

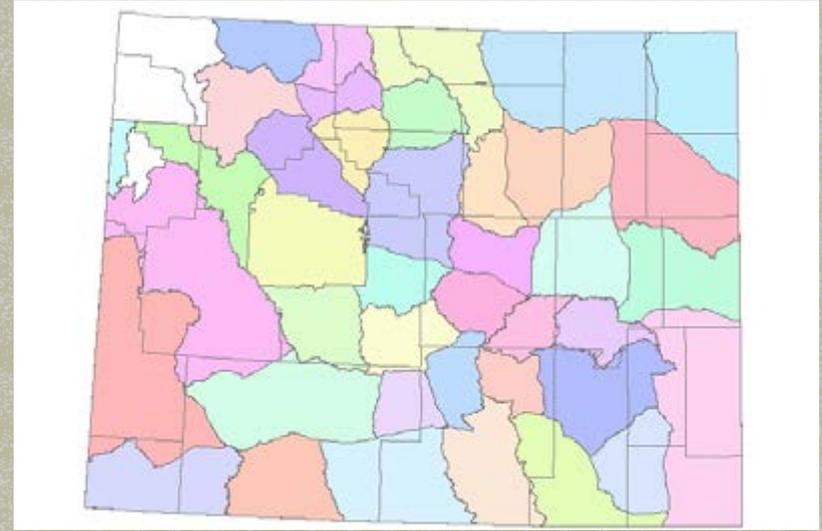
Wyoming Mule Deer



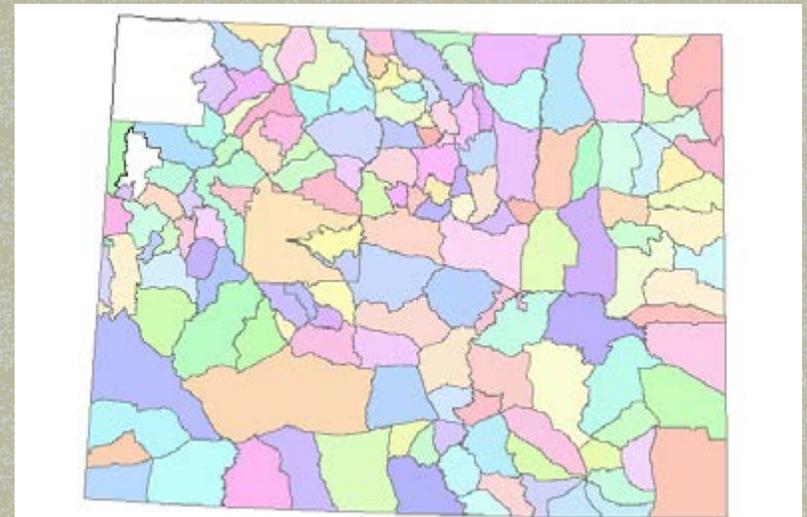


In Wyoming.....

- Mule deer are managed in 41 Herd Units or distinct populations



- Encompassing 156 Hunt Areas



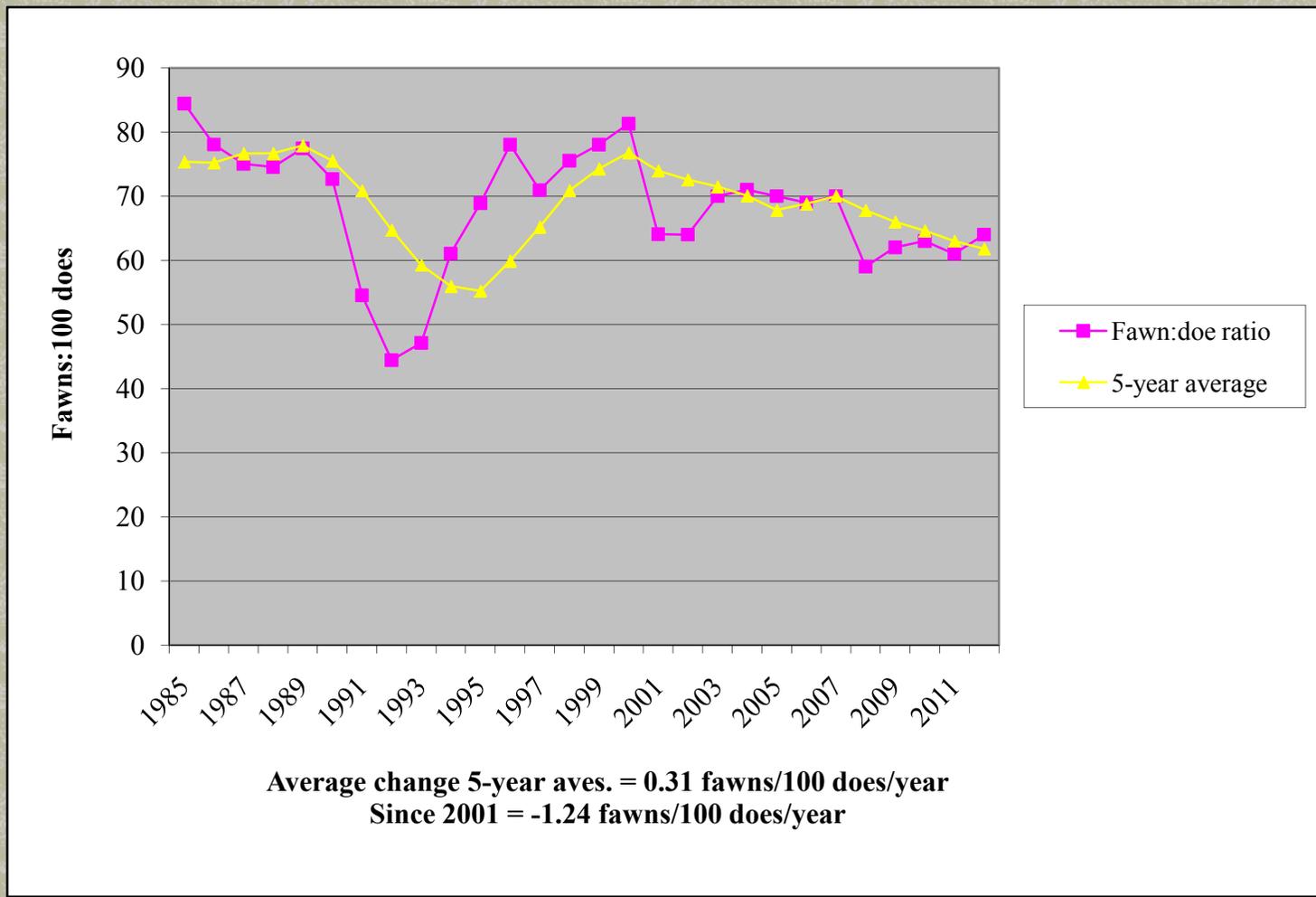


**FOR MANY,
MULE DEER
SYMBOLIZE
WYOMING'S
WILDLIFE
HERITAGE,**

**BUT THEY'RE
FINDING
SURVIVAL MORE
DIFFICULT IN
TODAYS WORLD**

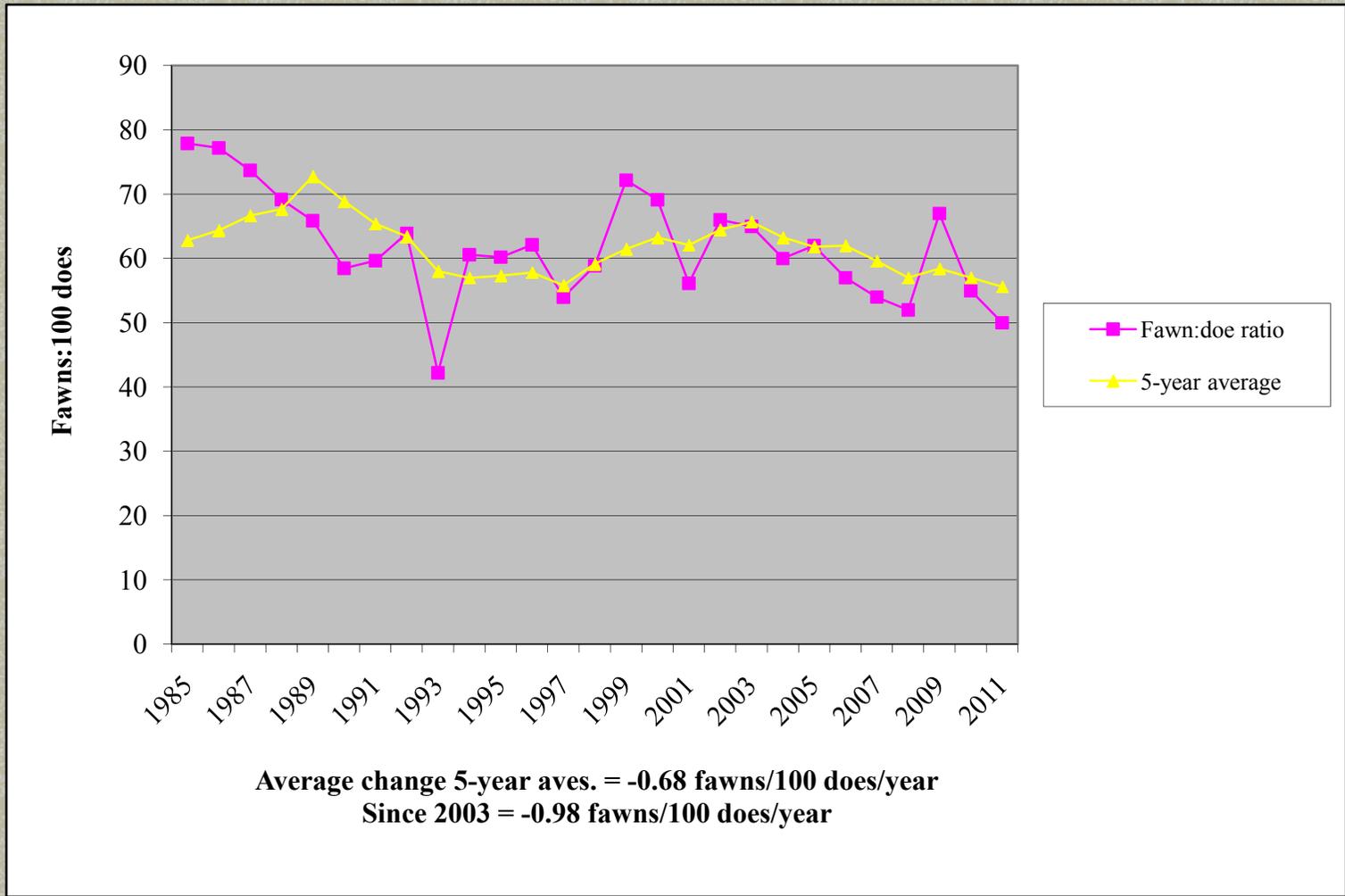


Wyoming Range



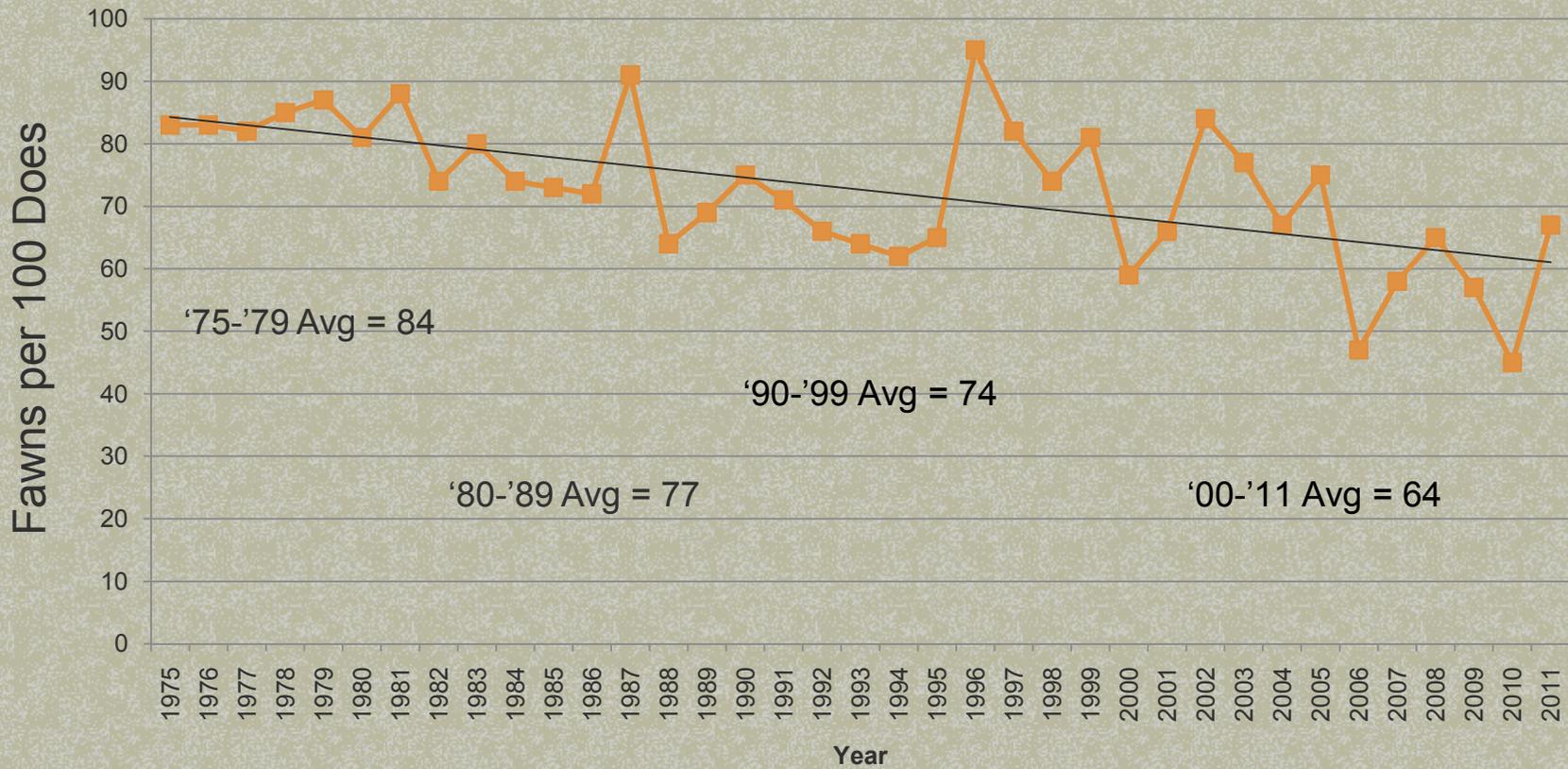


Platte Valley



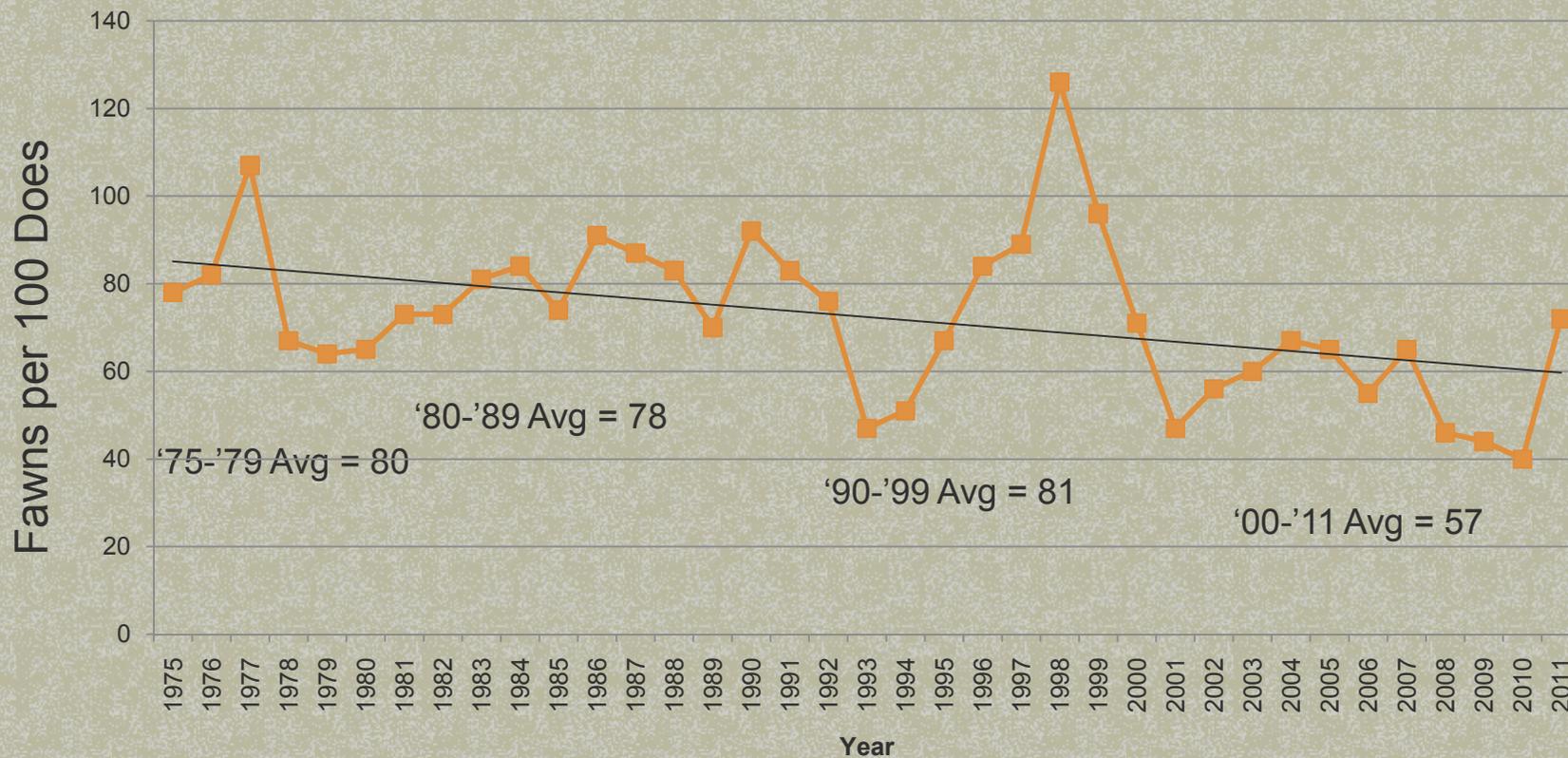


Bates Hole/Hat Six – Fawn Production Trend 1975 - 2011





South Converse – Fawn Production Trend 1975 - 2011





Recent History

- **Population decline after the winters of 1978/79 and 1983/84, followed by robust recovery.**
- **Unexpectedly high losses during the 1992-93 winter, followed by slow and erratic recovery.**
- **Populations responded somewhat through the 1990's, but never recovered to levels observed prior to 1992.**
- **Populations declined significantly in the 2000's due to poor habitat conditions which are, in part, a result of drought, habitat loss and fragmentation, declining shrub-stand vigor, etc.**



■ Impacts to Mule Deer Habitats

- ✓ Energy Development
- ✓ Housing Subdivisions
- ✓ People
- ✓ Plant Composition
- ✓ Plant Nutrition
- ✓ Plant Condition
- ✓ Plant Competition



Plant composition impacts carrying capacity through introduction and expansion of non-native, invasive plants, such as cheatgrass





Mule deer are much more specialized and less adaptable than elk

- Have smaller stomachs than elk relative to body size
 - rumeno-reticular ratio of ~ 0.10 , with intestinal lengths of 12-15x their body length
 - Food passes more quickly but ability to digest carbohydrates declines
 - Bison have ratio of ~ 0.24 , with intestinal lengths of 25-30x their body length
- Mule deer therefore need higher quality, more specific foods
 - Leaves/browse, newly emergent grasses and forbs have higher concentrations of readily digestible nutrients
- Elk can process lower quality foods
 - Foods with higher cellulose concentration – i.e. grasses



Antelope Bitterbrush



- Shrubs in this condition are no longer capable of producing large quantities of high quality forage.





Wyoming Big Sagebrush



- Plants in this condition can no longer support the animals that depend on them.



Plant condition impacts carrying capacity through lack of production, poor vigor and health



Carrying Capacity

Plant nutrition impacts carrying capacity through the lack of nutrients

Crude Protein Content of True Mountain Mahogany





BUT, carrying capacity can be improved through habitat improvement projects – although very expensive



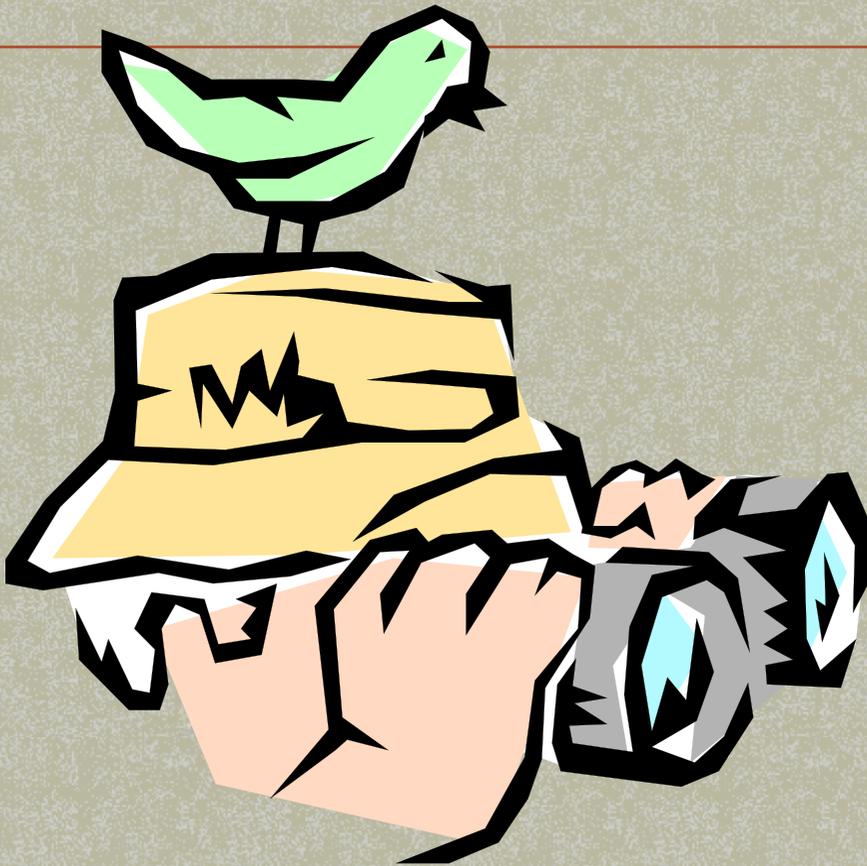


which change plant composition to plants that are tasty, easier to digest,





SO WHY SLOW POPULATION RECOVERY AND RECOVERY TO A LOWER LEVEL?



THERE ISN'T A SINGLE ANSWER, BUT THE PROBLEMS FACING WYOMING'S MULE DEER ARE THE SAME AS THOSE EFFECTING MULE DEER THROUGHOUT THE ROCKY MOUNTAIN WEST



In addition to habitat-related issues, what other factors are likely impacting mule deer?



Predation

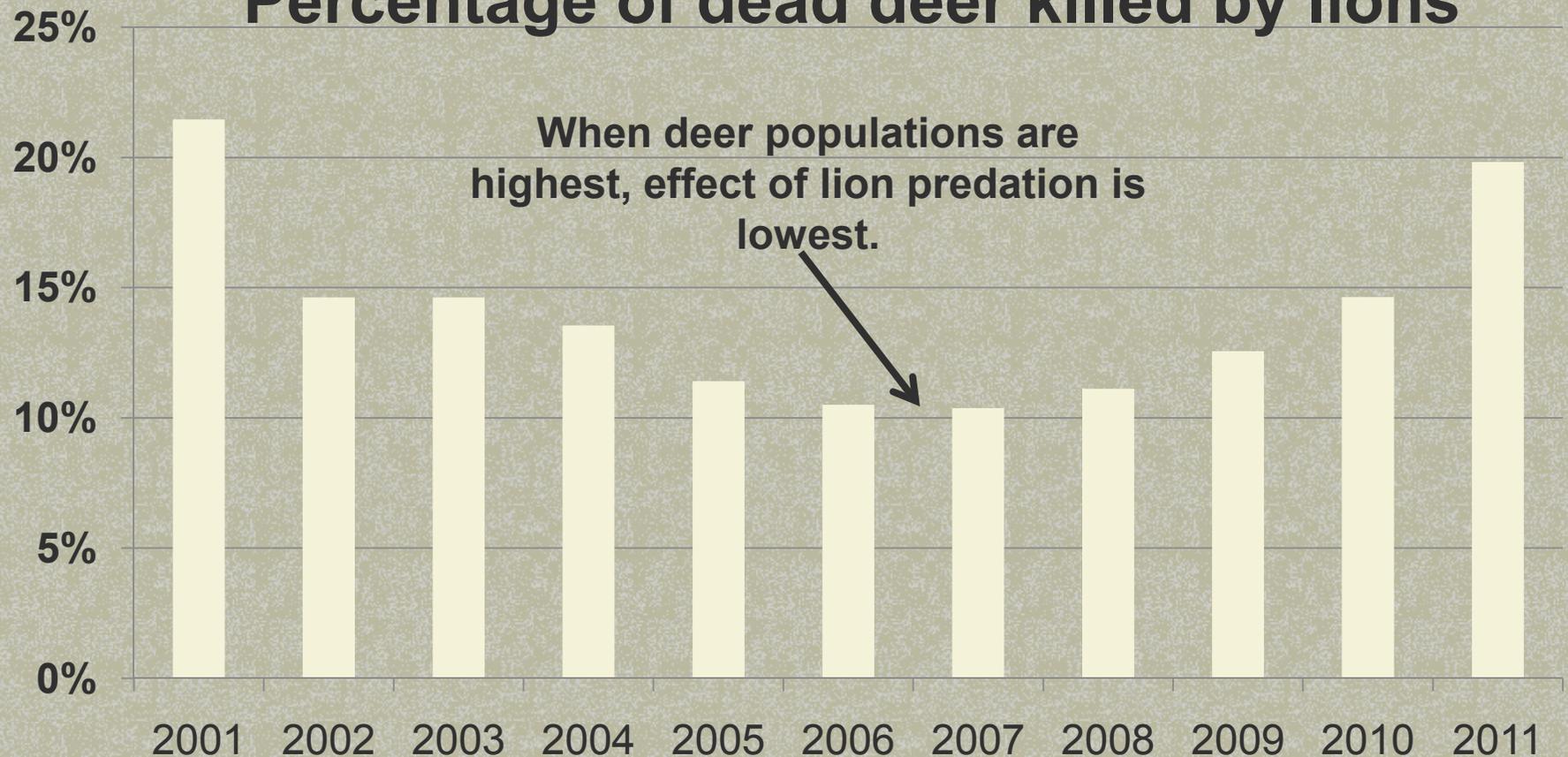
Predation is most significant when populations have declined and are well below carrying capacity

- Extensive field experience has resulted in hundreds of conversations with hunters and landowners
- Many indicate coyote observations were much more rare from the 1950's through the 1980's
- Discontinued use of 1080/poisons
- Lions have made comebacks in many areas
 - i.e. very low lion densities in the Black Hills through the early 2000's (hunting quota of 1 in 2000)
 - Lion densities are now extremely high in Black Hills
 - Lions responsible for highest percentage of mortality in CWD study

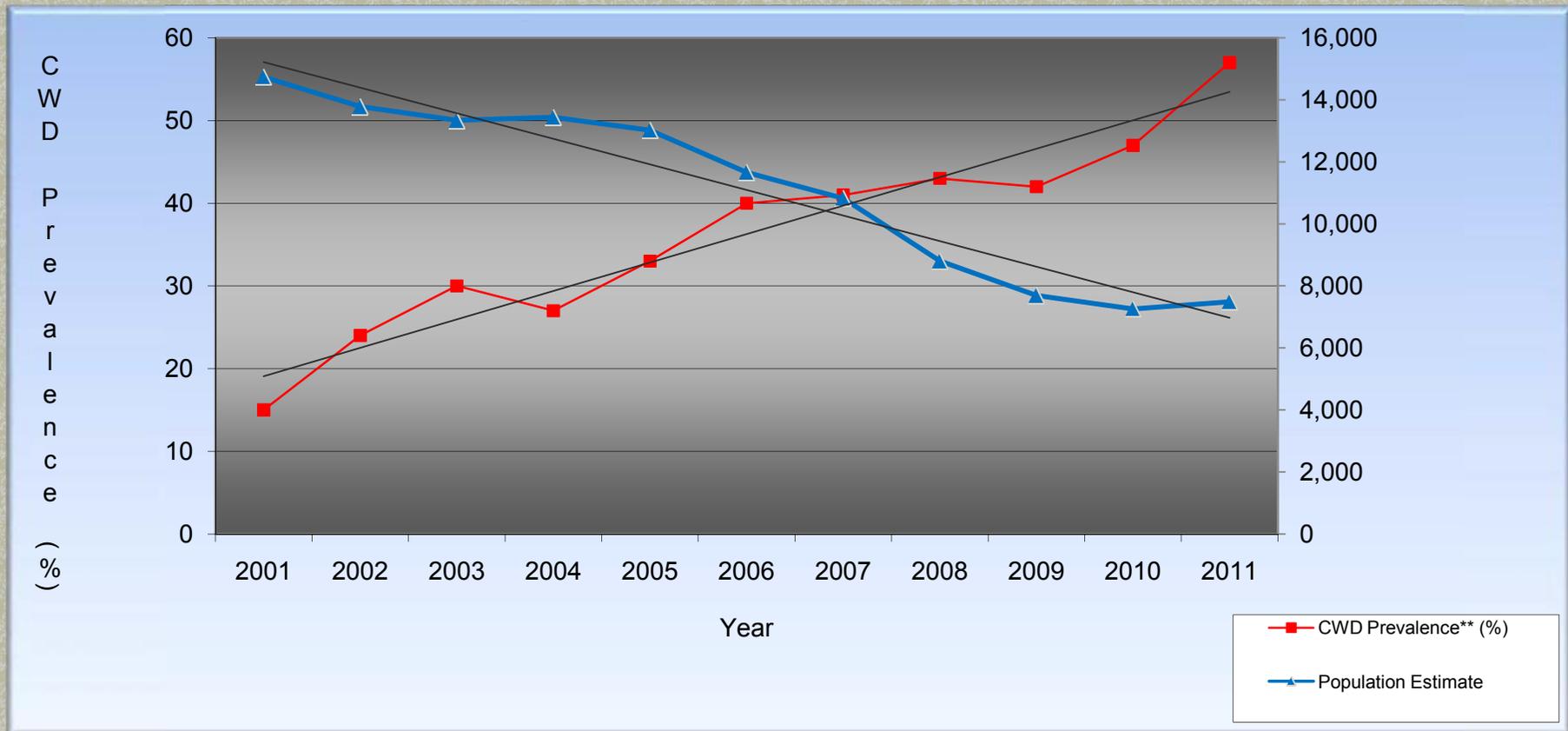


Assume we had 125 adult lions every year, and they each killed 1 deer a week

Percentage of dead deer killed by lions



Diseases - Chronic Wasting Disease (CWD) and Epizootic Hemorrhagic Disease (EHD) can impact mule deer population size and their ability to increase after a decline.



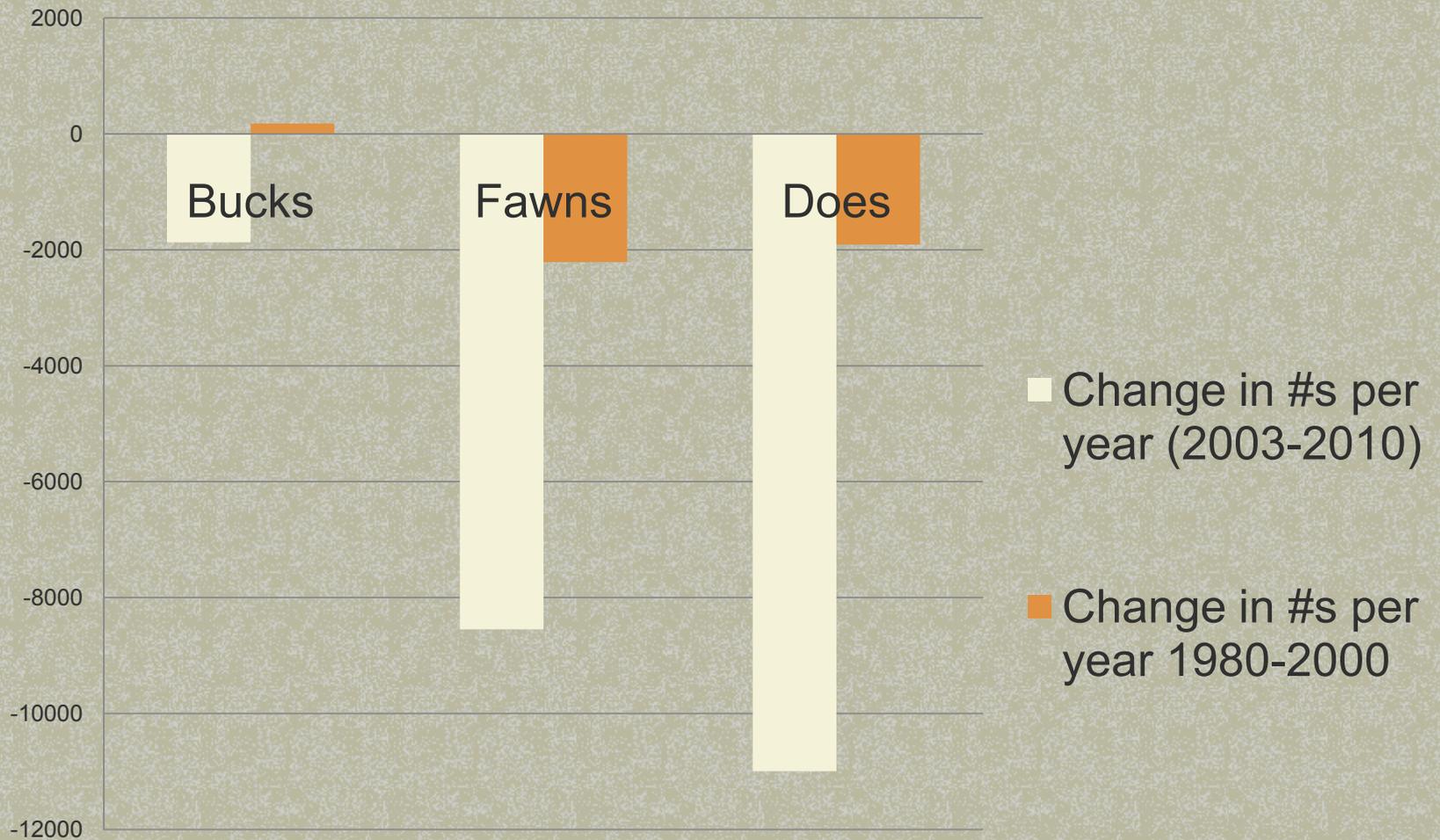


Other Diseases/Parasites

- Meningeal brainworm
- Adenovirus
- Trichostrongylosis infection - worms
 - Significant mule deer fawn mortality in eastern Montana in 2011
- Many others

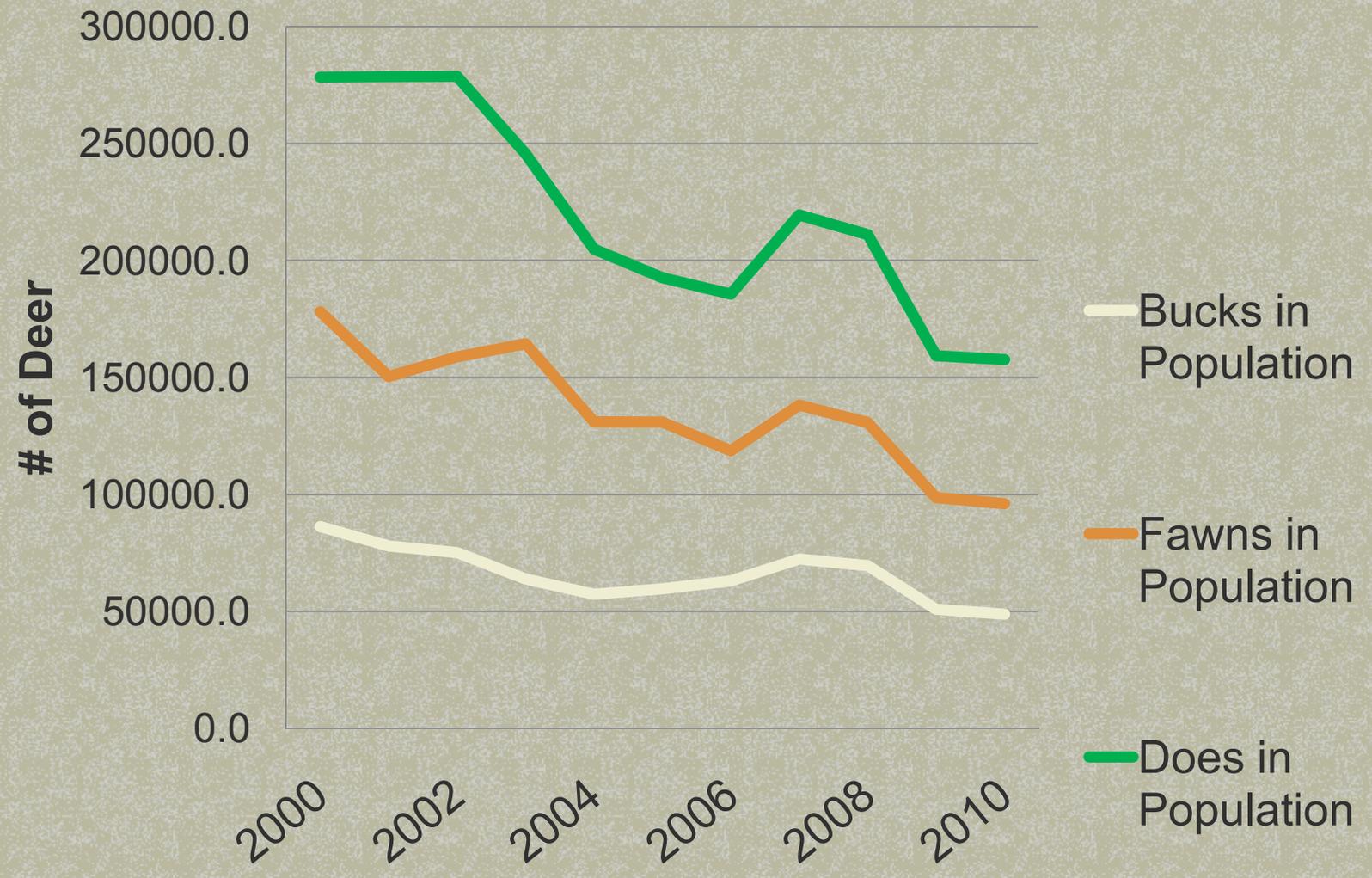


Change in Population (per year) 2003-2010 and 1980-2010 Statewide



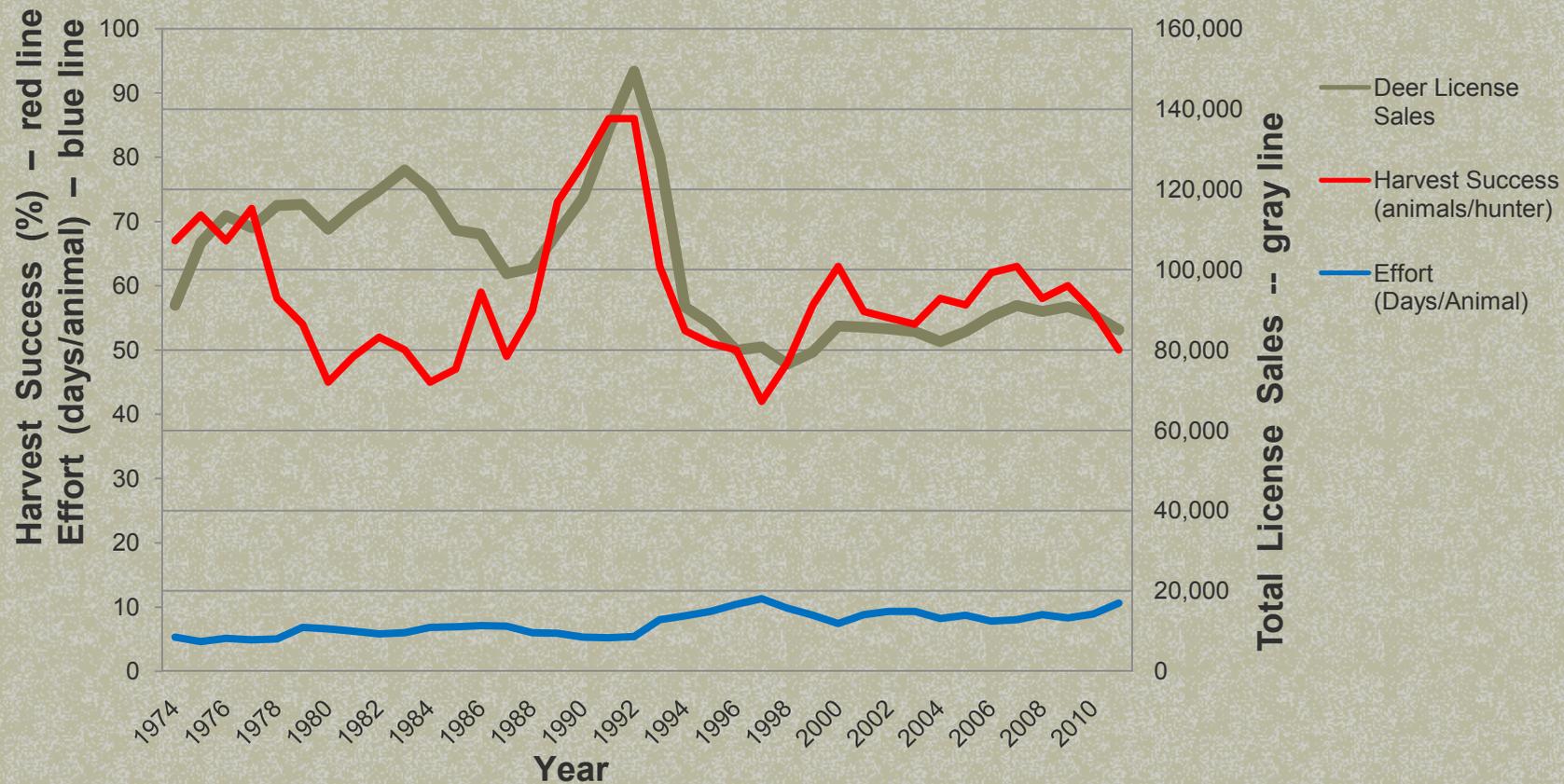


Bucks/Does/Fawns in Population Statewide





Deer License Sales, Harvest Success, Effort *





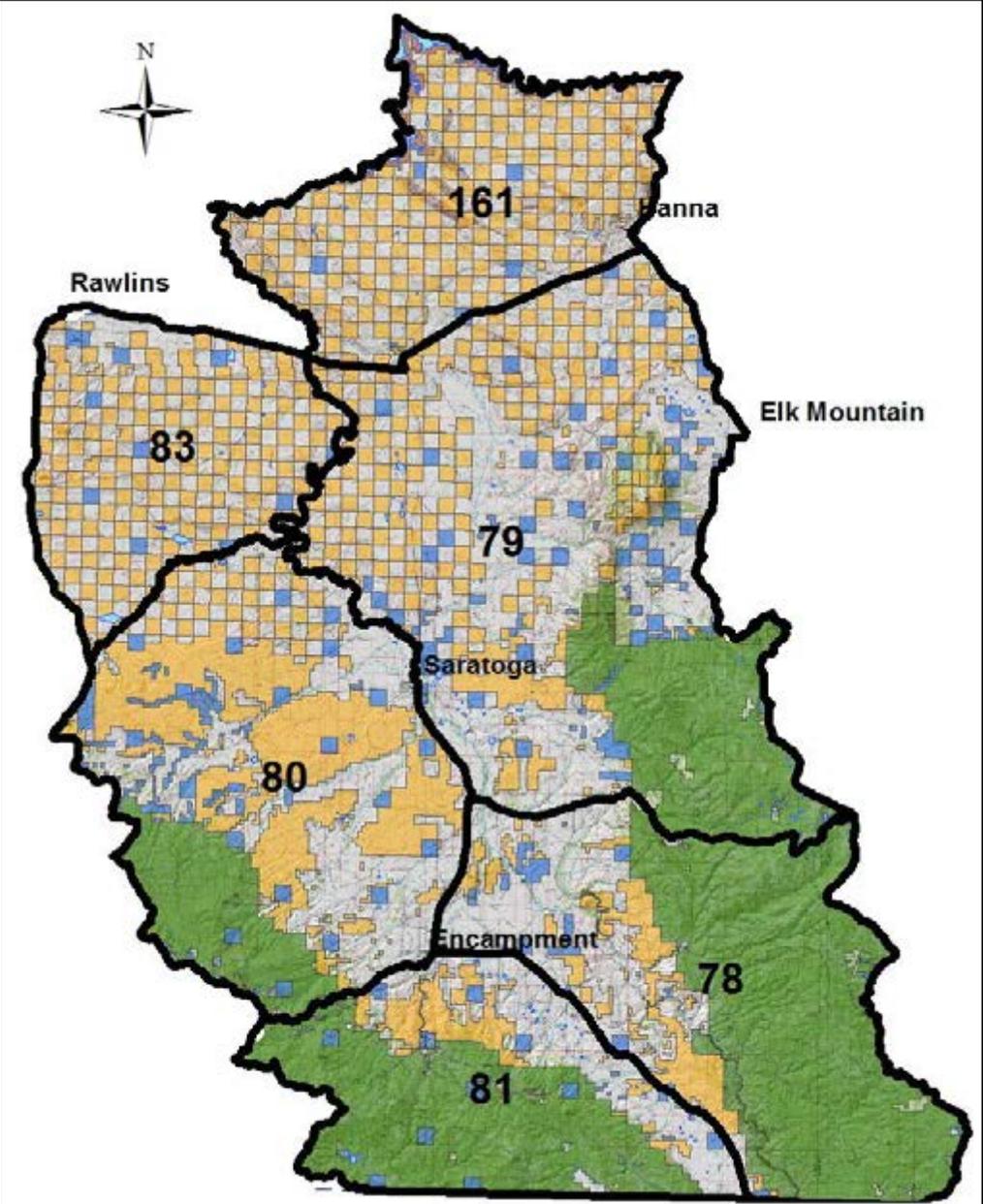
WGFD Course of Action

- Commission a statewide deer hunter attitude survey during the summer of 2012
- Continuation of the Platte Valley and Wyoming Range Initiatives – and now PVHP
- Numerous habitat inventories and improvement projects are underway or being planned
- Enhanced involvement with county predator boards, and recent/proposed mountain lion quota increases

Platte Valley Mule Deer.....

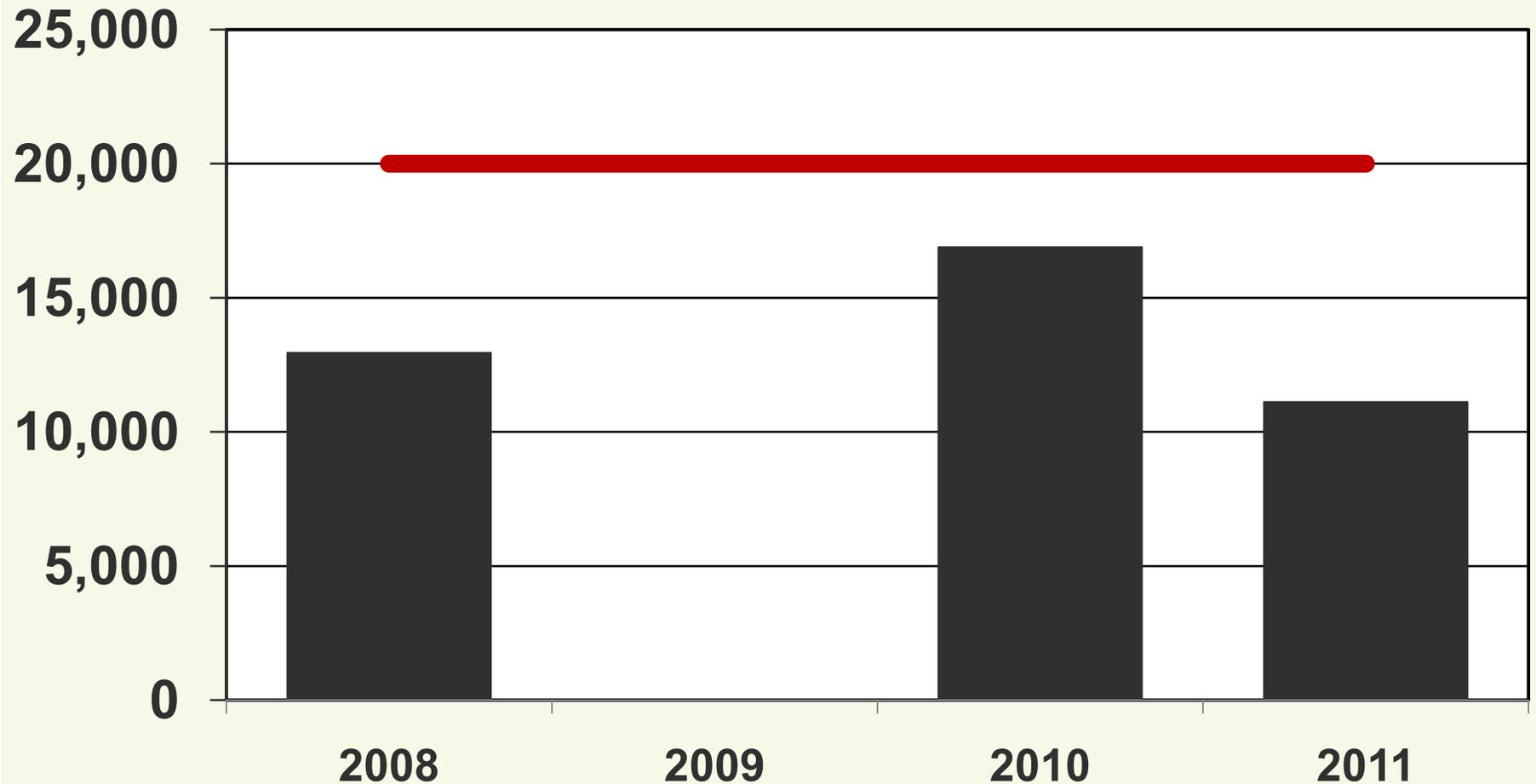


In the Platte Valley.....



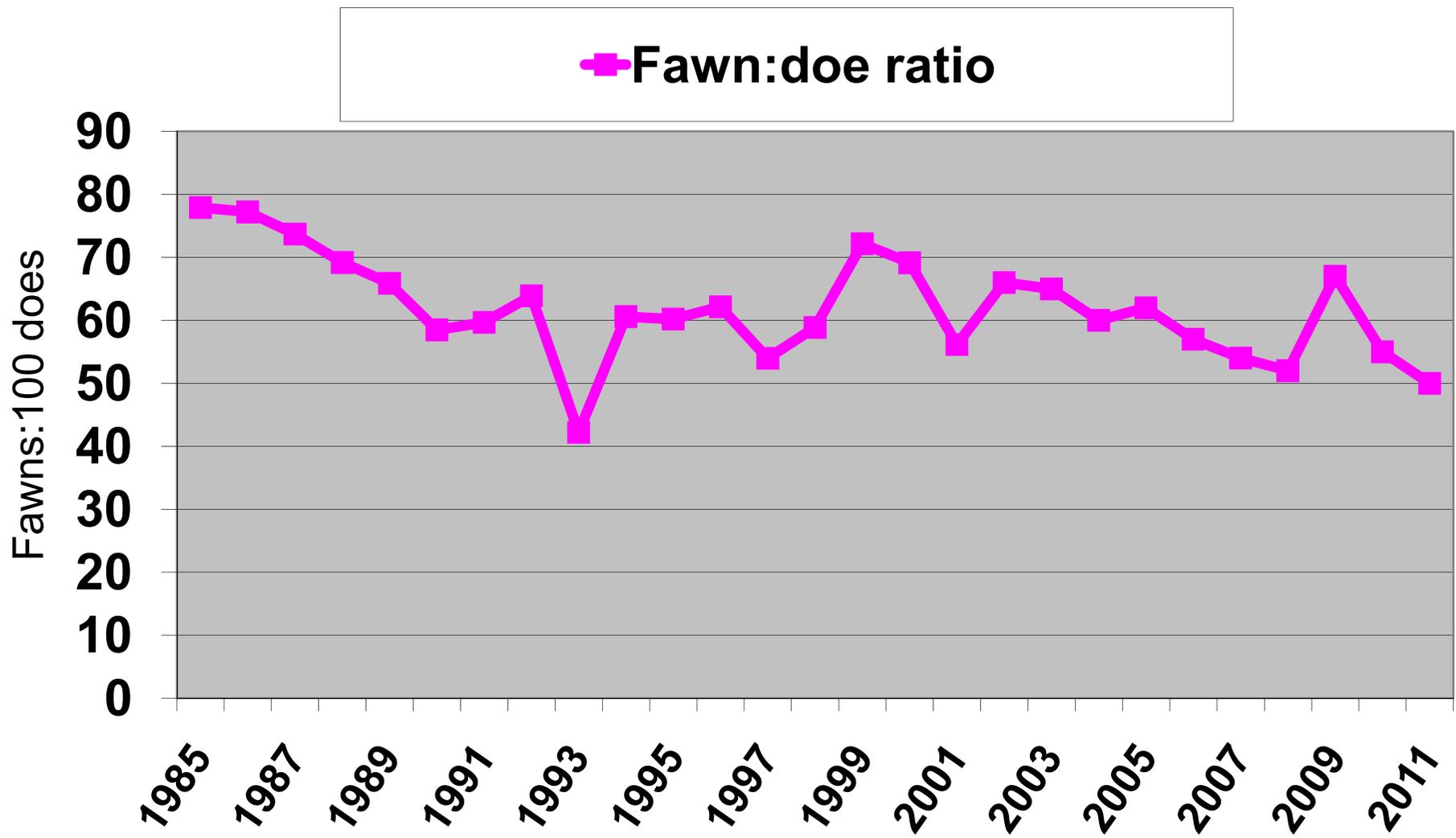
Population Estimates

■ Sightability Survey Estimate — Population Objective

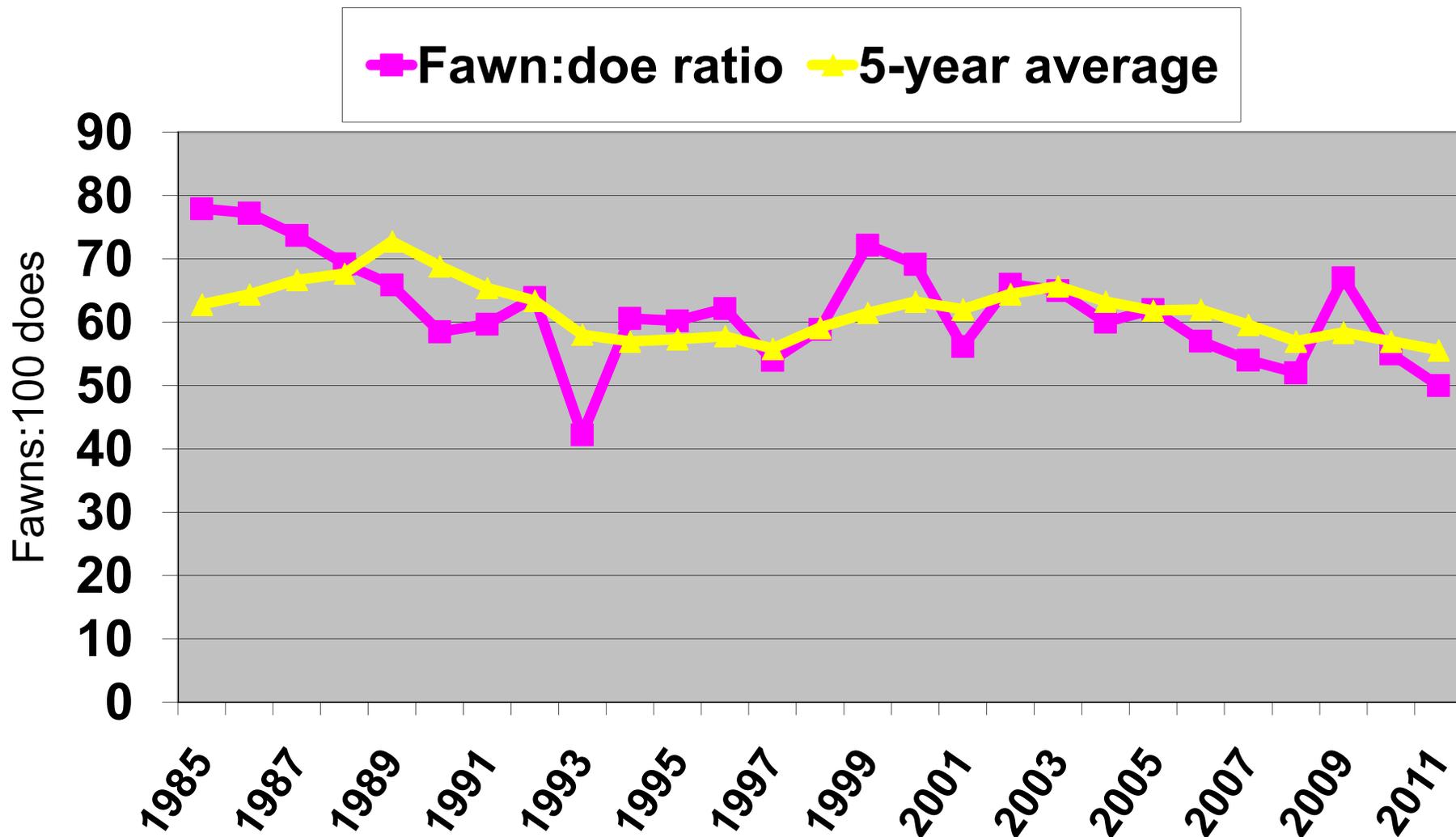




Fawn Recruitment



Fawn Recruitment



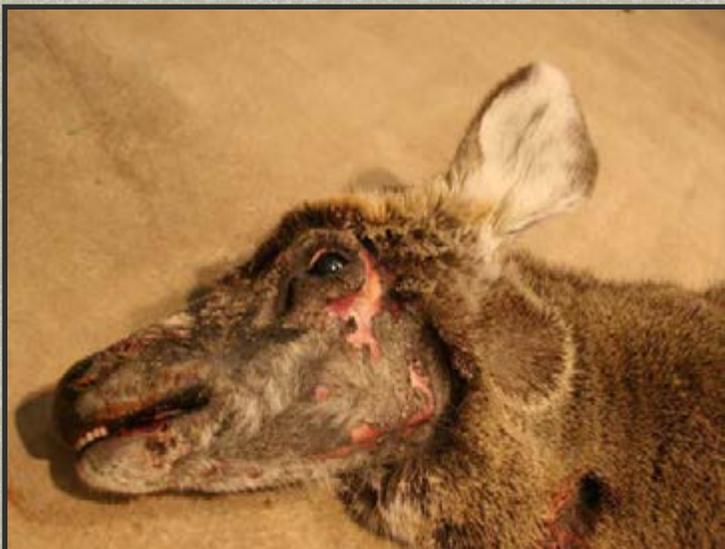
Average change 5-year aves. = -0.68 fawns/100 does/year
Since 2003 = -0.98 fawns/100 does/year



Disease and Parasites

Chronic Wasting Disease (CWD)

- 1st documented in the Platte Valley Herd Unit in 2002
- Approximately 1% Platte Valley mule deer are positive for CWD



Fallow Deer Louse (*Bovicola tibialis*)

- 1st documented in Wyoming (Hunt Area 80) in 2009
- Several positive cases from the Platte Valley but also identified in 6 other Wyoming counties since 2009



Predator Management

- Carbon County Predator Management District, in cooperation with USDA Wildlife Services and WGFD, is proposing a coyote control project for the Platte Valley Mule Deer Herd Unit to begin in 2013
- WGFD is proposing to increase mountain lion mortality quotas in Hunt Areas 9 and 31 for the 2012-2013 hunting season





Nutrition





Winter Range





Winter Range





Summer Range

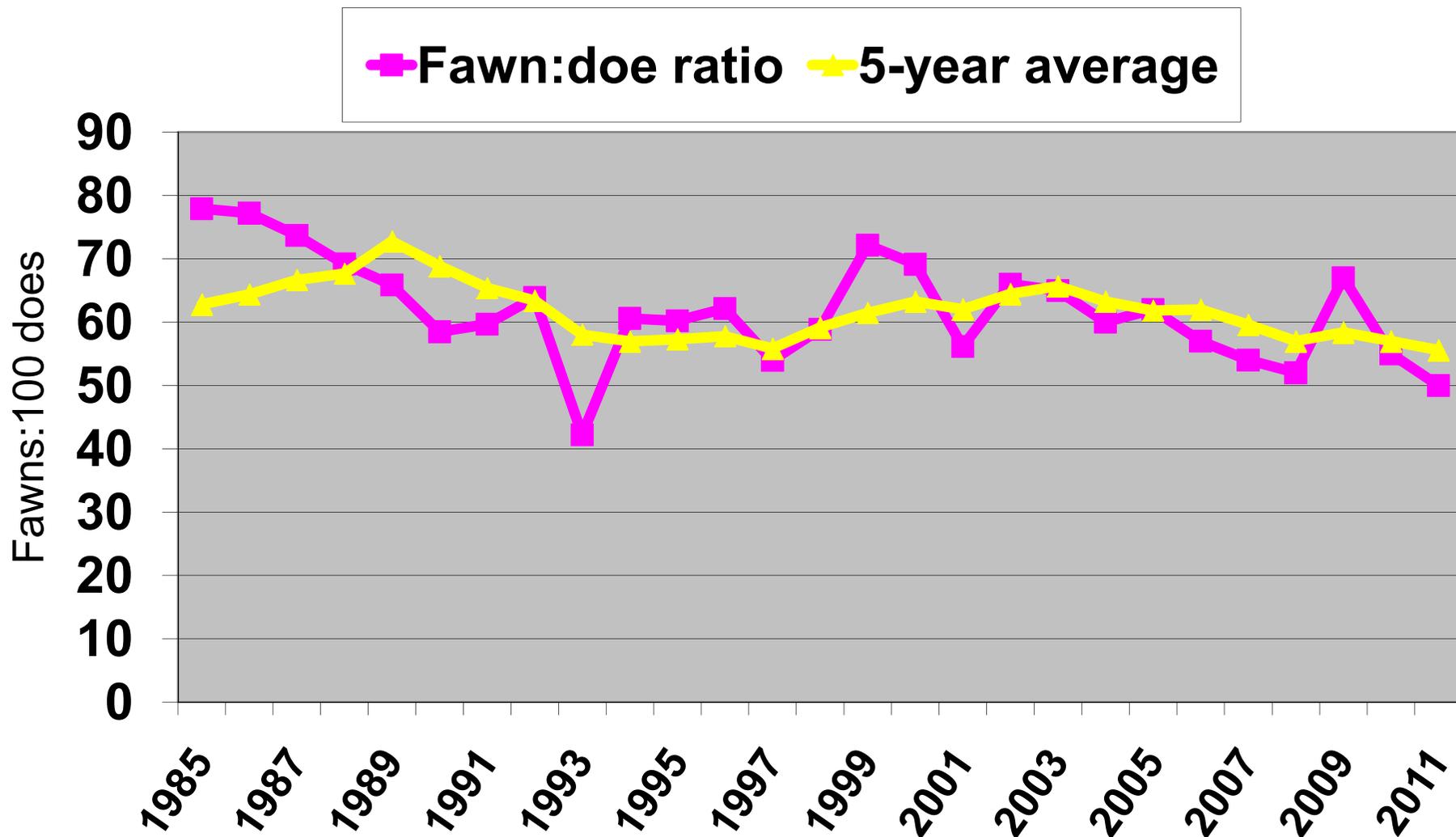




Other considerations - PVMDI

- Predation
- Hunting Seasons
- Diseases
- Etc.

Focus on reversing this trend



Average change 5-year aves. = -0.68 fawns/100 does/year
Since 2003 = -0.98 fawns/100 does/year



Ultimately - Nutrition





Any questions?

