

# DESERT BIGHORN SHEEP

Jeff Cole, Wildlife Manager

[jcole@hnndfw.org](mailto:jcole@hnndfw.org)

928-871-6595

**Department of Fish and Wildlife  
Research and Management Section**

# TODAY'S PRESENTATION

- ▶ **Desert Bighorn sheep**
- ▶ **History**
- ▶ **Status on the NN**
- ▶ **Management**



# GOAL

**The Dept. of Fish and Wildlife's goal is to restore and protect the Bighorn population by increasing the population and establishing additional herds of sheep**

**Bighorn sheep and their habitat are protected on the Navajo Nation**



# CULTURAL SIGNIFICANCE

- ▶ Traditionally bighorn sheep supplied food, clothing, and other products
- ▶ Parts are used for medicinal and ceremonial purposes
- ▶ Goal to offer hunts for Tribal Members



# ECONOMIC SIGNIFICANCE

NON-NAVAJOS WILL PAY \$35,000 TO \$57,000 FOR A HUNTING PERMIT



# BIGHORN SHEEP MANAGEMENT

- ▶ 1997 radio telemetry study initiated. **GOAL:** To provide information necessary for effective conservation and management.



- ▶ size
- ▶ distribution
- ▶ habitat/diet requirements
- ▶ carrying capacity

# BIGHORN SHEEP MANAGEMENT CONT.

## Threats to Bighorn sheep

1. Disease from domestic/feral sheep and goats
2. Competition with livestock for forage
3. Poaching
4. Predation
5. River recreation
6. Accidents



# HISTORY OF THE BIGHORN SHEEP POPULATION

- ▶ bighorn sheep were fairly numerous ...until the 1860's" (William Fair, 1942)
- ▶ 1963 – report of six BHS on the San Juan River
- ▶ 1979 – 1 confirmed BHS
- ▶ 1980's – DFW initiated surveys of BHS (~15-25 BHS)
- ▶ 1997 – Study initiated (pop. 34 animals). 16 radio collars deployed.



# HISTORY OF THE BIGHORN SHEEP POPULATION - CONTINUED

NOV. 2002 – 13 MORE RADIO-COLLARS DEPLOYED

2003 – A VIABLE POP. (78-80 BHS)

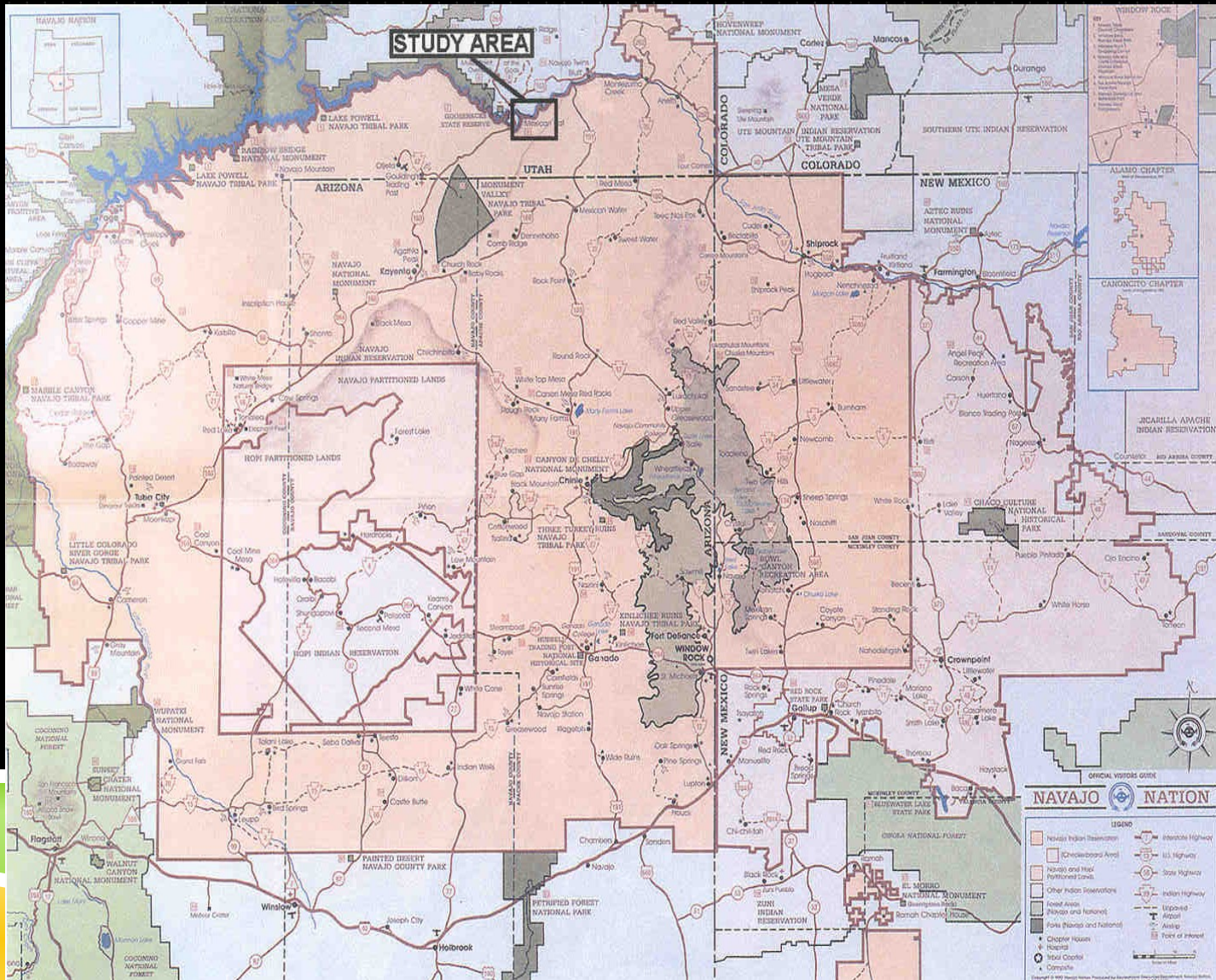
2004 – 19 ACTIVE RADIO COLLARS IN THE UPPER SJR  
CANYON

2008 TRANSPLANT 24 SHEEP TO LAKE POWELL

2011 RADIO COLLARED MORE SHEEP ON RAPLEE RIDGE HEARD AND  
TRADED 20 SHEEP TO ARIZONA FOR A TRANSPLANT

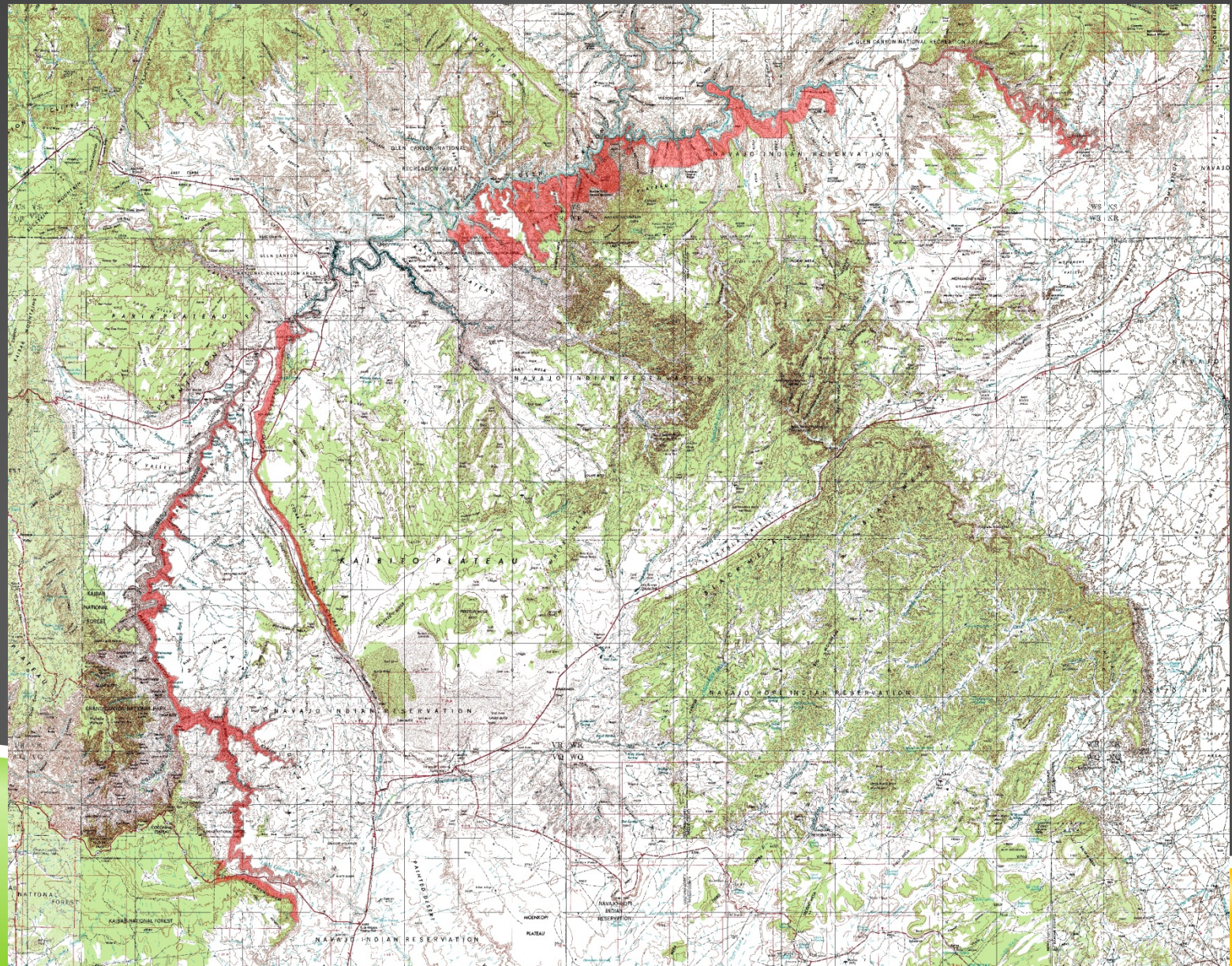
2015 – 20 MORE SHEEP TRANSPLANTED TO LAKE POWEL HERD

# LOCATION OF BIGHORN SHEEP RANGE @1996





# BIGHORN SHEEP POPULATION TODAY





# DISEASE FROM DOMESTIC SHEEP

## What can we do?

-prevent the domestic sheep and Bighorn from interacting as much as possible

## How?

Keeping a close eye on our sheep

If a wild sheep comes in contact with domestic sheep we will remove that sheep from the wild

Any sheep we handle gets preventative disease treatments and disease testing



# COMPETITION WITH LIVESTOCK

- ▶ **Competition for forage**
- ▶ **There are no grazing permits in the Raplee Ridge area**
- ▶ **Trespass livestock were removed and fences were installed to exclude them**



# POACHING



- ▶ **One confirmed case**
- ▶ **Radio-collared ram**
- ▶ **Carcass found without head**
- ▶ **S. side of river closed to vehicles. Two locked gates on the road to Raplee Ridge**

# OTHER THREATS TO BHS

- **PREDATION**

Keen eyesight and rugged terrain  
minimize predation

Mtn. lion, feral dogs, coyote,  
eagles

- **ACCIDENTS**

Falls and fighting

- **OTHER**

Bacterial infections resulting  
from ingesting  
non-native weeds





# BACTERIAL INFECTION FROM A NON-NATIVE GRASS – SUMMER 2001



*Bromus tectorum* (cheat grass) ended this ram's life



# RIVER RECREATION

- ▶ River closed to camping
- ▶ No dogs allowed on river

Preparing to release the sheep



# CONCLUSION

- ▶ **What have we have accomplished so far?**
  - ▶ **Established 3 herds of sheep**
  - ▶ **Developed a Bighorn Sheep Management Plan**
  - ▶ **Population has increased from 34 to over 500**
  - ▶ **Reduced threats to the sheep**
  - ▶ **Established a bighorn sheep exhibit at the Zoo**
  - ▶ **Pieces of horn are available to the public for ceremonial use**
- ▶ **What Will We Continue to do?**
  - ▶ **Monitor the population**
  - ▶ **Seek additional transplant locations**