

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 benefits³
- 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]



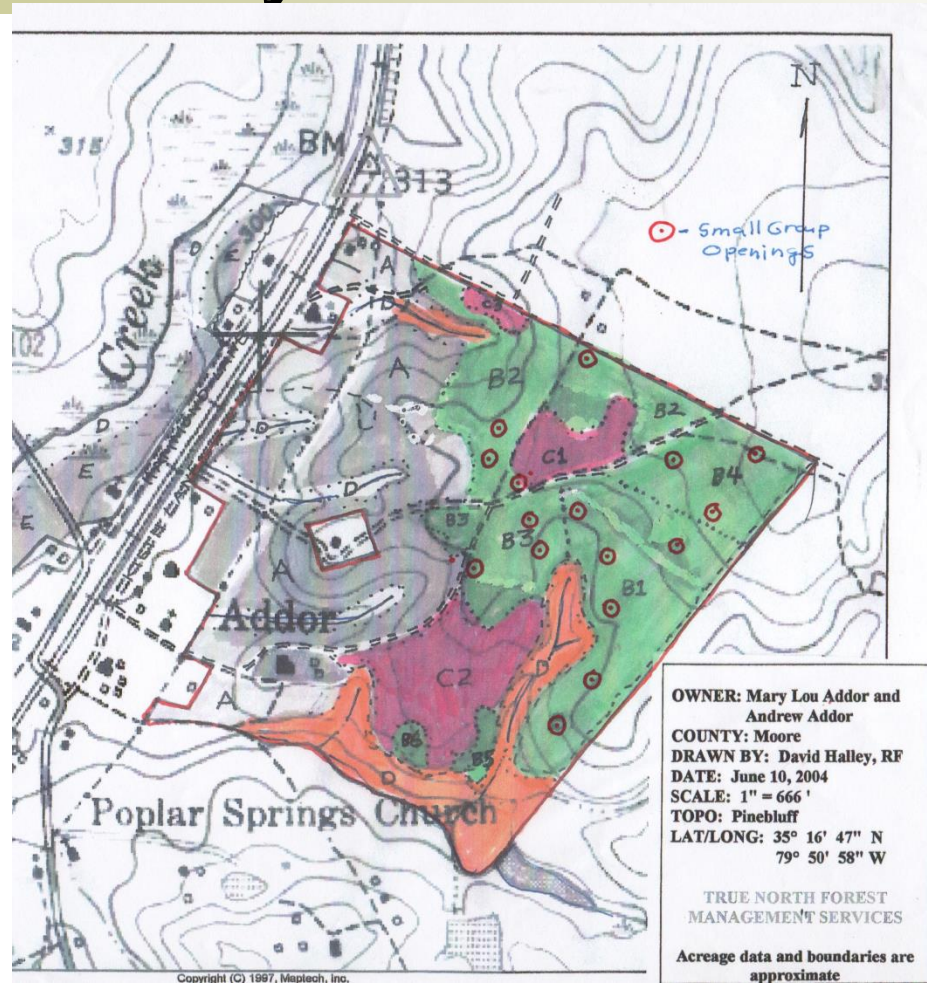
[Day After (March 2006)]



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



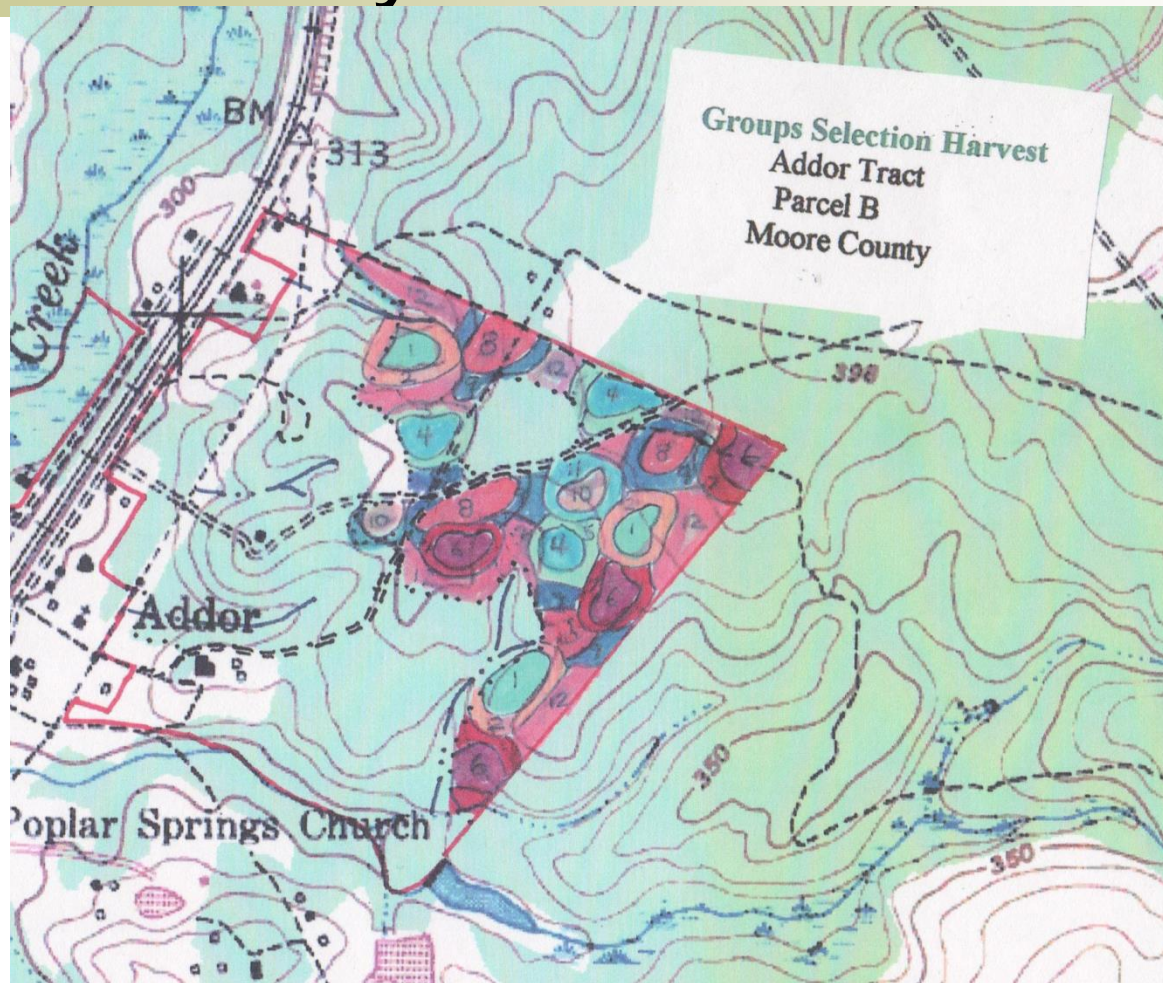
[Brushing - After]



[Brushing – Mulching after]



[Case Study: Addor Farm]



Controlling Hardwood Understory

- Spot stump treatments



Controlling Hardwood Understory

- Velpar (hexazinone) treatment



Controlling Hardwood Understory

- Velpar treatment

