

Sage-Grouse 101



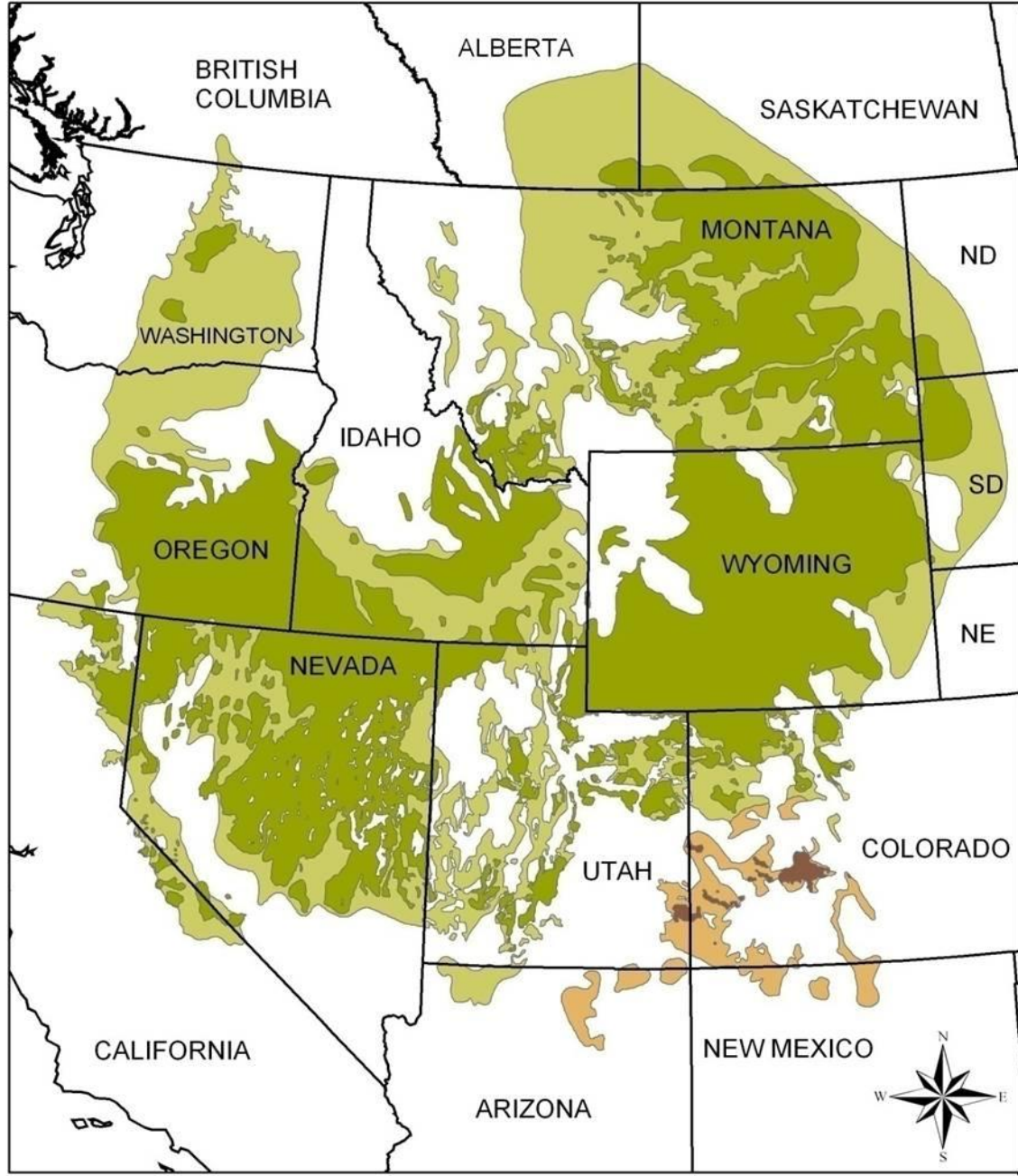
Dawn Davis
ODFW



Basic Biology

- Largest North American grouse
- Lek mating system
- Long-lived (up to 5 years)
- Low productivity
- Sagebrush obligate
- Requires vast expanses of sagebrush
- Umbrella species





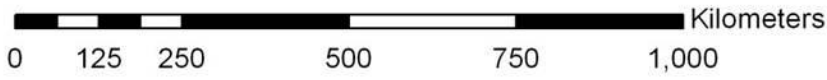
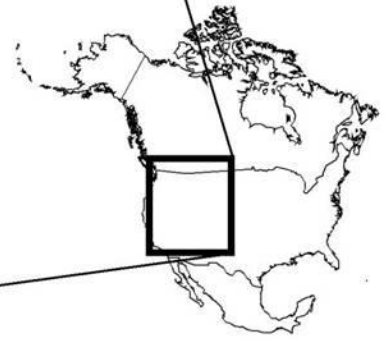
Sage-Goose Distribution

Current

- Greater
- Gunnison

Potential Presettlement

- Greater
- Gunnison

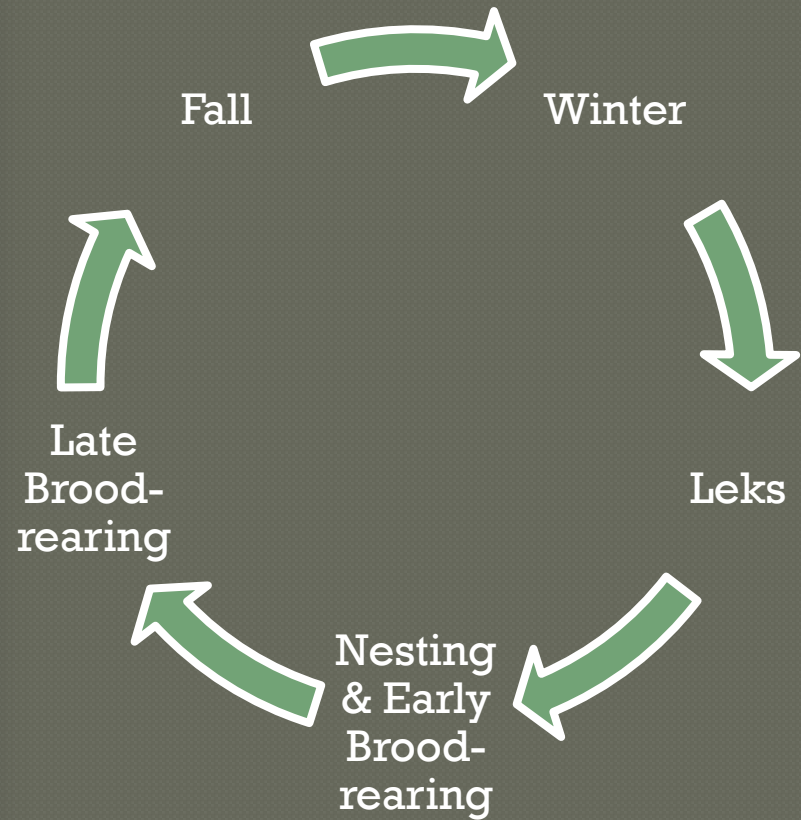






Sage-grouse populations are vulnerable to habitat fragmentation

Life History

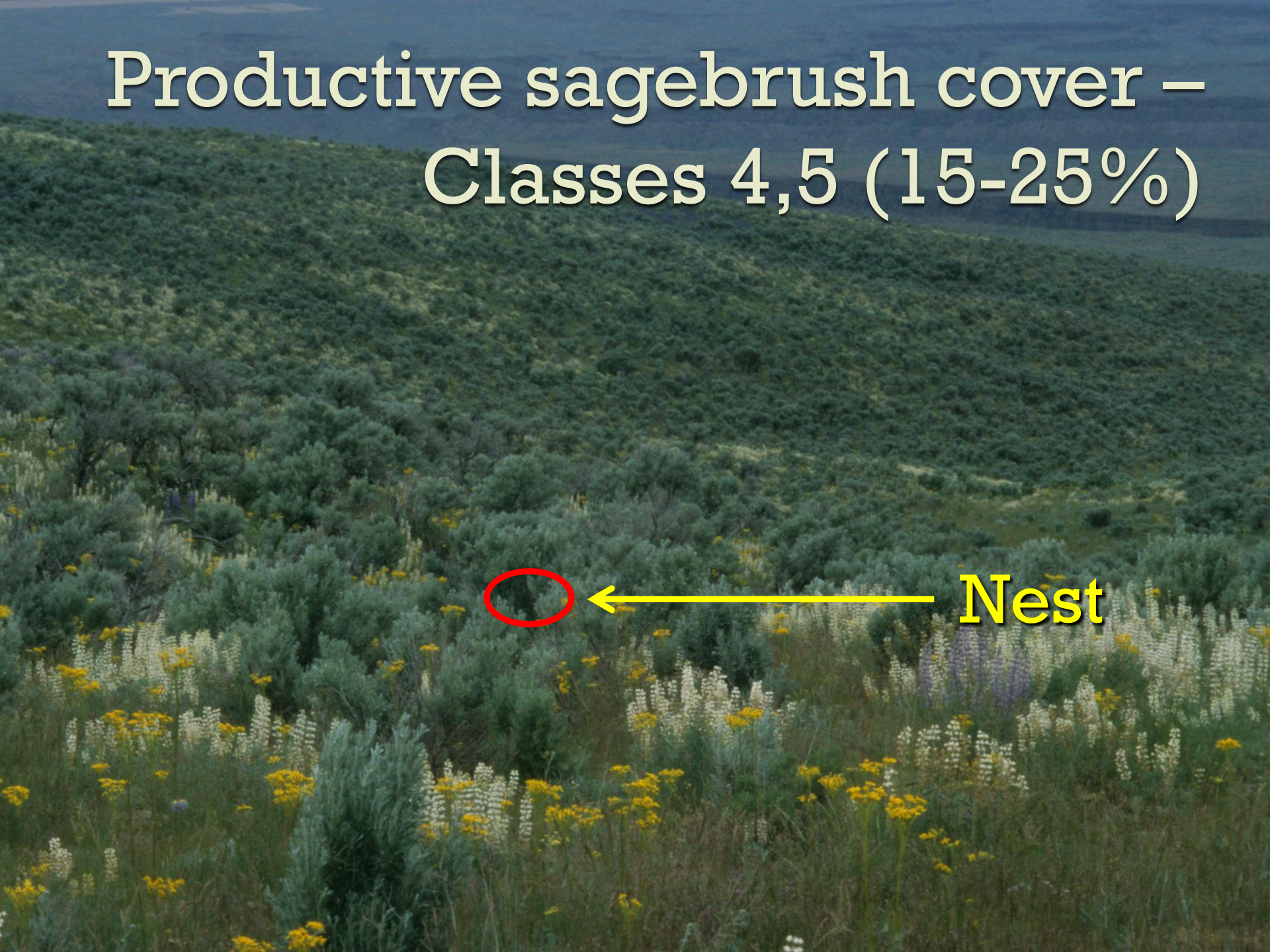


Nesting & Early Brood-rearing Habitat Characteristics

Habitat Feature	Habitat Use	Habitat – Wetter Sites	Habitat – Dryer Sites
Sagebrush canopy cover	Nesting Cover	15-25%	15-25%
Sagebrush height	Nesting Cover	15-30 inches	12-30 inches
Sagebrush growth form	Nesting Cover	Spreading form, few if any dead branches	Spreading form, few if any dead branches
Grass & forb height	Nesting Cover	≥ 7 inches	≥ 7 inches
Grass & forb canopy cover	Nesting Cover & Food	≥ 25%	≥ 15%
Forb abundance & variety	Food	High	High

Productive sagebrush cover – Classes 4,5 (15-25%)

 ← Nest



Marginal sagebrush cover – Class 3 (10%)



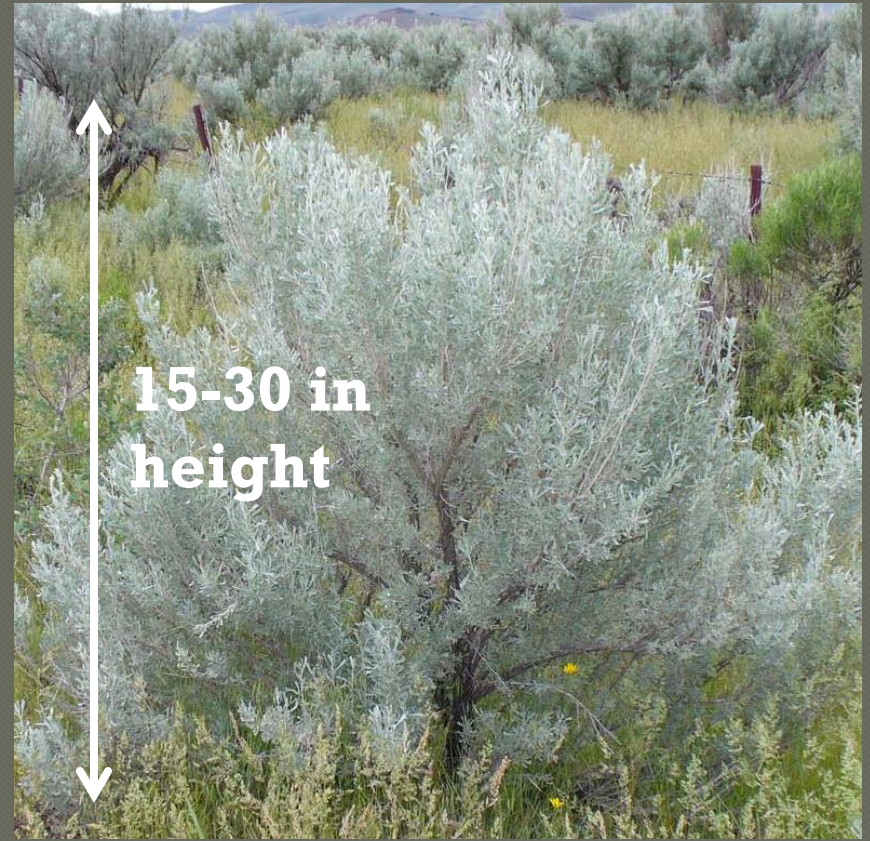
Insufficient sagebrush cover – Classes 1,2 (5%)



Shrub Structure



A columnar structure provides less cover and leaves nests more visible to predators.



Preferred spreading branch form.

Understory



Successful nest



Unsuccessful nest



Late Brood-rearing (July-Sept)

Habitat Feature	Habitat Use	Productive Habitat
Sagebrush canopy cover	Cover	10-25%
Sagebrush height	Cover	15-30 inches
Proximity of sagebrush cover	Cover	Sagebrush cover is adjacent (<100 yards) to brood-rearing areas
Grass & forb canopy cover	Cover & Food	≥ 15%
Riparian & wet meadows	Food	Wetland plant species dominate
Riparian & wet meadow stability	Cover & Food	Some bare ground may be evident but vegetative cover dominates the site
Forb availability in uplands & wet areas	Food	Succulent forbs are readily available in terms of distribution & plant structure



Fall & Winter (Sept-Mar)

Habitat Feature	Habitat Use	Productive Habitat
Sagebrush canopy cover	Cover & Food	10-30%
Sagebrush height	Cover & Food	10-14 inches above snow level



Addressing Habitat Needs at a Landscape Scale



Sage-Grouse are a Landscape-scale Species

Sage-grouse do best in landscapes with:

- >70% sagebrush cover
- <3% development



If >30% of sagebrush is lost in a landscape:

- Likelihood of occupancy decreases
- Population persistence decreases
- Changes to landscape structure are detrimental

Potential Risk Factors for Sage-Grouse in Oregon

- Wildfire
- Invasive weeds/Wildfire-exotic annual grass cycle
- Juniper expansion
- Prescribed fire
- Vegetation treatments (e.g., sagebrush removal)
- Improper livestock grazing
- Predation
- Realty (e.g., land use changes)
- Energy development and transmission
- Recreation
- West Nile Virus

Other Habitat Considerations

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- A photograph of a grouse, likely a spruce grouse, standing in a field of tall, green and yellow grass. The bird is facing right and has mottled brown and white feathers. The background is a soft-focus field of similar grass.
- Oil or gas wellheads/energy development
 - Roads
 - Buildings
 - Powerlines
 - Center-pivots/agriculture
 - Wind turbines
 - Communication towers
 - Fences
 - Noise

How do we optimize
sage-grouse habitat?

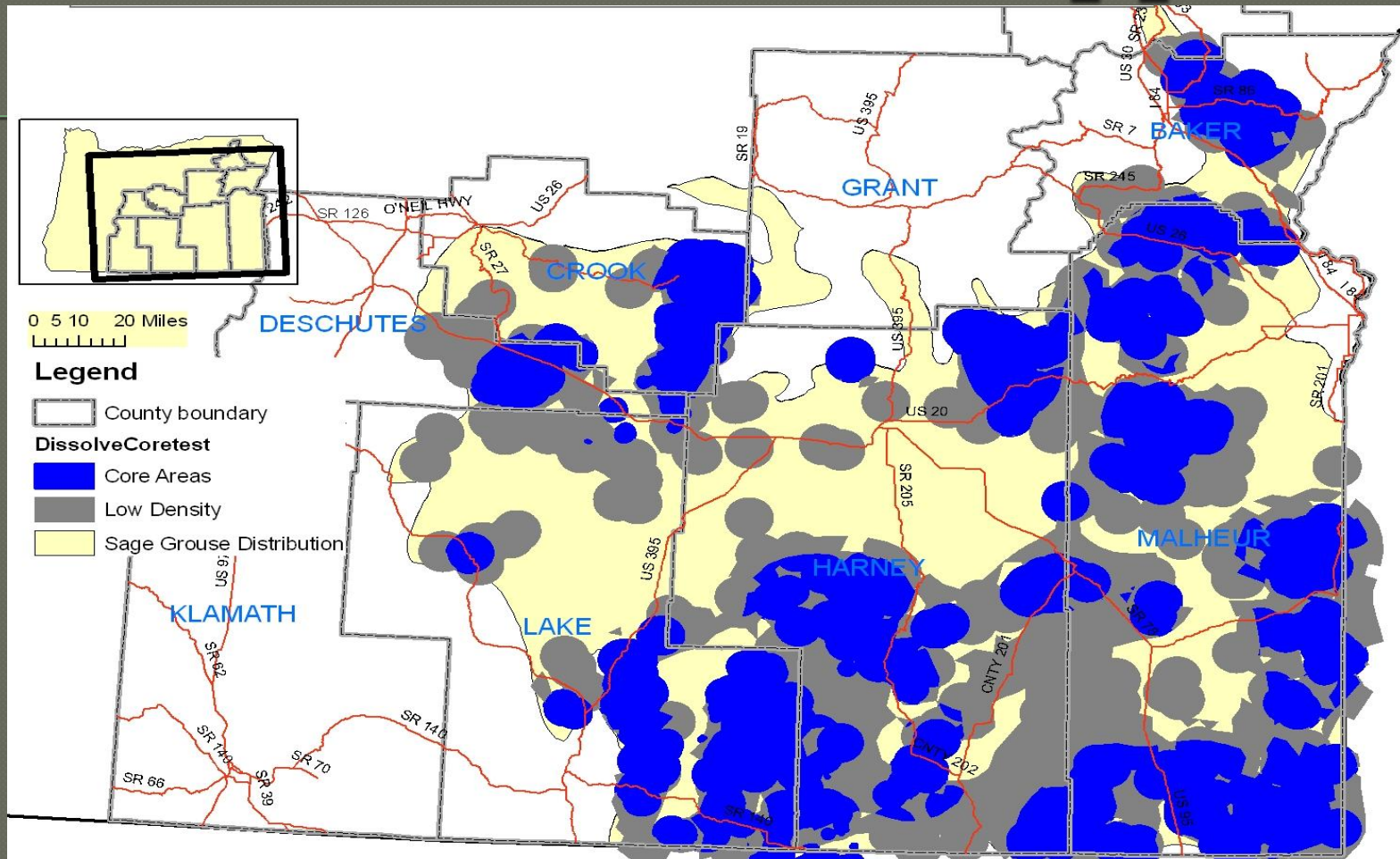
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70/30 Goal

- Conserve >70% of sage-grouse habitat
- Approximates the current status of intact and disturbed habitat in Oregon
- Science-based, i.e., 70% serves as a biological threshold
- Ensures goals are being met at both local & regional scales
- No net loss

Core Area Approach



- 90% of the breeding population
- Only 38% of the range
- Identifies the most productive landscapes
- **Represents a fraction of the occupied range**

Challenges



- How do we establish acceptable levels of disturbance in core habitat?
- How can ODFW and other participating agencies coordinate their conservation efforts with SAGECON?

Questions?

