

Fuel Reduction Treatments in Douglas-fir stands of the Southwest Cascade Mountain Range



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Introduction

- Project is located on Cow Creek Tribal Land Trust property
- Fire exclusion and past land management has led to an increase in stand density primarily by species that are not adapted to fire.
- Traditional species composition included Douglas-fir sugar pine, incense cedar, and ponderosa pine
- Prescribed burning after thinning may create a more fire resilient forest structure



In 2018 the Cow Creek Band of Umpqua Tribe of Indians under the Western Oregon Tribal Fairness Act received approximately 17,500 acres of forest land in trust. This land was transferred from the Bureau of Land Management.

Experimental Design

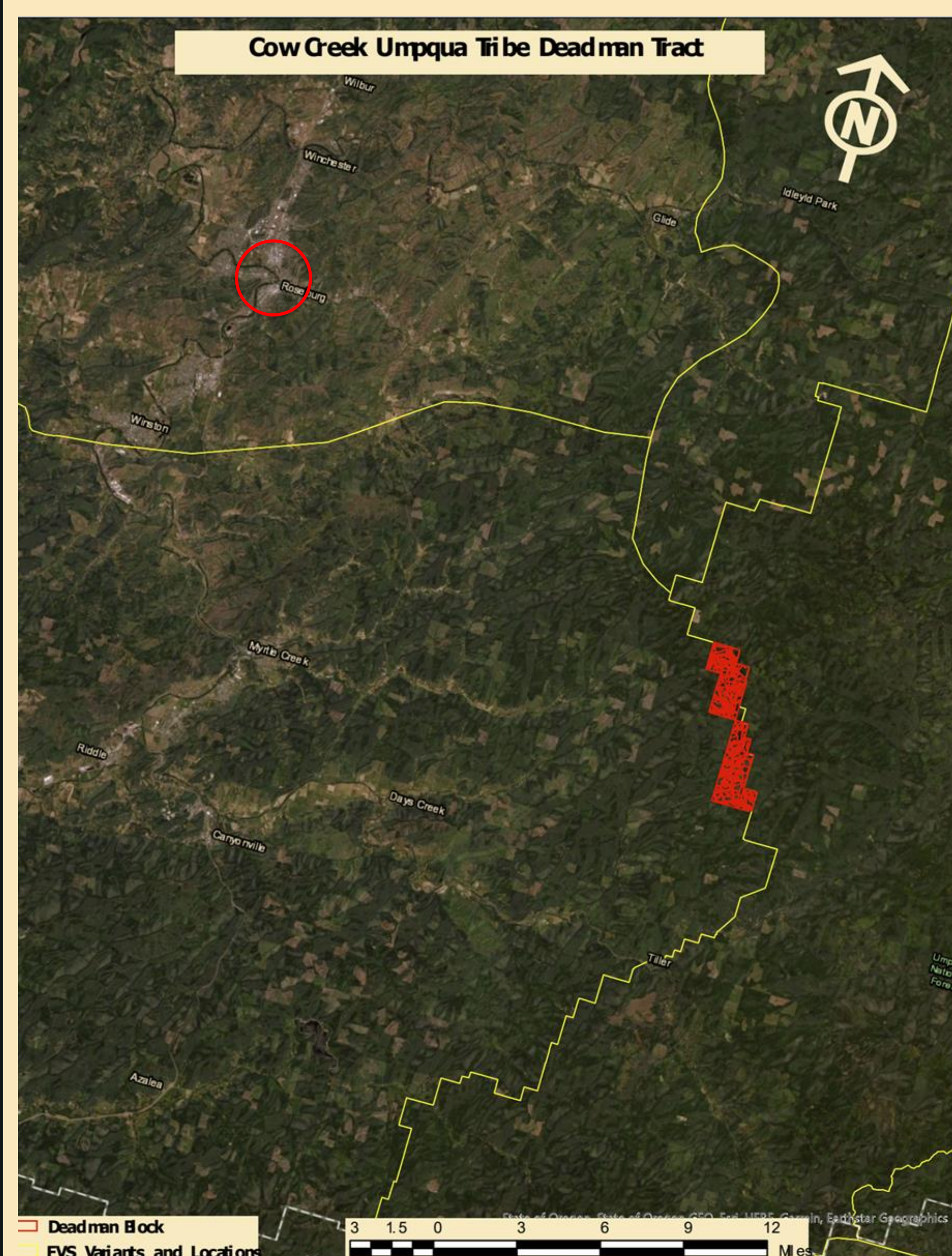
- Inventory data was gathered for the land transfer process
- Surface fuel data will be gathered using Brown's Transect
- Forest Vegetation System (FVS) will be used to model current stand conditions and develop treatment options
- Fire and fuels add-on will be used to model crowning index, torching index, and fire induced tree mortality



Silvicultural Approaches

- Thin from below- 16" DBH and below
- Forest Service restrictions of 80-year-old and younger
- Comprehensive thinning- thinning across diameter classes with and without prescribed fire

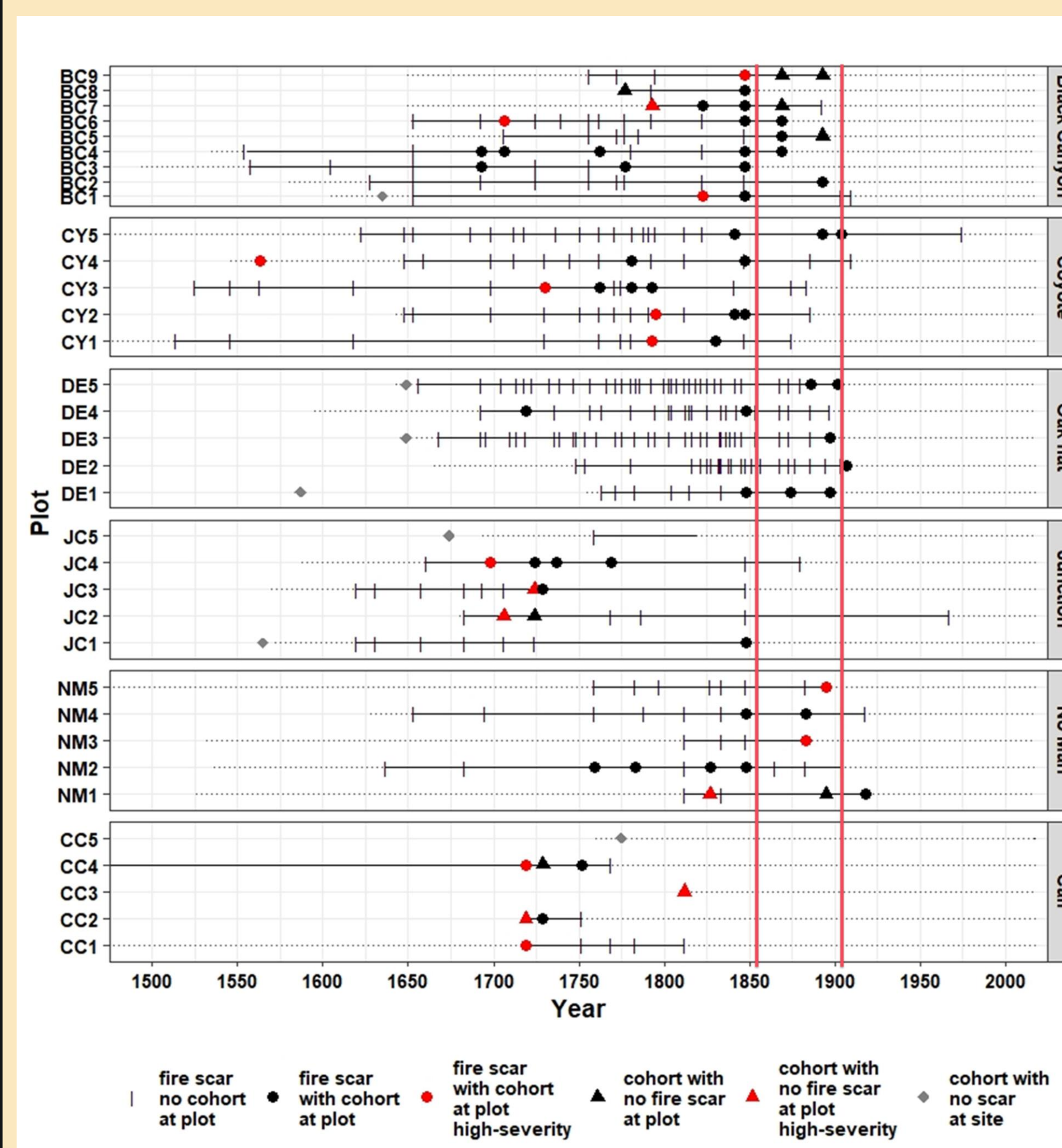
Deadman Creek Tract of the Canyon Mountain Land Conveyance



- Project area is approximately 25 miles southwest of Roseburg Oregon on the western slopes of the Cascade mountains.



Composite Fire histories from the Umpqua National Forest



- 1853- Treaty between the Cow Creek Tribe and US Government signed.
 - 1907- Cascade Forest Reserve established (predecessor to the Umpqua National Forest)
- Figure Prepared by Andrew Merschel

Stand conditions/Site characteristics



- Has wide range of stand conditions ranging from mixed age 200+ year old trees to even aged 20-year-old Douglas-fir stands
- Many stands have high SDI 0.8 and above.
- Some stands are over 1000 TPA
- Site class III/IV ground

For this project I will be concentrating management strategies on 70-year-old and older stands and multi-age stands. I chose this age class because it has more ecological and economical value than younger stands. There are also more of this type of stand that borders the National Forest directly than do younger merchantable stands.

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