

ECOLOGY OF GREATER SAGE-GROUSE IN THE MORGAN-SUMMIT SGMA : CONSERVATION IMPLICATIONS FOR MANAGERS

Brandon Flack
M.S. Student
Utah State University

Major Advisor: Dr. Terry A. Messmer

GREATER SAGE-GROUSE BASICS

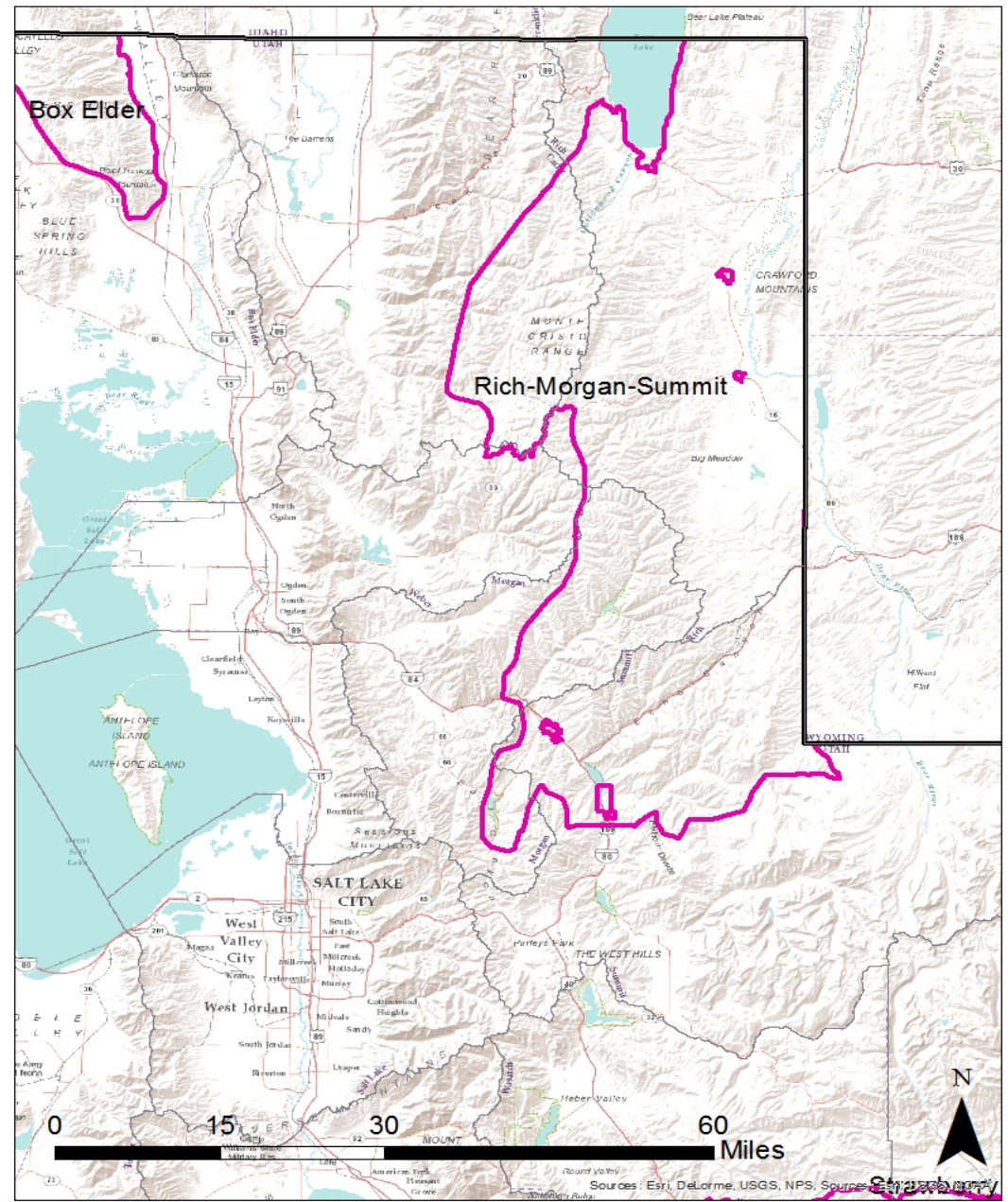
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- A photograph of a Greater Sage-Grouse lek in a field of sagebrush and grass. Several male birds with their tail feathers fanned out are visible, along with a few female birds. The background is a dense thicket of sagebrush.
- *Centrocercus urophasianus*
 - Long-lived (3-6 years)
 - Ground dwelling/nesting game bird
 - 11 states & 2 provinces
 - Landscape species (annual home range up to 230 mi.²)
 - Sagebrush obligate
 - Lekking species
 - Utah has 5%
 - SGMAs cover 94%
 - Candidate species for protection under ESA (2010)
 - Decision to be made this year by USFWS (September)
 - \$\$\$ Millions spent on research and habitat improvements \$\$\$
 - Yet, there are still research “holes” that need to be filled

RICH- MORGAN- SUMMIT SGMA

➤ 2nd largest SGMA
(~1.3 million acres)

➤ “Black Hole” of
information in
southern portion of
SGMA...

...until now!



STUDY QUESTIONS & OBJECTIVES

1. Seasonal migration patterns and associated vital rates?

- Specific travel corridors used?
- Migration patterns affected by habitat fragmentation?
 - Seasonal survival, nest success, brood success?

2. Preferred sites for nesting, brooding, and winter use areas?

- Do they differ from random sites?
- Is preferred habitat selection influenced by land use, fragmentation, and disturbance?
 - Spatial extent of potentially available critical habitats?
 - How much of the available habitat is being used?

3. Do different radio-marking methods affect vital rates?

- Rump-mounted GPS transmitter vs. necklace style VHF radio-collar

TRAPPING & TRACKING

Trapping methods

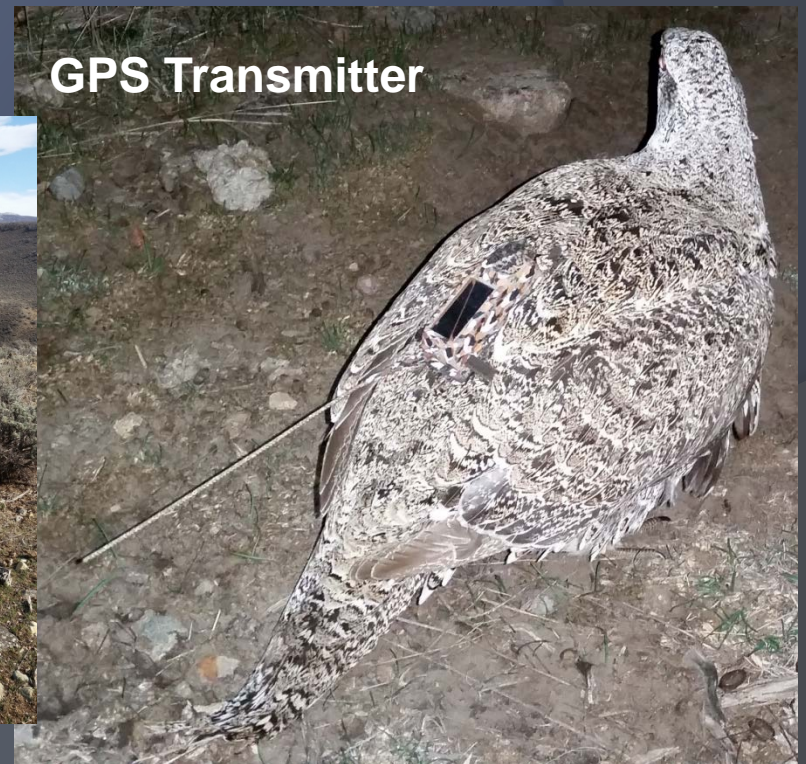
- ATV spotlight method
- Net cannon



Tracking/Location/Monitoring methods



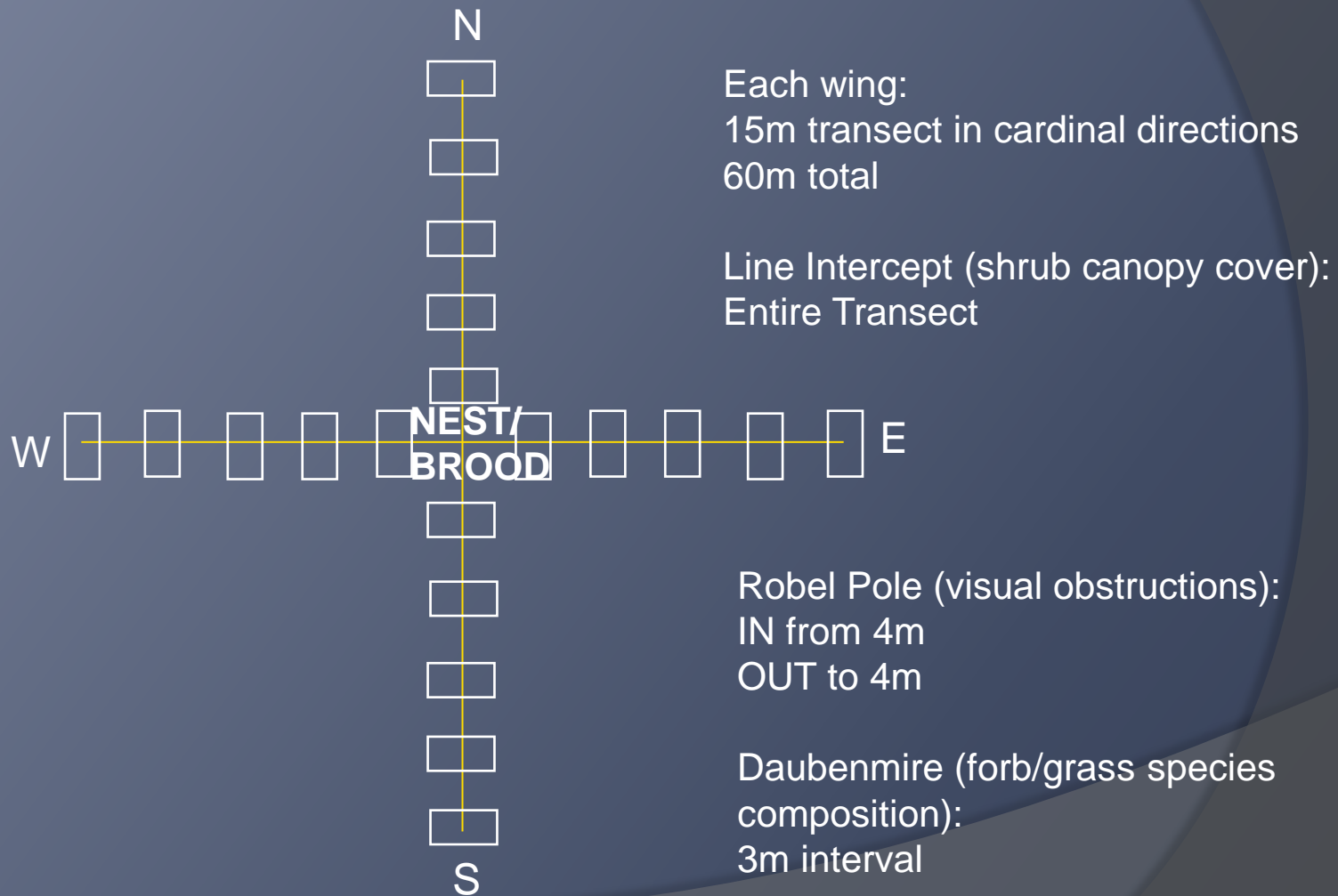
VHF Radio-collar



GPS Transmitter

VEGETATION SURVEYS

Actual sites & Random sites



WINTER HABITAT

September thru February

➤ GPS birds track themselves. So...

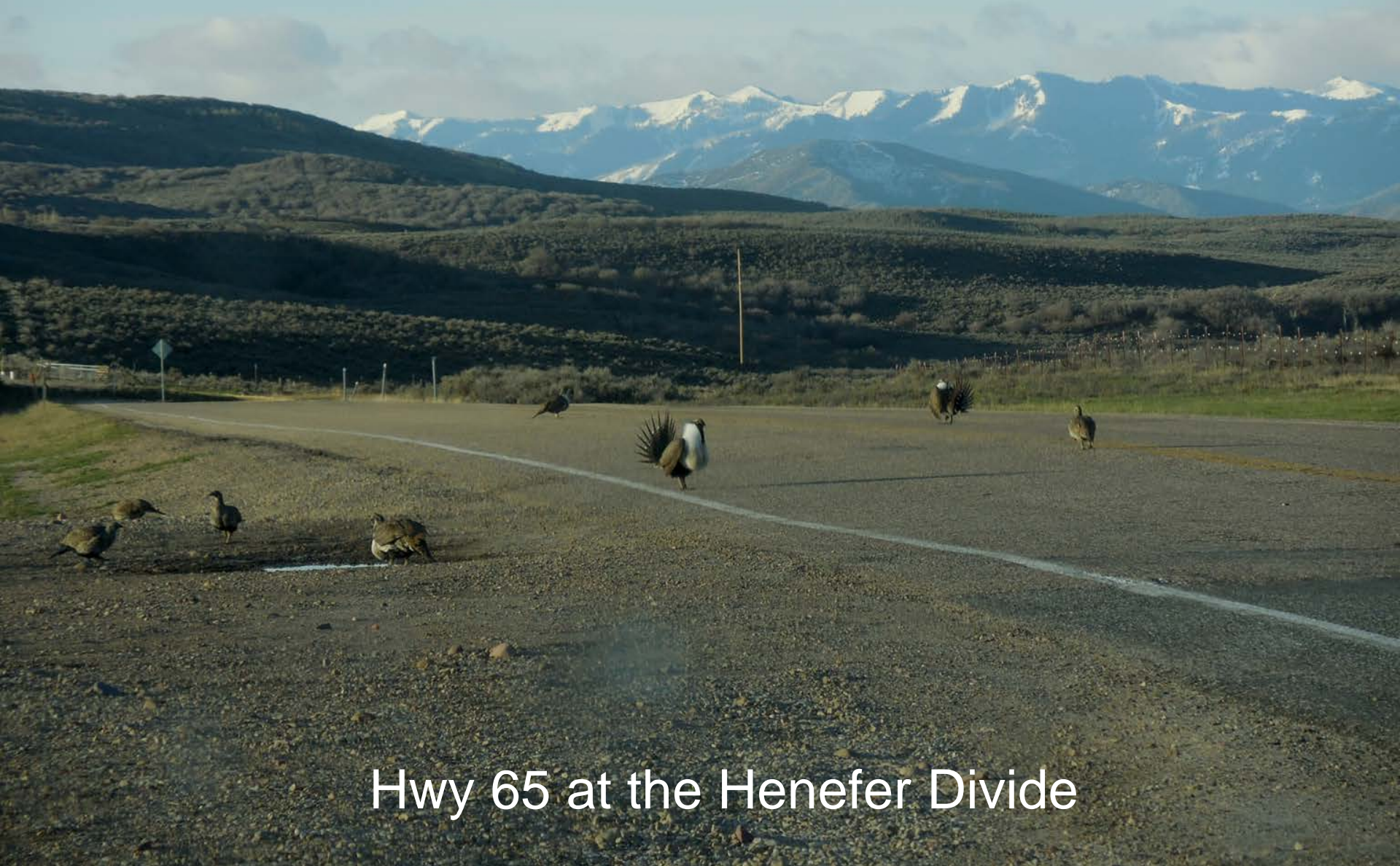


<http://www.clker.com/clipart-339253.html>

➤ VHF birds don't. So...

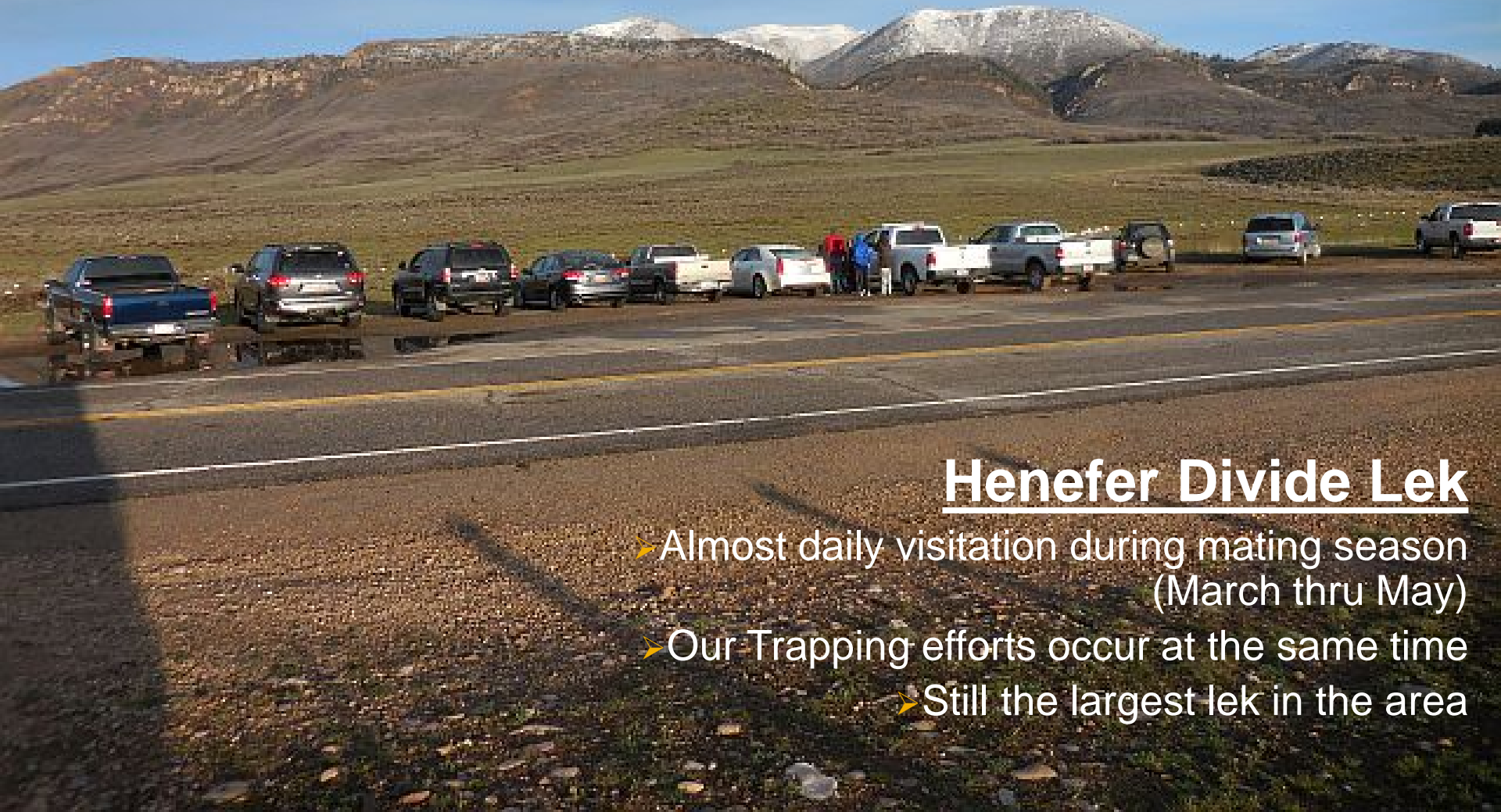


DISTURBANCE & FRAGMENTATION?



Hwy 65 at the Henefer Divide

DISTURBANCE & FRAGMENTATION?



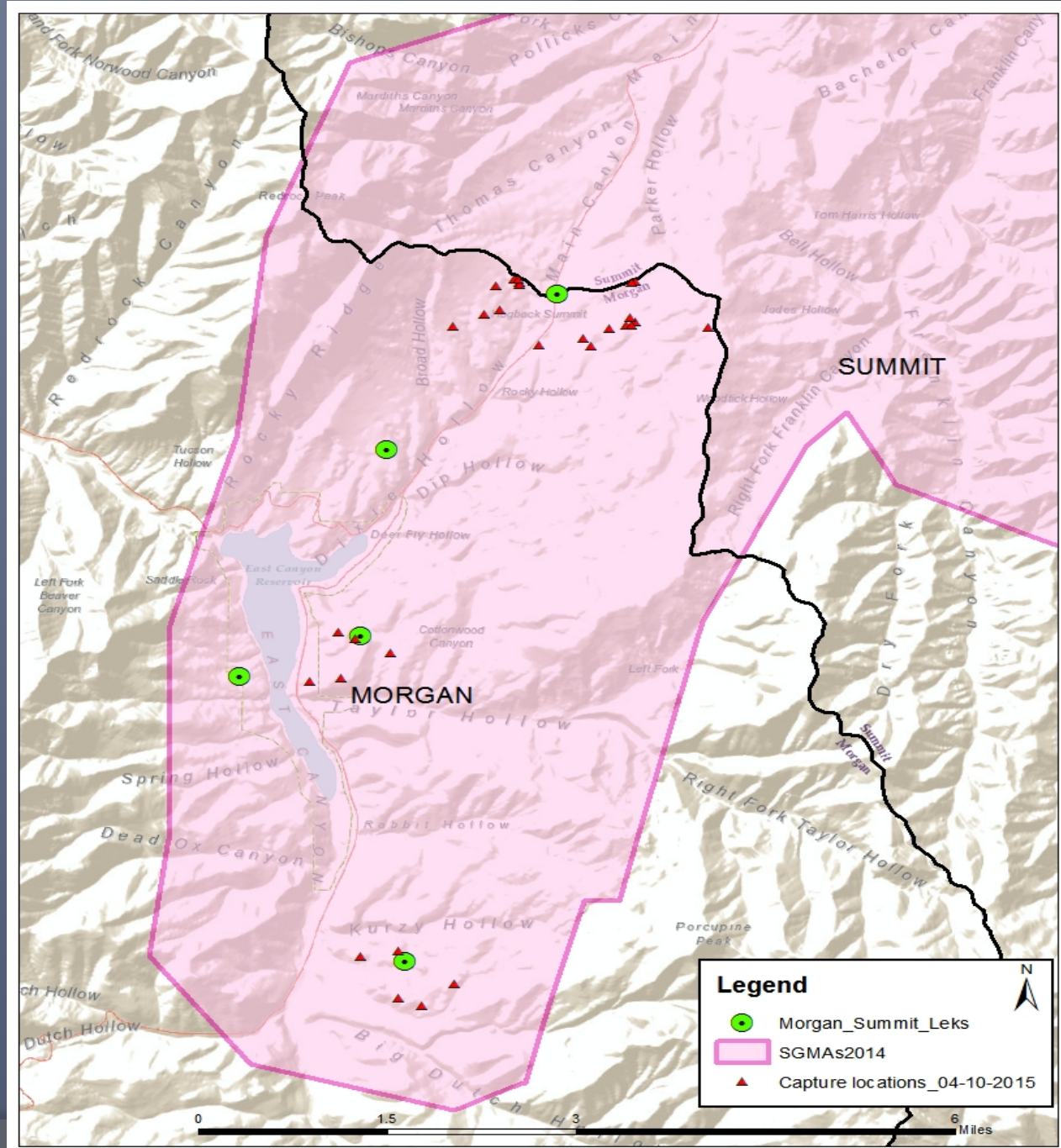
Henefer Divide Lek

- Almost daily visitation during mating season (March thru May)
- Our Trapping efforts occur at the same time
 - Still the largest lek in the area

CAPTURE LOCATIONS

- 39 birds captured
 - 5 males
 - 34 females

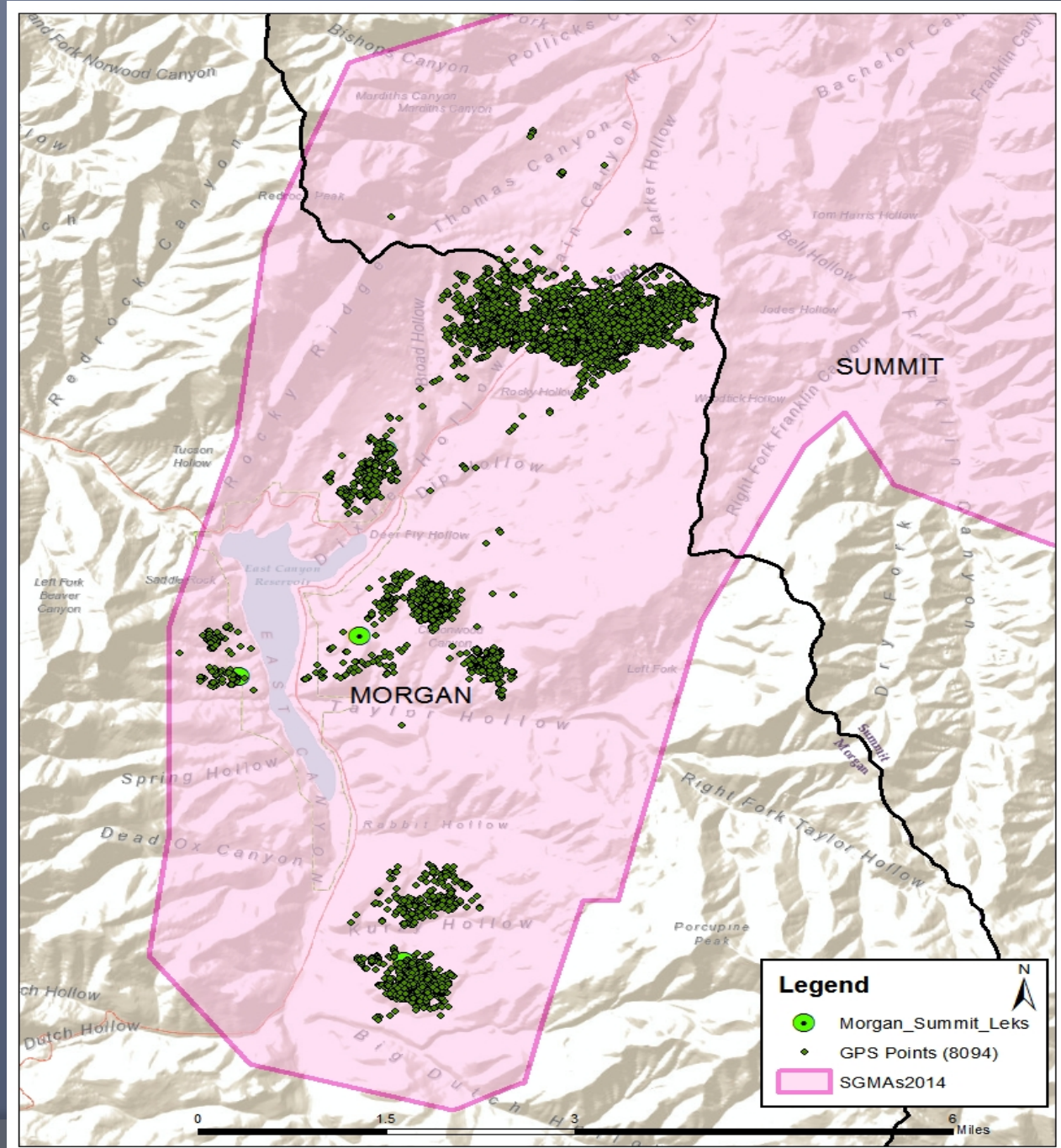
- 3 Mortalities (All VHF birds)
 - 1 male
 - 2 females



GPS LOCATIONS

(JULY 26, 2015)

- 10 transmitters (all on hens)
- 4 ½ months
- 8,094 locations



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Dr. Tom Edwards

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- Utah DWR Folks
- Landowners

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- Utah Community Based Conservation Program
- Morgan-Summit Adaptive Resource Management Local Working Group



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