

# Longleaf Pine Uneven Aged Management

**TRUE NORTH FOREST MANAGEMENT SERVICES**

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# [ Typical Existing Situation ]

- Mix of loblolly and longleaf
- Heavy scrub oak/hardwood midstory which is suppressing understory of grasses and forbs
- Fire excluded for long period of time
- Thick needle duff layer
- Some wiregrass, but very sparse.
- Wildlife decline or lost

Clearcut and replant seems like your only option.

Before



Before



# [ What Usually Happens ]



# Uneven Aged Management a Good Fit for Landowner who:

- Wants to generate sustainable long-term income, while protecting, and in many cases enhancing, the ecological integrity of their woodlands.
- Wants something that looks nice
- Wants to maintain and see mature longleaf pine trees.
- Wants to enhance wildlife and bird habitat.
- Maintain recreational opportunities
- Is looking for something different.



# Longleaf Pine Uneven Aged Systems

- Single Tree Selection or Small Gap Openings
- Shelterwood
- Others



# Advantages of Uneven Aged Management:

- Get to maintain mature canopy longleaf pines
- Alternative to large clearcut
- Periodic income – spreads out income producing events
- Mimics small-scale natural disturbances
- Guided by aesthetic beauty
- Wildlife benefits<sup>3</sup>
- Increased understory diversity
- Seedlings are free! No planting costs
- Can continue to rake straw
- Sustainable if harvest volume < growth
- Keeps you involved – lots to do and observe

# [Challenges:

- Natural regeneration of longleaf sporadic: Every 5 to 7 years
- Can not control spacing – too many trees per acre – will have to correct (\$)
- Requires time and skill to implement
- Requires professional guidance and oversight
- Not as lucrative in the short term
- You can't just walk away
- It's a process not an event
- May lose some mature longleaf to windfall or fire.
- Hinges on the quality of the logger that does the work.

# Single Tree and Small Gap Openings

- Must be marked (need to walk the ground)
- Single tree to  $\frac{1}{2}$  acre in size (favor smaller, not too big)
- Allow to regenerate naturally. Modify fire regime in heavy mast year.
- Gradually expand openings and create new ones
- Sustainable Formula: Determine allowable cut
- Harvest a portion of your annual interest rather than all of it.

# Marking the Stand

- Trees you leave are more important than the trees you take
- Will the resulting gap be too small for longleaf regeneration?
- Will it be too big to carry fire?
- How will it impact aesthetics?
- Are we releasing reproduction that is already established
- Take the poorest quality trees first
- Avoid over cutting: Allowable cut

# [ Mark trees ]



# [ Small Gap Opening ]



# [ After Gap Opening Created ]



# [ Small Gap Openings ]



# [ Three Years After ]



# [ Eight Years After ]



# [ Shelterwood:

- I use a lot to restore longleaf stands
- Heavy thin
  - Mark longleaf to leave
  - Longleaf seed is heavy, make sure to leave enough trees to seed the understory
  - May have to supplement with planting
- Get rid of the loblolly (treat it like a weed)
- Prescribed burning prepares the seed bed for longleaf
- Canopy structure must support the long-term use of fire. Needles = fuel

# [ Shelterwood System ]



# [ Shelterwood System ]



# [ Shelterwood ]



# Longleaf Pine Restoration

- Use a combination of both small gap openings and Shelterwood
- On neglected stands, work with what you have available
- Cut out the loblolly
- Remove the scrub oak: whole tree chip
- Control the scrub oak understory (herbicides an option)
- Start burning
- Promote wiregrass (fire dependent)

# [ Prescribed Burning ]



# [ After Burn (2006) ]



# [ Wiregrass ]



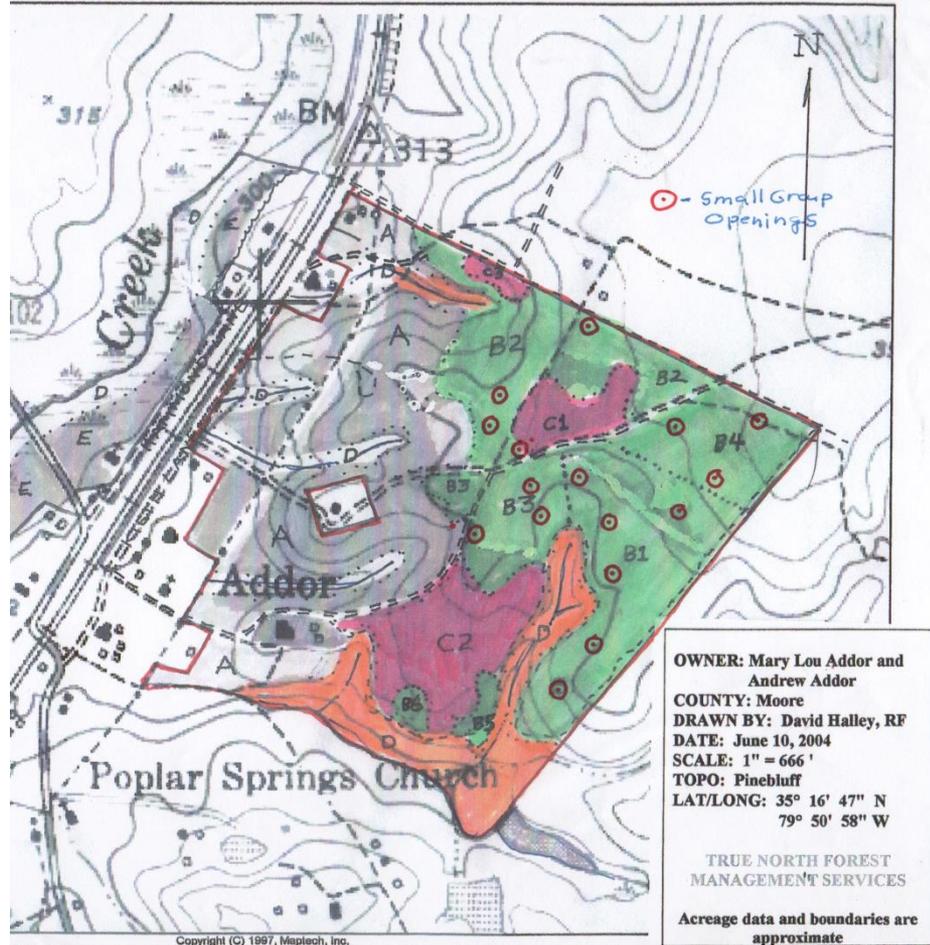
# [ Day After (March 2006) ]



# Three months after burn – July 2006



# Case Study: Addor Farm



# [ Addor Farm Aerial View ]



# Addor in 2002



# [ Addor Today ]



# [ Addor Now ]



# Addor in 2005



# [ Addor Now ]



# [ Precommercial Thinning ]

- Age 5 to 9 years old
- Remove loblolly
- 300 to 400 trees per acre
- Cost share available

# [ Long Term Approach ]

- With patience and time it will generate a net economic gain.
- The forest is an endowment not a liquid asset.
- You start with the principle, you reinvest the interest, and you draw a good-sized dividend.
- Don't lose a beautiful, functioning forest in the process

# Contact Info

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# [ Before you start cutting: ]

- Need existing stand of longleaf (cone bearing)
- Control hardwood understory
  - Herbicide treatment (burning won't kill it)
- Brushing (if you want to rake)
  - Felling and piling
  - Mulching machine
  - Whole tree chipping
- Prescribed burning (to keep it in check)

Need to start with a clean open  
understory

# [ Brushing

- Cut and pile



# [ Brushing

- Cut and pile



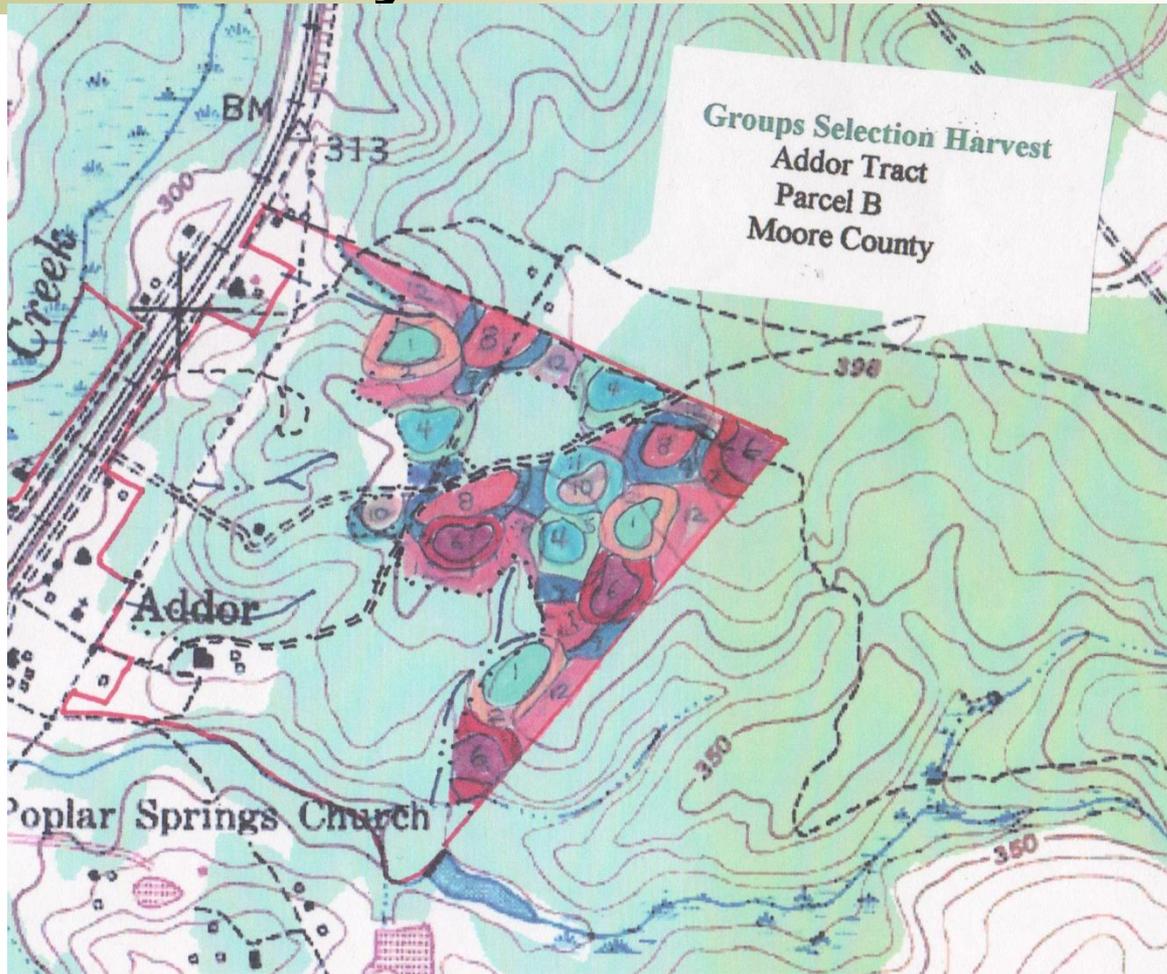
# [ Brushing - After ]



# [ Brushing – Mulching after ]



# Case Study: Addor Farm



# Controlling Hardwood Understory

- Spot stump treatments



# Controlling Hardwood Understory

- Velpar (hexazinone) treatment



# Controlling Hardwood Understory

- Velpar treatment

