

# Brucellosis Control Program in Montana

Brad De Groot, DVM, PhD

Brucellosis Program Veterinarian

Montana Department of Livestock

# Brucellosis Status

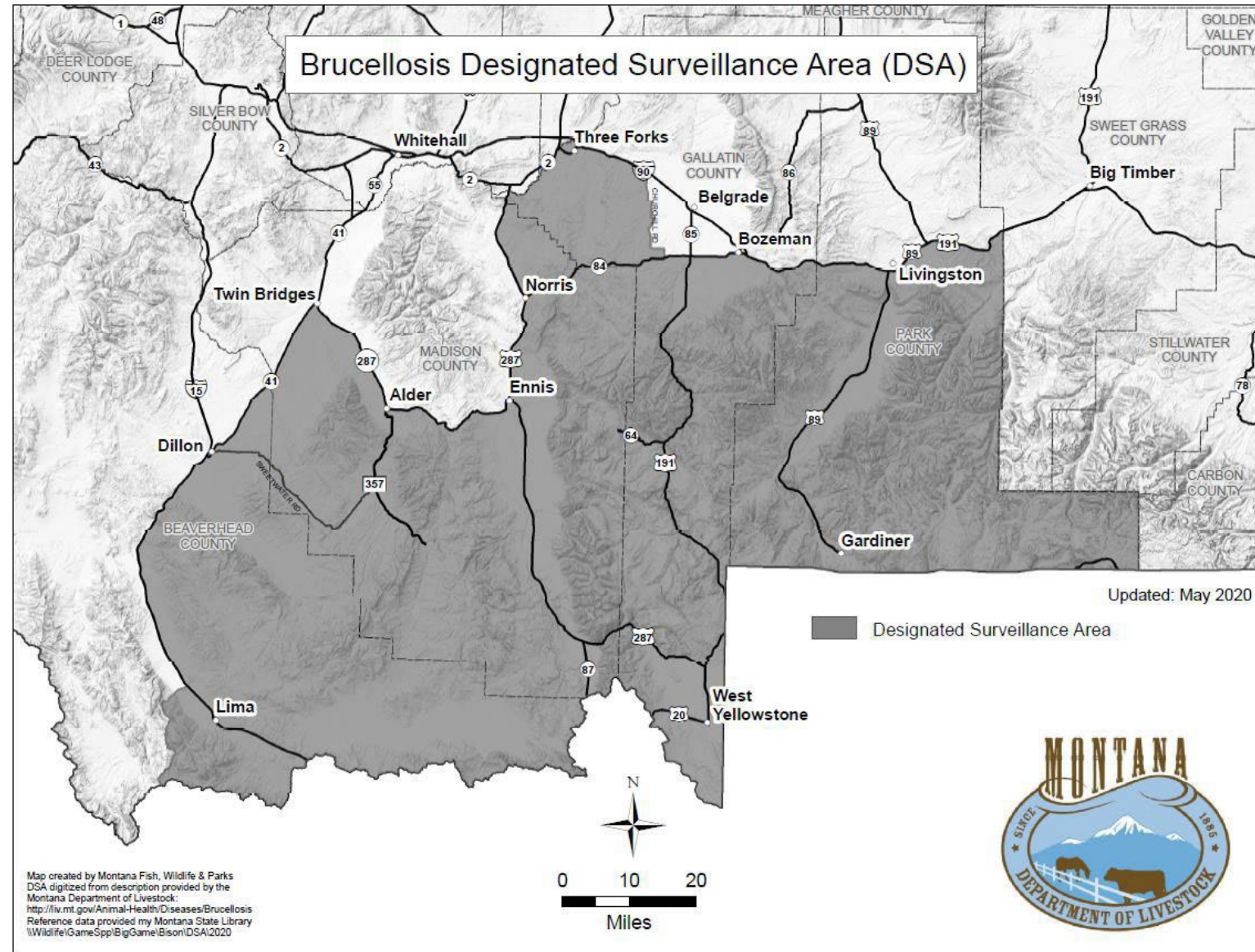
- U.S. & MT domestic livestock are Brucellosis free
- Wildlife reservoir remains around Yellowstone National Park
  - YNP bison
    - MDoL authority to restrict movement
  - GYA elk
    - MFWP

# Brucellosis Transmission Risk

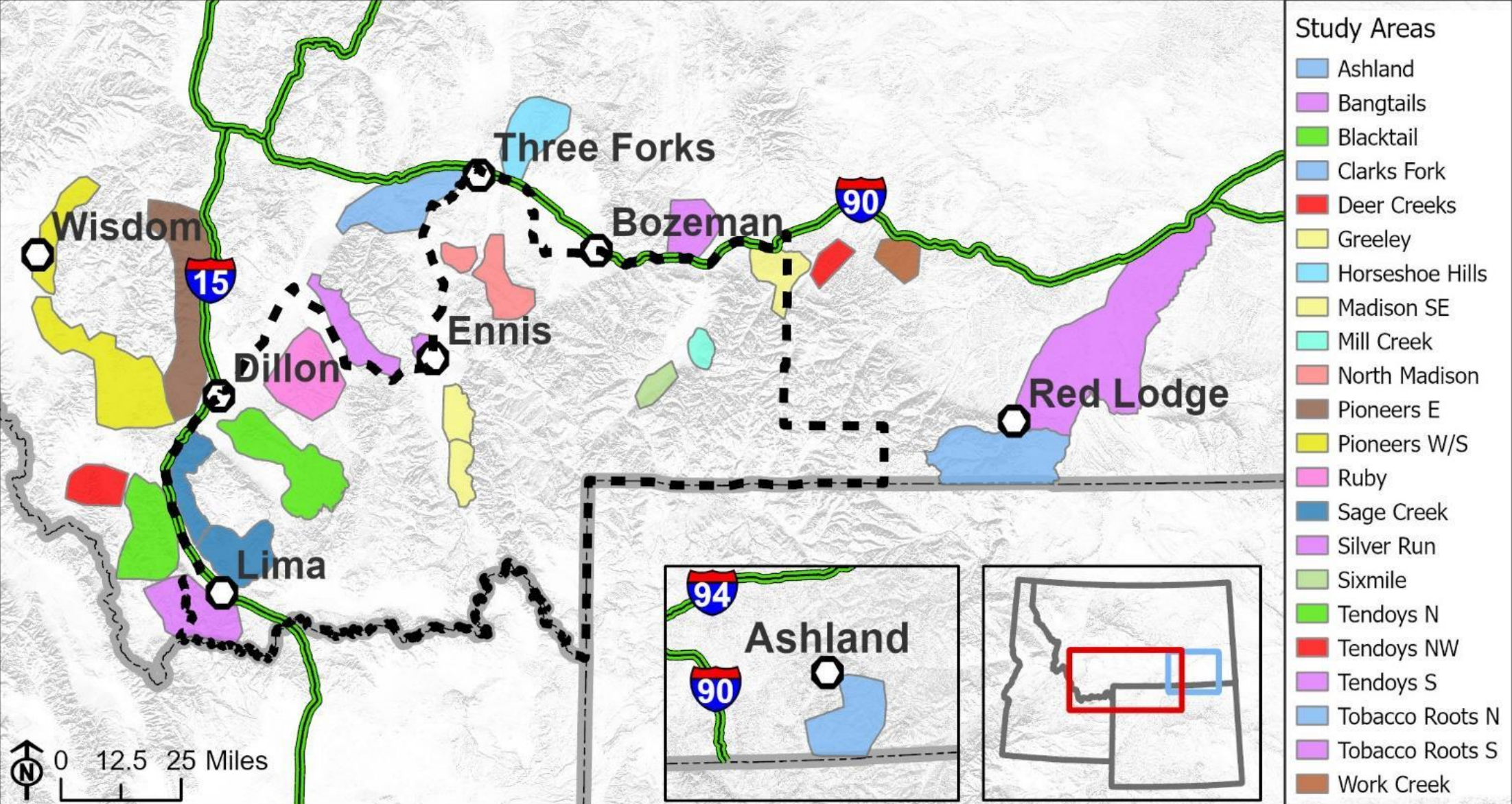
- Open cervix
- Lactation
  
- Season
- Stage of gestation
- Infection history
  
- Wildlife
- Livestock

# Designated Surveillance Area (DSA)

- Boundaries generally set by elk testing
- Livestock surveillance (e.g. DSA & slaughter traces) provide vital evidence of freedom



# Elk testing – MFWP targeted capture

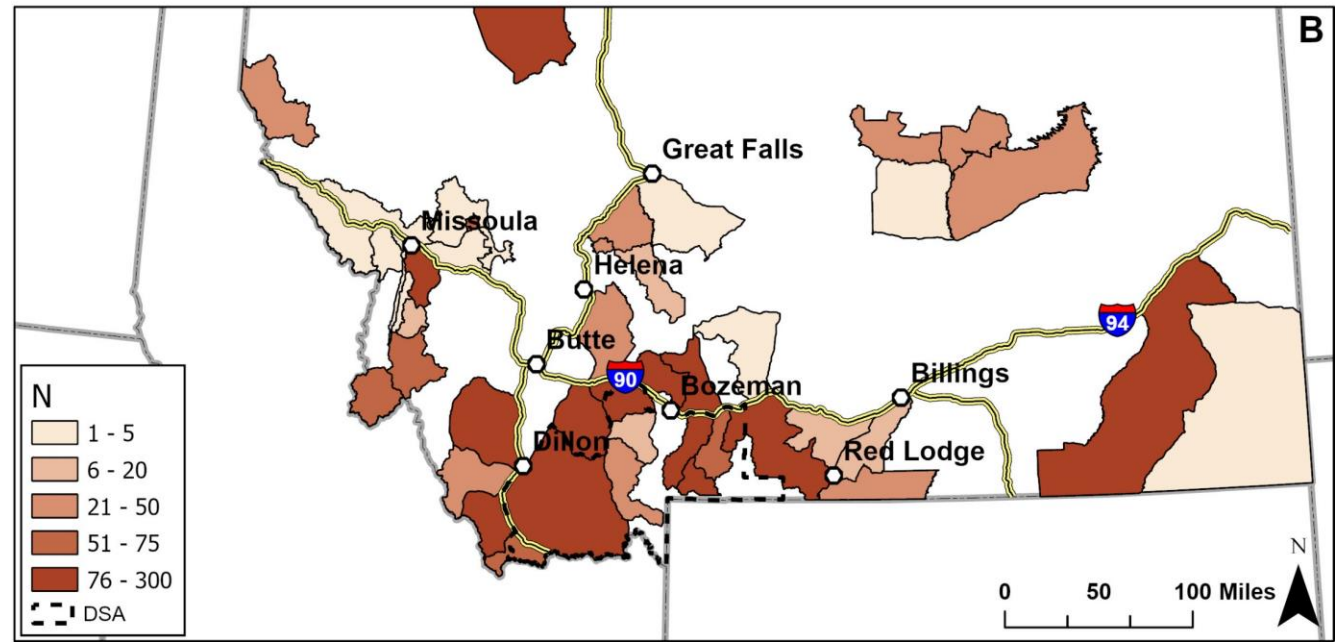
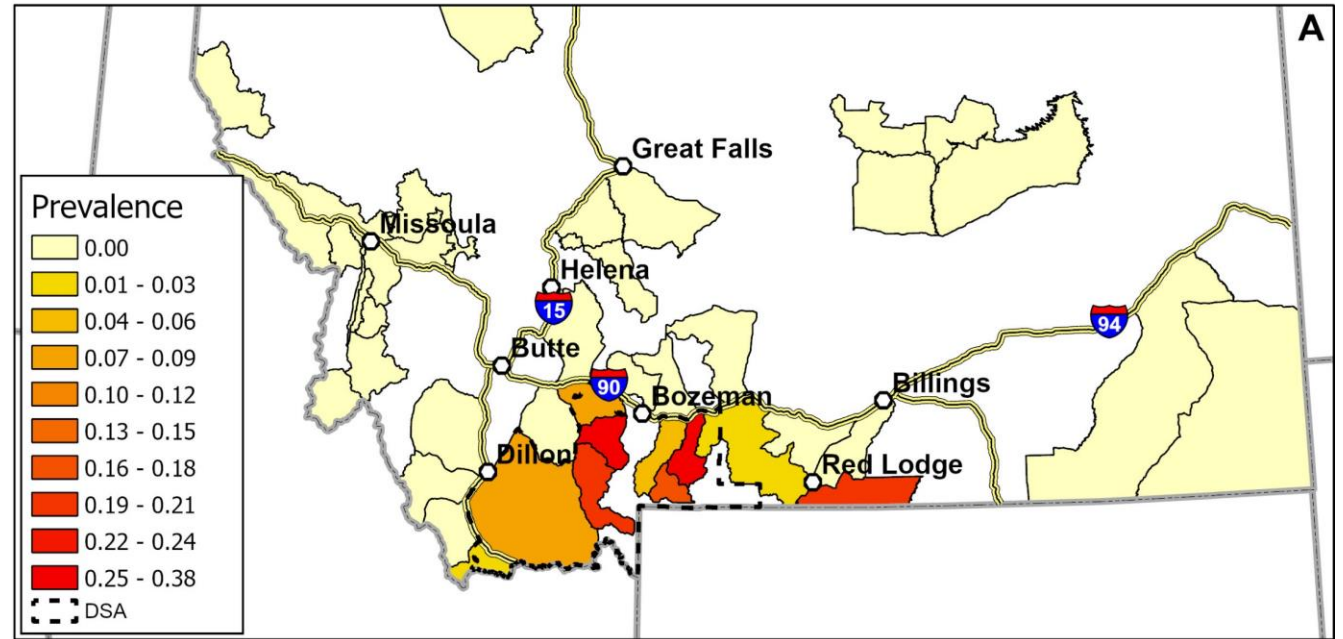


Elk testing –  
MFWP all  
capture

# Brucellosis Seroprevalence and Sample Size

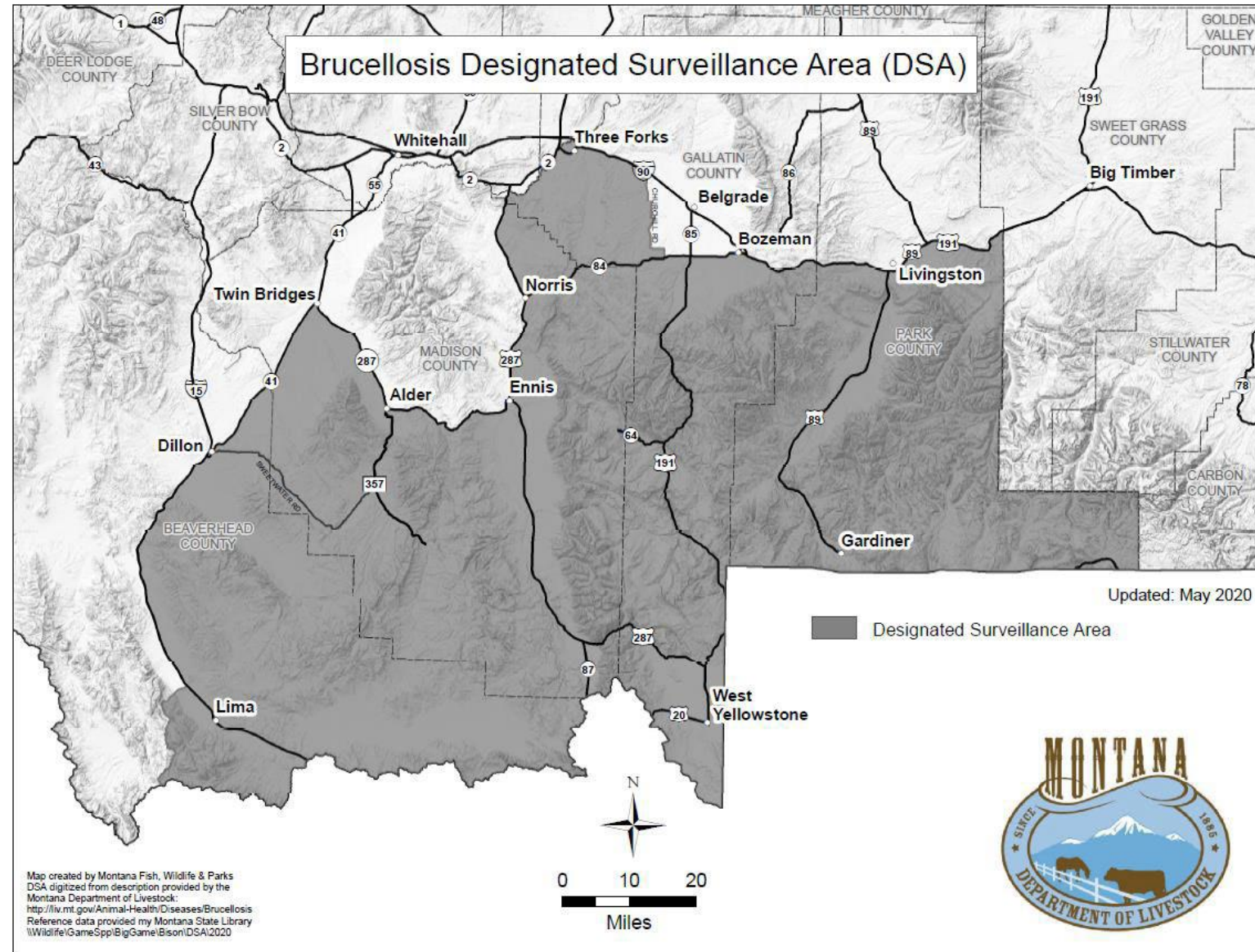
MONTANA FWP

Research captures and hunter harvest data 2010- 2023

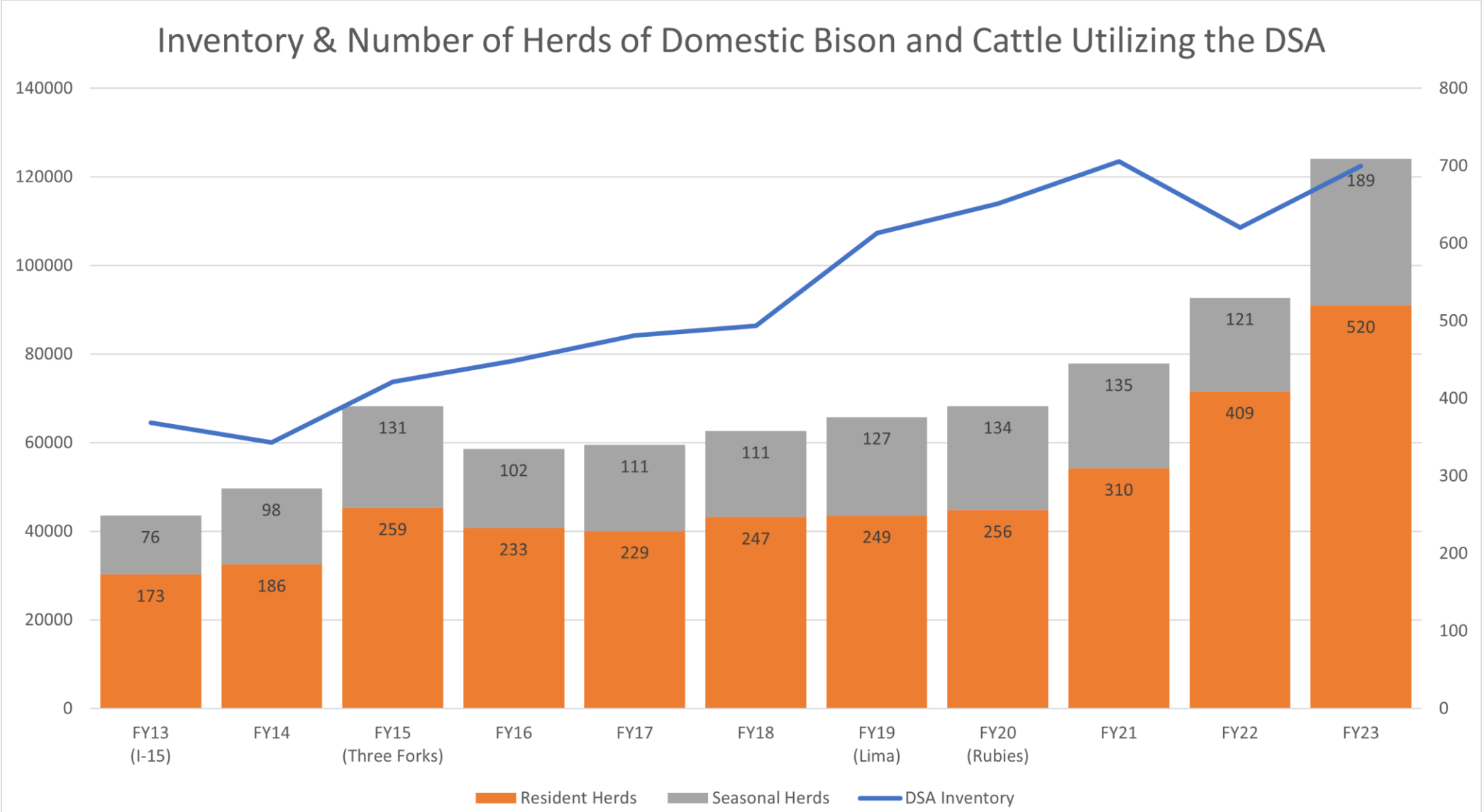


# Designated Surveillance Area (DSA)

- Boundaries generally set by elk testing
- Livestock surveillance (e.g. DSA & slaughter traces) provide vital evidence of freedom



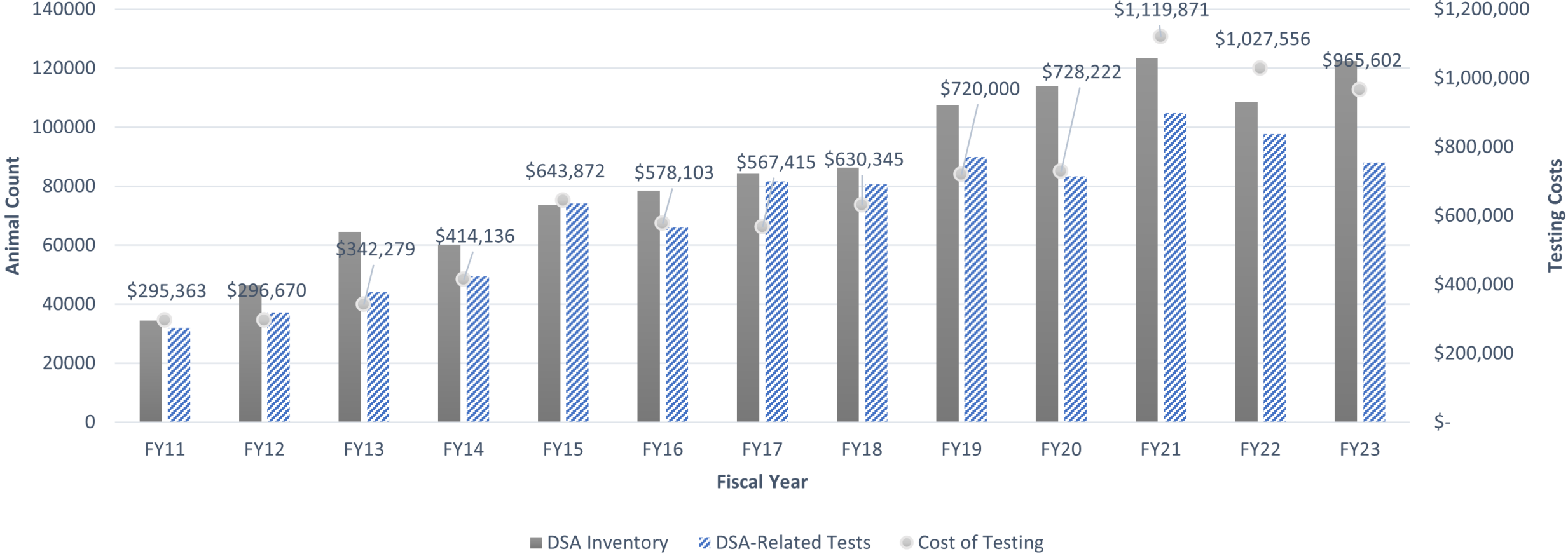
# Designated Surveillance Area (DSA) - Herds





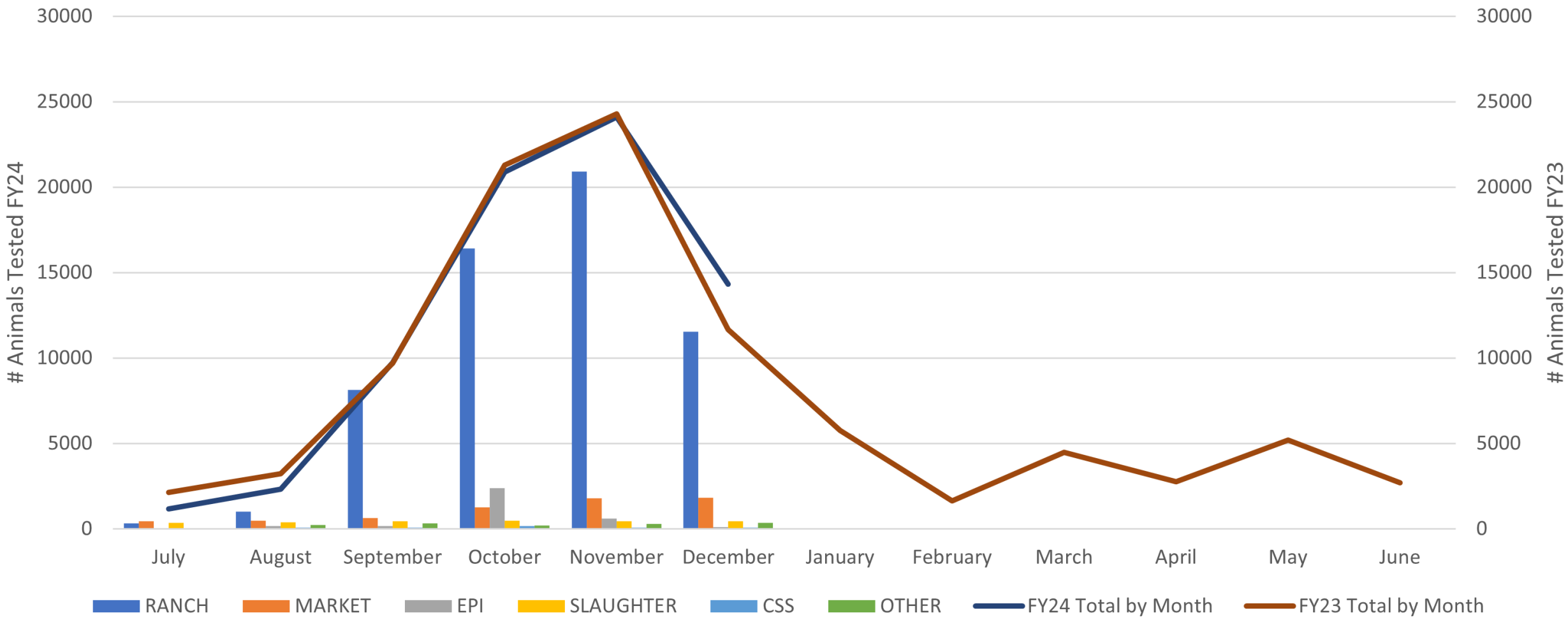
# Designated Surveillance Area (DSA) - Testing

**DSA Inventory, Testing, and Cost of Testing  
FY11 through FY23**



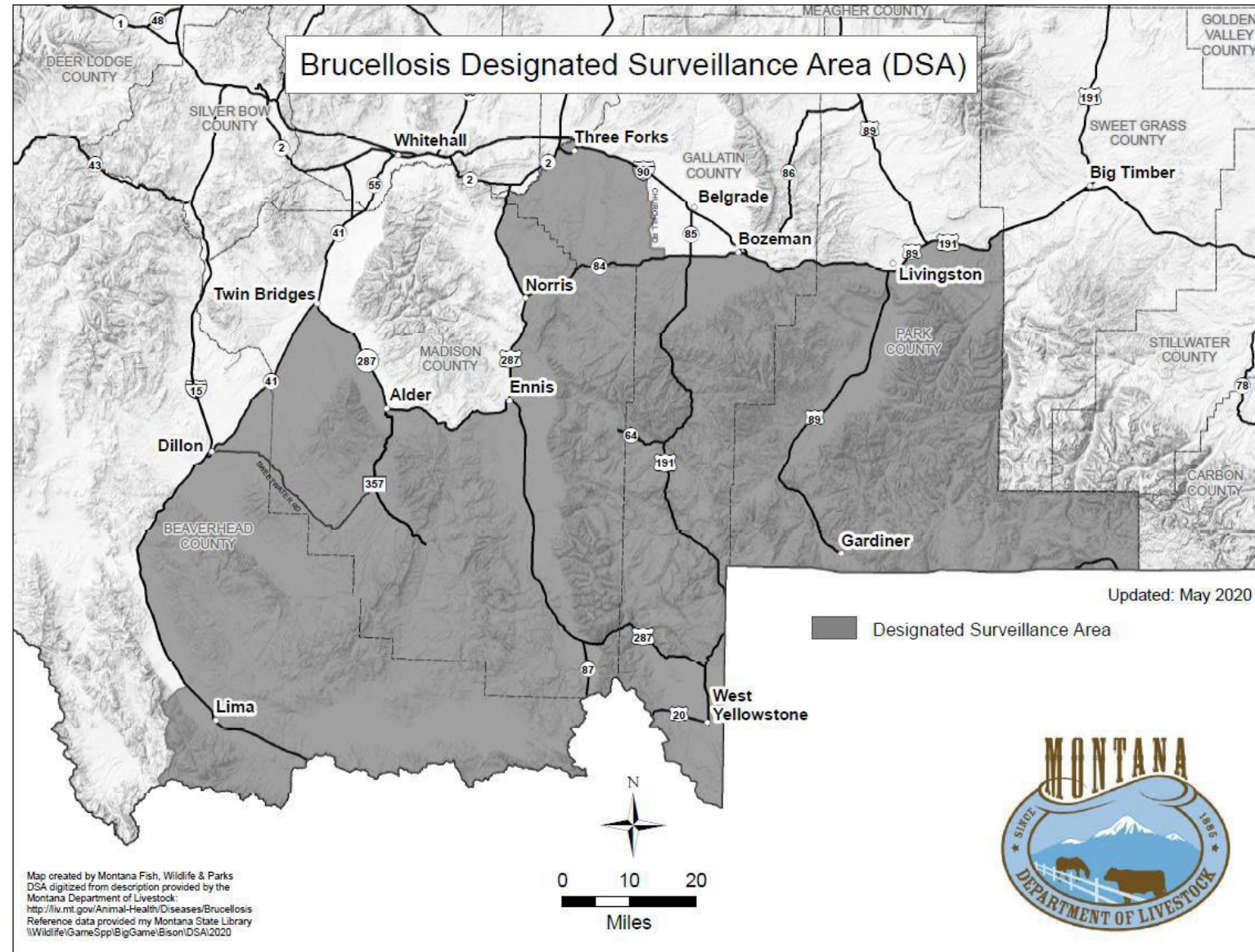
# Designated Surveillance Area (DSA) - Streams

Comparison of FY23 and FY24 Brucellosis Tests



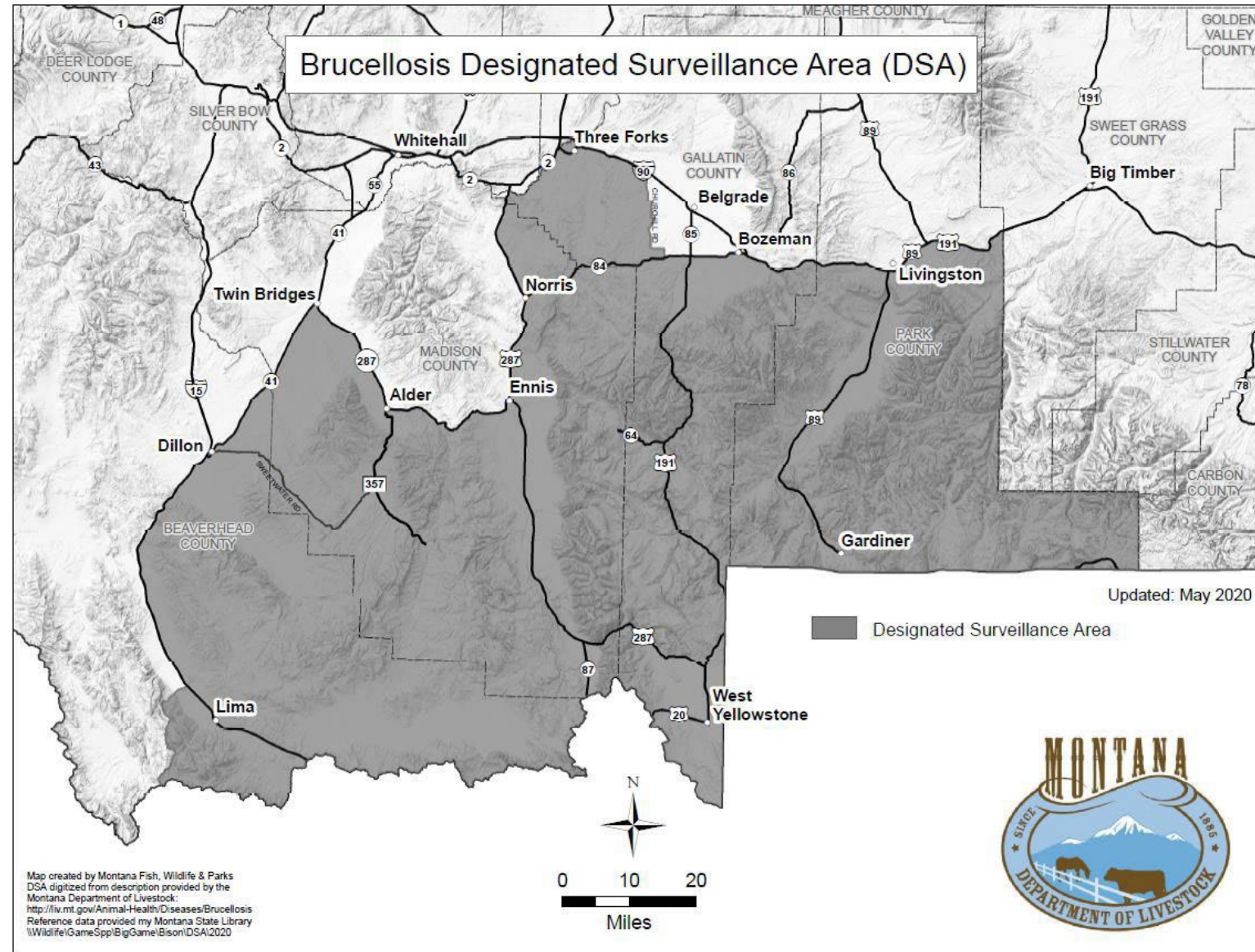
# Designated Surveillance Area (DSA)

- Testing requirements:
  - Leaving DSA
  - Change of ownership
- Cows
- Bulls
- Yearling heifers (any)
- Replacements (any age)



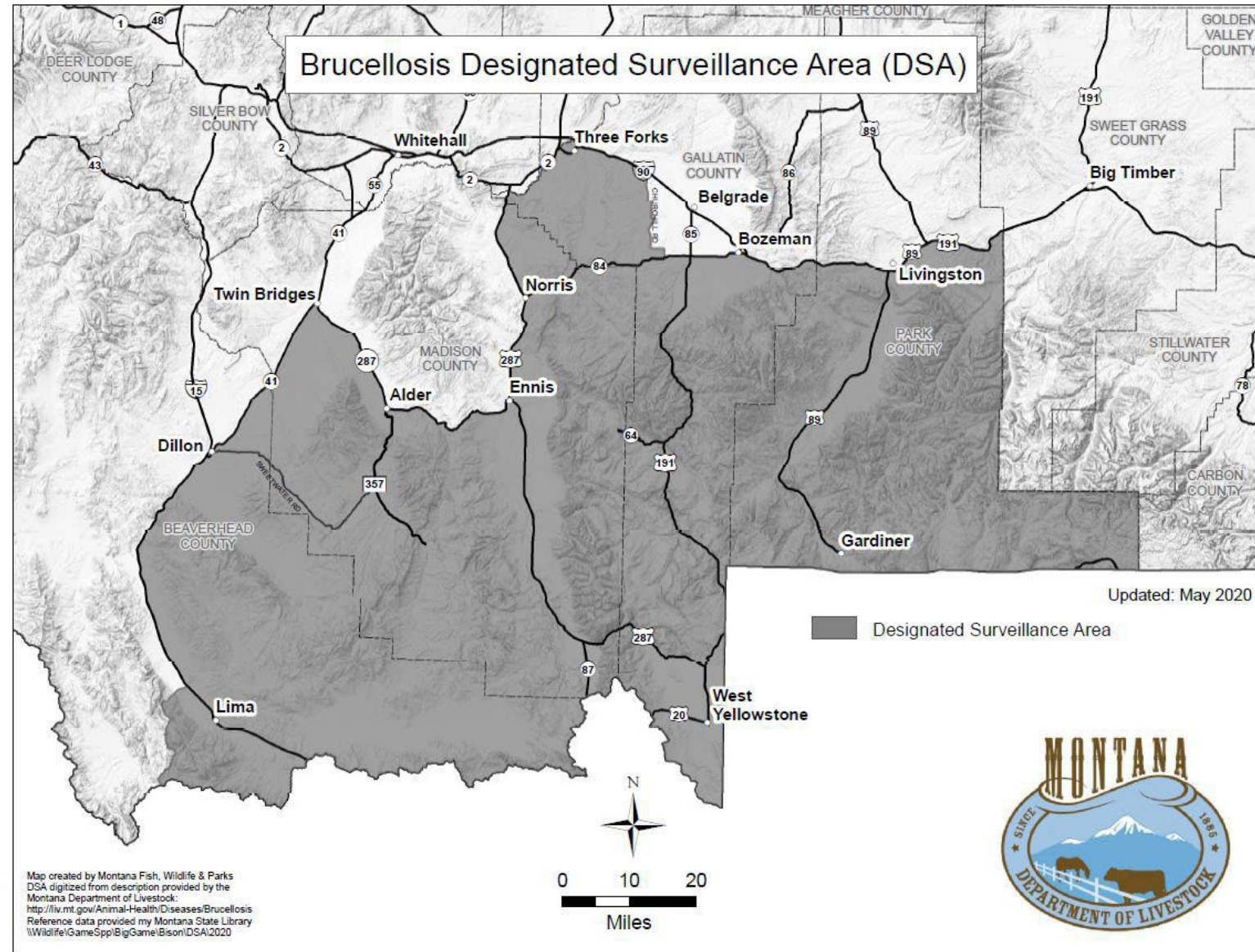
# Designated Surveillance Area (DSA)

- Testing exceptions:
- Weanling feeder heifers
- Steers
- Spayed heifers
- Exhibition or Tx  $\leq$  days
- In  $>$  07/15 & out  $<$  02/15



# Designated Surveillance Area (DSA)

- ID requirements:
  - All sexually intact cattle & bison (any age) leaving the DSA



# Practical Considerations for DSA Operations

- Annual, voluntary, whole-herd surveillance testing advantages:
  - Your clients control when they test
  - Eliminates the risk of having to rework herds if they are caught up in a trace
  - Limits epidemiological investigations to time since last known negative
  - Finding infections in the fall results in the shortest time under quarantine
- RB51 reduces the likelihood of abortion
  - More time to find infected individuals before transmission
  - Reduced *Brucella abortus* shedding if pregnancies are infected

# Take Home Messages

- GYA elk and YNP bison – remaining reservoir for *Brucella abortus*
  - Bison movement control prevents transmission to livestock
  - Domestic bison are not more likely to harbor brucellosis than cattle
  - Spillovers only from elk so far because YNP bison movement is controlled
  - Elk capture testing and movement tracking has served to limit DSA expansion
  - Annual whole herd testing puts your clients in control
- Success of the DSA maintains open markets for MT cattle