

Gunnison Sage-grouse



Photo by Noppadol Paothong

A grouse is a grouse??

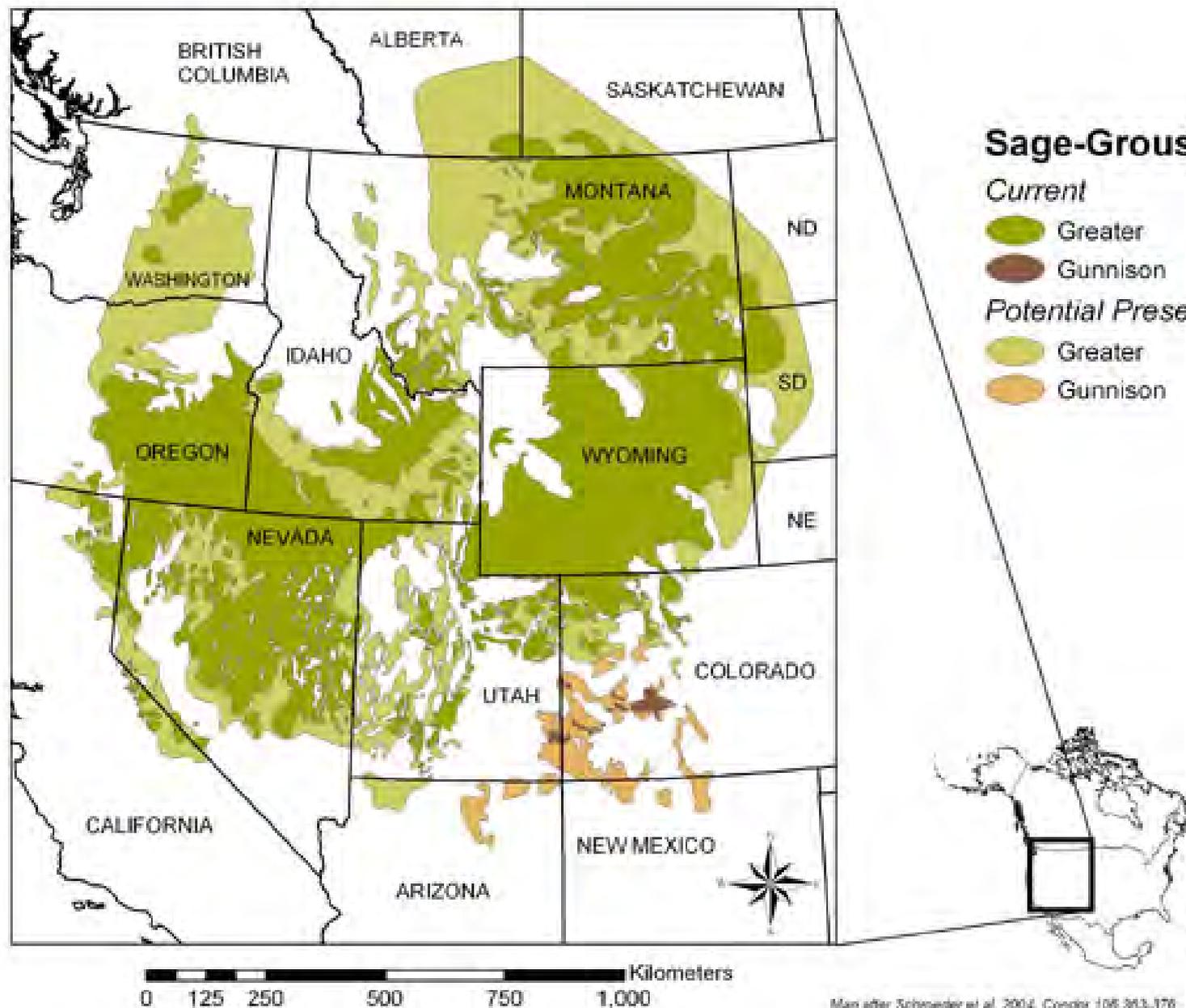
Differences between Gunnison and Greater Sage-grouse.



Gunnison Sage-grouse



Greater Sage-grouse



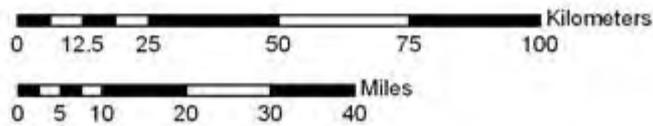
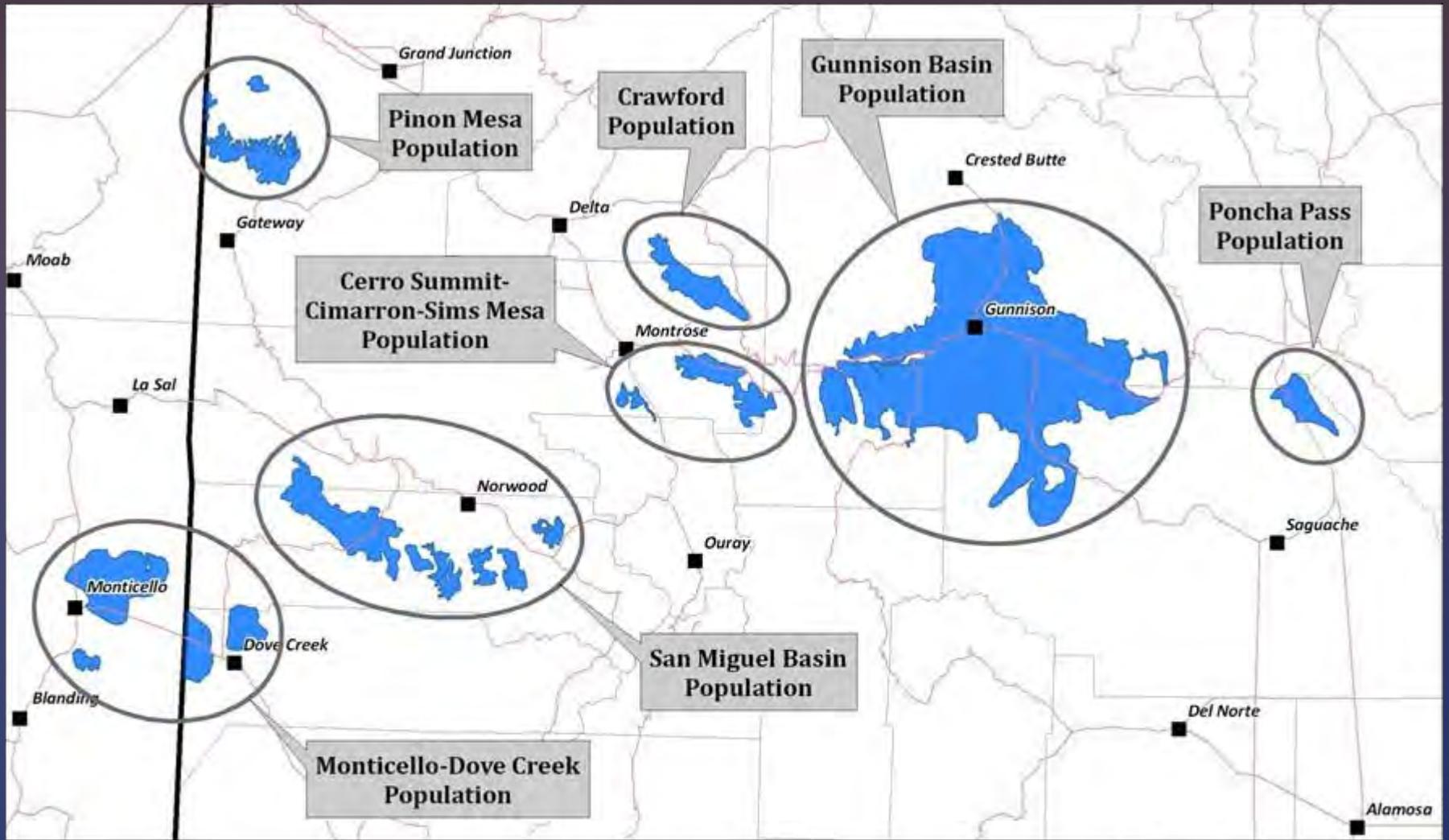
Sage-Grouse Range

Current

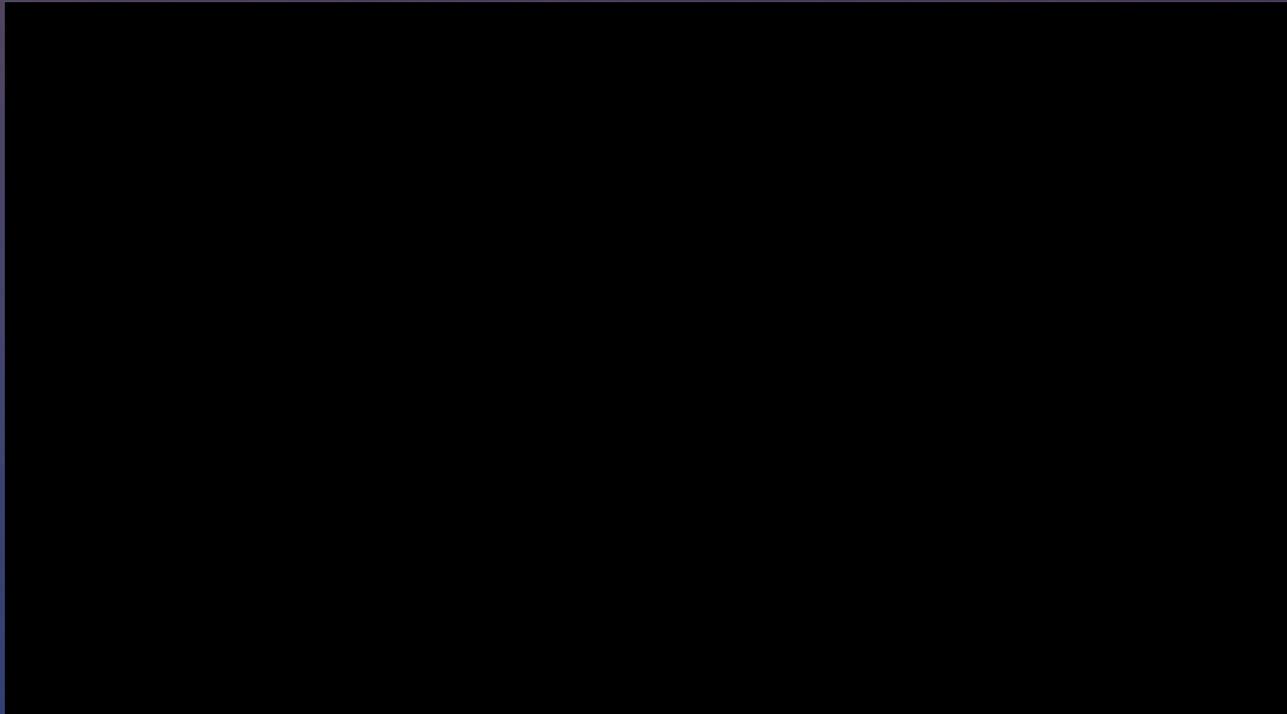
- Greater
- Gunnison

Potential Presettlement

- Greater
- Gunnison



Lek Display



Basic Life History:

Lek Season: Mid-March thru May

Nests: on the ground at the base of a live sagebrush bush.

Eggs: 6-10, incubation is about 28 days.

Males provide no parental care or resources for the nesting hen.

Chicks: Precocial, leave the nest with the hen shortly after hatching. Eat insects and succulent plants – forbs, flowers.

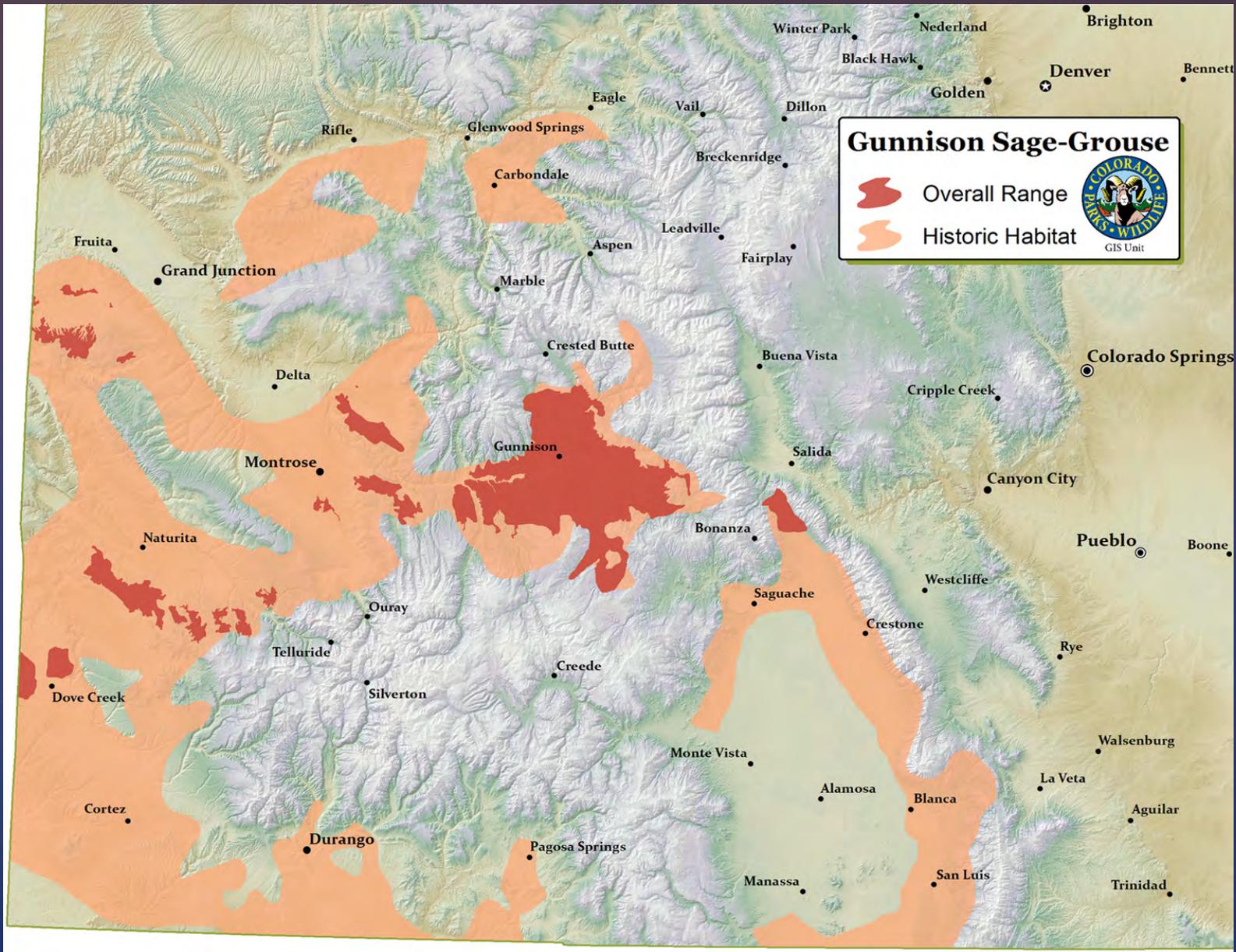
Diet: Sagebrush! Forbs: Dandelions, lupine, sweet clover, milkvetch, globe mallow and some insects.

Gunnison Sage-grouse Habitat

- Breeding – Lek
- Breeding – nesting and early brood rearing (within 4 miles of lek)
- Summer and Fall
- Winter



Photo by Noppadol Paothong



Gunnison Sage-Grouse

-  Overall Range
-  Historic Habitat



GIS Unit

Map labels include: Winter Park, Nederland, Brighton, Black Hawk, Denver, Bennett, Golden, Eagle, Vail, Dillon, Breckenridge, Rifle, Glenwood Springs, Marble, Leadville, Aspen, Fairplay, Fruita, Grand Junction, Delta, Crested Butte, Buena Vista, Colorado Springs, Montrose, Gunnison, Salida, Canyon City, Naturita, Ouray, Bonanza, Pueblo, Boone, Telluride, Silverton, Creede, Saguache, Westcliffe, Rye, Dove Creek, Cortez, Durango, Pagosa Springs, Monte Vista, Alamosa, Blanca, Walsenburg, La Veta, Aguilar, Manassa, San Luis, and Trinidad.

Conservation Efforts for Gunnison Sage-grouse

Collaborative Conservation



Photo from the Denver Post.

- Local Working Groups
- Local Conservation Plans
- Rangewide Conservation Plan
- Gunnison Basin Sage-grouse Strategic Committee
- USFWS Proposed Listing

Timeline of Listing Process:

Jan 13, 2013	Proposed Rule and Critical Habitat
Mar 12, 2013	End of Comment Period
Sept, 2013	Economic Analysis Of Critical Habitat Published
Dec. 2, 2013	Comment Period for Economic Analysis Closes
March 31, 2014	Final Rule

If species is listed: Recovery Plan, 2014-2015



Photo by Noppadol Paothong

Poncha Pass — brief history

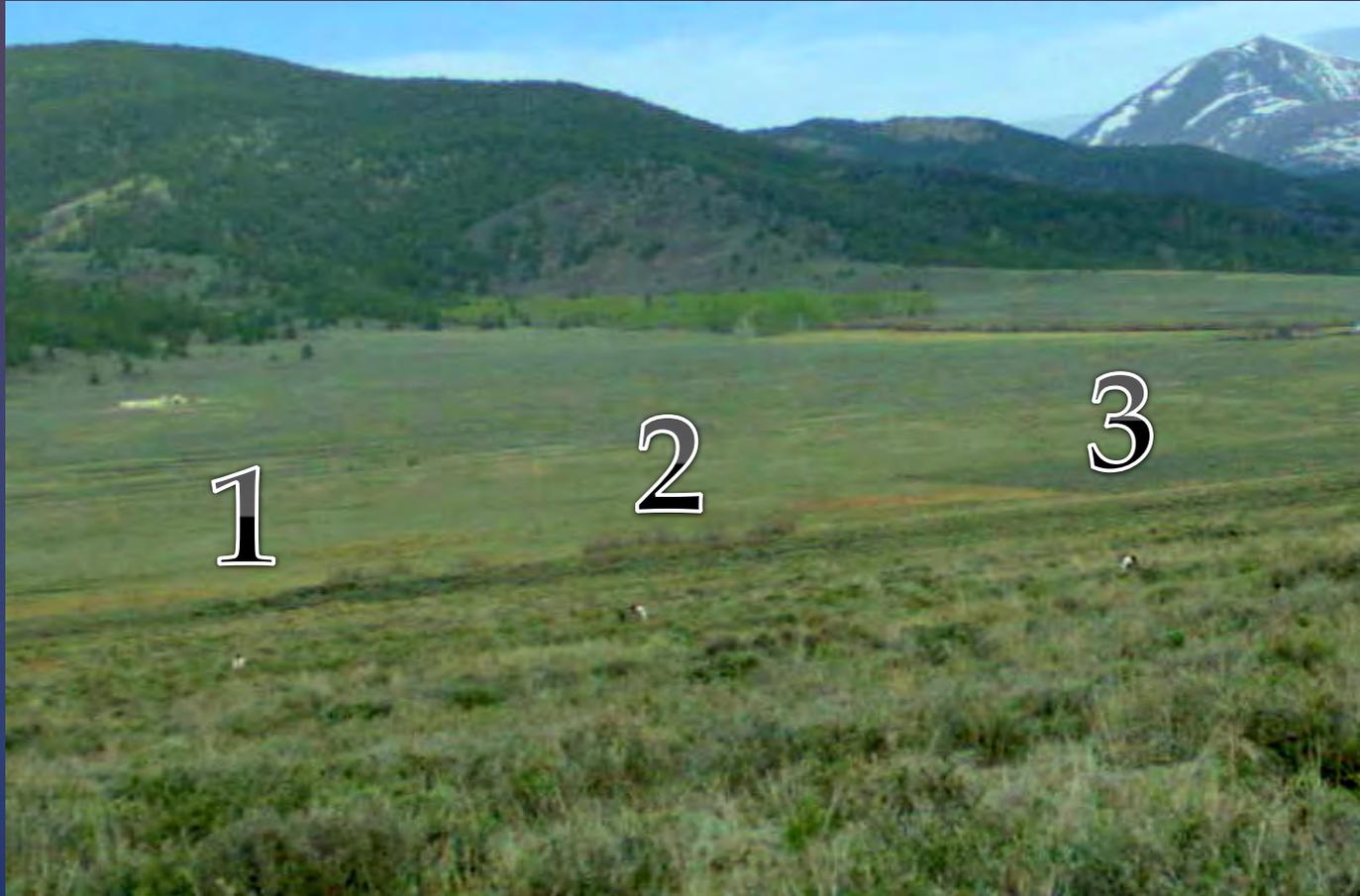
- ❖ Grouse historically present at Poncha Pass. It is possible Captain Gunnison himself ate them for dinner on August 31, 1853 near what is now the Oxcart Ranch.
- ❖ Rogers 1964: Recommends Poncha Pass as the best place to transplant grouse.
- ❖ 1971 and 1972, approximately 30 birds moved to Poncha from Gunnison by Cliff Coghill from CDOW and Joe Cristo from the BLM.
- ❖ 1989 to 1992 Poncha Pass was inadvertently left open for a hunting season and we know from wing barrel data from 1992 that at least 2 men from Salida hunted there killing at least 30 birds.
- ❖ Sporadic lek counts/searches 1990-1998. High Male Count April 1990 of 4 males. Regular lek counts since spring 1999.
- ❖ Spring 1999: Resident birds trapped and radio collared (2 males, 1 female).
- ❖ Spring 2000, Spring 2001 and Fall 2002 51 birds; 29 males and 22 females transplanted from Gunnison Basin to Poncha Pass

Sage Grouse (Female)



1202-133 11 Gunnison sage-grouse hen flying out as transport box is opened at Poncha Pass
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Population Status



October 2013 Transplant

17 birds (70% Juveniles, 30% Adults)

5 Juvenile Males

2 Adult Males

3 Adult Females

7 Juveniles of unknown sex



1202-133 11 Gunnison sage-grouse hen flying out
as transport box is opened at Poncha Pass
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Threats at Poncha

- Extirpation
- Genetic Viability
- Habitat Fragmentation
 - Residential Development
 - Renewable Energy
 - Geothermal
 - **Transmission Lines**
- Off-highway Vehicles, recreation impacts.



Photo from the Denver Post.

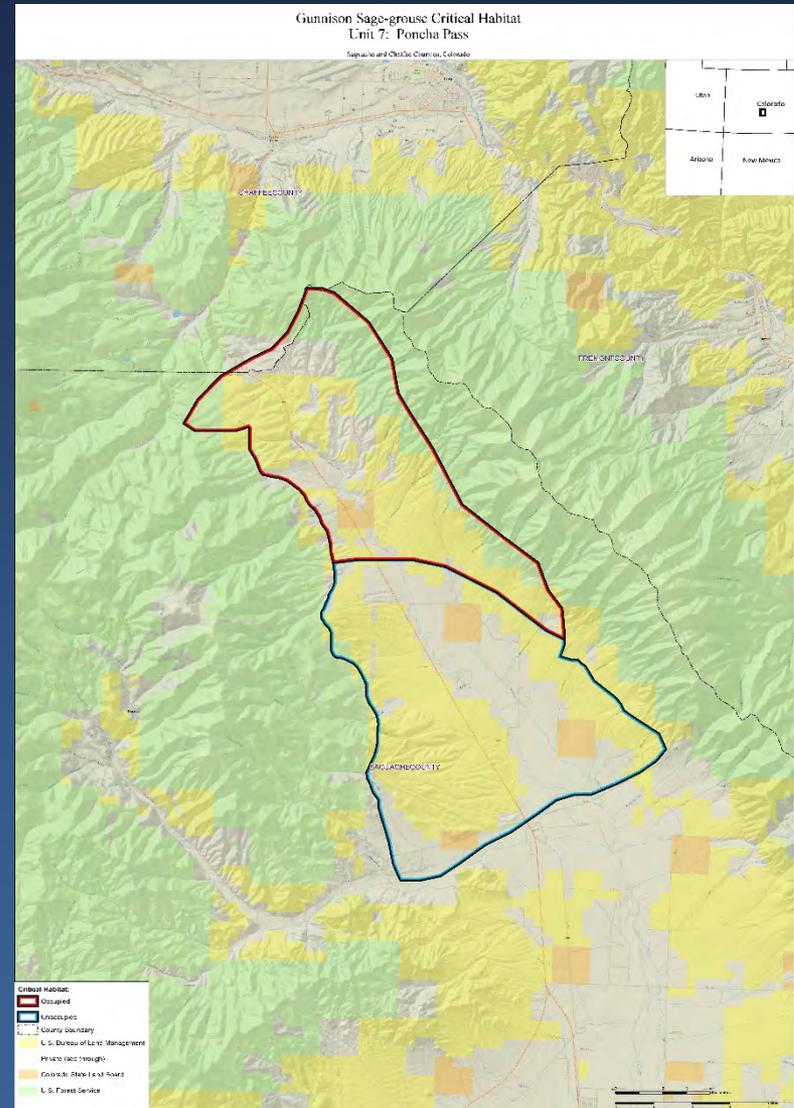
USFWS Proposed GUSG - Endangered

Threats

- Ongoing and Future Habitat Loss and Fragmentation due to residential development, roads, powerlines
- Existing regulations don't prevent habitat fragmentation
- Small population size
 - Improper grazing management, climate change
 - Predation effects, especially on small populations

USFWS - Proposed GUSG Critical Habitat

- Rangeland – 1.7 million acres
- Propose to designate all **Occupied Habitat** and Significant Areas of Unoccupied Habitat



How planning decisions affect Gunnison Sage-grouse

Habitat Destruction

- Sagebrush clearing, building on lek

Habitat Fragmentation

- Roads
- Powerlines

Habitat Degradation

- Weeds
- Residential homes and pets

What we need at Poncha:

- Habitat Protection
- Population Augmentation
- Habitat Improvement Projects
 - Riparian Restoration

GUSG Projects at Poncha Pass:

- Conservation Easement closing in 2013.
- NRCS Sage-grouse Initiative
- No CCAA's – Poncha Landowners were not included in that effort.
- Youth Conservation Corps
- Riparian Habitat Project in Lone Tree Creek.

Data and Research

Spring 2012, 2013

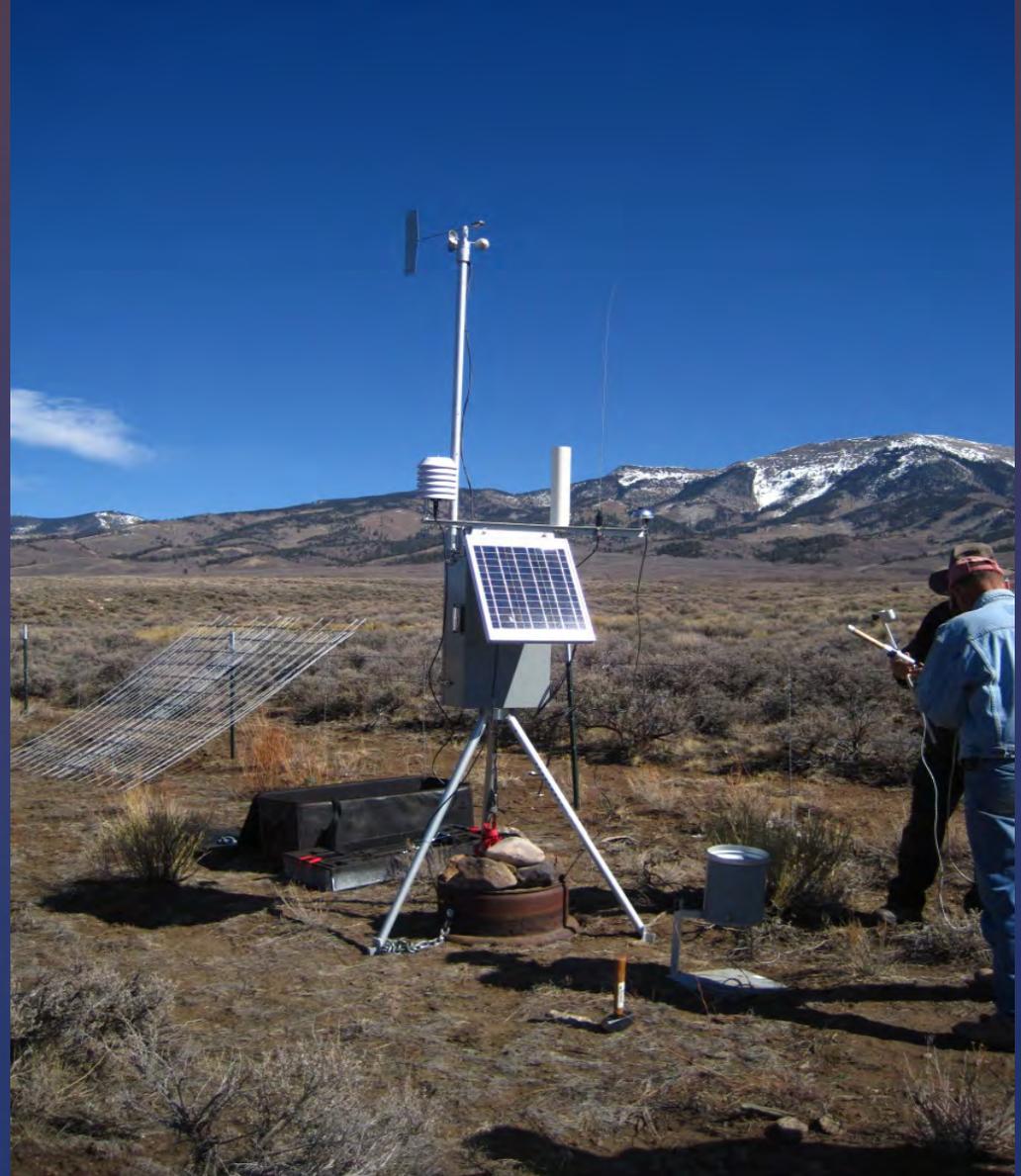
- Remote Weather Station
- Lek Camera
- Acoustic Monitoring
- Vehicle Monitoring Systems





BLM
Fire Program

RAWS unit
(remote access
weather station)

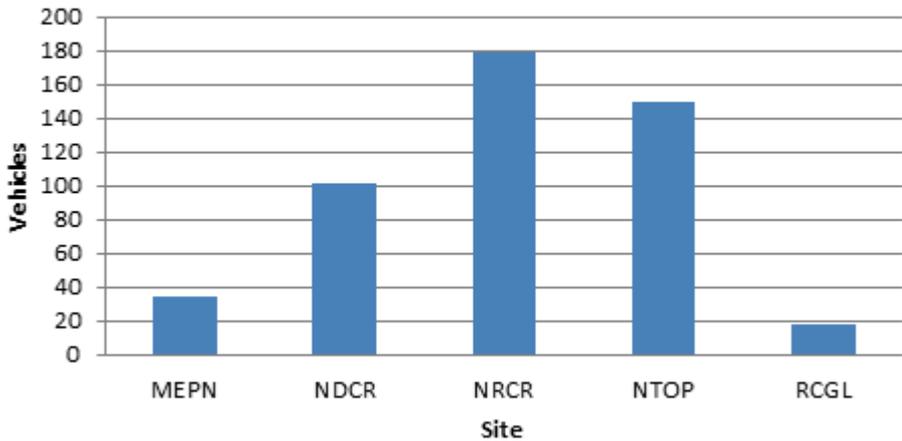




Vehicle Monitoring System



First Download of Poncha Data

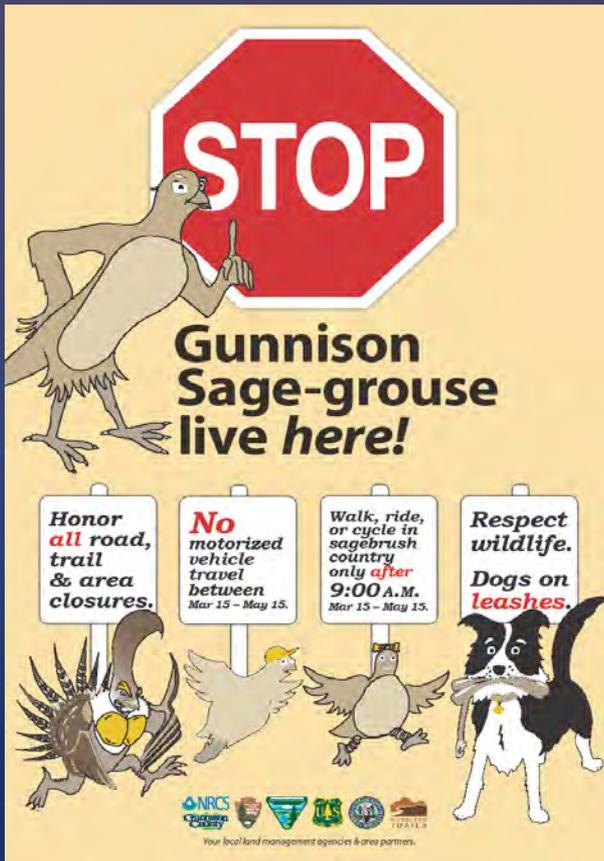


BLM Travel Management Road Closures

Seasonal
During Lek
Season

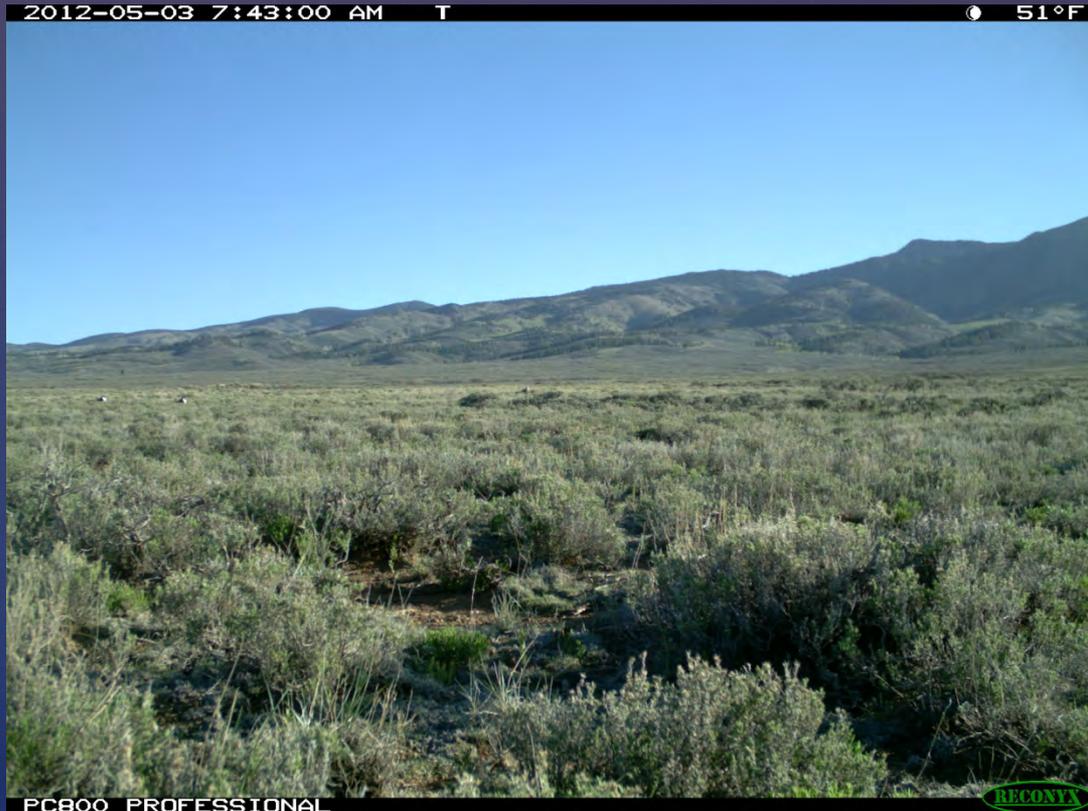


Permanent
Unofficial Roads





Remote Camera

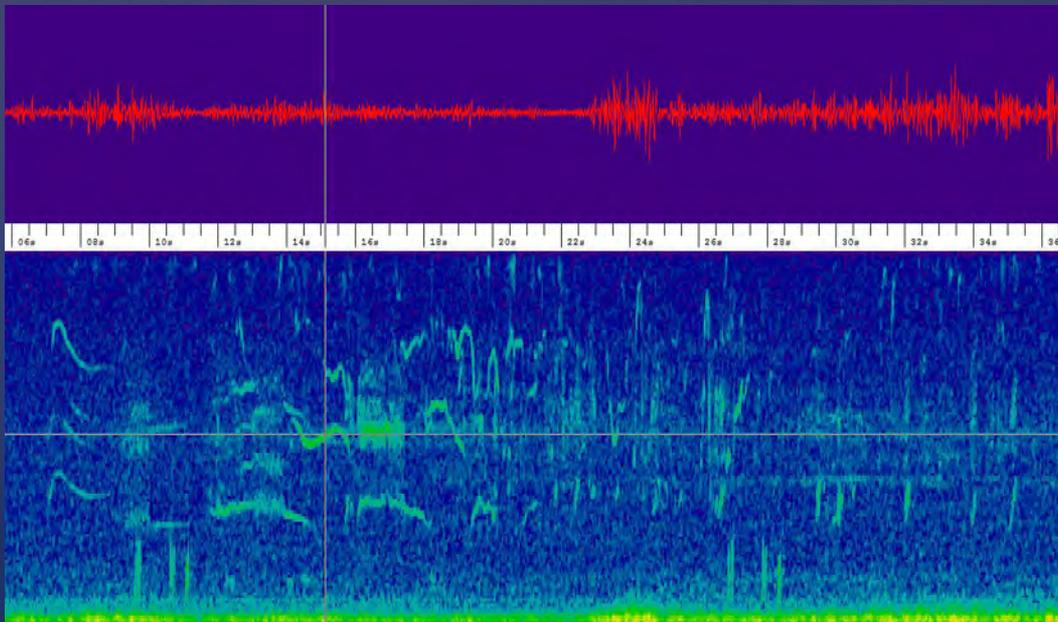
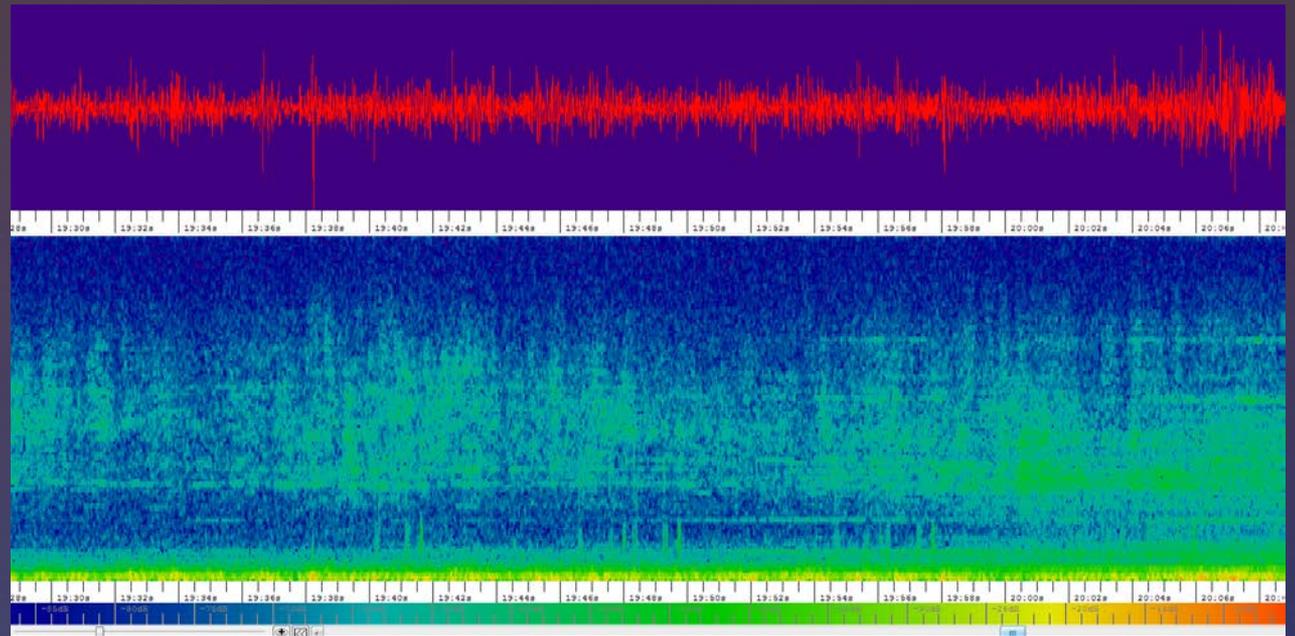


Acoustic Monitoring

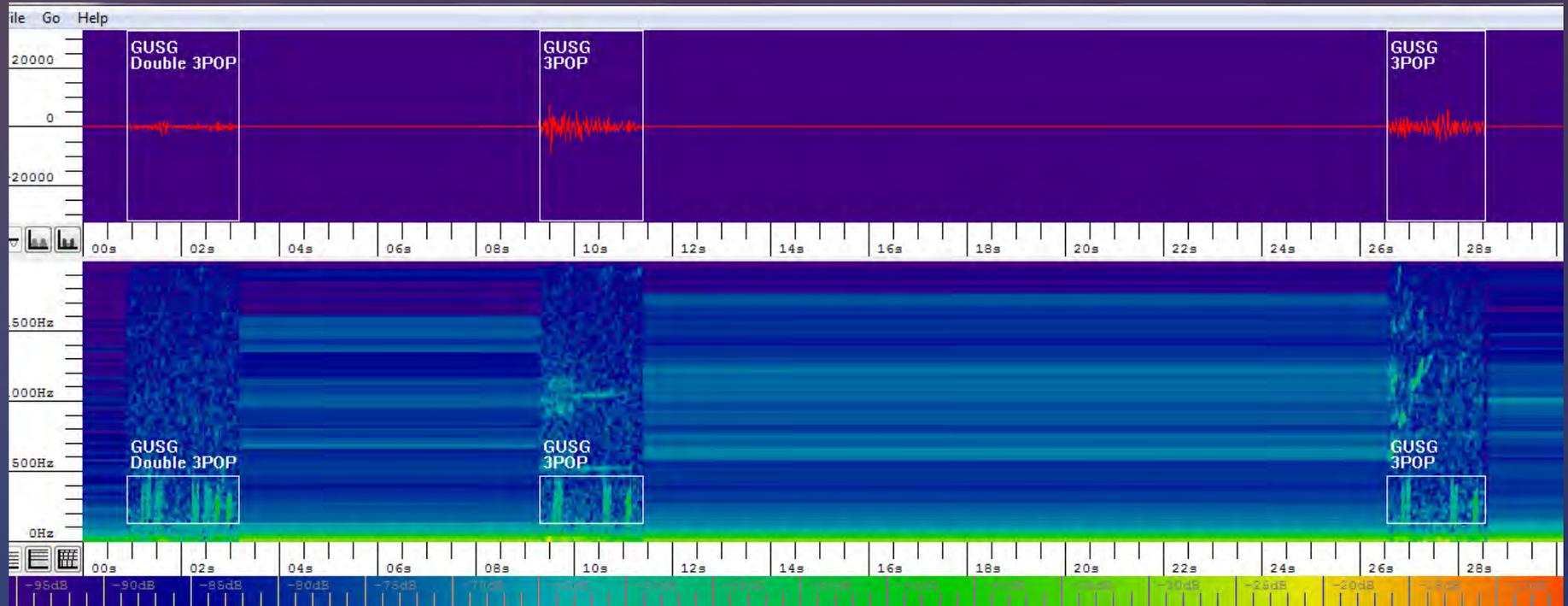
Wildlife Acoustics SM2Bat Units from BLM and USFS fitted with a non-ultrasonic microphone.

Record lek activity from March 16 to May 28, 3AM to 10AM.



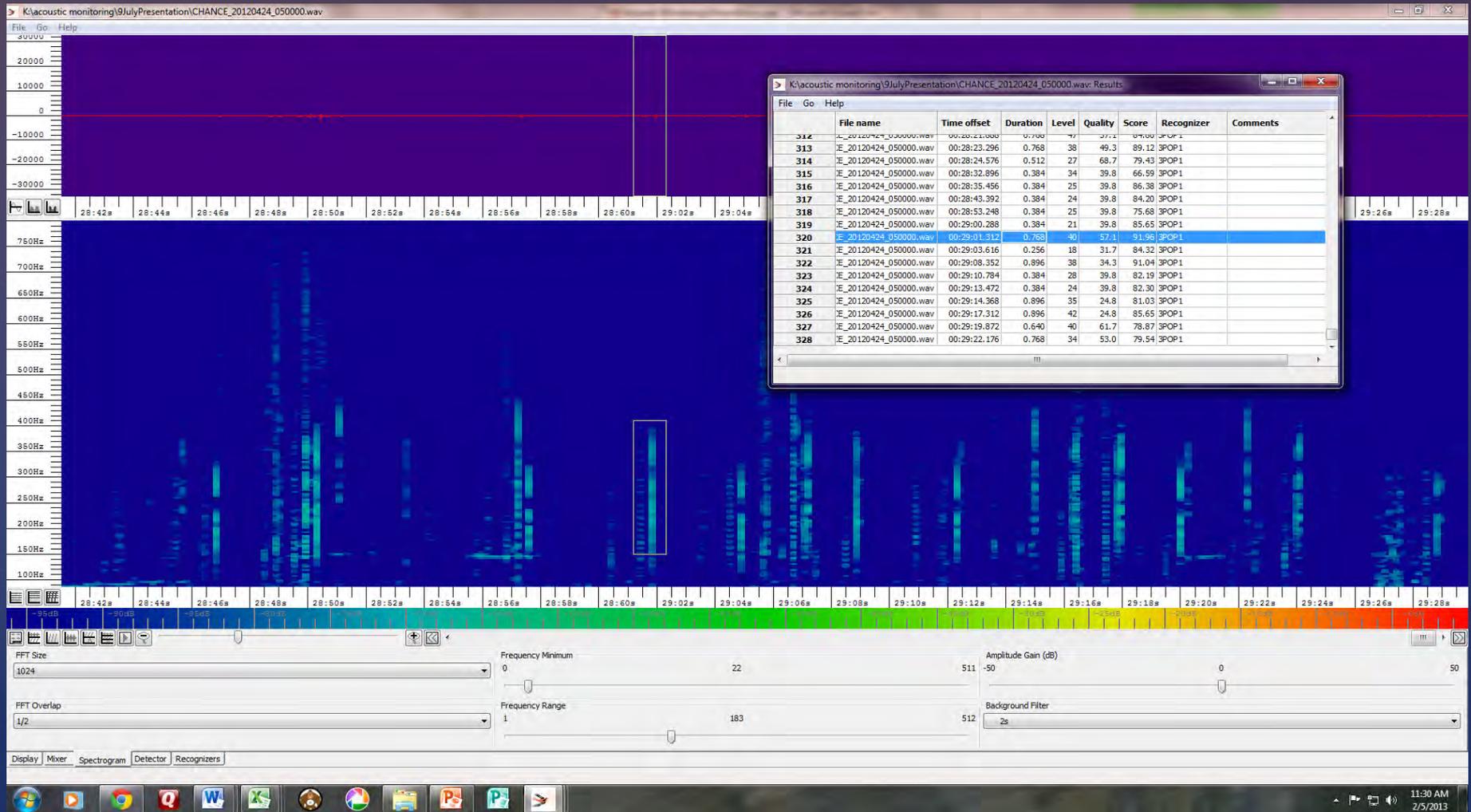


Building a recognizer....



Annotating a recording

Scan Recordings with Recognizer



Data Limitations.....

- False Positives
- False Negatives or missed vocalizations

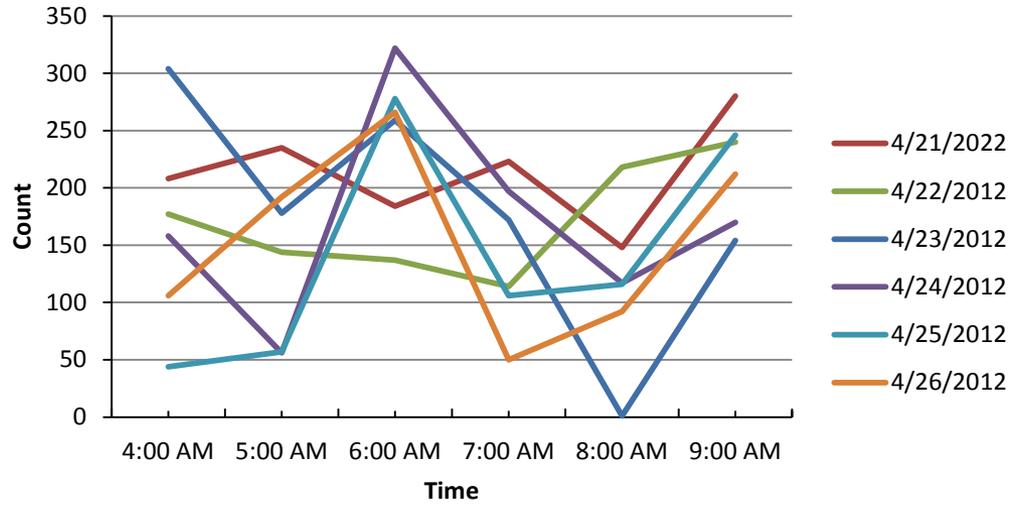
Data Utility.....

- Huge amounts of data – all consistently collected.
- Hourly, daily, season – long, measure of lek activity.

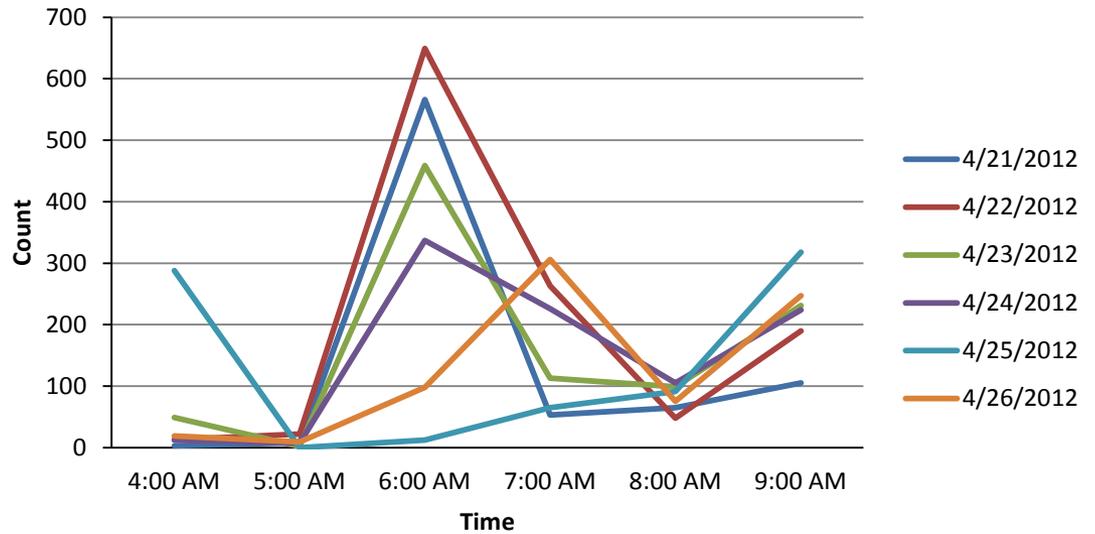
WHAT CAN THESE DATA TELL US?

- Presence/Absence of Grouse
- Measure of Activity on a Lek
 - More birds on lek = more hits
 - Intensity of display = more hits
- Comparisons Between Leks

Poncha Pass Lek



Razor Dome Lek



The end...



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Questions?