

Preserving Conservation Values: Operational Considerations to Minimize Impacts

Steve Jack

J.W. Jones Ecological Research Center



Background



When managing for conservation objectives want to maintain or enhance characteristics that caused area to be conserved



Background

- Must balance trade-offs of operational considerations and desirable attributes
- Silvicultural manipulations, specifically harvest operations, have large potential impact on conservation attributes



Some Considerations to Minimize Impacts

- Even-aged *vs.* uneven-aged harvests
- Tree and species selections
- Timing of harvest operations
- Harvest equipment
- Soil and groundcover disturbance
- Invasive species
- Harvest contract specifications

Even-aged and uneven-aged harvest systems

Some differences:

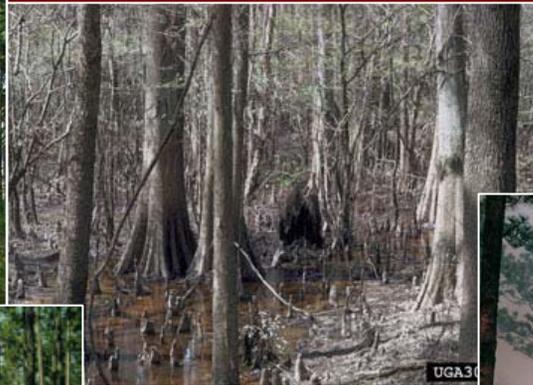
- Harvest around residual trees
- Site preparation
- Number of entries and impacts
- Natural or artificial regeneration



Tree and species selections

(when marking for harvest under selection)

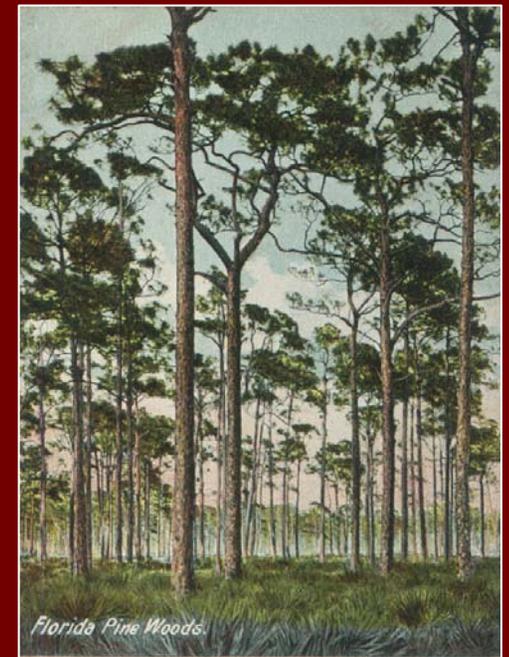
- Focus on appropriate species for site and objectives
- Leave enough to provide fuel for Rx-fire



Tree and species selections

(when marking for harvest under selection)

- Preserve heterogeneity in form and spacing

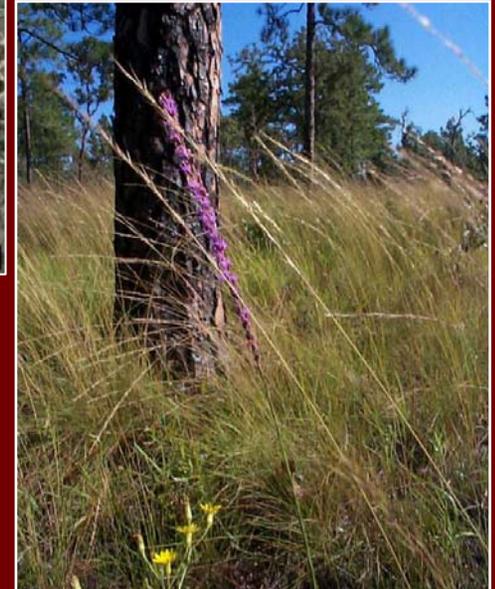


Timing of Harvest Operations

- Generally think of timing in regard to soil conditions – e.g., avoid rutting

- Timing of operations is also influenced by many other factors of conservation interest, as

many
conservation



Harvest equipment

Impacts from:

- Size & number of machines
- Type
- Mechanized versus hand crew



Soil and groundcover disturbance



- Much of groundcover not adapted to severe soil disturbance – minimize disturbance whenever and however possible
- Specify where disturbances are allowed – areas previously disturbed

Soil and groundcover disturbance

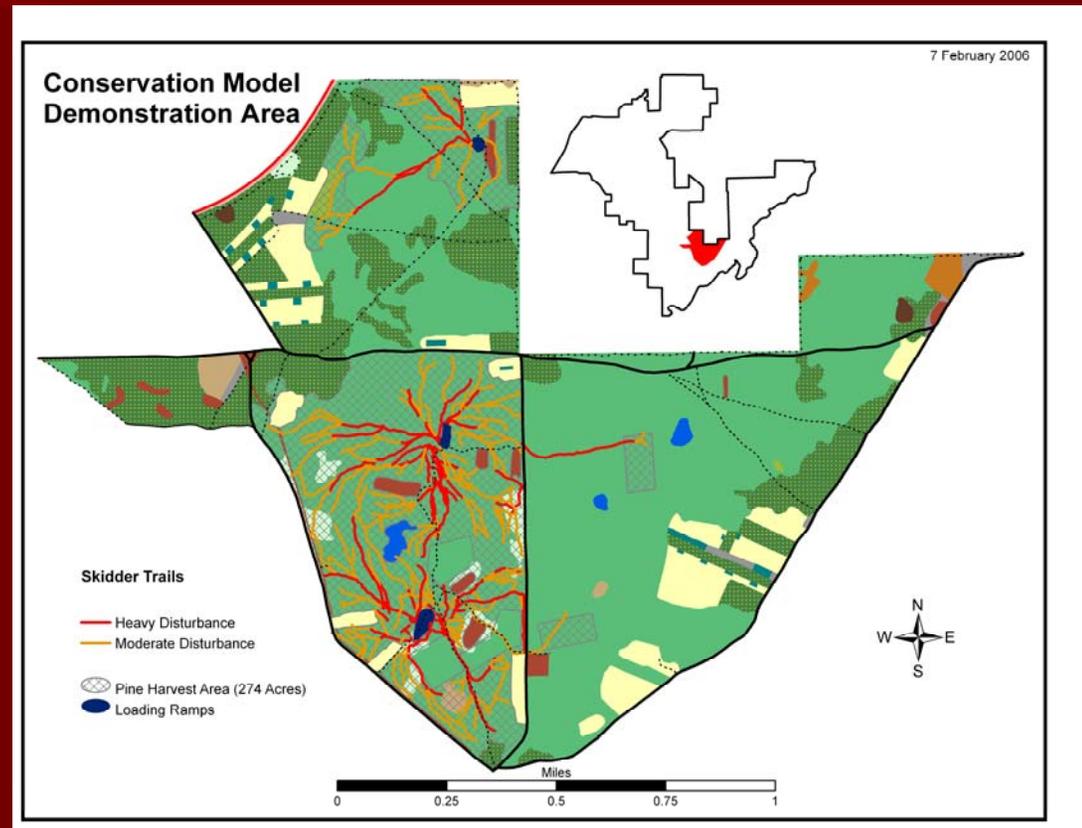


- Use previously disturbed area
- Control impacts and debris at logging ramp



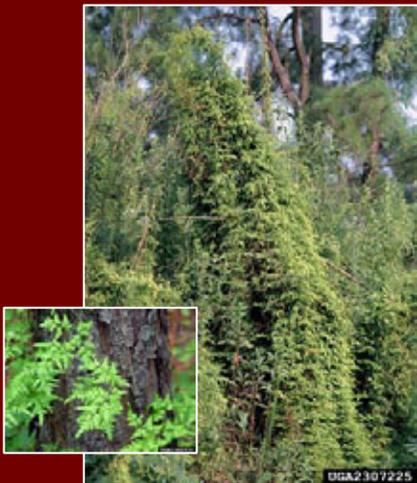
Soil and groundcover disturbance

- Planning, control and dispersion of skid trails
 - Located in disturbed areas, roads
 - Avoid sensitive areas
- How many passes?



Invasive species

Potentially biggest problem over long-term



Invasive species

- Moves on equipment – clean before come on site
- Once established may be difficult to control – collateral damage?
- Avoid introduction and attack early



Harvest Contract Specifications

- Penalties for damage
- Specify important factors: whole-tree skidding, delimiting, what to protect, acceptable disturbances
- Careful utilization and merchandizing



Harvest Contract Considerations

COMMUNICATE



Must allow logger to get the job done, but only within parameters set by landowner and objectives (give and take)

Harvest Contract Considerations

- Lump sum vs. per unit sale
 - Staged lump sum?
- If find a “good” logger or two, work with them to get desired results
- Be willing to give something up (price or when logged) to use a particular logging crew
- **How to accomplish these under bid system?**

Summary

- Generally common sense
- Think about desired conservation values
- Choose operations that are appropriate and minimize impacts – trade-offs
- Apply with care and supervision
- Put resources first



