Wolf Status in Washington

Wolf-Ungulate Webcast, July 18, 2013

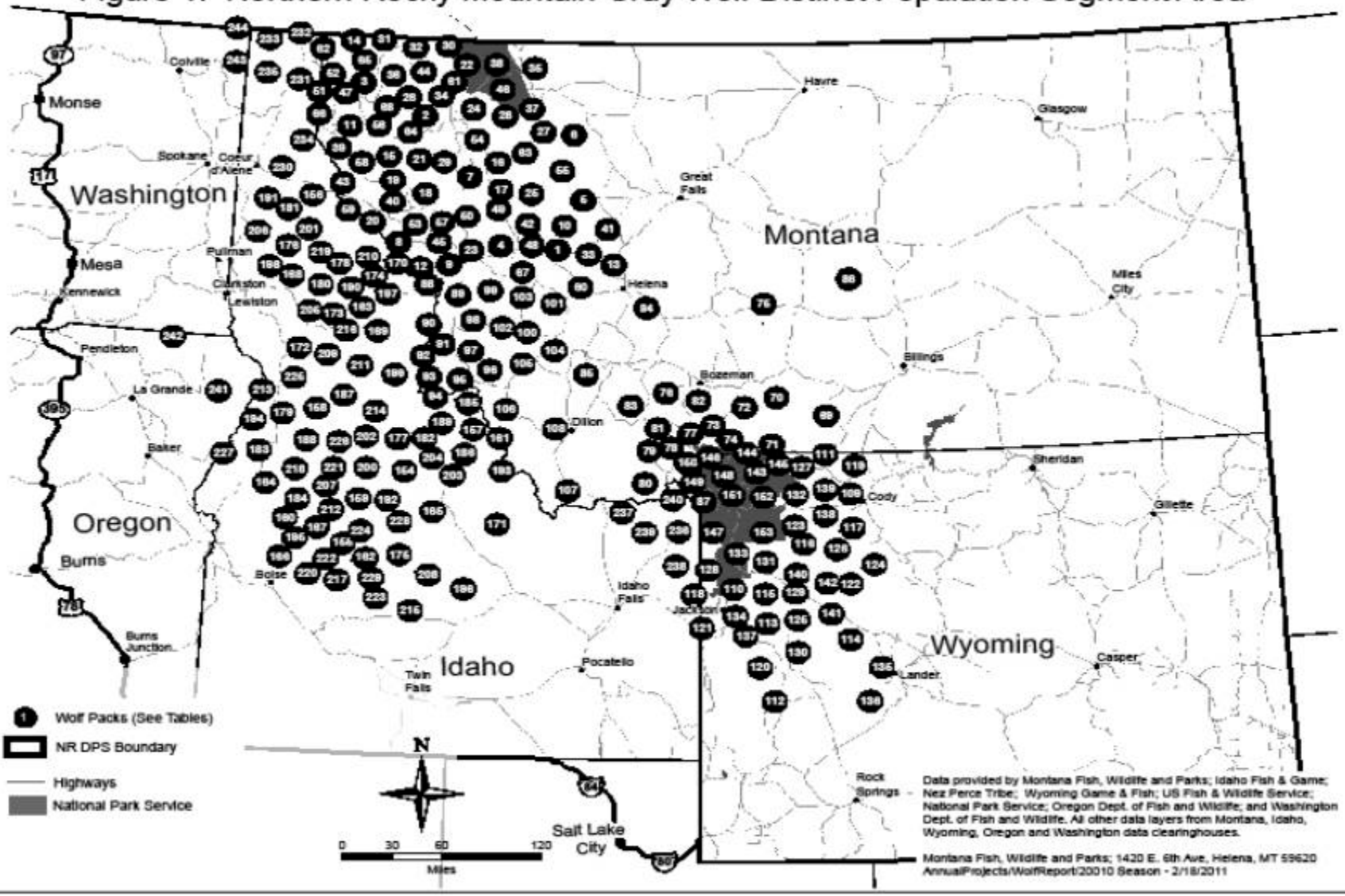
Washington Department of FISH and WILDLIFE

Wolves are returning to Washington

USFS Oregon

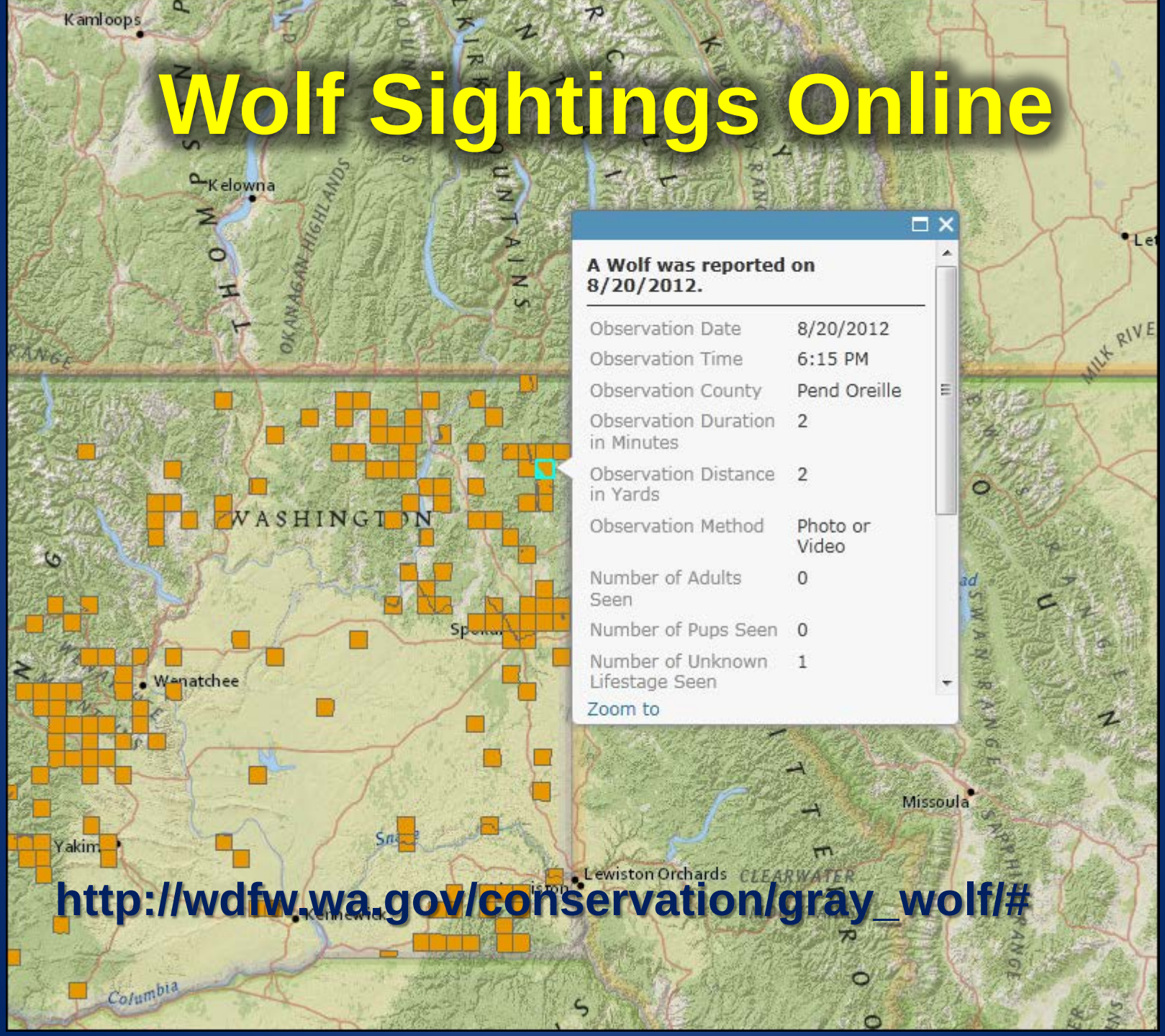
Recovery of populations in adjacent states & provinces producing dispersers into WA

Figure 1: Northern Rocky Mountain Gray Wolf Distinct Population Segment Area



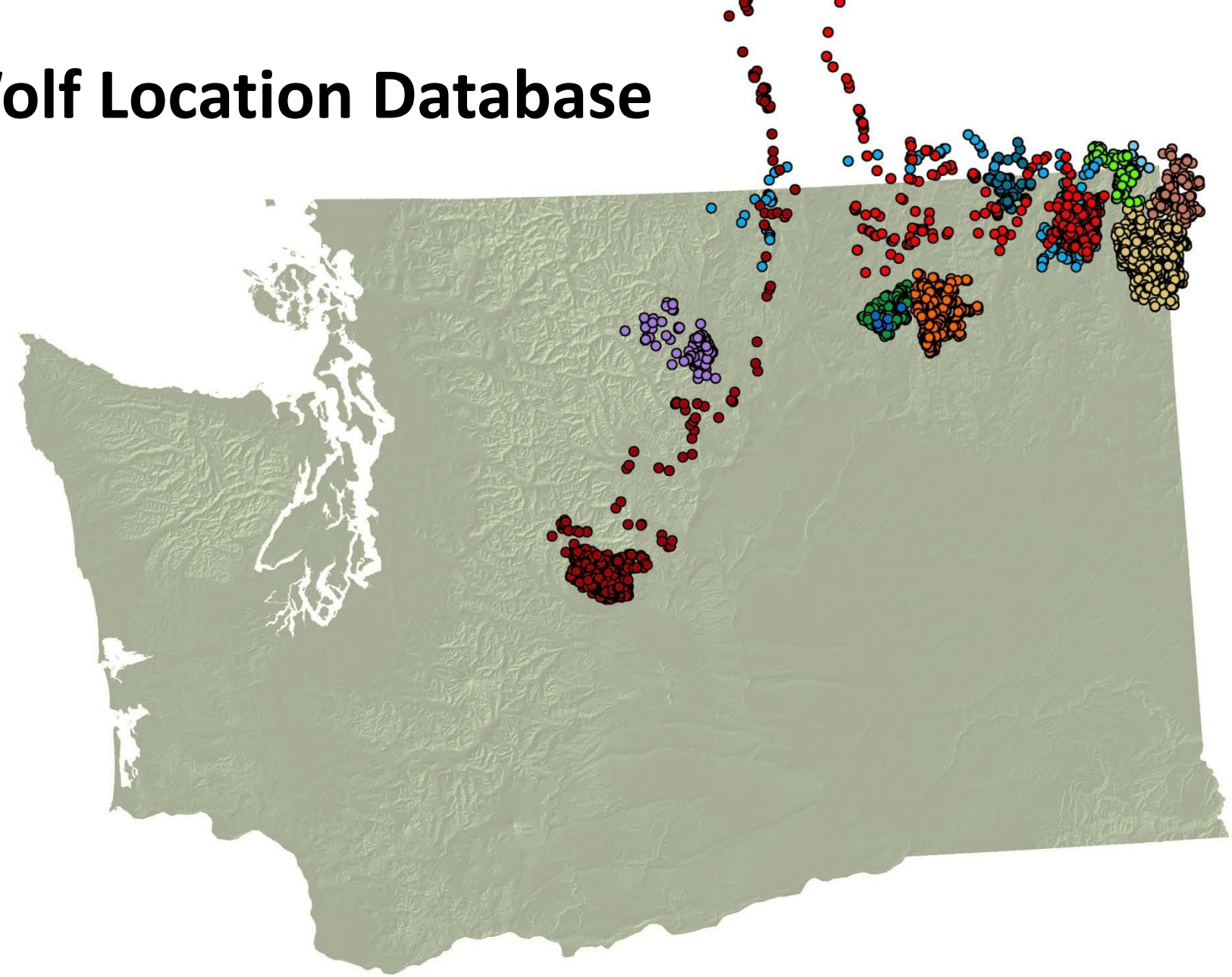
Wolf Monitoring

Wolf Sightings Online



http://wdfw.wa.gov/conservation/gray_wolf/#

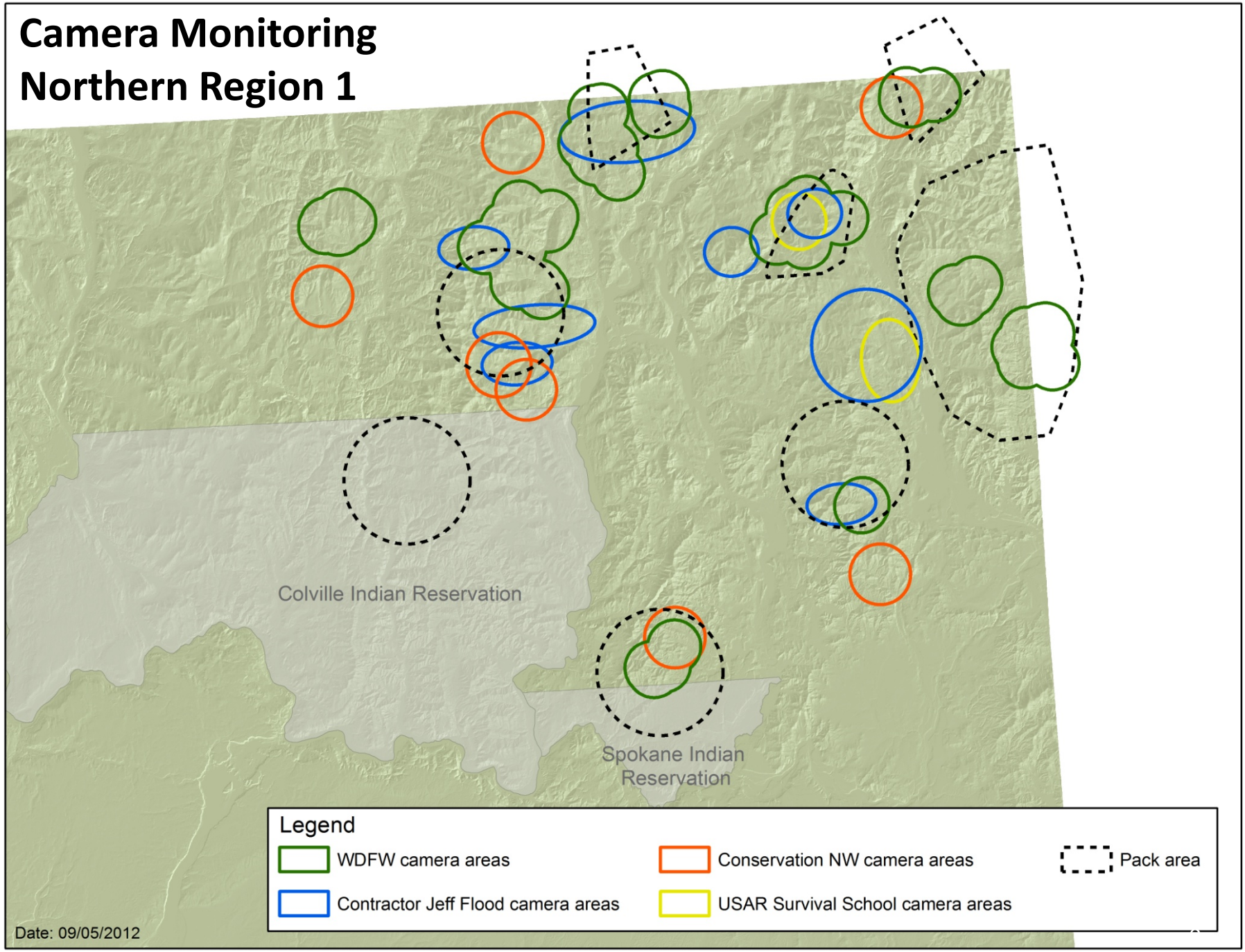
Wolf Location Database



Follow-up surveys

Lookout pack pair

Camera Monitoring
Northern Region 1



Wolf Captures and Collaring

- Multiple collars in each pack
- Satellite and VHF

Monitoring Activity

Recovery Region	Pack	Field Activity	# Collared
Eastern Washington	Boulder	Cameras	0
	Diamond	Cameras-Trapped-Aerial	2
	Huckleberry	Cameras-Trapped (Spokane Tribe)	2
	Nc'icn	Trapped (Colville Confederated Tribes)	2
	Ruby	Cameras-Trapped	1
	Salmo	Trapped	1
	Smackout	Cameras-Trapped-Aerial	2
	Strawberry	Trapped (CCT)	1
	Touchet	Cameras	0
	Wedge	Cameras-Trapped	--
Northern Cascades	Lookout	Cameras-Trapped	0
	Teanaway	Cameras-Trapped	2
	Hozomeen	Cameras-Trapped	0
S Cascades & NW Coast	--	--	--
	Statewide		13

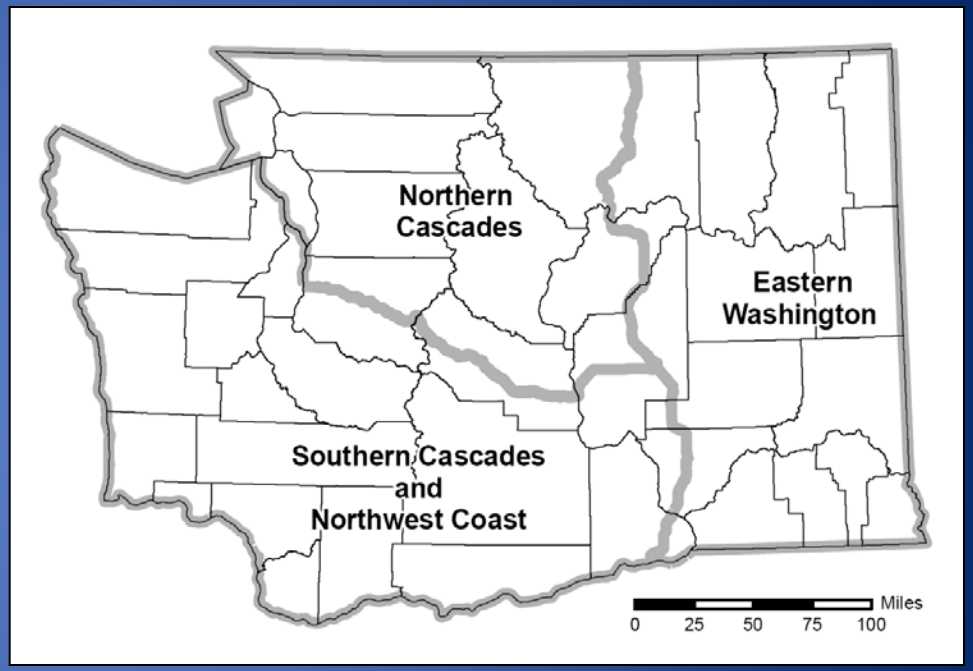
Breeding Pair Surveys

Tom Meier

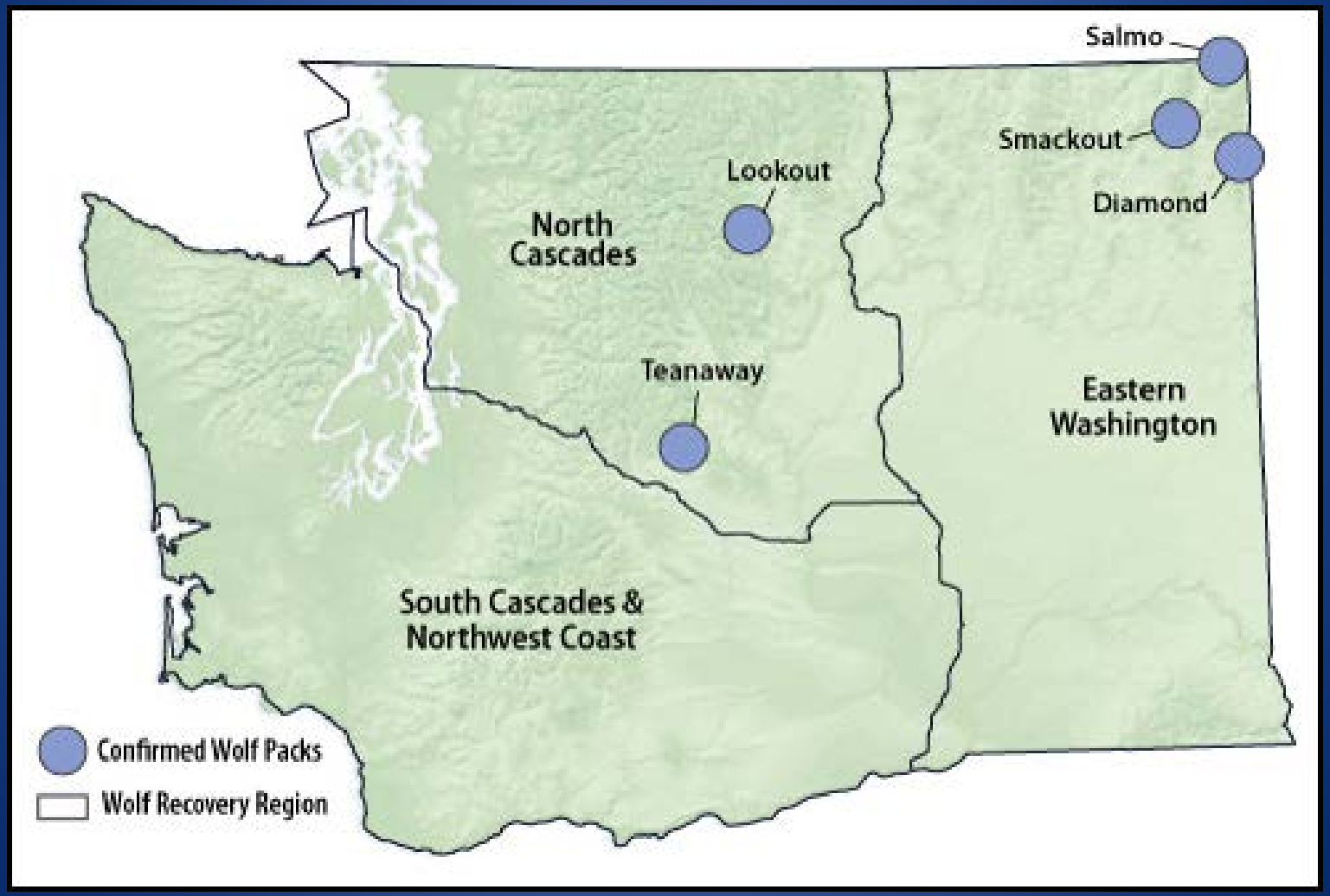
WDFW, Jay Shepherd

Recovery Objectives

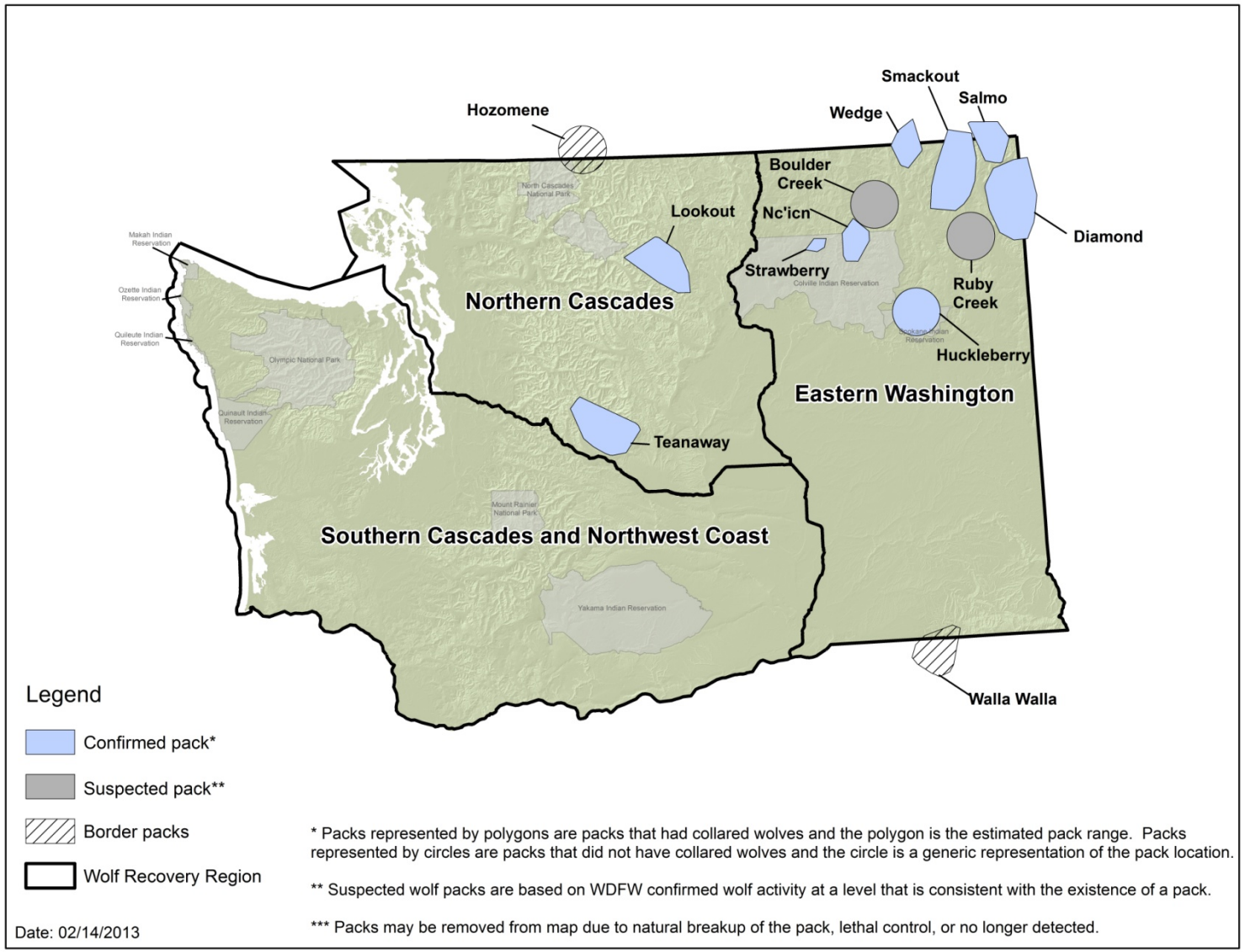
- Delist at 15 successful breeding pair for 3 consecutive years
- Or 18 successful breeding pair for 1 year
- Distributed among 3 recovery regions



Washington Wolf Packs – Dec 2011



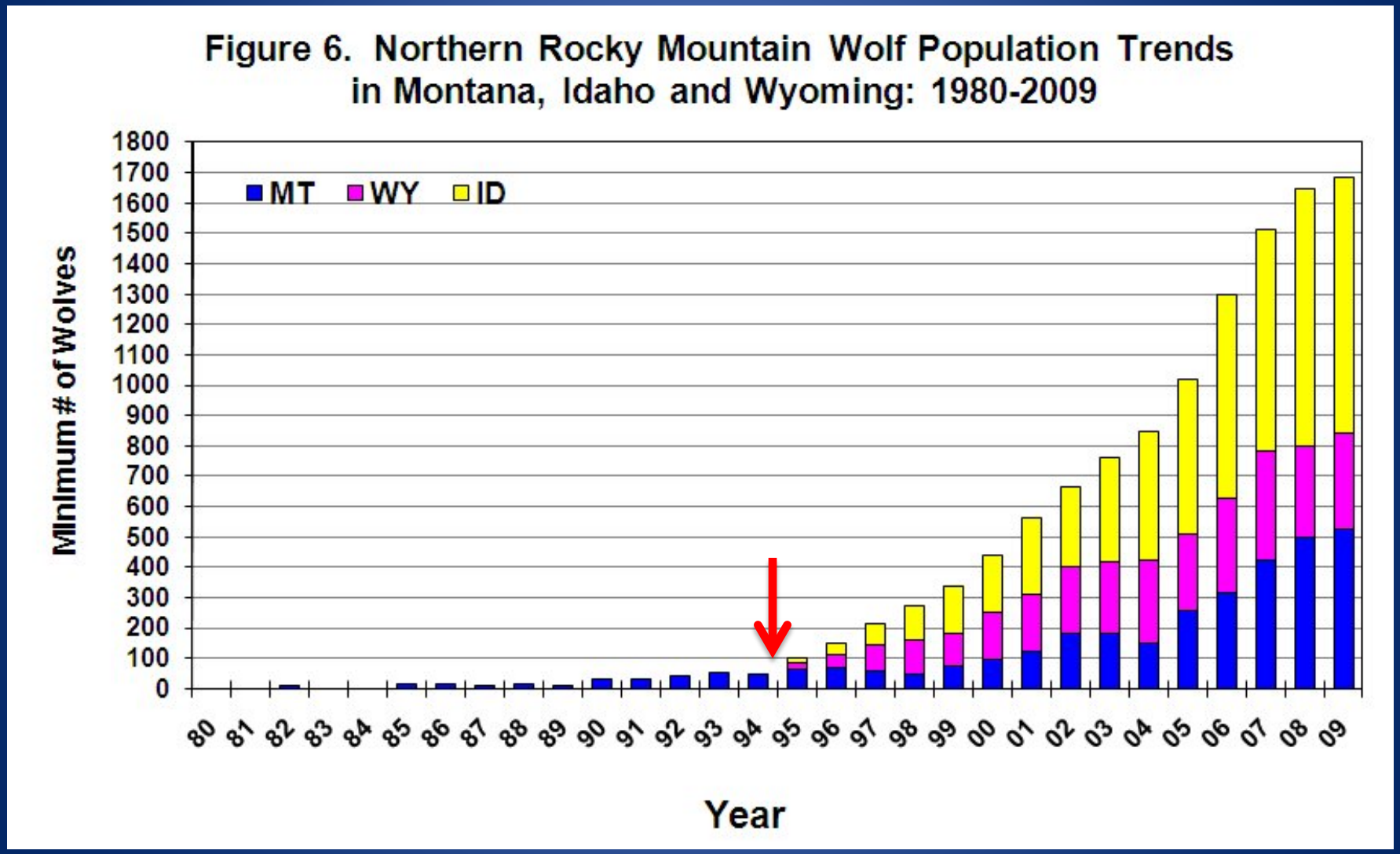
Washington Wolf Packs – Dec 2012



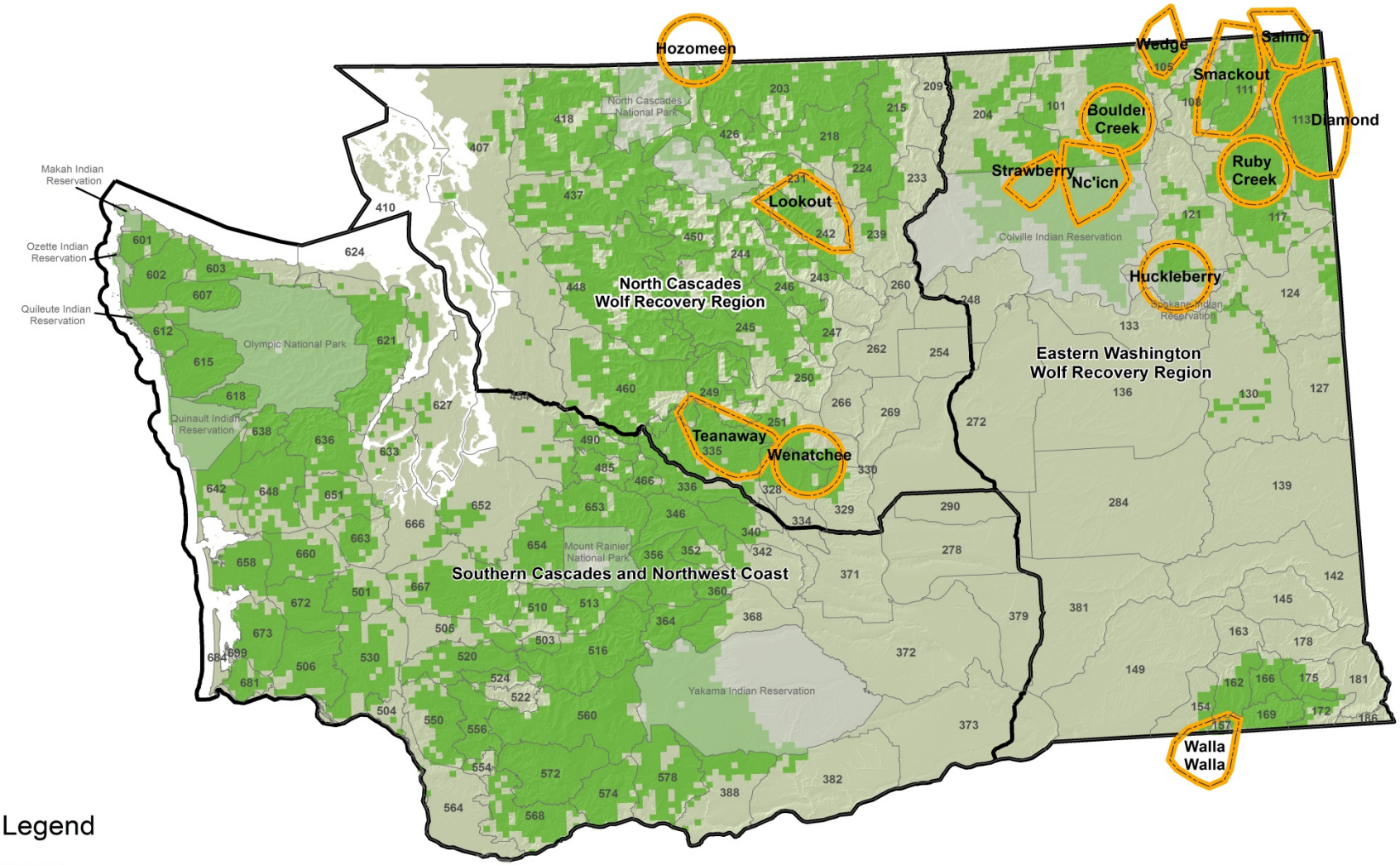
Pack Statistics – Dec 2012

Recovery Area	Pack Name	Pack Status [a]	Minimum Count	Successful Breeding Pair
Eastern Washington	Boulder Creek	Suspected	-	-
	Diamond	Confirmed	10	Yes
	Huckleberry	Confirmed	8	Yes
	Nc'icn	Confirmed	6	Yes
	Ruby Creek	Suspected	-	-
	Salmo	Confirmed	2	No
	Smackout	Confirmed	12	Yes
	Strawberry	Confirmed	3	No
	Wedge	Confirmed	2	No
Northern Cascades	Lookout	Confirmed	2	No
	Teanaway	Confirmed	6	Yes
S Cascades & NW Coast	-	-	-	-
Totals			51 [b]	5

Wolf Population Growth In NRM DPS



Washington Wolf Packs Relative to Estimated Suitable Wolf Habitat



Legend

Wolf packs (confirmed and suspected)

Estimated suitable wolf habitat (greater than or equal to 50% probability of occupancy; see page 60 in Wolf Conservation and Management plan)

Date: 07/18/2013

Predator-Prey Relationships

- What are the impacts of wolves on ungulates?
- The average number of deer equivalents that eight wolf packs would consume is about 3300.
- Simple math might suggest that wolf (and other predator) consumption of deer would reduce the deer population.

Okanogan Mule Deer - 2010

Predator-Prey Relationships

- What are the impacts of wolves on ungulates?
- Some of the more obvious influences on the prey base include weather…
- Predators impact each other.
- Prey switching occurs depending on population levels.
- Many other factors that are difficult to predict.

South Dakota Photo

Blue Mountains Elk Example

- Results of the Research (2003-06)
  - Hunters were the primary source of mortality (65%)
  - Predation (13%)
  - Natural (9%)
  - Poaching (5%)

Blue Mountains Bull - 2011

Predator-Prey Relationships

- Questions :
  - How will wolf population levels affect other predator levels and the number of prey that they might otherwise kill?
  - Does predation mortality add to or compensate for overall mortality caused by the multitude of factors such as disease, lack of forage, severe winter weather, vehicle collisions, legal harvest, poaching, or other causes???
  - What is the real cause of a prey population decline or increase?
  - The bottom line, we don't know the actual impact of wolves or any other predator on local prey populations is…until we do the research.

Predator-Prey Relationships

- While we have not conducted specific research, two things are anticipated:
- 1) we should have ample prey populations to support wolf populations well beyond the recovery objectives; and
- 2) there will be cases where wolves cause a reduction in local prey populations. We built management options into the wolf plan for both scenarios (at risk ungulate populations).

Definition of "At Risk" Ungulate Population

- Any 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.

Colockum Bulls 2011

Predator-Prey Relationships

- Social tolerance is a major factor in setting wildlife population objectives and management actions; whether it is deer, elk, cougar, or wolves.
- Because of the multitude of things that constrain prey populations, it is difficult to predict where wolves might be a primary (or important) factor in prey population restrictions.

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

- Population Objectives
- Monitor Ungulates
  - Population estimates
  - Indexes
  - Composition counts
  - Harvest trends
- So We Detect a Change
- Then What?

Hanford Bull - 2011

What Happens When We See a Decline?

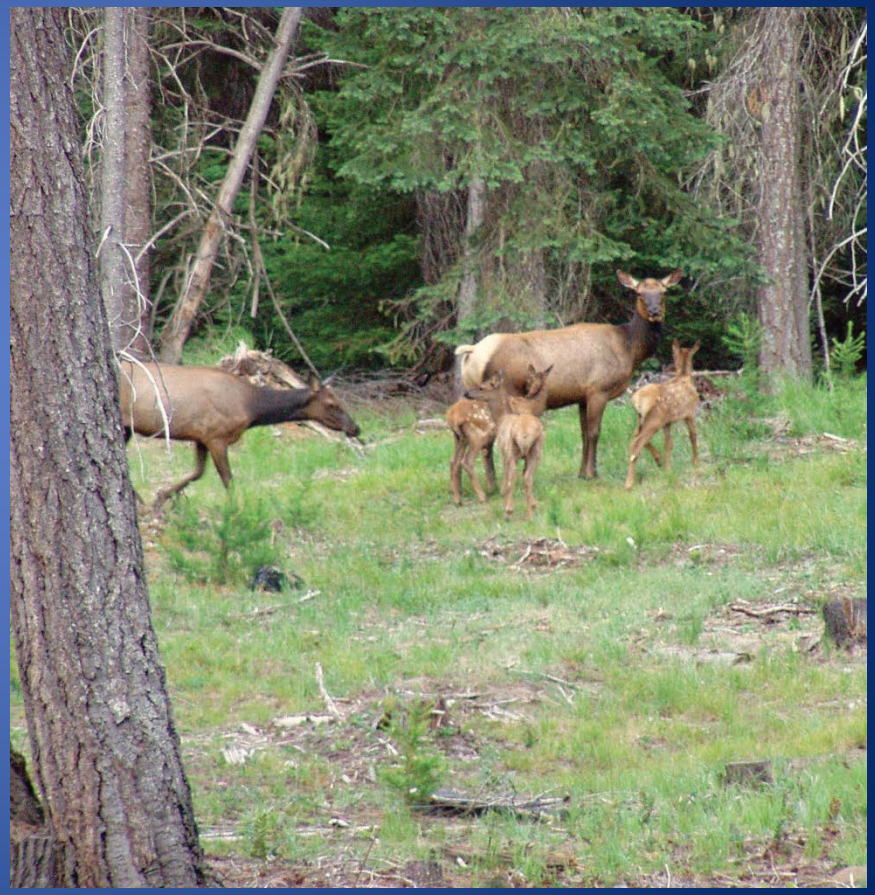
- What are the clues???
- Obvious:
  - Hunting
  - Severe weather
  - Fire
  - Disease
- Not So Obvious:
  - Drought
  - Habitat Change –
    - succession
  - Vulnerability
  - Change in Predation Levels

Detecting a Change
What are the Clues?

- Dead animals
- Hunter/landowner reports
- Harvest change:
  - Total harvest
  - Success rate
  - Days per kill
- Population surveys and trend
- Sex and Age Ratios

We Detected a Decline Now What???

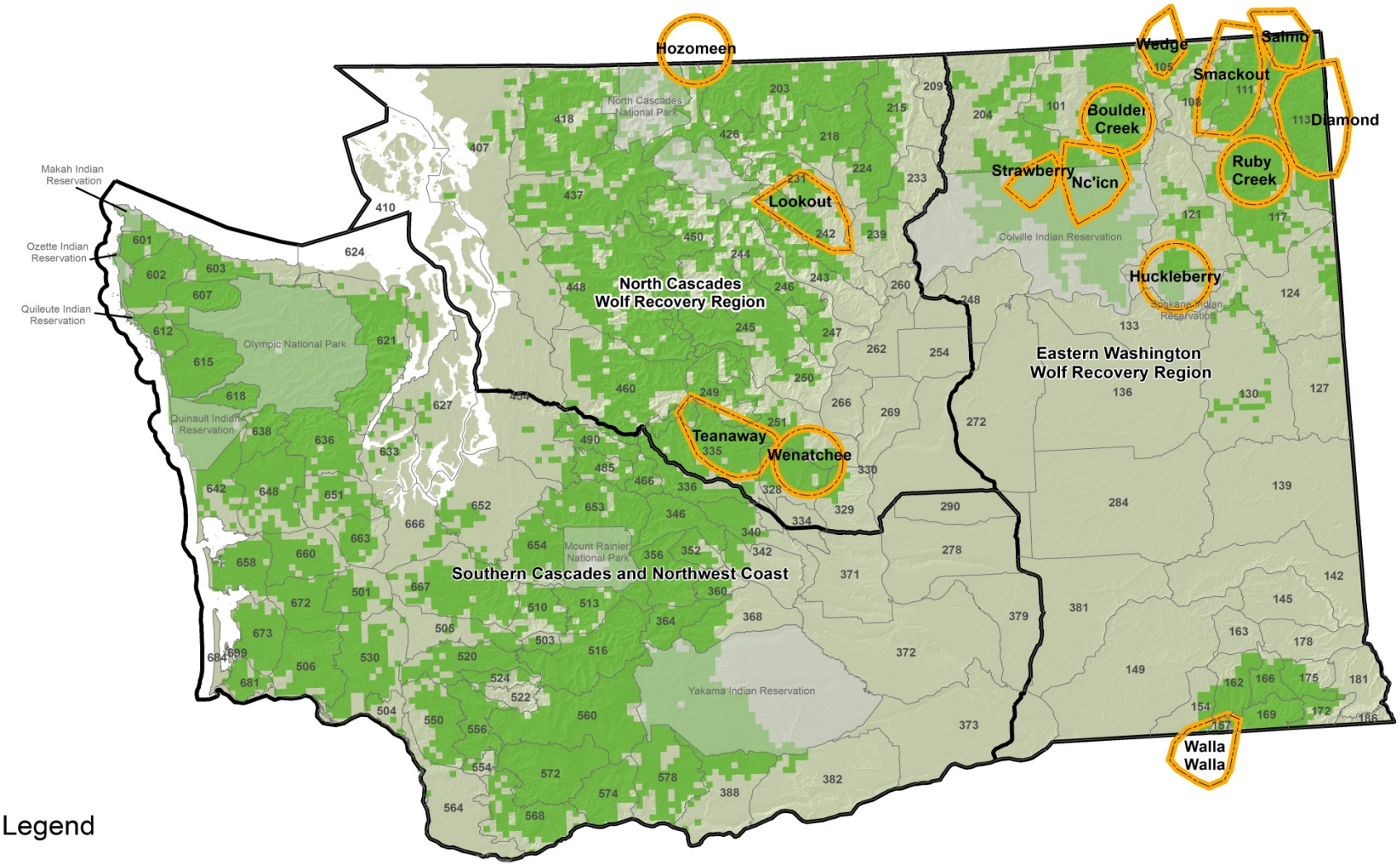
- Consider the Clues
  - Compare to other regions
  - Mortalities
  - Additional counts/surveys
  - Subtle weather patterns
  - Habitat changes
- Restrict harvest strategies
  - Depends on objective
    - Population
    - Male survival
- Monitor population and harvest



We Detected a Decline Now What???

- If no change after restricting harvest:
  - Initiate additional surveys
  - Expand harvest data collection
  - Initiate research

Washington Wolf Packs Relative to Estimated Suitable Wolf Habitat



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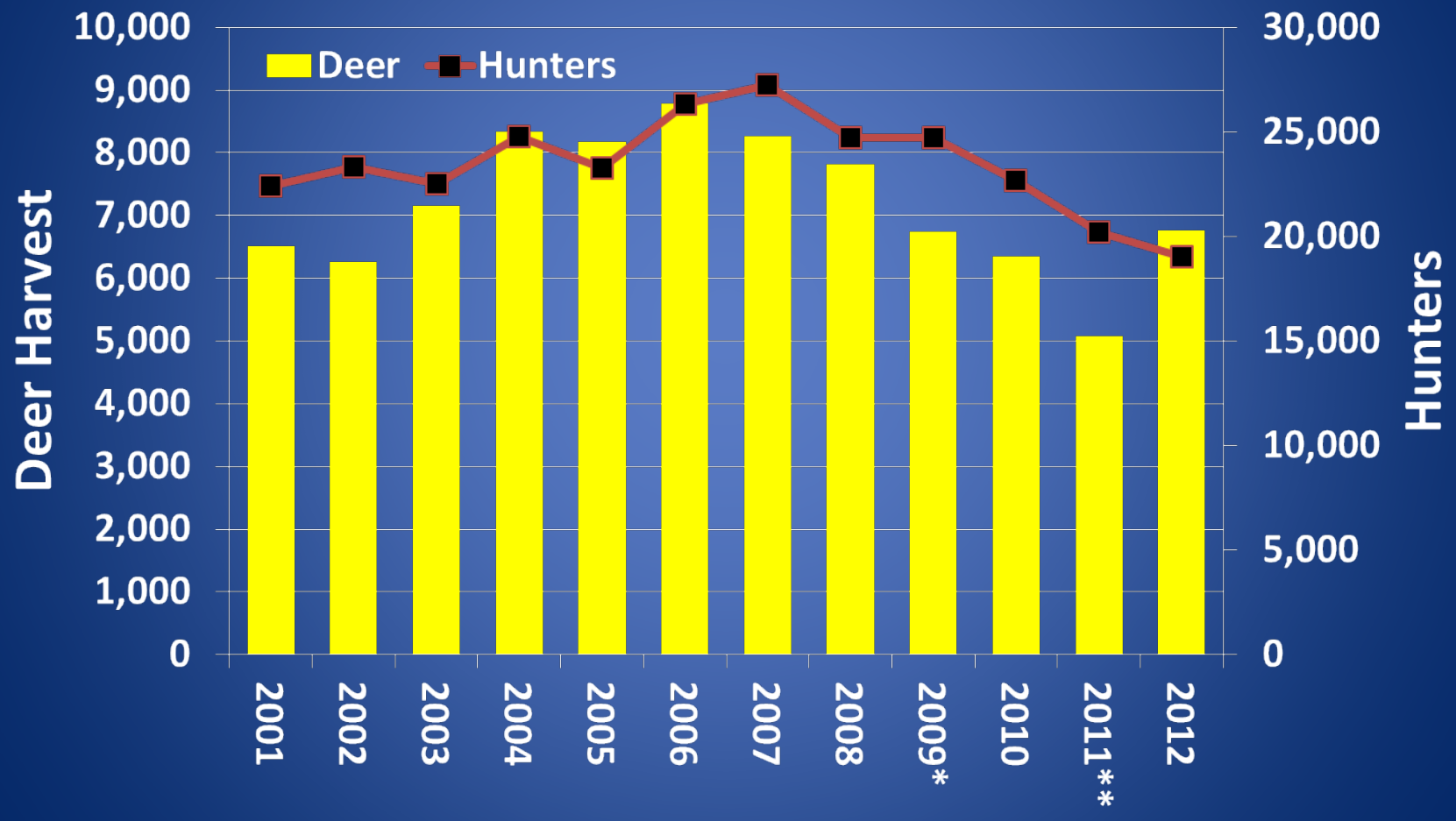
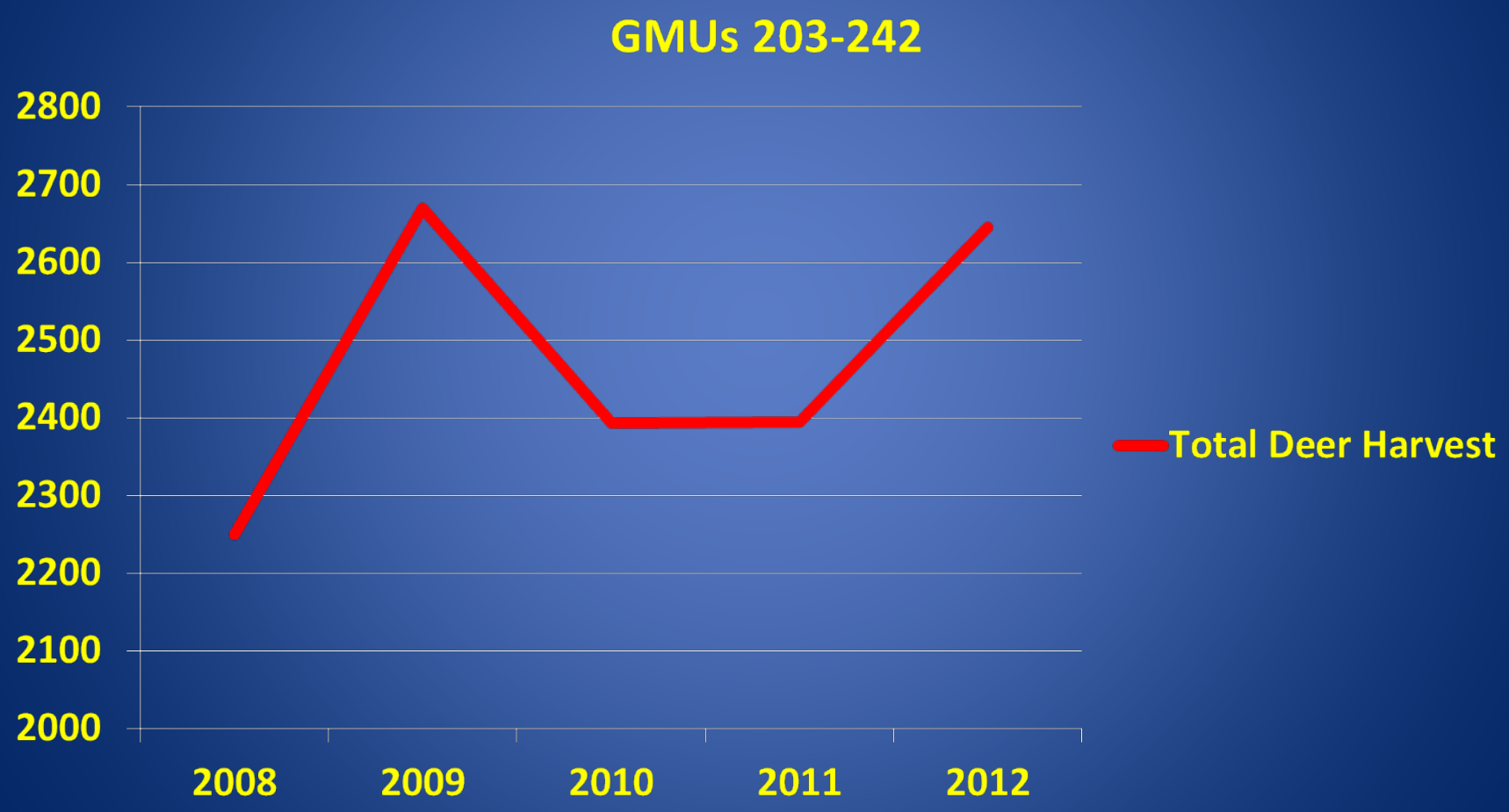
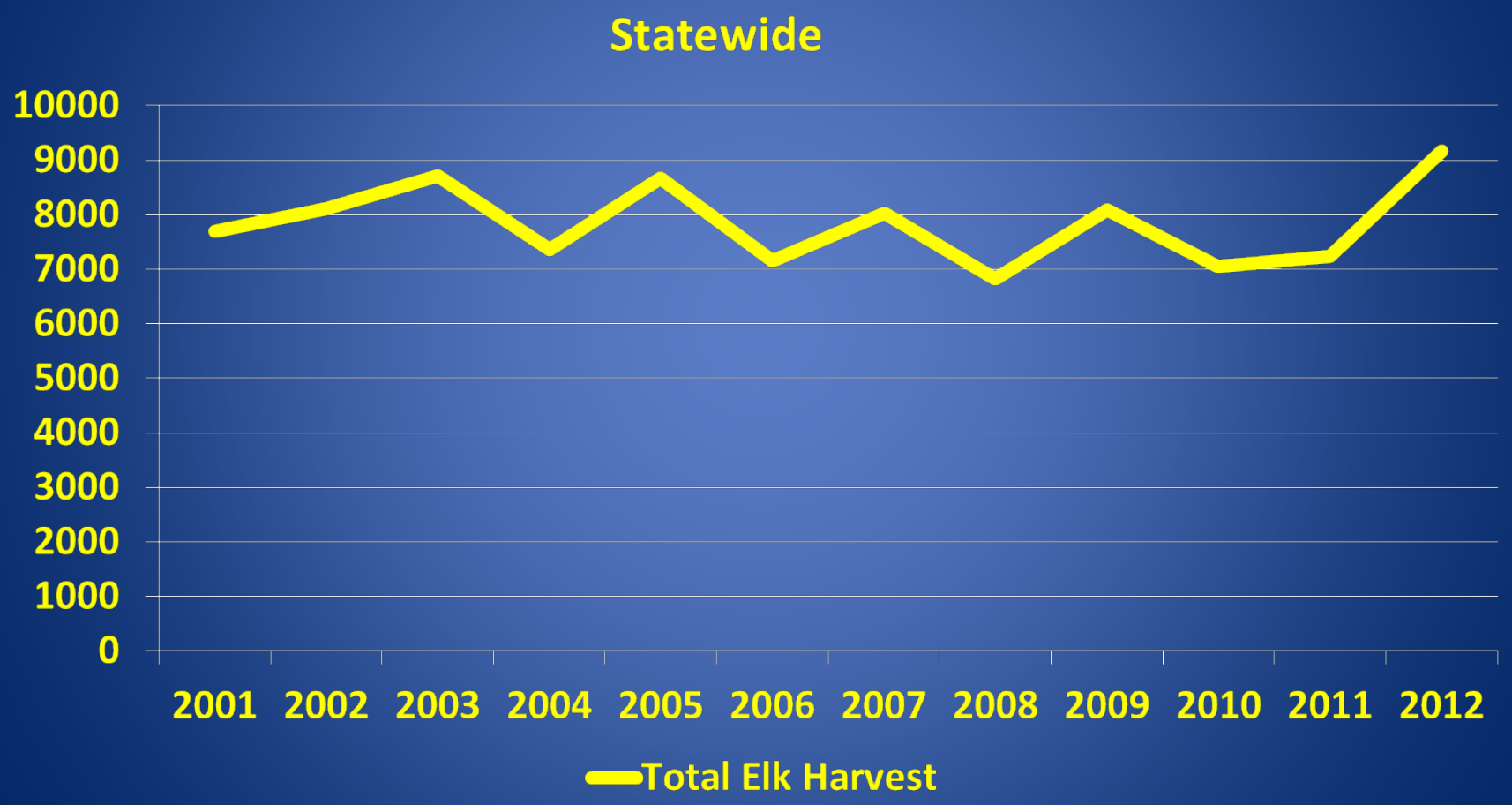
NE Washington Deer Harvest



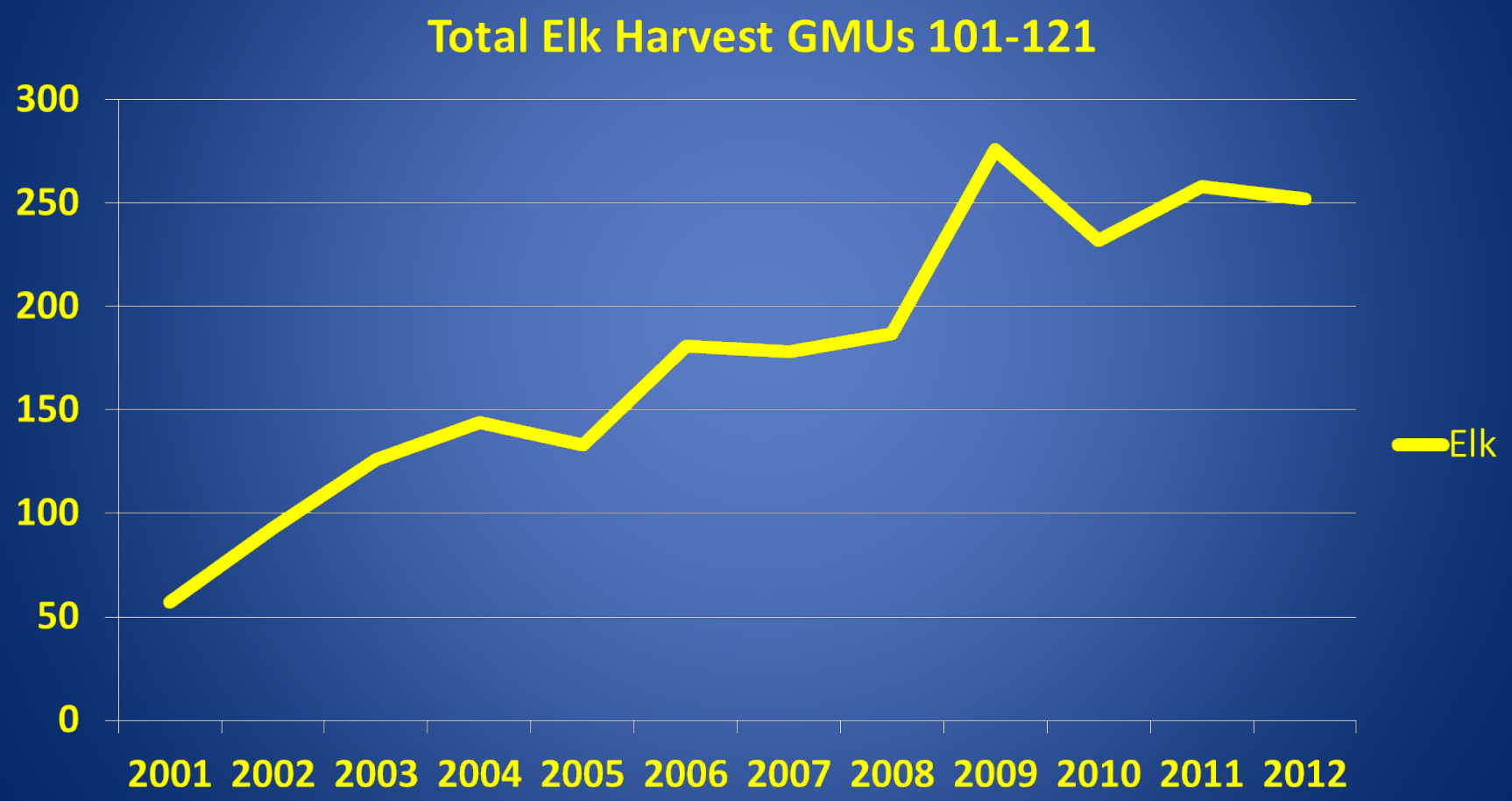
Okanogan Deer Harvest



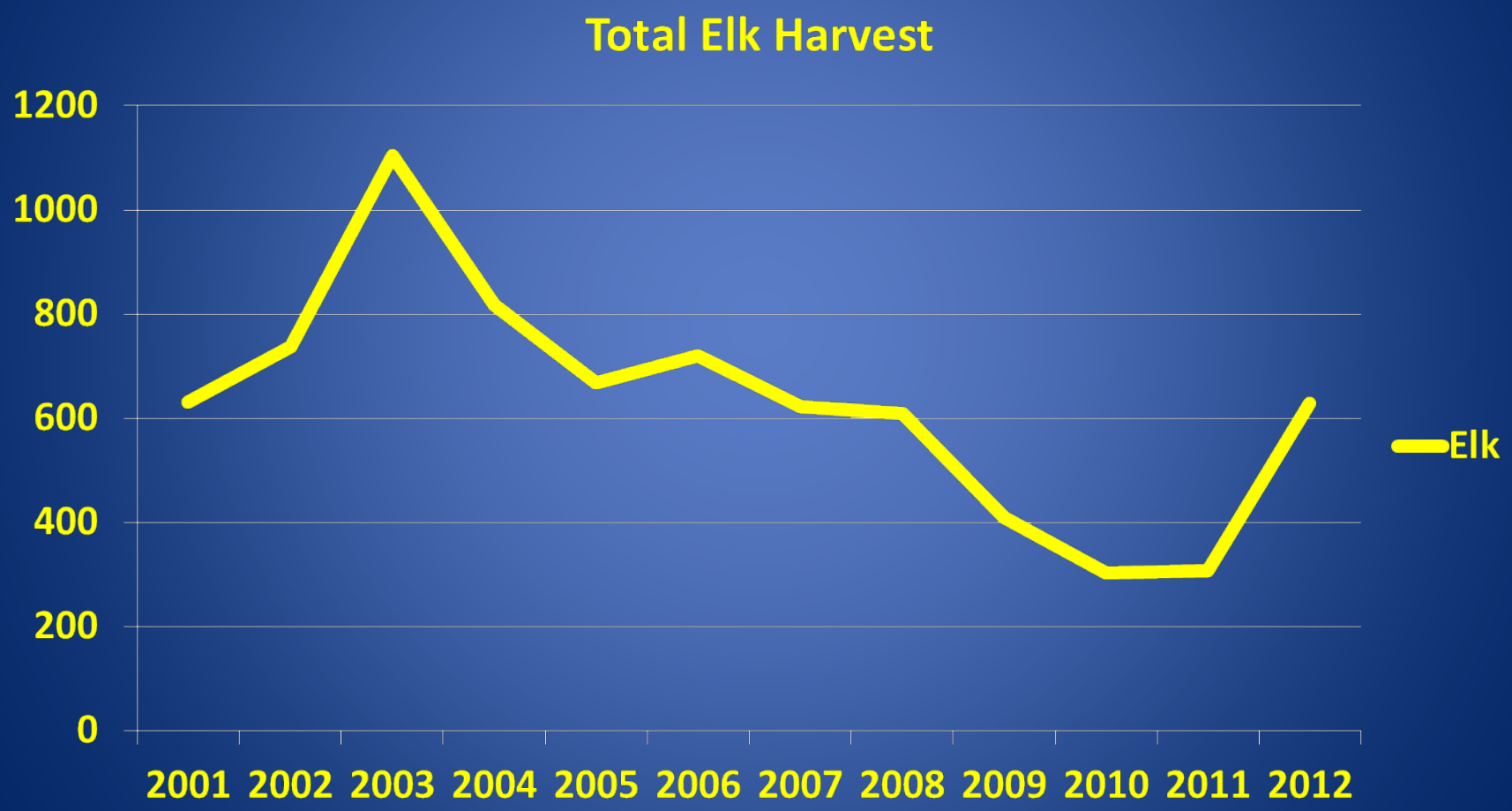
Elk Harvest


Statewide
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Total Elk Harvest

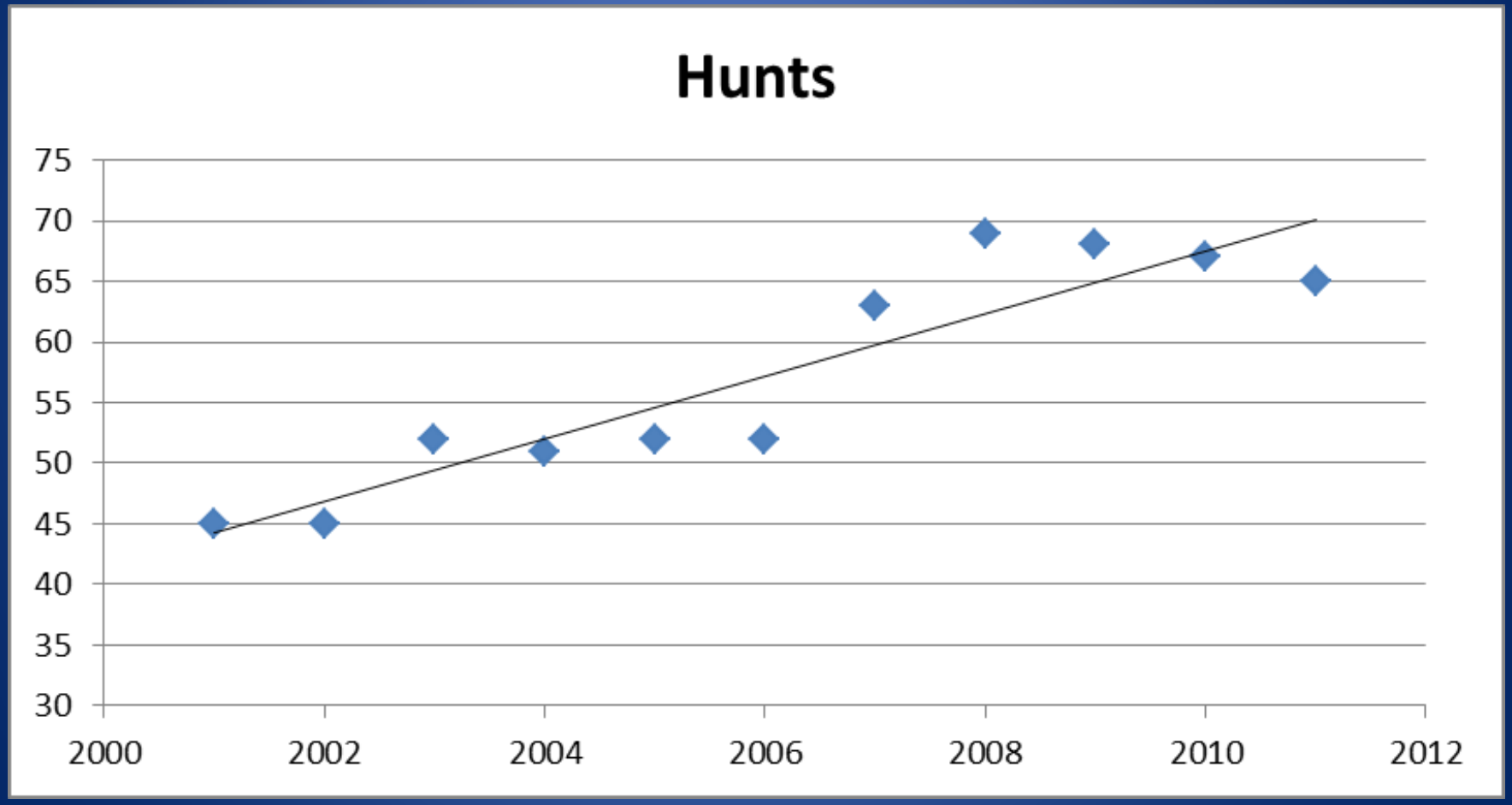
NE Elk Harvest



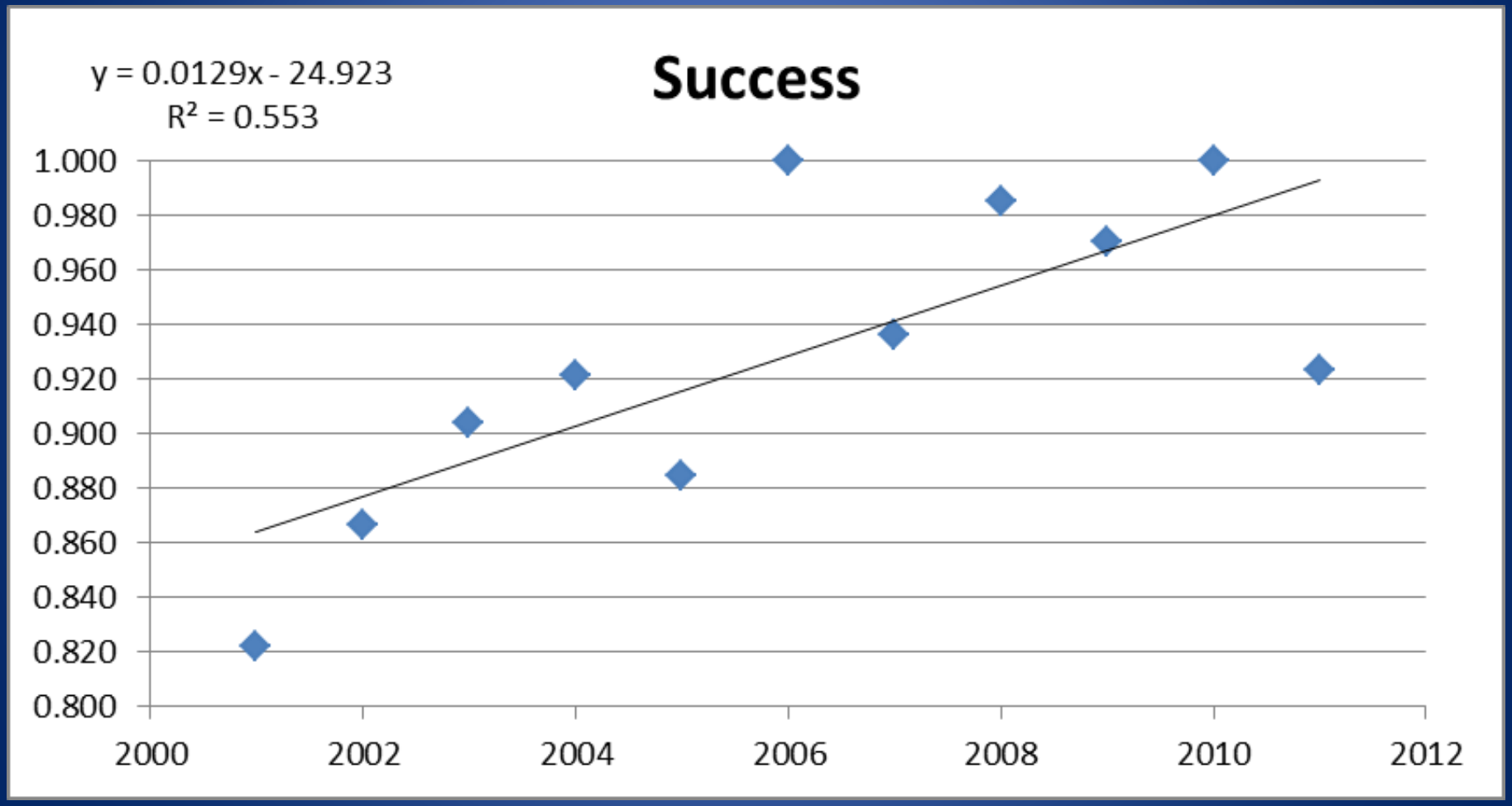
Colockum Elk Harvest



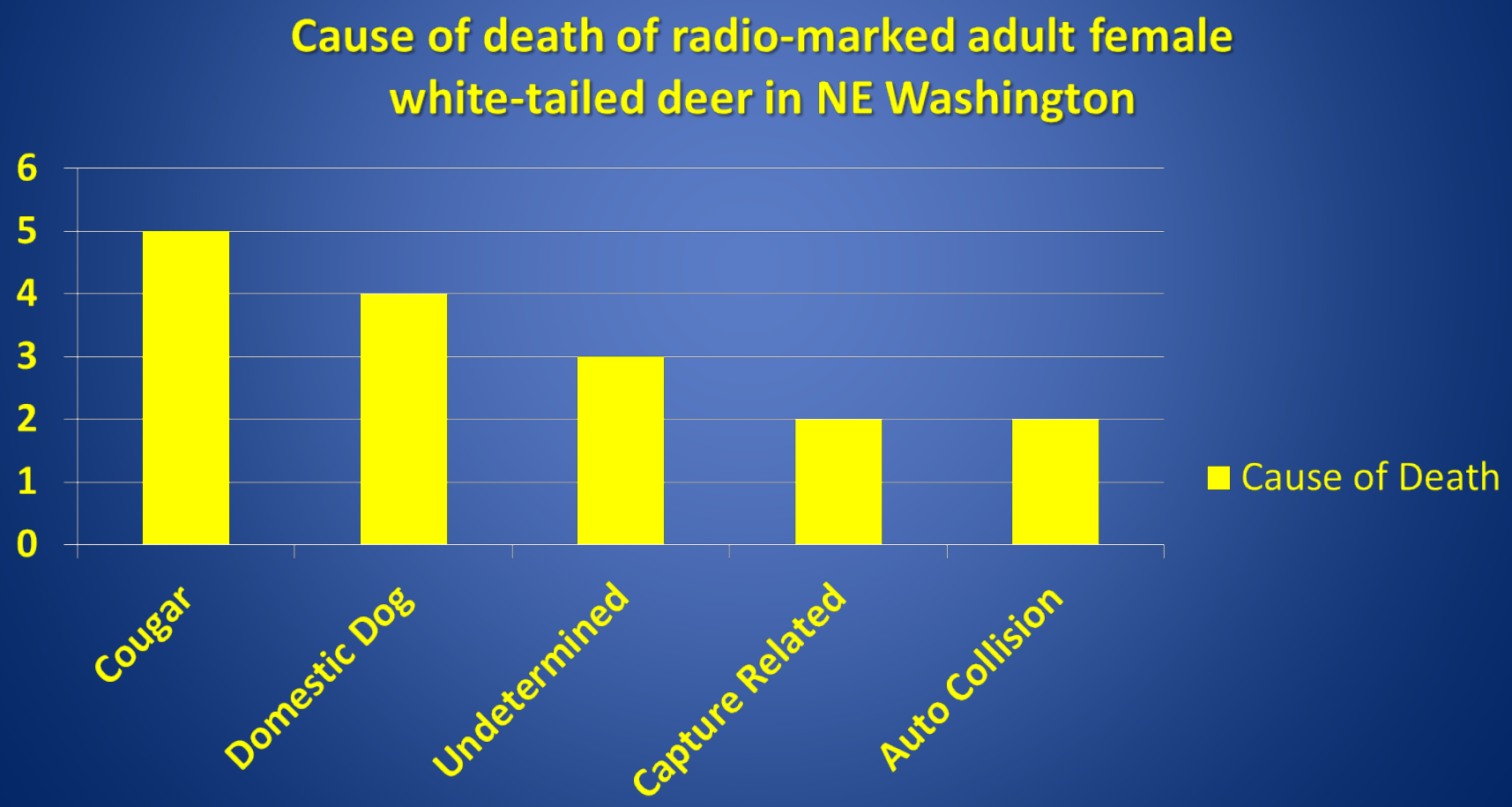
NE Washington Moose Permits



Moose Harvest



NE White-tailed Deer Study Mortality to Date



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
- White-tailed deer are still low after the decline experienced with the hard winters of 2007-08, but 2012 indicates we may have turned the corner

Wolves and Ungulates Predator – Prey Relationships

- At the T&E levels, wolves are not likely to measurably impact ungulate populations (PMU level), but we'll see
- Once delisted, wolf management options, particularly related to hunting, would be greater
- We are completing predator – prey guidelines for game species that can also provide guidance for how we address wolf predation issues

Wolves and Ungulates Predator – Prey Relationships

- Recent findings:
  - Predator regulation of ungulate populations is generally experienced in areas where multiple predators co-occur (and grizzly bear predation appears to be most influential under these conditions)
  - Wolf impacts generally occur where their numbers are more difficult to manage and other factors are in play
  - Recent predator removal experiments continue to demonstrate that it isn't a simple relationship

Wolves and Ungulates Predator – Prey Relationships

- Idaho, Montana, and Wyoming Lessons:
  - Wolves can impact ungulate numbers at a population management level
  - These scenarios have generally occurred well after "recovery" objectives have been achieved
  - "Problem" areas for ungulates are seldom associated with areas where livestock densities are high
  - The documented ungulate population issues are mainly related to elk although moose and whitetail population impacts are beginning to be a concern for biologists in some areas

Wolves and Ungulates Predator – Prey Relationships

- Idaho, Montana, and Wyoming Lessons:
  - Management of wolf numbers through hunting may be challenging, but possible
  - Harvest management principles and strategies are similar to other carnivores
  - Hunter harvest strategies can be targeted to help address predator – prey management objectives
  - We will be able to learn from the experiences of the Rocky Mountain states over the next several years
  - Washington's time is coming, based on the growth rate experienced in the Rocky Mtn DPS

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
- Once changes in population levels are suspected, additional efforts will be employed to verify the cause
- Washington is fairly well positioned to understand potential impacts to ungulate populations from wolves
- The Wolf Conservation and Management Plan planned for wolf management for at risk ungulate populations.