

Climate Change and Invasive Grass: Impacts and Treatments

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Sagebrush and Bunchgrass Communities

A landscape photograph showing rolling hills covered in dense sagebrush and bunchgrass. The sky is a mix of orange, pink, and blue, suggesting a sunset or sunrise. The foreground is filled with tall, dry grasses and green shrubs.

18

Million Acres Covered
(~1/3 of Oregon Landmass)

100's

Of Species Depend on
Sagebrush Rangeland for
Their Habitat Needs

Invasive Annual Grasses are a Long-term Threat

3.4 Million Acres
Impacted

Without Intervention,
IAG Establish Quickly
After a Fire and Prevent
Native Species from
Recolonizing

**Unburned,
Uninvaded**



Burned, Uninvaded



Unburned, invaded



Burned, invaded



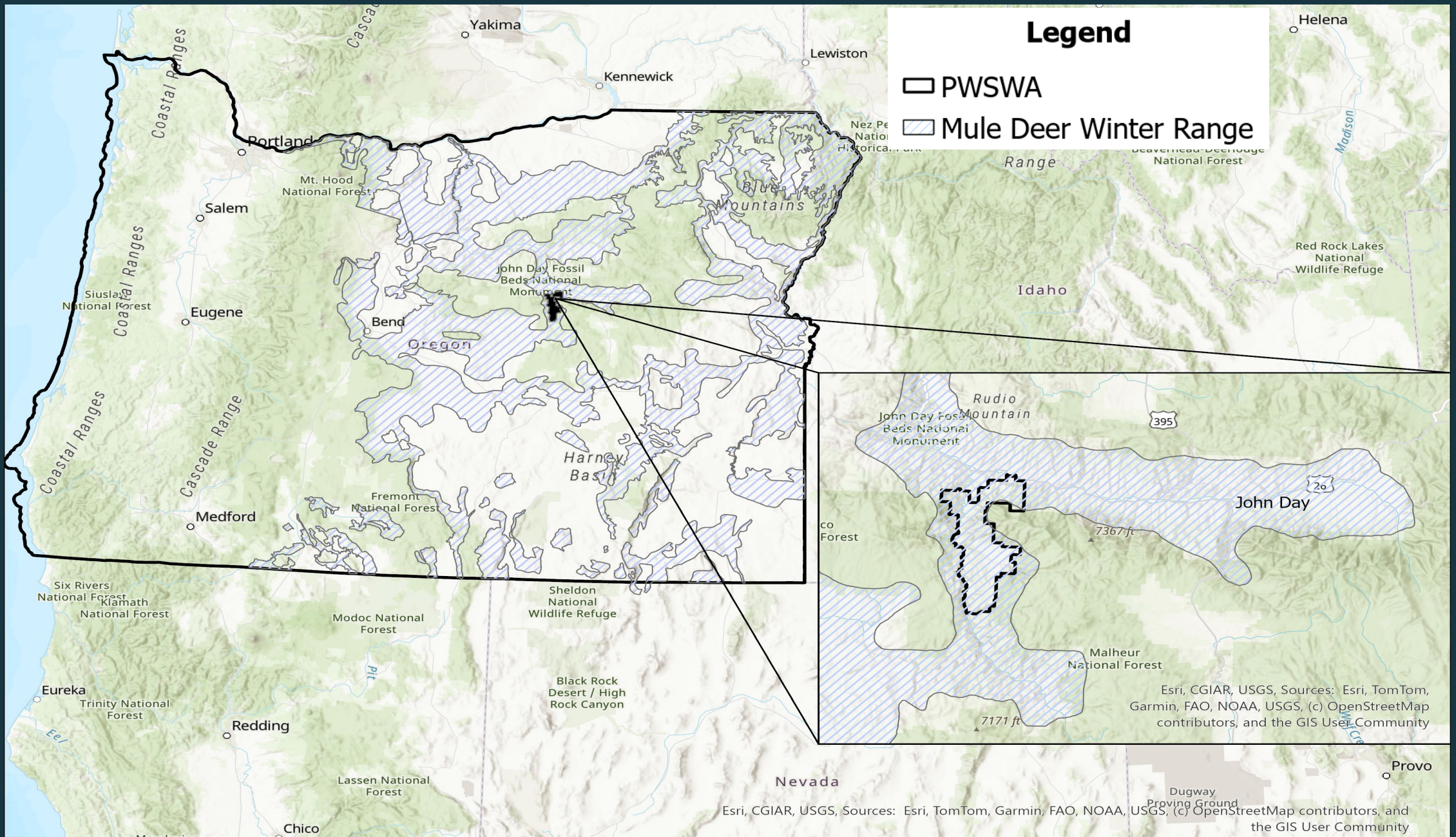
A photograph of a group of mule deer in a field of tall, dry grass. In the foreground, a male deer with large antlers looks towards the camera. Behind it, several other deer are visible, some facing away and others in profile. The scene is lit with warm, golden light, suggesting late afternoon or early morning.

Species Spotlight: Mule Deer

*Mule Deer Plan
Identifies Annual
Grass as a Major
Limiting Factor*

Strategy:

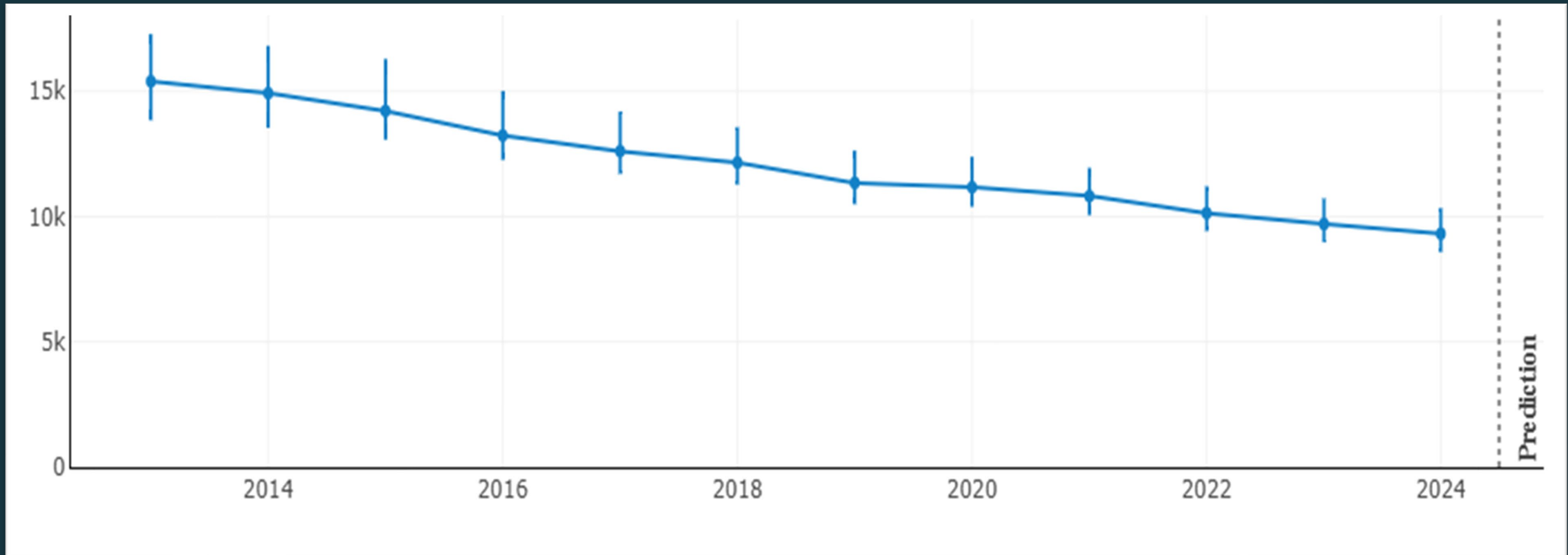
Chemical
Treatment to
Reduce Annual
Grass Cover





Mule Deer Population Decline

Aldrich Herd Range 2015-2024



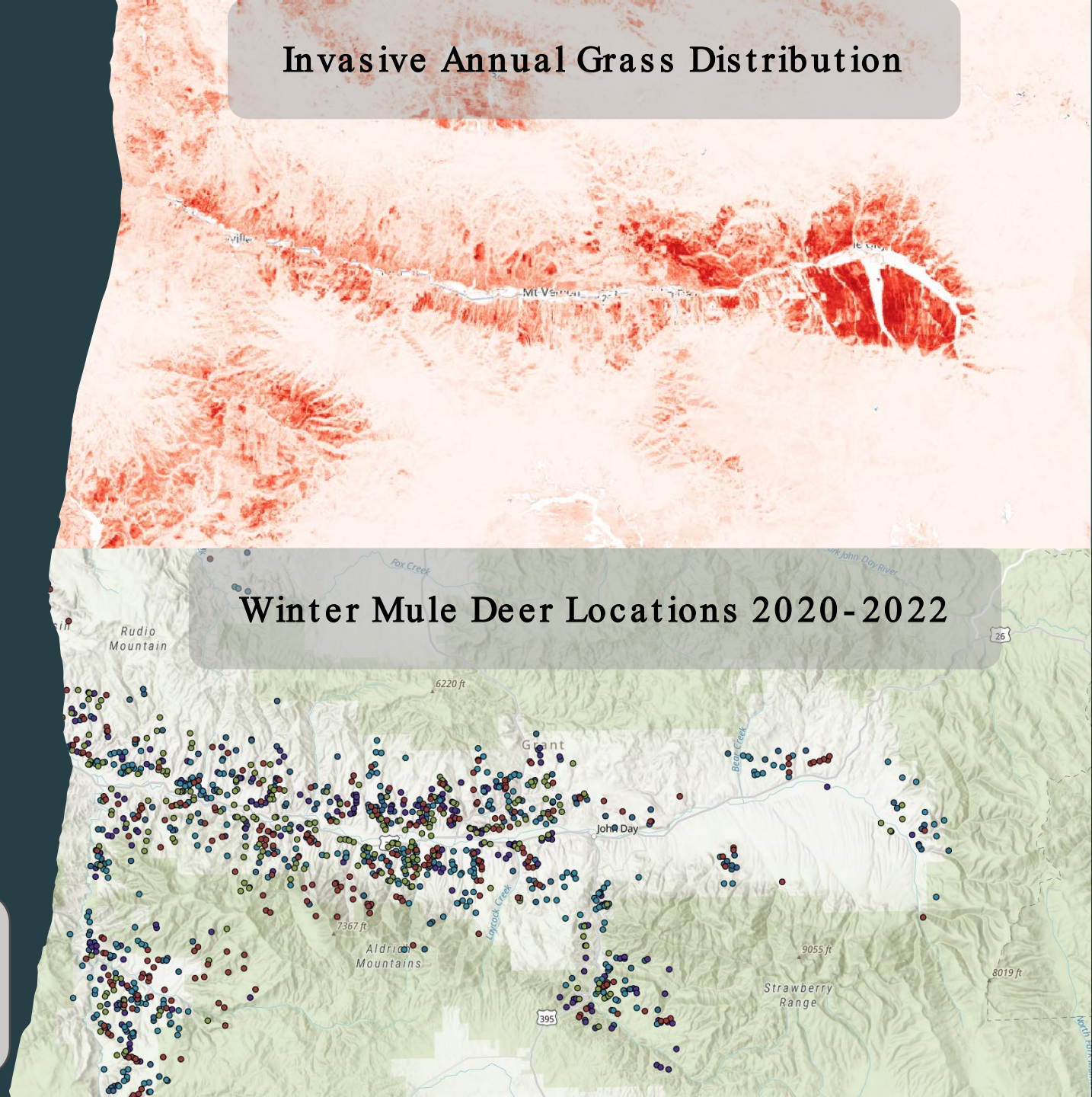
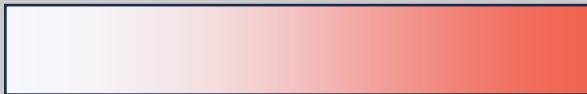
Significant Overlap Winter Range and Annual Grasses

Invasive Annual Grass Distribution

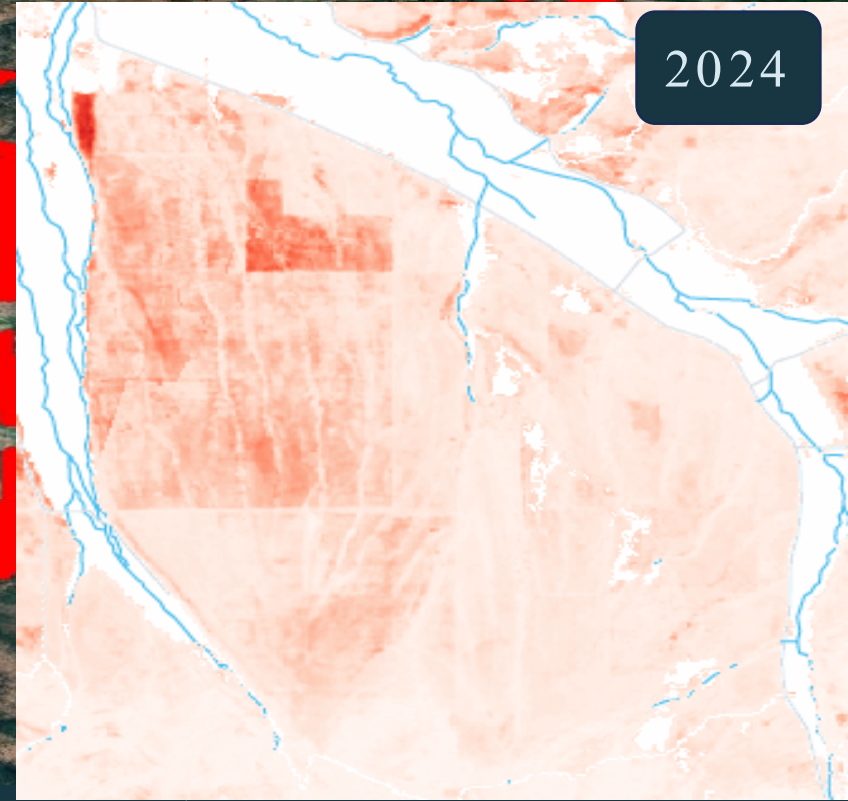
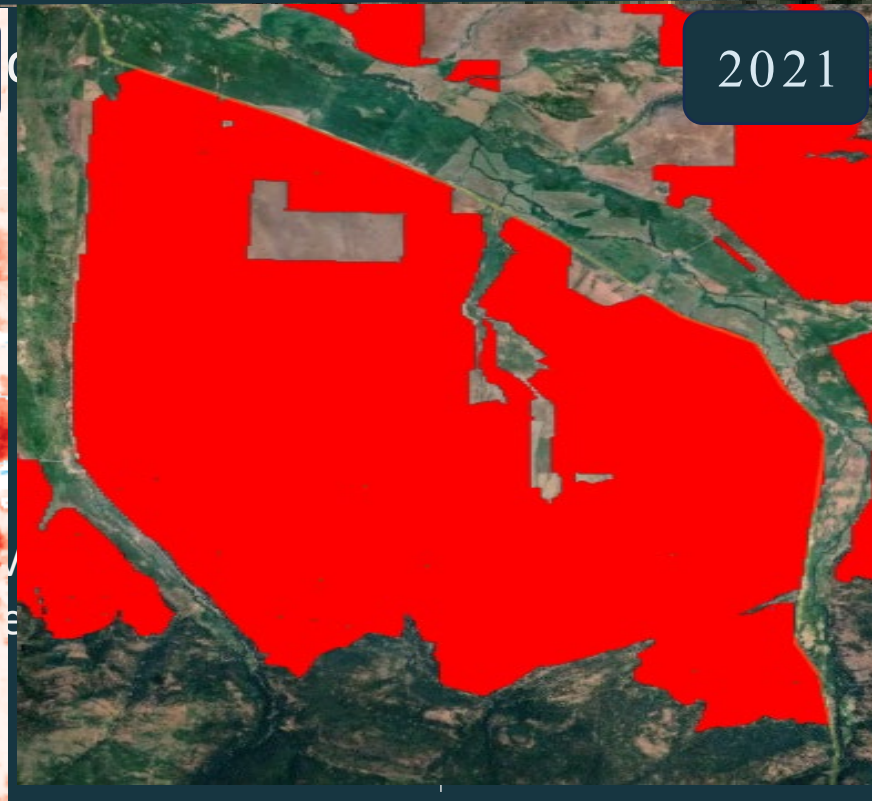
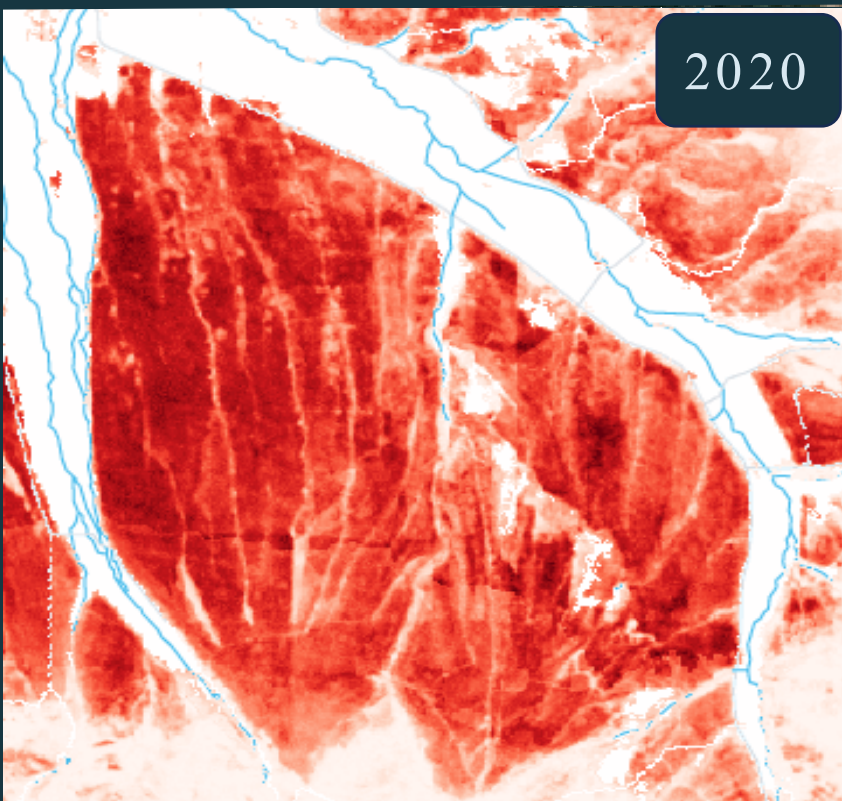
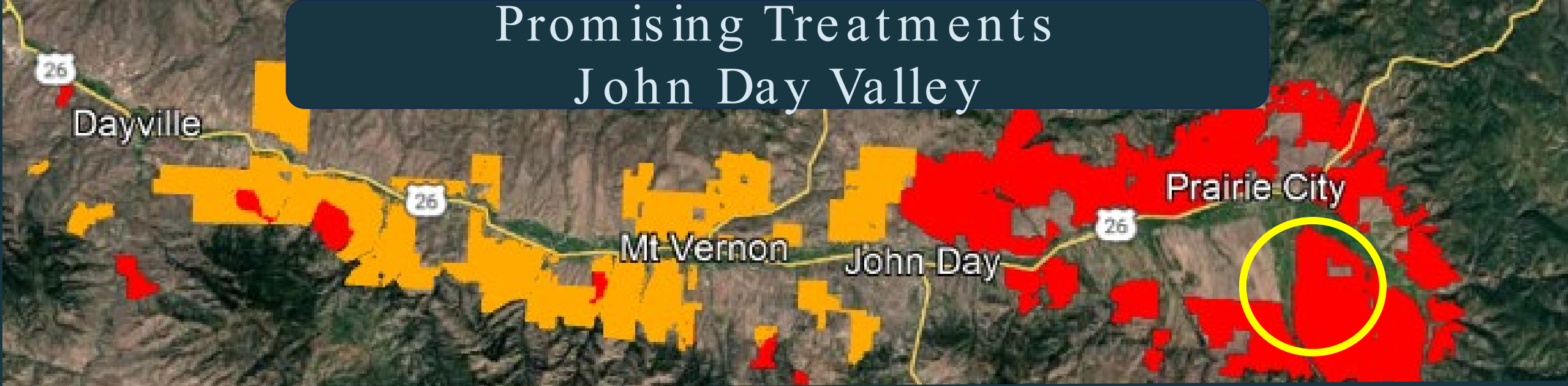
Winter Mule Deer Locations 2020-2022

Low IAG cover

High IAG cover



Promising Treatments John Day Valley



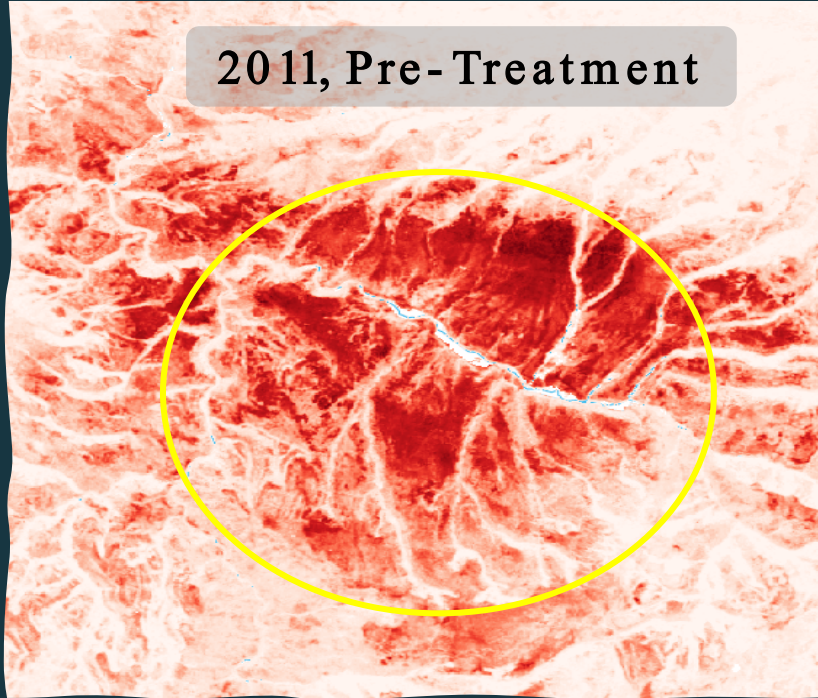
Retreatment of Annual Grass

Murderers Creek Basin

- Area Burned 2014
- Treated 2015 with Plateau Herbicide

9 Years Post-Treatment Area Re-invaded by Annual Grass

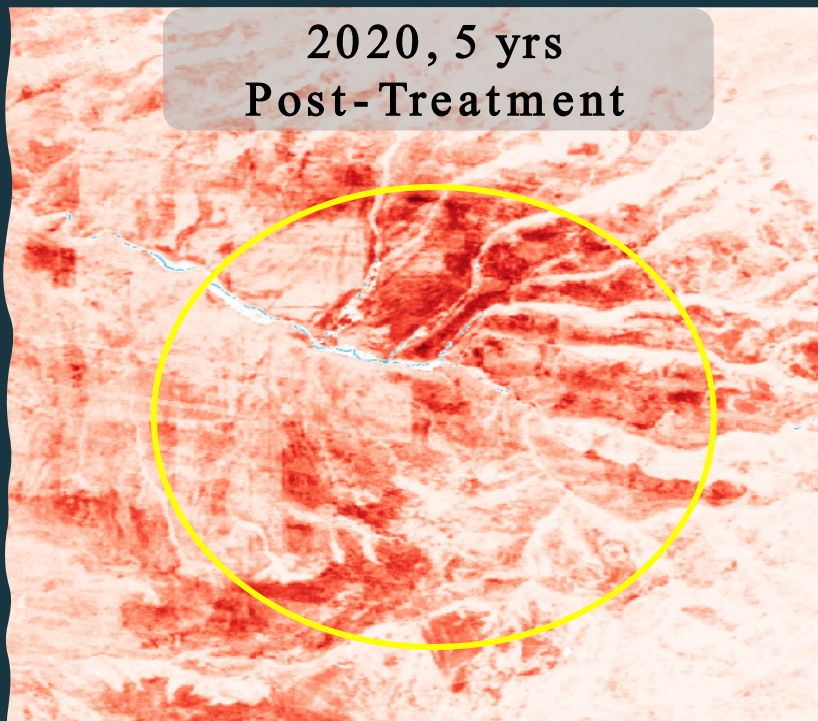
2011, Pre-Treatment



2015, Post-Fire, Treated Plateau



2020, 5 yrs Post-Treatment



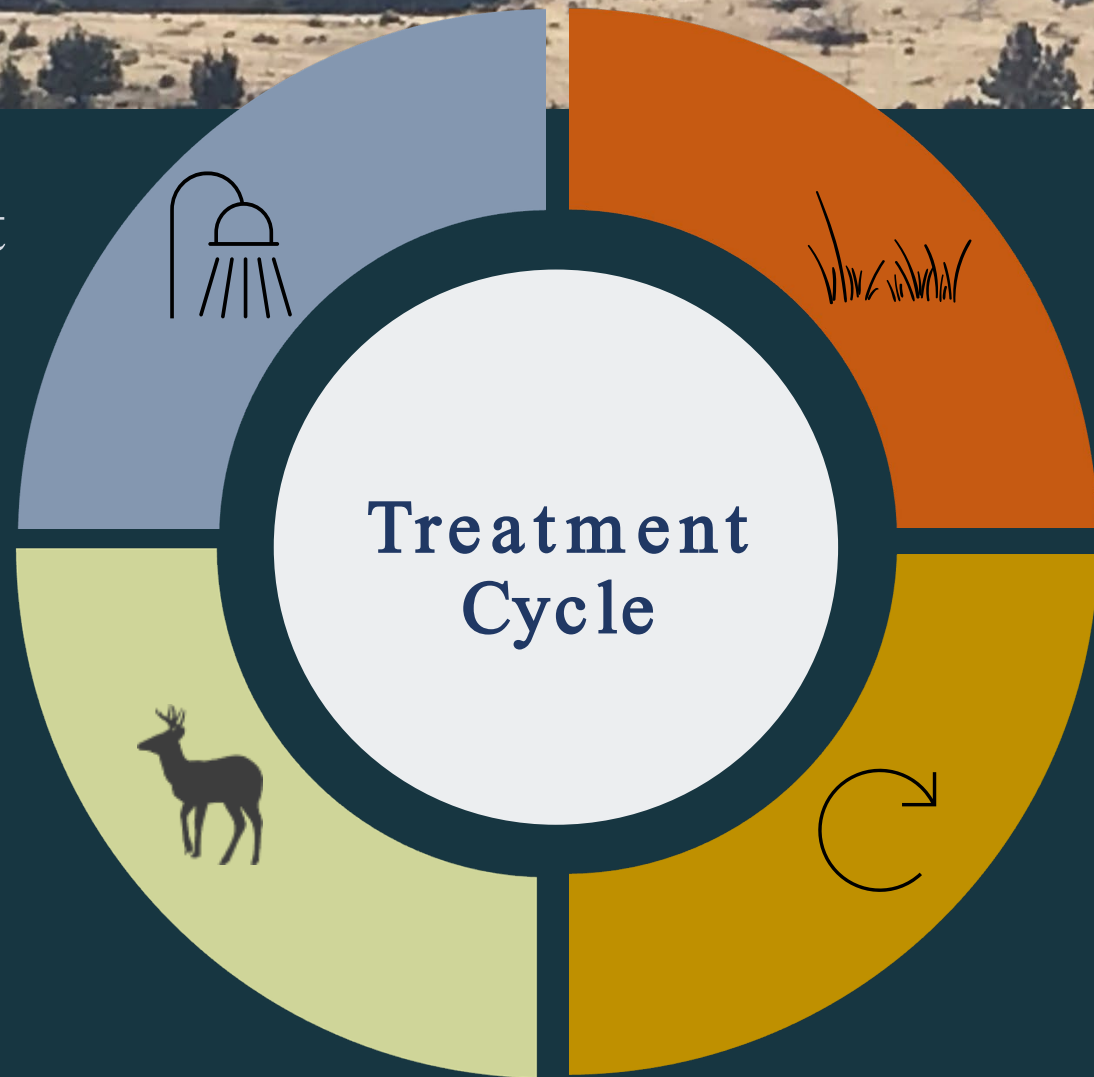
2024, 9 Yrs Post-Treatment





Chemically Treat
Invasive Annual
Grass

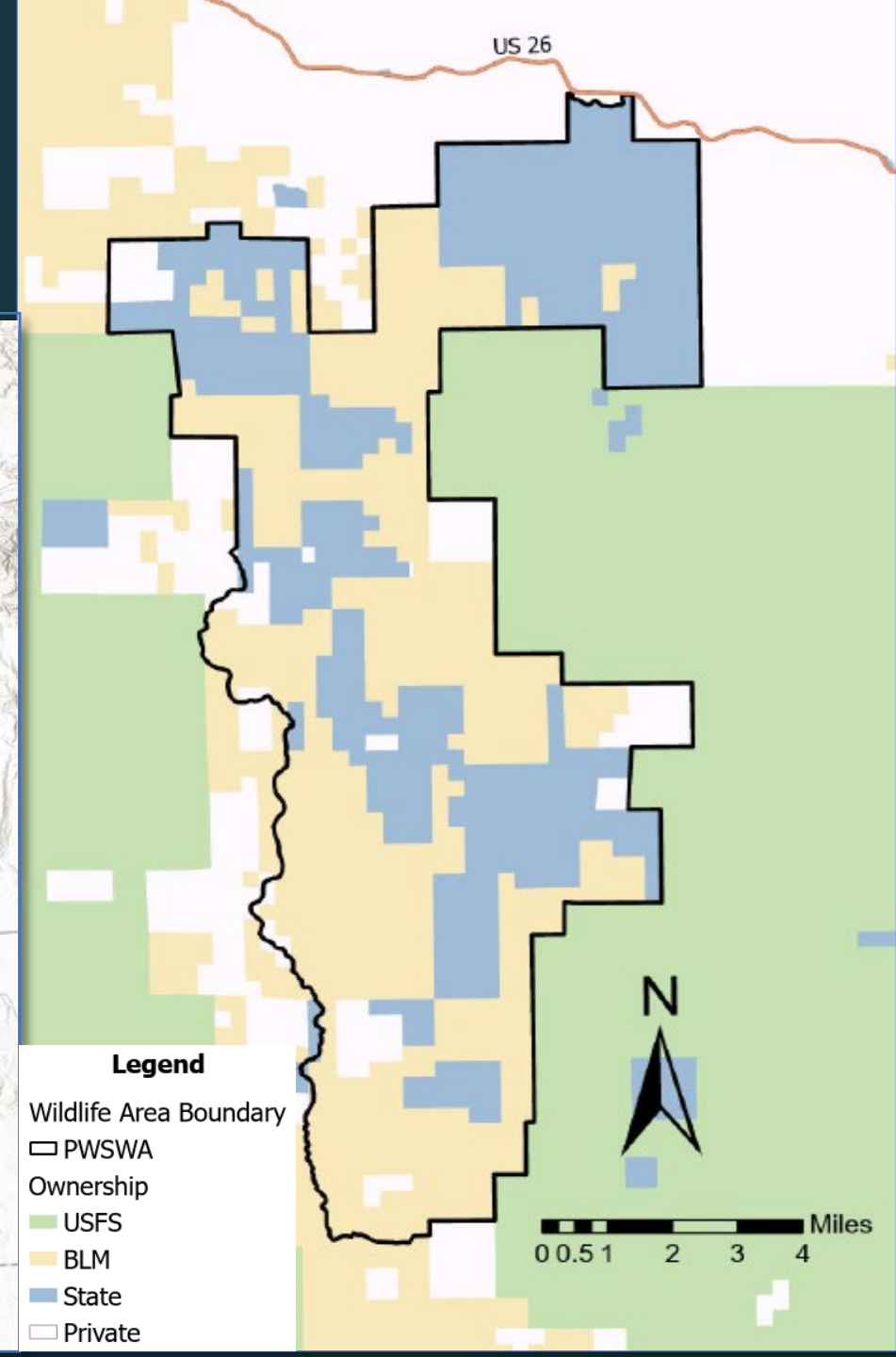
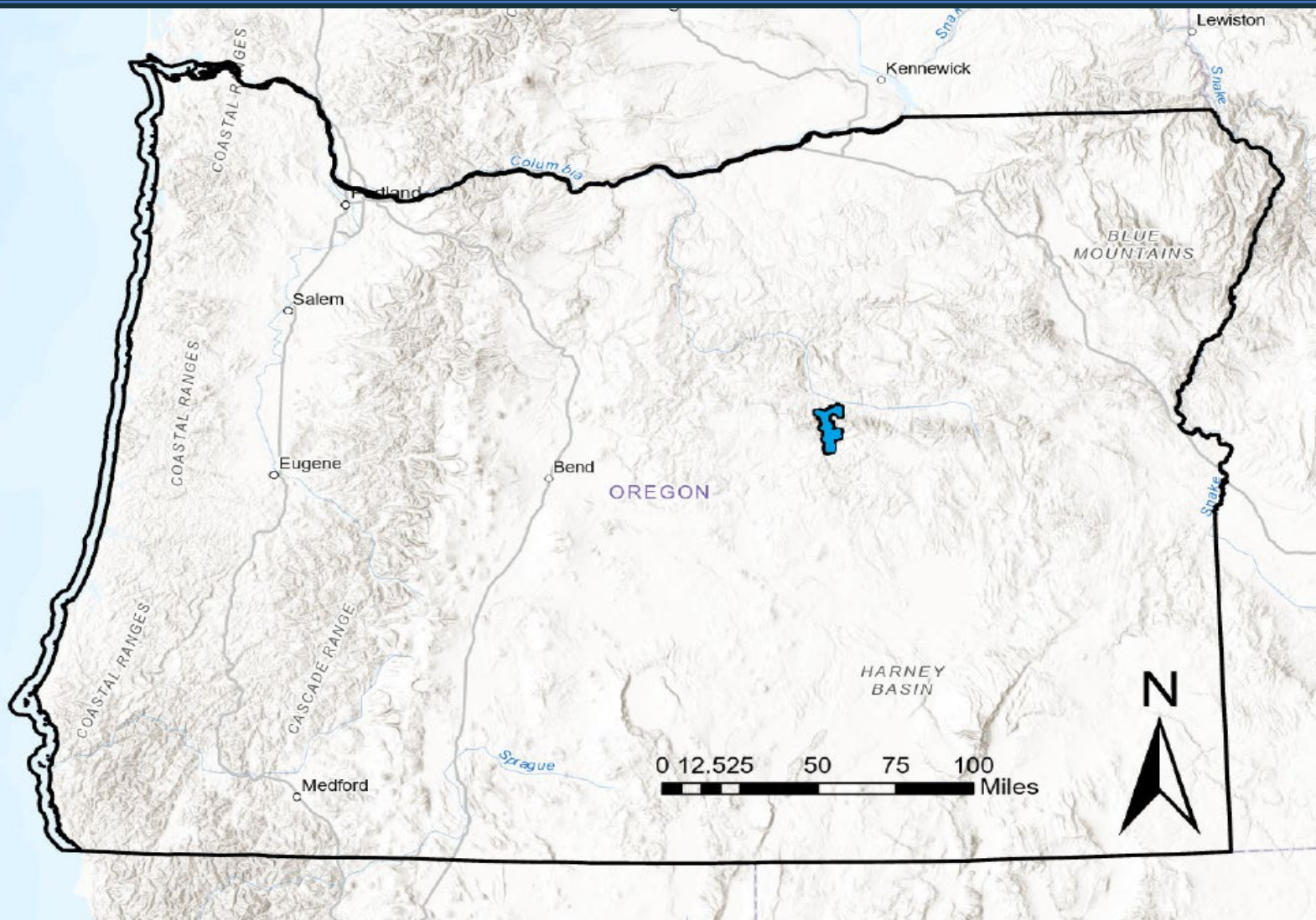
Goal = Perennial
Dominated Mule
Deer Habitat



Revegetate

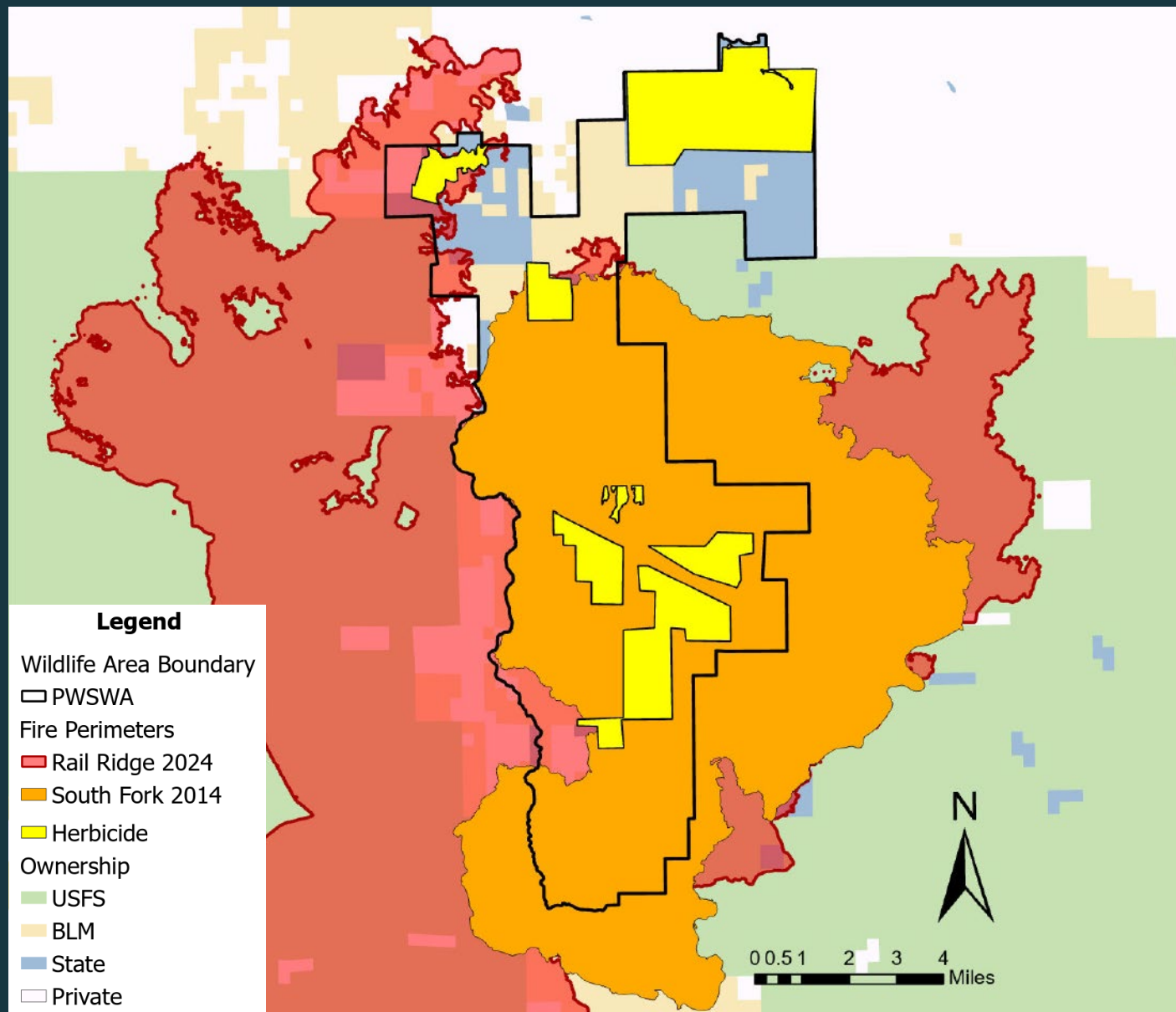
Retreatment

Case Study-Phillip W. Schneider Wildlife Area





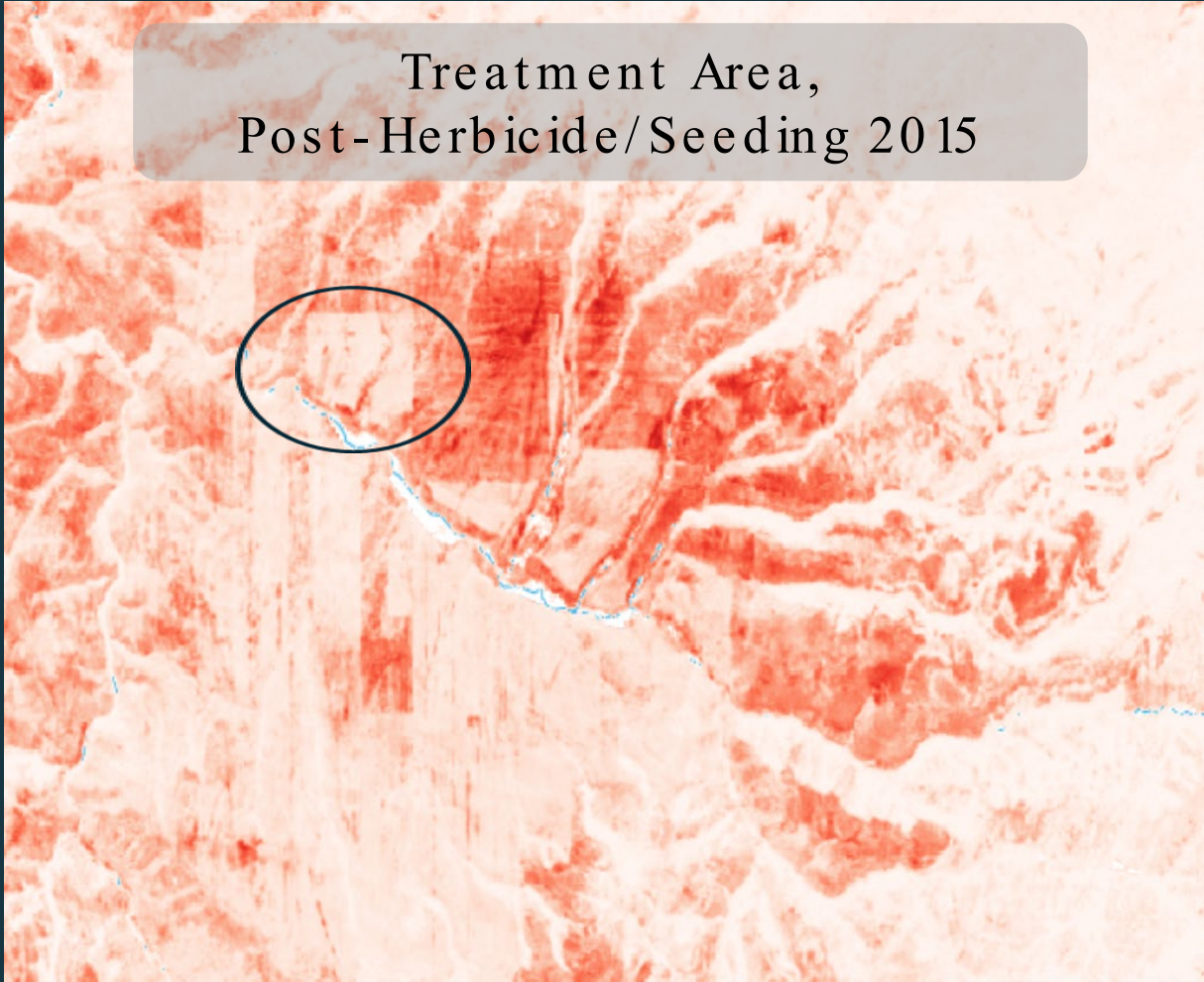
Wildfire and Habitat Restoration PWSWA





Invasive Annual Grass Treatment on PWSWA ~2014 - Present

Treatment Area,
Post-Herbicide/Seeding 2015



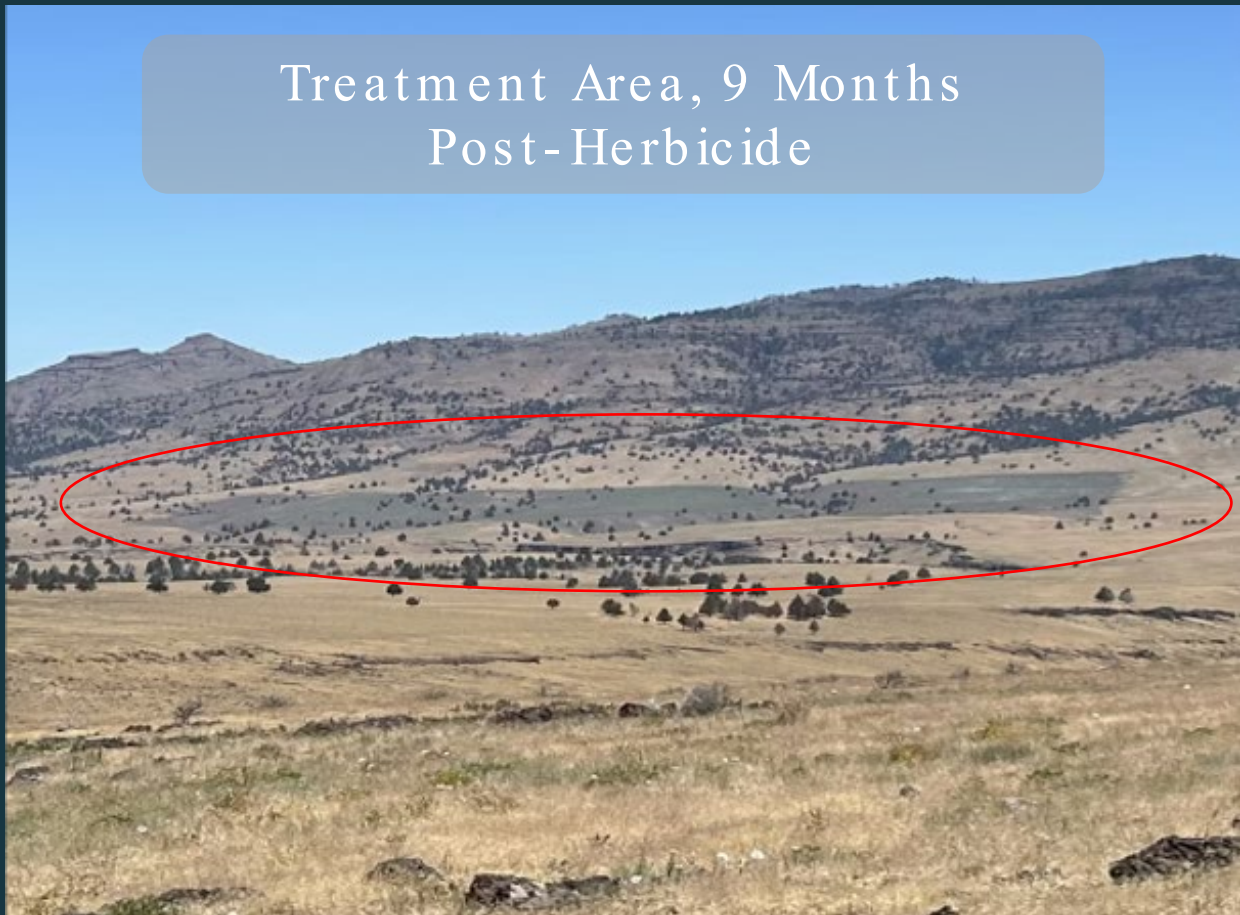
Treatment Area, Post-Fire 2024





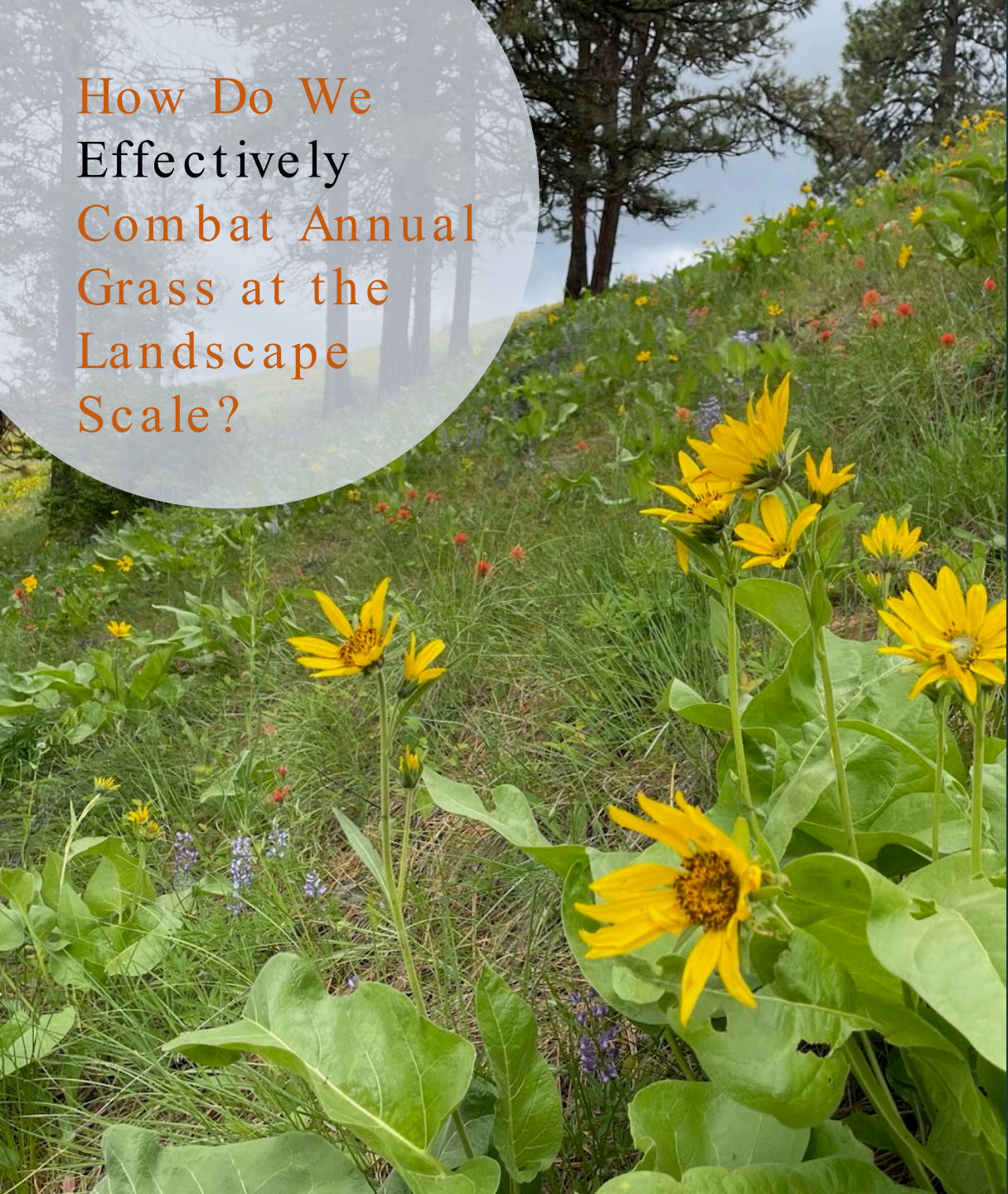
Invasive Annual Grass Treatment on PWSWA

Treatment Area, 9 Months
Post-Herbicide



Treatment Area, 9 Months
Post-Herbicide





How Do We
Effectively
Combat Annual
Grass at the
Landscape
Scale?

Prioritize Defending Core Habitats

Early Detection and Rapid Response

Diverse Funding Opportunities and
Partnerships

Lessons Learned

Effective Prevention & Treatment of IAG

Prioritize Treatments in Core Habitats,
Early Detection and Rapid Response,
Create Resilient Habitat

Winter Range Impacts

Significant Overlap with Winter Range &
Annual Grass Presence, Detrimental
Impacts to Mule Deer Population

Available Resources

Diverse Funding Sources and Partners,
Immediate Resources for Post-Fire
Revegetation

Questions?

