Preserving Conservation Values: Operational Considerations to Minimize Impacts

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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 can affect many other factors, that may be of conservation interest, as well.
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

before

during

after
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, delimbing, what to protect, acceptable disturbances
- Careful utilization and merchandizing
Harvest Contract Considerations

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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