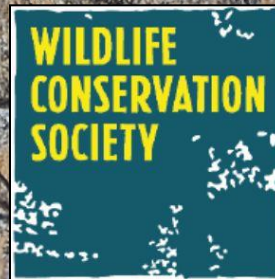
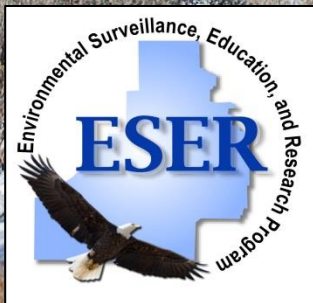


Sage-grouse and Bats: Management through Conservation Planning

Jericho Whiting

Gonzales-Stoller Surveillance, Idaho Falls



Outline

- **Why are these species an issue?**
- **What can be done to minimize project impacts and delays?**
- **What are the benefits of conservation planning?**



Photo by Devin Englestead

Idaho National Laboratory Site

- Established 1949
- Administered by DOE
- Leading center for nuclear, defense, and energy research
- Encompasses almost 900 mi²
- Near-pristine sagebrush steppe



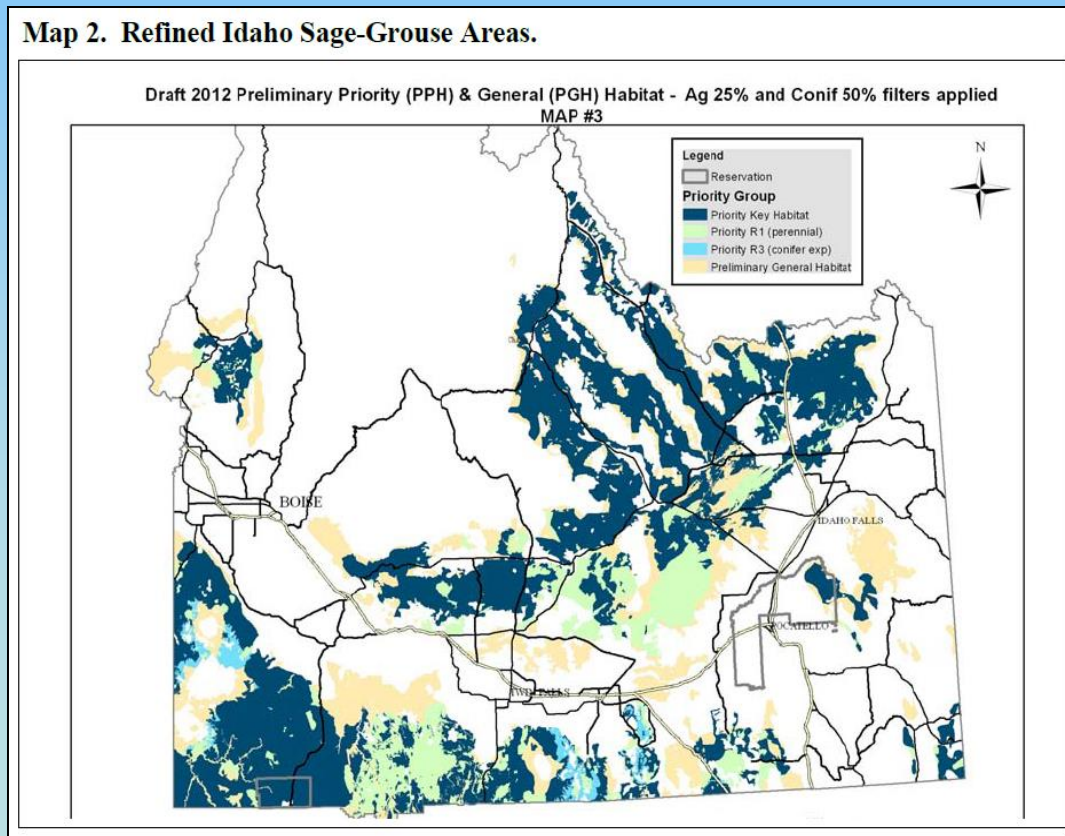
Sage-grouse is a Candidate Species

- **Warrants protection under ESA, but is precluded by higher listing priorities**
- **FWS must decide by October 2015 if it will list sage-grouse under ESA**



BLM/FS Environmental Impact Statement

- If Governor's Alternative is approved:
 - Priority habitat will guide management of sage-grouse and sagebrush



Candidate Conservation Agreement for INL Site

- **Voluntary agreement between DOE and FWS to address conservation of sage-grouse and their habitat**
 - **Remove or reduce threats to the species**
 - **FWS goal is to make a listing unnecessary**



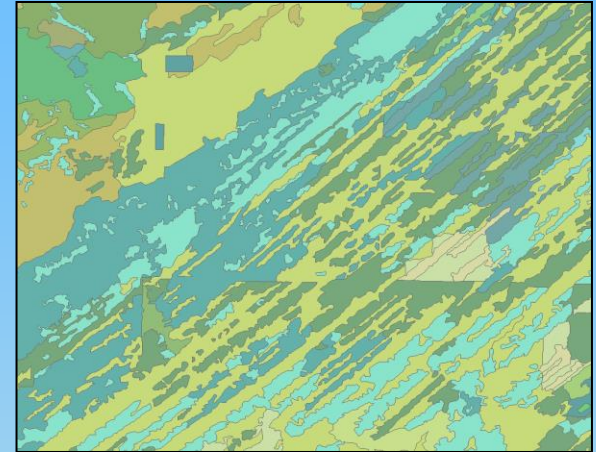
Goal for DOE: Provides a degree of certainty that the INL Site would be able to continue ongoing operations with minimal disruption should sage-grouse be listed.

Candidate Conservation Agreement with Assurances

- **Available to non-federal landowners**
 - **Remove or reduce threats to the species**
 - **Goal is to make a listing unnecessary**
- **Provides future regulatory certainty if the species is listed**
 - **No additional conservation measures**
 - **No additional restrictions on incidental take**
- **FWS can provide flexibility from other, rigid state-wide plans**

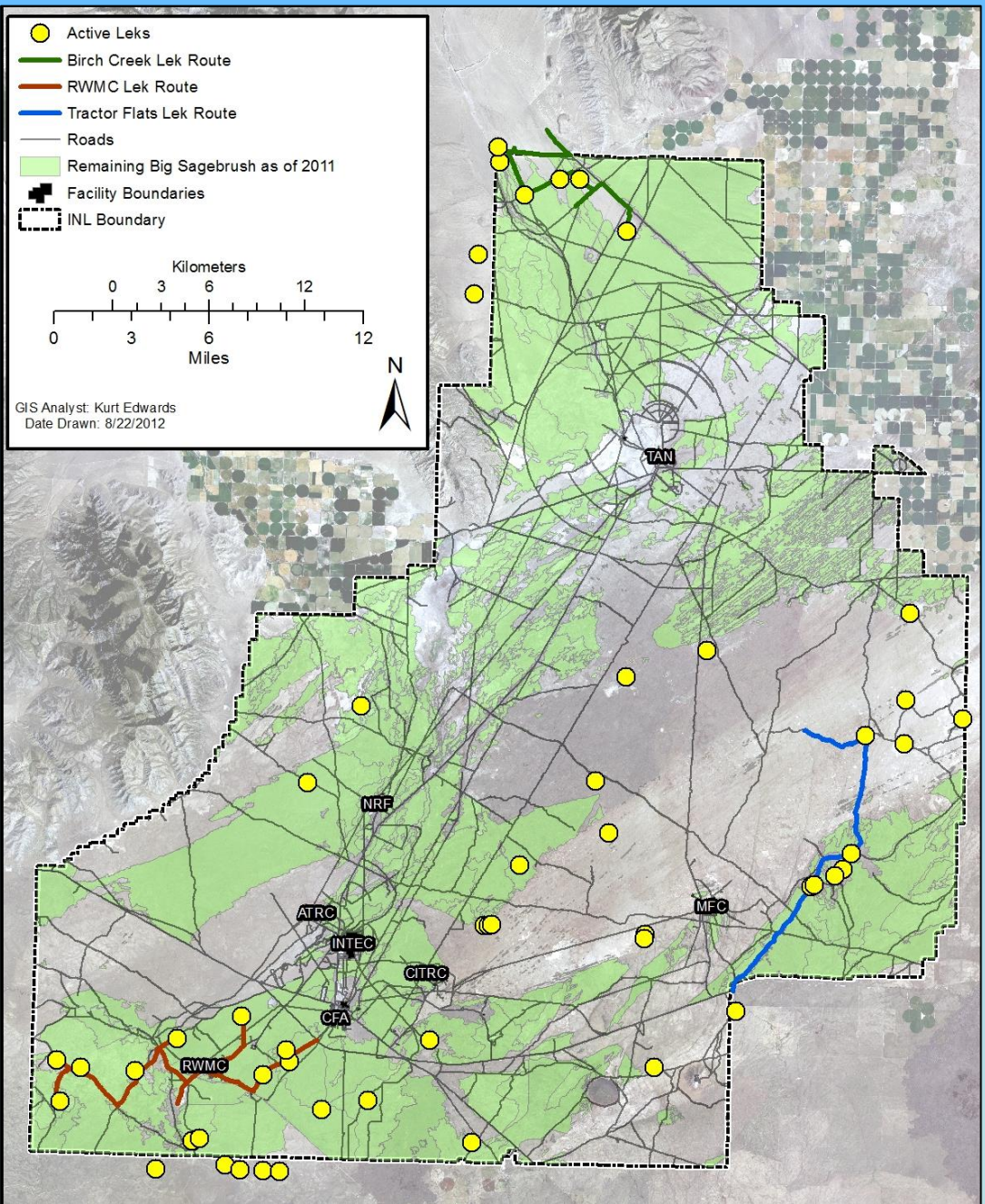
CCAA Process

- **Contact FWS**
- **Map habitat (sagebrush)**
 - Nesting and wintering habitat
- **Lek surveys**
 - Following IDFG protocols
- **Prepare and negotiate the agreement**
- **FWS would then complete an EA**

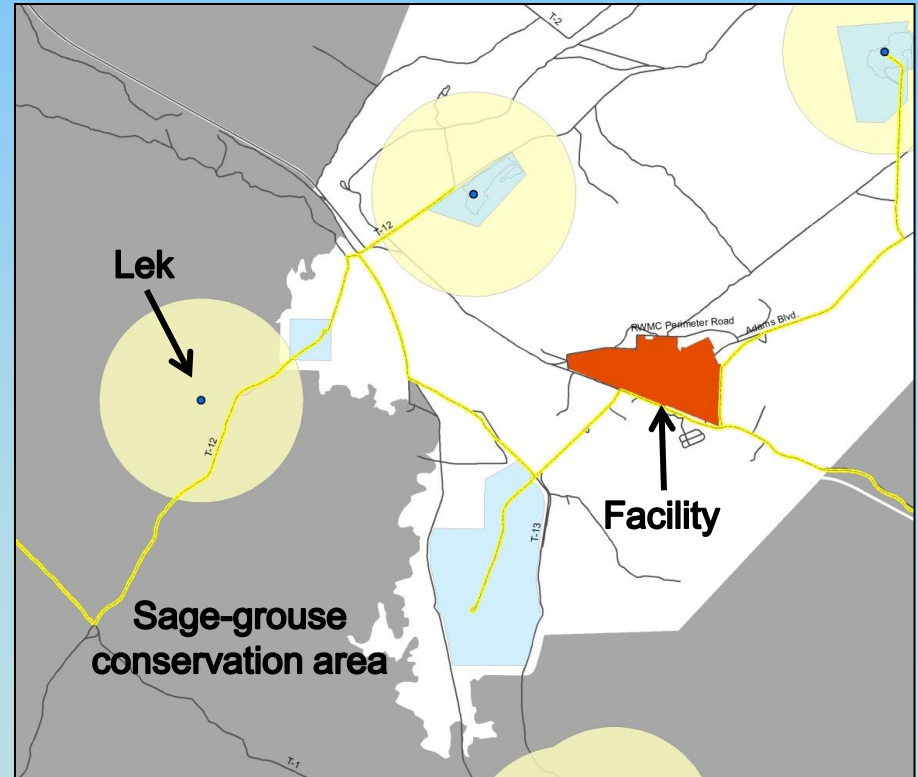
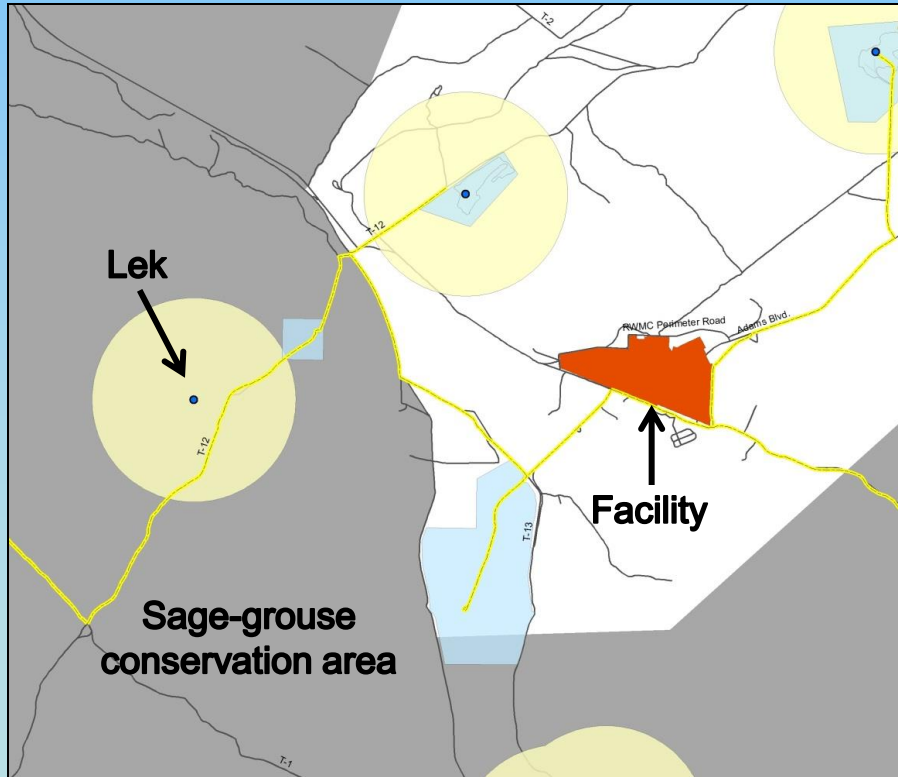


Greater Sage-grouse

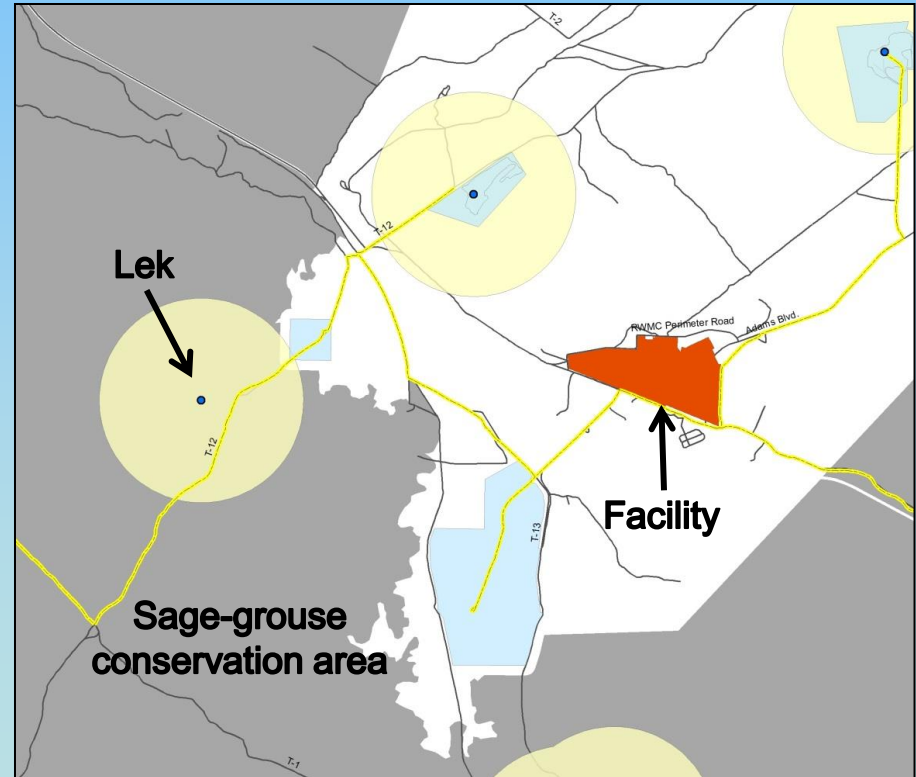
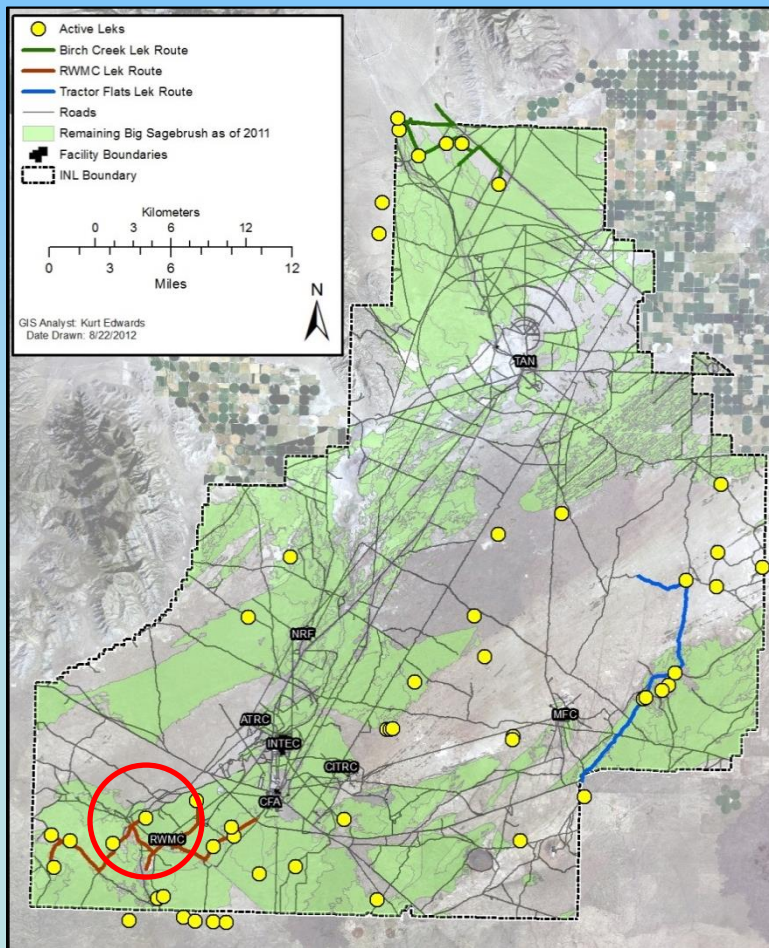
- **Lek route surveys**
 - Document trends of number of males on leks across years
- **Historic lek surveys**
 - Greater understanding of use of INL Site by grouse
- **Vegetation community map**
 - Quantified amount of sagebrush



Sage-grouse Conservation Areas are Tailored to allow Mission-priority Infrastructure

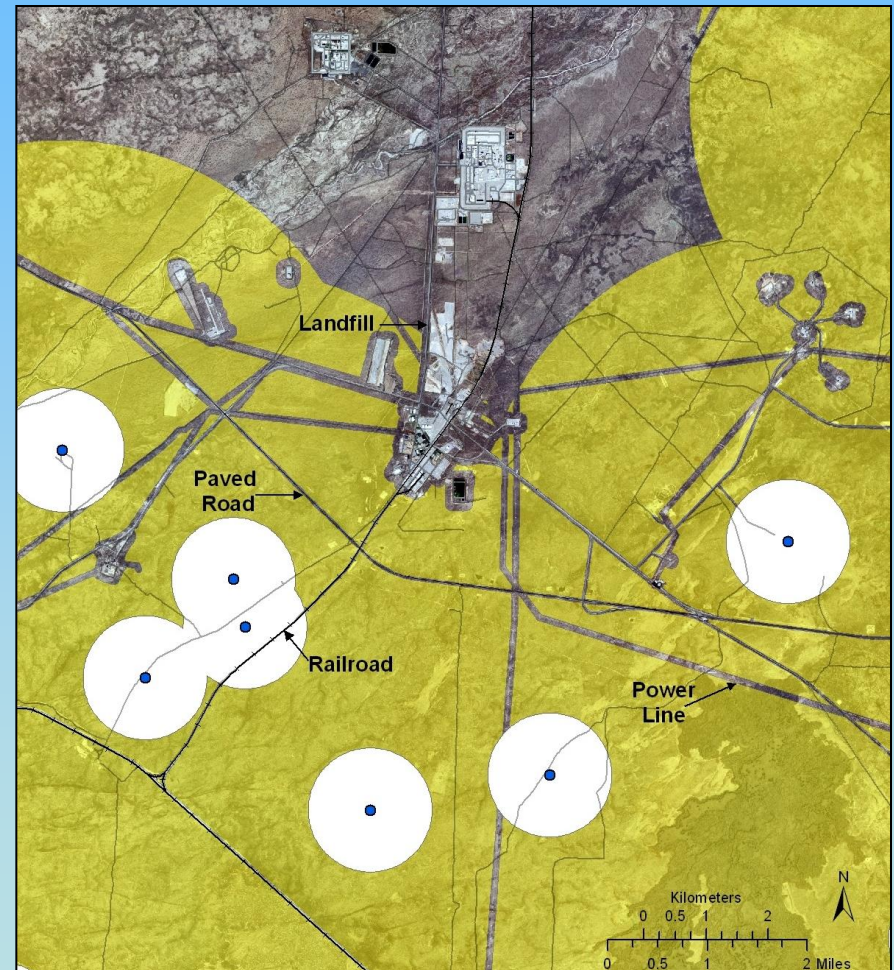


Sage-grouse Conservation Areas are Tailored to allow Mission-priority Infrastructure



Flexibility for Future Mission Needs

- Ability to renegotiate SGCA as mission needs change
- Knowledge of sage-grouse and habitat use on property provides ability to negotiate



Bats

- **Roles in ecosystem functions (i.e., insect control, plant pollination, and seed dissemination)**
- **Value of bats to agricultural industry ~ \$22.9 billion/year**
- **Declines in bat populations could have far-reaching consequences across biological communities**



Current Threats to Bats

- **White-nose syndrome**
 - Killed at least 6 million bats in seven species since 2006
- **Wind-energy development**
 - Expanded drastically since 2004
- **Habitat loss and fragmentation**
- **Several species petitioned for ESA listing**



Bats on the INL Site

Common Name	WNS	Distribution, Habitat, and Occurrence
Big Brown Bat*	Yes	Sitewide, buildings and caves, year round
Hoary Bat		Patchy, riparian and junipers, autumn
Little Brown Myotis	Yes	Sitewide, buildings, summer and autumn
Pallid Bat		Patchy, shrub lands, autumn
Red Bat		Patchy, caves, autumn
Silver-haired Bat		Patchy, riparian and junipers, autumn
Townsend's Big-eared Bat*	Yes	Sitewide, caves, year round
Western Long-eared Myotis	Yes	Patchy, caves and junipers, summer and autumn
Western Small-footed Myotis*	Yes	Sitewide, buildings and caves, year round

***Resident**

Bats on the INL Site

Common Name	WNS	Distribution, Habitat, and Occurrence
Big Brown Bat*	Yes	Sitewide, buildings and caves, year round
Hoary Bat		Patchy, riparian and junipers, autumn
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*Resident

Conservation Management Plan Monitoring

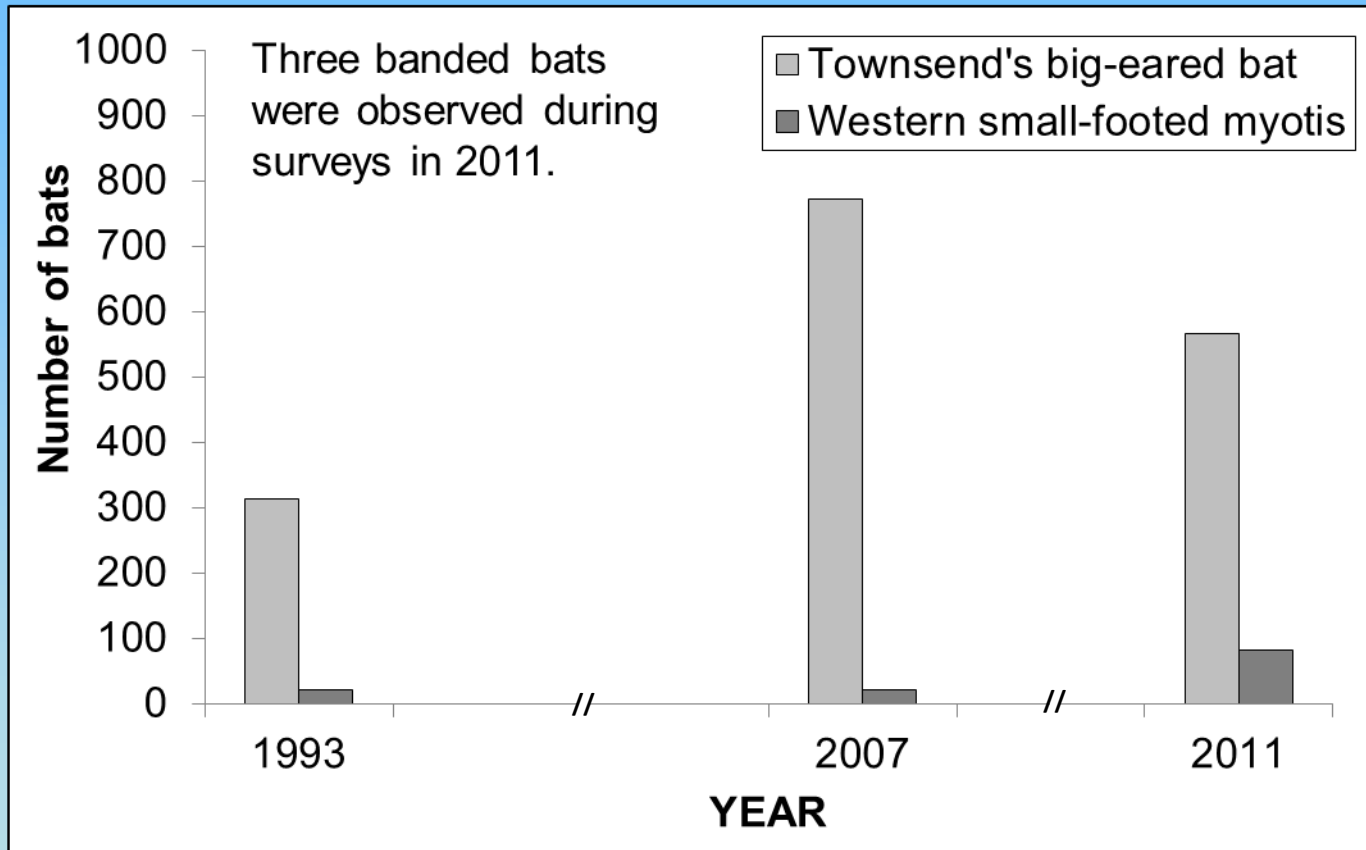
Key Ecological Attribute	KEA Indicator	KEA Rating
Wintering population size	# of individuals in hibernacula	549
Hibernacula sites occupied	# of caves utilized	9
Species richness	# species hibernating on INL Site	3
	# species at caves during migration	5-6
Summer roost sites	# caves used as day or night roosts	??
Foraging areas	# man-made ponds	7



Cave Surveys

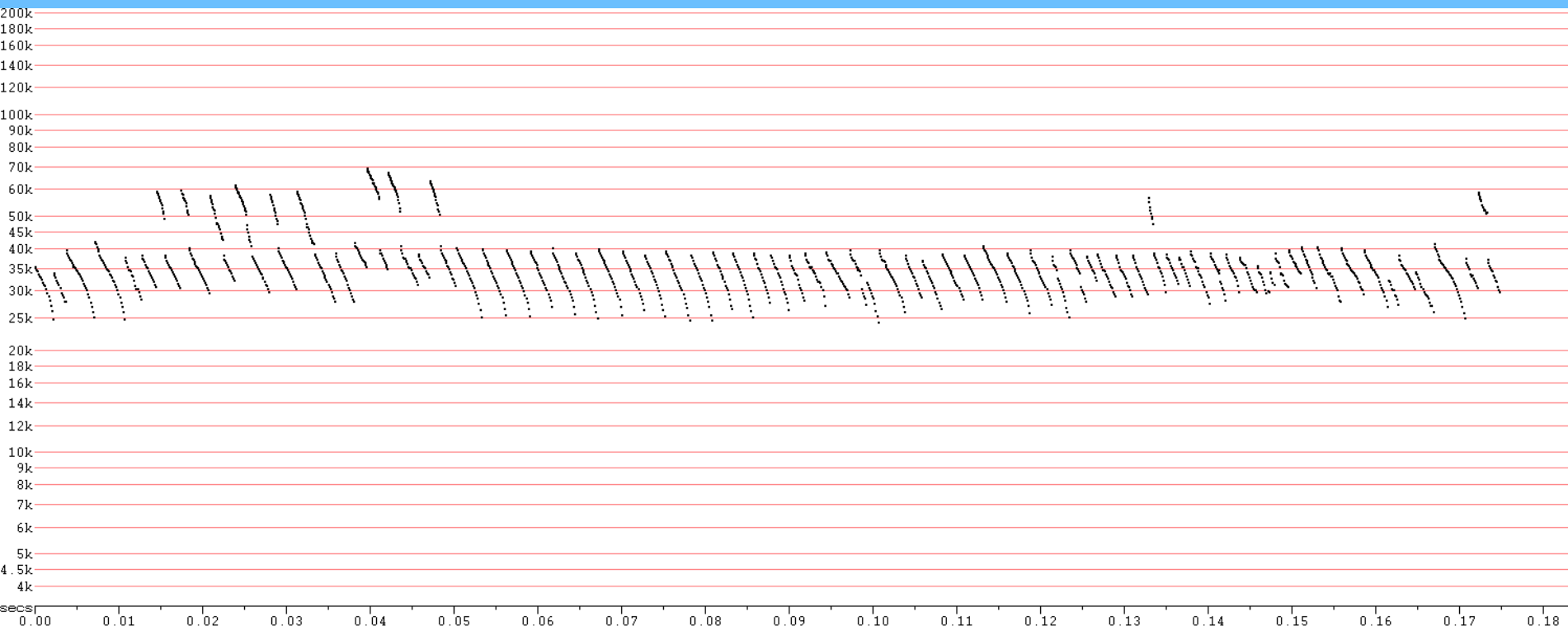


Middle Butte, Aviator, and Rattlesnake Caves

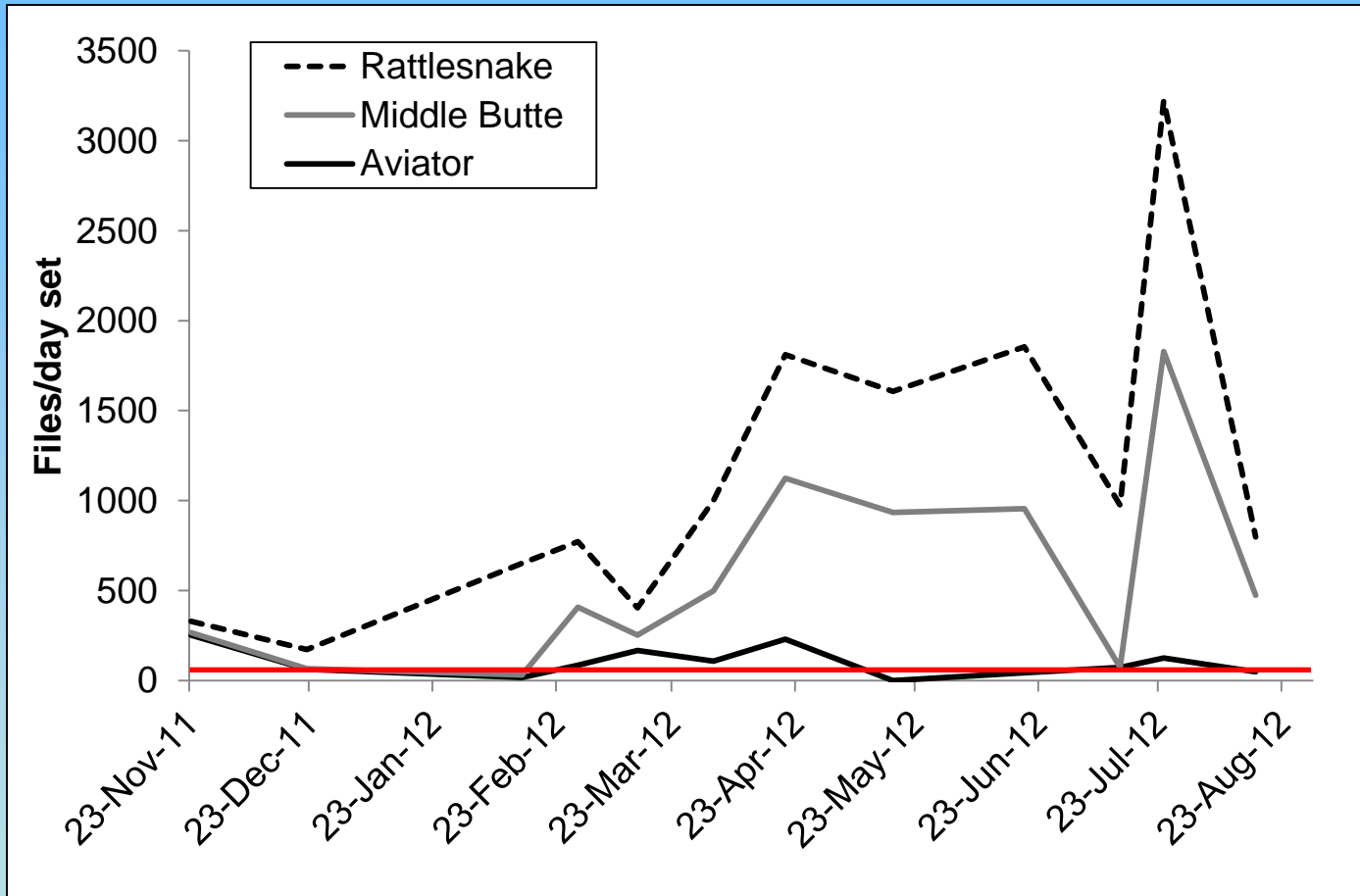


- **8 at facilities and at the 8 largest known hibernacula**
- **4 randomly deployed at the remaining caves**
- **1 detector around Middle Butte**
- **1 randomly placed around Site**

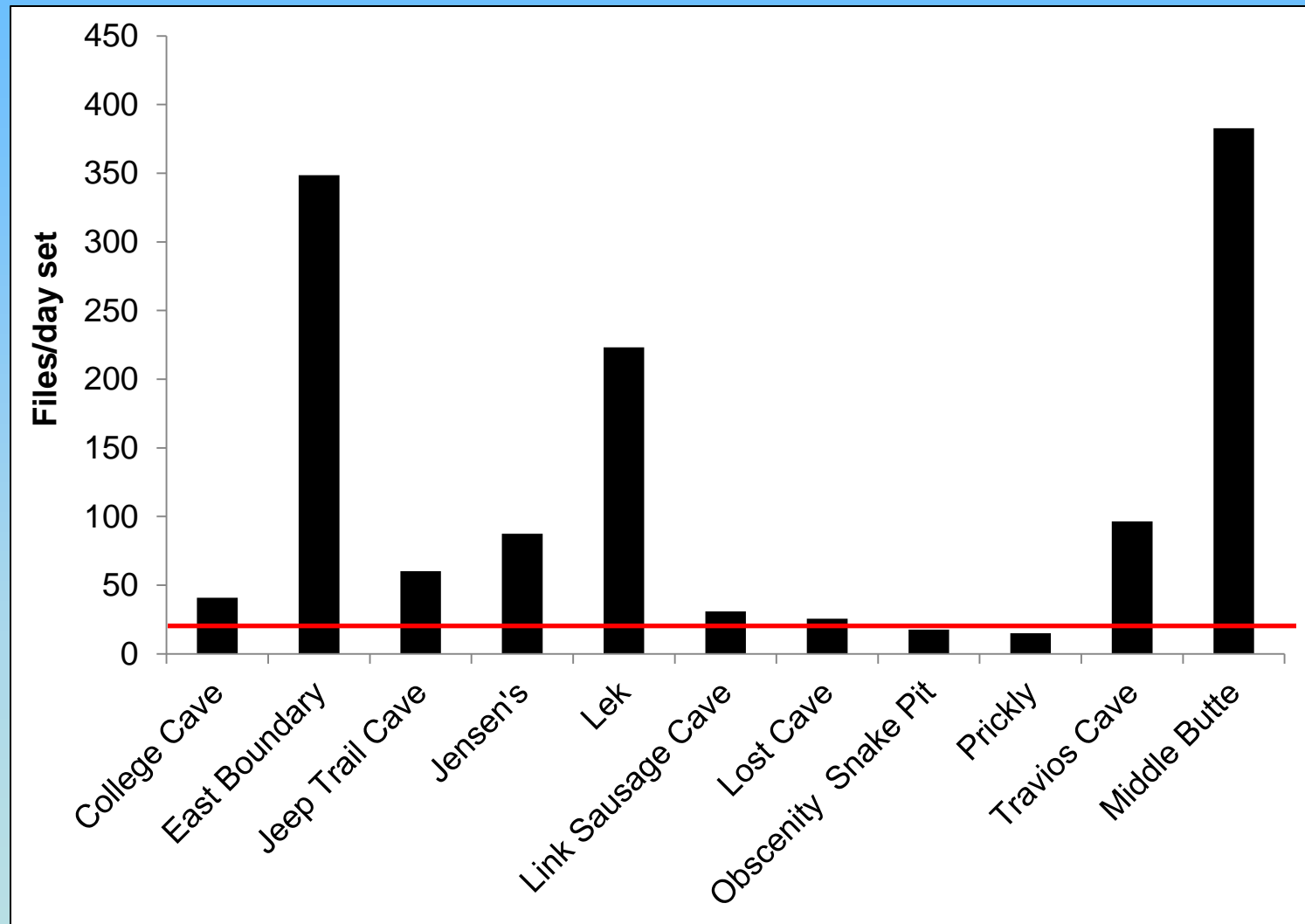


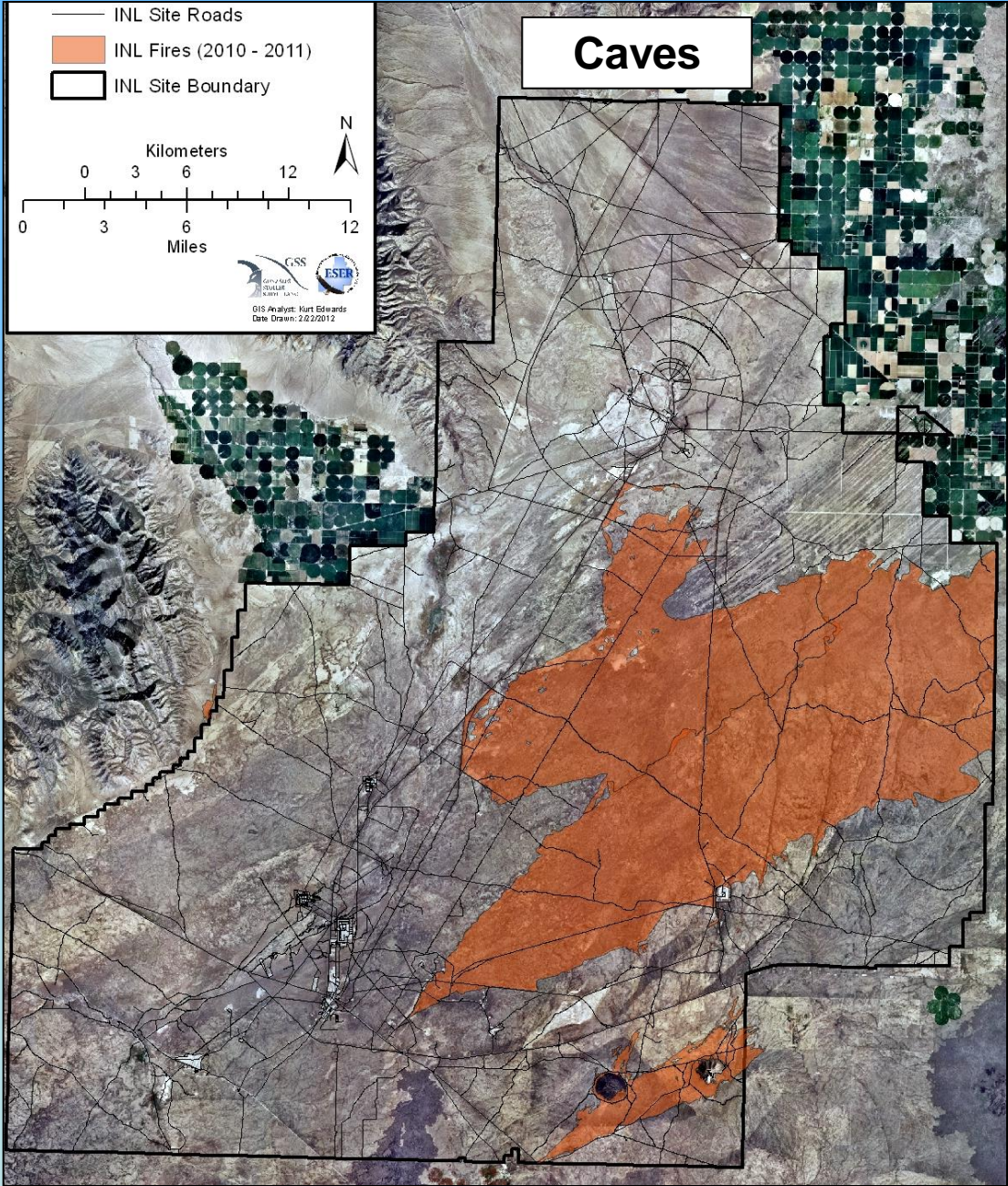


AnaBat Files at 3 Caves

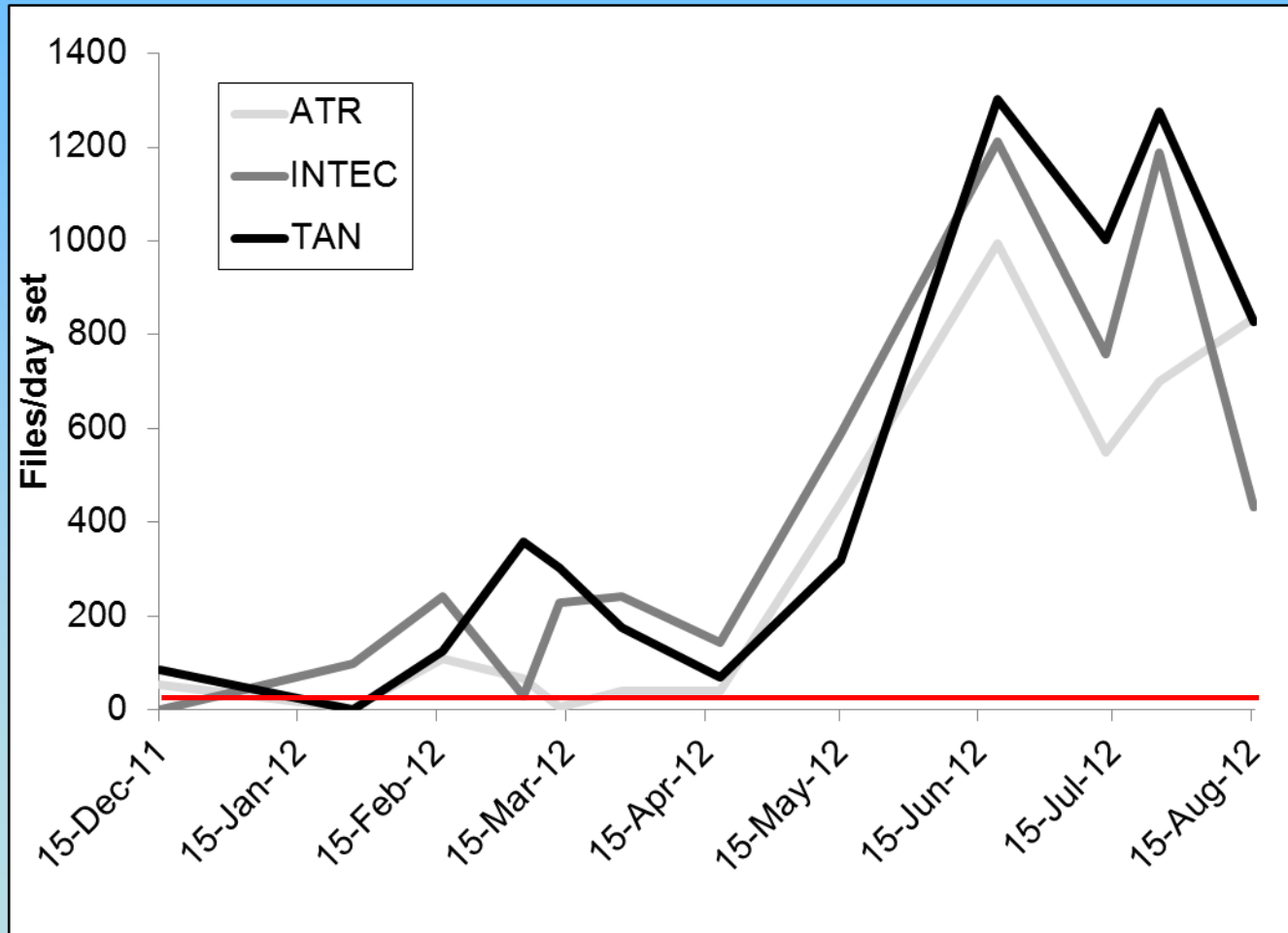


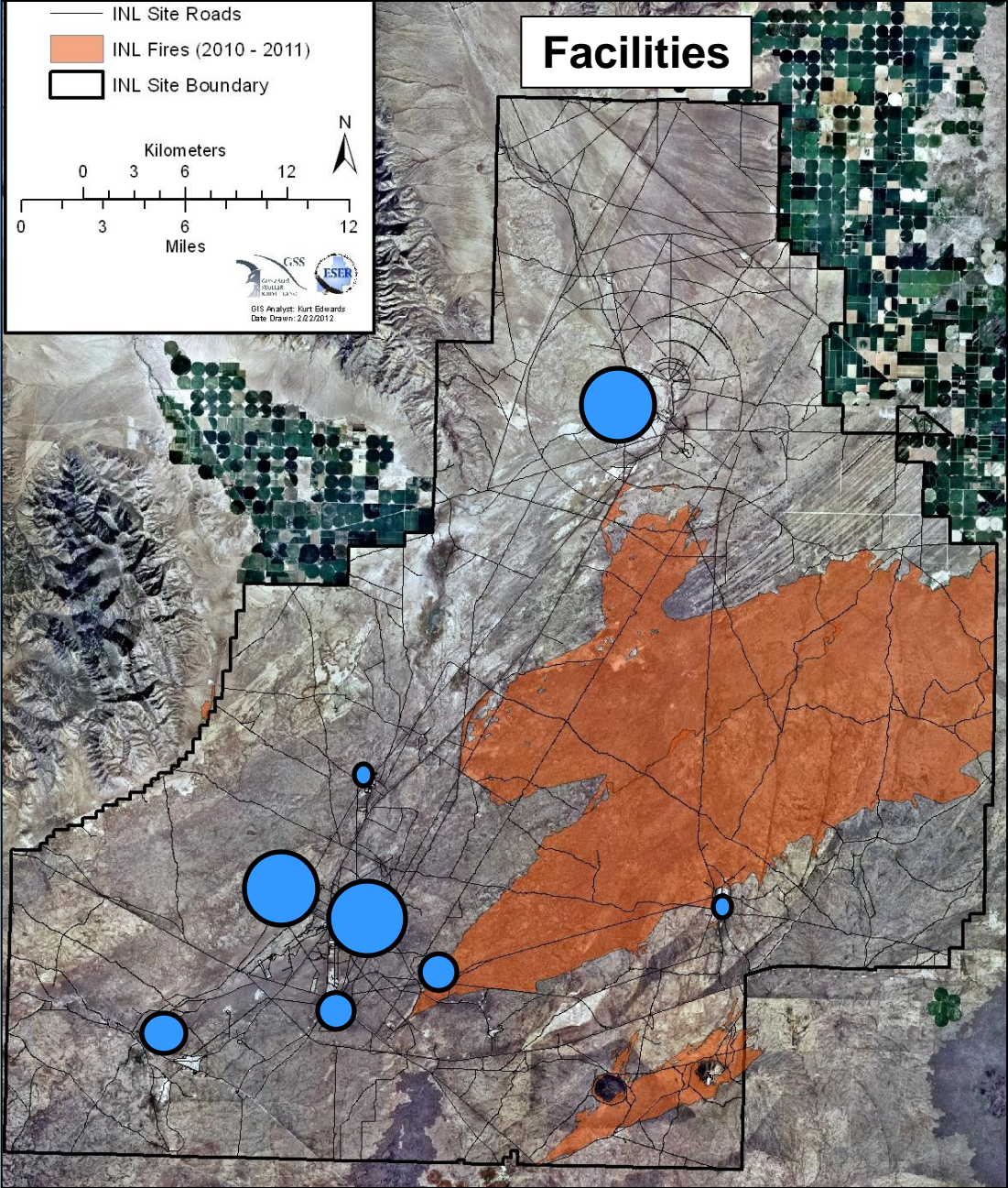
AnaBat Files at Caves and other Habitat

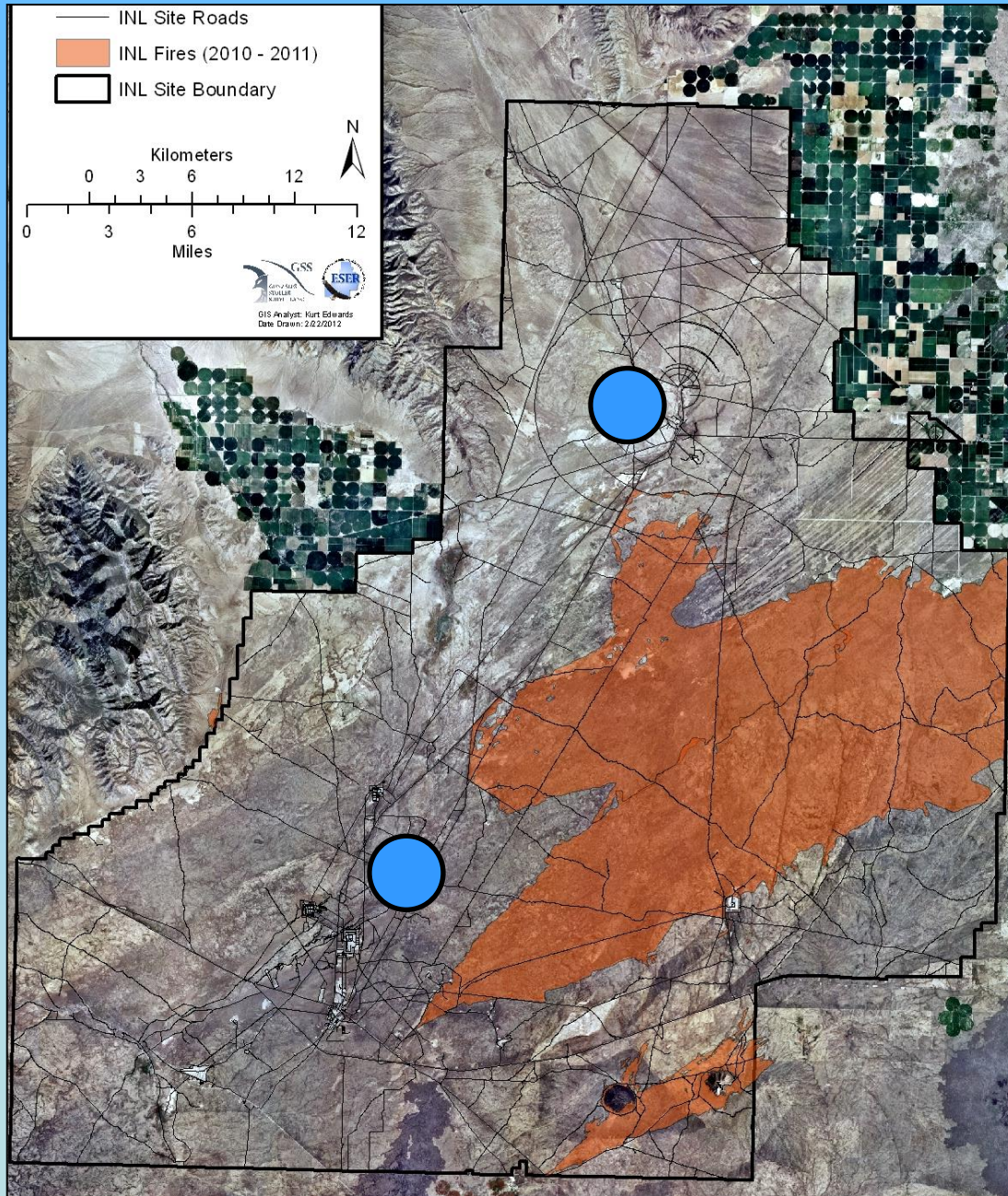




AnaBat Files at Facilities

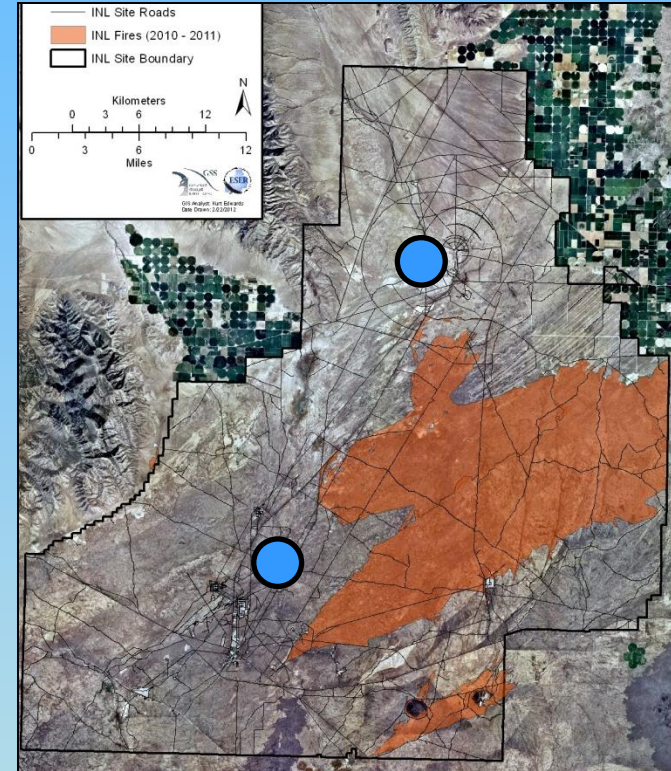






Conservation Plan

- **Contact FWS**
- **Map habitat**
 - Hibernation and roosting sites
- **Monitor important hibernacula**
- **Prepare and negotiate the agreement**
- **FWS would then complete an EA**



Thank You



Photo: Q. Shurtliff