

Colorado Parks and Wildlife

Bobcat Research Project



Shane Frank
CPW Wildlife Research Scientist
Bobcat Project Leader



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Bobcat Research
Wildlife Commission Meeting: Denver, CO
01/11/2024

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Colorado Parks and Wildlife

Bobcat Research Project



CPW personnel

Jake Ivan - Wildlife Research Scientist

Jon Runge - Biostatistician

Mark Vieira - Carnivore & Furbearer Manager

Area 6 Operations Staff GMUS 10 & 22

Seasonal staff - 6 people annually

Other Area(s) - TBD

Collaborators:

Colorado Trappers and Predator Hunter Association

Local hunters and trappers

Landowners and other land users



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Presentation Outline



- Bobcat Ecology
- Research Impetus
- Research Rationale and Objectives
- Project Status
- Questions

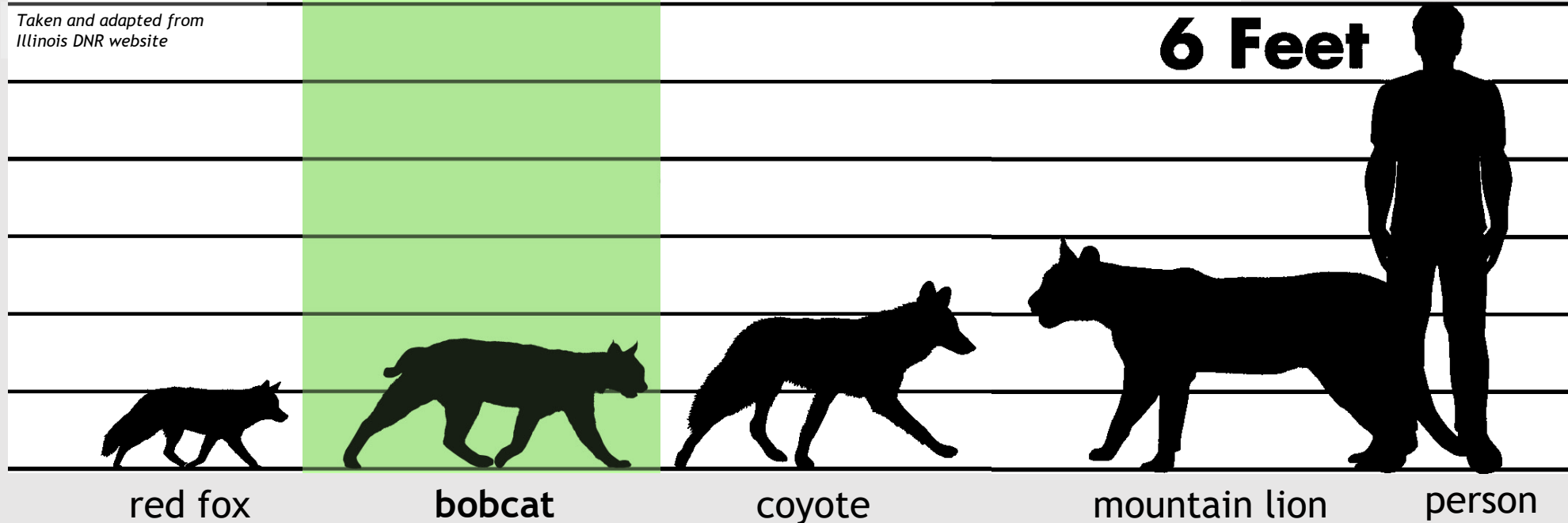


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Bobcat Ecology



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Bobcat Range and Density



North America

- IUCN status 'least concern'
- 2.35 - 3.57 million bobcats
- Density range: 4 - 62 bobcats/100 km²

(Roberts et al. 2010; IUCN redlist)



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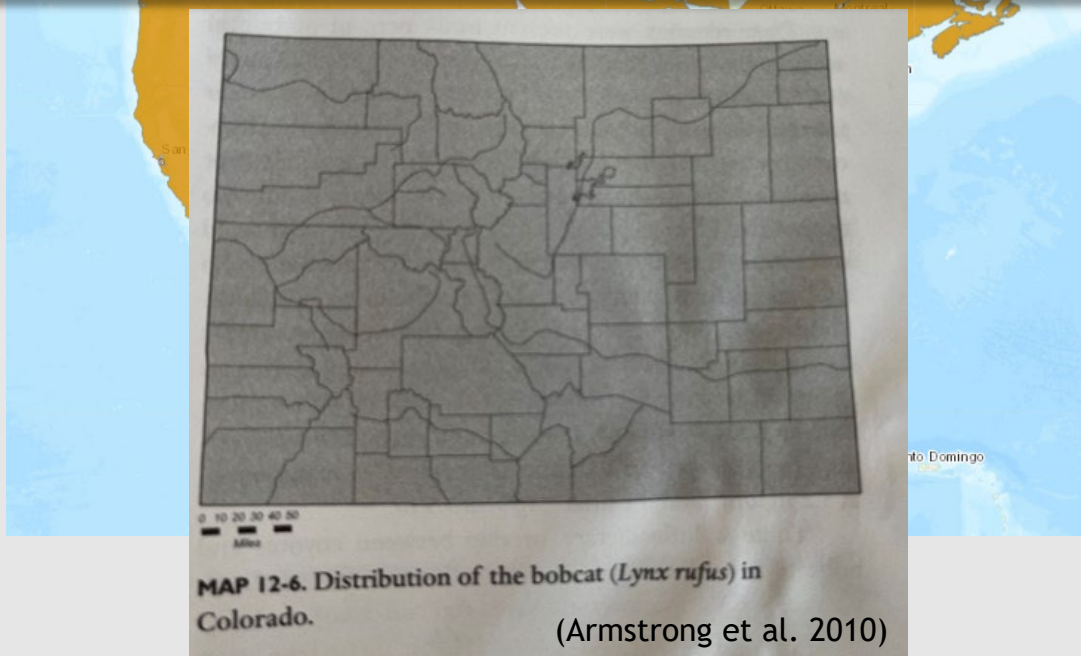
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Bobcat Range and Density

Colorado

- No population size estimate
- Available information suggests stable or potentially increasing
- Density is expected to be ~15 bobcats/100 km²
- ~20/100 km² in Uncompahgre and Front Range (Lewis et al. 2015)



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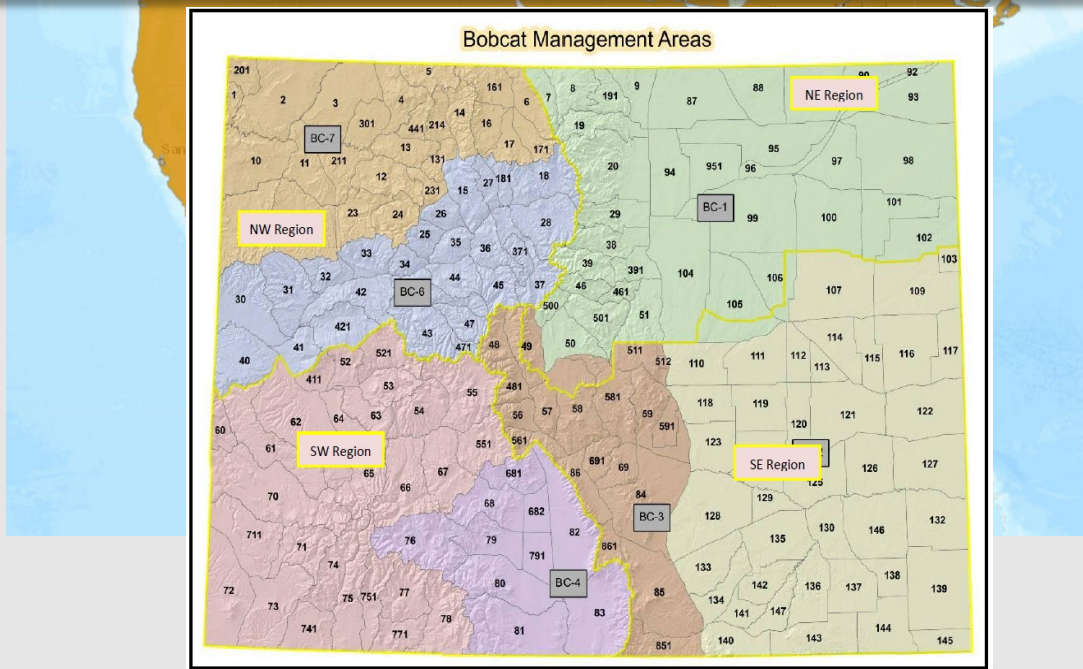
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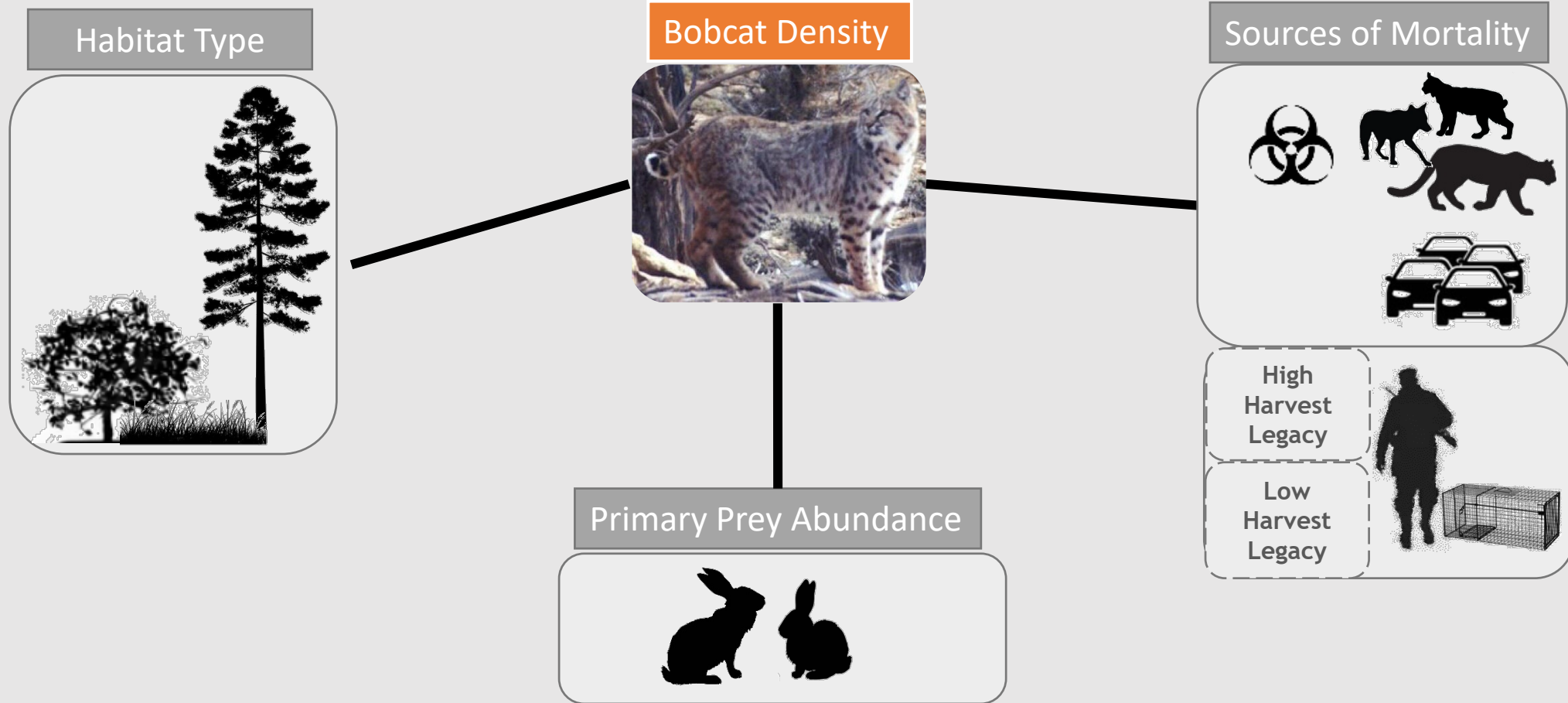


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Research Rationale



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Research Objectives

1. Estimate **bobcat density** across several **bobcat habitat types** and **harvest legacies**
2. Estimate cause-specific **bobcat mortality**
3. Estimate **sex ratio and age composition** of bobcat population
4. Determine bobcat **diet**
5. Estimate **rabbit/hare density**

Potential Management Applications

- Explore **associations** between both **harvest demographics** and **rabbit/hare abundance** with **bobcat density** to identify potential **indicators of population change**.
- **Extrapolate bobcat density** from study areas to **other comparable habitat/vegetation cover** in Colorado.



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Research Methods

Select two study areas for each focal habitat type(s) and sample/collect data

- Similar topography, similar habitat type(s), different harvest legacy (high vs. low)

Study Area 1

- Pinyon-Juniper/Sagebrush
- Similar topography
- *High* Harvest Legacy

Study Area 2

- Pinyon-Juniper/Sagebrush
- Similar topography
- *Low* Harvest Legacy



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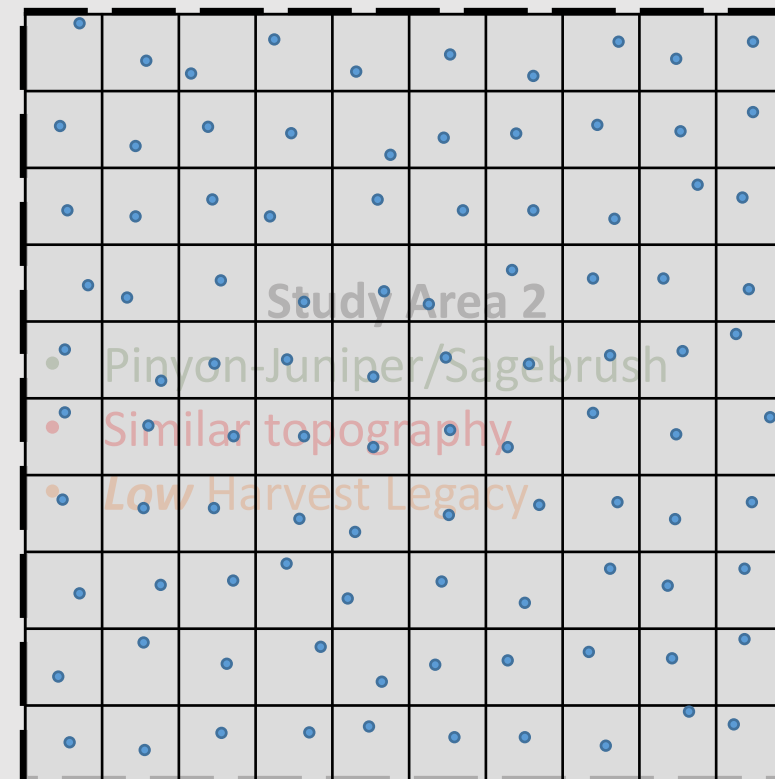
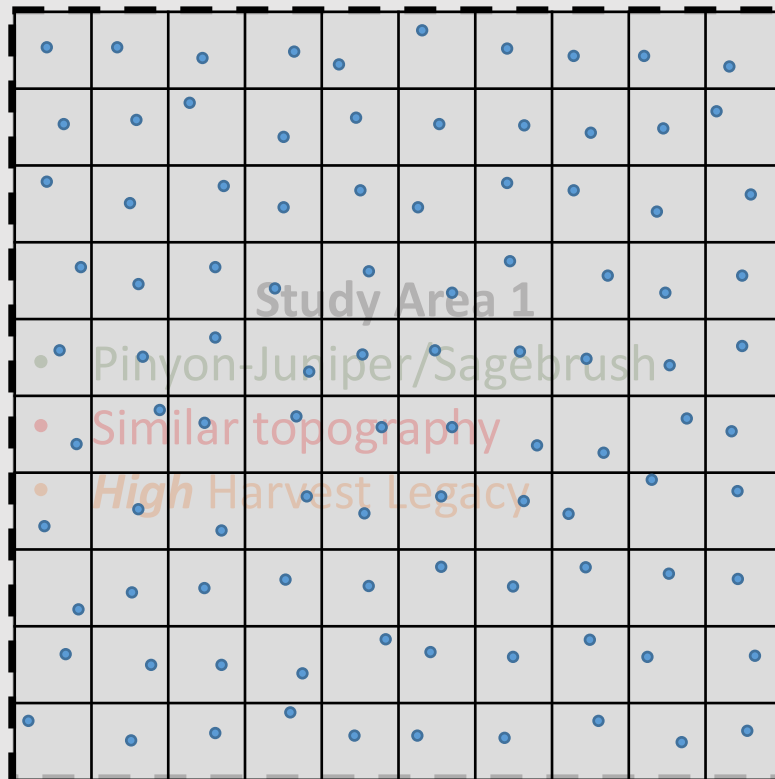
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Research Methods

In each study area, set up a camera grid and perform live captures of bobcats

- “Mark” bobcats with GPS collars and eartags for resighting on cameras.



● = Camera Set



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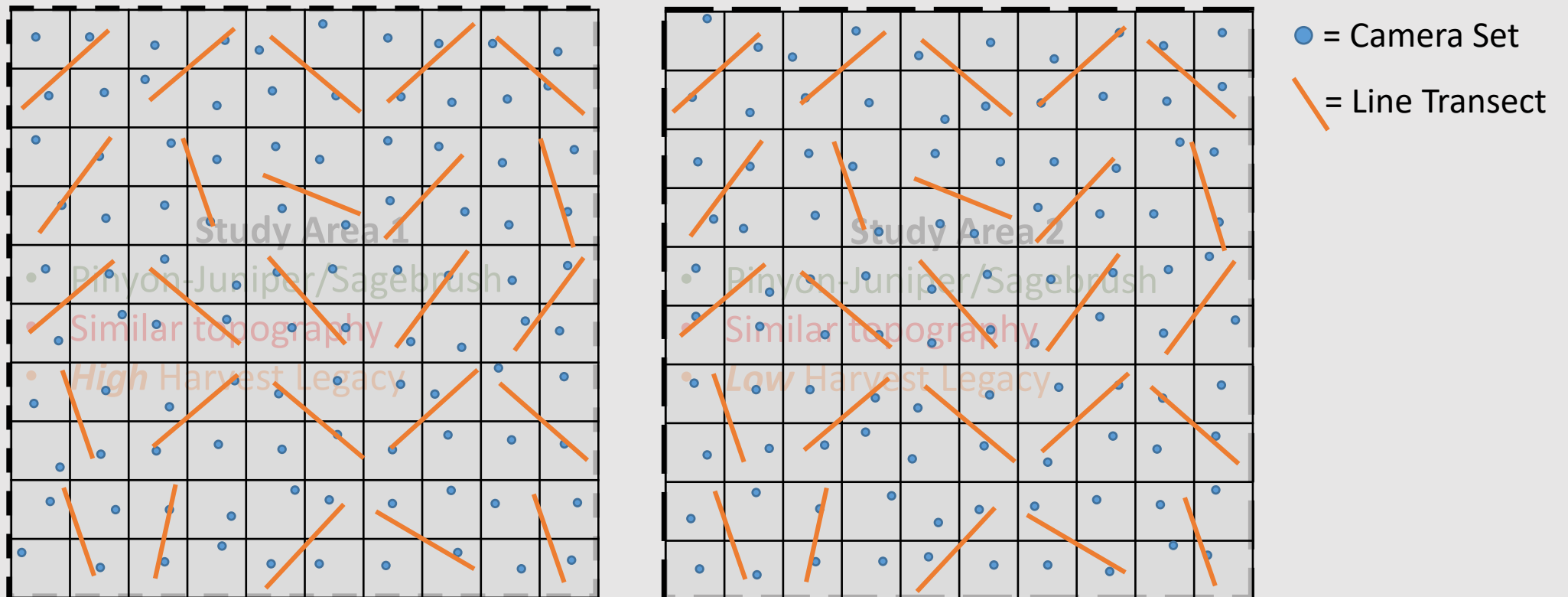
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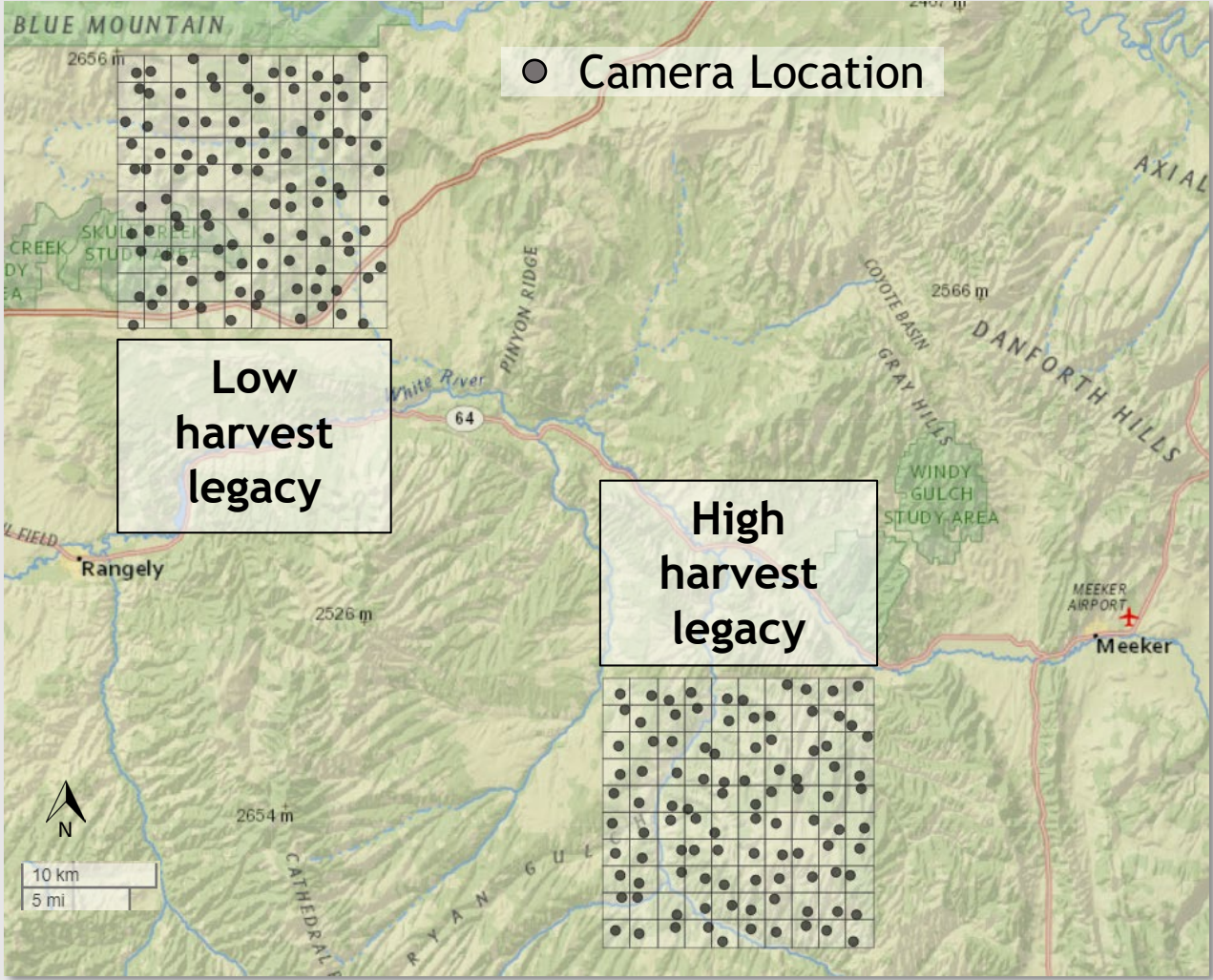


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Project Status






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Project Status

	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Habitat Type(s): Pinyon-Juniper/Sagebrush					
Study area: high harvest					
GPS collared animals	✓	⌚
Camera grid	✓	✓
Bobcat Density	✓	⌚
Rabbit-Hare Transects	✗	⌚
Study area: low harvest					
GPS collared animals	✓	⌚
Camera grid	✓	✓
Bobcat Density	✗	⌚
Rabbit-Hare Transects	✗	⌚
Habitat Type(s): To Be Determined					
	...				
	...				
	...				
	...				
	...				
	...				
	...				
	...				

 Completed
  Not completed
 Partial
  In progress



Questions?



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