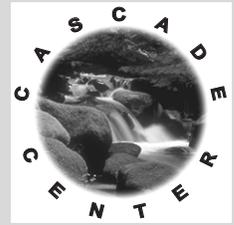


THE H.J. ANDREWS UNEVEN-AGED MANAGEMENT PROJECT

MANAGING YOUNG STANDS



background

There are hundreds of thousands of acres of young even-aged forest stands regenerated following clearcutting within western Cascade Range forests. Many people advocate an end to clearcutting and suggest that forests be managed in an uneven-aged manner. Little research and monitoring has been done on uneven-aged management on western Cascade forests. This study is designed to compare and evaluate alternative approaches to initiating uneven-aged/multicohort stand structure in 30 to 40 year old plantations.

the study

The study is occurring in sixteen young stands on the H.J. Andrews Experimental Forest located within the Blue River Ranger District of the Willamette National Forest. The study will be initiated by thinning approximately 320 acres in 12 stands. In addition, there are approximately 80 acres in 4 stands designated as controls, where no treatments are planned. Controls serve as a reference for the various commercial thinning treatments. Stand development and understory composition will be tracked in all 16 stands over a 200 year period.

The uneven-aged project consists of three treatments, plus the controls. Each treatment will be replicated four times. Since the stands are quite variable, they will be thinned to a target relative density. Relative density is a useful indicator of the degree that trees are competing with each other for light and other resources. The treatments include:

Multi-Storied Stand - thinnings will maintain the stand at a relative density of 20 to 40.

Single Tree Selection - thinnings will maintain the stand at a relative density of 30 to 50.

Group Selection - small gaps of varying size and ages will eventually be created and regenerated over most of the stand, areas between the gaps will be maintained at a relative density of 30 to 50. Initially the gaps will be placed in areas of natural disturbances (e.g., blowdown, root rot) or, if there are no natural disturbances, then a gap will be placed approximately every 250 feet.

Stands assigned to the Multi-Storied Stand treatment will be thinned in the future to a relative density of 20 when both the overstory cohort and the second cohort reach a combined relative density of 40. Subsequent

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entries will follow this pattern as more cohorts develop. Initially, the thinning will be a “thinning from below” but eventually crown thinning will be done as well. Stands will be underplanted with an equal mix of Douglas-fir, western hemlock, western white pine, and western redcedar. Planting spacing will be 10 by 10 feet. Existing leave trees will be considered in the spacing.

Stands assigned to the Single Tree Selection treatment will be thinned again to a relative density of 30 when the stand (all cohorts) reaches a relative density of 50. Subsequent entries will follow this pattern. As in the Multi-Storied Stand treatment, the thinning will be a “thinning from below” but eventually crown thinning will be done as well. Stands will be underplanted with an equal mix of Douglas-fir, western hemlock, western white pine, and western redcedar. Planting spacing will be 10 by 10 feet. Existing leave trees will be considered in the spacing.

Stands assigned to the Group Selection treatment will be thinned again to a relative density of 30 when the stand (all cohorts) outside of the gaps reaches a relative density of 50. At that time an additional 10% of the stand will be placed in gaps. The gaps will increase in size over time, with the size proportionate to the height of the surrounding trees. Studies suggest that gaps need to be at least as large as the surrounding stand height in order to get successful Douglas-fir regeneration. Additional gaps will be adjacent to existing gaps. Subsequent entries will follow this pattern. Only the gaps will be planted. Gaps will be planted with an equal mix of Douglas-fir, western hemlock, western white pine, and western redcedar. Planting spacing will be 8 by 8 feet.

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status

Pre-treatment vegetation data collection was completed in 1998. Timber harvest began in 1999 and was completed in 2000. Post-treatment vegetation data was collected in 2001 and is scheduled again in 2003 and 2005.

