Sheldon National Wildlife Refuge

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Sheldon-Hart Mountain National Wildlife Refuge Complex

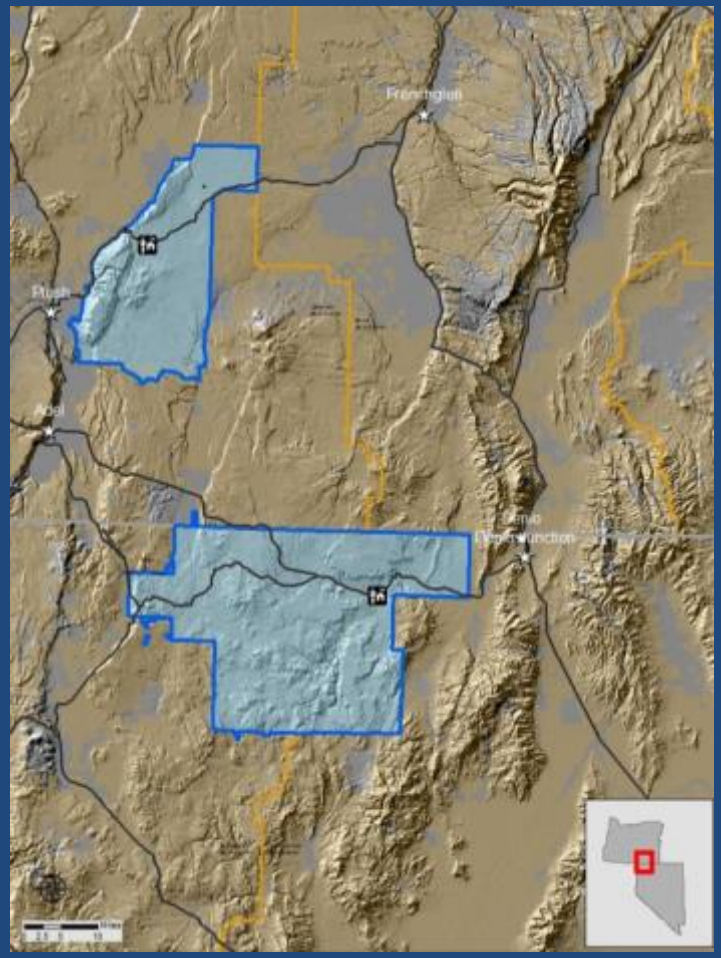
Nevada Legislative Committee on Public Lands

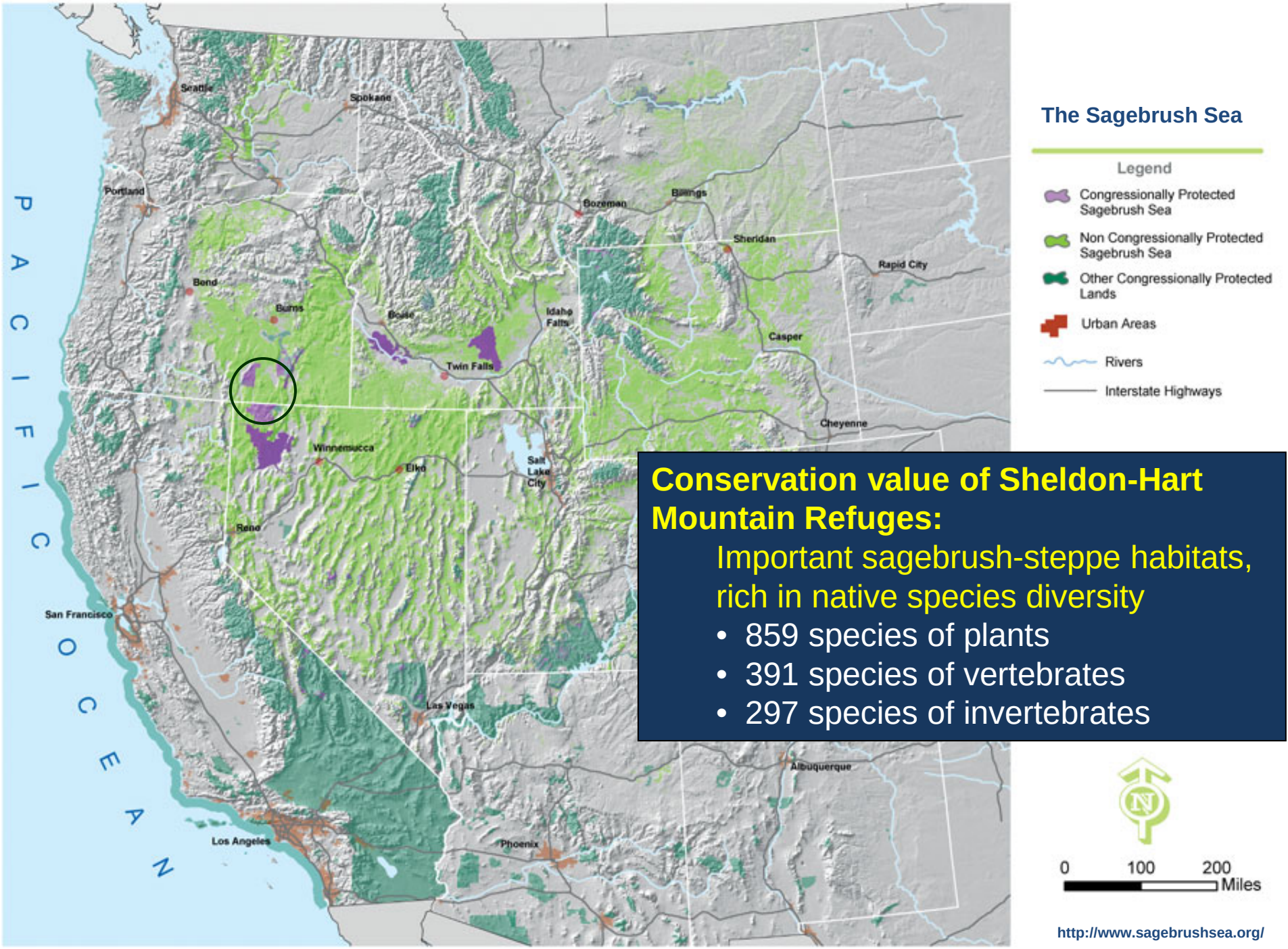
April 15, 2016

EXHIBIT I - LANDS
Document consists of 28 pages.
Entire exhibit provided.
Meeting Date: 4-15-16

Sheldon-Hart Mountain National Wildlife Refuge Complex

- 851,000 acres of sagebrush-steppe, high desert habitats managed as a Complex:
  - Sheldon NWR - 573,000 ac
  - Hart Mountain NAR - 278,000 ac
- Complex Office located in Lakeview, OR
- 14 permanent full time staff
  4 permanent career seasonal fire crew
  6 temp seasonal fire crew
  3 temp seasonal biological interns
  2 temp seasonal maintenance workers





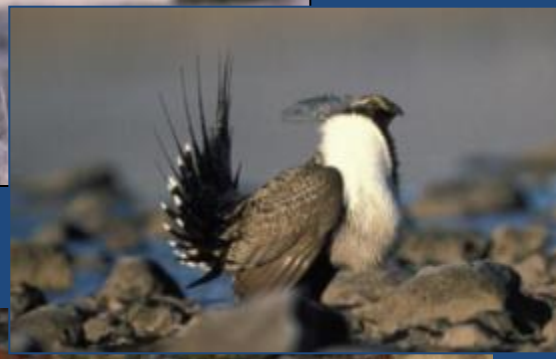
Conservation value of Sheldon-Hart Mountain Refuges:

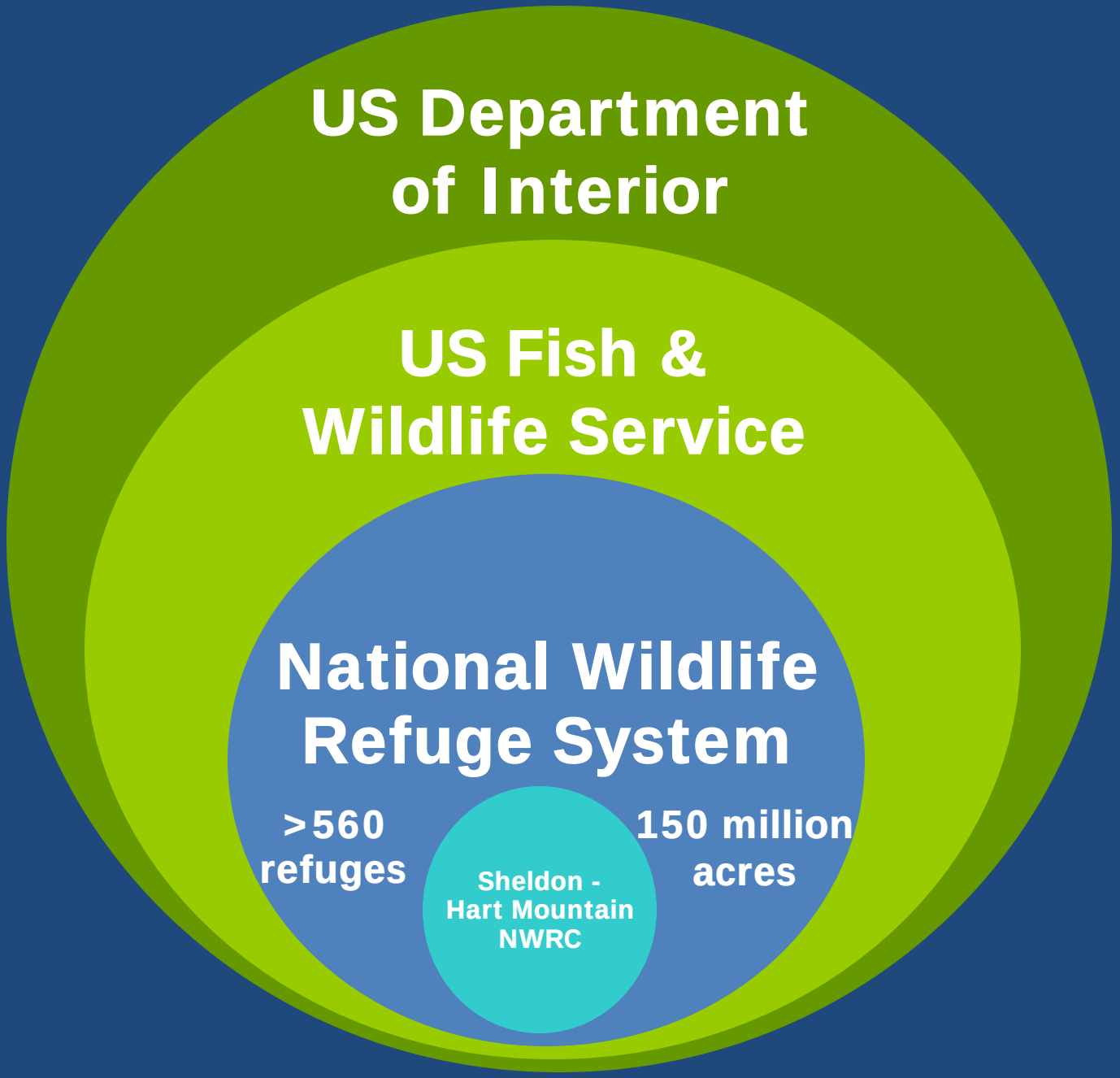
Important sagebrush-steppe habitats, rich in native species diversity

- 859 species of plants
- 391 species of vertebrates
- 297 species of invertebrates

Wildlife Species

- Pronghorn antelope
- Sage grouse
- Mule deer
- California bighorn sheep
- American pika
- Pygmy rabbit
- Migratory birds
  - Songbirds
  - Raptors
- Fish
  - Cutthroat & redband trout
  - Tui chub
  - Pan fish




US Department of Interior
US Fish & Wildlife Service
National Wildlife Refuge System
>560 refuges
150 million acres
Sheldon - Hart Mountain NWRC

Refuge System Guiding Principles

National Wildlife Refuge System Administration Act

- Congressionally mandated, strong and singular wildlife mission, i.e., “Wildlife First” (*to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans*)

- Comprehensive Conservation Plan required to provide management direction over a 15-year horizon

- Any use must first be found “Compatible” with the purpose of the refuge and the mission of the system

- Managed for biological integrity, diversity, and environmental health

- The “Big Six” priority public uses are to be allowed if compatible.

“Big Six” Priority Public Uses

Hunting

Fishing

Wildlife photography

Wildlife observation

Environmental interpretation

Environmental education

Sheldon National Wildlife Refuge
Pre - Refuge

Mid-1800s – 1930s

- Intensive livestock grazing – peak ~1907
- Cattle, sheep, and horses

1920s

- Concerns grow:
  - American pronghorn numbers declining from >20 million to <20,000
  - Overgrazing, and deterioration and erosion of the range
- NW Nevada and SE Oregon recognized as an area important for pronghorn
- Boone and Crockett Club and the National Audubon Society purchase private lands at Last Chance Ranch and donate them as a nucleus for an antelope refuge

Sheldon National Wildlife Refuge Establishment

January 26, 1931

- President Hoover issues Executive Order 5540 to establish Charles Sheldon Wild Life Refuge (~31,000 acres)

Purpose - “as a refuge and breeding ground for wild animals and birds”

Administration – USDA Bureau of Biological Survey (now FWS)

“Little Sheldon”

Sheldon National Wildlife Refuge Establishment

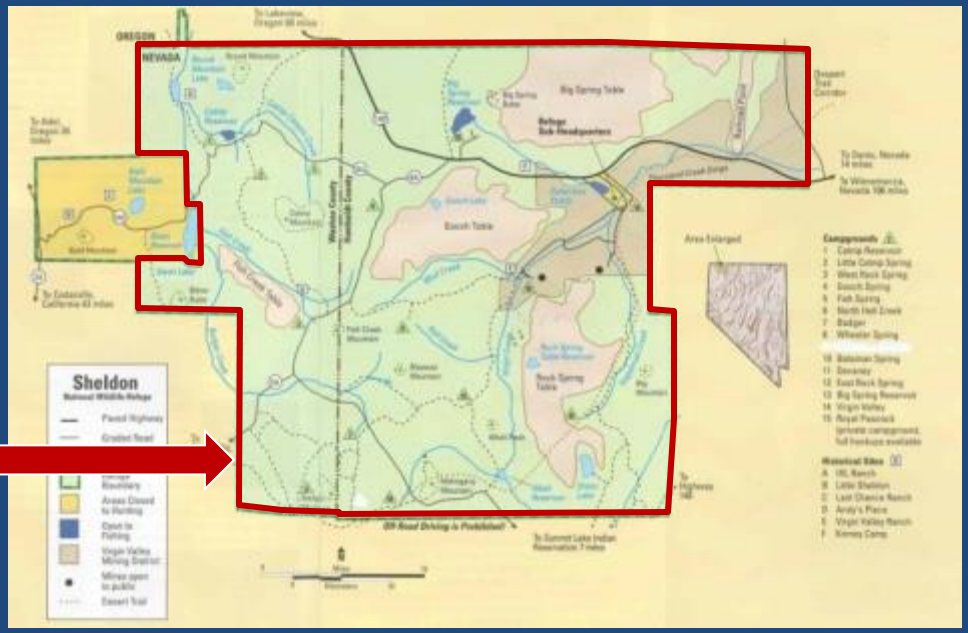
December 21, 1936

- President Roosevelt issues Executive Order 7522 to establish Charles Sheldon Antelope Range (539,000 acres)

Purpose - "for the conservation and development of natural wildlife resources [primarily pronghorn] and for the protection and improvement of public grazing lands and natural forage resources."

Administration: jointly by the DOI Division of Grazing (now BLM) and the "FWS"

"Game Range"



Sheldon National Wildlife Refuge Joint BLM – FWS Management

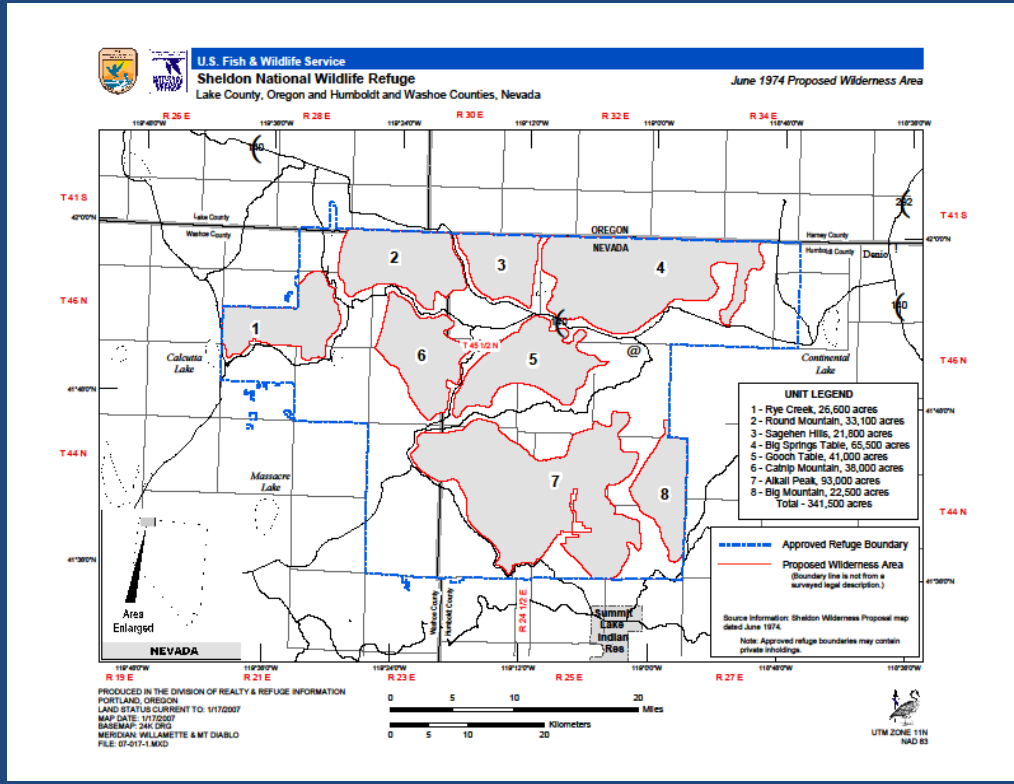
1936 – 1976

- Game Range under joint jurisdiction of “BLM” and “FWS”
- Grazing under the exclusive jurisdiction of “BLM”
- Forage resources first to be utilized to sustain a maximum of 3,500 pronghorn and other wildlife
- 20,000 AUMs average grazing use – cattle and horses
- Focus on
  - Development of water sources
  - Treatments (including sage brush removal) to increase grasses
  - Predator control (ended 1968)

Sheldon National Wildlife Refuge Proposed Wilderness

1974

- President proposed 341,500 acres
- Never designated by Congress
- FWS policy requires proposed areas to be managed as wilderness



Sheldon National Wildlife Refuge FWS Management

1976 – Game Range Act

- Gives sole jurisdiction of game ranges (including Sheldon) to FWS

1978 – Public Order 5634

- Directs FWS to manage grazing in accordance with NWR System Administration Act
- Combined into one unit designated Sheldon National Wildlife Refuge

1980 – Renewable Natural Resources Management Plan & EIS

- Grazing to be managed to support wildlife management objectives (compatible use standard)
- 15,668 AUMs allocated
- 34% of refuge excluded from grazing on key wildlife winter areas
- Fencing to better manage cattle distribution
- Riparian and stream channel restoration

Sheldon National Wildlife Refuge FWS Management

1994 – Grazing Retired

- The Mellon Foundation and Conservation Fund purchase all grazing permit privileges from willing sellers
- Privileges donated to the FWS and permanently retired

1991 & 2011

- 445,766 acres withdrawn from mining
- Virgin Valley remains open to mining

Sheldon National Wildlife Refuge Current Management

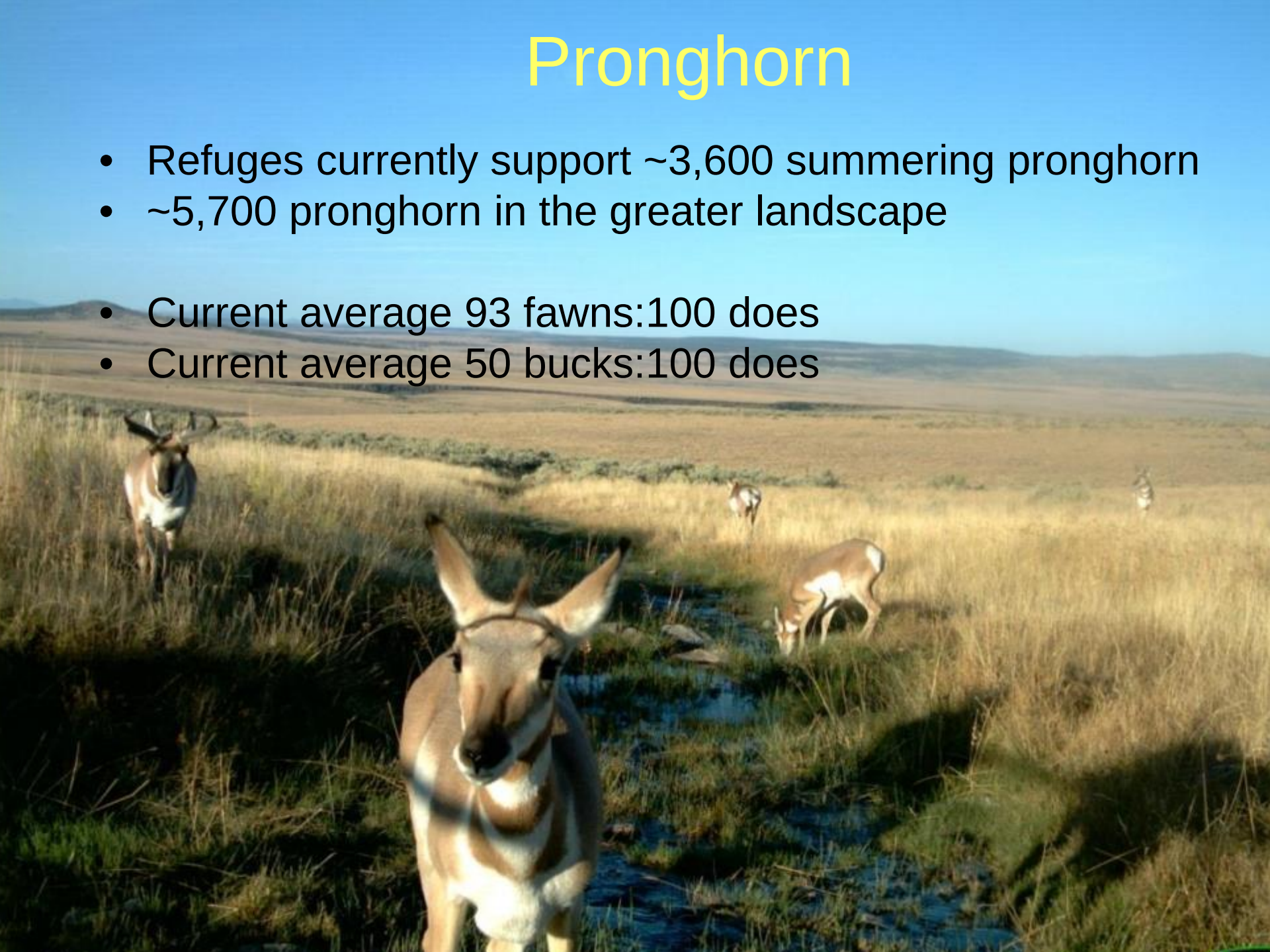
2012 – Comprehensive Conservation Plan & EIS

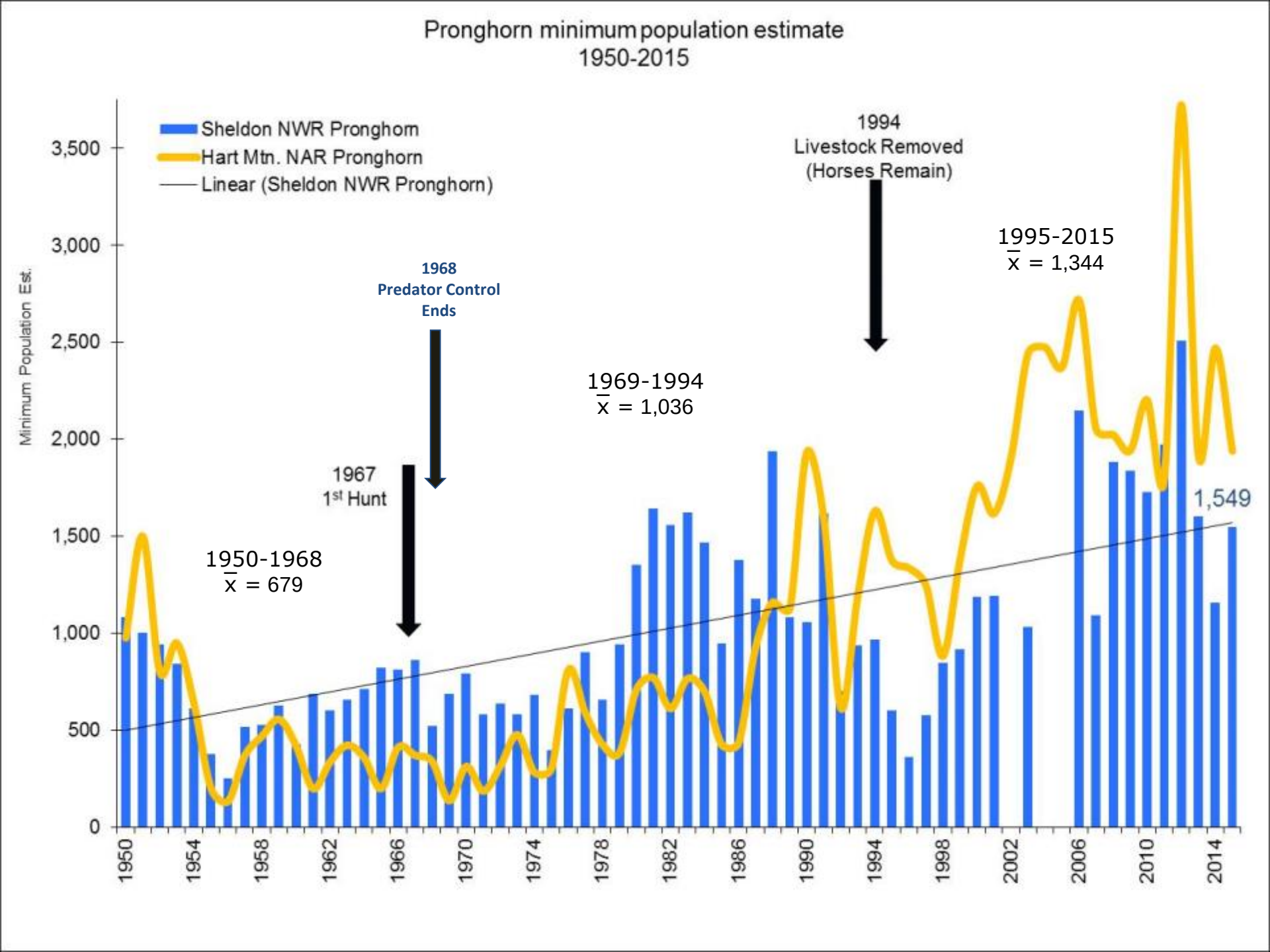
- Conservation of key wildlife species (e.g., pronghorn, sage grouse)
- Focus on habitat restoration, biological integrity, and contribution within the larger Great Basin landscape through natural processes
- Removal of all feral horses and burros
- Juniper control and removal in sagebrush-steppe
- Inventory and control of invasive species
- Spring and playa restoration – removal of old water developments
- Management of wildland and prescribed fire

Pronghorn

- Refuges currently support ~3,600 summering pronghorn
- ~5,700 pronghorn in the greater landscape

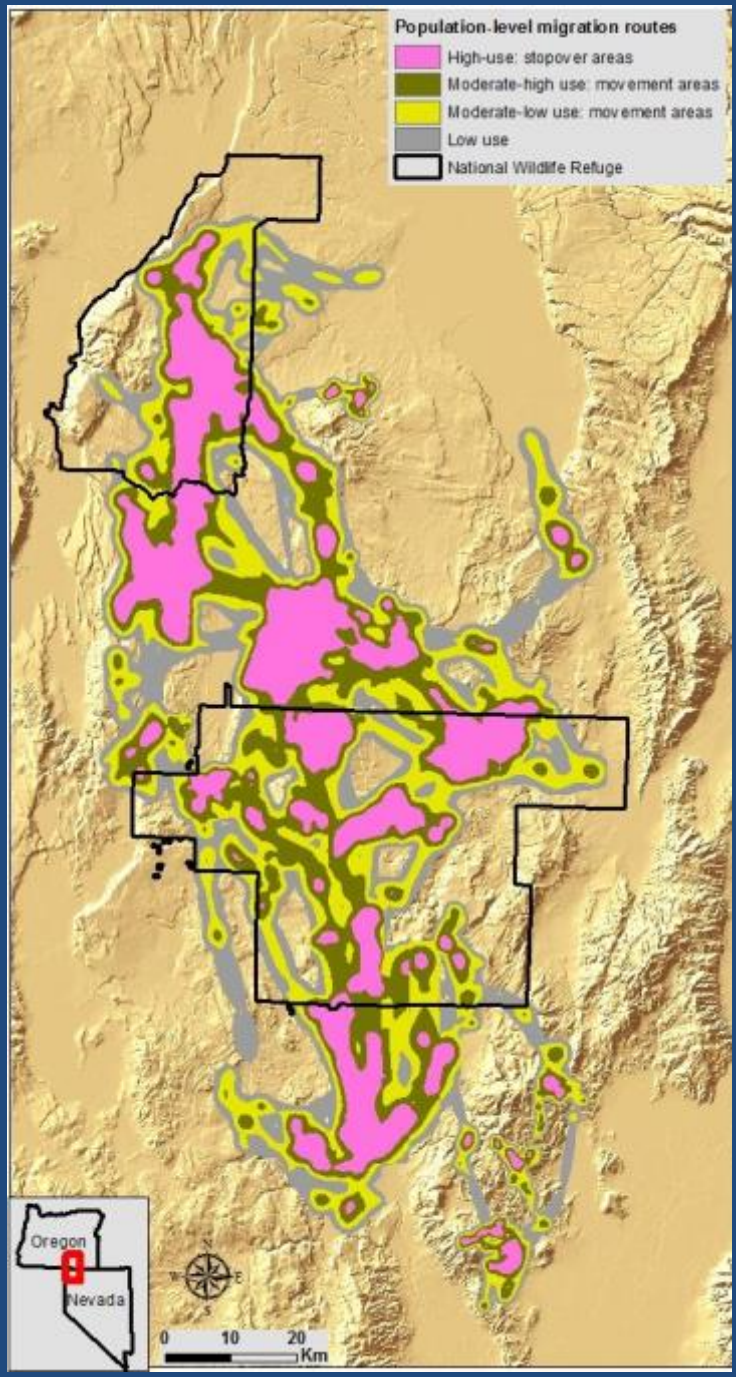
- Current average 93 fawns:100 does
- Current average 50 bucks:100 does




Pronghorn minimum population estimate
1950-2015
Sheldon NWR Pronghorn
Hart Mtn. NAR Pronghorn
Linear (Sheldon NWR Pronghorn)
Minimum Population Est.
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1950
1954
1958
1962
1966
1970
1974
1978
1982
1986
1990
1994
1998
2002
2006
2010
2014
1994
Livestock Removed
(Horses Remain)
1995-2015
x̄ = 1,344
1968
Predator Control
Ends
1969-1994
x̄ = 1,036
1967
1st Hunt
1950-1968
x̄ = 679
1,549

Pronghorn & Connectivity

- Some individuals migrated over 90 miles between summer and winter ranges.
- Summer ranges averaged:
  - 55 square miles.
- Winter ranges averaged:
  - 98 to 178 square miles depending on winter severity.
- Harsher winter conditions resulted in:
  - Longer migration distances
  - Larger winter ranges
  - Lower elevational use
  - Shift in location of winter ranges

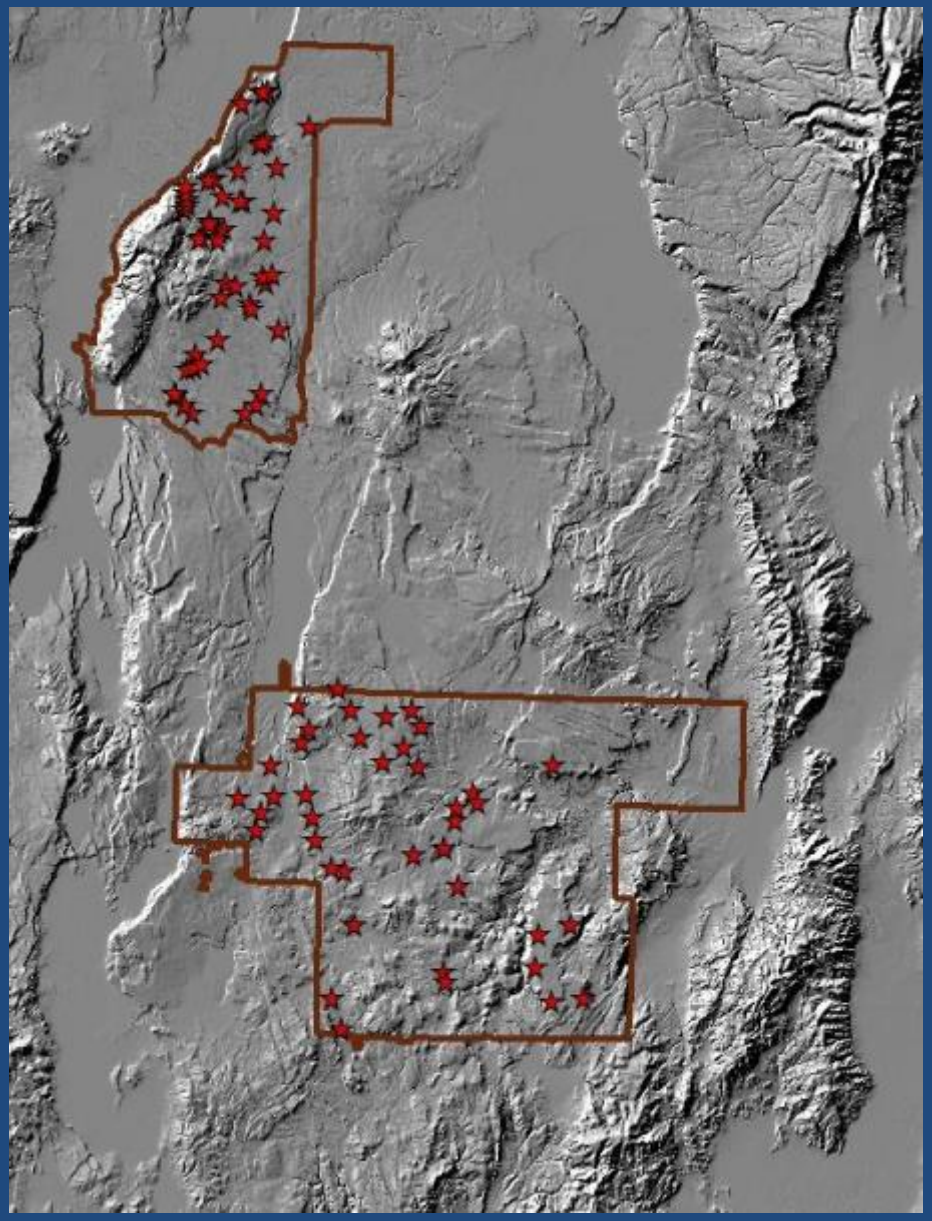


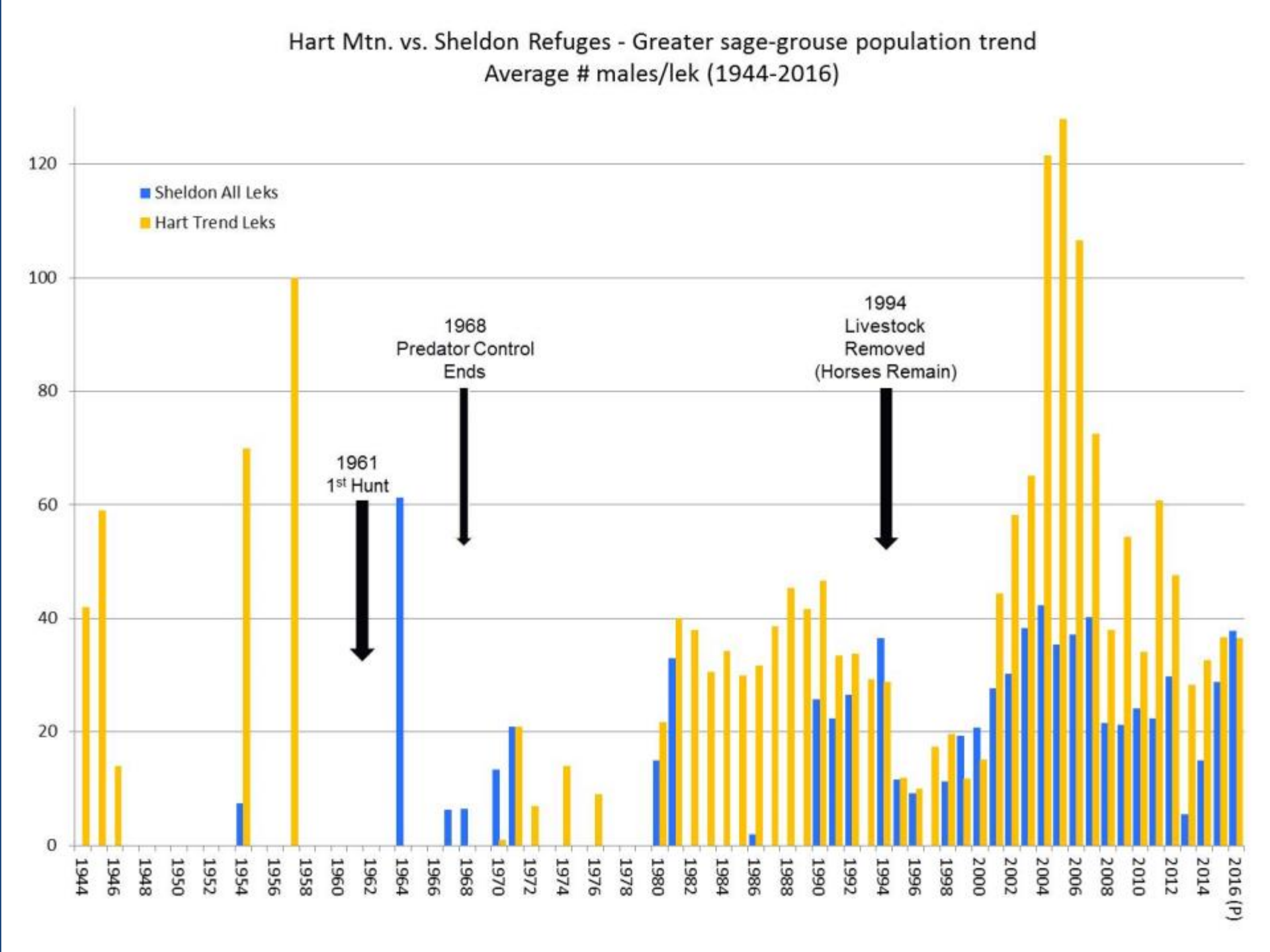
Greater sage-grouse

- Ongoing and long-term Greater sage-grouse monitoring and research

- Complete lek inventory and census conducted on Refuges in 2013-2014
  - Over 135 known leks
  - Aerial infrared and ground surveys

- Lek inventory and census of Beatys Butte PAC currently underway.




Hart Mtn. vs. Sheldon Refuges - Greater sage-grouse population trend
Average # males/lek (1944-2016)
Sheldon All Leks
Hart Trend Leks
1961
1st Hunt
1968
Predator Control
Ends
1994
Livestock
Removed
(Horses Remain)
0
20
40
60
80
100
120
1944
1946
1948
1950
1952
1954
1956
1958
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016 (P)

Response to Livestock Removal: Hart Mountain NAR

Riparian Areas

Bank stability & riparian extent

Forb cover

Riparian & snow pocket Aspen

Riparian shrubs (willow)

Bird abundance (33%)

- ground/understory nesters (133/67%)
- overstory nesters (33%)

Bare ground

Non-riparian shrubs

- sagebrush

Ballard, 2012.
Batchelor, et al., 2014
Earnst et al., 2012.

Response to Livestock Removal: Hart Mountain NAR

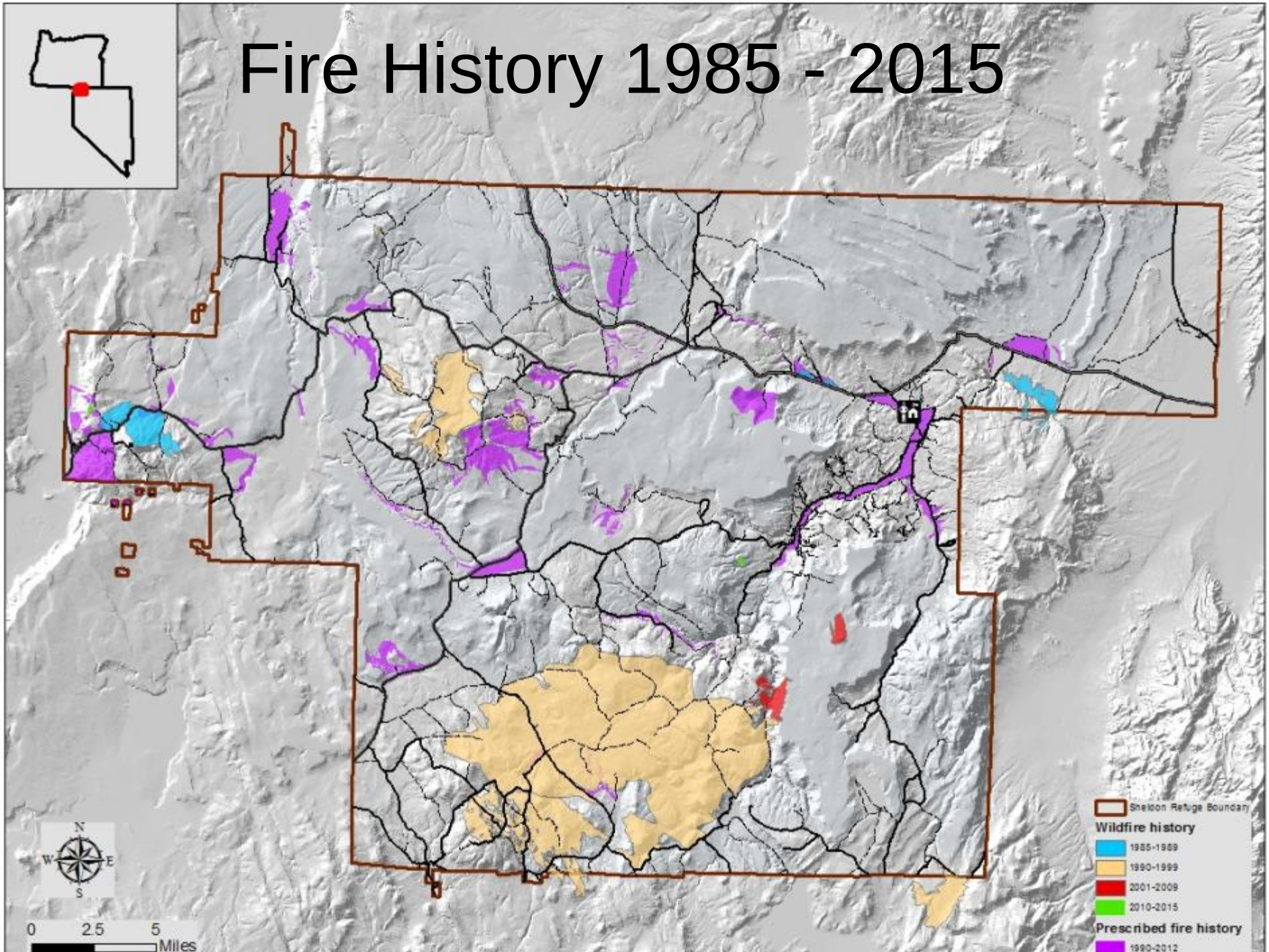
Uplands

Native bunchgrasses
Shrubs
Biological soil crust

Cheatgrass <1%
Bare ground

Ellsworth et al., 2014

Fire History 1985 - 2015



Feral Horses & Burros

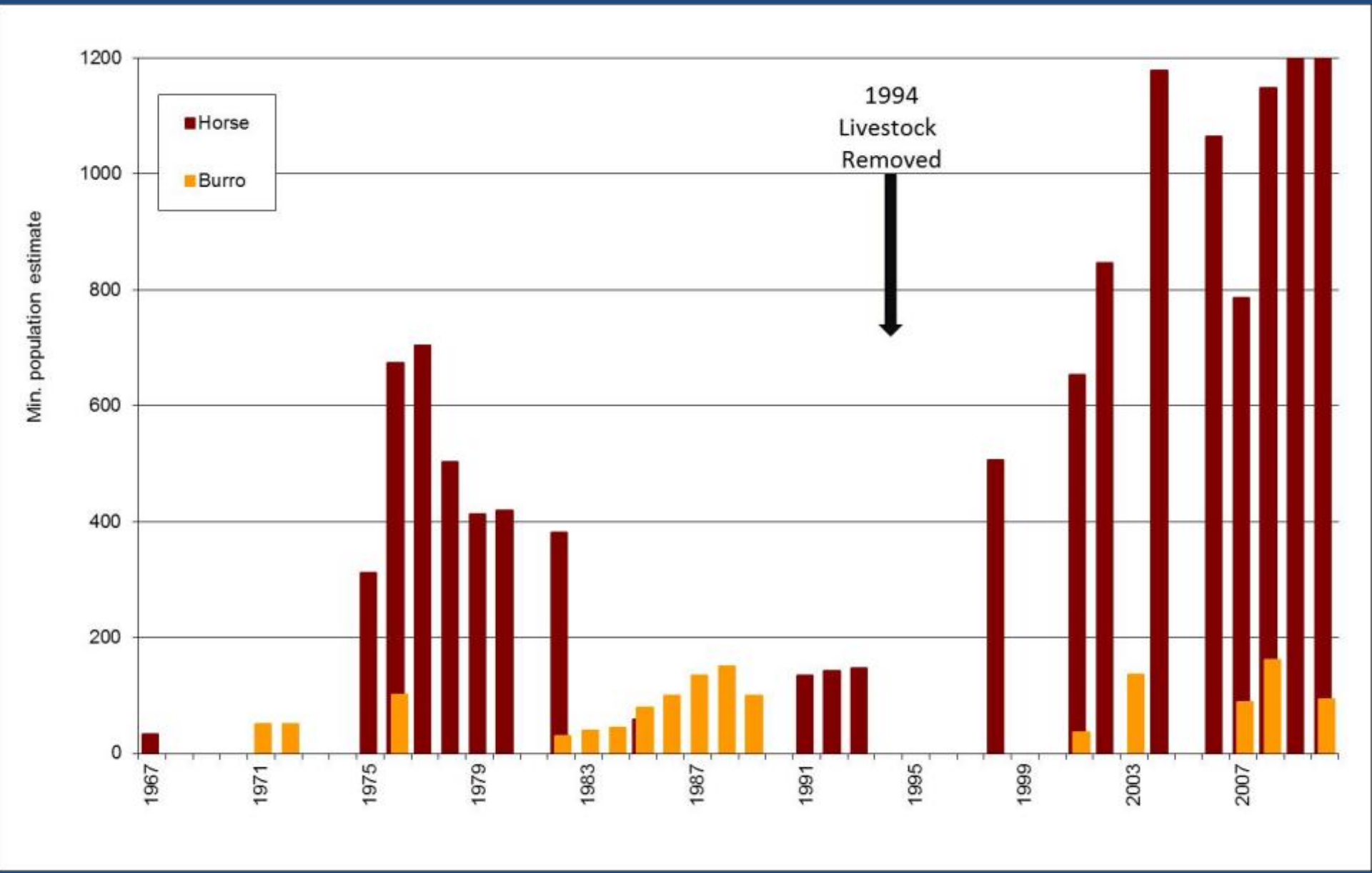
roundup. The roundup started in June and ended in late October of 1948. I had to make one or two trips a week out there to keep the situation under control.

We gathered nearly 3,800 head of horses on the Sheldon Game Range and adjacent areas. Of this number, some 1,600 head were branded. Of the branded horses, 1,178 belonged to Harry Wilson who had a permit for 200 horses. Trespass charges were filed upon Mr. Wilson. I wanted to trespass him to the tune of some $18,000. A proposition of settlement was finally worked out with the regional office for some $10,000.

Another roundup in the area was initiated a year later which netted some 1,500 head more of horses, or a total on both roundups of around 5,000 head. That brought the trespass horse situation under control in that area. It was a

Fulwider, D.S. 1985

Feral Horses & Burros



Feral Horses & Burros

Impacts

- Displace native wildlife from water
- Damage habitats and wetlands
- Increase soil erosion
- Decrease water availability
- Reduce plant diversity
- Limit sagebrush recruitment

2012 CCP:

- Complete horse and burro removal documented as the highest priority management action needed to meet refuge purpose and goals.

Feral Horses & Burros

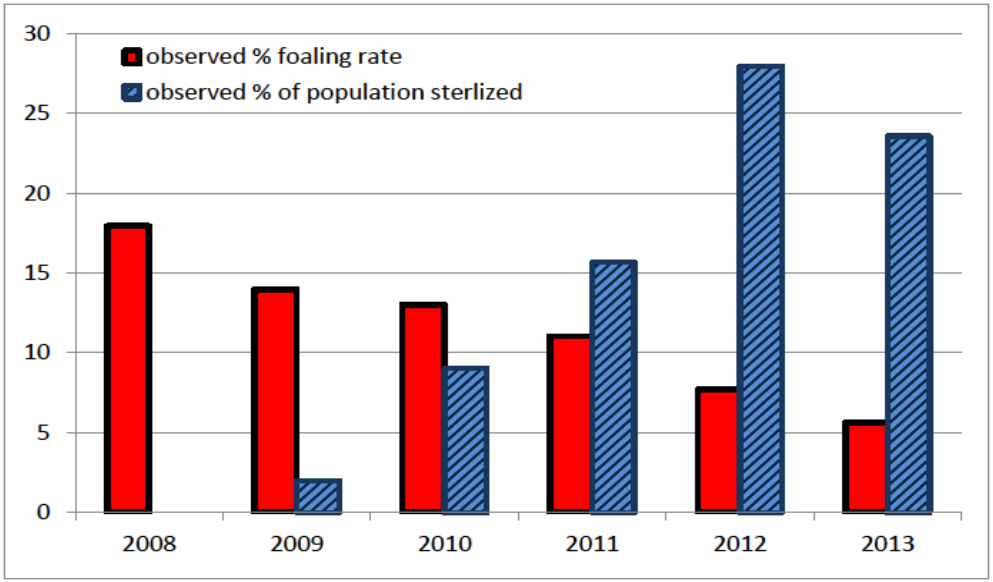
Interim Solution - Contraception

2008 - 2011, approximately 380 horses captured, permanently sterilized and returned to the Refuge.

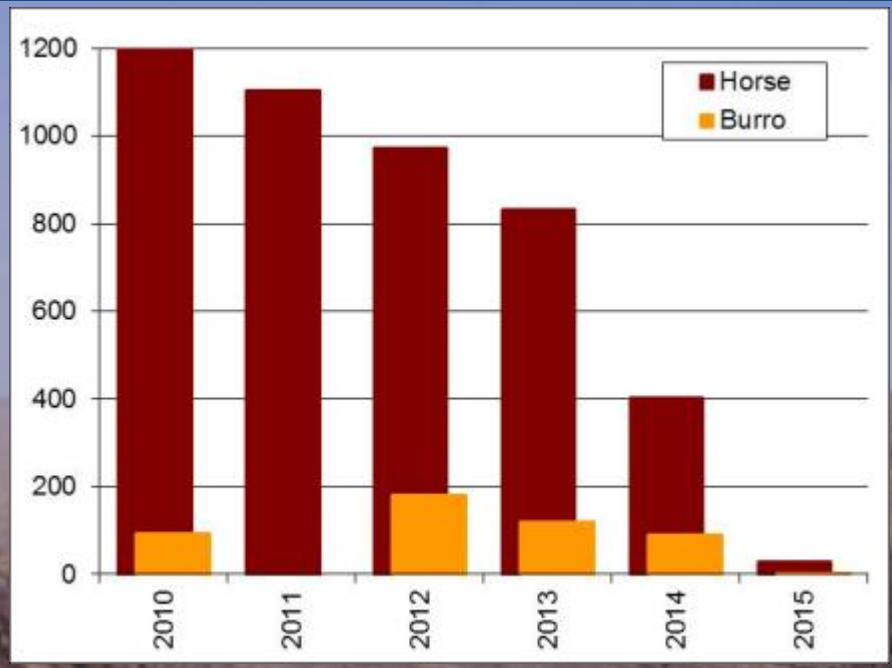
- Studs: surgical or chemical vasectomy
- Mares: surgical ovariectomy

Results:

- Substantial reduction in the number of foals
- Control of population growth.



Feral Horses & Burros



~30 horses remain on Sheldon NWR today