Ungulate Harvest and Population Trend Data in Areas of Washington with Wolves

Washington Department of FISH and WILDLIFE

May 2015

Can Wolves Impact Prey Numbers?

Yes, there are examples where wolves have caused or contributed to declines in prey numbers. However, in most areas, wolves were not the limiting factor for prey abundance.

Wolf impacts on ungulates is a concern for hunters and rural communities

The potential impacts of wolves to Washington's ungulate species was considered in the development of the Wolf Conservation and Management Plan.

The Plan discusses wolf predation and the potential resulting management of wolves in page 116.

Washington Wolf Conservation and Management Plan

Washington's wolf plan has a strategy that allows the state to address wolf impacts to "at risk" deer, elk, moose, or other ungulates.

WDFW could consider reducing wolf abundance in the localized area occupied by the ungulate population if wolf predation is found to be a primary limiting factor

Definition of "At Risk" Ungulate Population

- Any Federally or State listed ungulate population
- Any ungulate population that falls 25% below its population objective for two consecutive years,
- Or if the harvest decreases 25% below the 10-year average harvest rate for two consecutive years

Woodland Caribou

How will we know if there is a decline in an ungulate population?

Monitor Ungulates

- Population estimates
- Indexes
- Composition counts
- Harvest trends

Blue Mountains elk survey

If a Decline in Ungulate Population is Detected

Look for clues to determine the cause. More obvious causes are:

- Hunting
- Severe winters
- Fire
- Disease/Parasites

Mule deer in winter

If a Decline in Ungulate Population is Detected

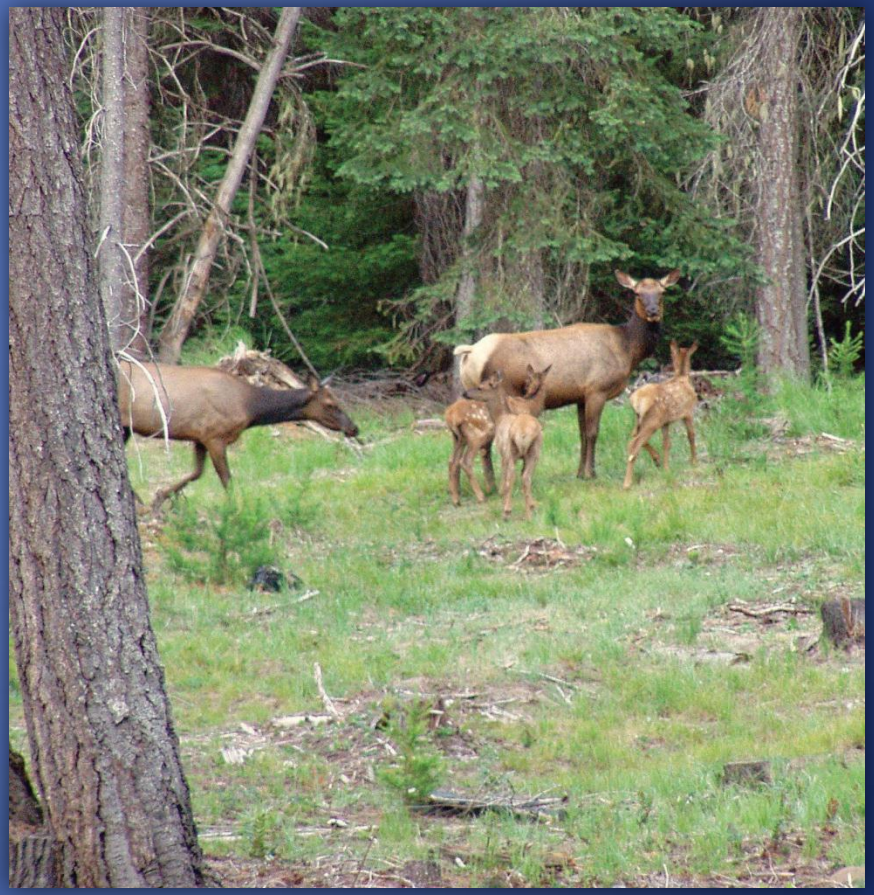
Less obvious causes are:

- Drought
- Changes in habitat
- Changes in vulnerability
- Predation effects

Cougar predation

If a Decline in an Ungulate Population is Detected

- Look at ungulate trends in surrounding areas
- Look at subtle weather patterns
- Intensify prey surveys
- Look for a change in survival rates of young or female prey



Cow and calf elk

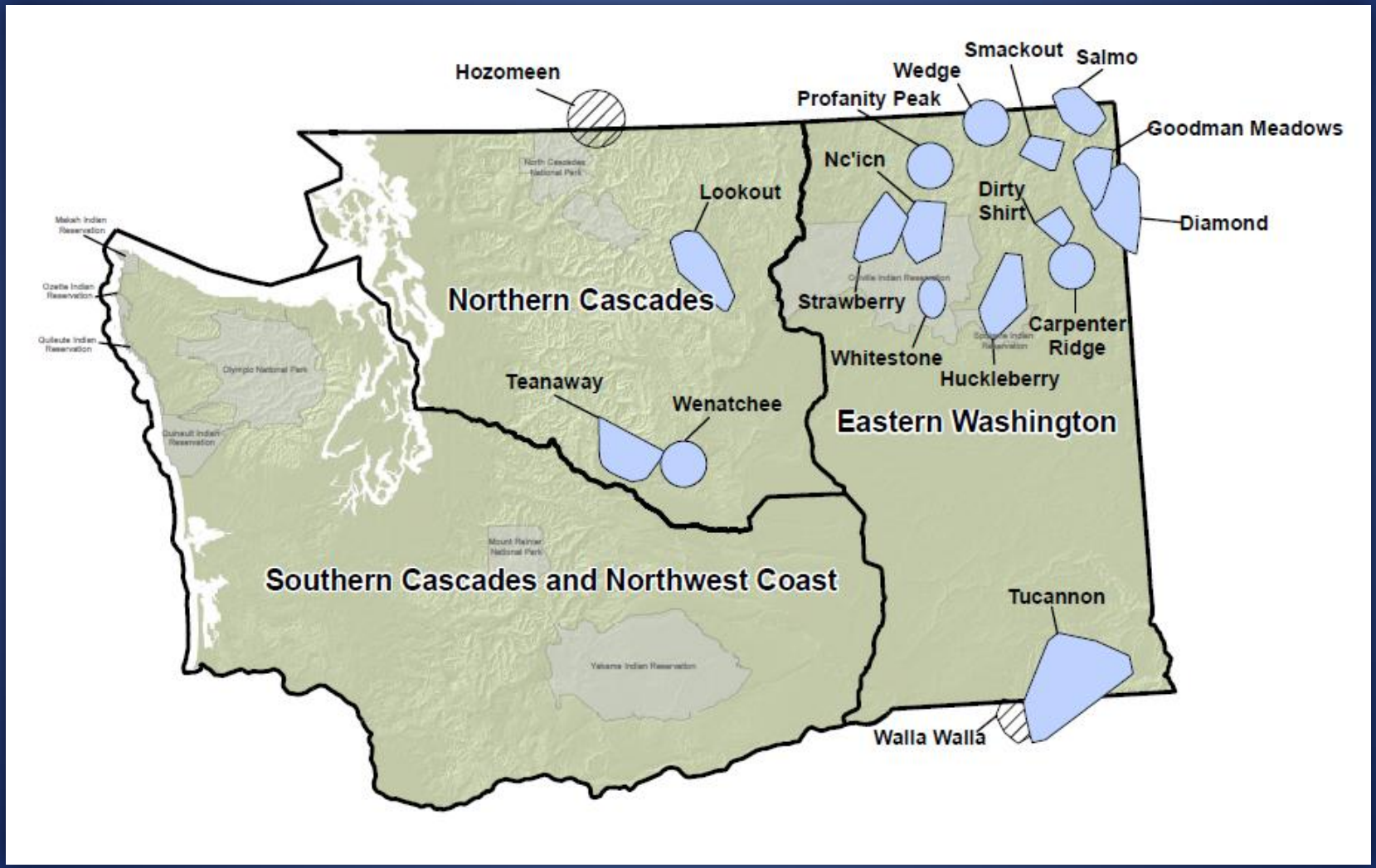
If a Decline is Detected and Predation is the Suspected Cause?

- Assess the available scientific information
- Conduct risk assessment
- If warranted, define appropriate wolf removal action
- Conduct public review of the proposed removal action
- Implement wolf removal
- Monitor results to prey and wolf population

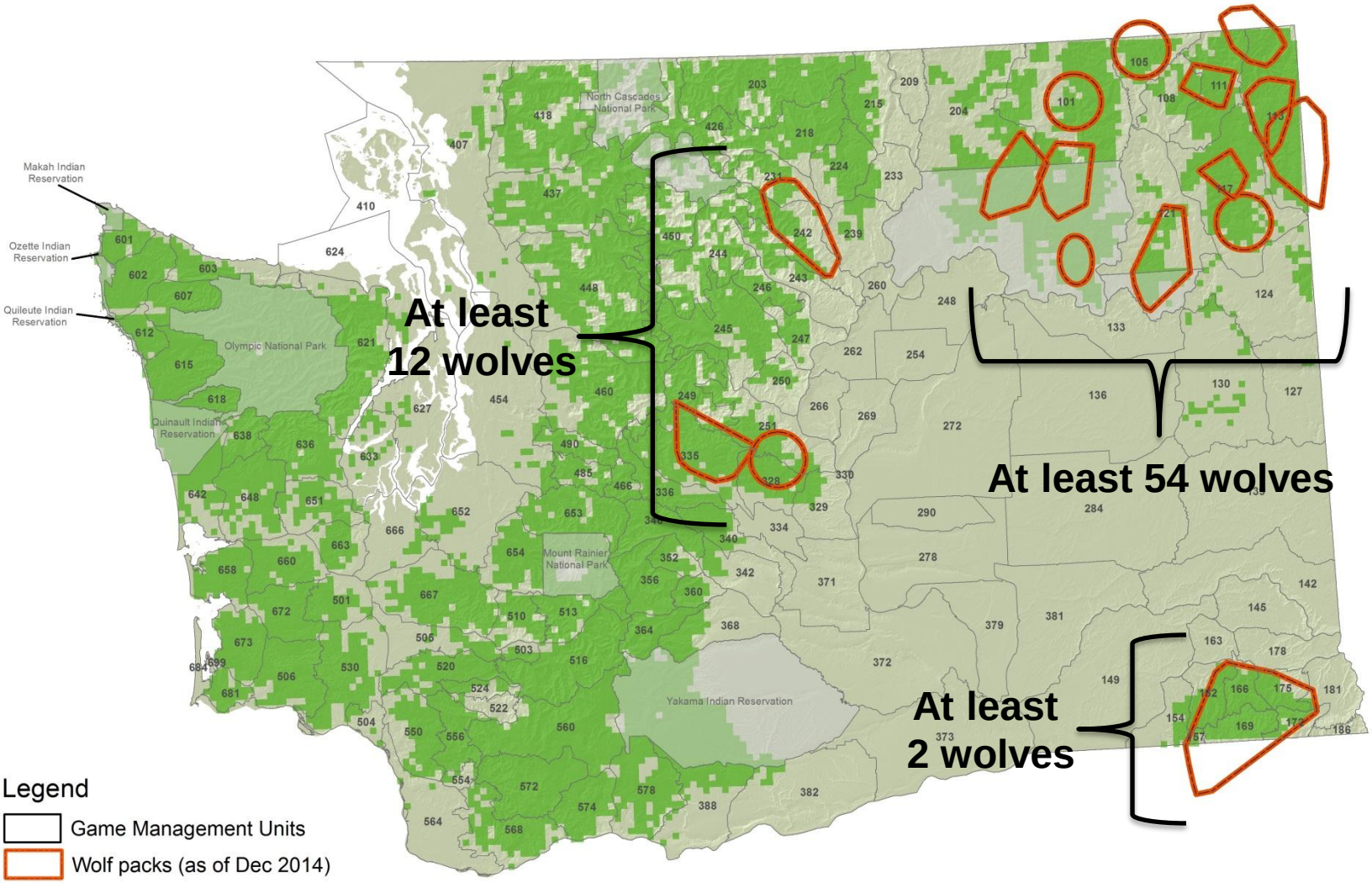
Elk capture

Wolf Status

Areas with Known Wolf Packs in 2014

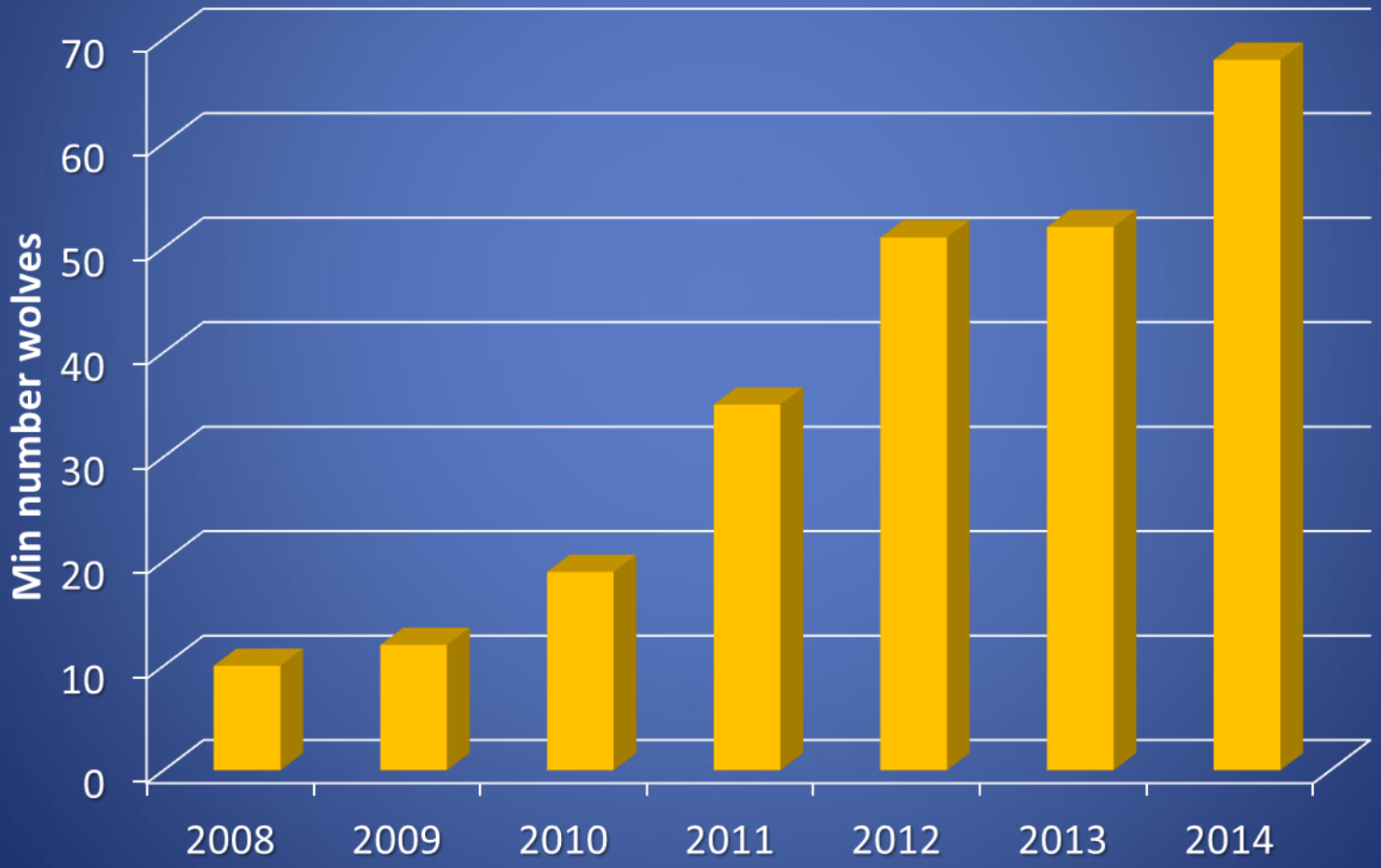


Washington Wolf Packs Relative to Estimated Suitable Wolf Habitat



Minimum Number of Wolves

Expect population to continue increasing



Deer, Elk, and Moose Status in Areas with Wolves

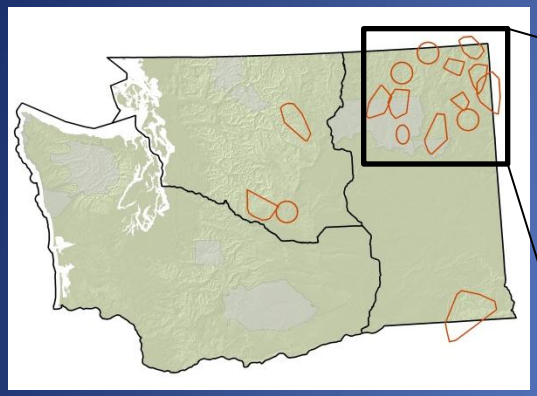
Northeastern Washington

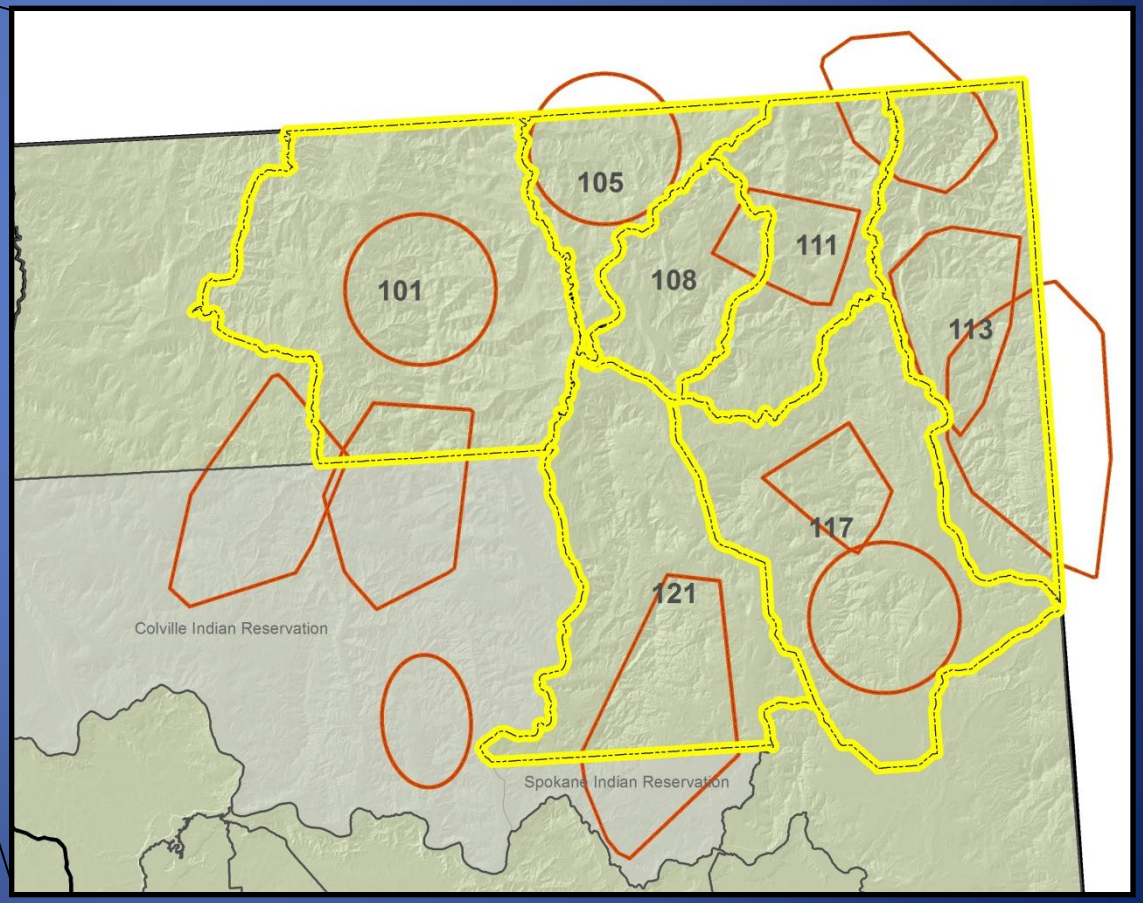
Information From Collaborative Ungulate Research in Washington

- Moose abundance, distribution, and demographic characteristics in eastern Washington: Univ. of Montana: http://wdfw.wa.gov/publications/01699/
- NE White-tailed deer habitat use, movements, and mortality rates: Univ. of Montana
- NE White-tailed deer abundance: WDFW
- Predation impacts on mule deer and white-tailed deer populations: Univ. of Washington

Buck Harvest in Core GMUs with Wolves

GMUs 101 – 121





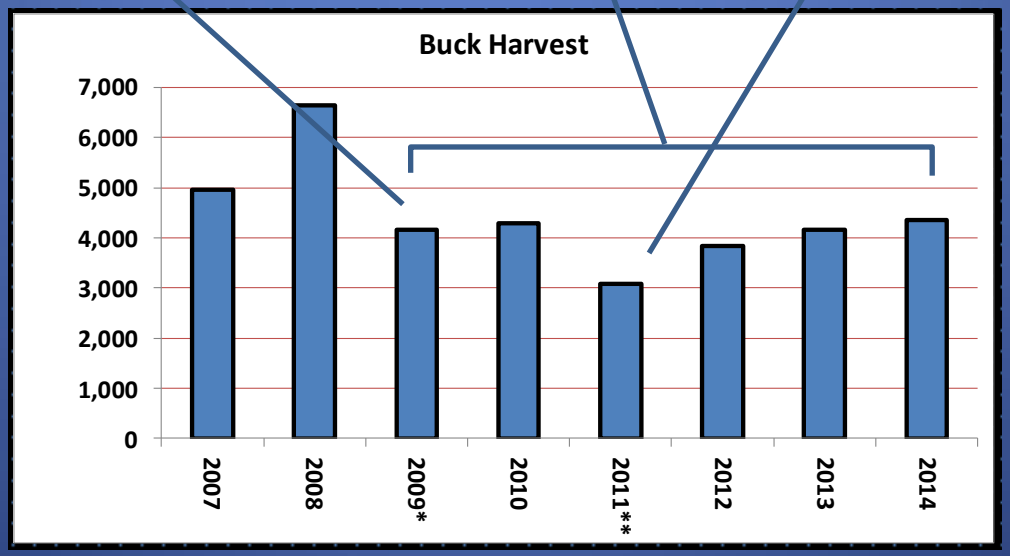
Buck Harvest in Core GMUs with Wolves

GMUs 101 – 121

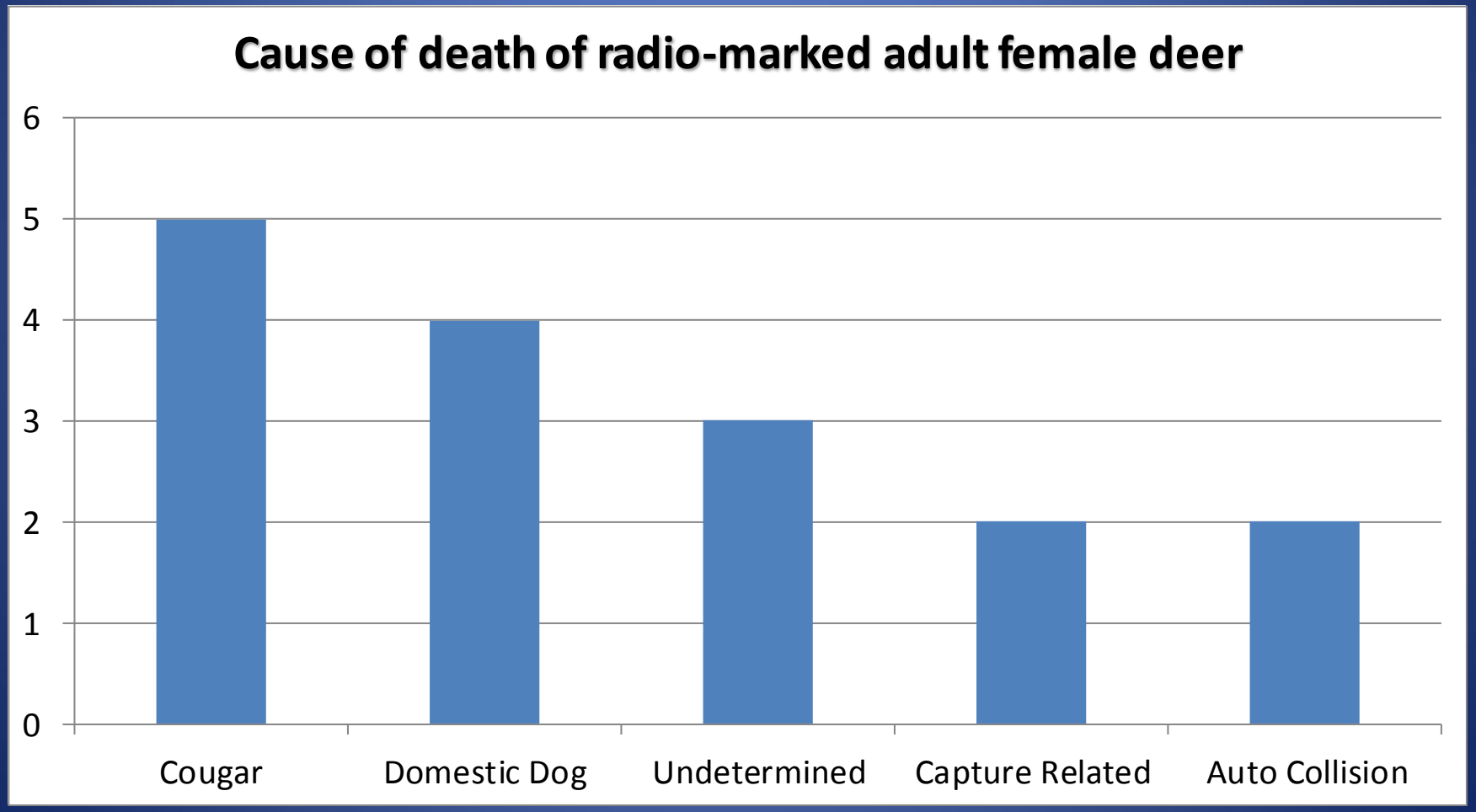
Buck harvest declined significantly after two hard winters in 2007 & 2008

The first wolf pack was documented in 2009 and there were twelve in 2014

In 2011 a four point buck restriction was implemented in the two largest units (117 & 121)

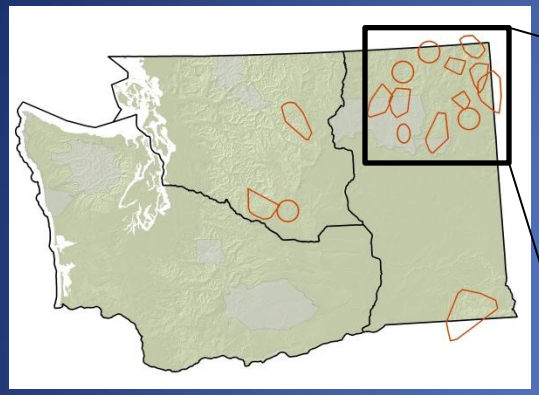


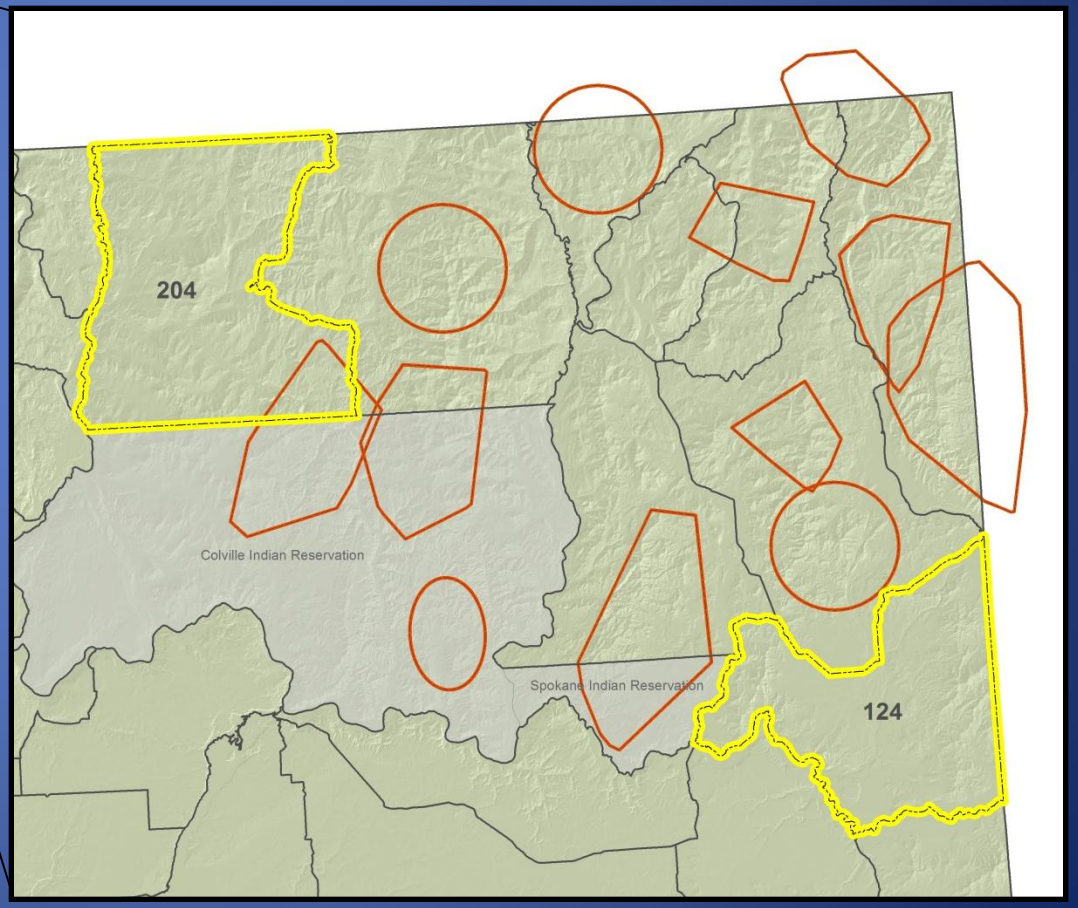
Causes of Mortality in White-tailed Deer
GMUs 101-121



Buck Harvest in GMUs with few Wolves

GMUs 124 & 204



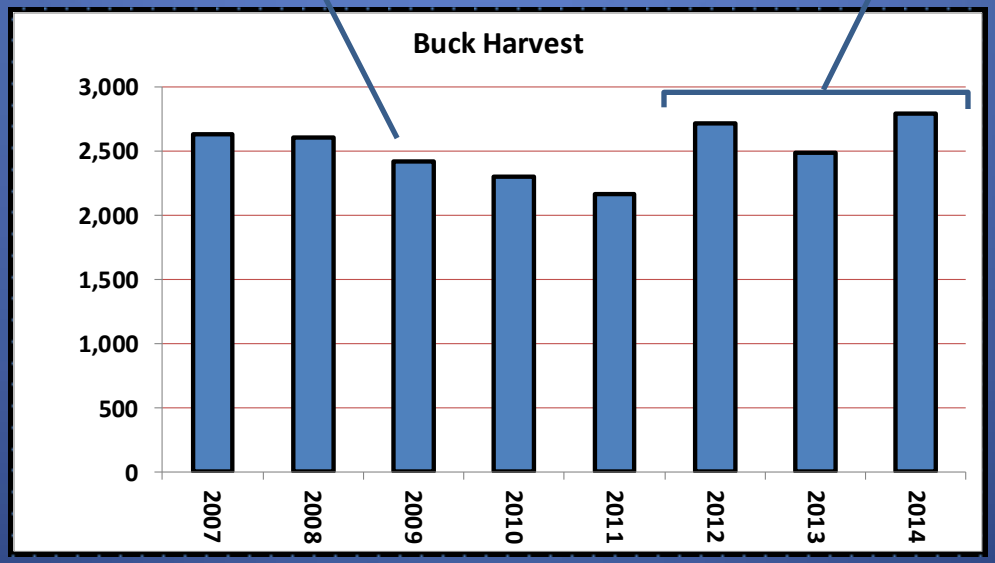


Buck Harvest in GMUs with few Wolves

GMUs 124 & 204

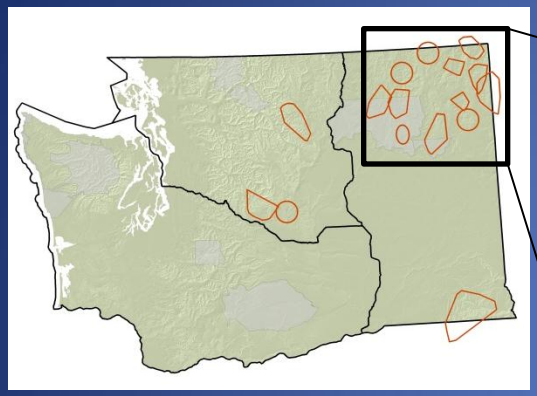
Buck harvest declined significantly after two hard winters in 2007 & 2008

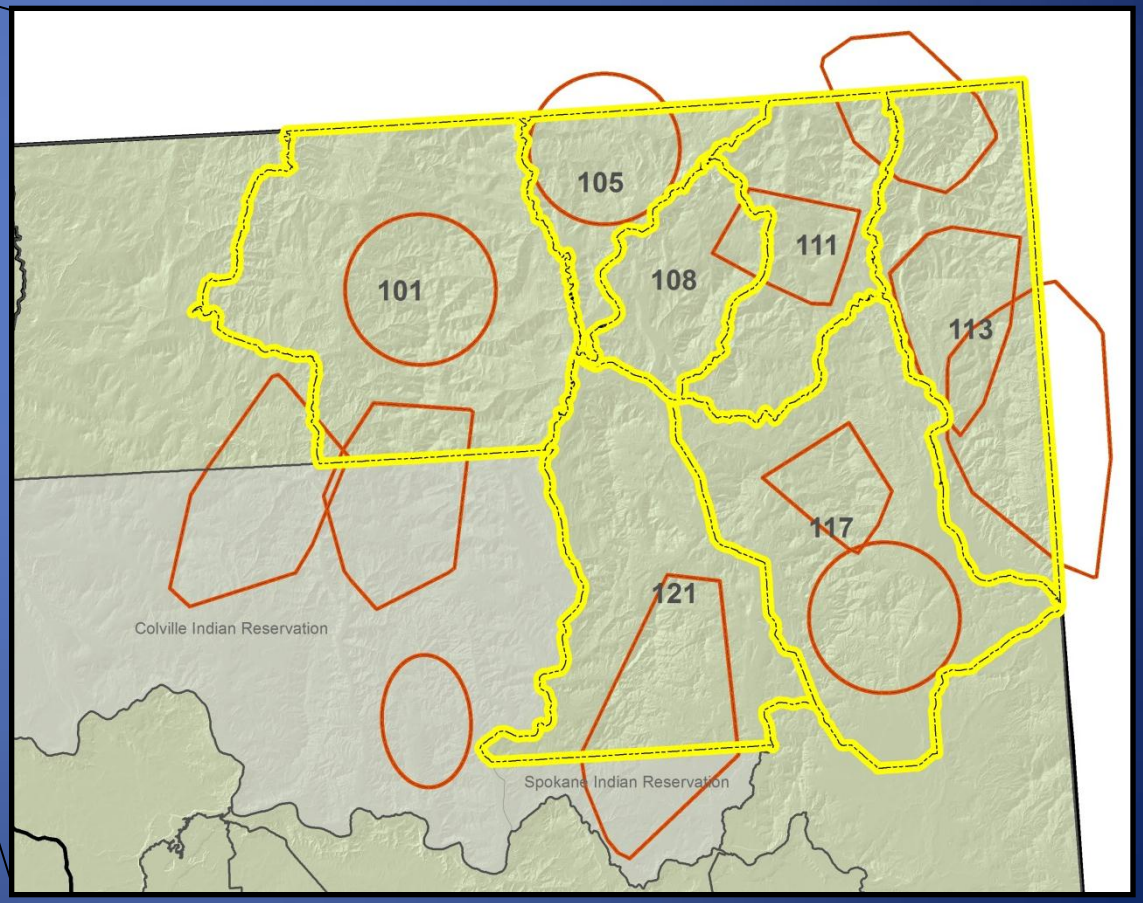
Slight over lap with wolf packs, but wolves likely in area



Bull Elk Harvest in Core GMUs with Wolves

GMUs 101 – 121

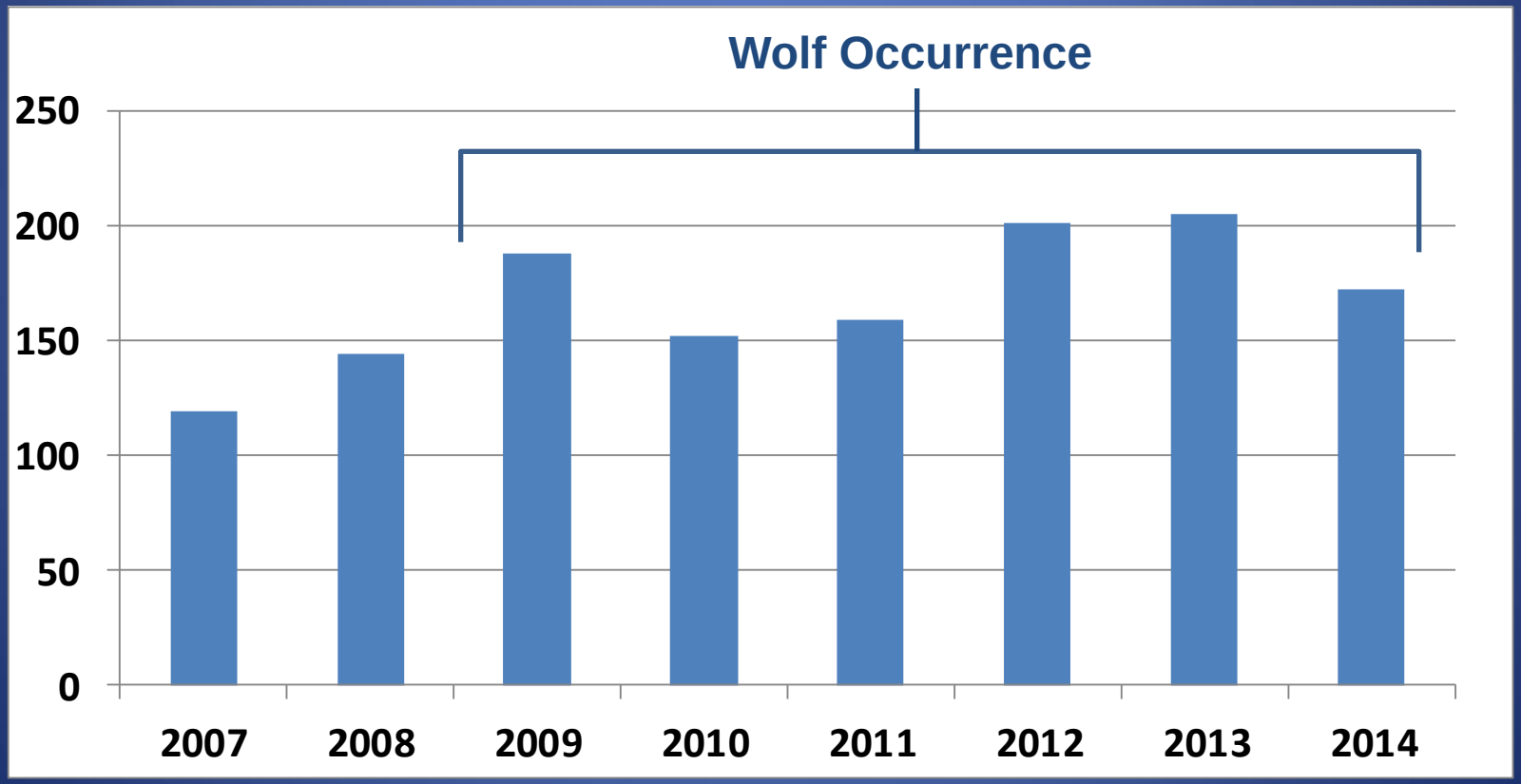




Bull Elk Harvest in Core GMUs with Wolves

GMUs 101 – 121

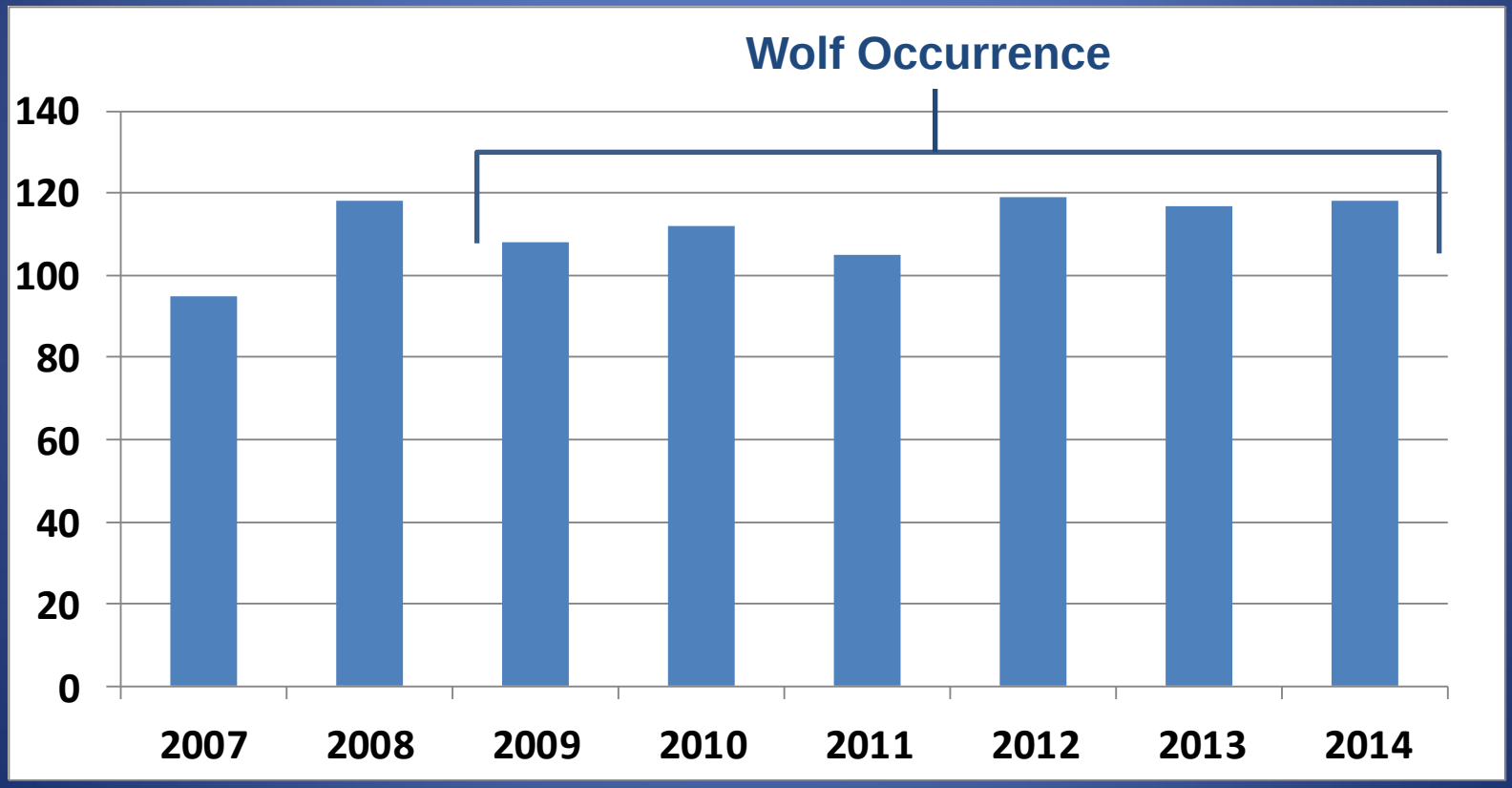
Wolves do not appear to be impacting bull harvest trends



Moose Harvest in Core GMUs with Wolves

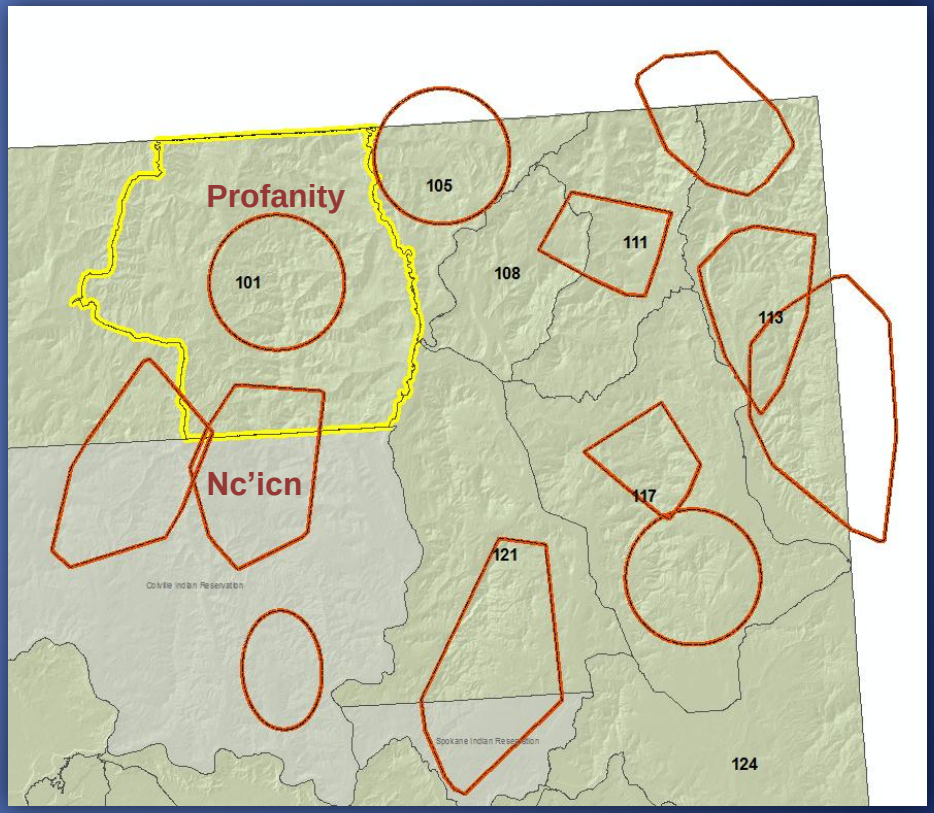
GMUs 101 – 121

Wolves do not appear to be impacting moose harvest trends

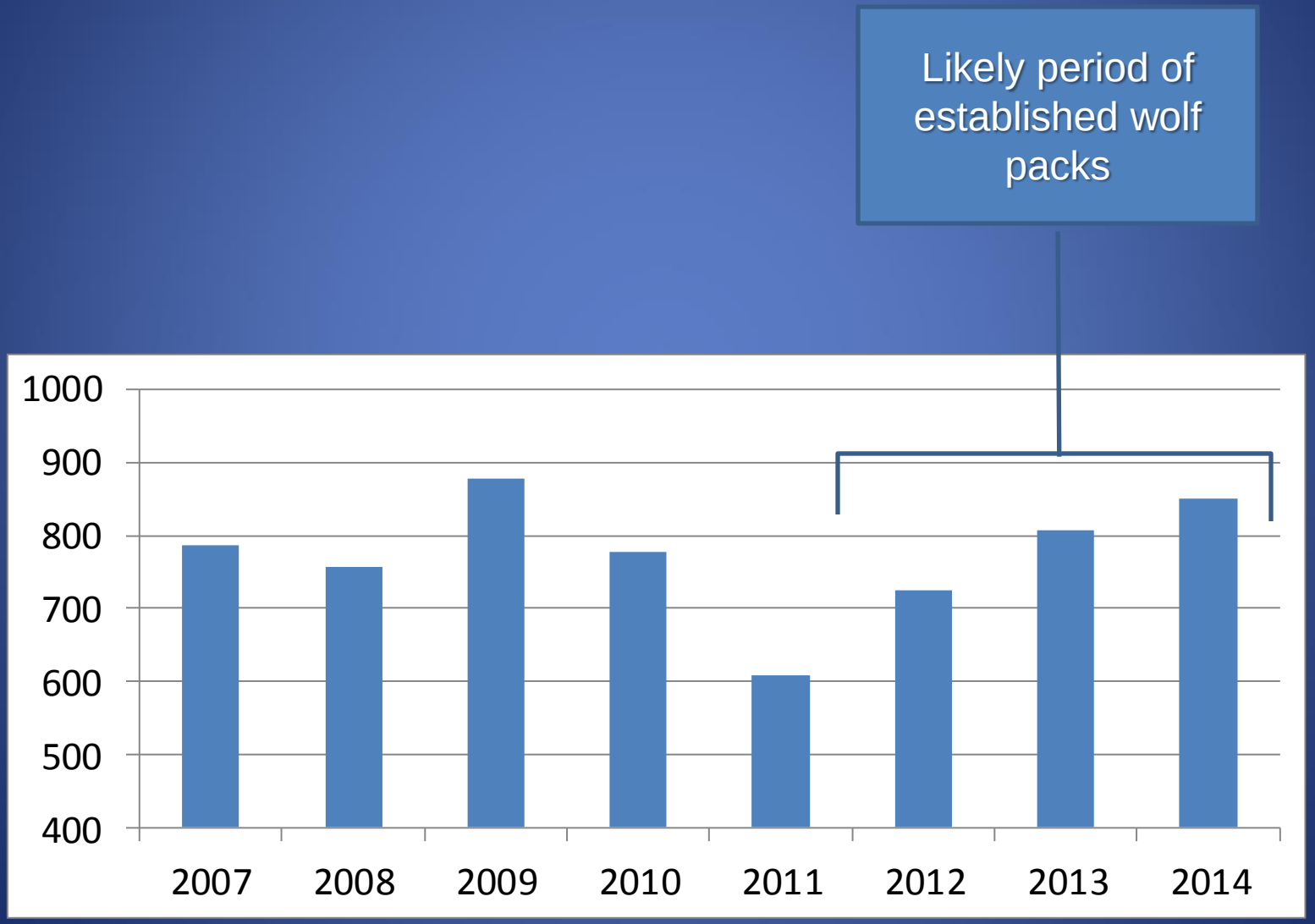


Wolf Packs in GMU 101

- The Nc'icn Pack has been documented since 2012 and straddles the northern boarder of the Colville Indian Reservation
- The Profanity Pack (which was likely the expected Boulder Pack in 2012) was documented in 2014

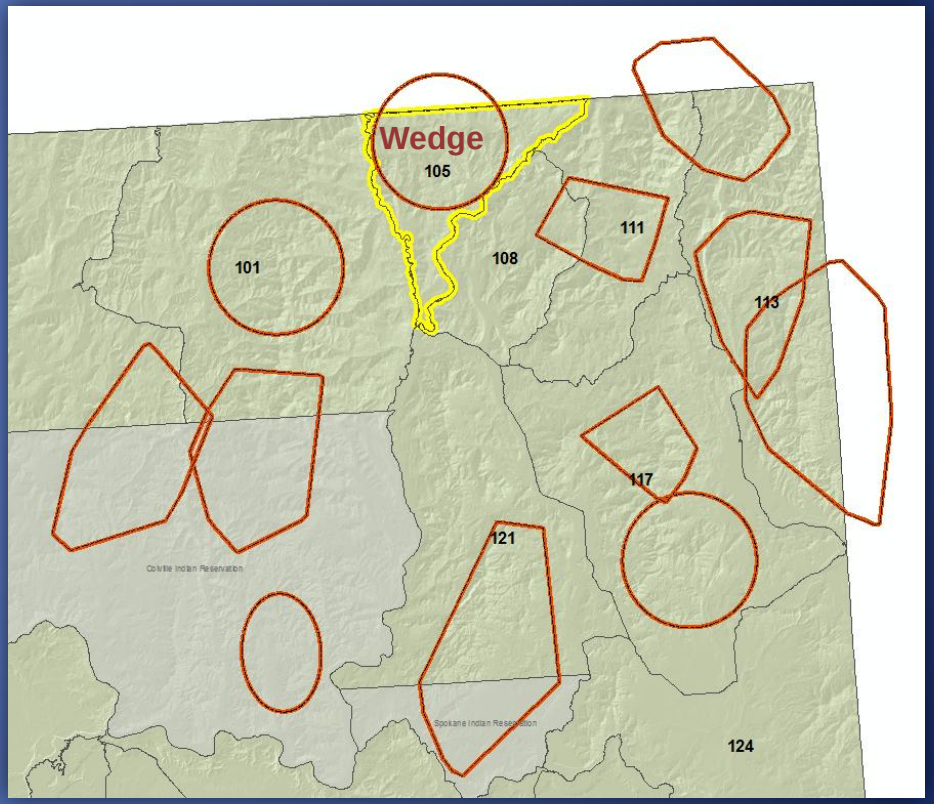


Buck Harvest in GMU 101



Wolf Pack in GMU 105

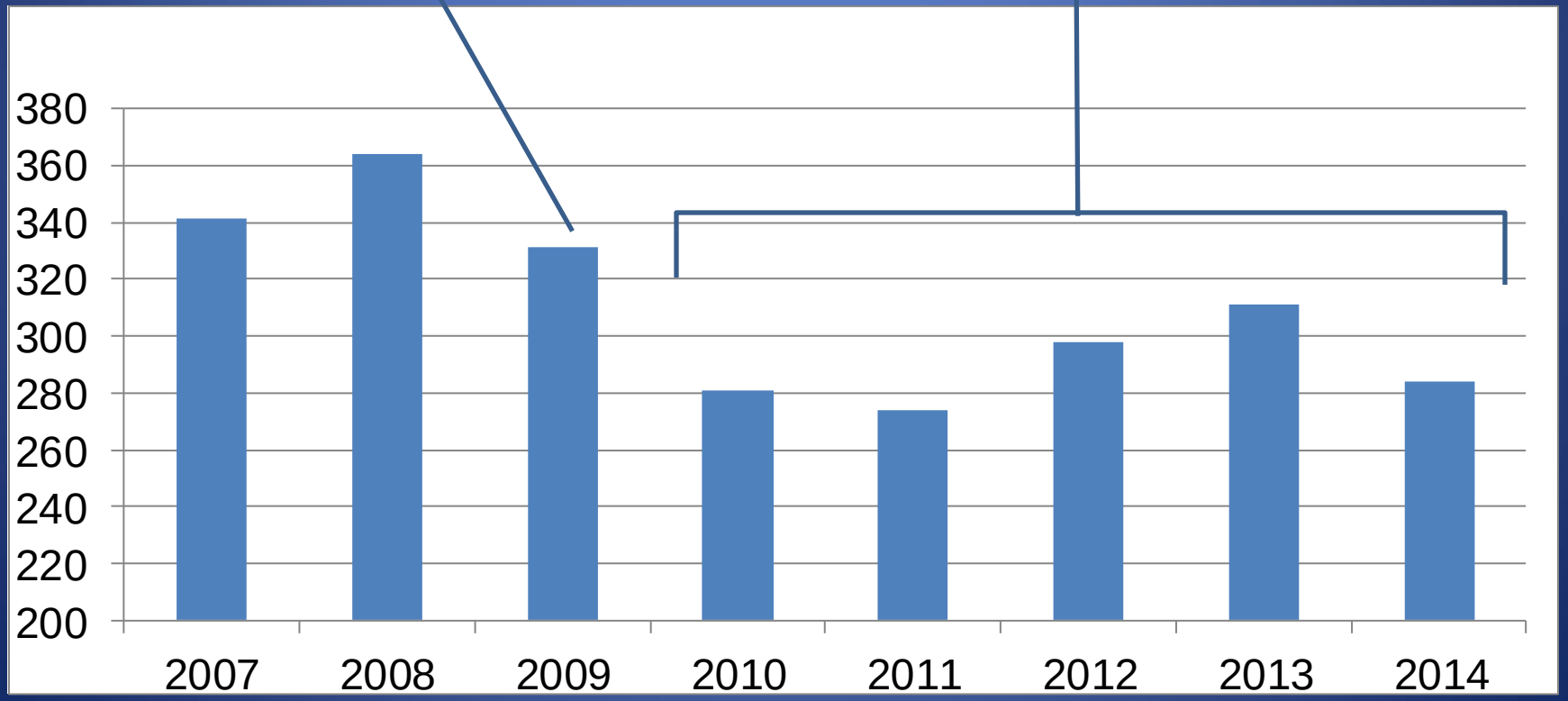
- The Wedge pack was documented in 2012
- Most of the pack was removed the same year after they killed cattle
- There have been at least two wolves in this area each year since 2012



Buck Harvest in GMU 105

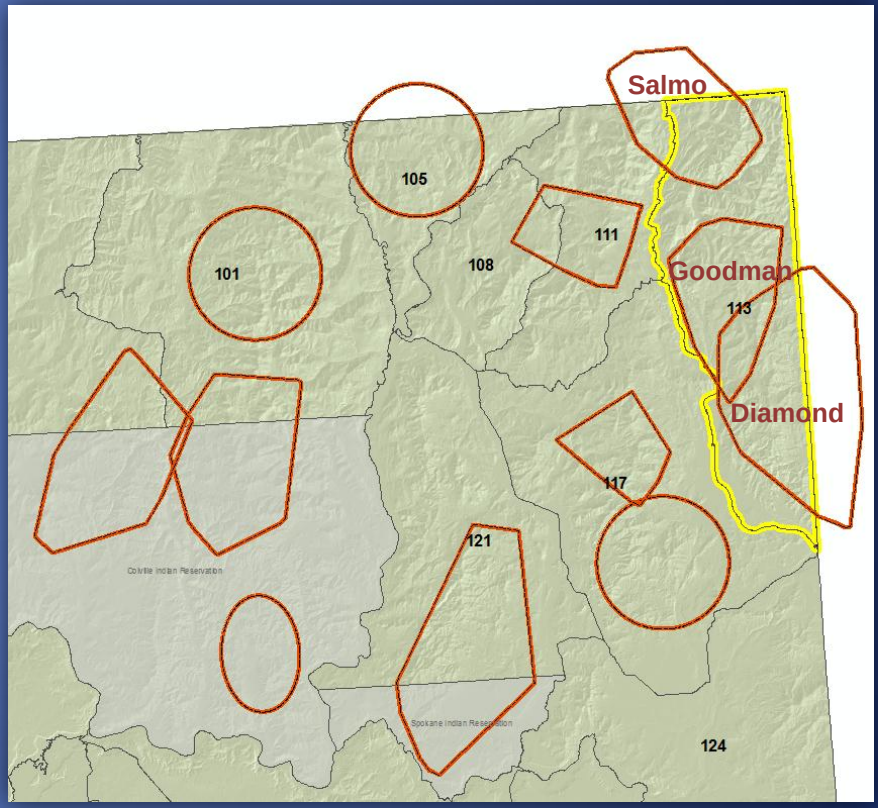
Buck harvest declined after two hard winters in 2007 & 2008

Established wolf pack



Wolf Packs in GMU 113

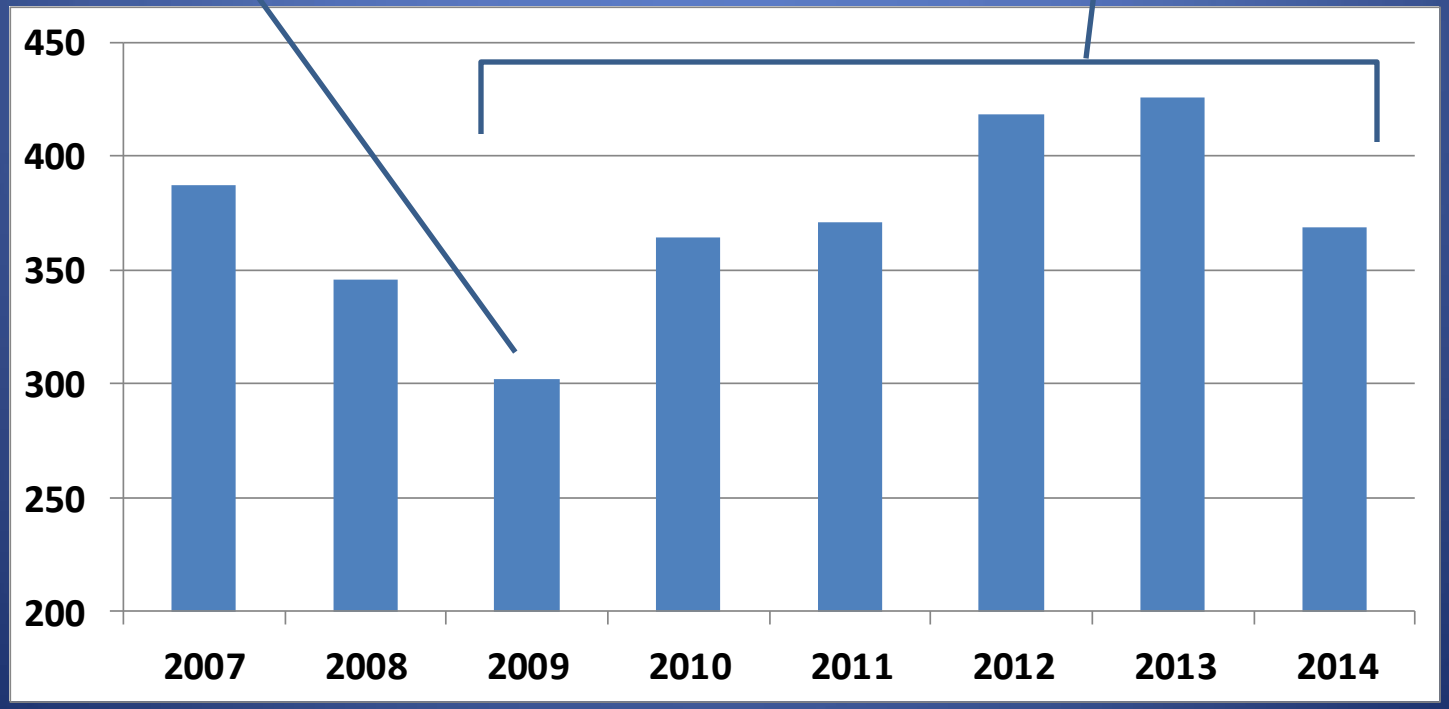
The first wolf pack was documented in this area in 2009; there are currently three packs



Buck Harvest in GMU 113

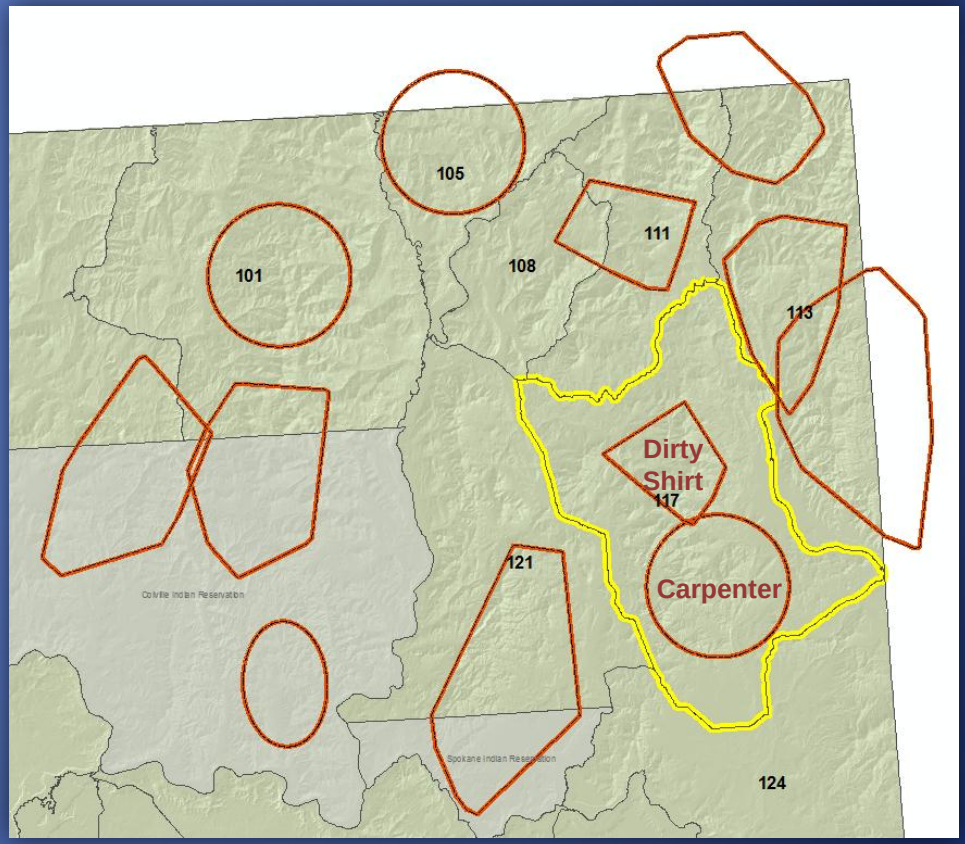
Buck harvest declined significantly after two hard winters in 2007 & 2008

Established wolf packs



Wolf Packs in GMU 117

The first pack was documented here in 2012; there are two in this area currently

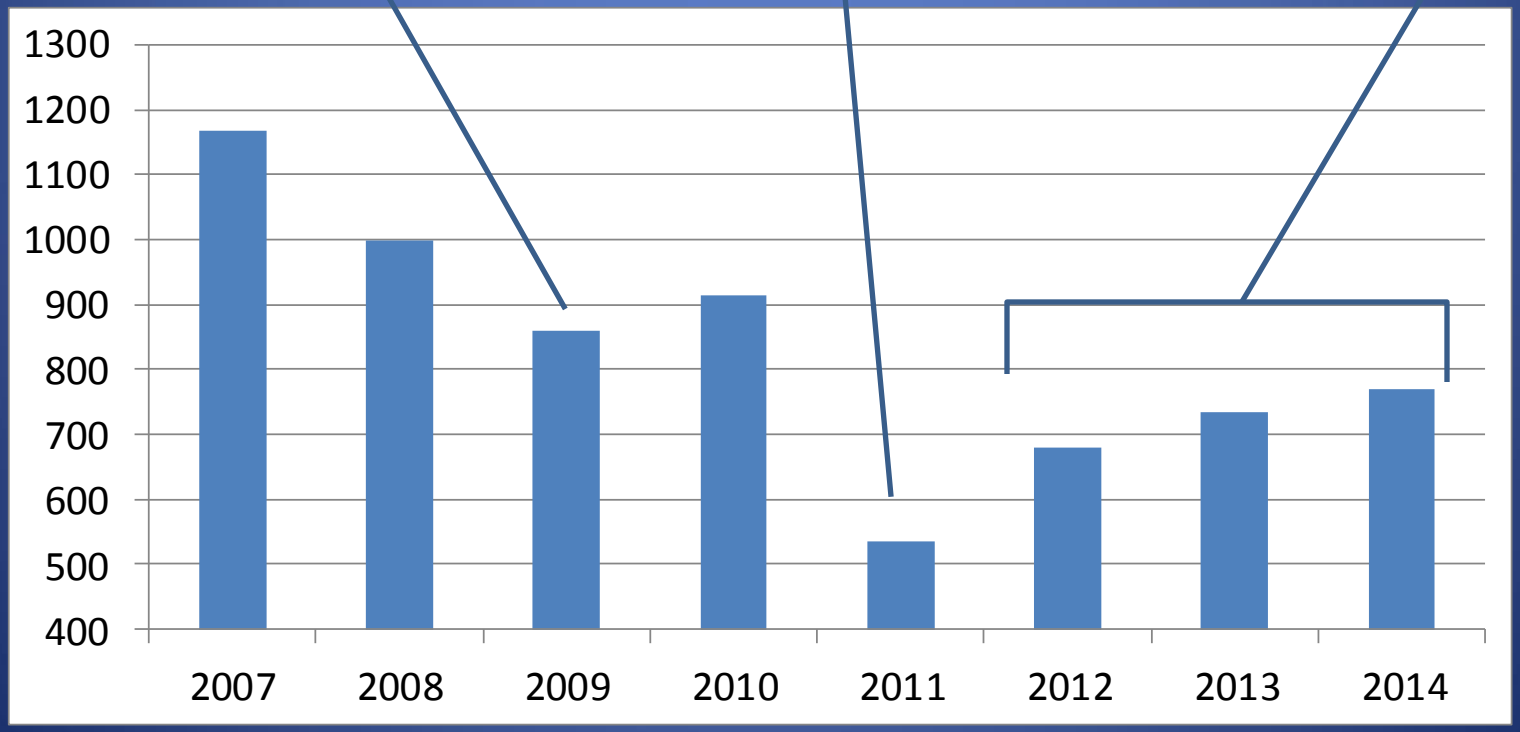


Buck Harvest in GMU 117

Buck harvest declined significantly after two hard winters in 2007 & 2008

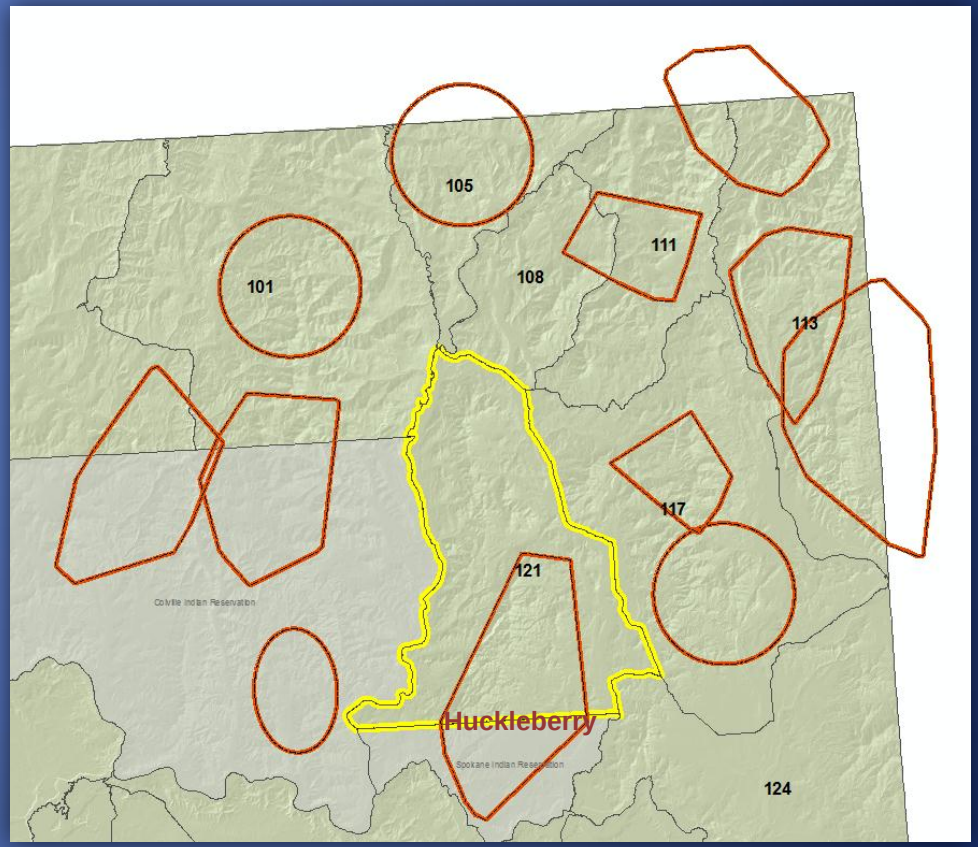
Reduced hunter participation and harvest after 4-point restriction

Established wolf packs



Wolf Pack in GMU 121

The Huckleberry pack documented in 2012. Range extends to southern portions of GMU 121

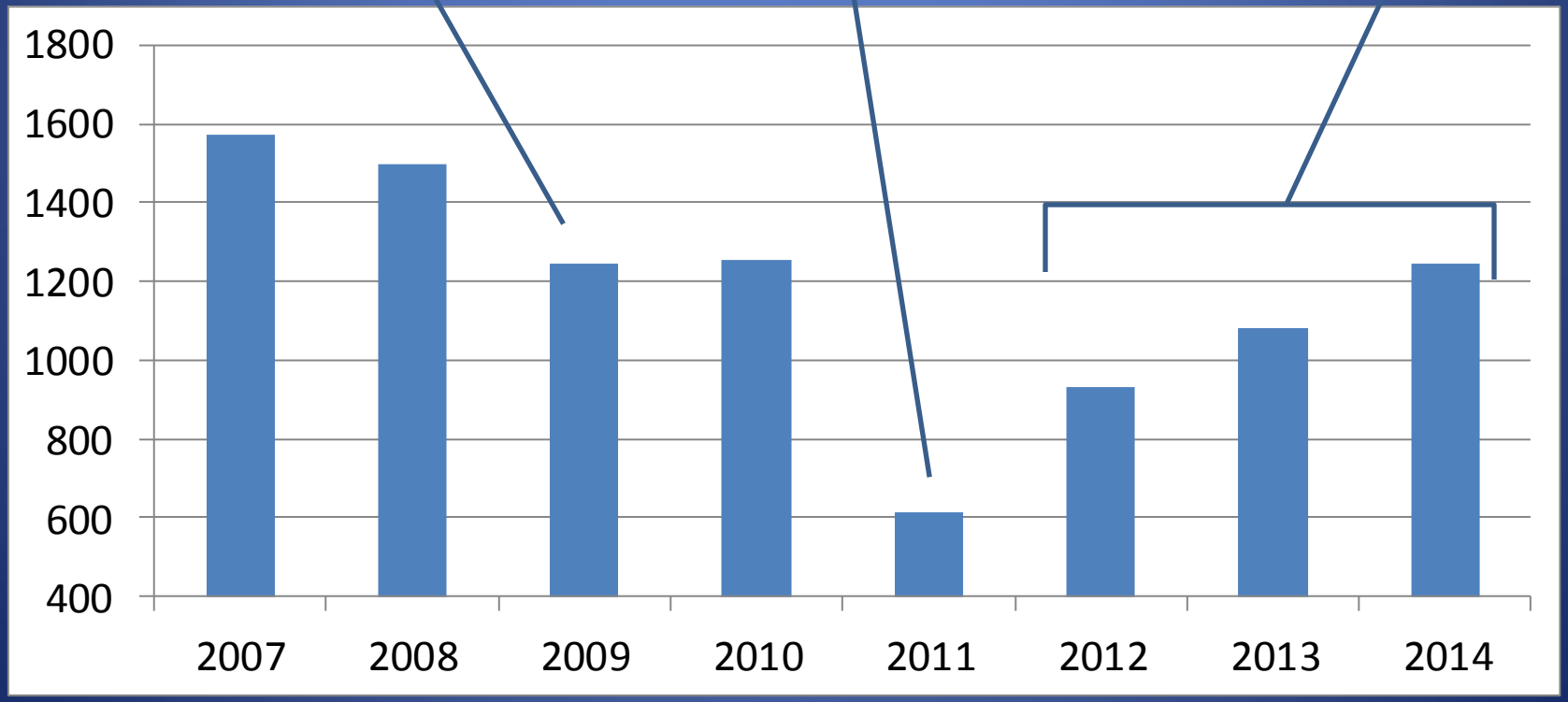


Buck Harvest in GMU 121

Buck harvest declined significantly after two hard winters in 2007 & 2008

Reduced hunter participation and buck harvest after 4-point restriction

Established wolf pack

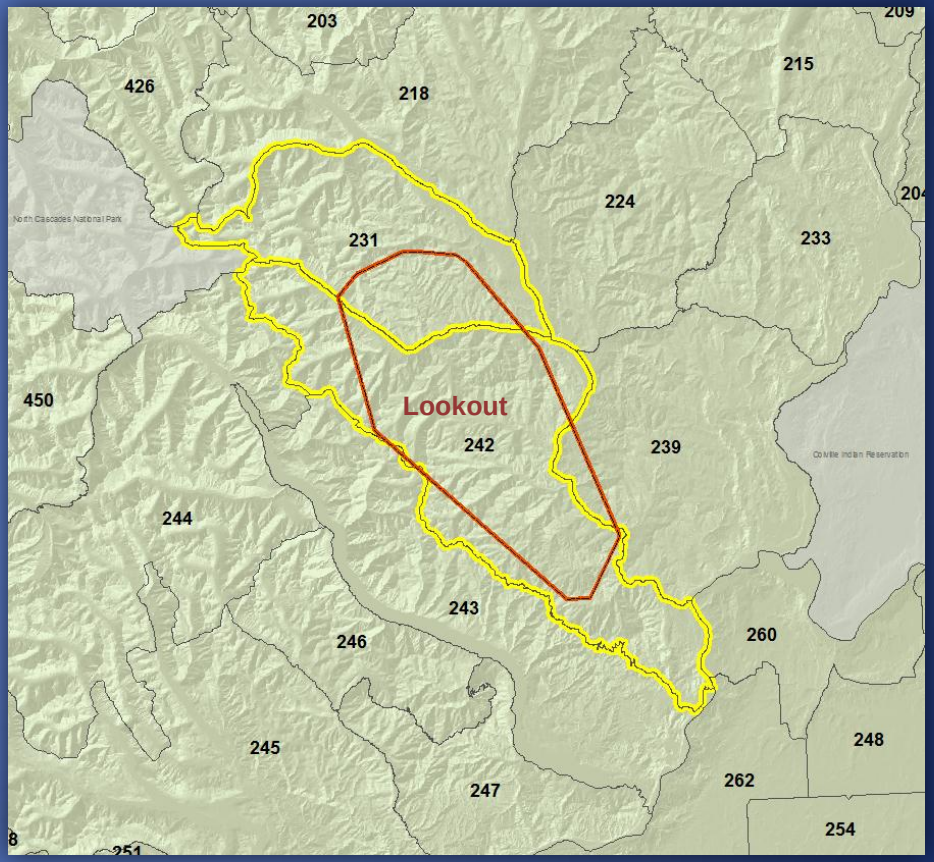


Deer and Elk Status in Areas with Wolves

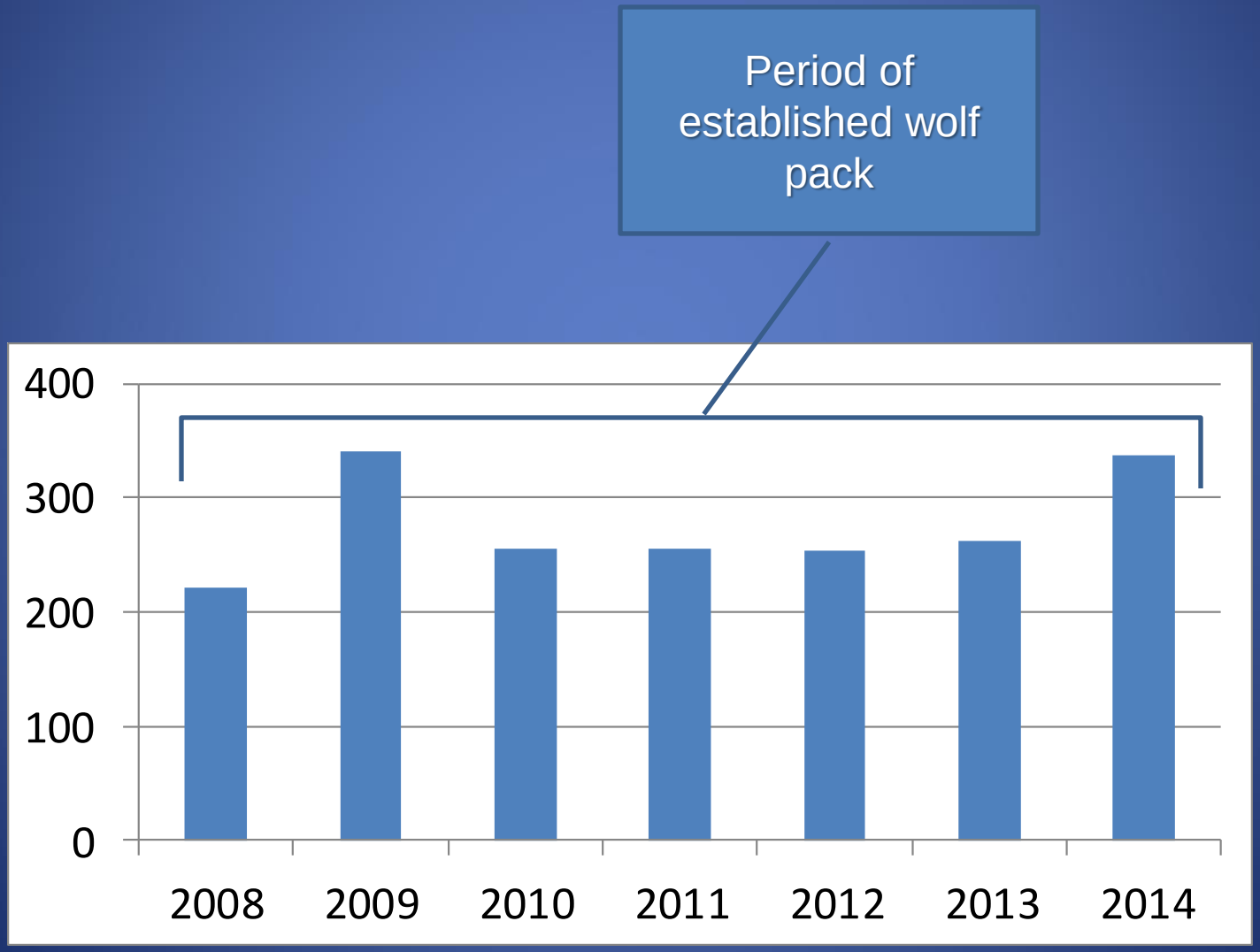
Central and Northcentral Washington

Wolf Pack in GMUs 231 & 242

- Lookout Pack documented in 2008
- Pack size likely small from 2009-2011 due to poaching

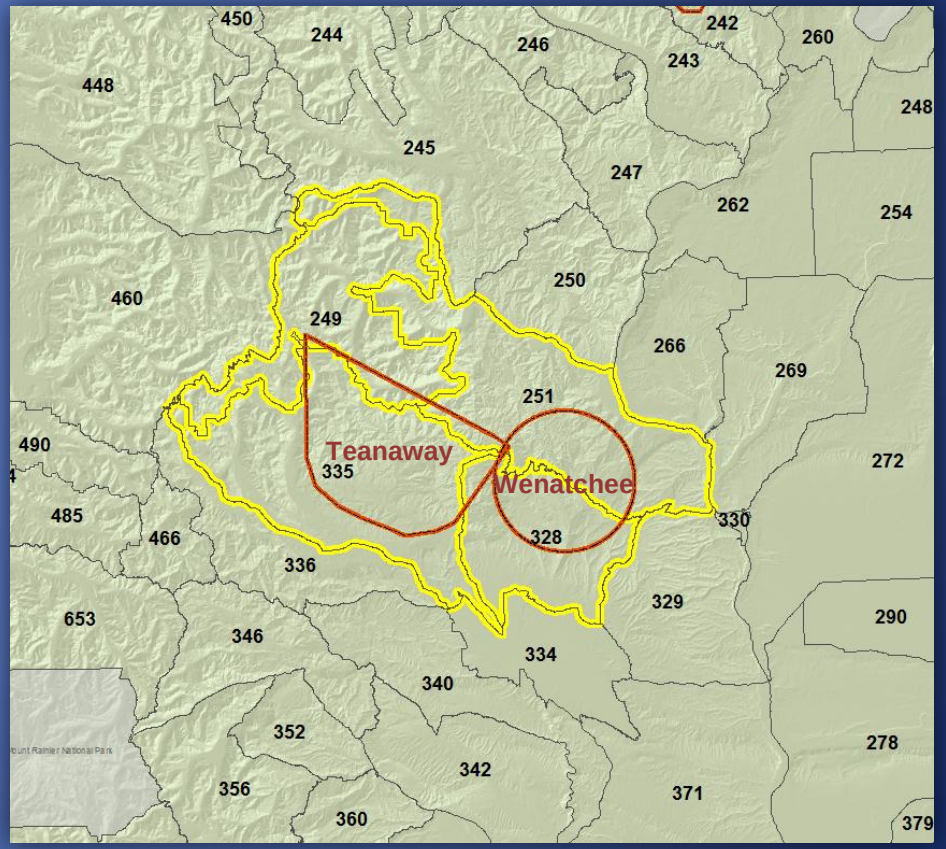


Buck Harvest in GMUs 231 & 242

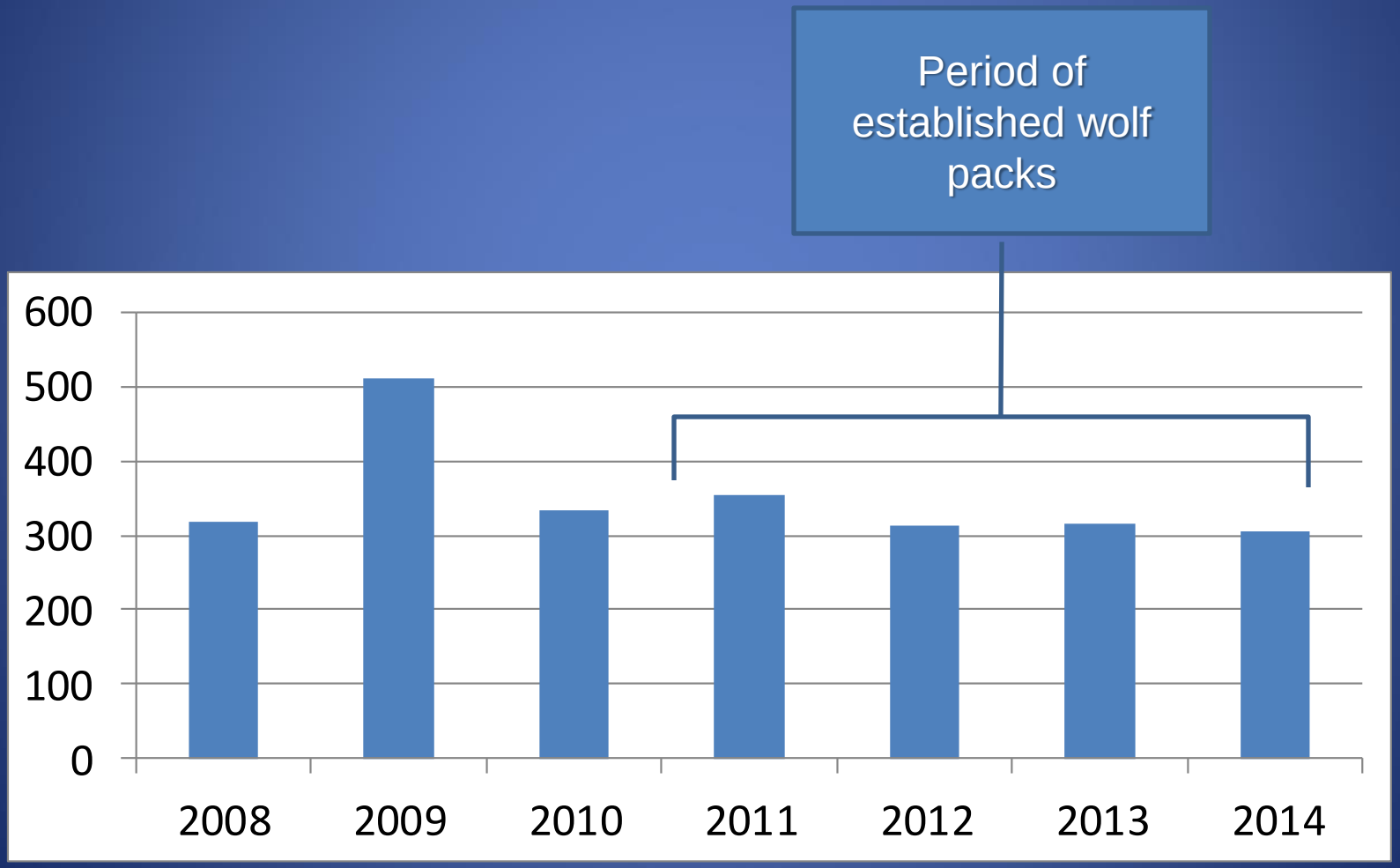


Wolf Packs in GMUs 249, 251, 328, & 335

- Teanaway Pack documented in 2011. Has been larger pack consistently producing pups.
- Wenatchee Pack documented in 2013. Believed to be at least 2 wolves.

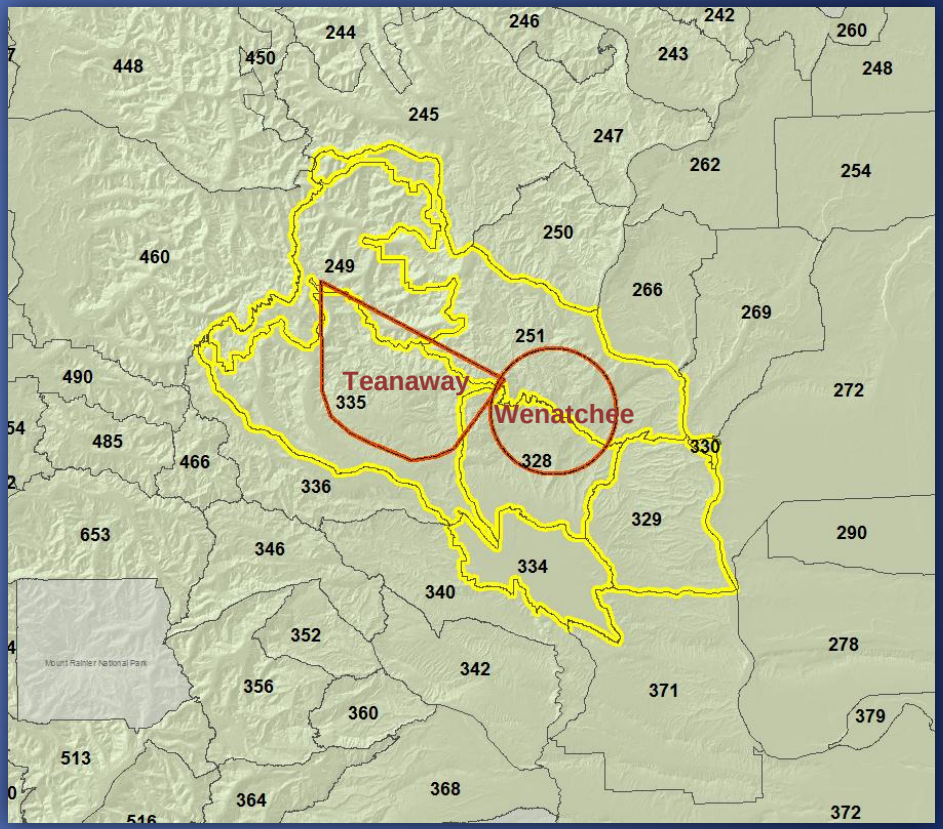


Buck Harvest in GMUs 249, 251, 328, & 335



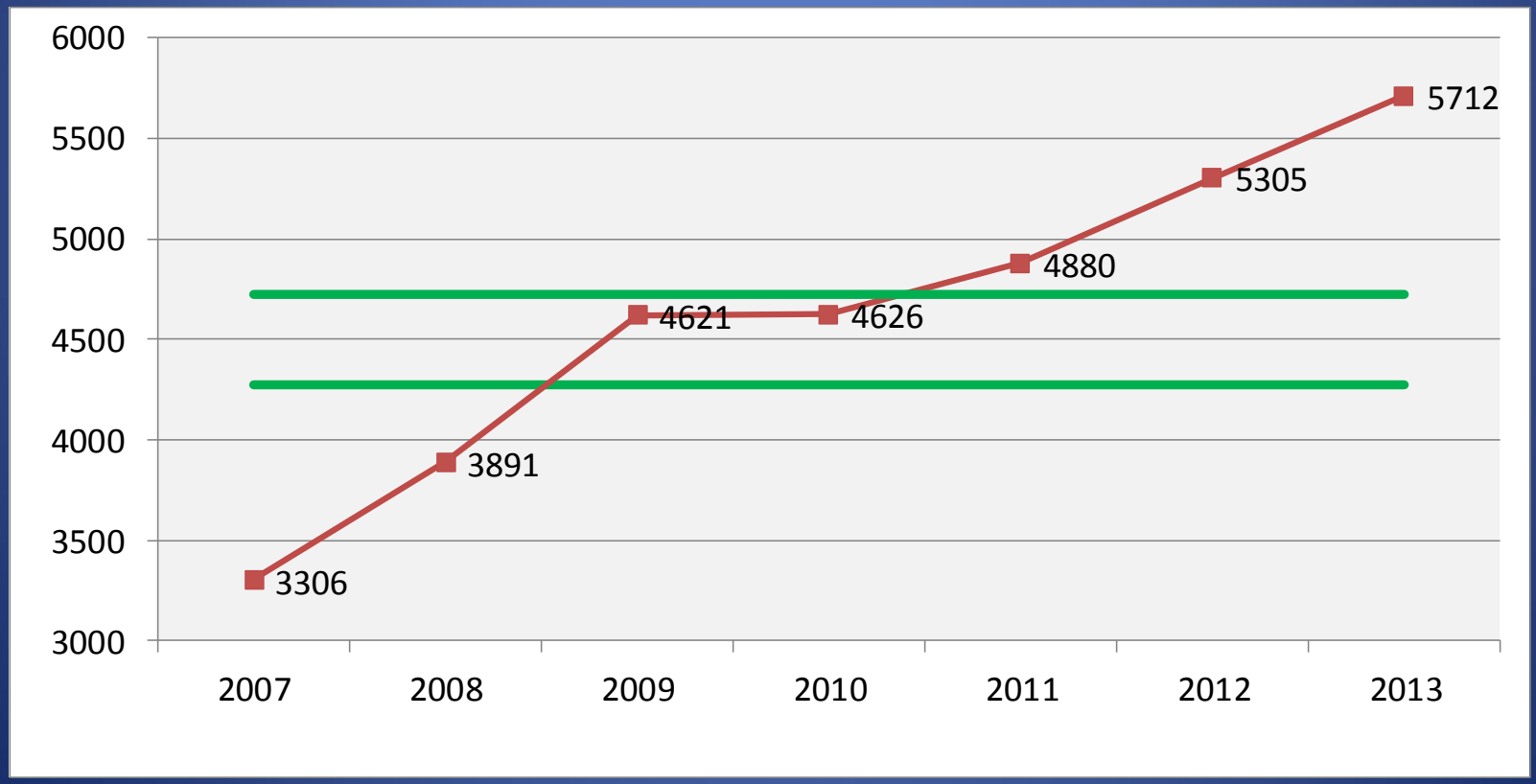
Wolf Packs in Colockum Elk Herd Area

- Teanaway Pack documented in 2011. Has been larger pack consistently producing pups.
- Wenatchee Pack documented in 2013. Believed to be at least 2 wolves.

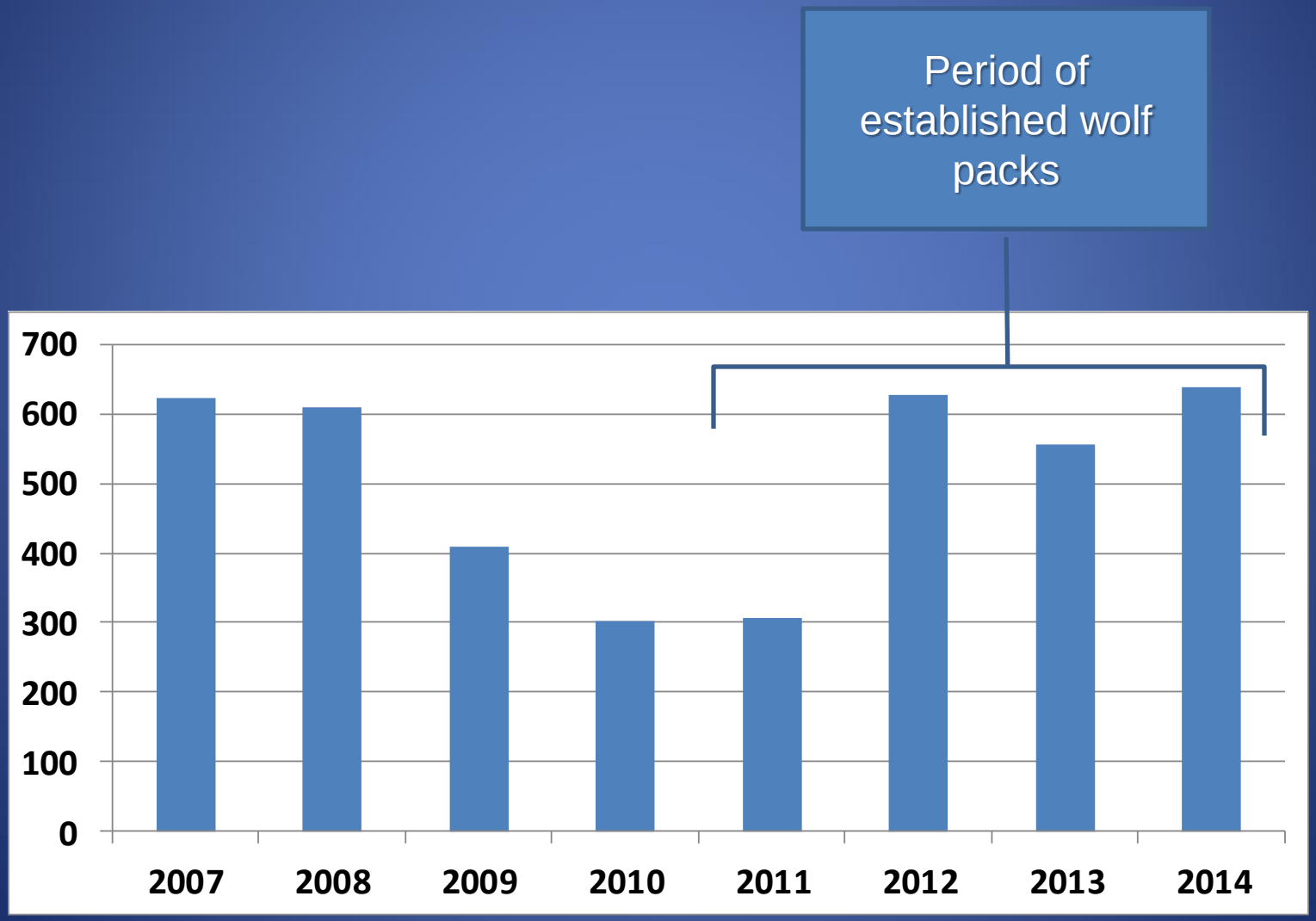


Colockum Elk Population Estimate

WDFW is planning to reduce this population with hunting because the elk herd is above objective (green lines)



Total Harvest in Colockum Elk Herd

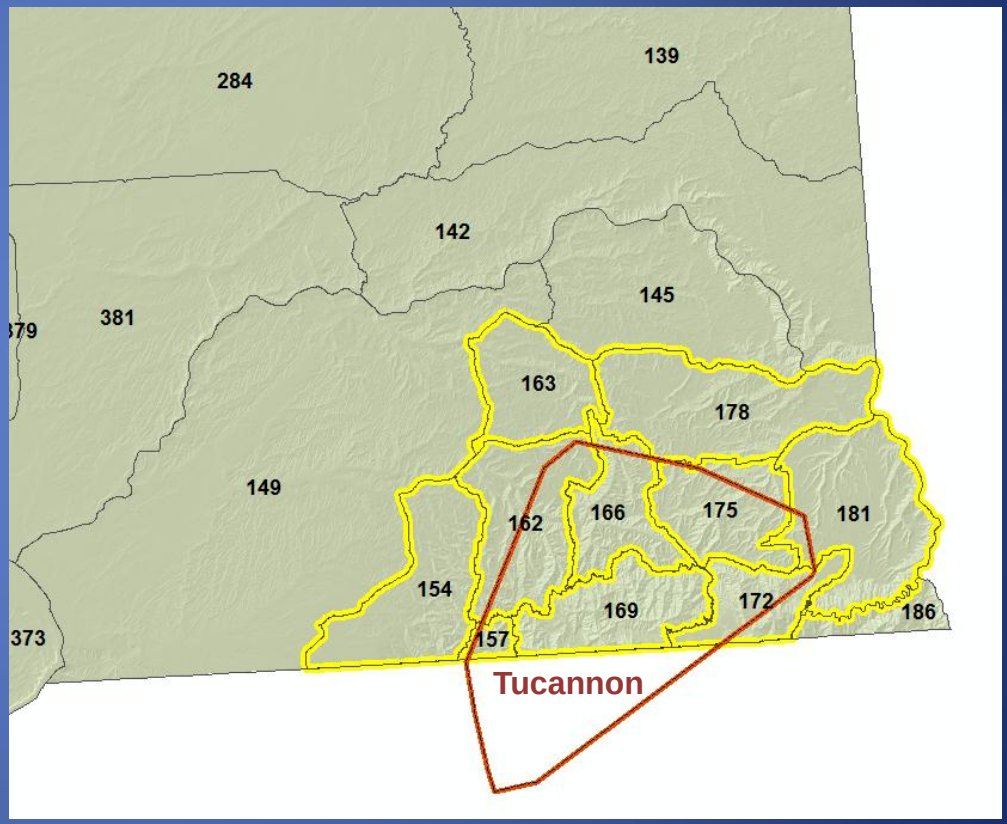


Elk Status in Areas with Wolves

Blue Mountains

Wolf Pack in Blue Mountains

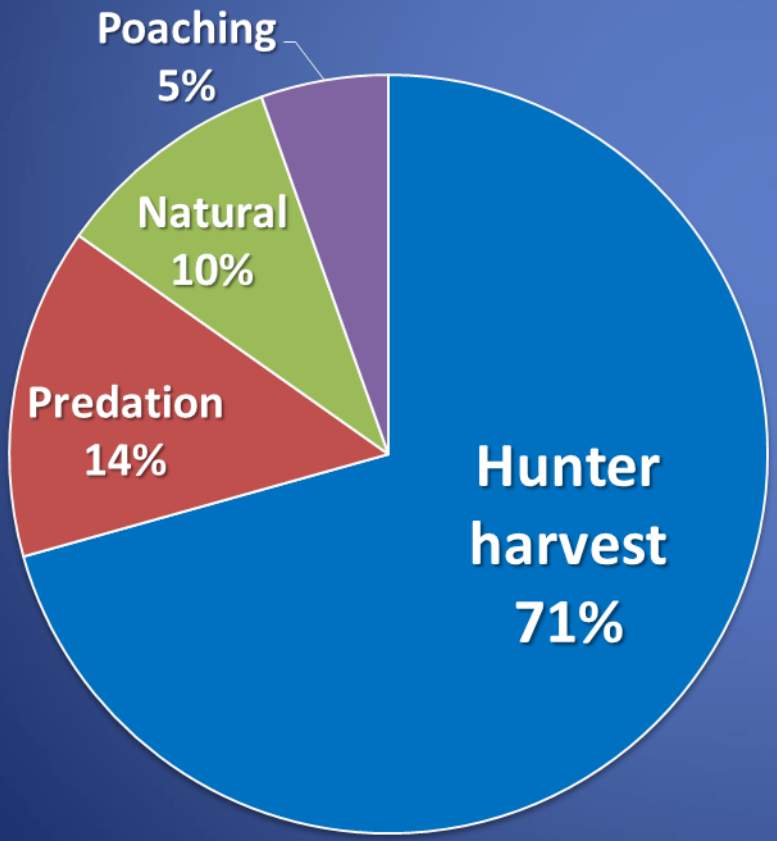
- Tucannon Pack documented in 2014, with at least 2 wolves.
- Other dispersing wolves from Oregon documented travelling through Blue Mountains.



Blue Mountains Elk Study

Bull mortality 2003-2006

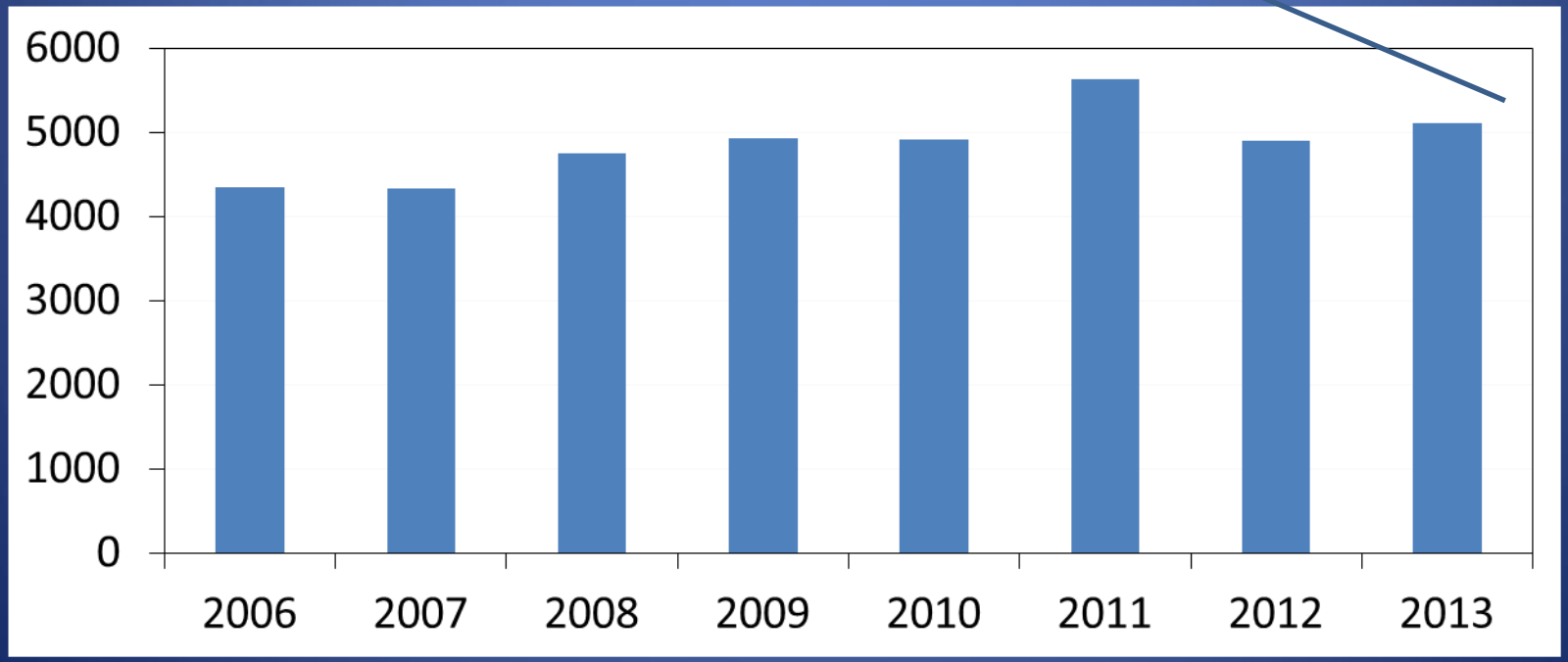
(prior to Tucannon Pack)



Hunter harvest, 2010

Blue Mountains Elk

First wolf pack detected in 2014



Blue Mountains Elk Study

- WDFW identified high (exceeded 15%) cow harvest by hunters was limiting elk in the Blue Mountains
- The elk population grew when cow harvest was reduced and the elk herd currently is meeting the population objective in the herd plan.
- There were other factors affecting the population growth as well, such as two large fires that created substantial habitat improvement (over 100,000 acres)

Summary

Summary of Prey Status in NE Washington

- Elk numbers are increasing and we plan to allow them to increase a little more by cutting back on antlerless harvest
- Mule deer numbers appear to be increasing, mostly in the western units
- Moose appear to be continuing their long term increase and expansion; although based on 2014 body condition work, they may have reached carrying capacity
- White-tailed deer populations are still low after the decline experienced with the hard winters of 2007-08, but there is some indication we may have turned the corner

Summary

- Ungulate population changes can be detected in a variety of ways
- As of today, WDFW does not have any measurable indication that wolves are having an impact on ungulate populations
- If changes in population levels are suspected, additional efforts will be employed to verify the cause

Summary

- Washington is fairly well positioned to understand potential impacts to ungulate populations from wolves
- The Wolf Conservation and Management Plan allows for wolf management for “at risk” ungulate populations
- Once delisted, wolf management options likely will expand

Questions:

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