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The attached may be
of interest to you.

you or someone else in the
Dept. may be interested
in this. Anyone interested
can contact Jon directly, or
me if they can't get hold of
Jon.

B.R.
Bob Riggs
Wildlife & Range Scientist
Northeast Oregon Region

REQUEST FOR PROPOSALS

EFFICIENCY AND EFFECTIVENESS OF VEGETATION SAMPLING METHODS FOR BCC TIMBERLANDS

Boise Cascade Corporation (BCC) has identified a number of attributes of homogeneous vegetation units to be monitored on its timberlands in the Pacific Northwest for wildlife habitat assessments. Some of these attributes can be readily sampled as part of BCC timber cruising. Others, particularly those dealing with measures of vegetation cover, will require additional efforts. BCC seeks assistance in determining both the accuracy and efficiency of several vegetation sampling methods it is considering for estimating cover attributes.

The vegetation variables to be estimated include the following cover measurements:

- % canopy closure above 16.5'
- % canopy closure of evergreens
- % canopy closure of spruce/fir trees
- % ground cover of slash over 3" diameter
- % ground cover of herbaceous vegetation
- % cover of shrubs

These variables could be sampled in several ways:

- Ocular estimates within plots
- crown ratio interpolation for overstory attributes
- densiometer measures of overstory
- "moosehorn" estimates of overstory
- line intercept methods

BCC desires an evaluation of the accuracy and efficiency of these various methods for determining the required habitat variables.

This evaluation would need to determine the accuracy and efficiency of these methods in a variety of vegetation types spread out over BCC land holdings in the Pacific Northwest. Specific types of questions to be answered would be:

1. How many densiometer or moosehorn readings would be needed in a number of vegetation types to determine an accuracy of 10% and 20% of a mean value greater than 10% cover at an 80%, 90%, and 95% confidence level for overstory attributes, and the time required to sample this?
2. How many plots and of what size are needed to determine an estimate of herbaceous and shrub cover in a number of vegetation types to achieve the above accuracy of sampling? What is the time required to complete this, and what is the time required if sampled along with the densiometer or moosehorn readings above? What is the precision of these measurements?
3. Can % ground cover of slash over 3" diameter be accurately determined from densities of downed woody material over 3" diameter from plot sampling? If so, what is the precision and efficiency of this method?
4. What length and how many line intercepts are required to sample all of the cover attributes in the identified vegetation types, at the accuracies indicated above, and what is the time required to complete this relative to the other sampling methods?
4. What type of accuracy could be obtained using existing information on crown ratios? How much time would be involved in this?
5. What is the accuracy of ocular estimates of the above variables in plots, and the time required to sample?

Study sites for the evaluation of the sampling methodologies will be located in southern Oregon, western Oregon, northeast Oregon, central Washington, northeast Washington, and Idaho.

Approximately a month of field work by a crew of 2-3 people is anticipated. Boise Cascade personnel at each location will assist in locating appropriate study sites. This work needs to be conducted during Summer, 1993, with a final report by November, 1993.

Proposals outlining activities, associated budgets, and qualifications of investigators should be submitted by July 9, 1993 to:

Dr. Jonathan Haufler
Timberland Resources
Boise Cascade Corporation
P.O. Box 50
Boise, ID 83728
(208-384-6013)