Wyoming Elk Feedground Program

Wyoming Game & Fish Department

Travel, Recreation and Wildlife

October, 2019

Elk Feeding - the early years

- **1908- severe winter around Jackson resulted in significant elk die-off due to starvation**

Photos courtesy of the Jackson Hole Historical Society

Elk Feeding - the early years

- **Late 1890's – 1912**
- **limited feeding of elk by individuals in Jackson**

Photos courtesy of the Jackson Hole Historical Society

Elk Feeding - the early years

- **1910 – Wyoming legislature allocated $5,000 to feed elk**
- **1912 – Creation of the National Elk Refuge**

Photos courtesy of the Jackson Hole Historical Society

National Elk Refuge

The National Elk Refuge was established by various Acts of Congress, executive orders, and other documents to provide, preserve, restore, and manage lands for wintering elk, birds, and other big game animals. The main Act of Congress on August 10, 1912 set aside lands "for the establishment of a winter game (elk) reserve in the State of Wyoming, lying south of the Yellowstone Park . . ."

A few of the significant documents and dates in the Refuge's history include:

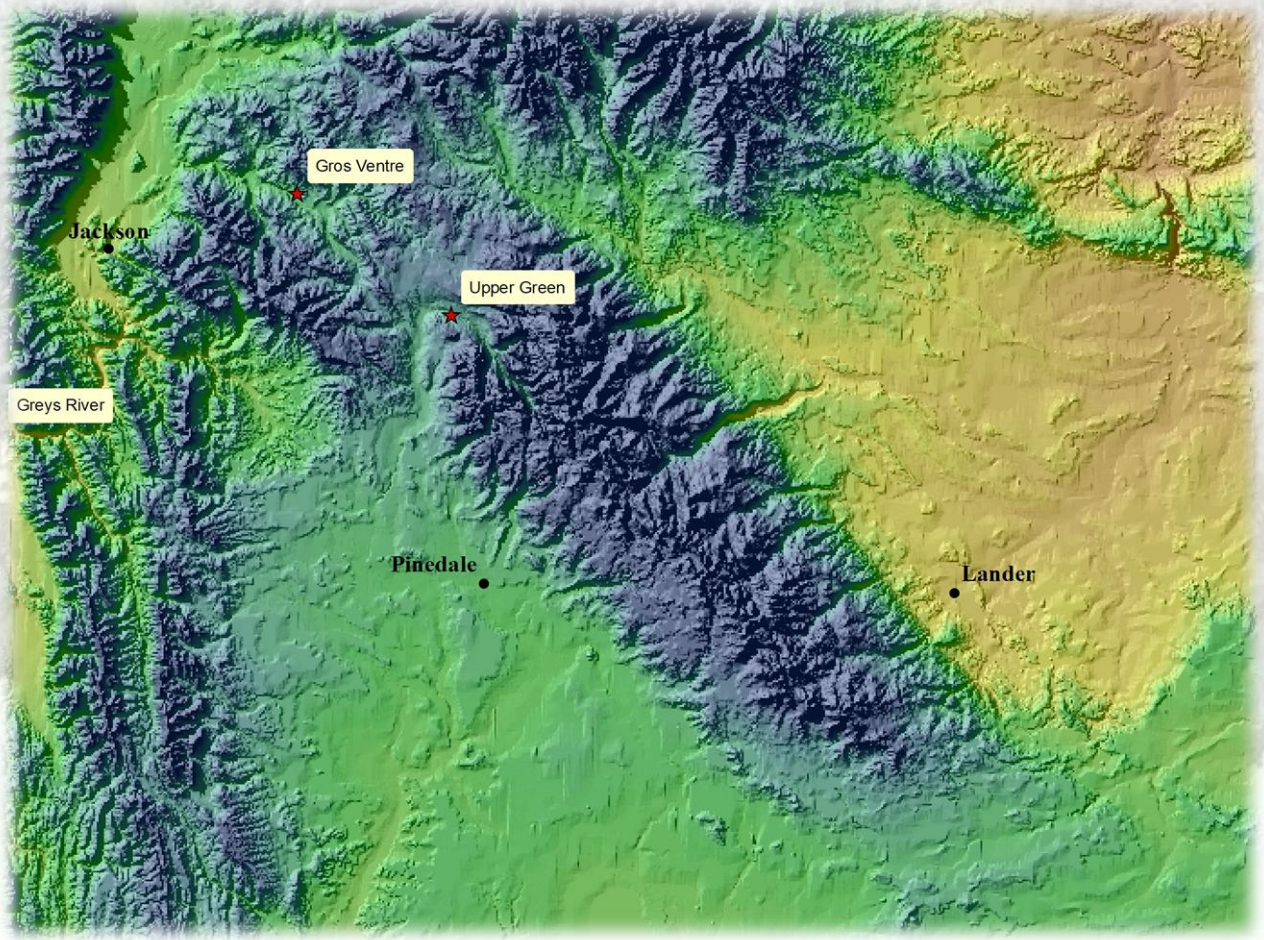
August 10, 1912 – Act of Congress, Ch. 284, 37, Stat.293: Establishment of a winter elk reserve

March 4, 1913 – Act of Congress, Ch. 145, 37 Stat.847: Establishment and maintenance of winter elk refuge.

July 25, 1940 – Presidential Proclamation 2416: Changed the name from Elk Refuge to National Elk Refuge

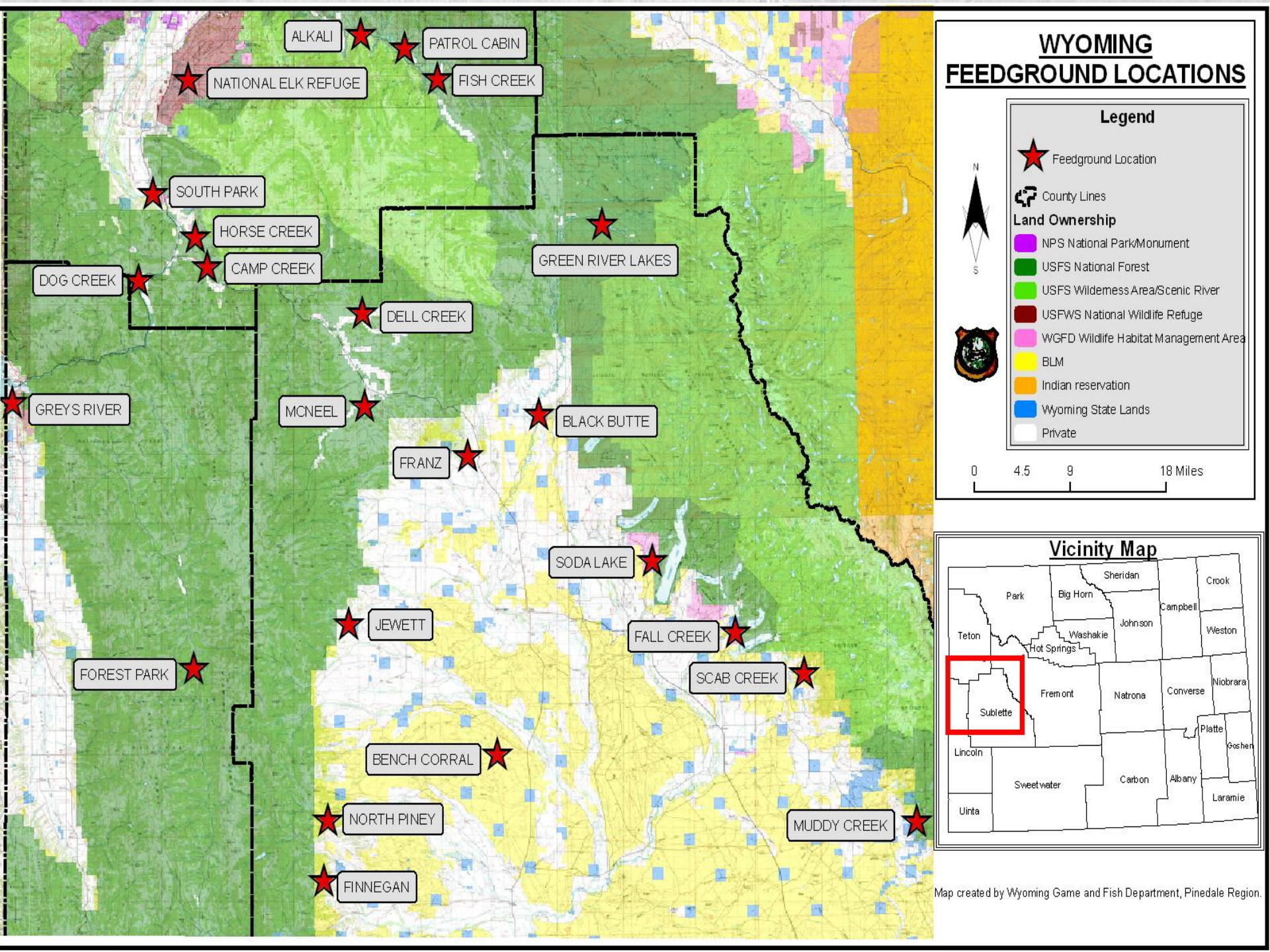
Elk Feeding - State management

- **1929 - WGFD assumed operations of three feedgrounds to reduce large scale starvation events.**



Elk Feeding - WGFD

- Many feedgrounds were started in the 1940's to prevent damage to stored crops
- Present system was in place by 1960's
- Annually provide feed to ~14,000 – 16,000 elk
- 80% of elk in feedground herd units attend one of 22 state feedgrounds (or the NER)
- Feed approximately 6,000 tons of hay per year
- Average feeding season is about 120 days



Map created by Wyoming Game and Fish Department, Pinedale Region.

Why Feed Elk?

- Prevent commingling of cattle and elk
- Reduce damage to private property
- Maintain elk herd objectives

Why Feed Elk?

- **Feeding allows the WGFD to maintain stable elk populations in spite of winter range availability**

Why Feed Elk?

- Reduces elk/vehicle collisions
- Reduces competition on winter ranges with other big game species

Challenges

- **Long duration of high densities can facilitate density-dependent disease transmissions**
  - **Brucellosis**
  - **necrotic stomatitis (hoof rot and mouth sores)**
  - **CWD (?)**

Challenges

- **Cost**
  - **Feedground budget**
  - **$1.9 million in FY-19**
- **Hay Hauling Logistics**
  - **Remote, difficult terrain**
  - **Hauling must be complete prior to snowfall**
- **Winter Weather!**

Hay Purchasing

- Currently purchasing 6,000-7,000 tons annually
- Most hay is purchased from Teton, Sublette, Lincoln Counties
- Purchasing begins in early July immediately following budget approval
- Hay prices fluctuate annually based on availability/demand
  - $190/ton in 2019 ($150/ton + $40 ton/delivery fee)

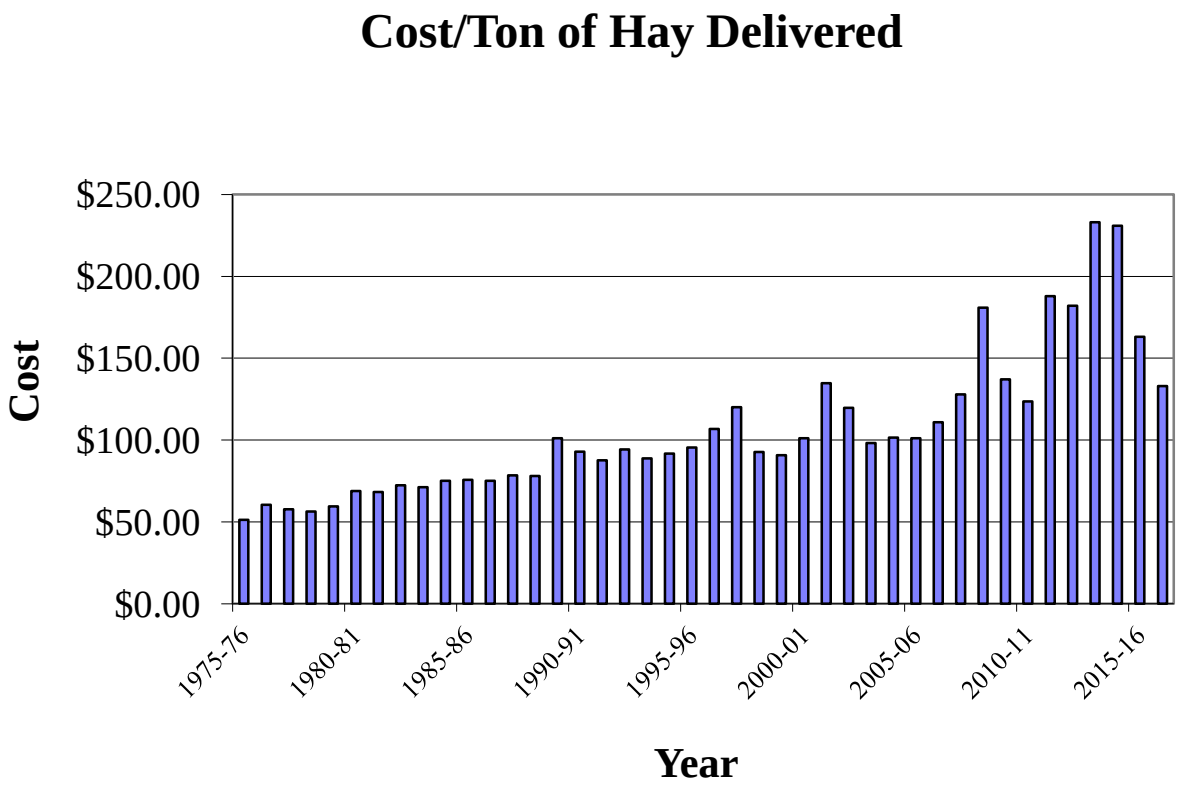
Hay Purchasing

- Hay must be certified weed-free
- Some feedgrounds utilize small square bales
  - Small bales can be difficult to find
- Large bales require heavy equipment
  - Equipment requires maintenance!

Hay Purchasing

- **Current Process**
  - **Must make offers in late June - early July**
  - **Market research**
  - **Generally buy locally (Pinedale, Farson, Star Valley, etc.)**
  - **Some risk involved (prices set during growing season)**
  - **G&F prices have been consistent with regional and national averages**
  - **Department has increased storage capacity in recent years**
    - **Allows us to buy additional hay when prices are favorable (“hay banking”)**

Hay Purchasing



Hay Hauling

- Hauling begins immediately after hay is cut and contracts processed
- Takes about four months to complete
- ~$40/ton hauling cost – contracted service with private vendor

Feeding Operations

- **Contract elk feeders at each feedground (Paid daily rate)**
  - **Feeding occurs late November through mid April (varies depending on winter conditions)**
  - **Must feed <u>every day</u>**
  - **Horses/sleighs (small bales)**
  - **Tractors (large bales)**

Feeding Operations

- Elk are fed 5-8 pounds of hay/elk daily
  - Varies depending on feedground and temperature
- Feeders monitor elk behavior, health, mortalities daily
- Feeders notify Department personnel of any problems
  - Excessive mortalities, significant elk movements, wolves, etc
- Feedground managers, biologists, wardens, BFH personnel work with/assist feeders on a regular basis

Other Activities

- Classification surveys
- Maintenance
  - Hay sheds, corrals, etc
- Disease monitoring
  - Brucellosis
  - CWD – Vet Services budget/enhanced surveillance – Jackson
    - 2 Feedground techs

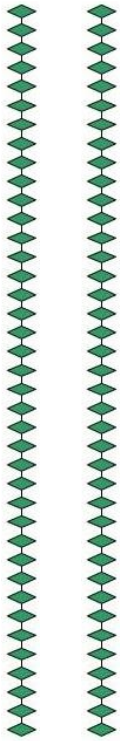
Disease Management Action

- Delay feeding as long as possible*
- End feeding as early as possible*
- Reduce duration of high concentration to minimize disease transmission

*Requires a balancing act with potential livestock conflict – if elk leave feedground, it can be tough to get them back to it

Disease Management Action

- Low Density feeding methods
  - Disperse elk while on feed to eliminate single path



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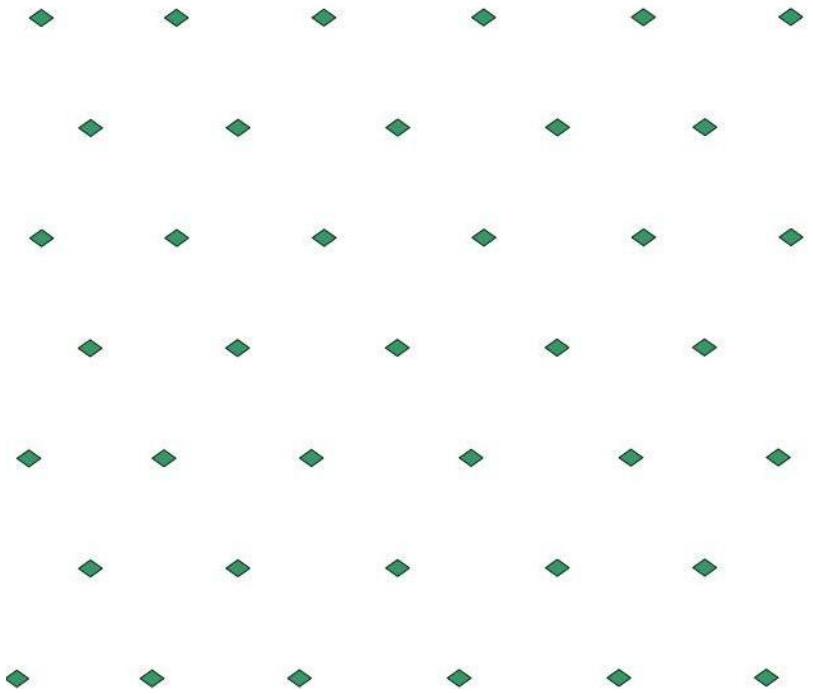


Feedline

Low-Density

Brucellosis 101

Brucella abortus

- Found almost worldwide
- Bacterial disease
- Persists by hiding in host's cells
- Slow growing
- Slow mutation
  - Susceptible to environmental conditions
  - Easily killed by disinfectants
  - Sensitive to many antibiotics

Brucellosis 101

- Introduced into GYA around civil war
  - First detected in bison in 1917, elk in 1930
- Cows normally abort first calf after infection
  - ~ 82% abortion rate in bison and 61% in elk
  - Not population limiting

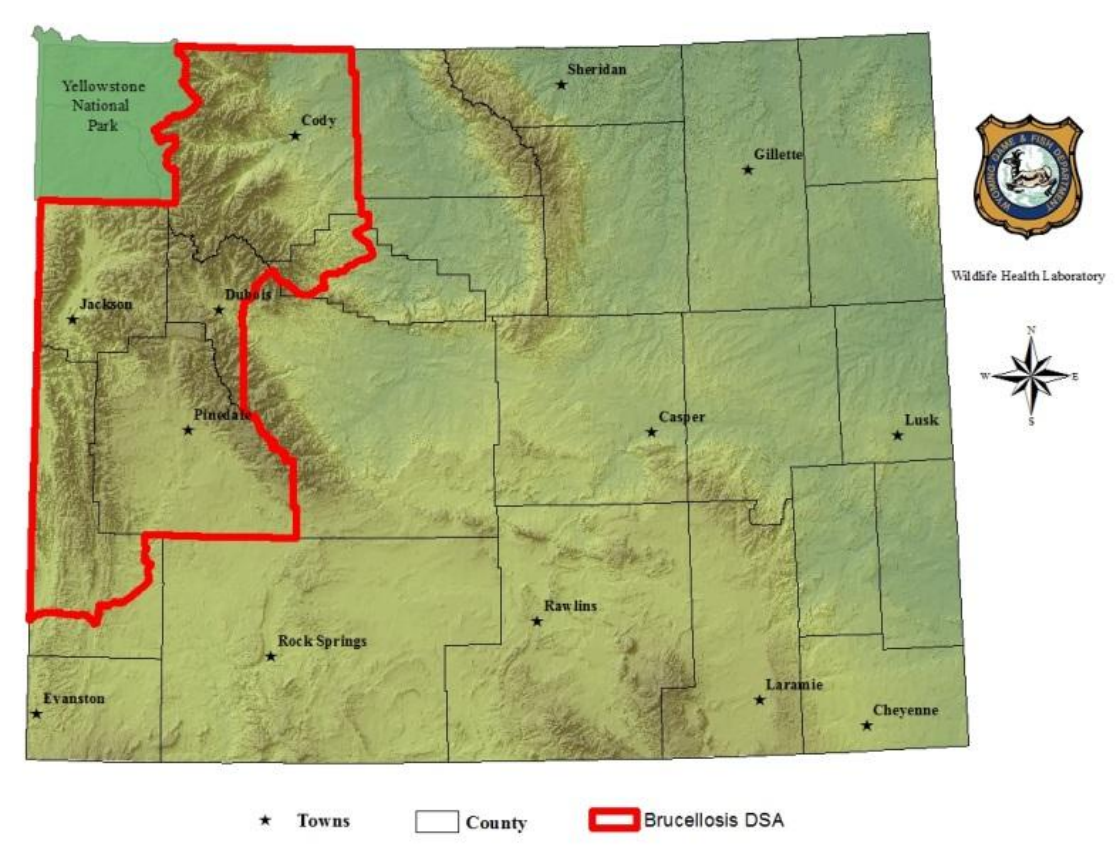
Brucellosis 101

- Seroprevalence = Exposure ≠ infected
- Brucellosis seroprevalence in feedground elk averages ~32%
- Seroprevalence in bison ~65%
- Brucellosis is maintained in the absence of feedgrounds

Brucellosis 101

- A federal/state program began in 1934 with the goal of eradication by 1998
  - Except for the GYA, the United States is free of cattle brucellosis
- DSA herds: Movement restrictions, increased surveillance
- Quarantined herds: Very expensive
- Vaccination not a silver bullet (RB51 about 60-70%)
  - Infectious dose from aborted tissues/fluids hard to overcome

Brucellosis 101



Feedgrounds

- A complex issue….

Questions?