

## **Managing by Growing Space Allocation**

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This poster will illustrate translation of new concepts from research literature to field implementation. The Multi-Aged Stocking Assessment Model (MASAM) concepts were used to mark a variable stand using specific prescriptions to result in a uniform stand that reflects the MASAM desired condition.

Professor O'Hara of U.C. Berkeley and Professor Berrill of Humboldt State University have collaborated on a series of papers regarding Leaf Area Index (LAI) and uneven or multi-aged silviculture regimes. The effort led to their development of MASAM for determining optimal stocking and harvest prescriptions for an uneven-aged stand. The approach to uneven-aged silviculture system uses multi-age cohorts. The number of stems in each cohort is controlled in order to ensure adequate growing space for the regeneration cohort. The model user apportions growing space, represented by leaf area, amongst distinct size or age classes. The model user also sets the density of these stand components. The model outputs is used to validate the long term productivity goals of the multi age or cohort prescription set by the model user.

As a key concept, each cohort is allocated an amount of growing space, with the overall growing space kept between 50% and 70% of species maximum stand LAI. Growing space utilization is controlled by designating the desired number and size of the stems comprising the harvest cohort at the end of a cutting cycle.

The goal of this demonstration was to implement the methodology developed in the MASAM model. Preharvest inventory was conducted at an intensity of 1 plot per 0.75 acres to assess current stand conditions. Due to stand structure variation within the unit, the unit was stratified into four subunits. Prescriptions were developed for each subunit, to allow harvesting at different intensities. The resulting post harvest stand will exhibit greater homogeneity, and reflect the target composition of the MASAM cohorts.

This demonstration unit is scheduled for harvesting in 2016. As examples for practitioners; graphics and marking prescriptions presented in this poster will illustrate the approach taken to reduce preharvest subunit variability and move the stand towards a more unified composition reflecting the MASAM concept. Once harvesting and the regeneration thinning phases are complete, this site will serve as a long term demonstration of the MASAM approach to uneven-aged management.