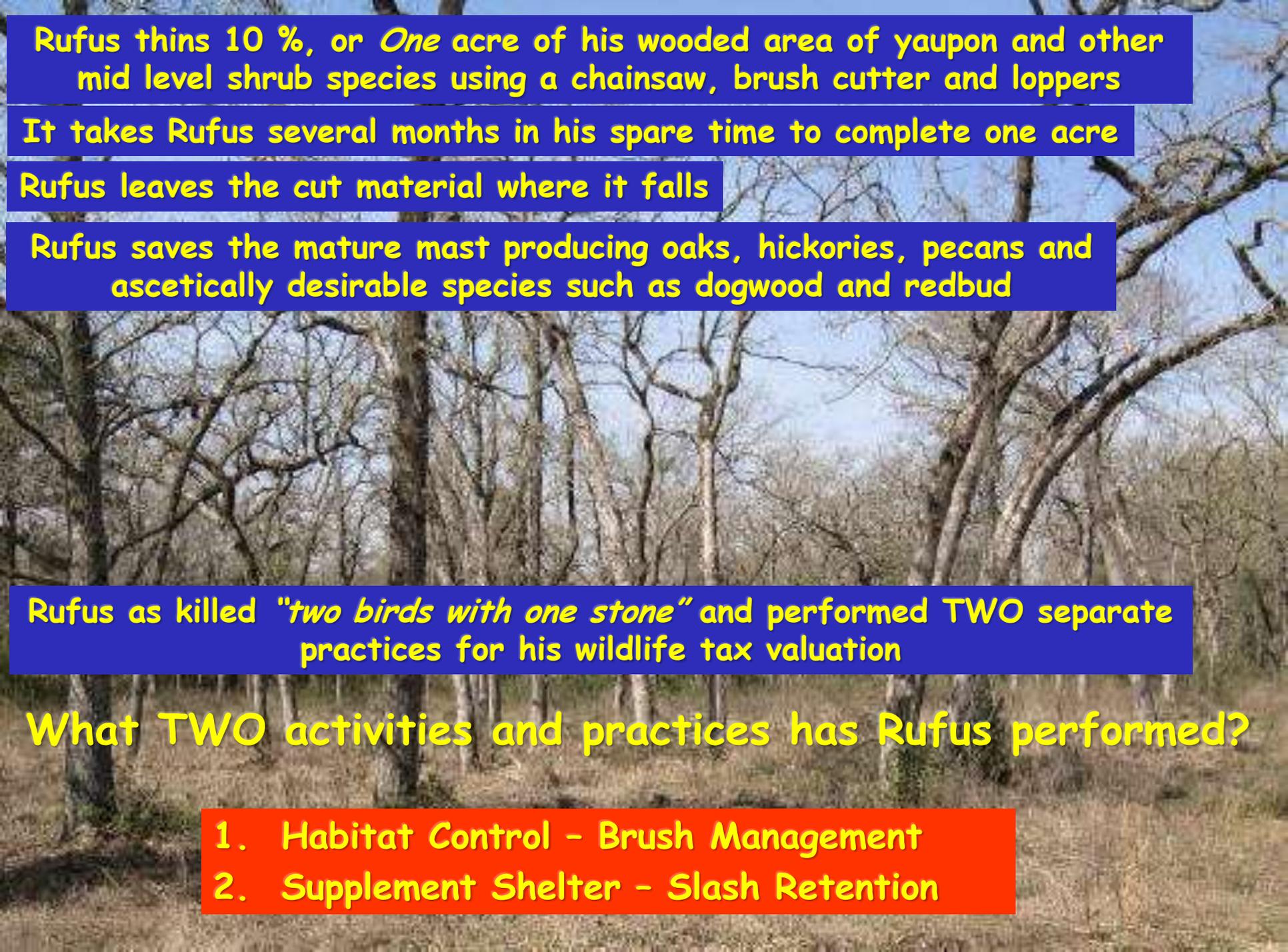


**Rufus has a 20 acre farm in the Post Oak Savannah
10 acres are wooded and 10 acres are improved pasture**

Rufus lives on a meager income

Rufus is a hard worker and a motivated person

Rufus recruits his teenage son and daughter to assist.



Rufus thins 10 %, or *One* acre of his wooded area of yaupon and other mid level shrub species using a chainsaw, brush cutter and loppers

It takes Rufus several months in his spare time to complete one acre

Rufus leaves the cut material where it falls

Rufus saves the mature mast producing oaks, hickories, pecans and ascetically desirable species such as dogwood and redbud

Rufus as killed "*two birds with one stone*" and performed TWO separate practices for his wildlife tax valuation

What TWO activities and practices has Rufus performed?

1. Habitat Control - Brush Management
2. Supplement Shelter - Slash Retention

Rufus is really pleased with the results



He now has an area he can easily access.

Rufus decides to add bird boxes and squirrel boxes

Rufus adds a deer feeder in the center of the block

Rufus puts up a tree stand

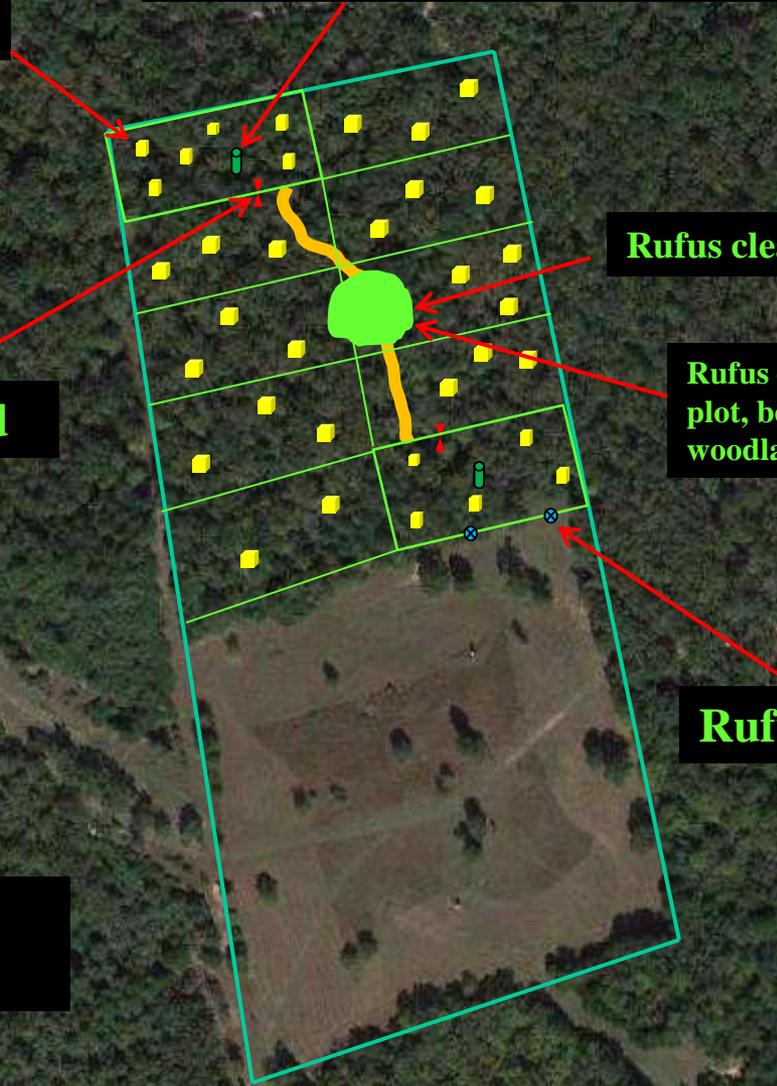
Rufus clears trail

Rufus clear cuts ½ acre to create forage plot, bedding in the center of the woodland – connecting trails

Rufus adds two brush piles

Rufus can hunt a north wind or a south wind

Deer and wildlife filter from adjacent properties through the cleared areas – down the trails and to the forage plot

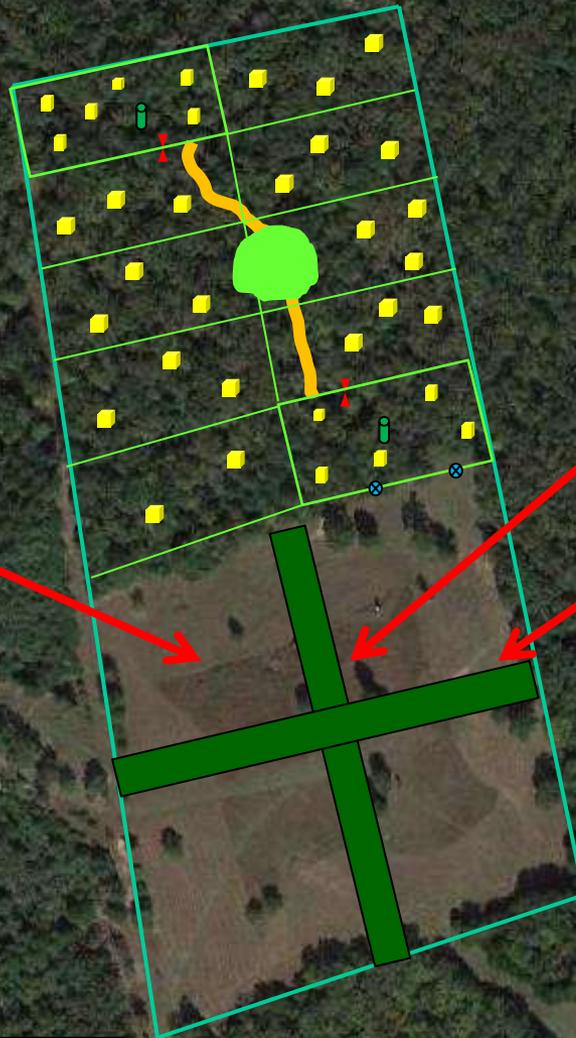


Rufus converts the improved pasture to native prairie – benefiting all wildlife species

Rufus plants rows of native trees for cover, travel corridors and privacy

Rufus understands the pasture is lacking in cover

Rufus understands the improved pasture is non-productive for wildlife



What has Rufus Accomplished?

Accessibility

Nesting Cover & Structures

Fawning Cover

Abundant Forage

Screening Cover

Travel Corridors

Native Prairie

Mow Woodlands

Implement Prescribed Fire

Improved Esthetics

Increased Wildlife Diversity and Abundance

Increased Hunting Opportunity

Pasted on Values and Heritage to His Children –
Hard Work, Conservation and Habitat Management



What Activities and Practices has Rufus Performed?

Brush Control

Slash Retention

Nesting Structures

Brush Piles

Tree Planting

Native Grass Restoration

Nesting Cover

Supplemental Forage

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- QUICK REVIEW -

6. PROVIDING SUPPLEMENTAL SHELTER

Nest boxes Target Species: _____
 Cavity type. # _____ Bat boxes. # _____ Raptor pole. # _____
 Additional Information: _____

Brush piles and slash retention
 Type: Slash Brush piles Number per acre: _____
 Additional Information: _____

Fence line management Length: _____ Initial establishment. Yes No
 Plant type established: Trees | Shrubs | Forbs Grasses
 Additional Information: _____

Hay meadow, pasture and cropland management for wildlife Acres treated: _____
 Shelter establishment: Roadside management Terrace/wind breaks Field borders
 Shelterbelts Conservation Reserve Program lands management
 Type of vegetation: | Annual | Perennial
 Species and percent of mixture: _____
 Deferred mowing Period of deferment: _____
 Mowing Acres mowed annually: _____
 No till/minimum till
 Additional Information: _____

Half-cutting trees or shrubs
 Acreage to be treated annually: _____ Number of half-cuts annually: _____
 Additional Information: _____

Woody plant/shrub establishment
 Pattern: Block Mosaic Strips: Width: _____
 Acreage or length established annually: _____ Spacing: _____
 Shrub/tree species used: _____
 Additional Information: _____

Natural cavity/snag development
 Species of snag: _____ Size of snags: _____ Number/acre: _____
 Additional Information: _____

Appendix AA

Minimum Requirements for Supplemental Shelter - Post Oak Savannah & Blackland Prairies

NEW: Summary guidance for *supplemental shelter* intensity levels. The following documents are intended for guidance only, and represent what would be the desired number of supplemental shelters for various species that a landowner should strive for. Because each individual property is different and effective use of supplemental shelter for wildlife enhancement will vary based on individual site characteristics, these numbers should be used as guidance only. Additional information is available from your local biologist or on the TPWD web site at www.tpwd.state.tx.us/wildscapes. Be sure to study the general guidelines for agricultural tax valuation based on wildlife management. See Wildlife Management Activities And Practices: Comprehensive Wildlife Management Planning Guidelines for your region. It's the book to which this is an appendix.

Species:	Supplemental shelter type	Min. no. of structures per area of habitat
<i>E. bluebird, Tufted titmouse, Bowick's wren, Carolina chickadee</i>	<i>Nest boxes</i>	One nest box per 3 acres of suitable habitat. Minimum number of boxes required: 6. Maximum number of boxes required: 40
	<i>Snag development</i>	Create or maintain one snag per 3 acres.
<i>Screech owl</i>	<i>Nest boxes</i>	One nest box per 10 acres of suitable habitat
	<i>Snag development</i>	Create or maintain one snag per 10 acres.
<i>Wood duck</i>	<i>Nest boxes</i>	One nest box per 8 acres of suitable lake, pond, riverine or stream habitat.
<i>Bat spp.</i>	<i>Bat house</i>	Houses should be erected in groups of 3 or more per 100 acres.
<i>Bubwhite quail</i>	<i>Half-cutting mesquite</i>	One per acre, in areas where suitable woody plant cover is lacking.
	<i>Brush piles</i>	One per acre, in areas where suitable woody plant cover is lacking.
	<i>Shrub planting</i>	One group of shrubs per acre, in areas where suitable woody plant cover is lacking.
<i>Other</i>	<i>Slash retention</i>	One per acre in areas where woody plant reproduction is inadequate.

Thank You!

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