

# **THE WYOMING RANGE MULE DEER INITIATIVE**

## **History and Current Status: Wyoming Range Mule Deer Herd**



Mark Gocke



**Wyoming Range Deer:**  
**People, Habitat, Land Use, and Predation**  
*What's the Connection?*

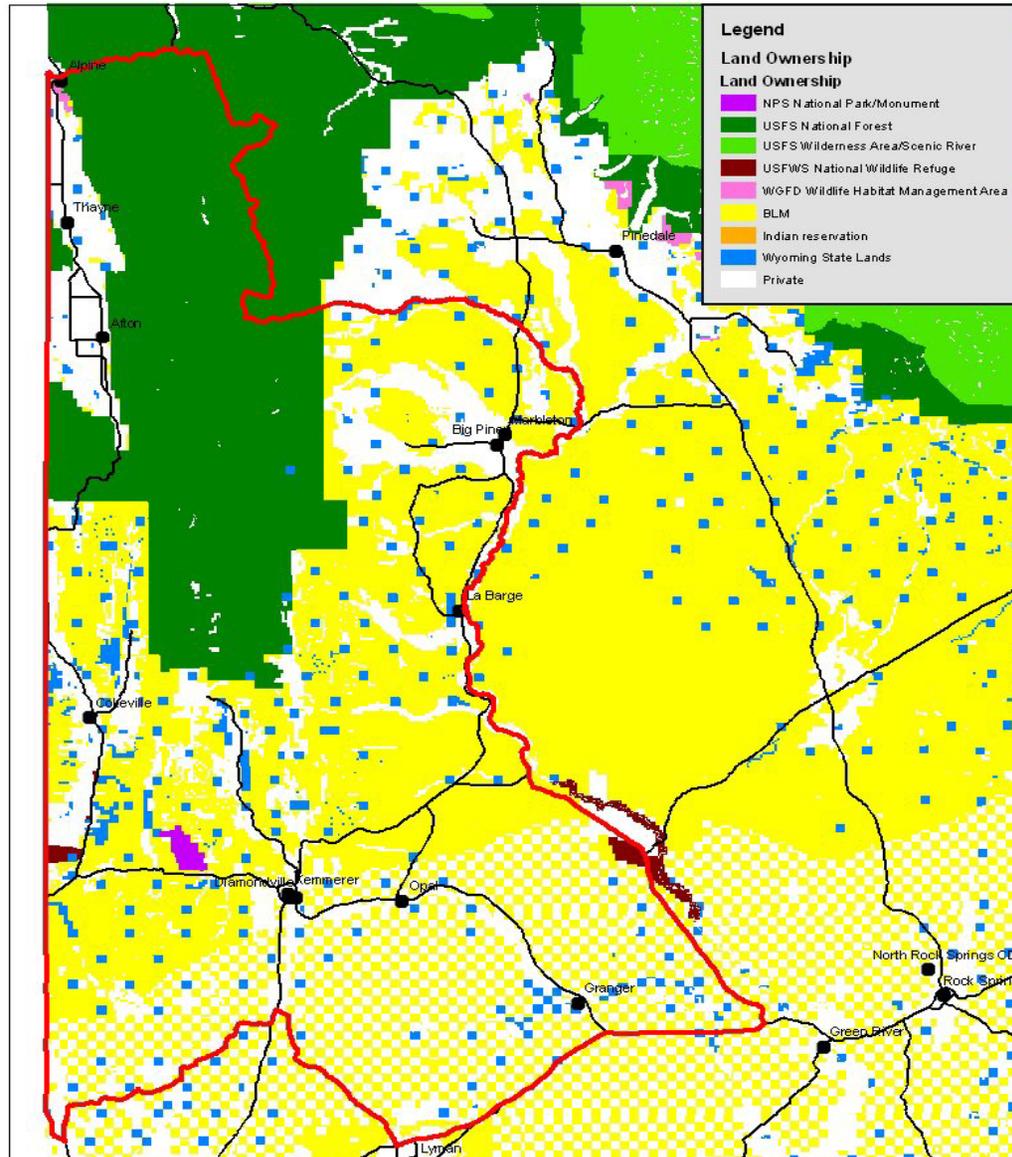


# THE CONNECTION

- *Identify Limiting Factors to Mule Deer Populations and Their Habitats;*
- *Secure Adequate Funding*
- *Further Develop Relationships with Landowners and Agencies*
- *Increase Public Participation and Support*



# THE WYOMING RANGE DEER HERD



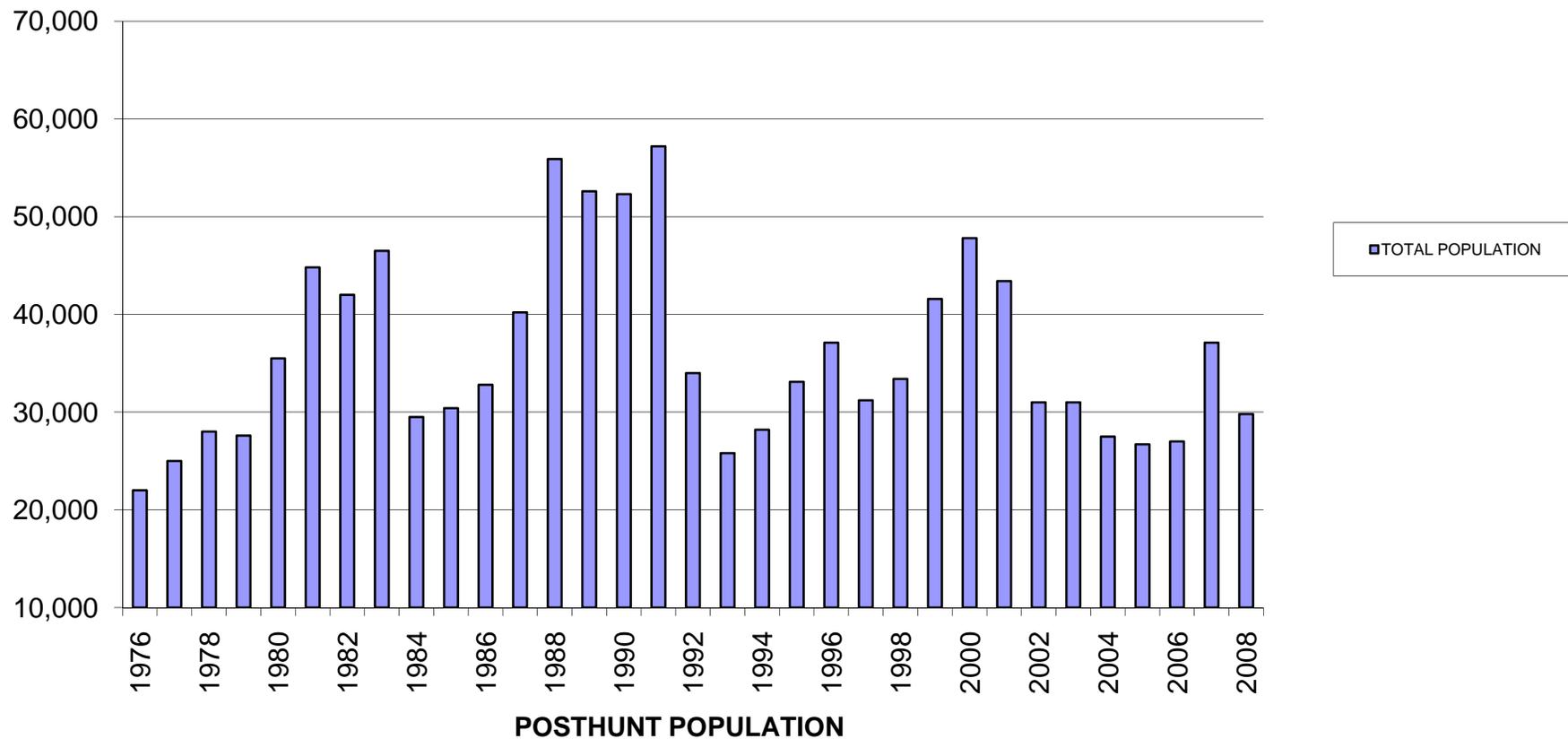
# LIMITING FACTORS

- Habitat Loss - Oil, gas and mineral development, subdivisions, roads, vegetation conversions
- Habitat Degradation/Fragmentation - Roads, disturbance (ATV's, pets), fences, grazing management, development, drought
- Habitat Condition - Plant vigor, nutrient value, decadent/dead shrubs and overbrowsing
- climate such as drought, severe winters
- Predation - Poor habitat = increased predation

# POPULATION



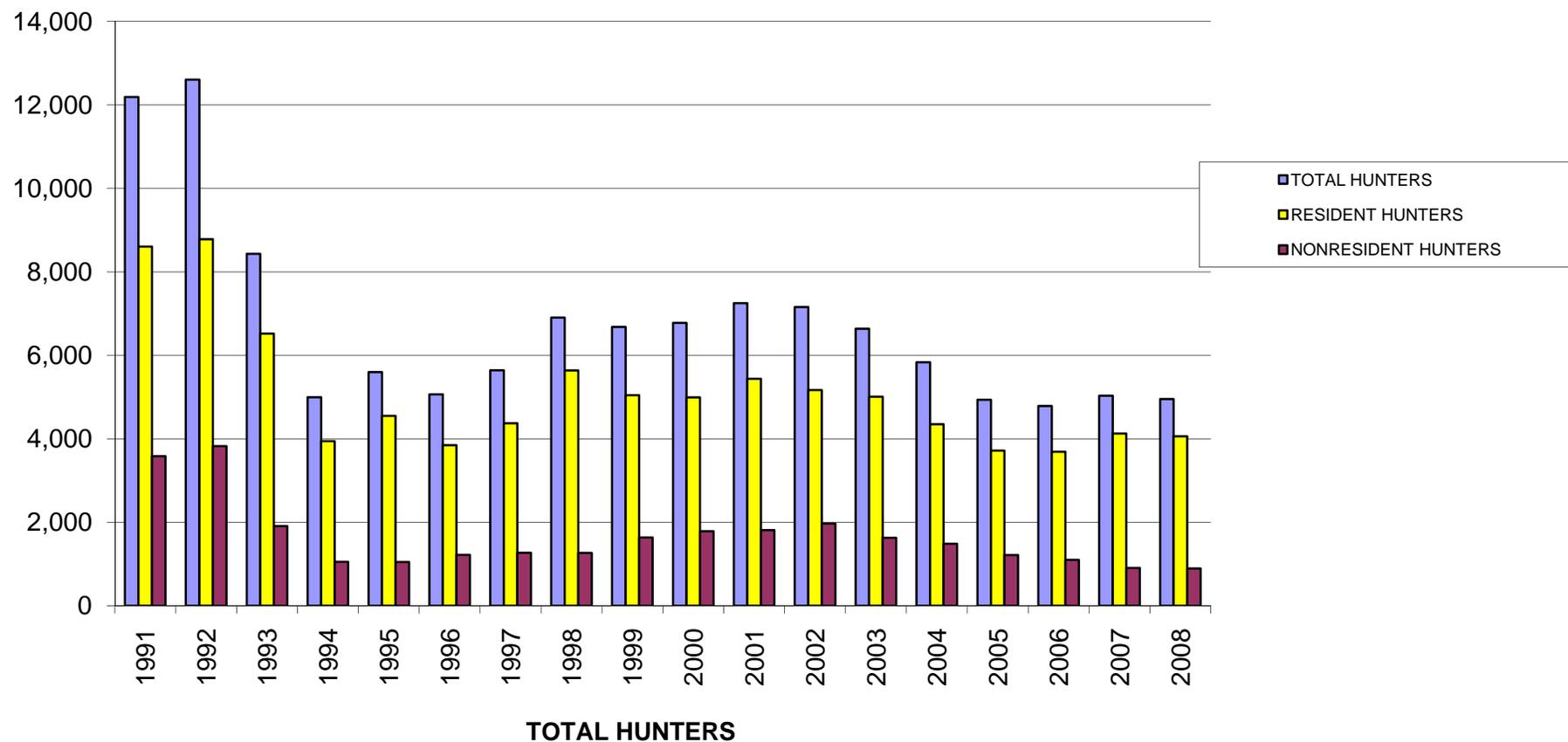
**WYOMING RANGE MULE DEER HERD  
1976 - 2008**



# HUNTER NUMBERS



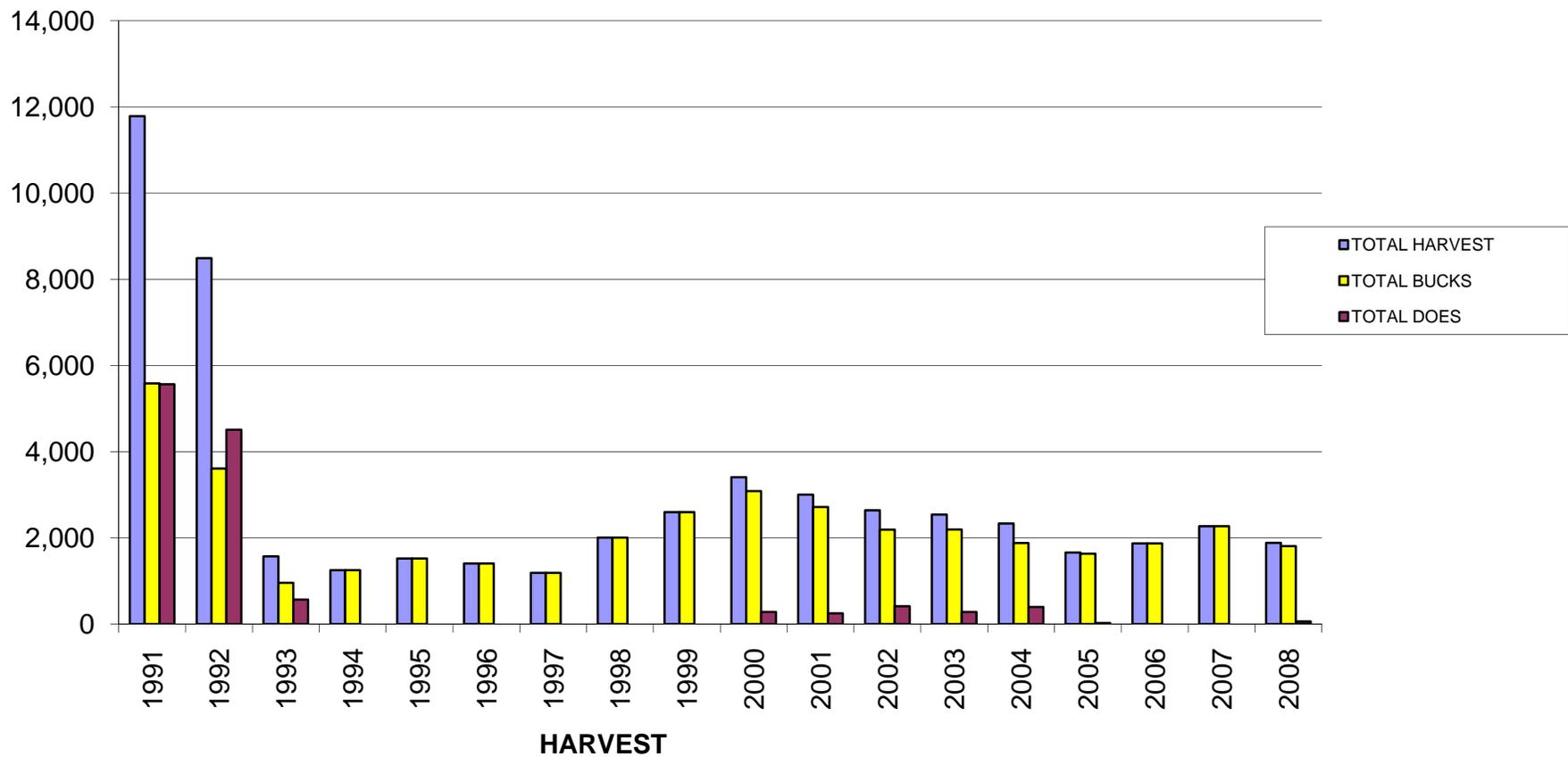
**WYOMING RANGE MULE DEER HERD  
1991 - 2008**



# HARVEST



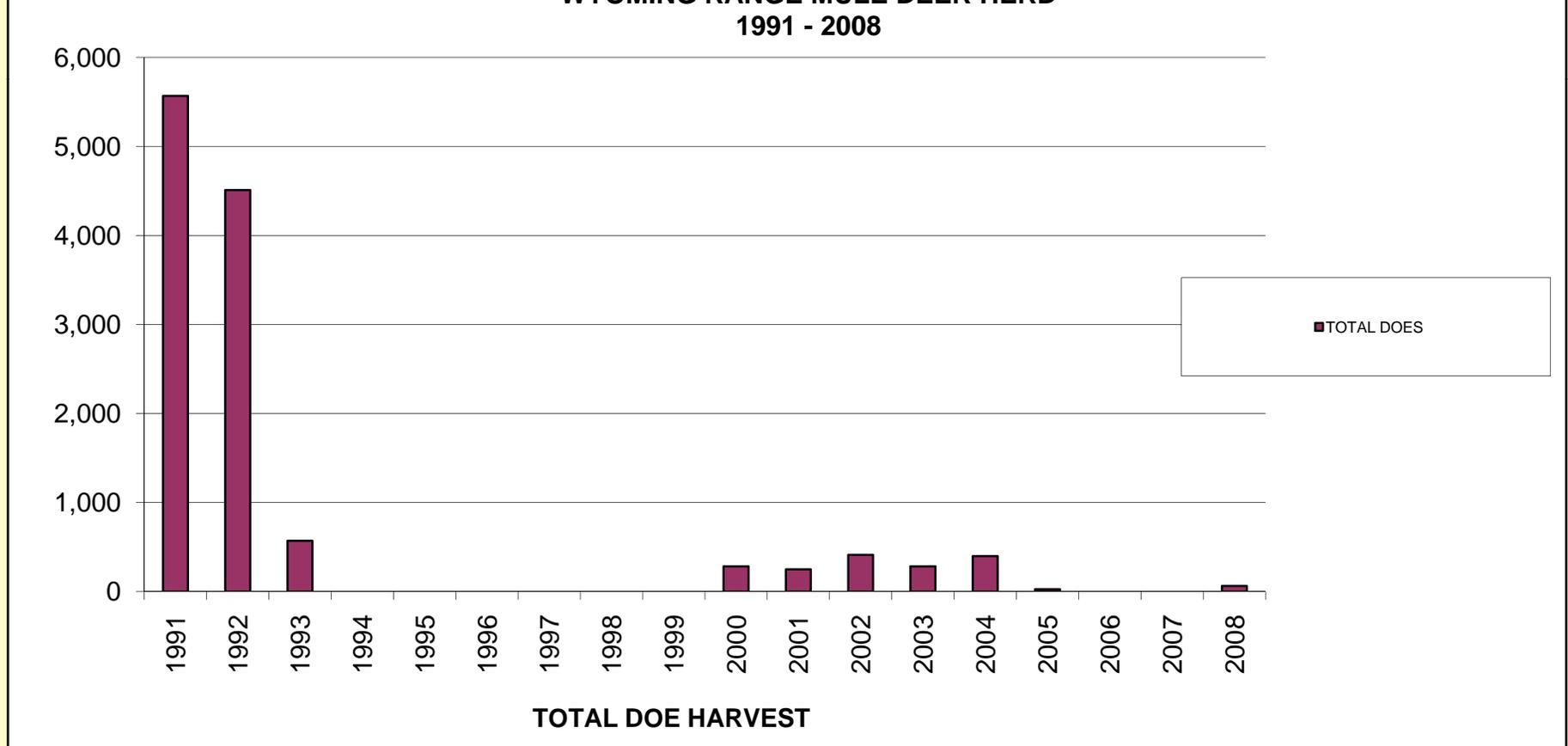
**WYOMING RANGE MULE DEER HERD  
1991 - 2008**



# DOE HARVEST



WYOMING RANGE MULE DEER HERD  
1991 - 2008



# BUCK QUALITY



ANTLER SPREAD OF BUCK DEER	Kaibab Plateau Arizona 1936-1951 N=8,781		Wyoming Range Wyoming 1989-2008 N=2,396	
	N	%	N	%
<20	5,181	59%	777	32%
20-25	2,081	24%	1,075	45%
>25	1,519	17%	544	23%
TOTAL	8,781	100%	2,396	100%
(GTE 30)	(527)	(6%)	(107)	(4%)

# WYOMING RANGE

## *4-point Bucks and*

## *Age Classes of Buck Harvest*

- 24% of Bucks Harvested Are Yearlings\*
- 77% of Bucks Harvested are 4-points or better\*
- 42% of 2-Year Old Bucks Are 4-points or better
- 73% of 3-Year Old Bucks Are 4-points or better
- Of 3,153 Bucks Aged 9% (n=279) Were GTE 6-Years Old

# BUCK QUALITY

**TROPHY BUCK =  $\geq 24$  Inches**

**(73% Respondents: 2009 W.R. Hunter Attitude Survey)**

ANTLER SPREAD* OF BUCK DEER	Kaibab, AZ. 1936-1951 N=8,781 16 Years		Wyoming Range 1989-1995 N=781 7 Years		Wyoming Range 1996-2002 N=914 7 Years		Wyoming Range 2003-2009 N=844 7 Years	
	N	%	N	%	N	%	N	%
$\geq 24$	2195	25%	246	<b>31%</b>	409	<b>45%</b>	202	<b>43%</b>

# PREDATION

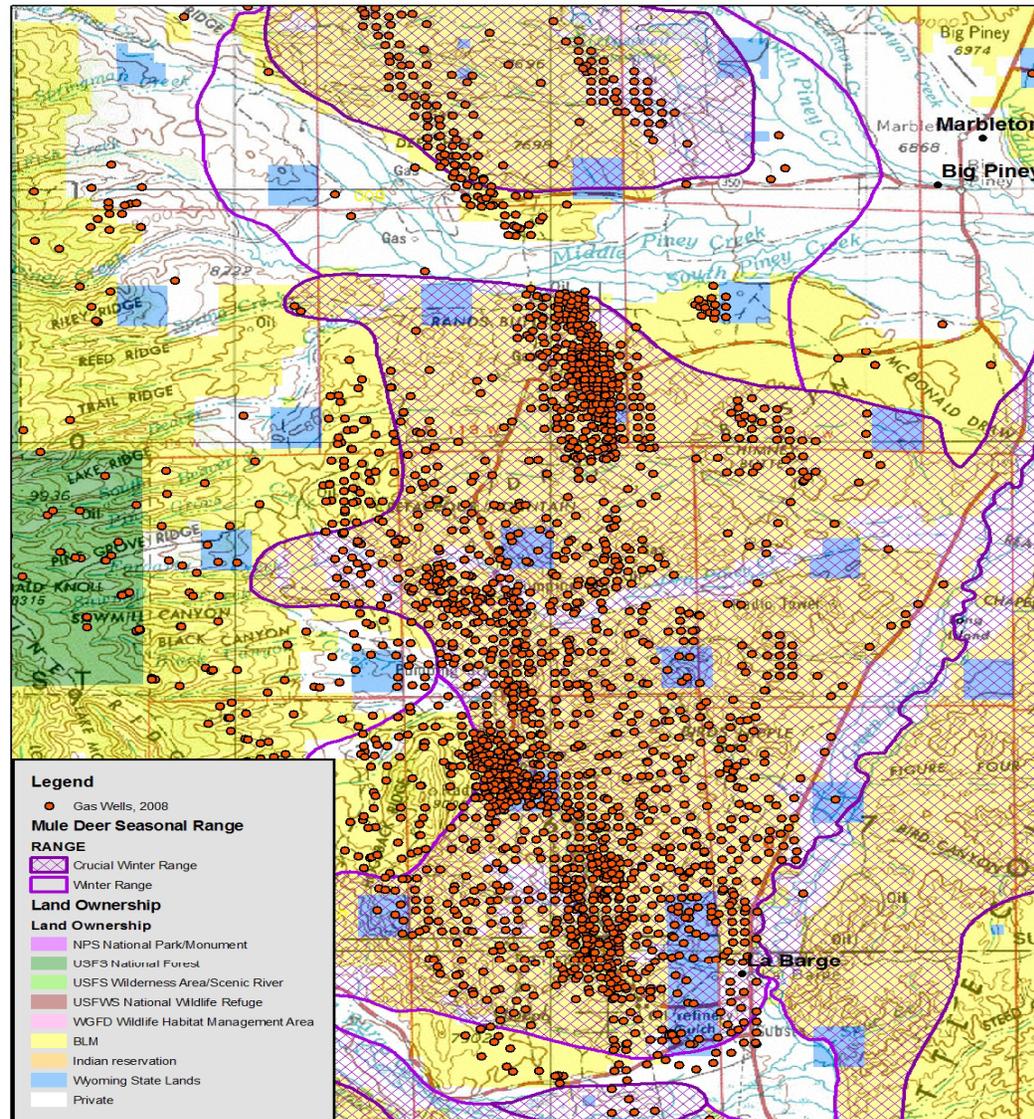


# NOISE, TRAFFIC, AND HABITAT LOSS CAUSED BY MINERAL DEVELOPMENT DISPLACE WILDLIFE



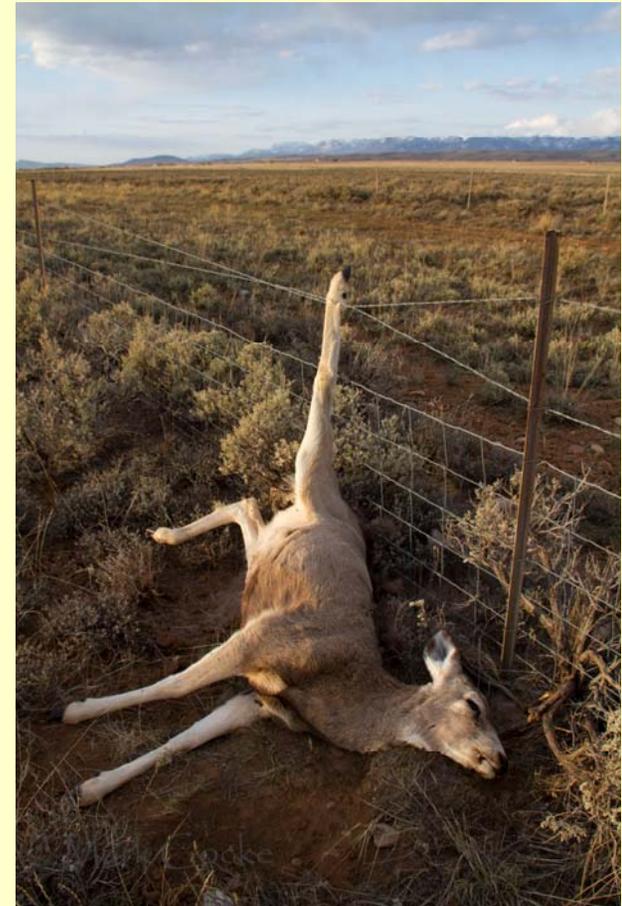
©Mark Gocke

# BIG PINEY/LA BARGE WINTER RANGE OIL AND GAS DEVELOPMENT

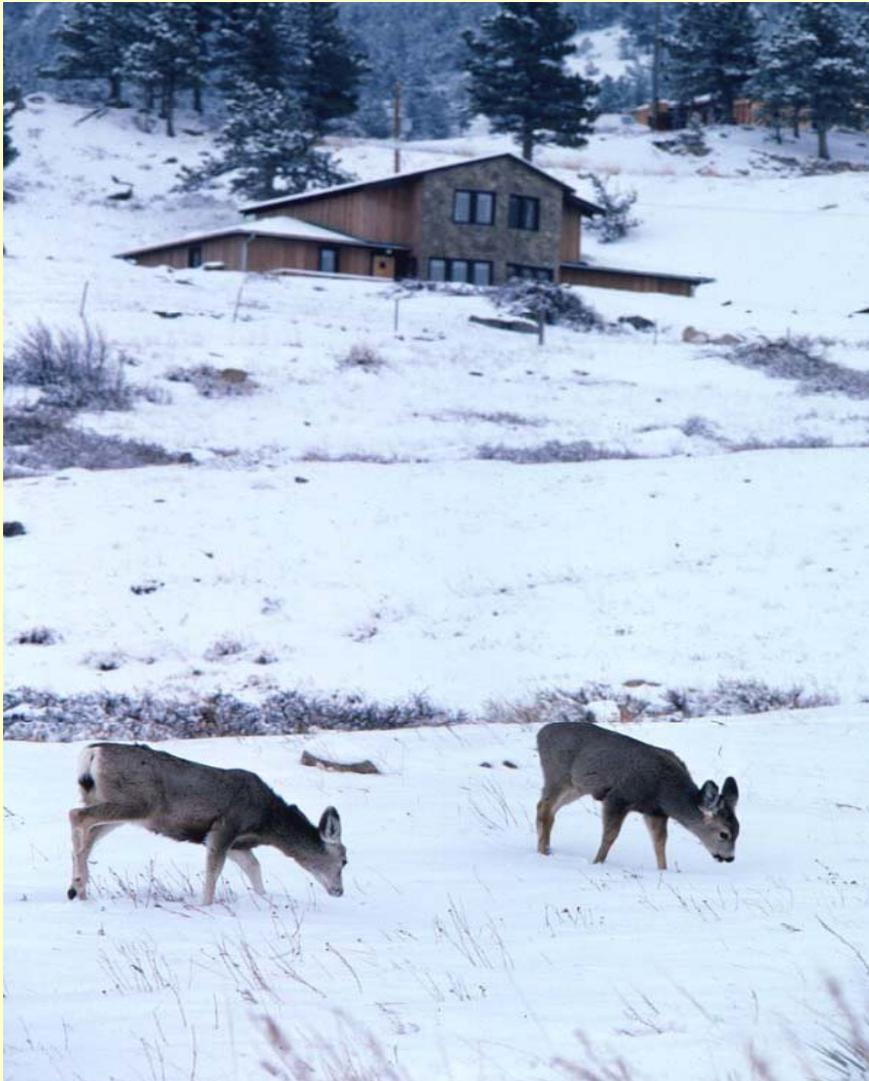


# WE'RE BUMPING INTO WILDLIFE MORE

HIGHWAYS AND FENCES BLOCK MIGRATION  
ROUTES, CAUSE DIRECT MORTALITY AND FORCE  
ANIMALS INTO AREAS LESS OPTIMAL FOR  
SURVIVAL



# Subdivisions



WYOMING IS  
FORTUNATE NOT TO  
HAVE MANY PEOPLE  
  
**BUT, WE'RE GETTING  
MORE PEOPLE IN THE  
WRONG PLACES**  
  
**BIG GAME WINTER  
RANGE**

# WEATHER & DROUGHT



## Drought

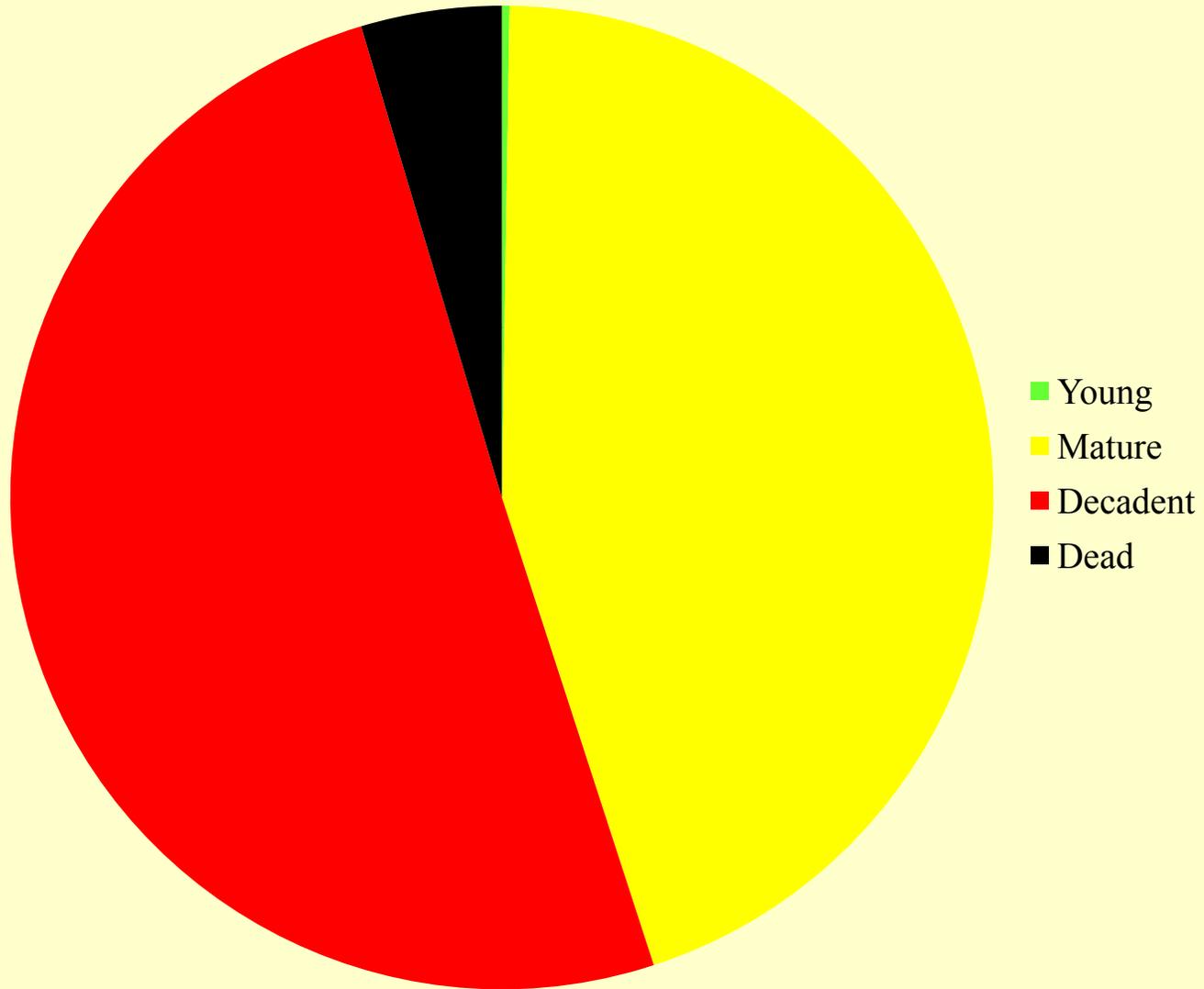
## Severe Winters

Winter Deer Mortality: 1992-93, 1996-97, 2000-01, 2001-02, 2003-04, 2004-05, 2007-08

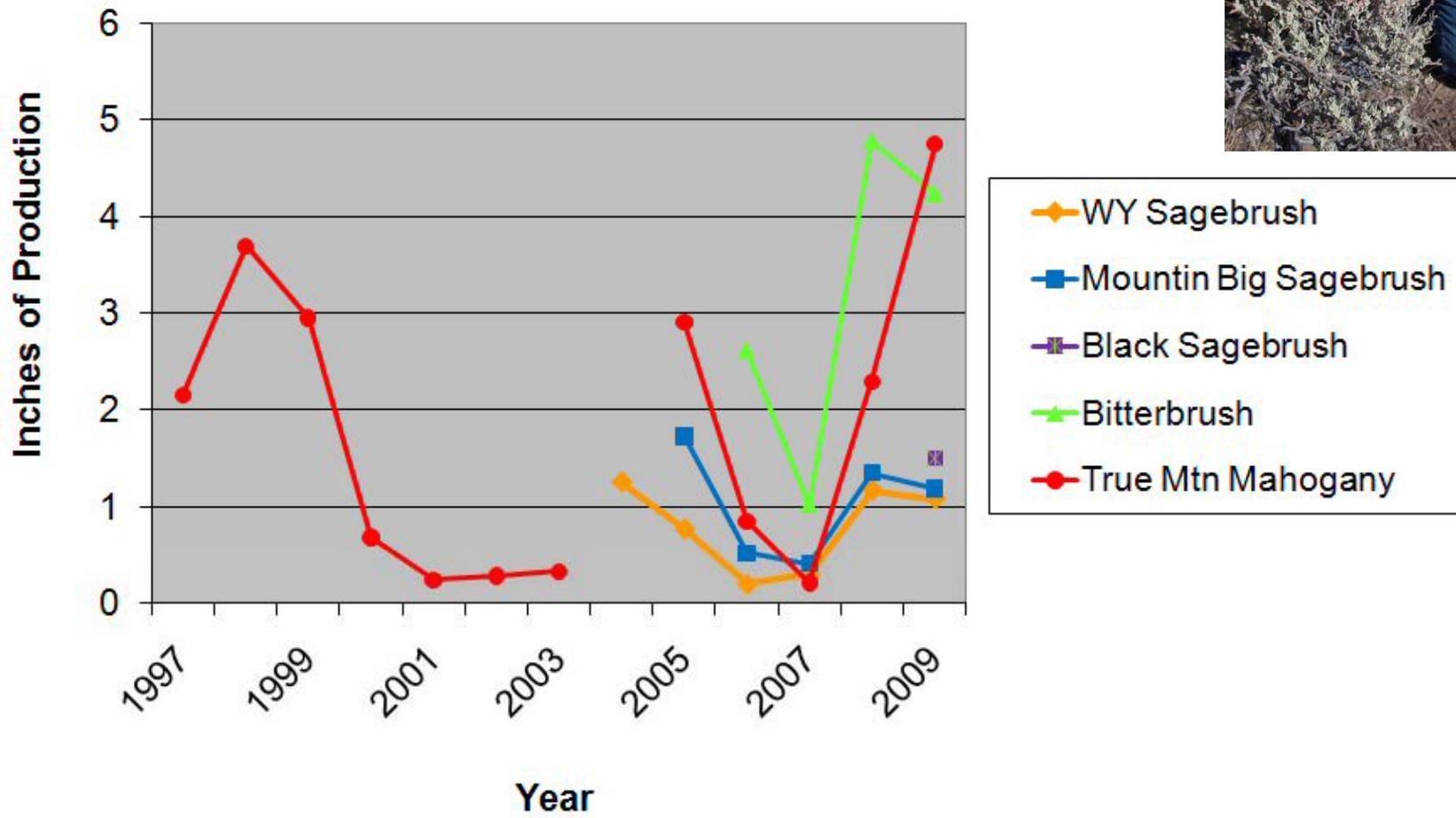
75% fawn loss, 25% adult loss



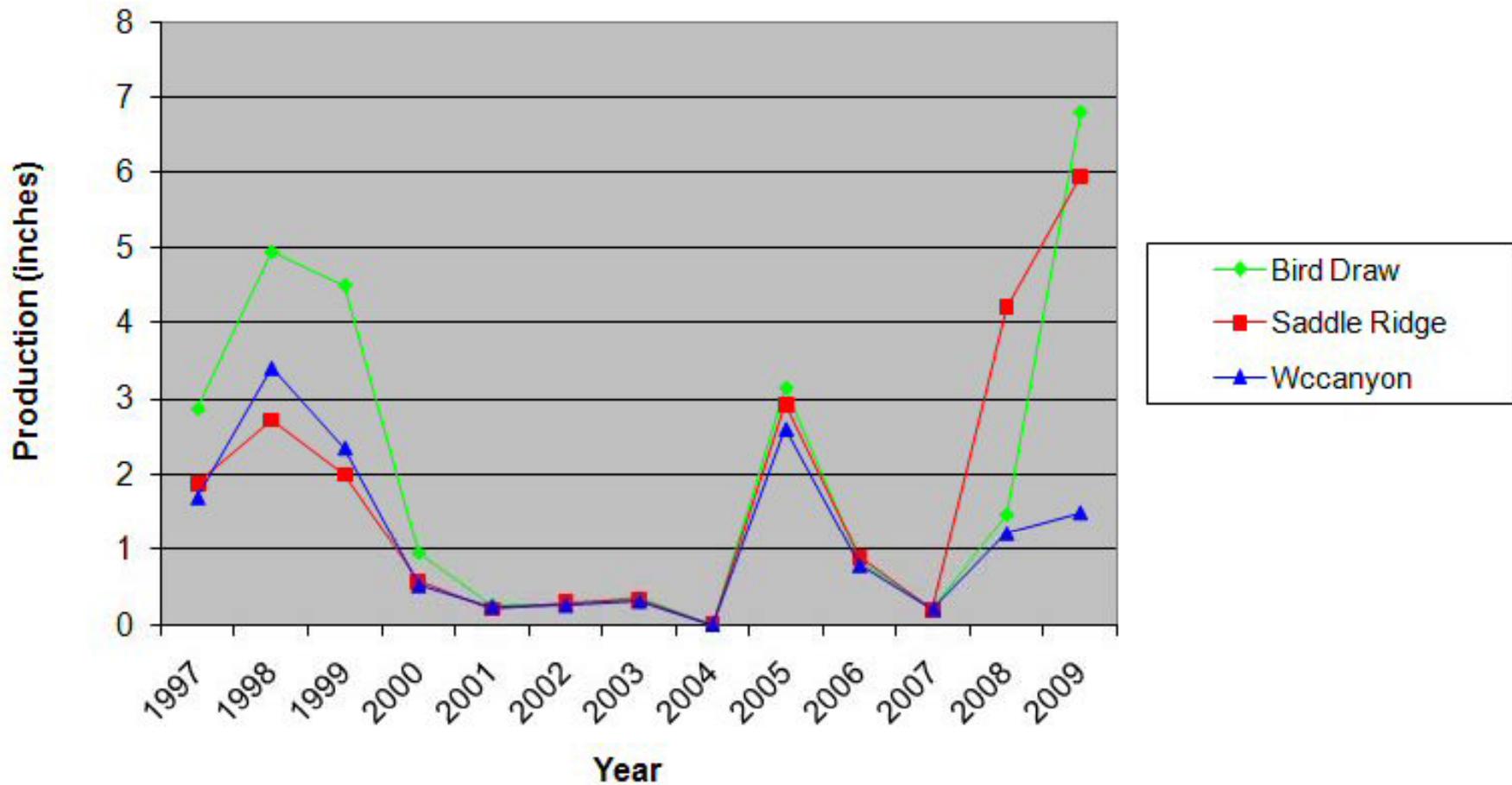
# Age Class of Shrubs



## Average Production of Browse Species



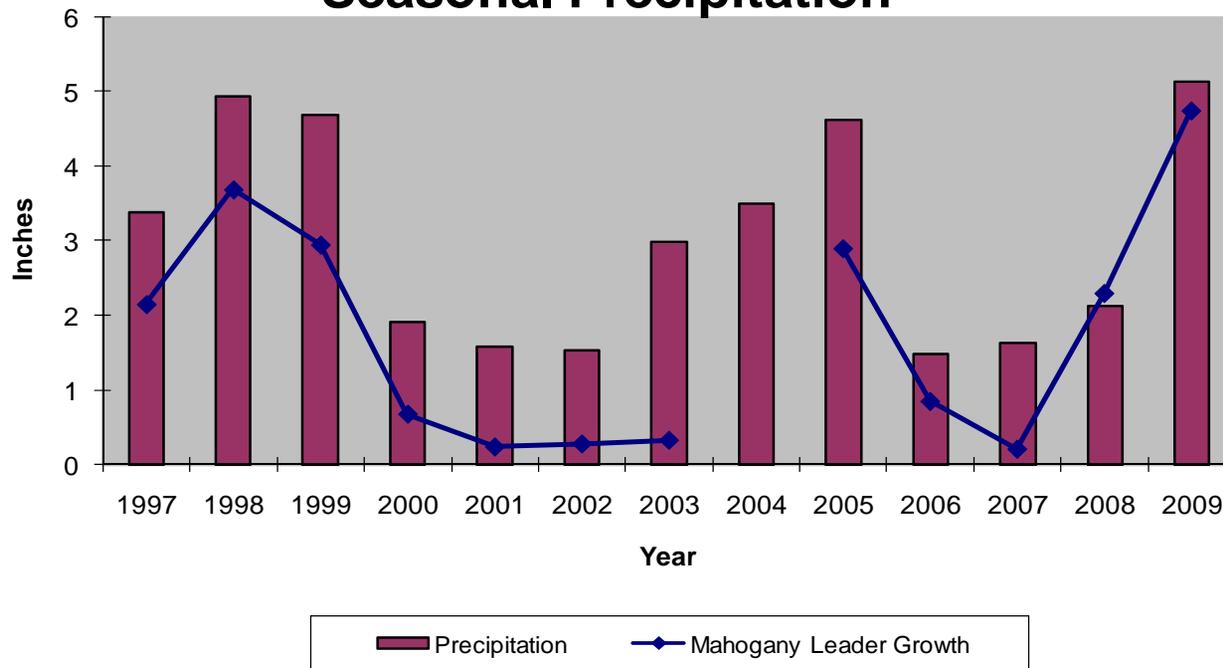
## True Mountain Mahogany Production Labarge Winter Range Area



# Shrub Data 2009



## Mountain Mahogany Production Compared to Seasonal Precipitation





Plants under less pressure from browsing are more productive and can provide more forage, which is vital for wintering big game herds.

Heavy browsing reduces the health and production capacity limiting its ability to support wildlife populations.



# Consequences of Excessive Big Game Numbers

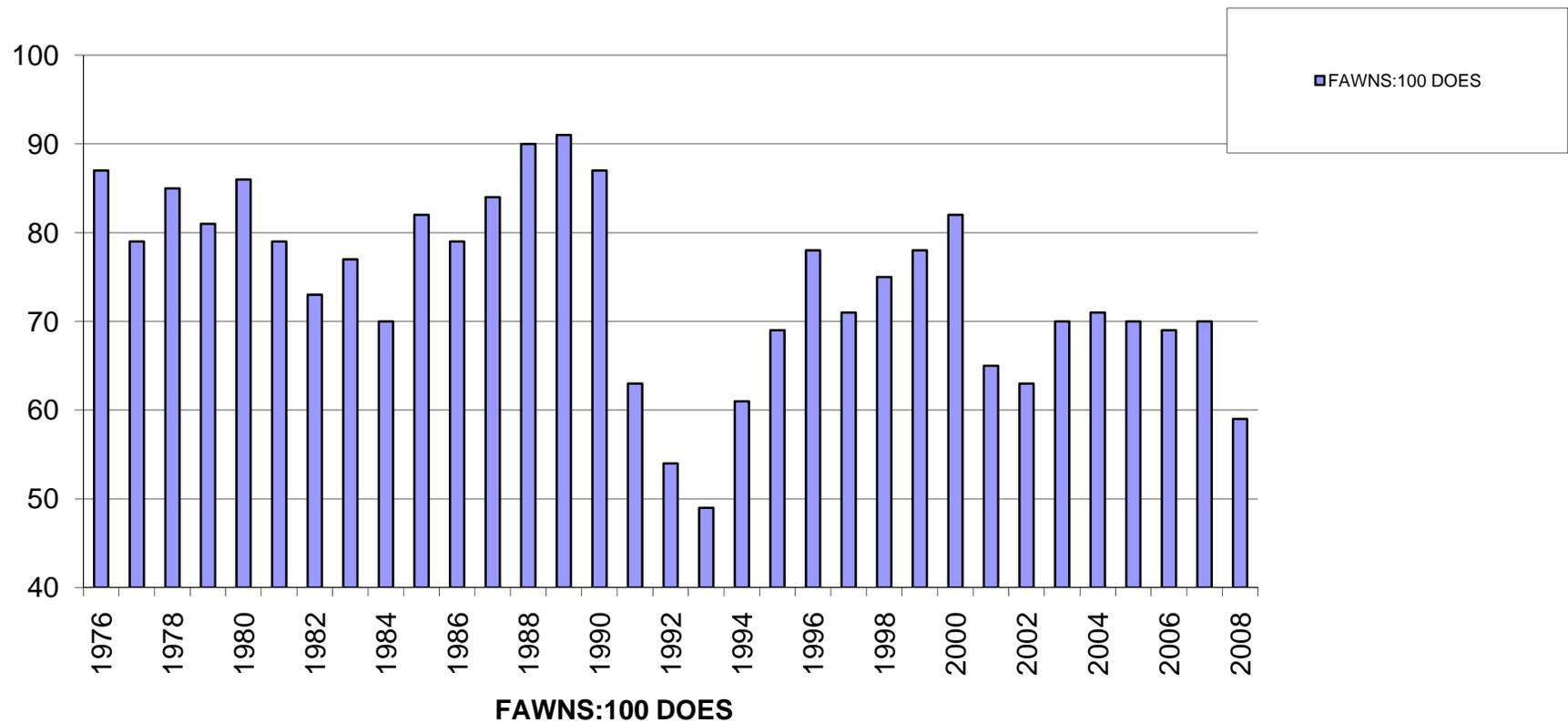
- Deteriorated Habitat
- Decreased Production & *Recruitment* of Young
- Decreased Quality of Big Game
- Reduced Antler Growth



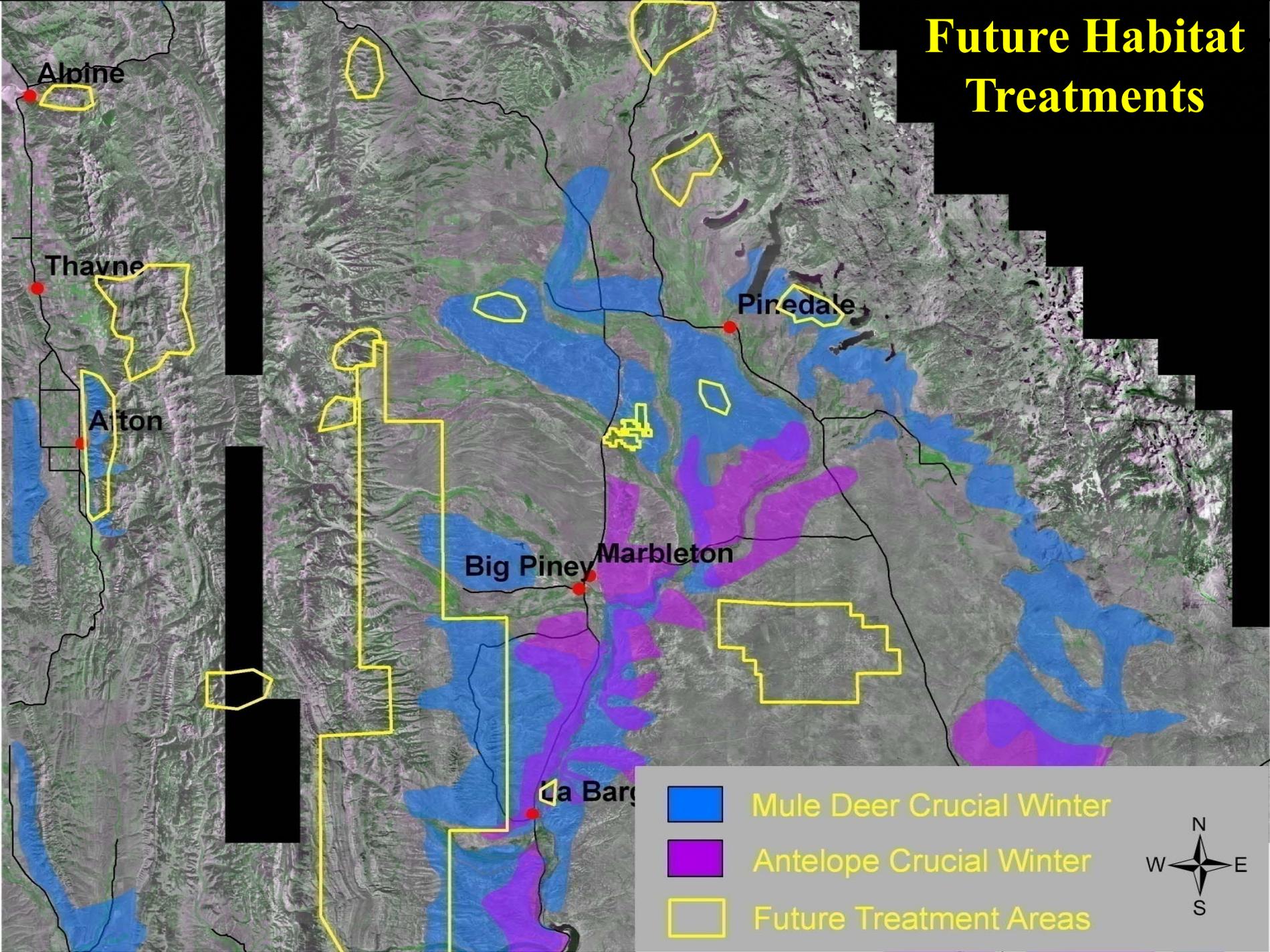
# FAWN:DOE RATIOS



WYOMING RANGE MULE DEER HERD  
1976 - 2008



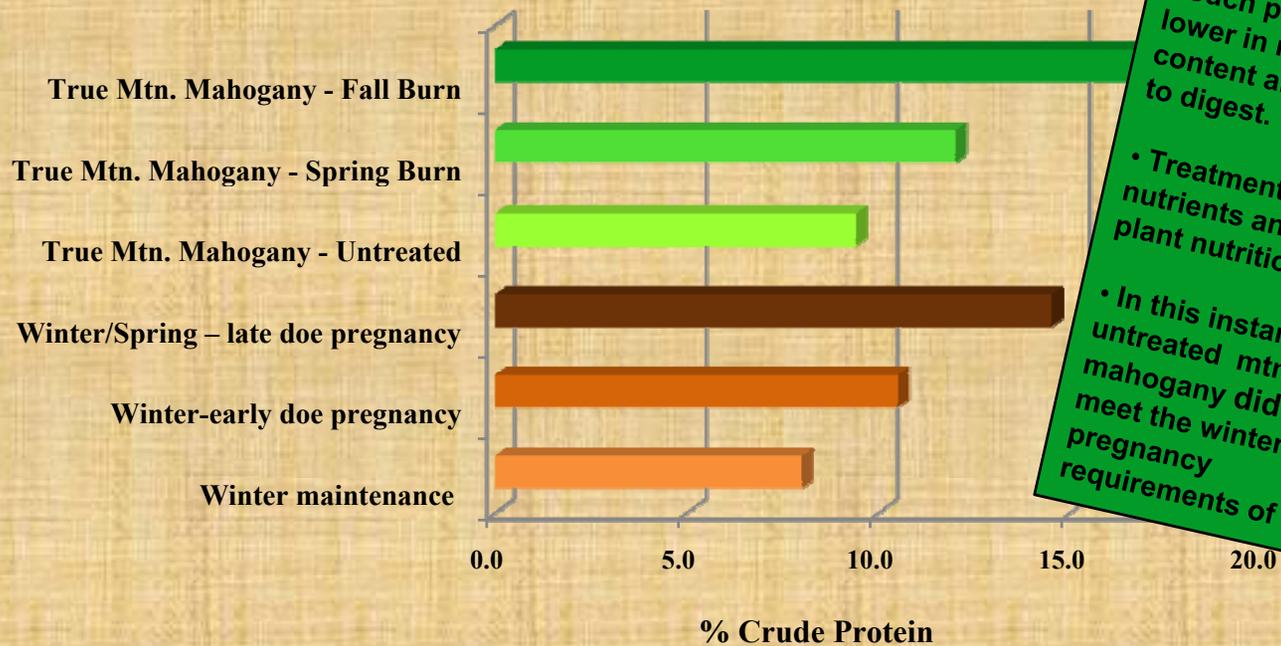
# Future Habitat Treatments



# Why we do habitat treatments



Comparison of MD Crude Protein Requirements to Crude Protein Levels in Treated and Untreated Mountain Mahogany



- Much of the important transitional and winter ranges are comprised of mostly old-aged plants.
- Such plants are lower in nutritional content and difficult to digest.
- Treatments recycle nutrients and enhance plant nutrition levels.
- In this instance untreated mtn. mahogany did not meet the winter pregnancy requirements of does.

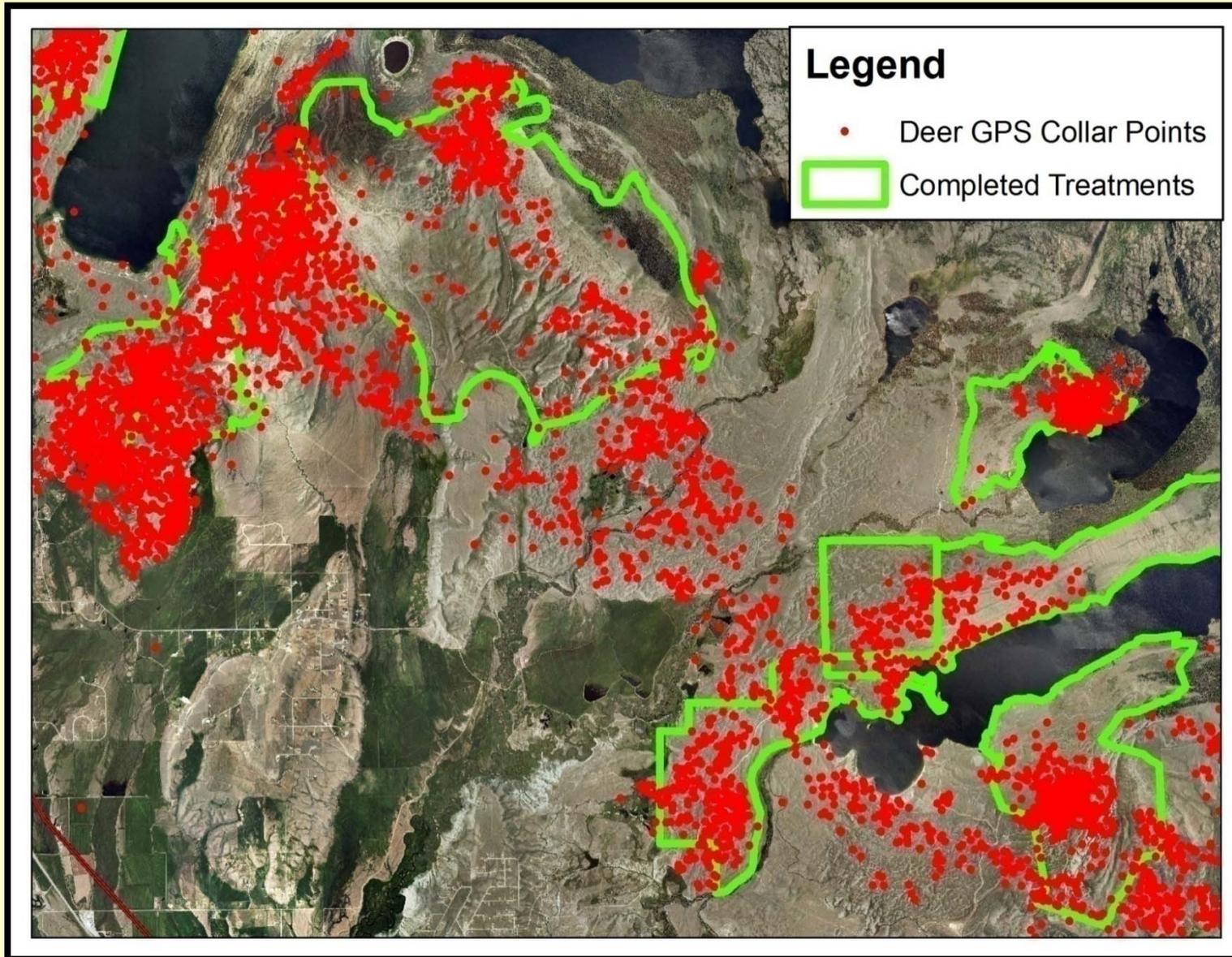
*What Have You Done For Me  
(and Mule Deer) Lately?!*



# HABITAT TREATMENTS

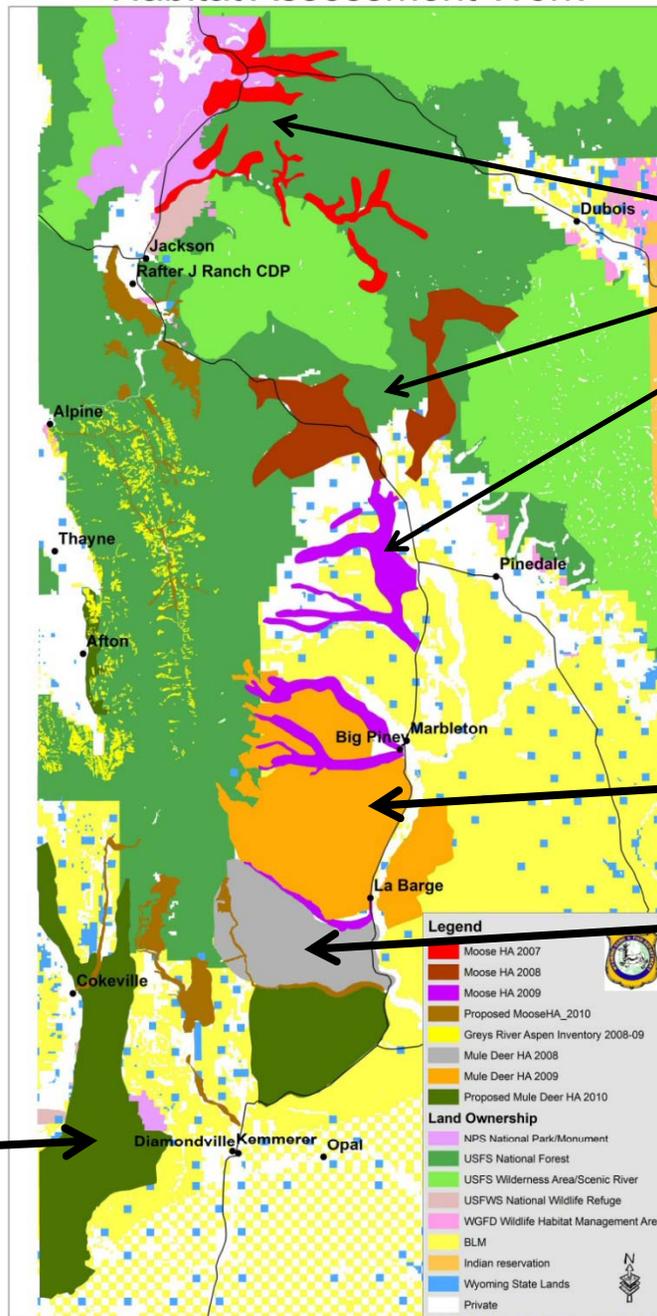


# Deer Use of Habitat Treatments



# Wyoming Range Mule Deer Habitat Assessment

## Habitat Assessment Work



Moose Habitat Assessment Areas

2009 Area

2008 Area

2010 Area

**Goal: Learn current conditions and opportunities to enhance habitat for mule deer...implement projects!**

Fall 2009 Nugget Canyon Update

WEST, Inc



# WINTER RANGE CLOSURE

PUBLIC LANDS BEHIND THIS  
SIGN ARE CLOSED TO  
MOTORIZED VEHICLES FROM  
JAN 1 - APRIL 30 TO  
PROTECT WINTERING WILDLIFE

VIOLATORS WILL BE SUBJECT TO  
PENALTIES

FOR MORE INFORMATION OR TO REPORT  
VIOLATIONS CALL THE BUREAU OF LAND  
MANAGEMENT PINEDALE FIELD OFFICE AT  
307-367-5300



12/18/2008 13:14

**WYOMING GAME AND FISH COMMISSION**  
**CHAPTER 61**  
**COLLECTION OF SHED ANTLERS AND HORNS**

Section 1. Authority. This regulation is promulgated by authority of W.S. §§23-1-103 and 23-1-302.

Section 2. Regulation. The Wyoming Game and Fish Commission hereby adopts the following regulation governing the collection of shed antlers and horns of big game animals. This regulation shall remain in effect until modified or rescinded by the Commission.

Section 3. Purpose. The purpose of this regulation is to minimize the harassment or disturbance of big game animals on their winter and spring ranges when animals are most vulnerable to physiological stress and displacement to less productive habitats.

Section 4. Definitions. For the purpose of this regulation, definitions shall be as set forth in Title 23, Wyoming Statutes and the Commission also adopts the following definitions:

- (a) "Antlers" mean the bony, deciduous appendages protruding from the heads of members of the deer family (*Cervidae*), including deer, elk or moose.
- (b) "Collect" means to search for, locate, stockpile, or possess shed antlers and horns of big game animals on public land or attempt to search for, locate, stockpile, or possess shed antlers and horns of big game animals on public land.
- (c) "Horns" mean the hard, permanent appendages protruding from the heads of bighorn sheep, mountain goats or pronghorn antelope.
- (d) "Public land" means federal lands and lands owned or administered by the Wyoming Game and Fish Commission, excluding Grand Teton National Park, John D. Rockefeller, Jr. Memorial Parkway and the National Elk Refuge.
- (e) "Shed antler" means an antler having become naturally separated from the skull.

Section 5. Collection of Shed Antlers or Horns. No person shall collect shed antlers or horns from big game animals on public land west of the Continental Divide, excluding the Great Divide Basin, from January 1 through April 30 of each calendar year.



# WINTER RANGE CLOSURE

PUBLIC LANDS BEHIND THIS SIGN ARE CLOSED TO MOTORIZED VEHICLES FROM JAN 1 - APRIL 30 TO PROTECT WINTERING WILDLIFE

VIOLATORS WILL BE SUBJECT TO PENALTIES

FOR MORE INFORMATION OR TO REPORT VIOLATIONS CALL THE BUREAU OF LAND MANAGEMENT KEMMERER FIELD OFFICE AT 307-828-4500



# STOP

## ANTLER HUNTERS



1-800  
WGFD-7111

20/04/2010 14:5

# PUBLIC VOLUNTEER PROGRAMS: MULE DEER MORTALITY SURVEYS









# THE WYOMING RANGE

CLEAN WATER. OUTSTANDING WILDLIFE HABITAT  
AN ABIDING SENSE OF HISTORY

FENCE POST AND HOUSE LOGS. SUMMER RANGE  
FOR LIVESTOCK. BIG GAME FOR TABLE FARE - A PLACE  
FROM WHICH WE TAKE SUSTENANCE AS WELL AS PLEASURE.

ENDURING TRADITIONS OF BIG GAME HUNTING  
FISHING, HORSE PACKING, HIKING  
WINTER SPORTS AND TOURING SCENIC ROADS  
THIS IS THE LEGACY OF THE WYOMING RANGE  
AND SURROUNDING MOUNTAINS  
OF THE BRIDGER-TETON NATIONAL FOREST

THANKS TO SENATOR CRAIG THOMAS  
AND SENATOR JOHN BARRASSO WHO  
SPONSORED THE WYOMING RANGE LEGACY  
ACT OF 2009

08/23



Mark Crooke