Oregon Mule Deer Research

Oregon Department of Fish and Wildlife

Declining Mule Deer Populations

Many hypotheses for declines

- Habitat loss
- Land management changes
- Climate change
- Declining habitat quality
- Predation
- Vehicle collisions

OREGON Fish & Wildlife

Research Focus

Habitat and nutrition

- Habitat effects on forage
- Body condition of does
- Demographic effects

Predation

- Cause-specific mortality
- Carnivore abundance
- Compensatory mortality

OREGON Fish & Wildlife

Study Areas

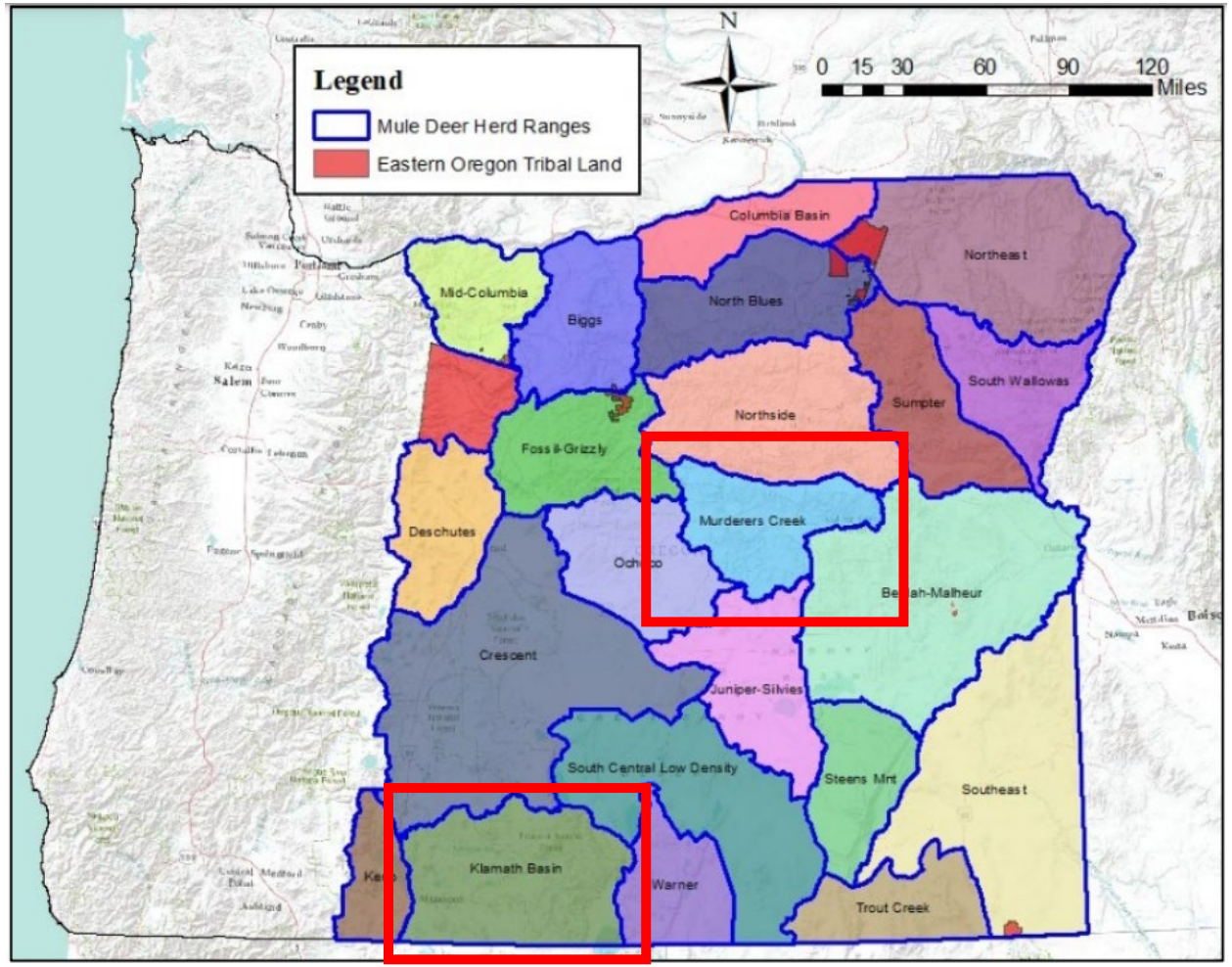
Murderer's Creek Herd Range

- Started winter of 2022/23
- Conclude summer 2028

Klamath Basin Herd Range

- Started winter of 2023/24
- Conclude summer 2029

Study Areas


Legend
Mule Deer Herd Ranges
Eastern Oregon Tribal Land
N
0 15 30 60 90 120
Miles
Columbia Basin
Northeast
Mid-Columbia
Biggs
North Blues
South Wallowas
Sumpter
Northside
Fossil-Grizzly
Deschutes
Murderers Creek
Crescent
Juniper-Silvies
South Central Low Density
Steens Mnt
Southeast
Klamath Basin
Warner
Trout Creek

Research

OREGON
Fish & Wildlife

Mule Deer Monitoring

Mule deer does

- Capture during winter months
- Equip deer with GPS collar
- Measure body fat levels
- Assess pregnancy and fetal rate
- Equip with VIT to determine birth events the following spring

Mule Deer Monitoring

Mule deer fawns

- Capture during late spring
- Equip deer with GPS collar
- Weigh and determine sex
- Document any siblings

OREGON Fish & Wildlife

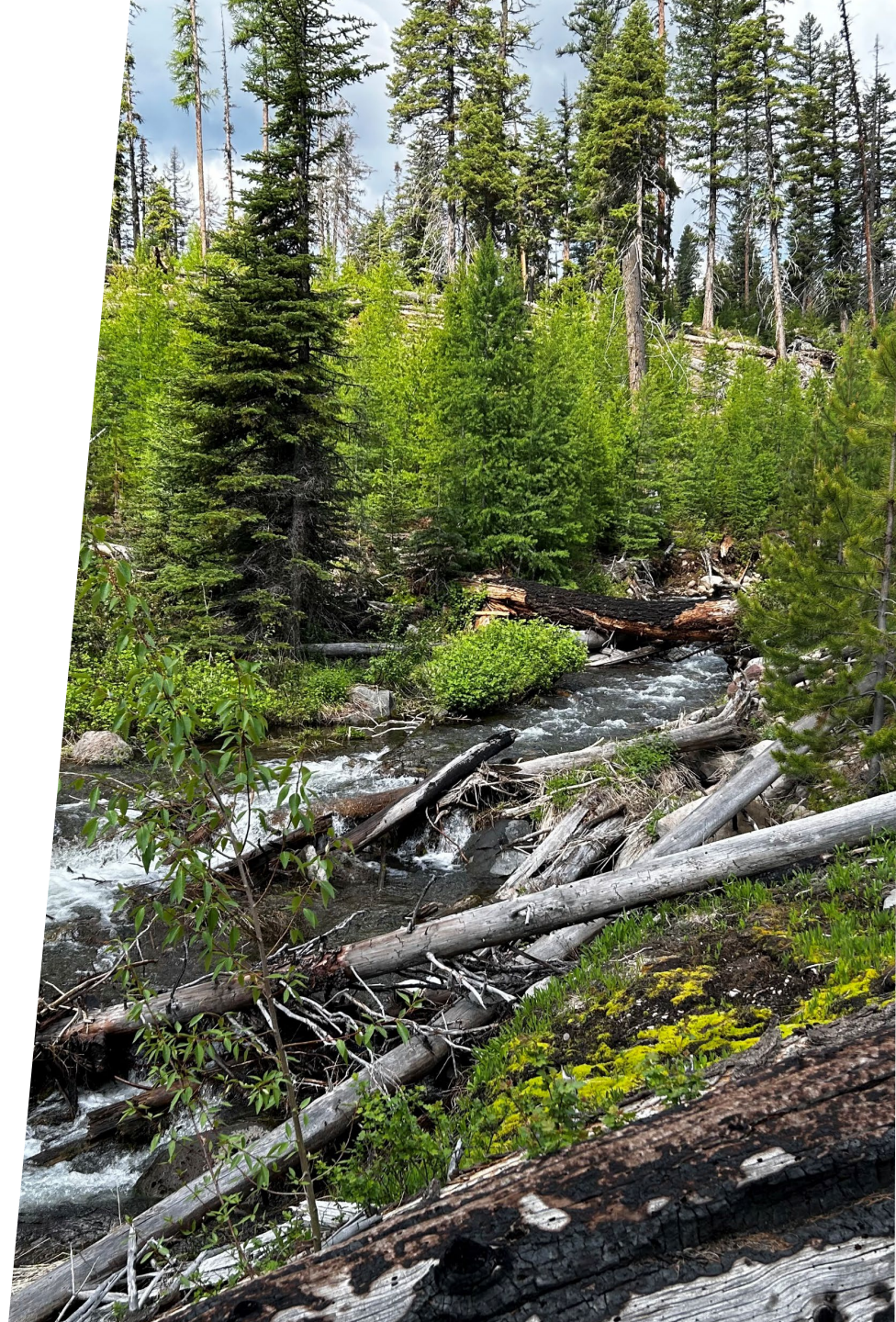
Habitat

Habitat use

- GPS locations
- Use of vegetation types and environmental features

Vegetation sampling

- Forage availability
- Forage quality
- Link back to habitat features



OREGON Fish & Wildlife

Predation

Document cause-specific mortality

- Accurately assign cause of death
- Accurately assign predator species
- Calculate the percent of mortality caused by each predator
- Assess for fawns and does

Predation

Estimate carnivore populations

- Collar carnivores with GPS collars
- Collect carnivore scat
- Genetic analysis
- Statistical models
- Study area estimate
- Spatial surface of density

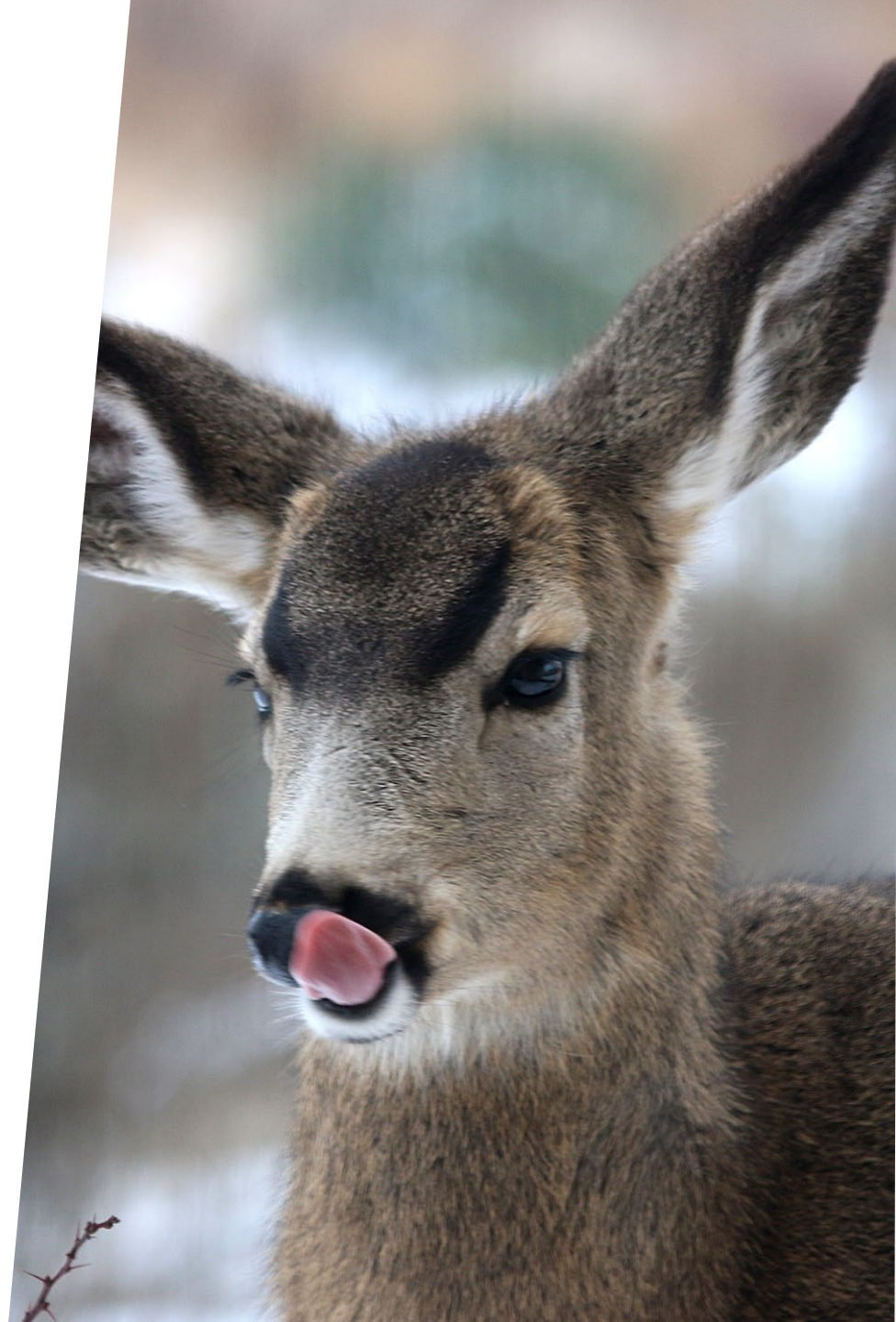
Expected Outcomes

Identify factors affecting mule deer

- Habitat
- Nutrition
- Predation

Quantify effects of each factor

- Population models
- Relative effect on population growth rates



Thank you!

Oregon Department
of Fish and Wildlife