

# Wolf Monitoring and Management in Wyoming 2018



WILDLIFE DIVISION  
WYOMING GAME AND FISH DEPARTMENT



# **WOLF MANAGEMENT REQUIREMENTS**

## **WYOMING GRAY WOLF MANAGEMENT PLAN**



**WYOMING GAME AND FISH COMMISSION**

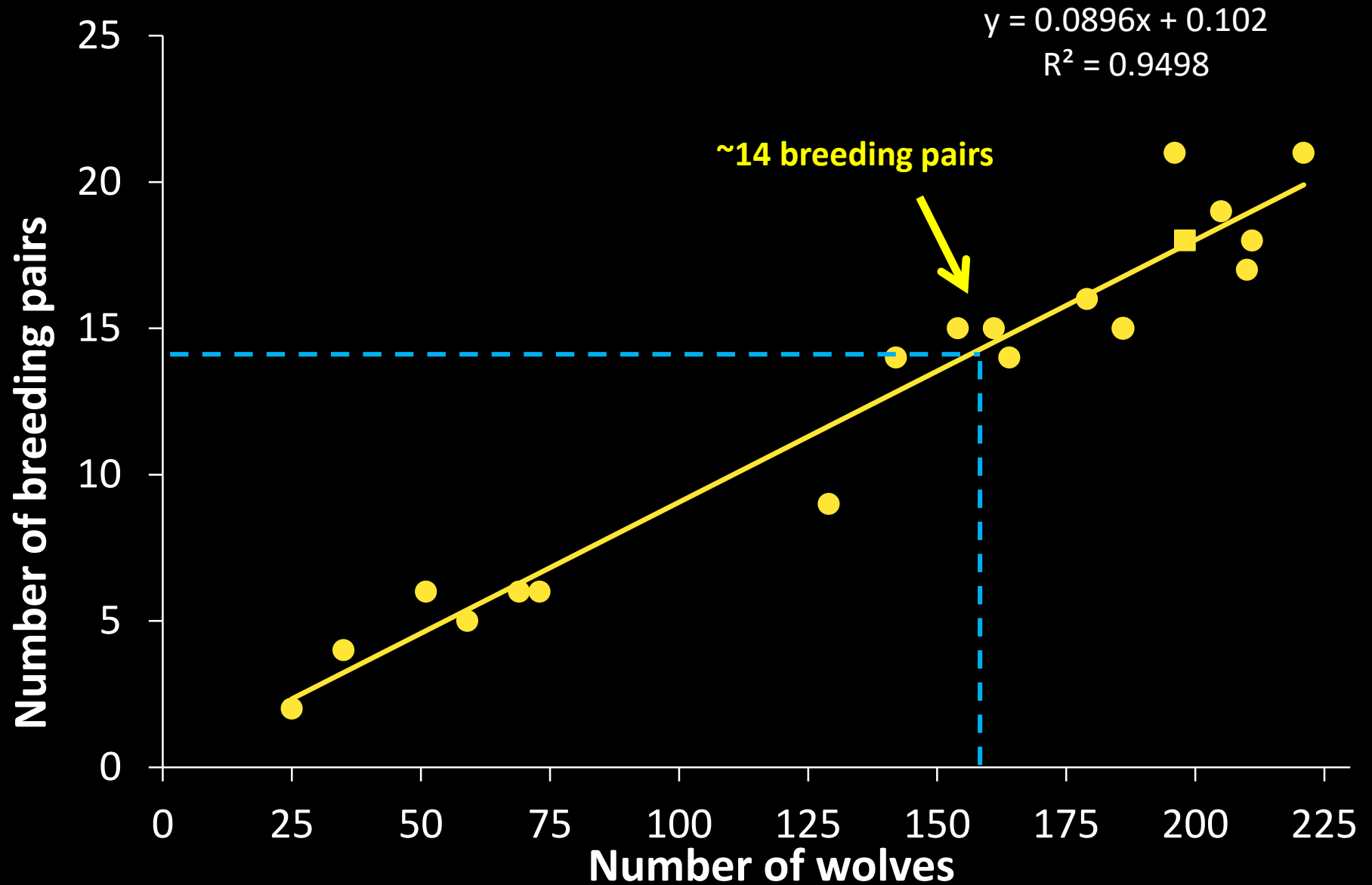
September 14, 2011

# WOLF MANAGEMENT REQUIREMENTS

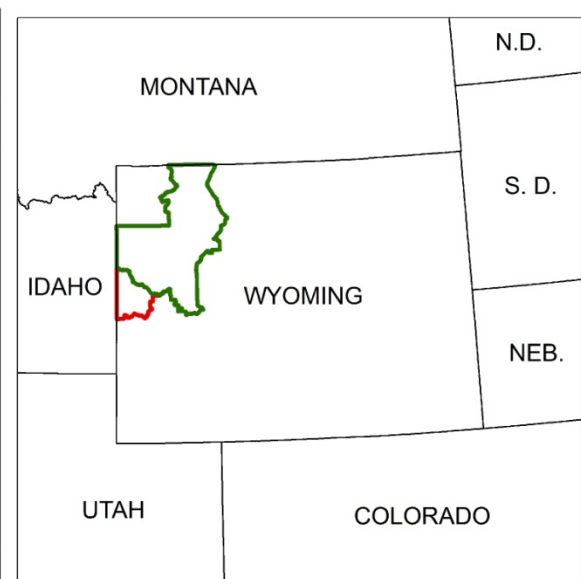
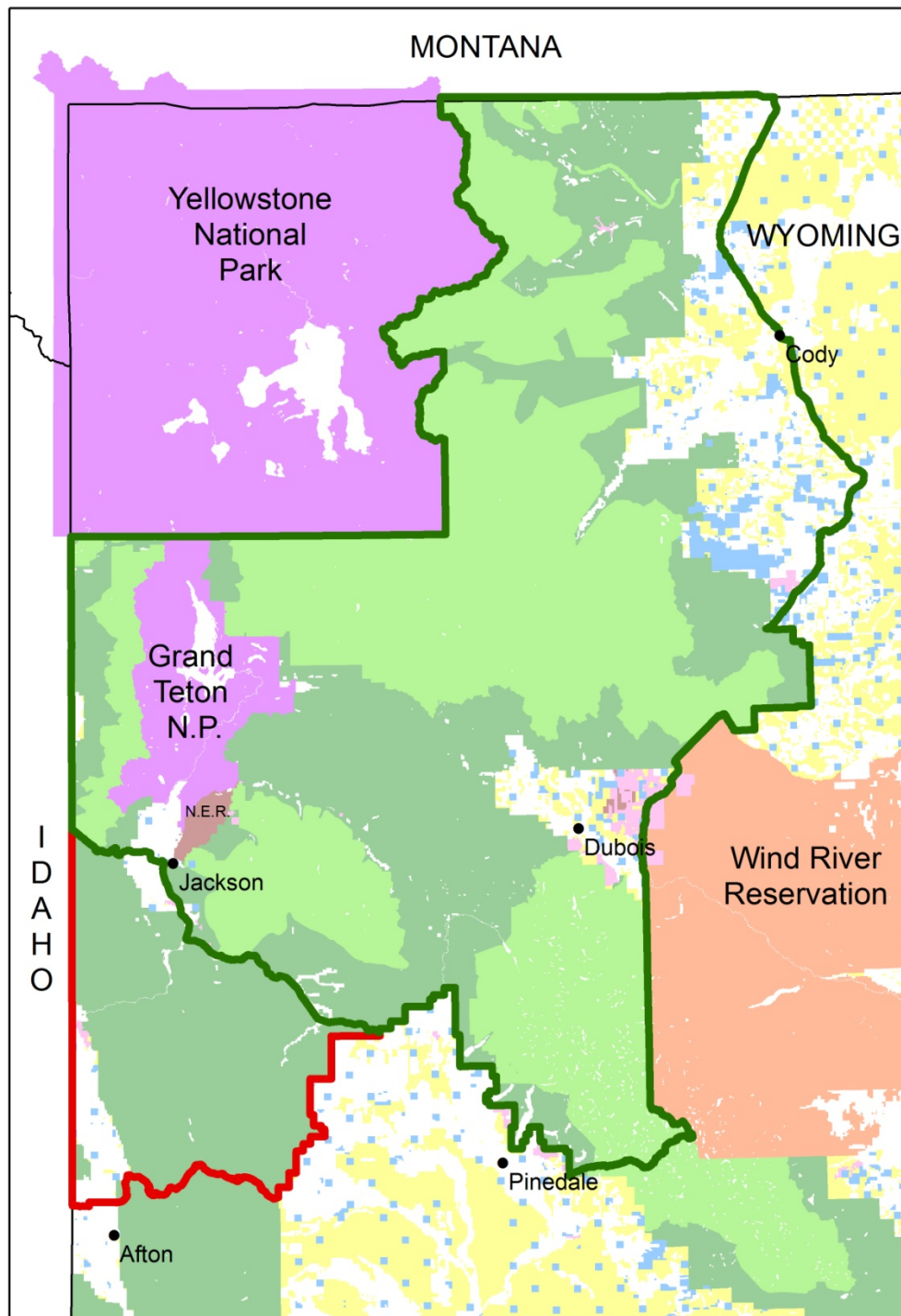
- 1)  $\geq 10$  “breeding pairs” and  $\geq 100$  wolves at end of calendar year
  - $\geq 15$  breeding pairs and  $\geq 150$  wolves in Wyoming (including Yellowstone NP and Wind River Reservation)
- 2) Adequate regulatory mechanisms ensure wolf population will meet or exceed delisting criteria
- 3) Document genetic interchange between wolf subpopulations in Northern Rocky Mountains



# DUAL POPULATION PARAMETERS







0 5 10 20 30 40  
Miles





# WOLF POPULATION DYNAMICS



# WOLF POPULATION DYNAMICS

- Populations can expand rapidly if limitations are removed
  - Prey availability/suitable habitat
  - Human-caused mortality
- In Wyoming, populations limited by suitable habitat and human-caused mortality
  - Average 13% growth despite 34% human-caused mortality; 2000-2018

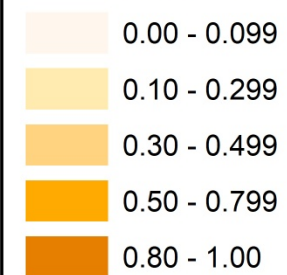




2018

WYOMING

**Colonization Probability**



N



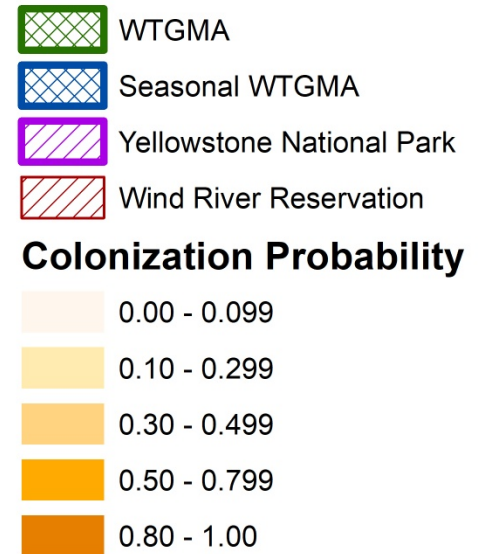
0 20 40 80 120 160 Miles

2018

WYOMING

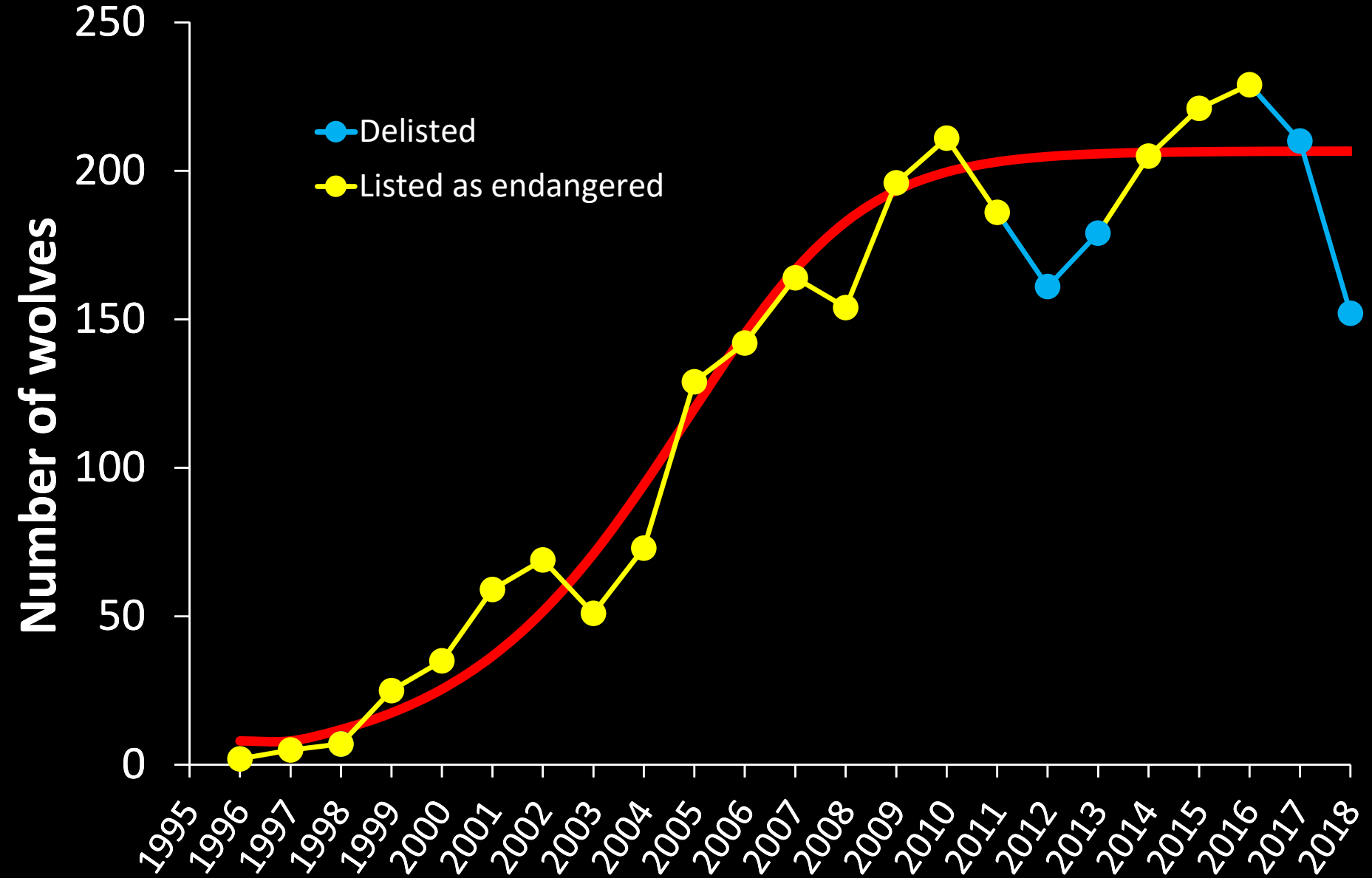
N

0 20 40 80 120 160 Miles

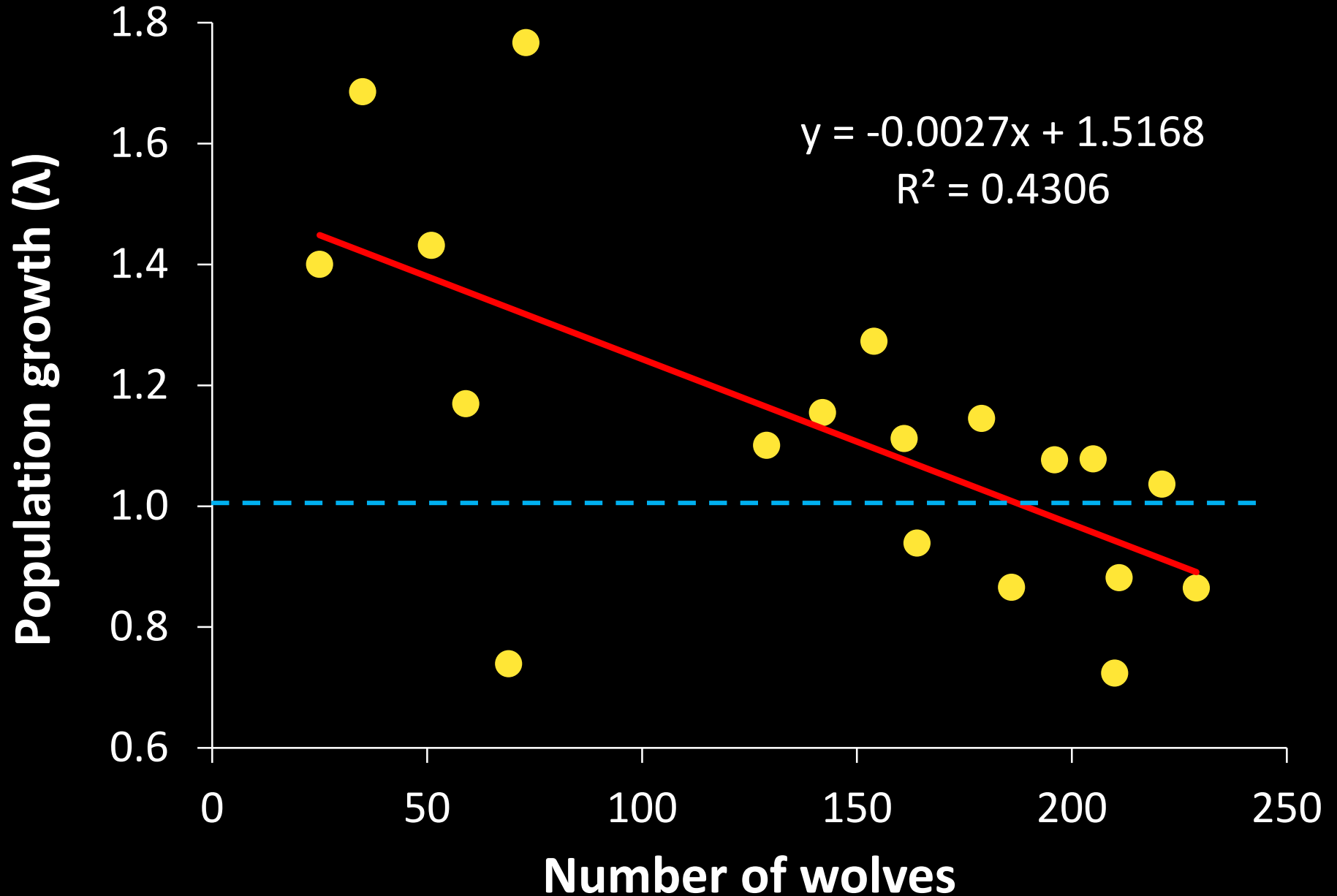




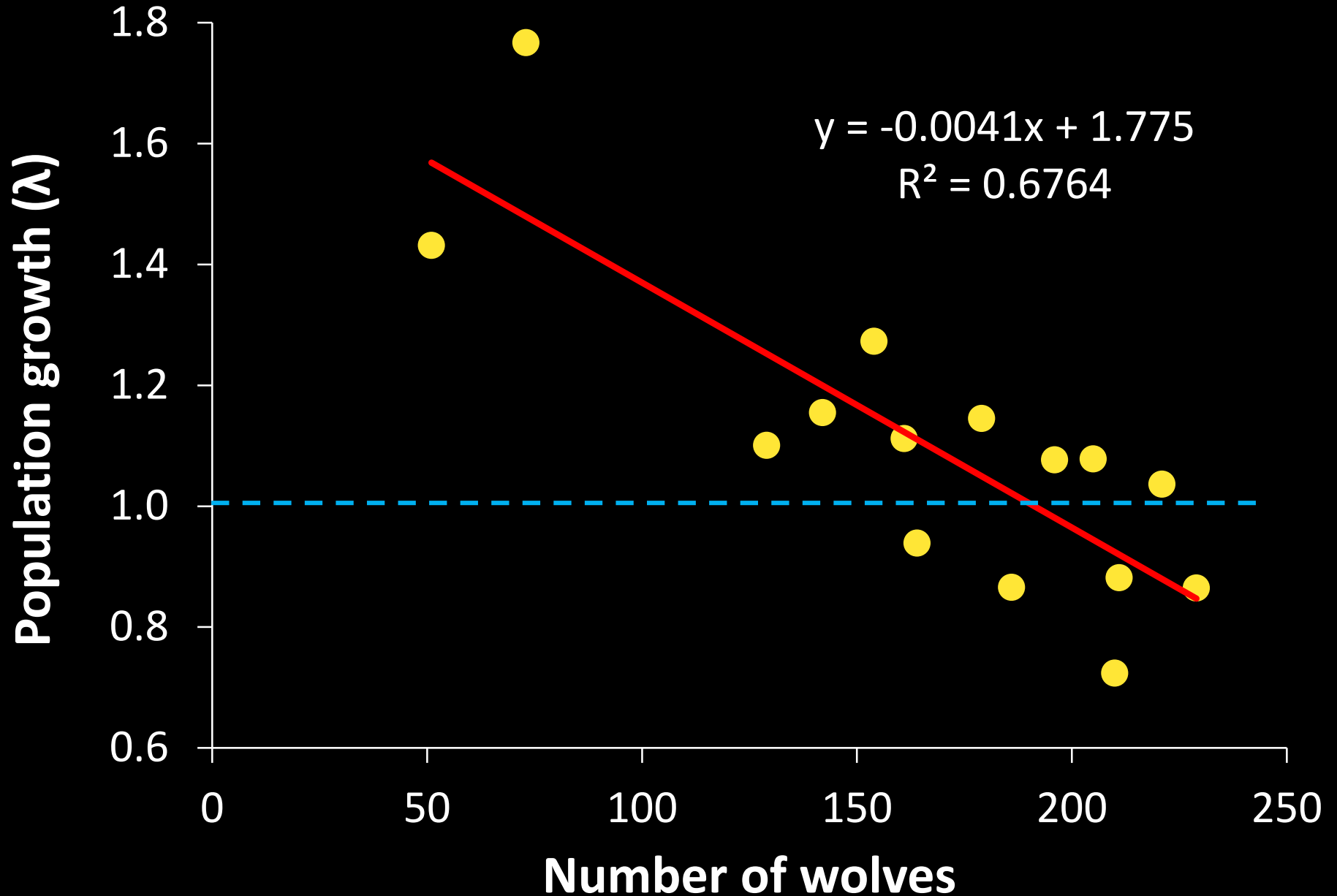
# WTGMA POPULATION GROWTH



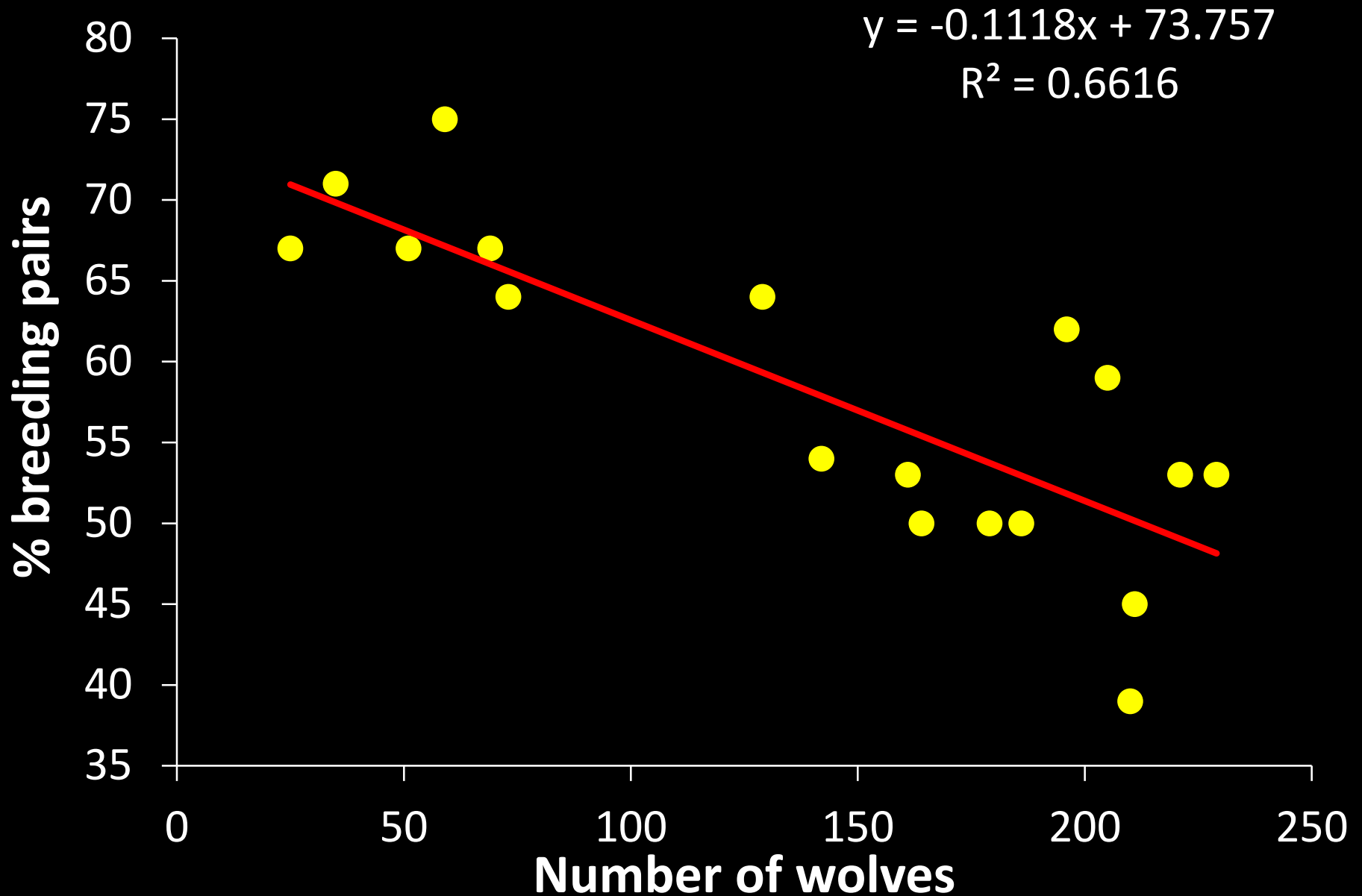
# WTGMA POPULATION GROWTH; 2000-18



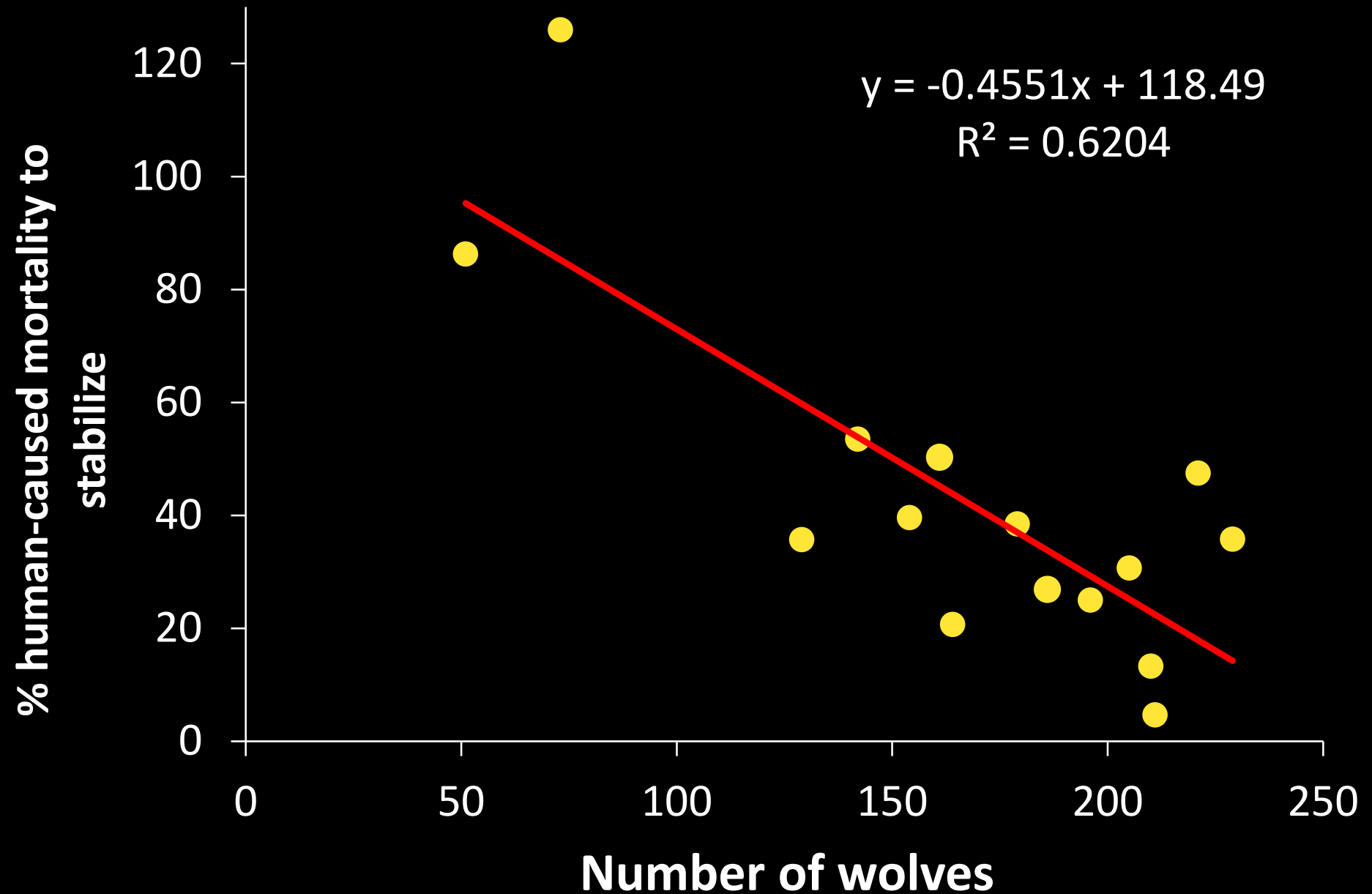
# WTGMA POPULATION GROWTH; 2004-18



# WTGMA RECRUITMENT; 2000-18

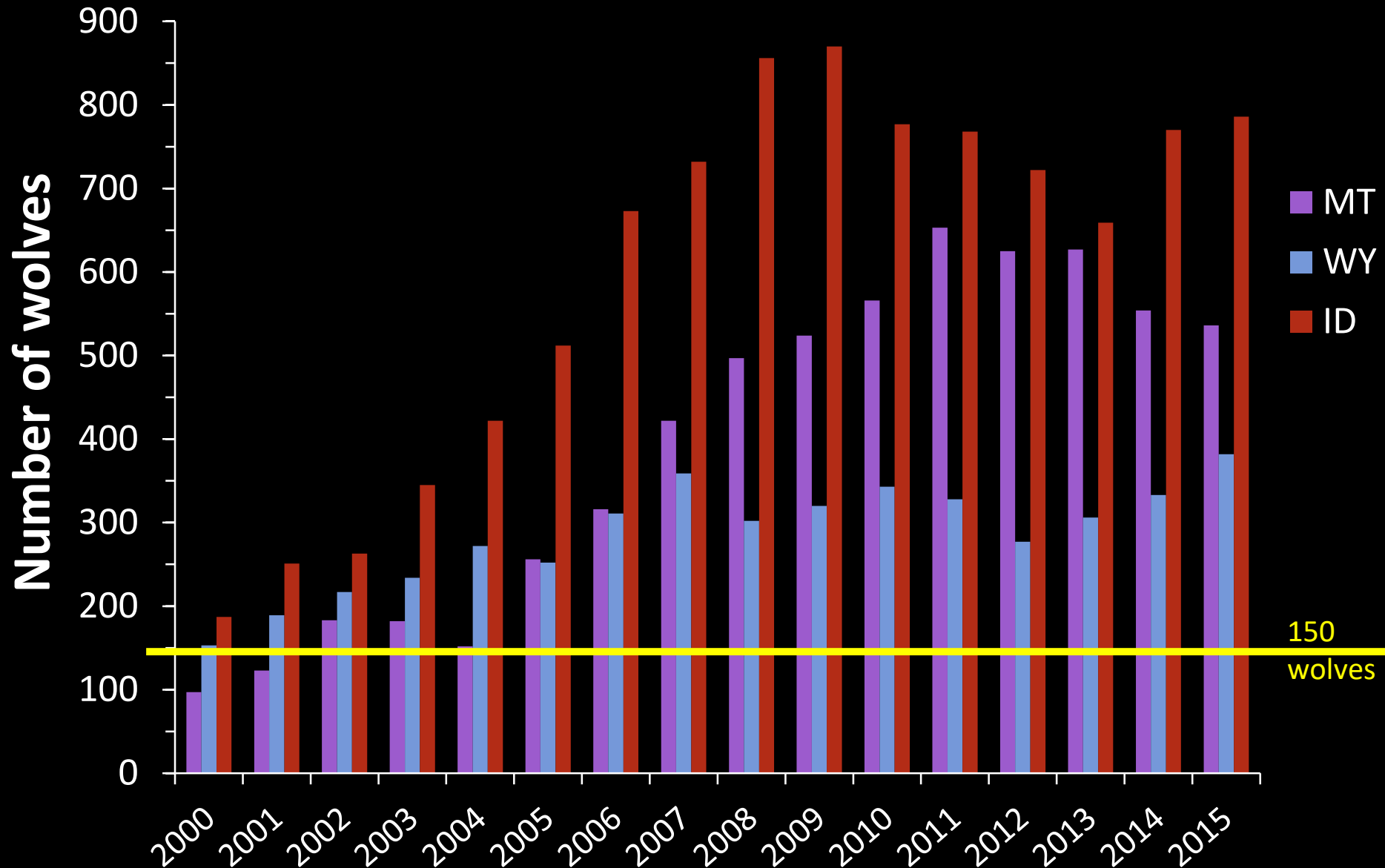


# WTGMA STABILIZATION MORTALITY; 2004-18





# WOLF MANAGEMENT REQUIREMENTS



# 2018 WOLF POPULATION STATUS





# WYOMING GRAY WOLF MONITORING AND MANAGEMENT 2018 ANNUAL REPORT

## 2018 ANNUAL REPORT

- All wolf data from 2018
  - Statewide report
  - Available to the public
- Year 2 of 5 year post-delisting monitoring period (ends 2022)
- 2019 begins Year 3

*Prepared by the Wyoming Game and Fish Department in cooperation with the National Park Service, U.S. Fish and Wildlife Service, USDA-APHIS-Wildlife Services, and Eastern Shoshone and Northern Arapahoe Tribal Fish and Game Department to fulfill the U.S. Fish and Wildlife Service requirement to report the status, distribution and management of the gray wolf population in Wyoming from January 1, 2018 through December 31, 2018.*



# WOLF CAPTURE

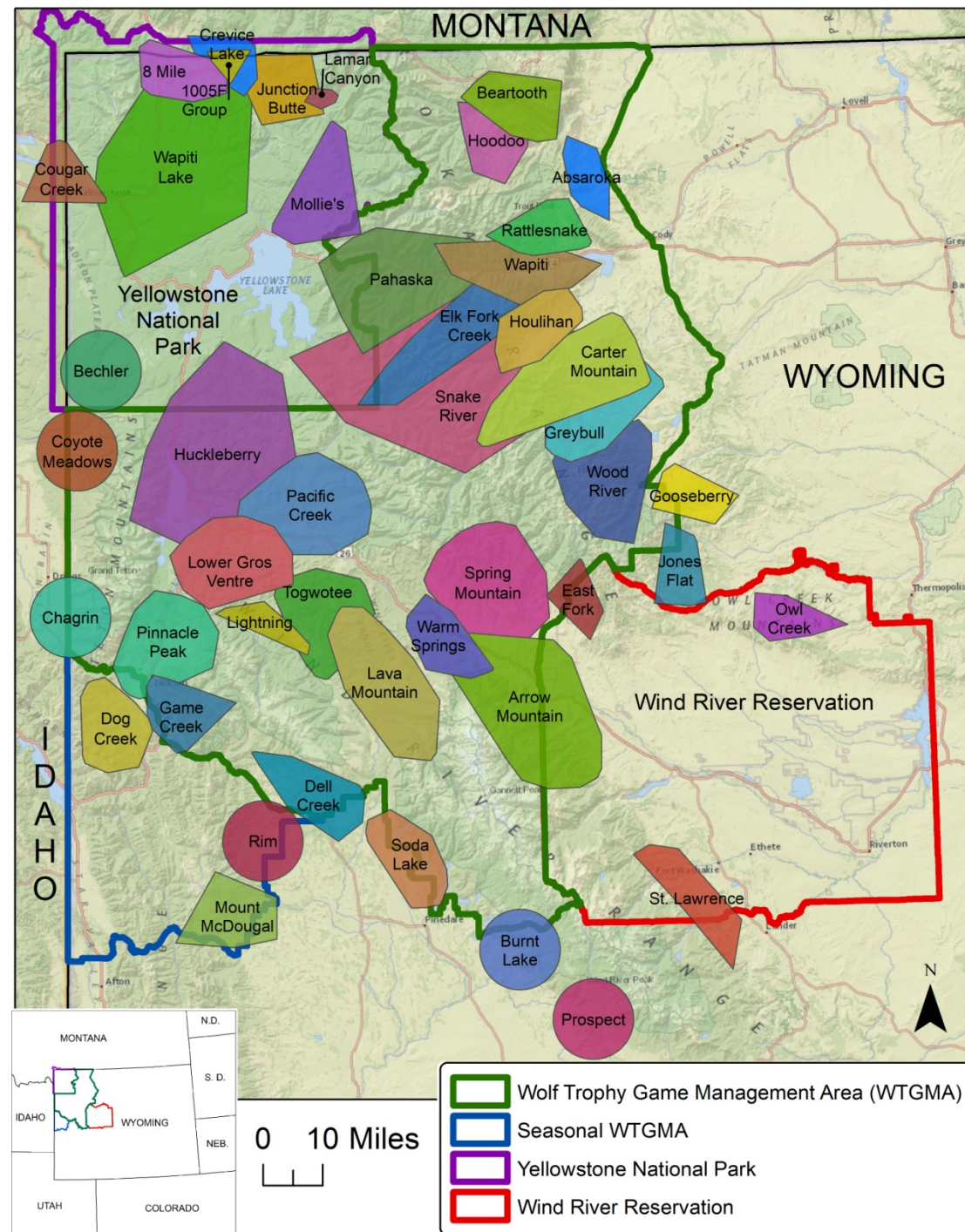
- Captured 47 wolves from 23 packs in 2018
  - 53 wolves in 26 packs at the end of 2018
- 2019: captured 40 wolves in 23 packs
  - 90 wolves in 31 packs at end of March
- GPS collars in 19 packs





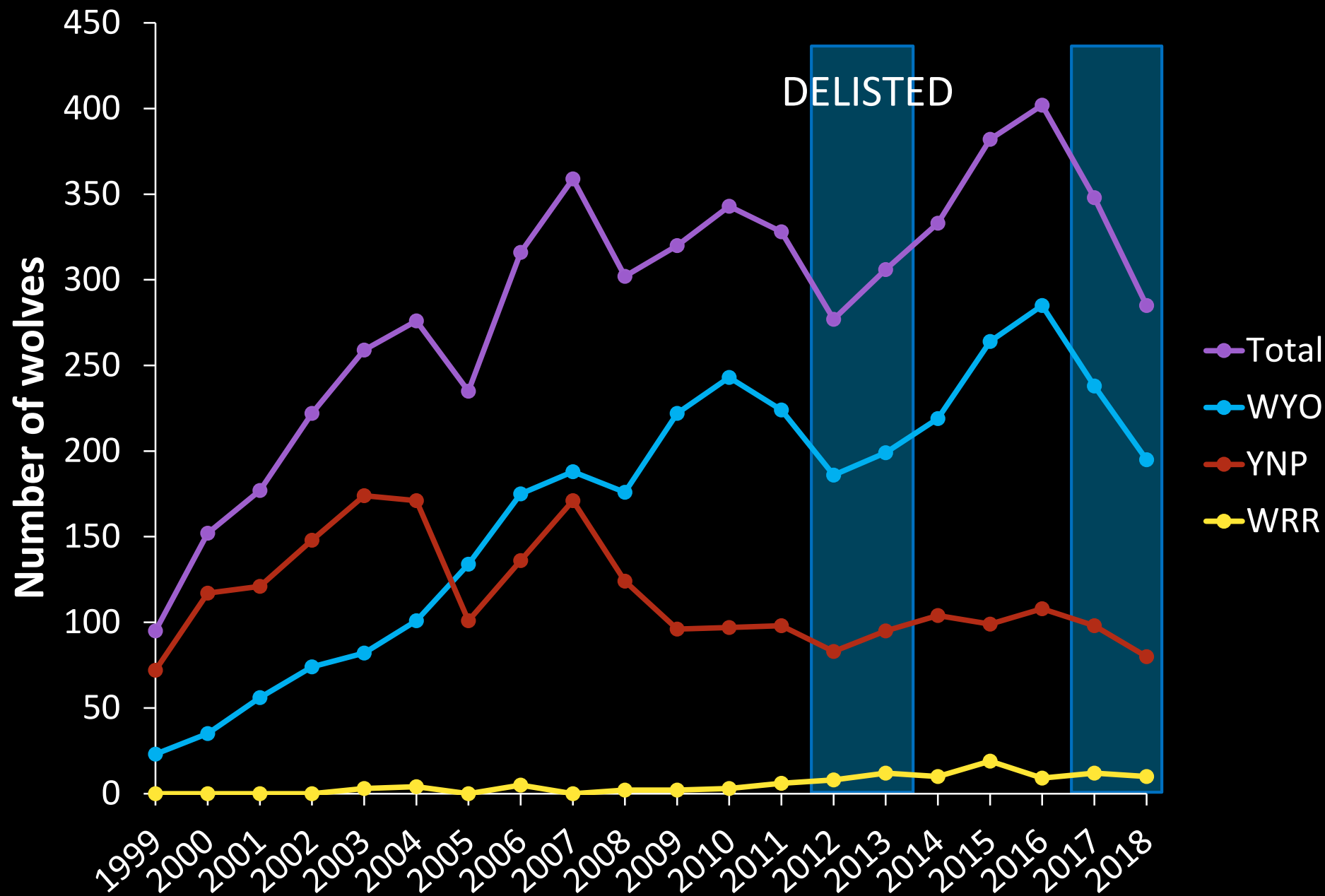
# WOLF DISTRIBUTION IN WYOMING 2018

- Majority of packs and breeding pairs are in the WTGMA
- Packs residing outside the WTGMA rarely persisted under ESA protections

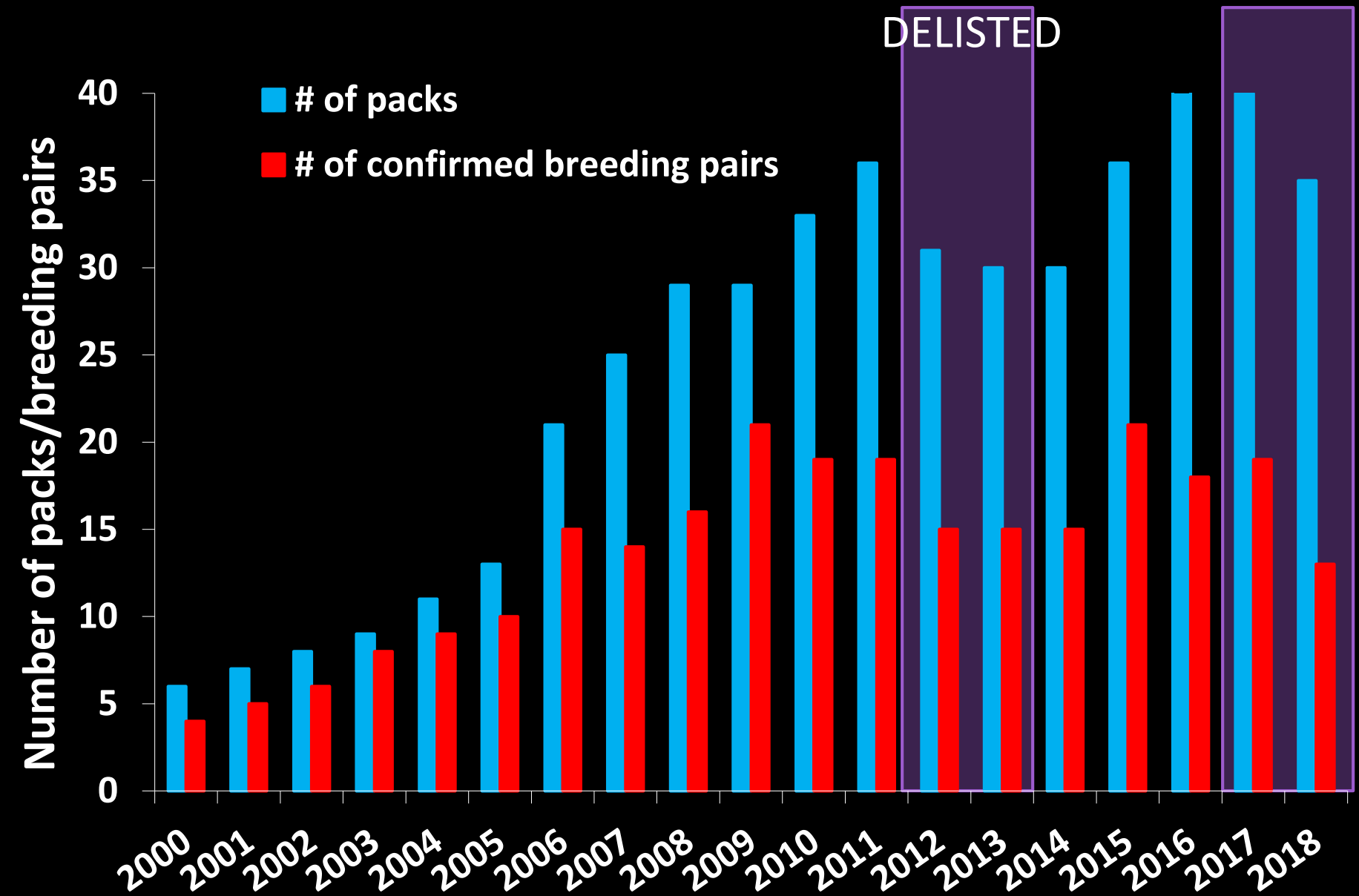




# WY WOLF POPULATION TREND

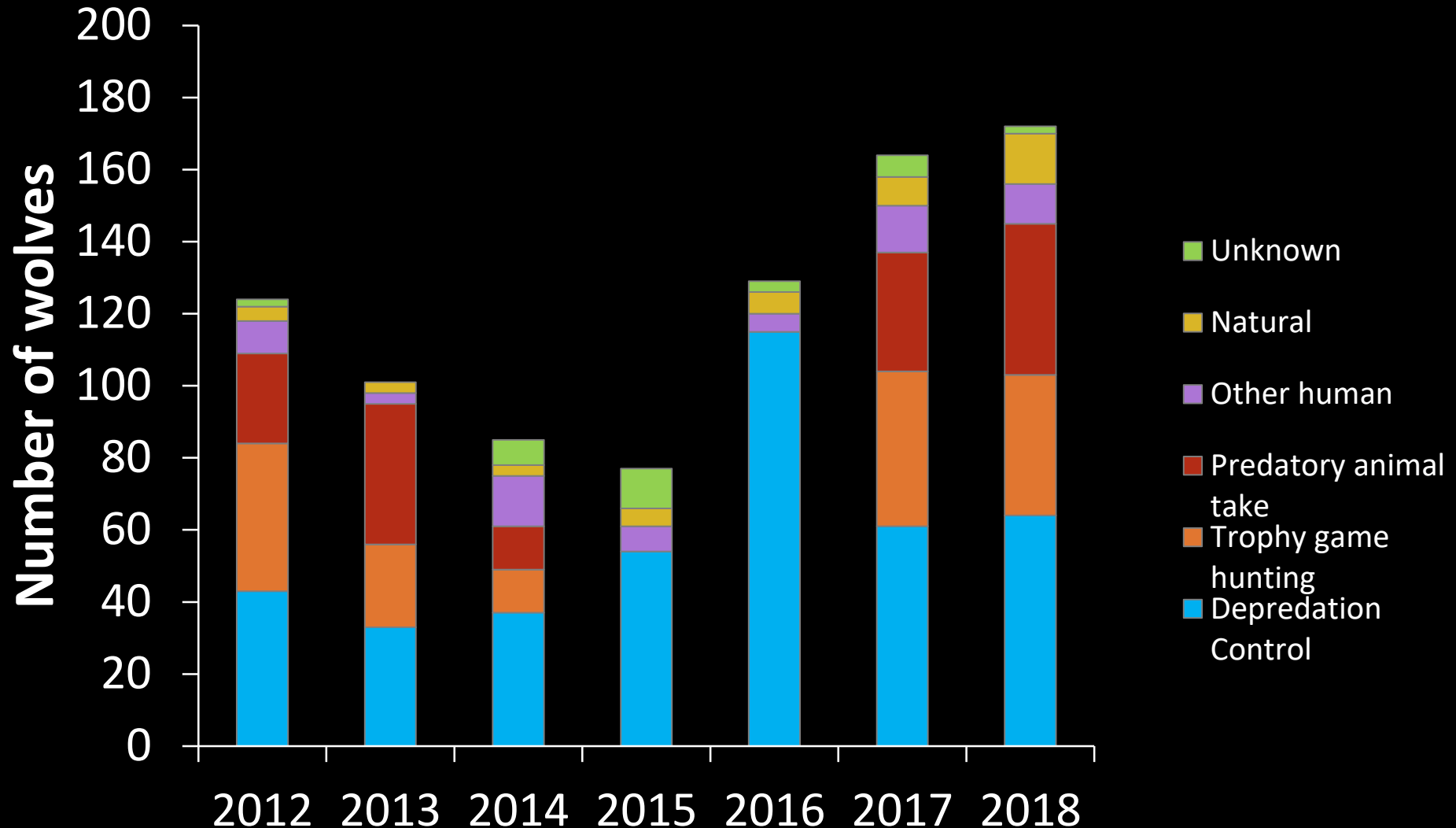


# WOLF PACKS IN WYO



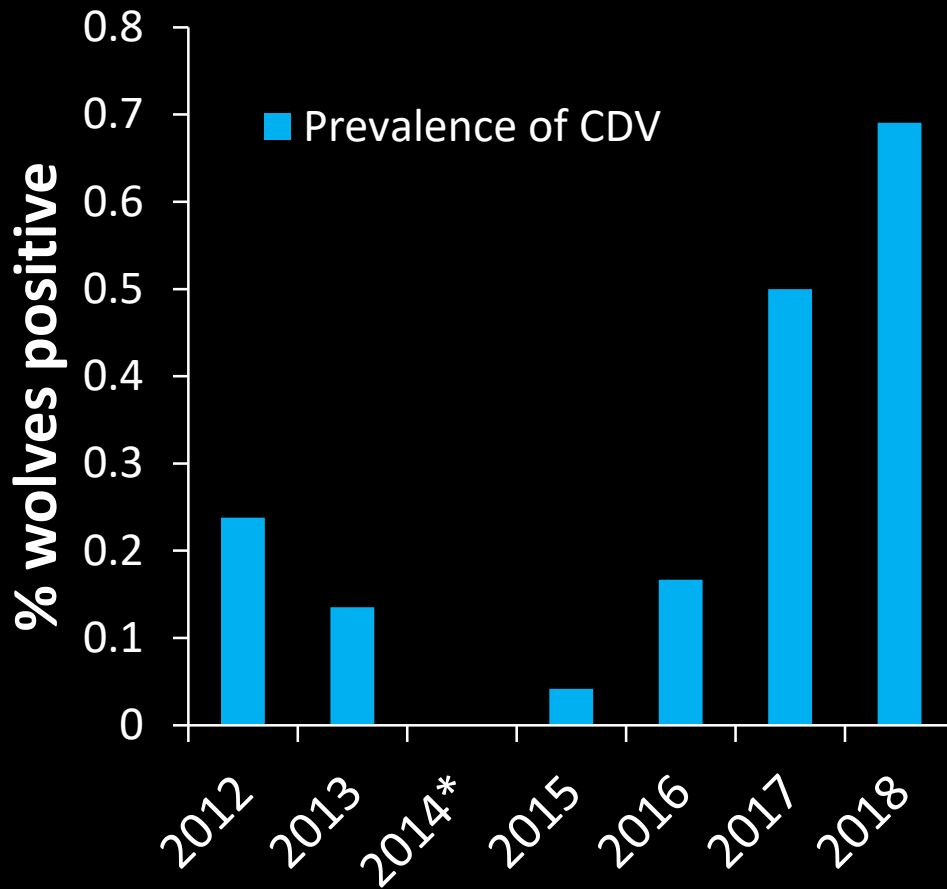
# WOLF MORTALITY IN WYO

- 172 wolf deaths in WYO in 2018
- 47% of wolves known to be alive in 2018



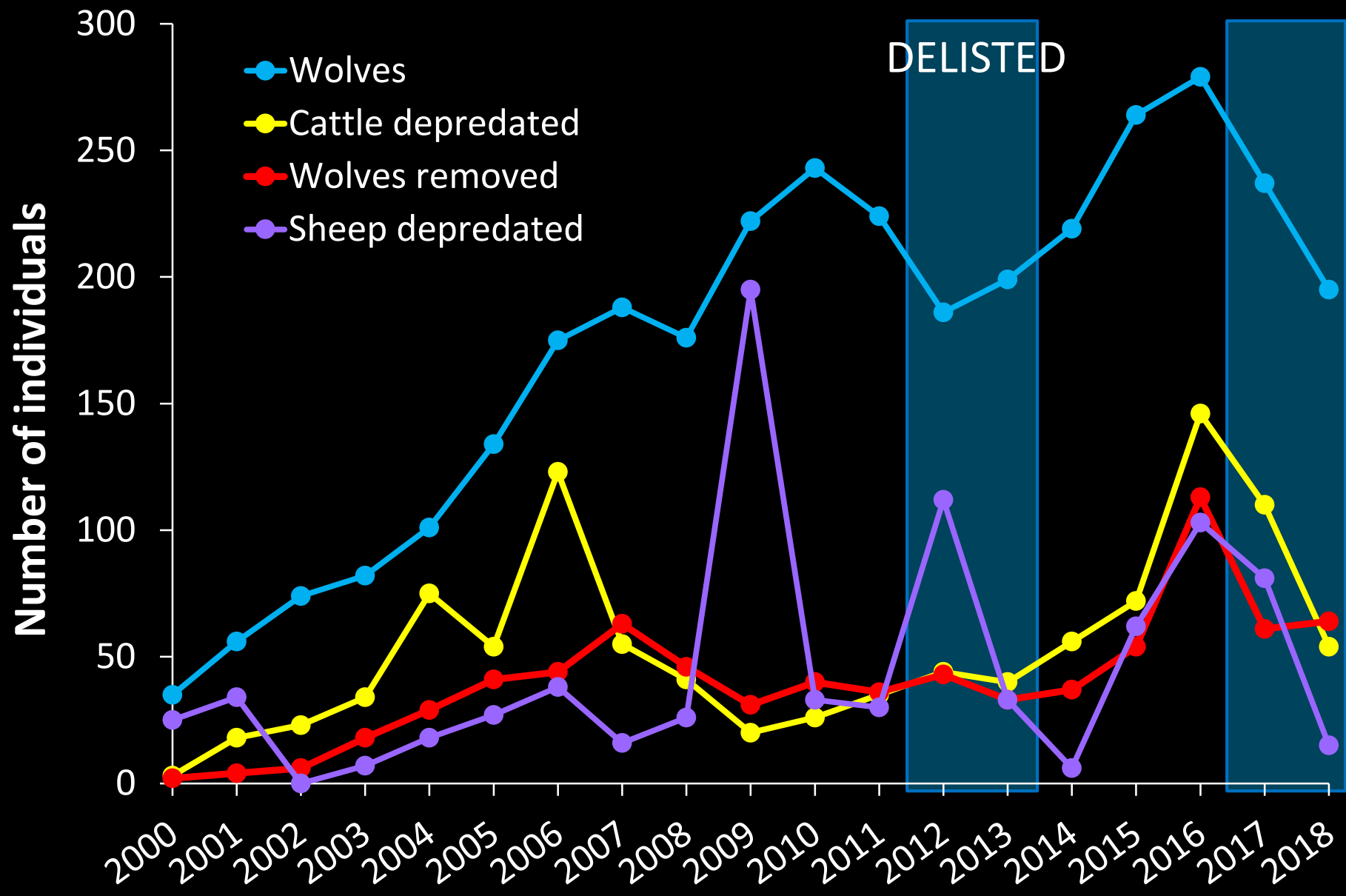
# WOLF DISEASE IN WYO

- Prevalence of mange and canine distemper virus high in 2018



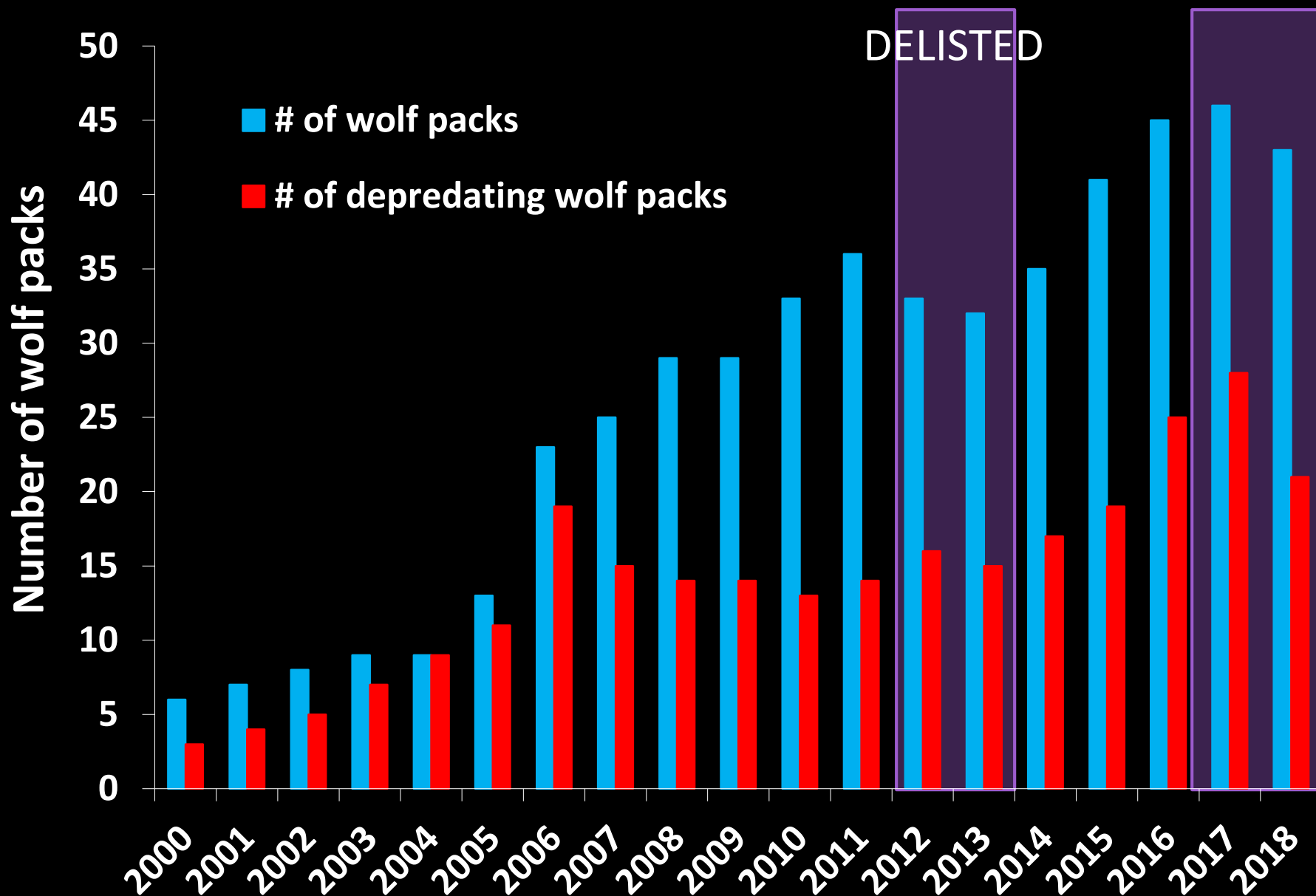
\*Too few wolves were captured to measure distemper

# LIVESTOCK DEPREDATION IN WYO

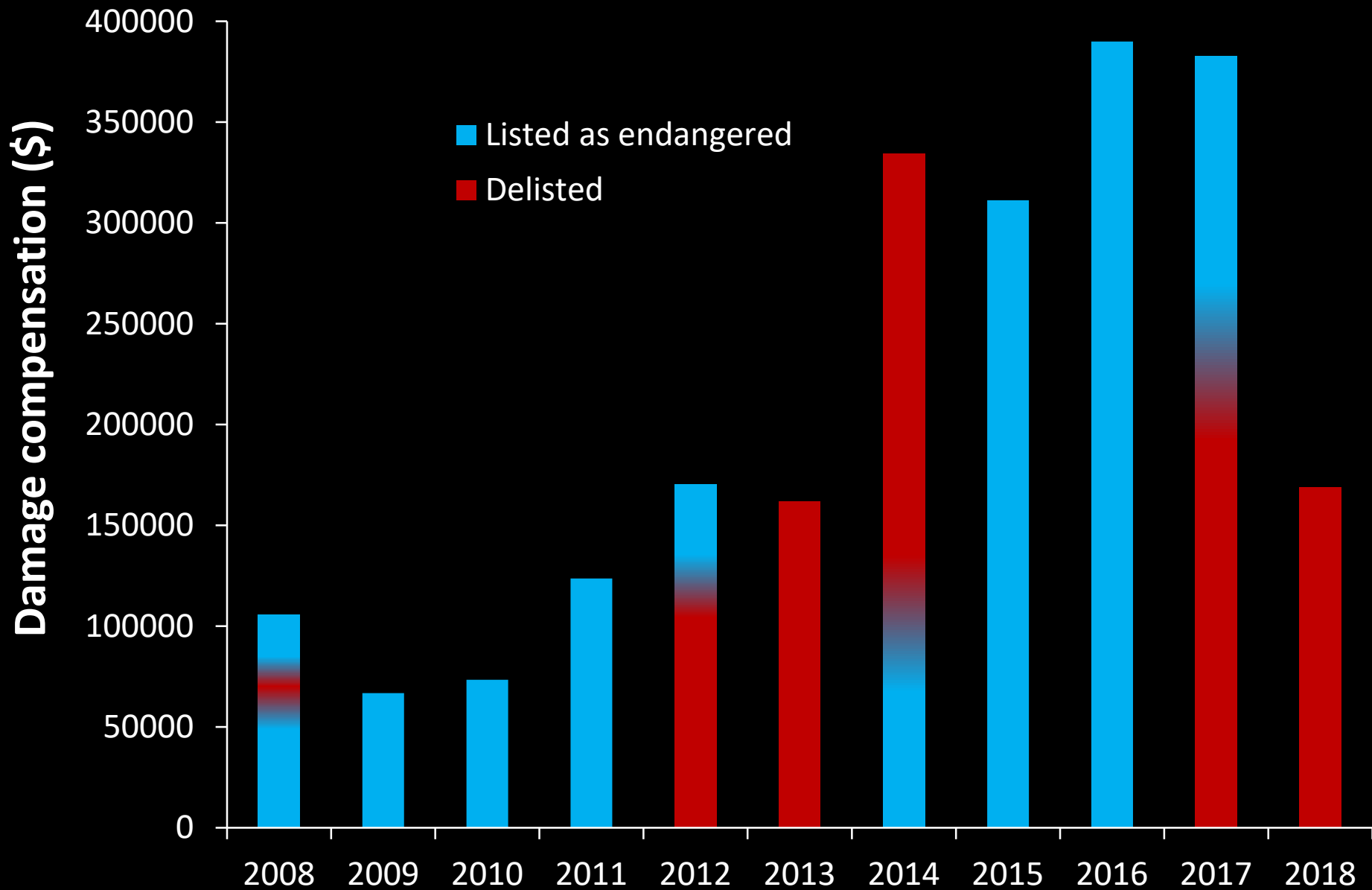




# LIVESTOCK DEPREDATION IN WYO



# LIVESTOCK DAMAGE COMPENSATION



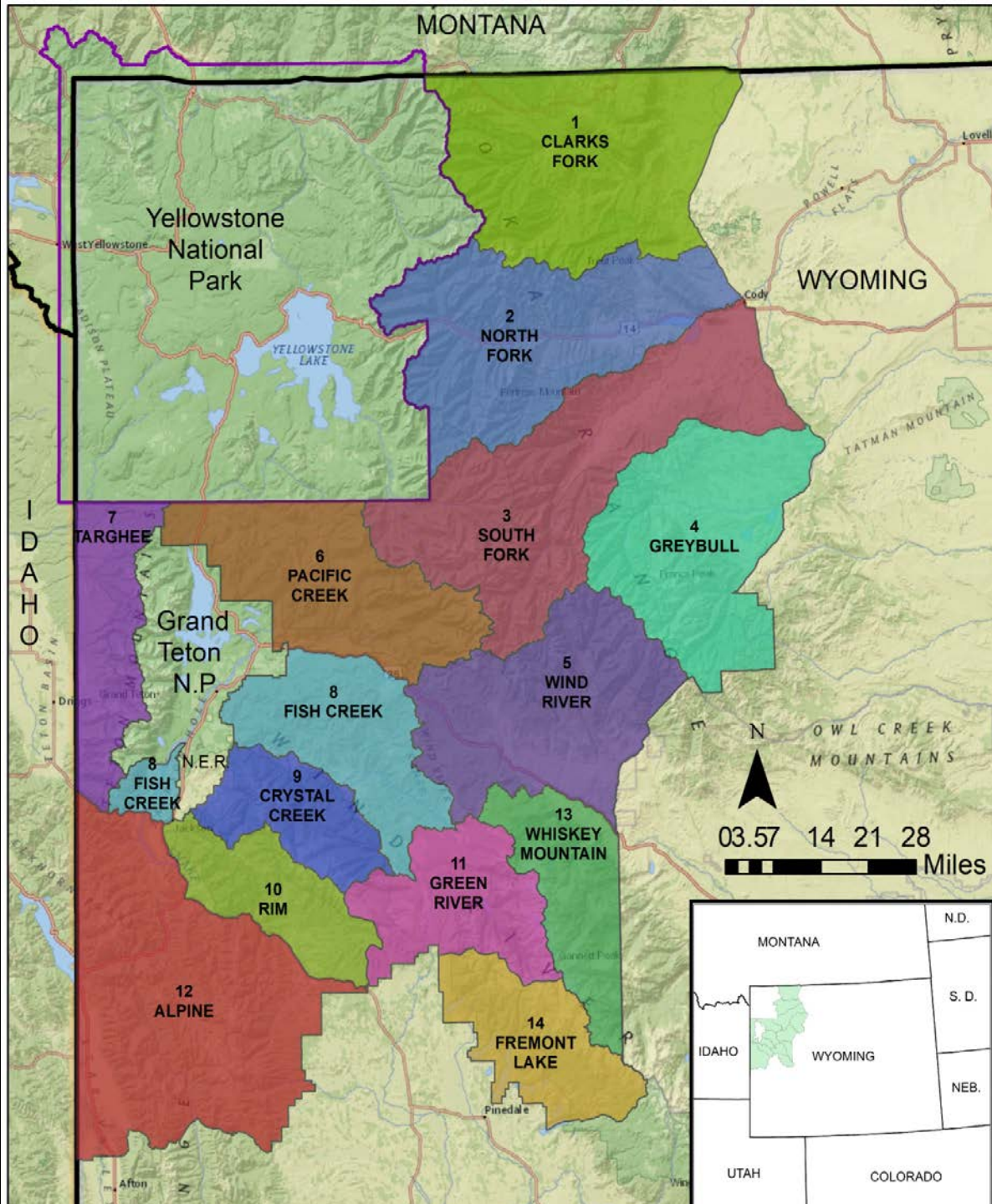
# 2018 WOLF HUNTING SEASONS



# 2018 WOLF HUNT

## OVERVIEW

- Two new hunt areas
  - Areas 13 & 14
- Revised boundaries for hunt areas 1-4
- Combined mortality limits for some hunt areas
  - Areas 6 & 7
  - Areas 8, 9 & 11
- Moved season opener to September 1<sup>st</sup> vs. Oct. 1<sup>st</sup>
- 2 licenses/hunter
  - 4 hunters filled both licenses



# 2018 MORTALITY LIMIT

<b>210</b>	Start of 2018 wolf population in WTGMA
<b>54</b>	Estimated # of wolf mortalities that will stabilize the population at 210 wolves (25.8%)
<b>+50</b>	# of wolf mortalities to reduce the population from 210 to ~160 wolves and ~14 breeding pairs
<b>=104</b>	Total # of wolf mortalities that will result in a decrease of the population from 210 to ~160 wolves
<b>-48</b>	Estimated # of wolves expected to die from non-hunting human-caused mortality (Average: 22.9%)
<b>56</b>	Total WTGMA mortality limit (WHAs 1-11, 13, 14)
<b>58</b>	Total WTGMA mortality limit + 2 for the Seasonal WTGMA (WHA 12)



## WGFD WOLF HUNTER HARVEST SUMMARY 2018

3/22/2019 4:00 PM

	HUNT AREA	QUOTA FROM REGS	SEASON DATES	HARVEST COUNTED TOWARDS QUOTA *1	AREA STATUS	DATE/TIME AREA CLOSED
			GENERAL			
	1	7	September 1 - December 31	7	CLOSED	11/11/2018 @ 7:30 am
	2	8		7	CLOSED	Dec. 31 per Regulation
	3	5		3	CLOSED	Dec. 31 per Regulation
	4	4		4	CLOSED	12/26 @ 5:00 pm
	5	3		0	CLOSED	Dec. 31 per Regulation
	6, 7	3		3	CLOSED	12/22 @ 12:30 pm
	8, 9, 11	15		14	CLOSED	Dec. 31 per Regulation
	10	5		1	CLOSED	Dec. 31 per Regulation
	12	2	Oct 15 - Dec 31	2	CLOSED	11/21 @ 8:30 AM
	13	5	September 1 - December 31	2	CLOSED	Dec. 31 per Regulation
	14	1		0	CLOSED	Dec. 31 per Regulation
	Total 2018 Trophy Quota	58	Total 2018 Trophy Harvest	43		
STATE WIDE	PREDATORY	No Quota	Total 2018 Predatory Animal Take *2	42		

\*1 All legal harvest or illegal human-caused gray wolf deaths that occur during an open hunting season will apply to the quota.

\*2 Total harvest for Gray Wolves designated as predatory animals.

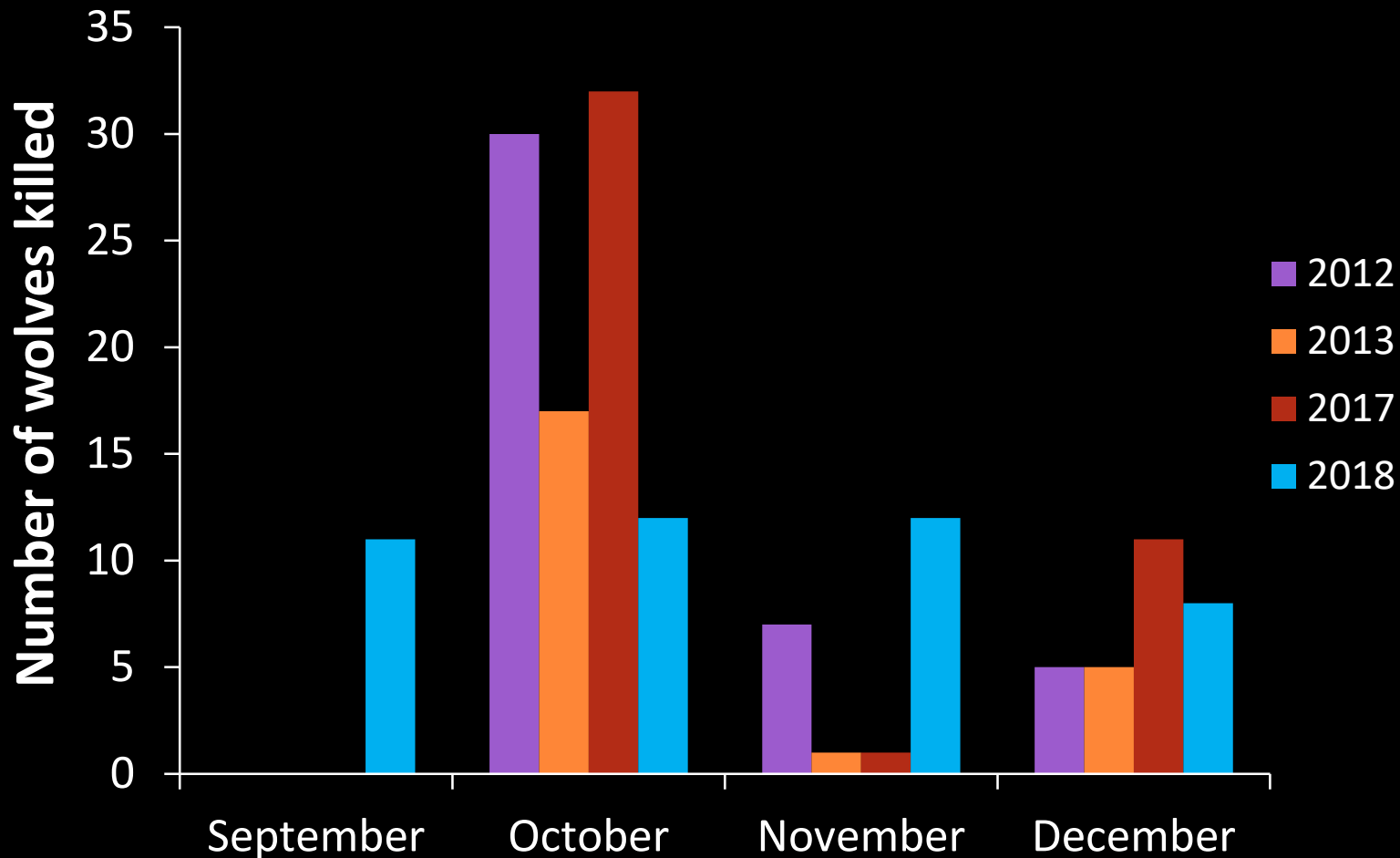
# **WOLF HUNTING**

## **WTGMA POPULATION RESPONSE**

	<b>Predicted</b>	<b>Actual</b>	<b>Difference</b>
<b>End of 2018 population</b>	<b>~160</b>	<b>152</b>	<b>-8</b>
<b>End of 2018 breeding pairs</b>	<b>14</b>	<b>11</b>	<b>-3</b>
<b># wolves taken</b>	<b>56</b>	<b>43</b>	<b>-13</b>
<b>% non-hunting human-caused mortality</b>	<b>22.9%</b>	<b>23.3%</b>	<b>+0.4%</b>
<b>% human-caused mortality to stabilize population</b>	<b>25.8%</b>	<b>13.3%</b>	<b>-12.5%</b>

# WOLF HUNTING MORTALITY

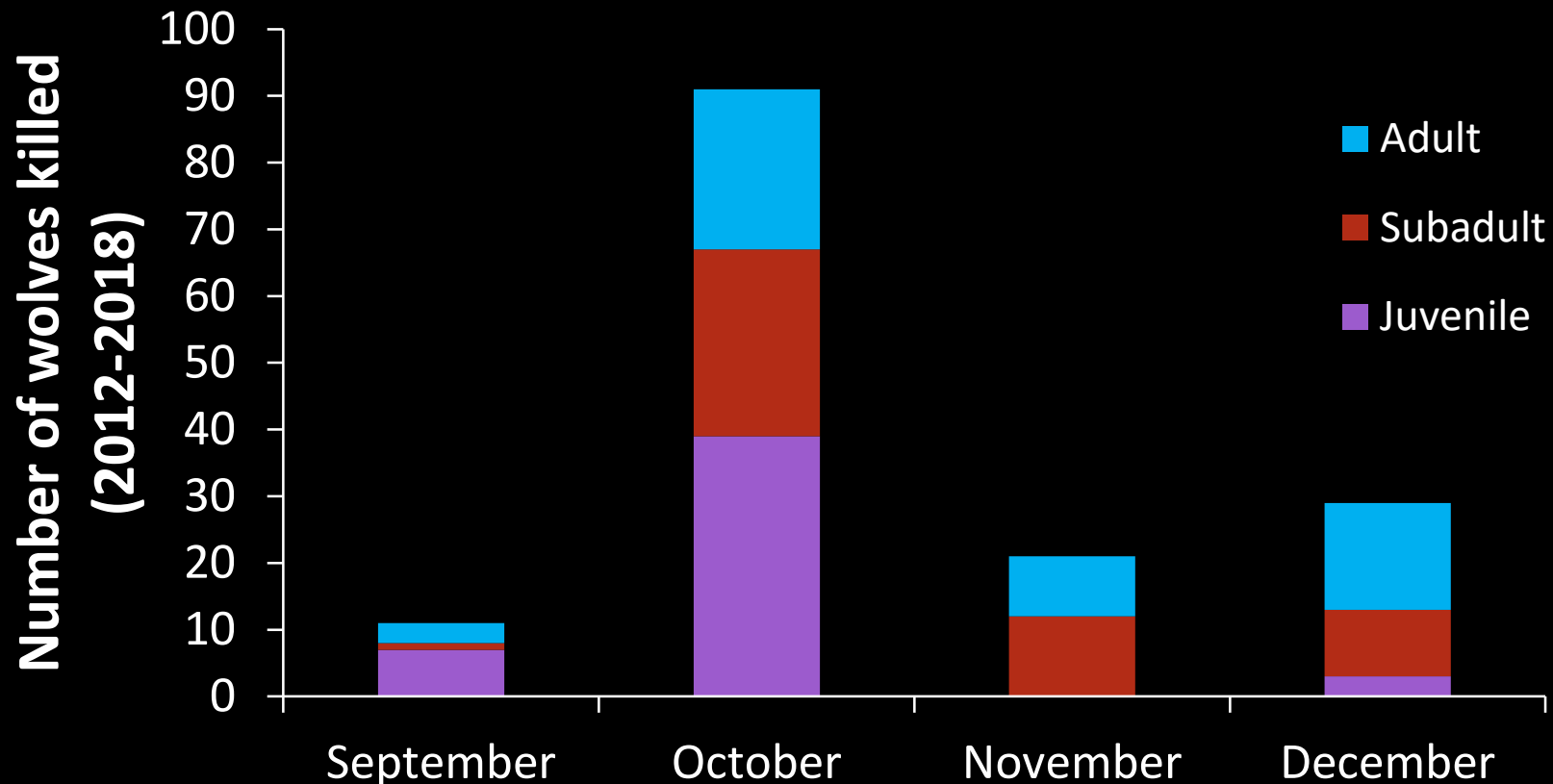
- Hunting mortality in 2018 was lower but steady compared to previous hunts





# WOLF HUNTING MORTALITY

- 74% of the mortality limit was met
  - Fewer wolves
  - Low recruitment in the population
  - Older age classes are more difficult to hunt



# 2019 SEASON SETTING PROCESS

- Proposed Chapter 47 regulation based on data collected in 2018 & early 2019
  - Population, distribution, mortality and prey data
- Public comment period April 29 – June 14, 2019
- Department will analyze public comments
- Final recommendation scheduled for the July Commission meeting





# QUESTIONS?

