
USDA-FOREST SERVICE
STARKEY EXPERIMENTAL FOREST AND RANGE
THIS FENCE ENCLOSING 40 SQ. MILES, FACILITATES RESEARCH CRITICAL TO MULTIPLE USE MANAGEMENT.
COOPERATORS INCLUDE: OREGON DEPARTMENT OF FISH & WILDLIFE (ODF&W), FOREST SERVICE – PNW RESEARCH STATION & PNW REGION, & OREGON STATE UNIVERSITY.
INTENSIVE TIMBER AREA
MEADOW CREEK
BEAR CREEK
2110
2105
TO ARRANGE GROUP TOURS OR OBTAIN INFORMATION CALL... INFORMATION OFFICER AT (503) 963-7122
LEGEND
MAIN TRAVEL ROUTES
8 FT. GAME FENCE
OBJECTIVES INCLUDE DETERMINING:
1. INTERRELATIONSHIPS OF ELK, DEER & CATTLE 2. EFFECTS OF FOREST MANAGEMENT ON ELK, DEER & CATTLE. 3. RELATIONSHIPS BETWEEN TRAFFIC ON FOREST ROADS ON ELK & DEER BEHAVIOR.
4. EFFECTS OF BREEDING BY AGE CLASSES OF MALES ON DEER & ELK REPRODUCTION.
THE AREA IS OPEN TO PUBLIC USE EXCEPT: 1. HUNTING IS BY PERMIT OR AS DESCRIBED BY ODF&W REGULATIONS. 2. NO ENTRY TO THE FEEDING OR INTENSIVE TIMBER MANAGEMENT AREAS. 3. MEADOW CREEK IS CLOSED TO ANGLING & TAKING OF SHELLFISH.
THE ONLY ENTRY OR EXIT IS WHERE FOREST ROAD 2120 DEPARTS HIGHWAY 244. IT IS MARKED BY THE HEADQUARTERS ENTRANCE SIGN. PLEASE DRIVE ONLY ON ROADS MARKED BY GREEN DOTS. CLOSE THE GATE & DO NOT DISTURB RESEARCH EQUIPMENT.


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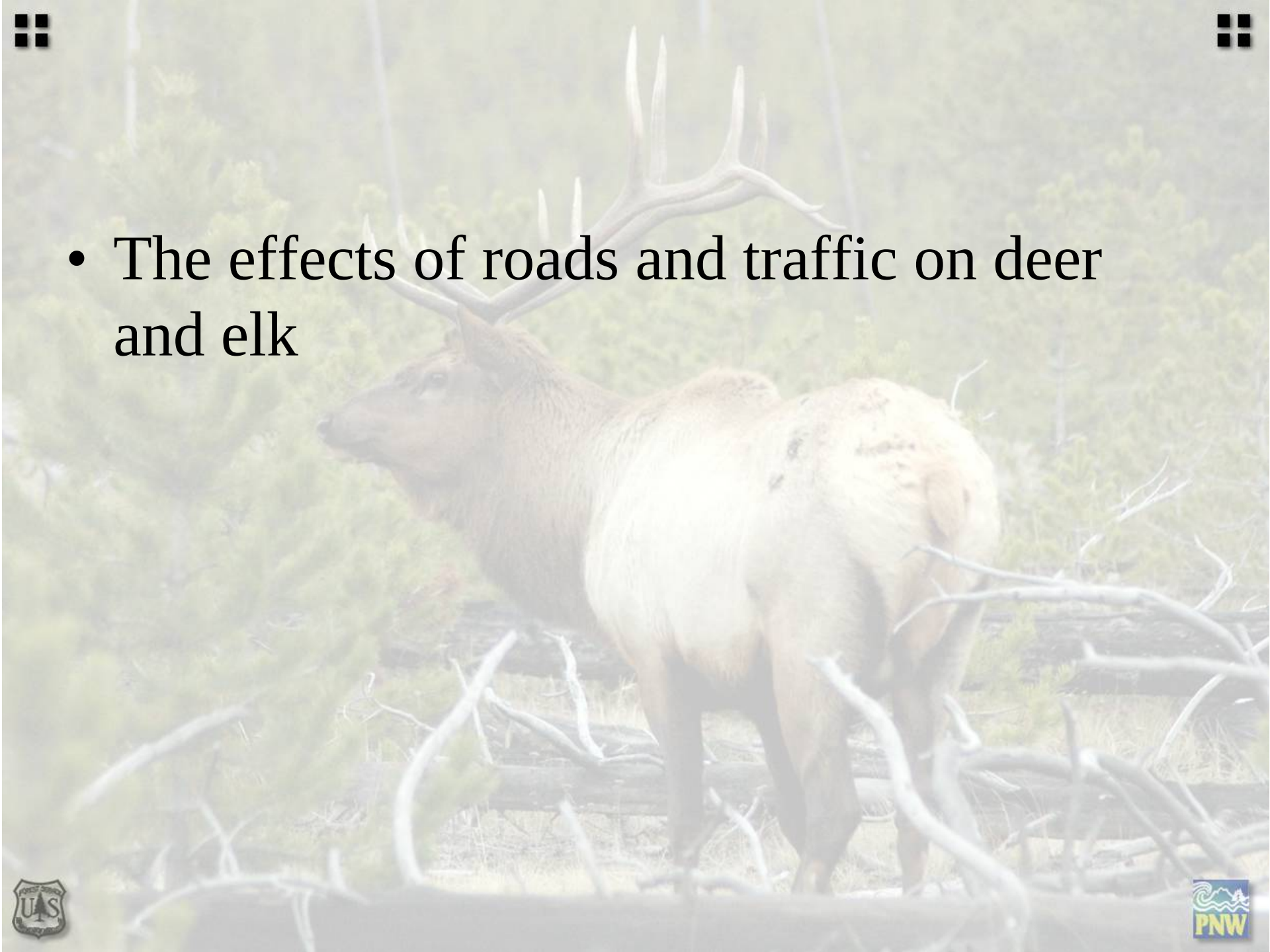
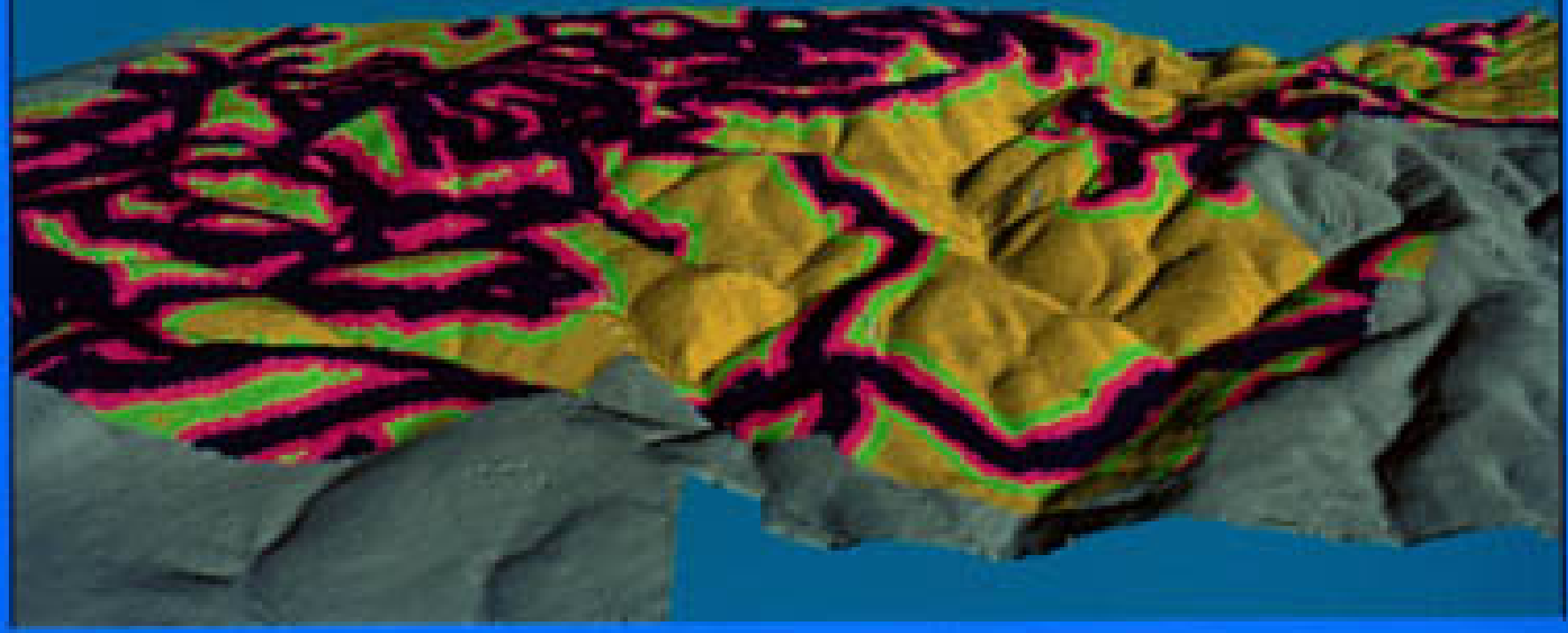
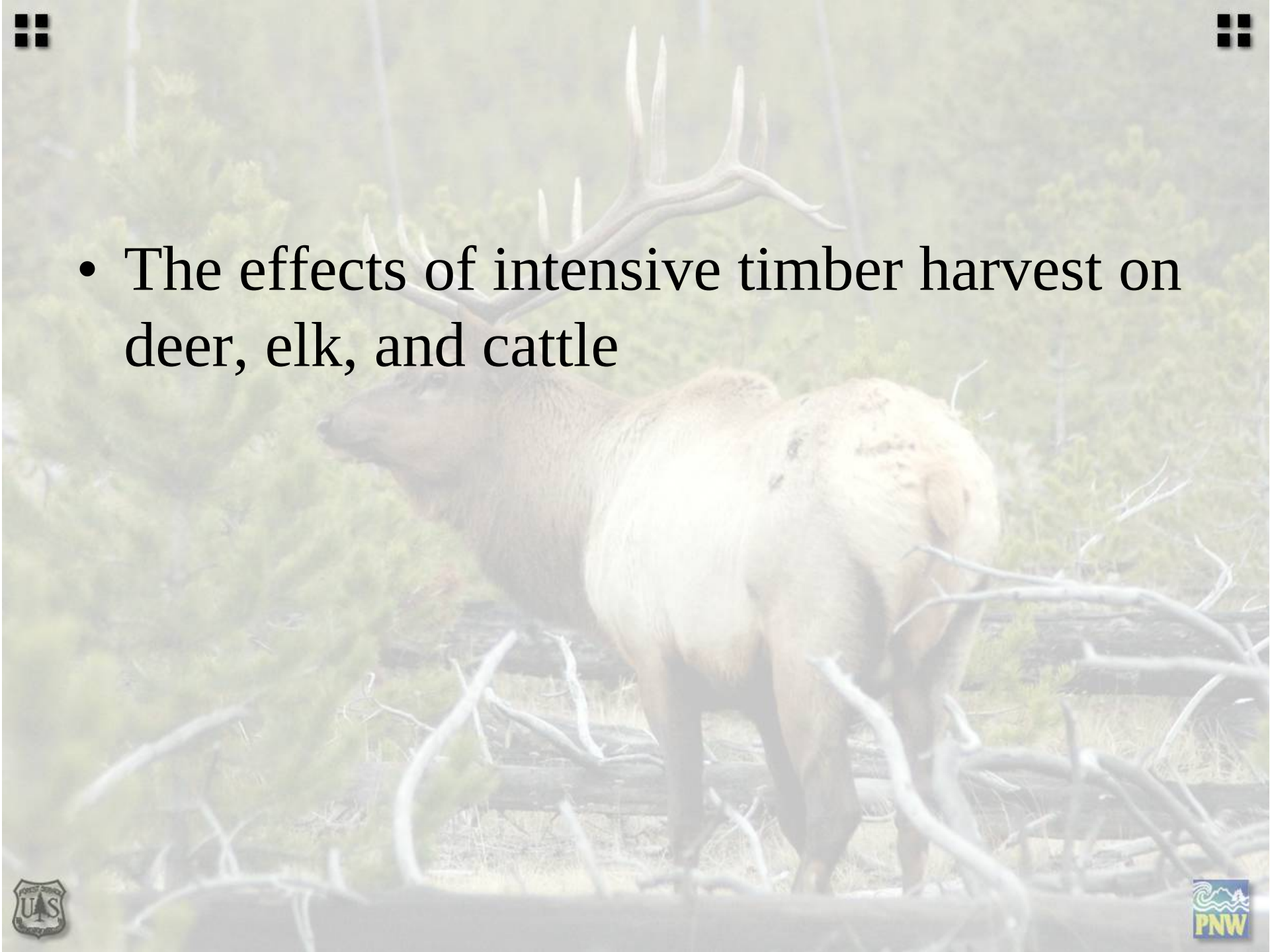


- The effects of roads and traffic on deer and elk

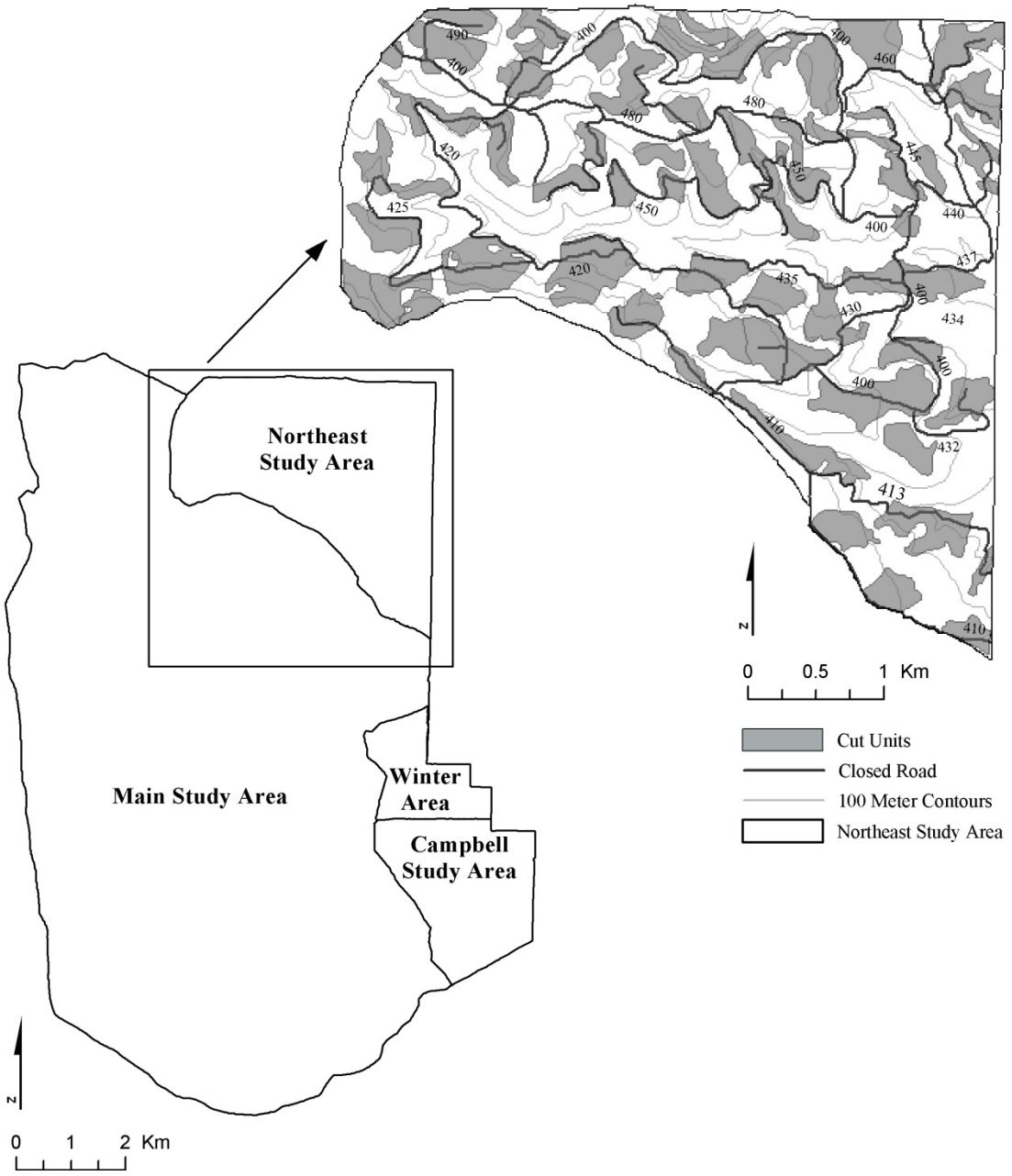
Starkey Experimental Forest & Range

Distance bands from road or traffic frequency categories.

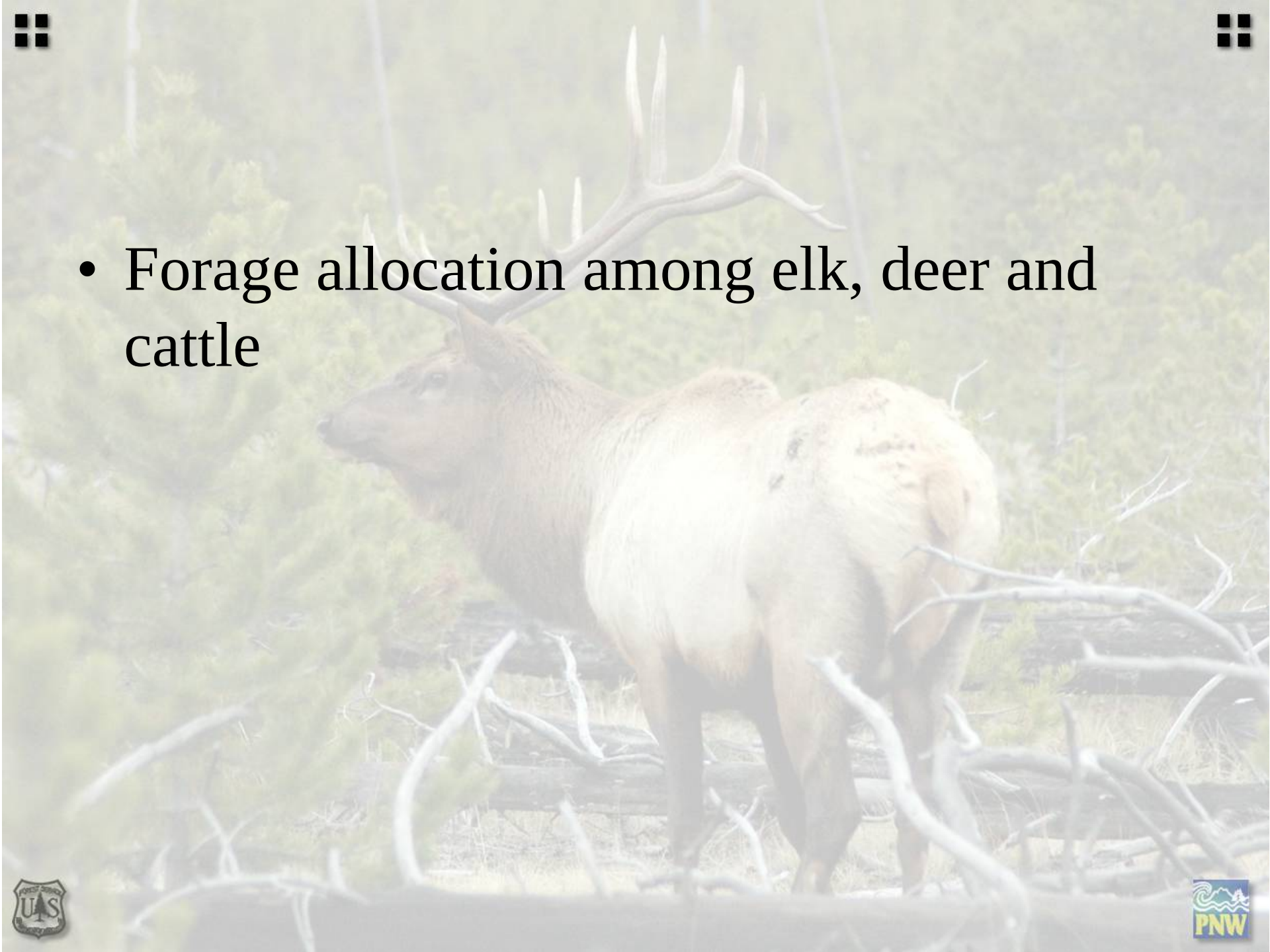




- The effects of intensive timber harvest on deer, elk, and cattle

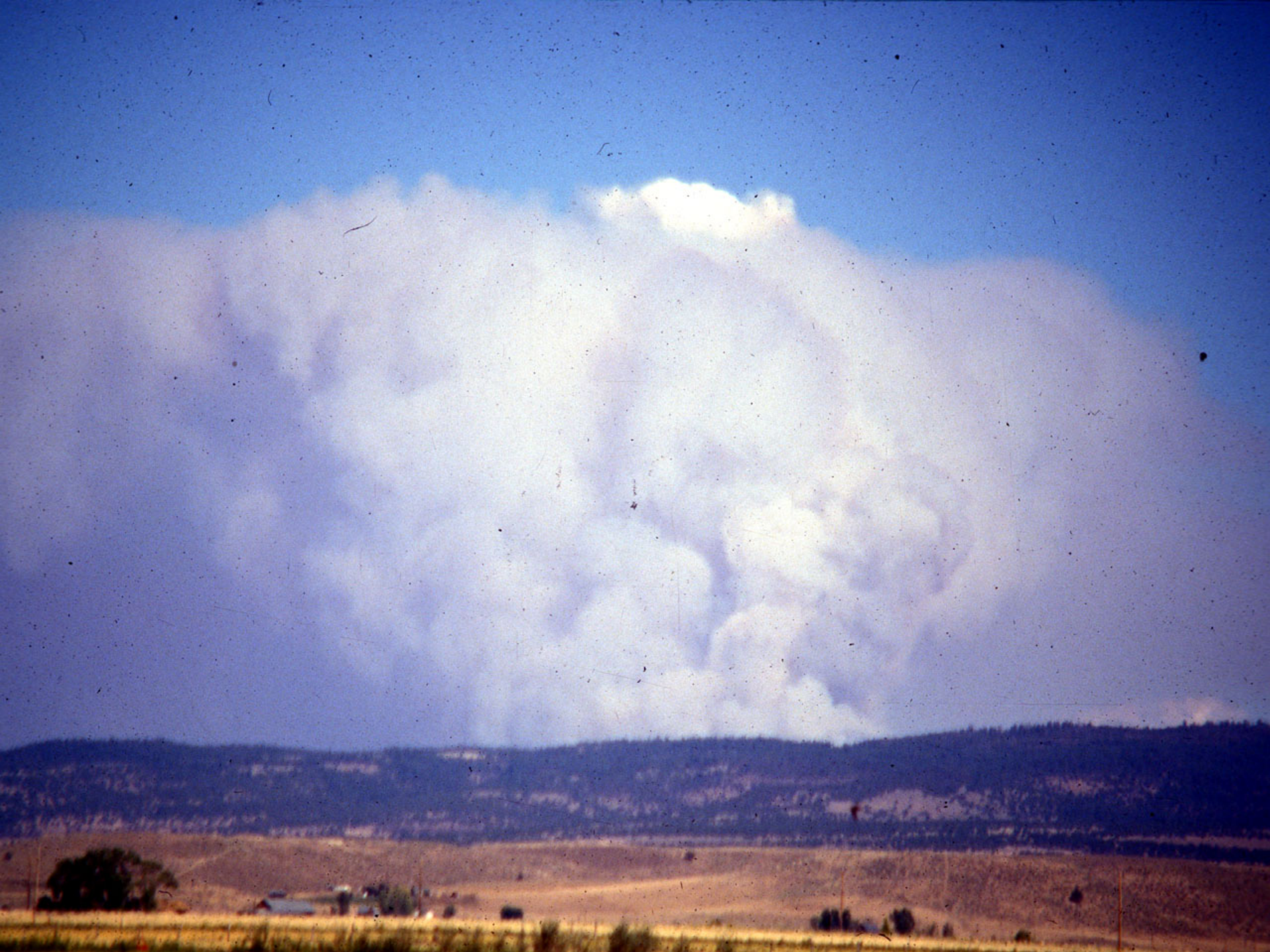

Northeast
Study Area
Main Study Area
Winter
Area
Campbell
Study Area
N
0 1 2 Km
N
0 0.5 1 Km
Cut Units
Closed Road
100 Meter Contours
Northeast Study Area

- The effects of breeding bull age on elk herd productivity



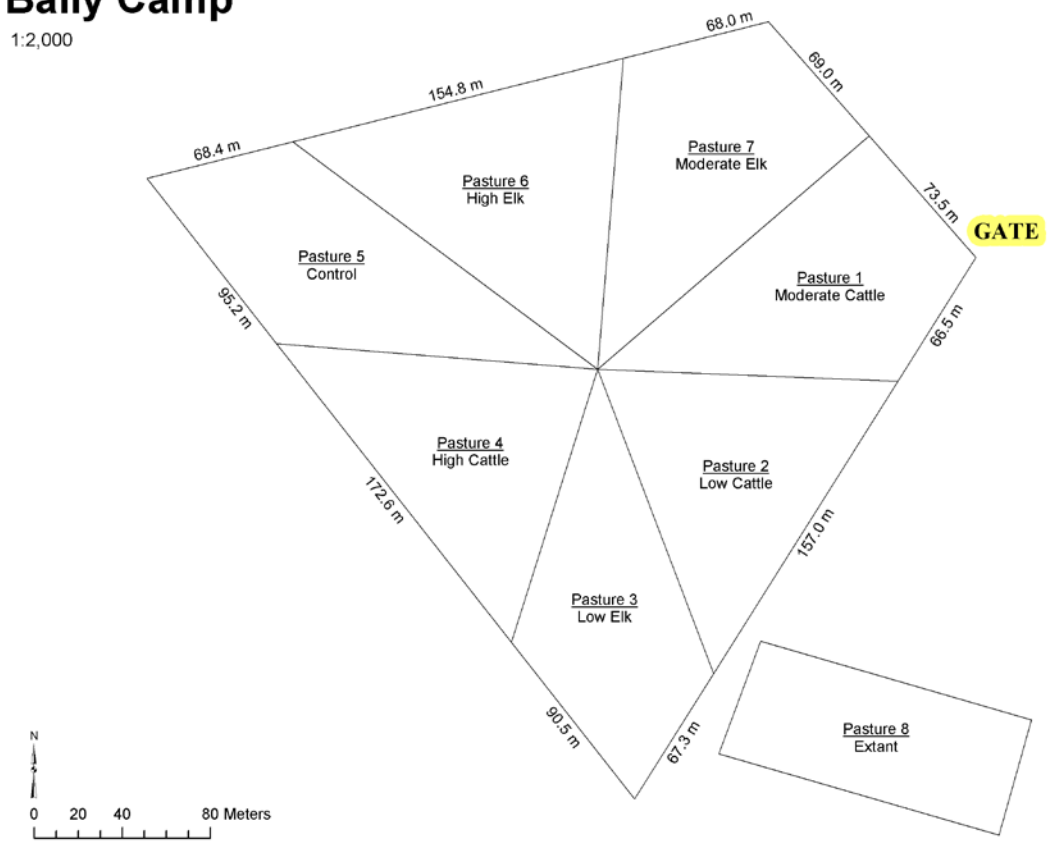
- Forage allocation among elk, deer and cattle

- Ungulate herbivory effects on secondary succession following fuels reduction



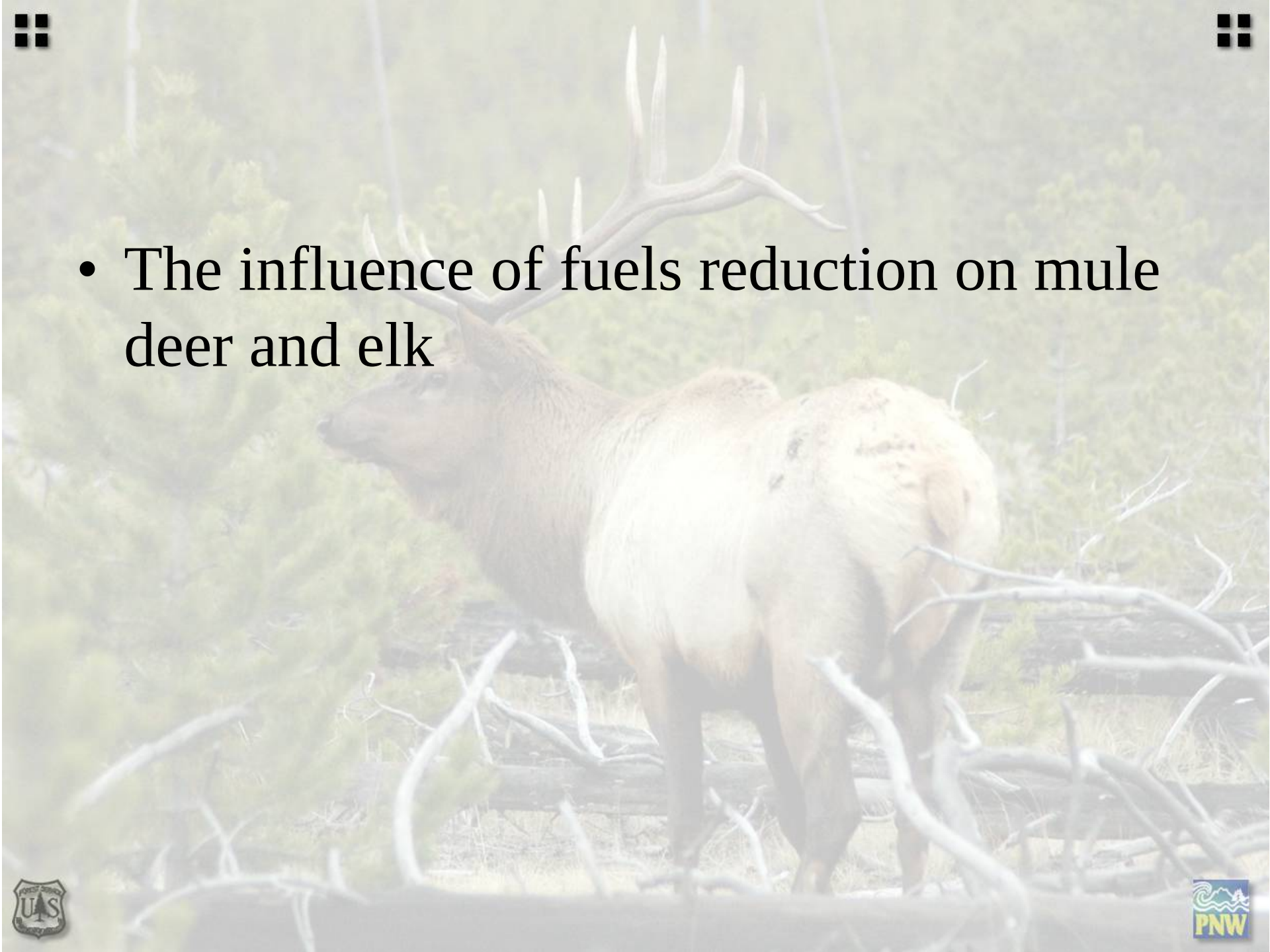
Bally Camp

1:2,000



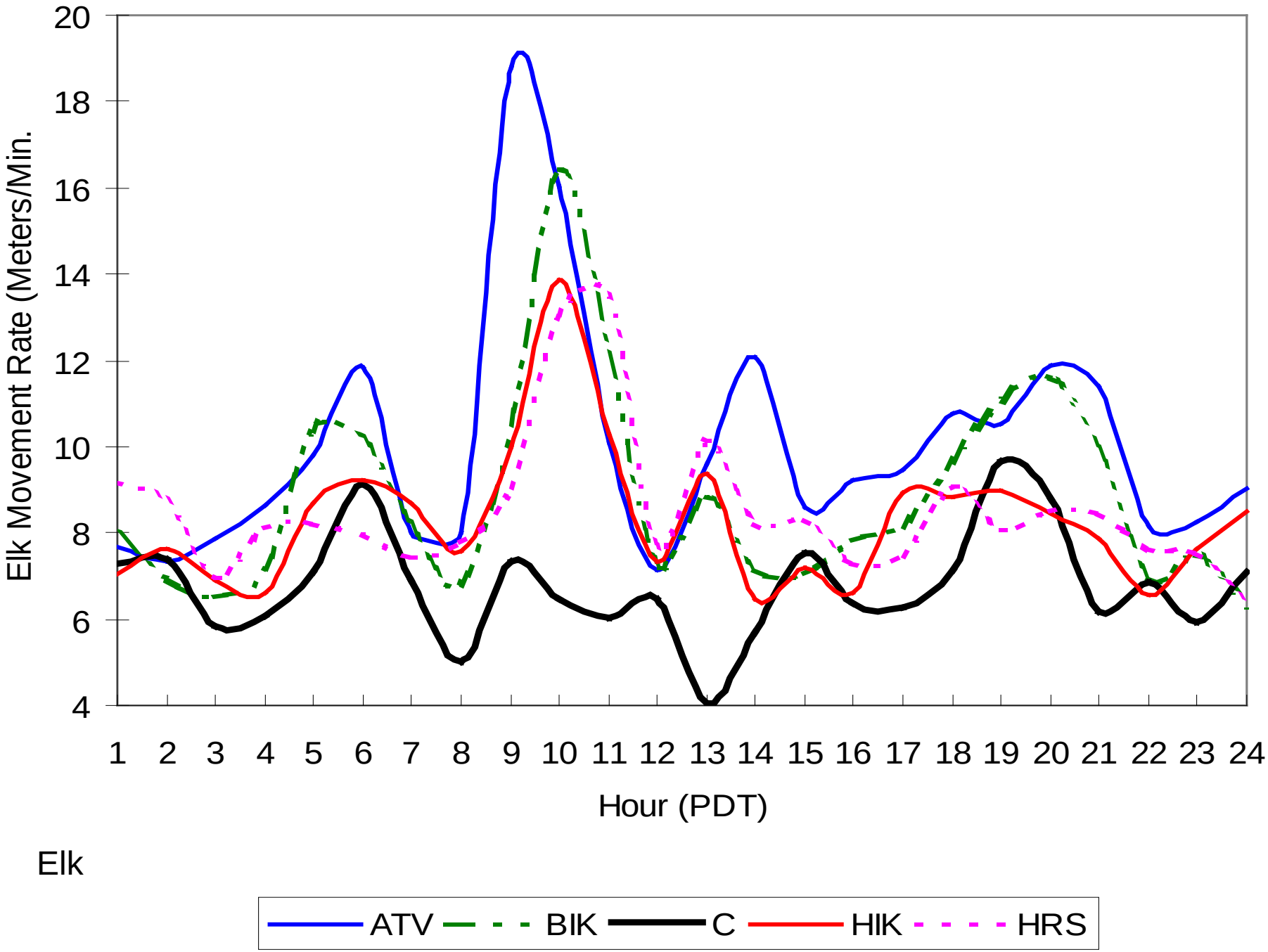
Elk Herbivory –
low population density

Cattle Herbivory –
high population density



- The influence of fuels reduction on mule deer and elk

The influence of human disturbance on elk


20
18
16
14
12
10
8
6
4
Elk Movement Rate (Meters/Min.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour (PDT)
Elk
ATV
BIK
C
HIK
HRS

Conclusions

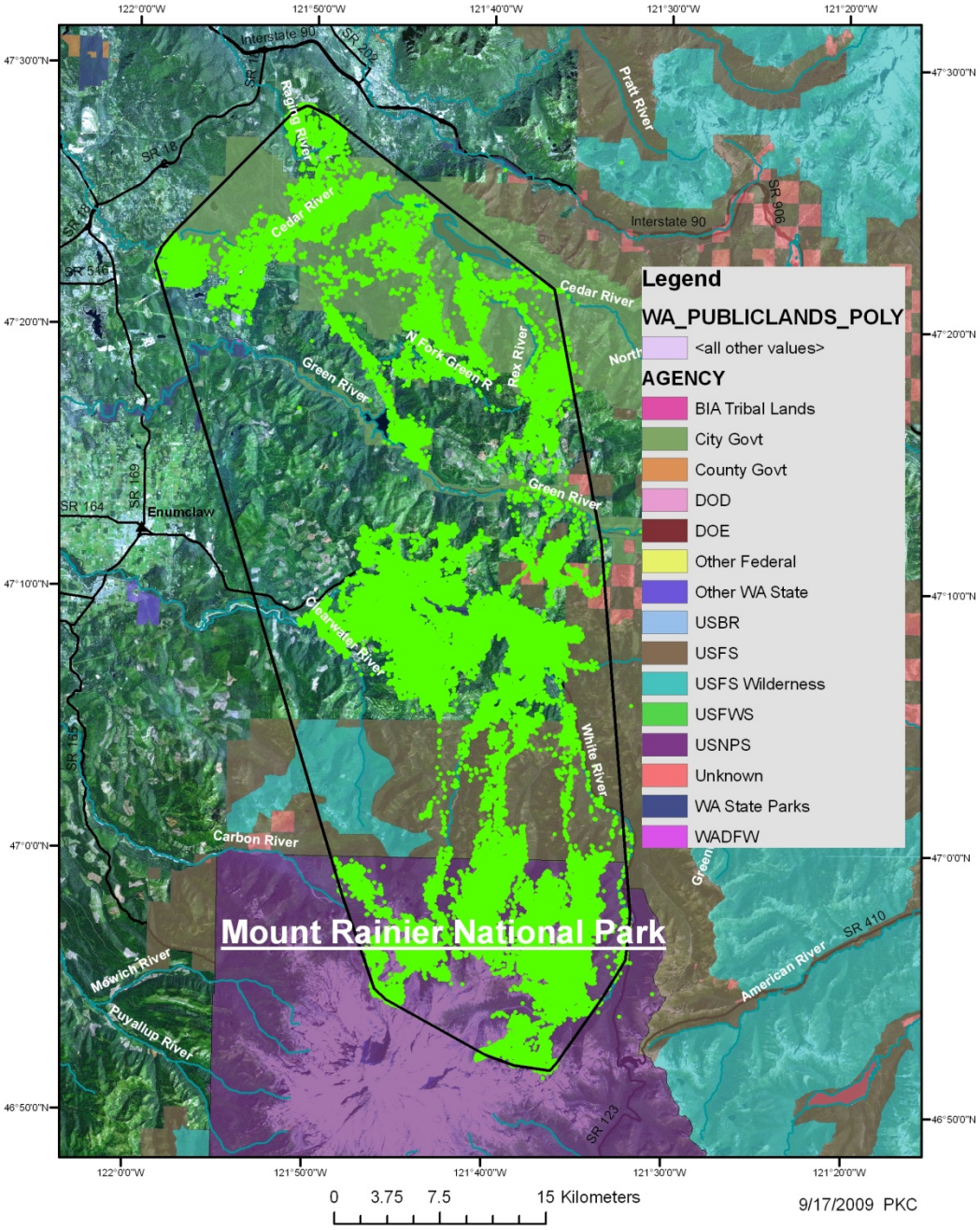
Elk responses to ATV and mountain bike riding were stronger than to horseback riding and hiking.

Foraging time was lower, and movement rates and flight responses were higher, during ATV and mountain bike riding than during horseback riding and hiking.

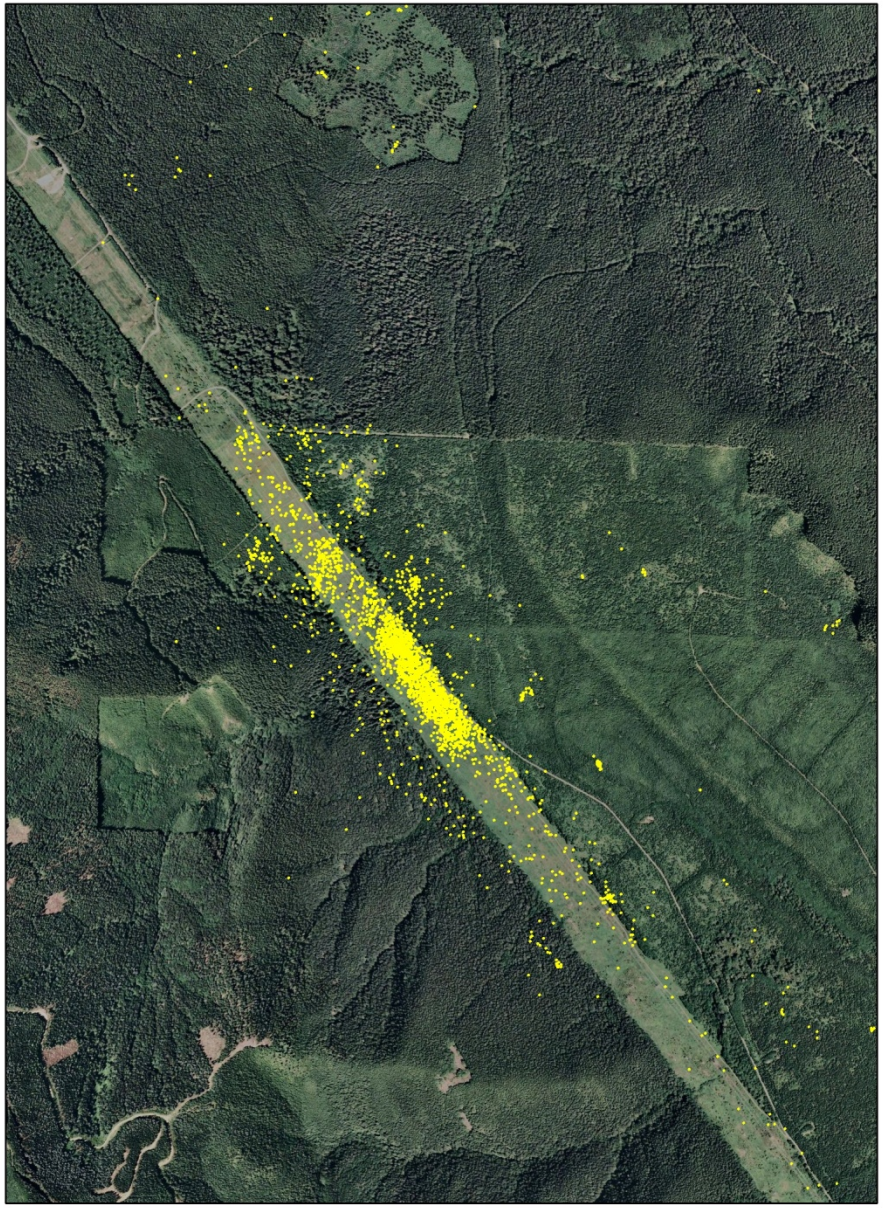
Developing habitat effectiveness models for elk

Models developed for use by managers
Focus on summer range
Based on multiple study area telemetry data

North Rainier Analysis Area



Elk Locations in Green River of North Rainier Study Area



West Side elk model covariates

Elk dietary digestible energy

Distance to roads open to public

Percent slope

Distance to cover-forage edge

Blue Mtns elk model covariates

- Elk dietary digestible energy
- Distance to open roads
- Percent slope
- Percentage of forest

The Influence of Elk, Deer, and Cattle Herbivory on Riparian Vegetation