

AVAILABILITY OF WHITE-TAILED DEER BROWSE
WITHIN THE HATTER CREEK ENCLOSURE

A Thesis

Presented in Partial Fulfillment of the Requirements for the

Degree of Master of Science in Forestry with

Major in Wildlife Management

In the

University of Idaho Graduate School

By

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Summary

A study of white-tailed deer browse was conducted during 1953 and 1954 within the Hatter Creek Enclosure, an 800-acre area devoted to wildlife research and located on the University (of Idaho) Experimental Forest in Latah County, Idaho.

A forage inventory was made in which a cover-type map of the area was produced based on an ecological classification of the vegetation. The map depicts the location and size of the area occupied by each of the various successional stages of vegetation, the zones and habitat types of which these stages are a part, and the dominant species present in the canopy and understory. The percentage of ground cover and the species composition of that cover were determined by the line interception method of sampling vegetation. The shrub species present were divided into two categories according to whether or not they are generally considered to be preferred as browse by white-tailed deer in this area. It was found that the ratio of preferred to non-preferred species varied between cover types, but that the two classes of shrubs were present in approximately equal ratio on the area as a whole.

Four of the preferred species (willow, redstem ceanothus, western redcedar, and serviceberry) were studied to determine the effects of snow depths on the availability of browse. These determinations were hampered by mild weather conditions during the winter, and accumulated snow depths of more than 18 inches were rare. The amount of snow on the ground at any time varied considerably between the cover types.

Percentages of total browse available with snow covers of approximately 1 foot and 1 ½ feet were as follows: willow, 97.1 and 92.8; redstem ceanothus, 67.4 and 49.3; western redcedar, 55.8 and 54.2, respectively. Percentage differences between species were due to differences in the distribution of current growth among the various height levels of the plants, and in the susceptibility of the branches of these species to bending under the weight of snow. The maximum accumulated depth on the serviceberry plot was 8 inches; the browse on these plants remained 100 percent available.

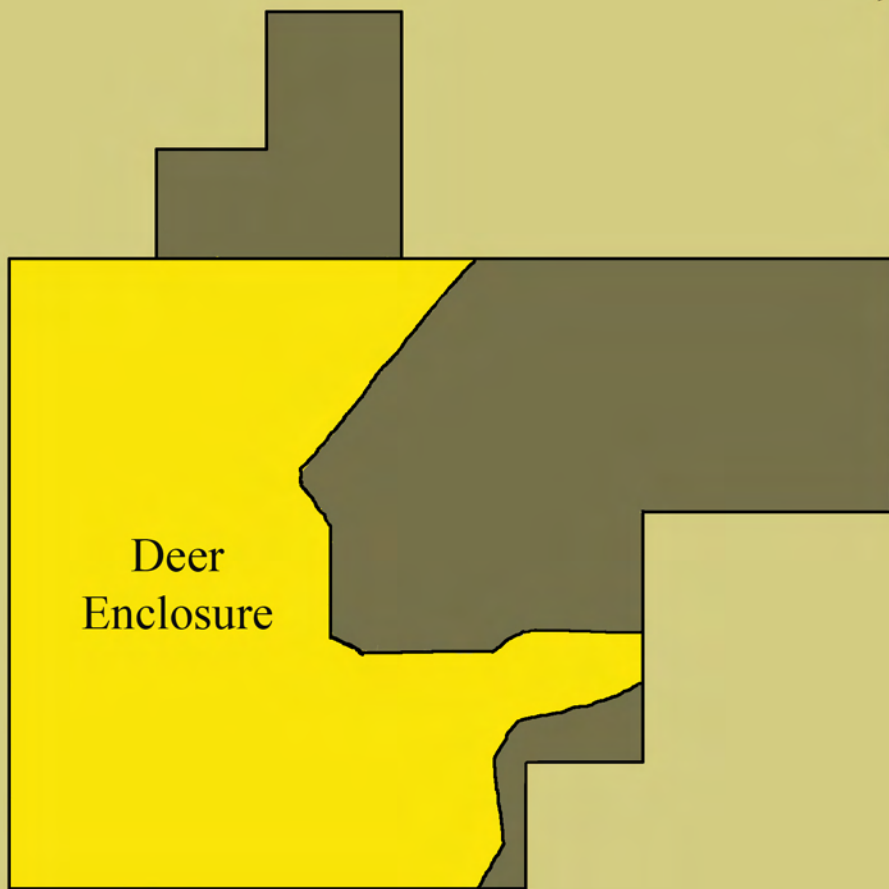
A clipping experiment was initiated to determine the ability of redstem ceanothus to withstand various degrees of forage removal. Three clipping intensities were employed, in each of which forage was removed in amounts that left a predetermined number of buds on each twig, as follows; 0, 1 and 3 buds, respectively. All four plants in each group were subjected to the same treatment. In addition, four plants were unclipped and served as a control group.

Each of the clipped plants showed a large gain in linear production and average twig length, as contrasted to a net loss in each of the control plants. Flower production was drastically reduced on the clipped plants, but was normal in the control group. Results are available for only one growing season following the start of the experiment, and are not representative of what may be expected over a period of several years of annual clipping at the same intensities.

Study Site Location

The Hatter Creek Enclosure is Located in East Hatter Creek Unit, it includes all of the West side of this unit.

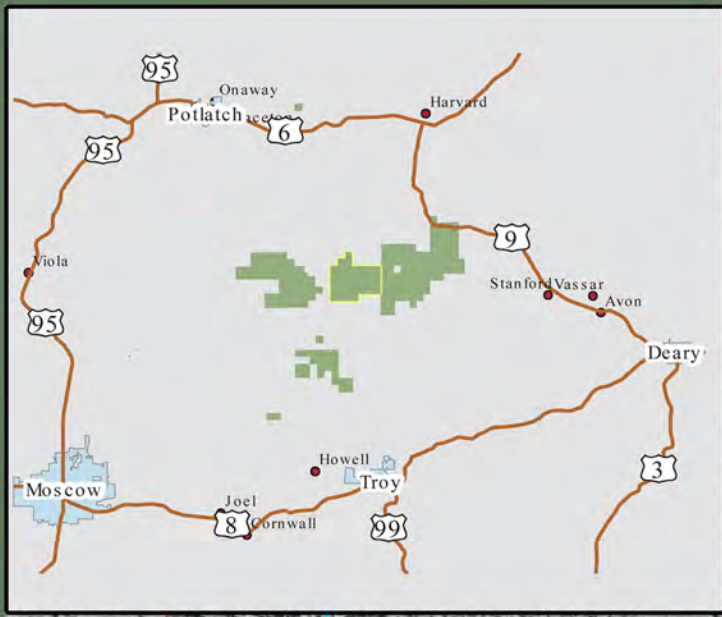
East Hatter Creek Unit Map
1987



Deer
Enclosure

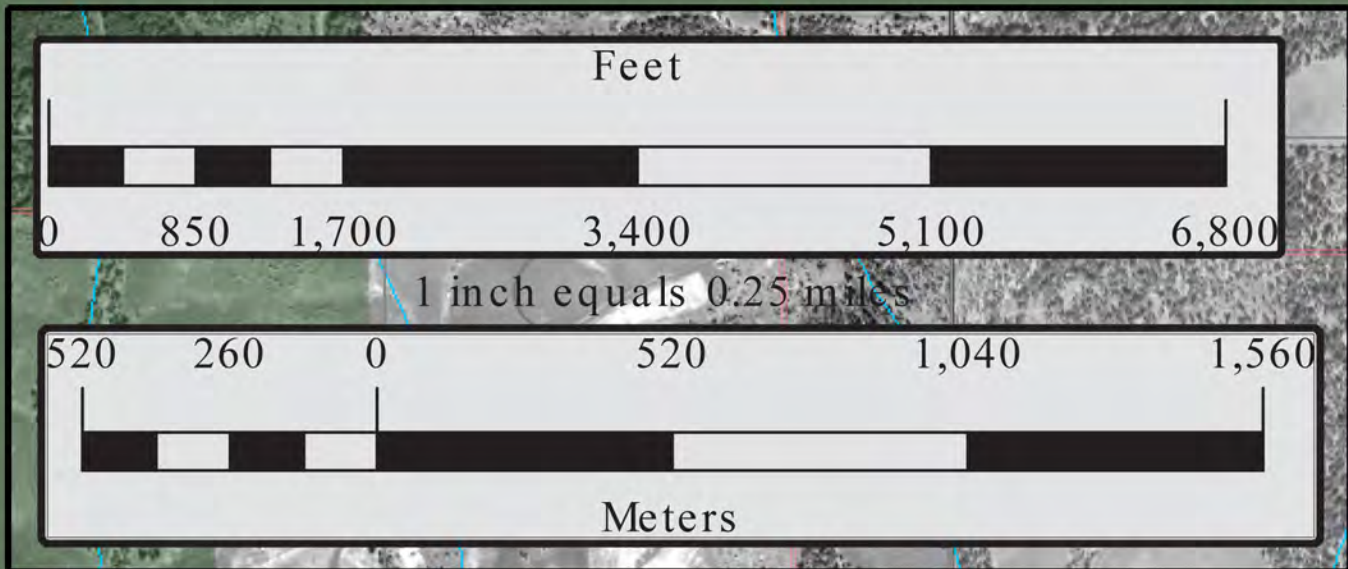
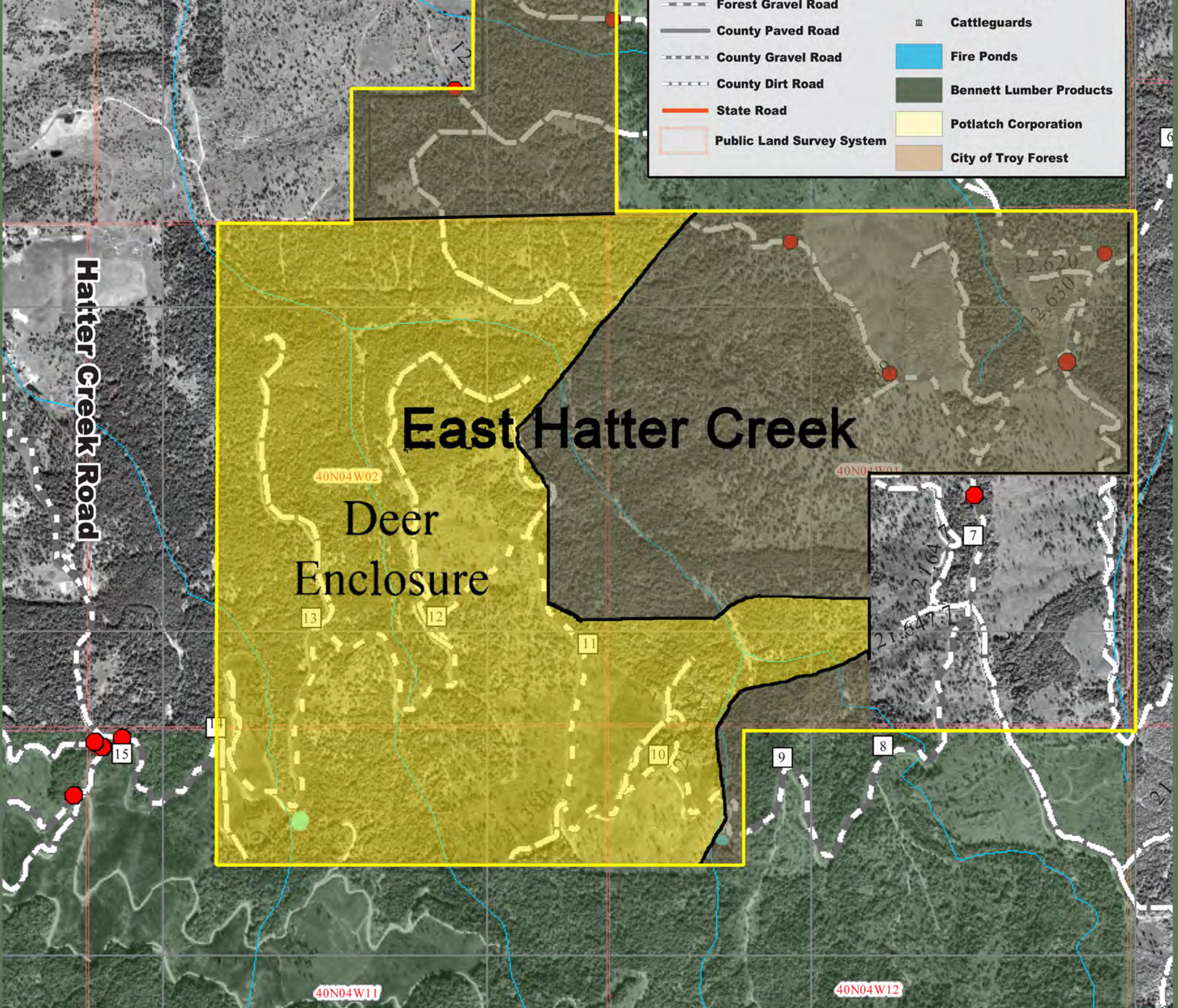
University of Idaho Experimental Forest

Scale: 1:24,000



UI Experimental Forest Administrative Map 2004

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|---------------------------|-------------------------|
| Running Surface Water | Forest Gates |
| Railroad Grade | CB Mile Markers |
| Forest Gravel Road | Cattleguards |
| County Paved Road | Fire Ponds |
| County Gravel Road | Bennett Lumber Products |
| County Dirt Road | Pottlatch Corporation |
| State Road | City of Troy Forest |
| Public Land Survey System | |



East Hatter Creek



Location of Complete Research:

Author & Title: Basile, Joseph V.
Availability of White-Tailed Deer Browse Within the Hatter Creek
Enclosure

University of Idaho Library:

Call Number- SD427.G8B3

College of Natural Resources:

Department- Wildlife

Other Sources: