

NCDE MONITORING UPDATE

2024 ANNUAL RESULTS

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TOPICS

- Field Data Collection
- Conservation Strategy Demographic Objectives
- Management Summary

2024 Field Data Collection

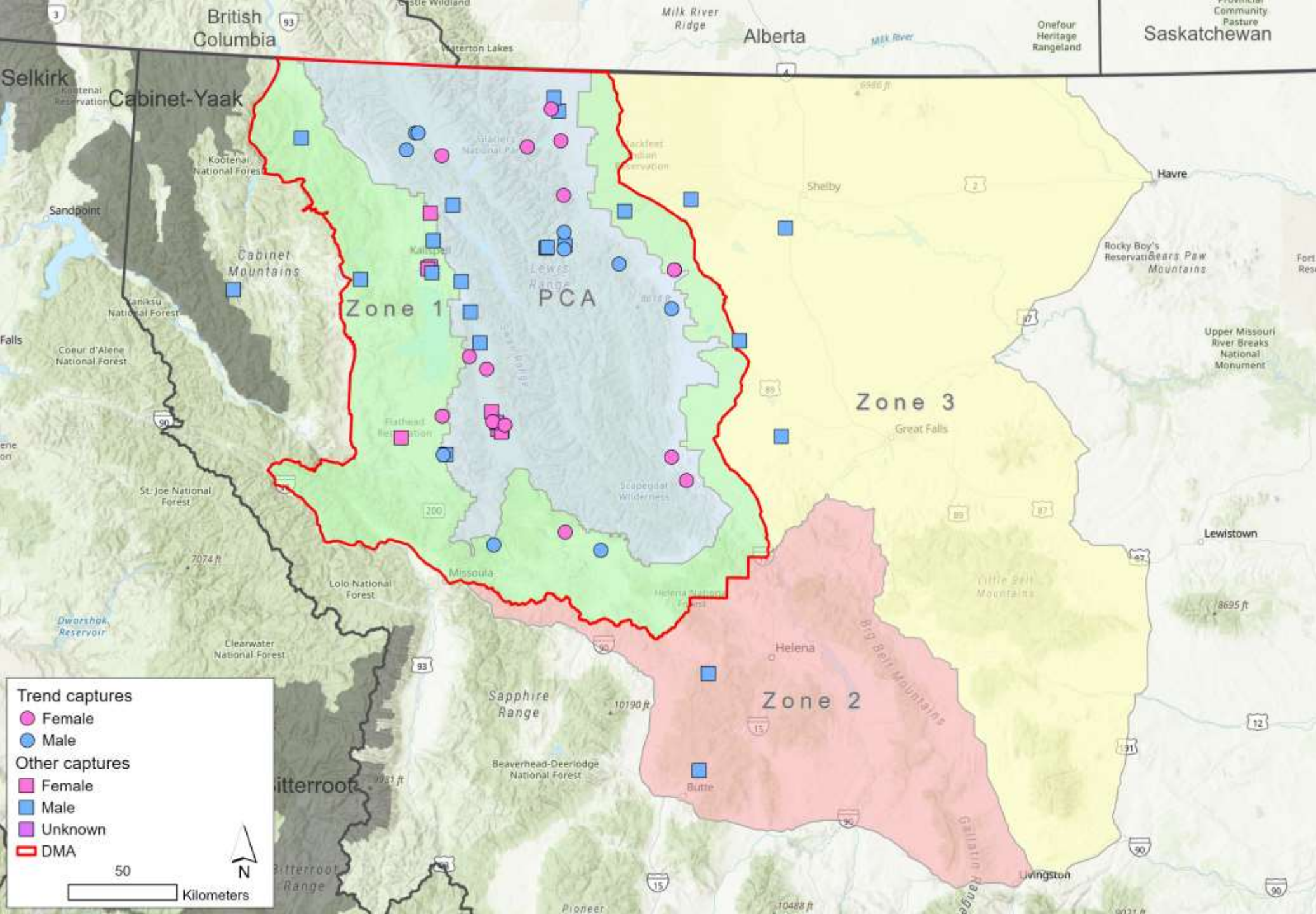
- Capture
- Trend research: 22 (17F, 5 M)
 - Augmentation: 7 (3F, 4M)
 - Management or other: 39 (20F, 19M)

- Radio-monitoring
- Trend research: 39 (32F, 7M)
 - Management or other: 35 (22F, 13M)

- Survival outcomes
- Trend: 0 radioed deaths
 - Management or other: 6 radioed deaths (2F, 4M)

- Reproductive monitoring
- Trend status: 28 adults (12 CB, 6 YR, 1 2YO, 9 None)
 - Trend cub survival: 12 litters, 22 offspring (4 presumed dead)
 - Trend yearling survival: 5 litters, 10 offspring (3 presumed dead)
 - Mean cub litter size: 1.8 cubs
 - Reproductive output documented

Captures 2024



*preliminary data, do not cite

Documented Mortalities

All zones, all age classes

	Ageclass	Female	Male	Unknown sex	Total
Inside DMA	Dependent	2	2	3	7
	Independent	10	10	1	21
	Total	12	12	4	28
Outside DMA	Dependent	0	0	1	1
	Independent	2	4	1	7
	Total	2	4	2	8

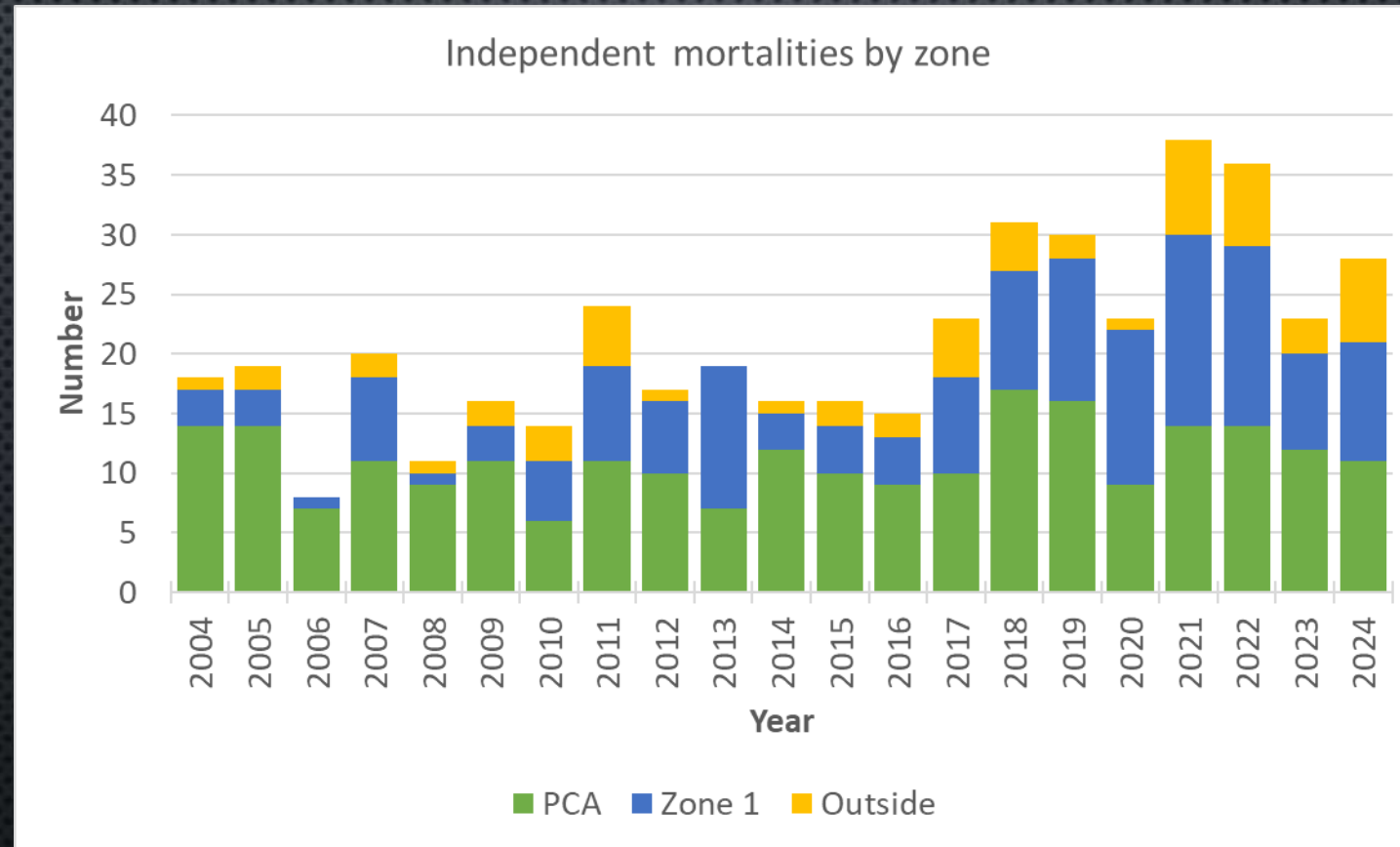
Mortalities 2024



*preliminary data, do not cite

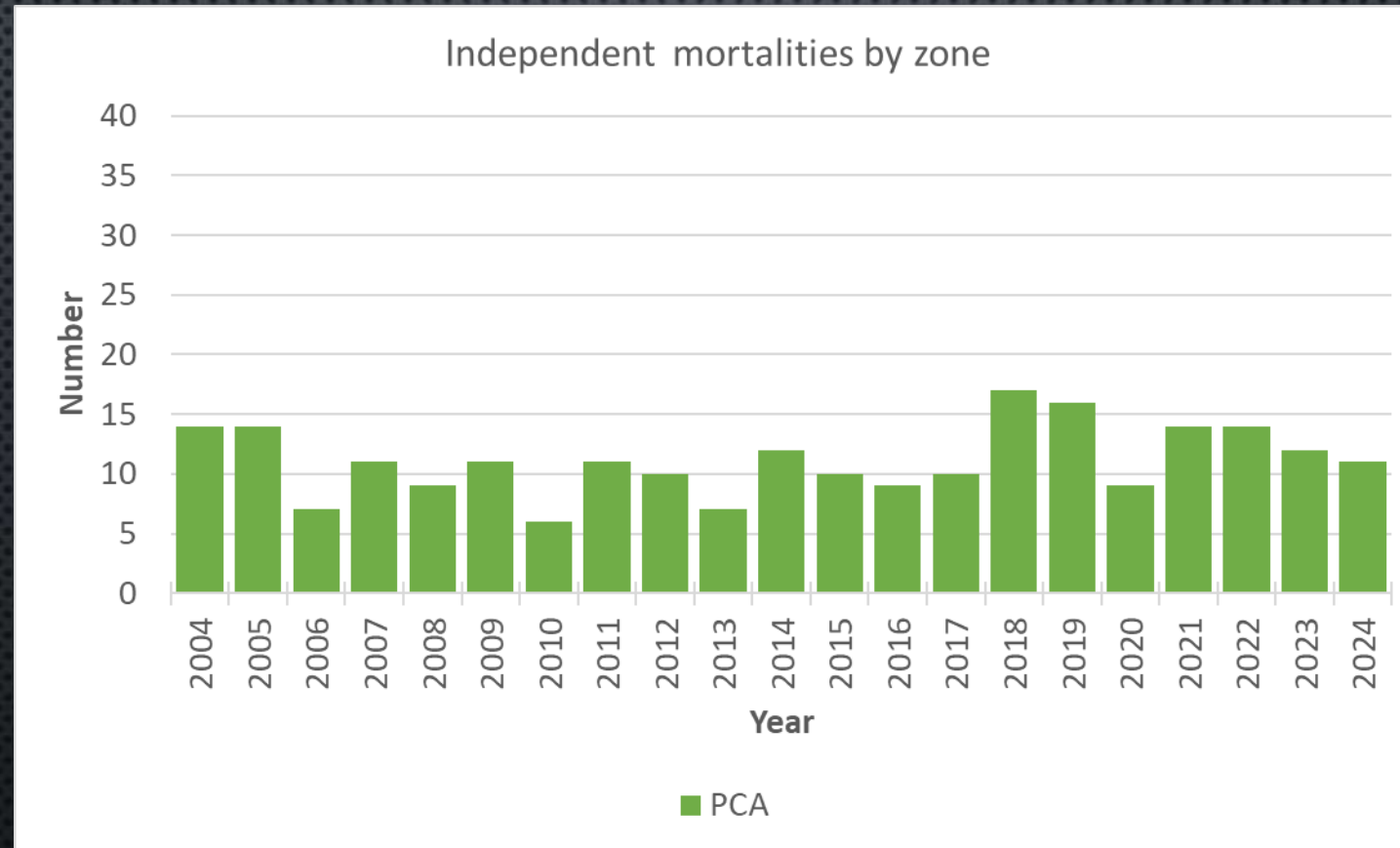
Conservation Strategy Zone

Independent bears only



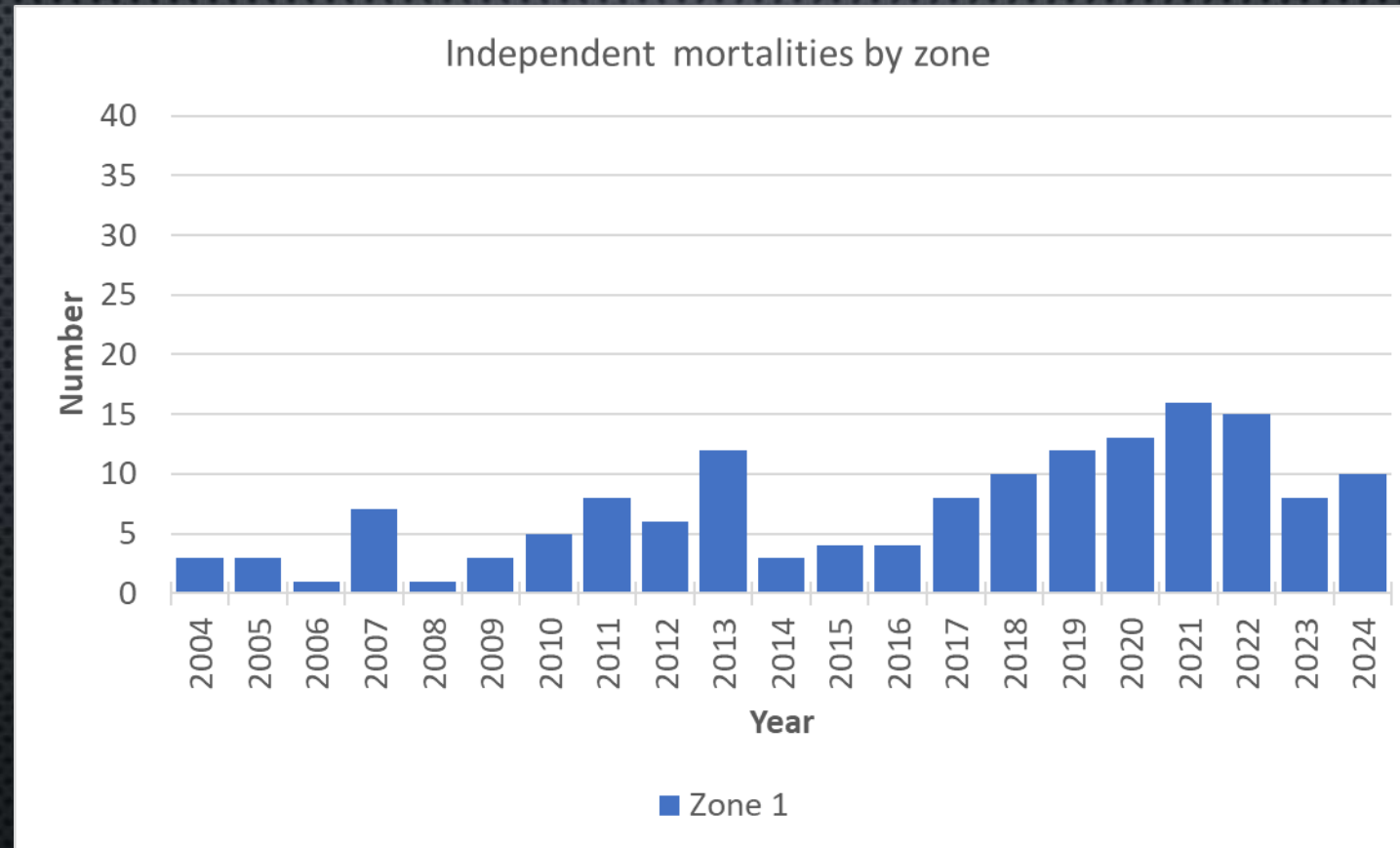
Conservation Strategy Zone

Independent bears only



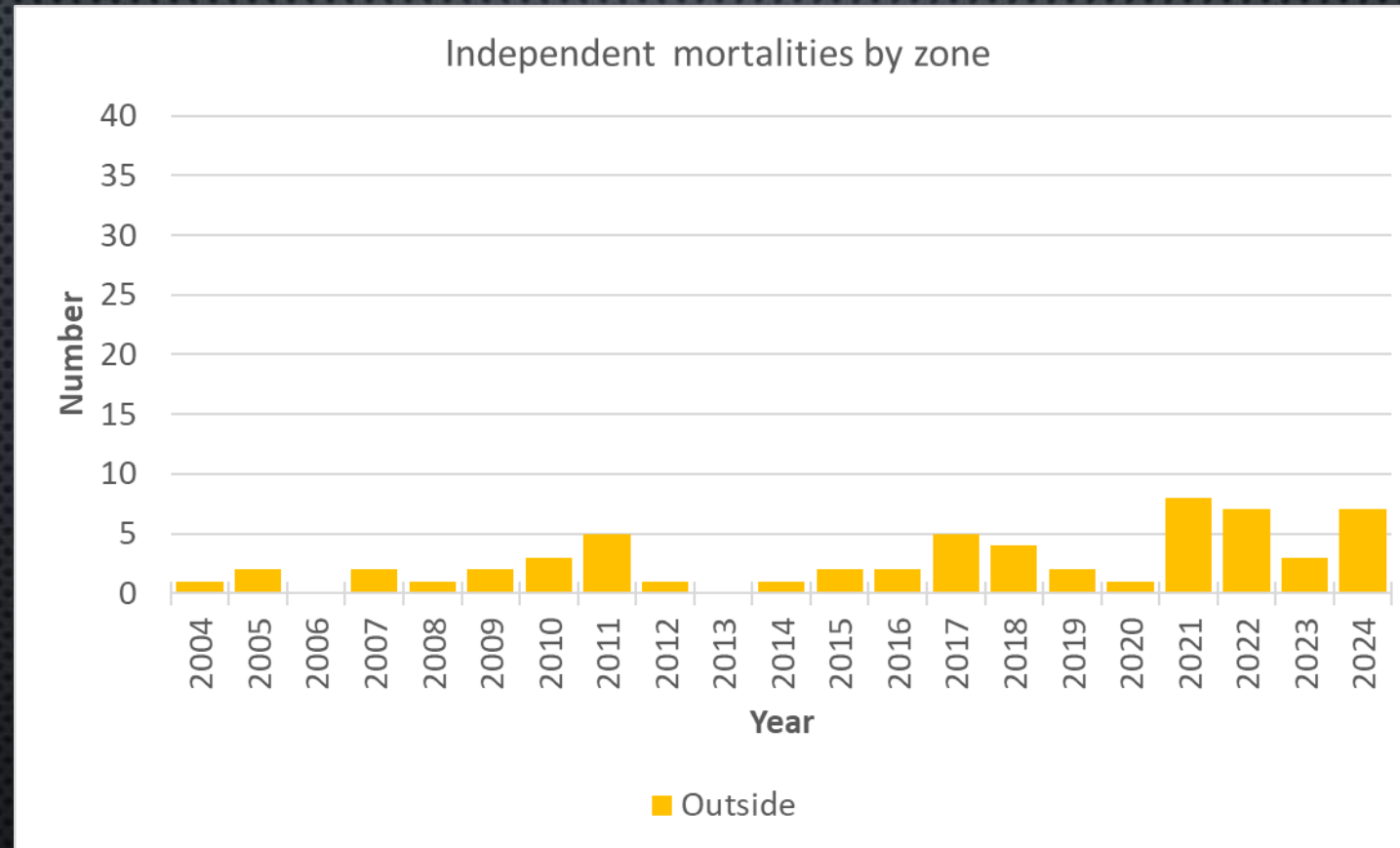
Conservation Strategy Zone

Independent bears only



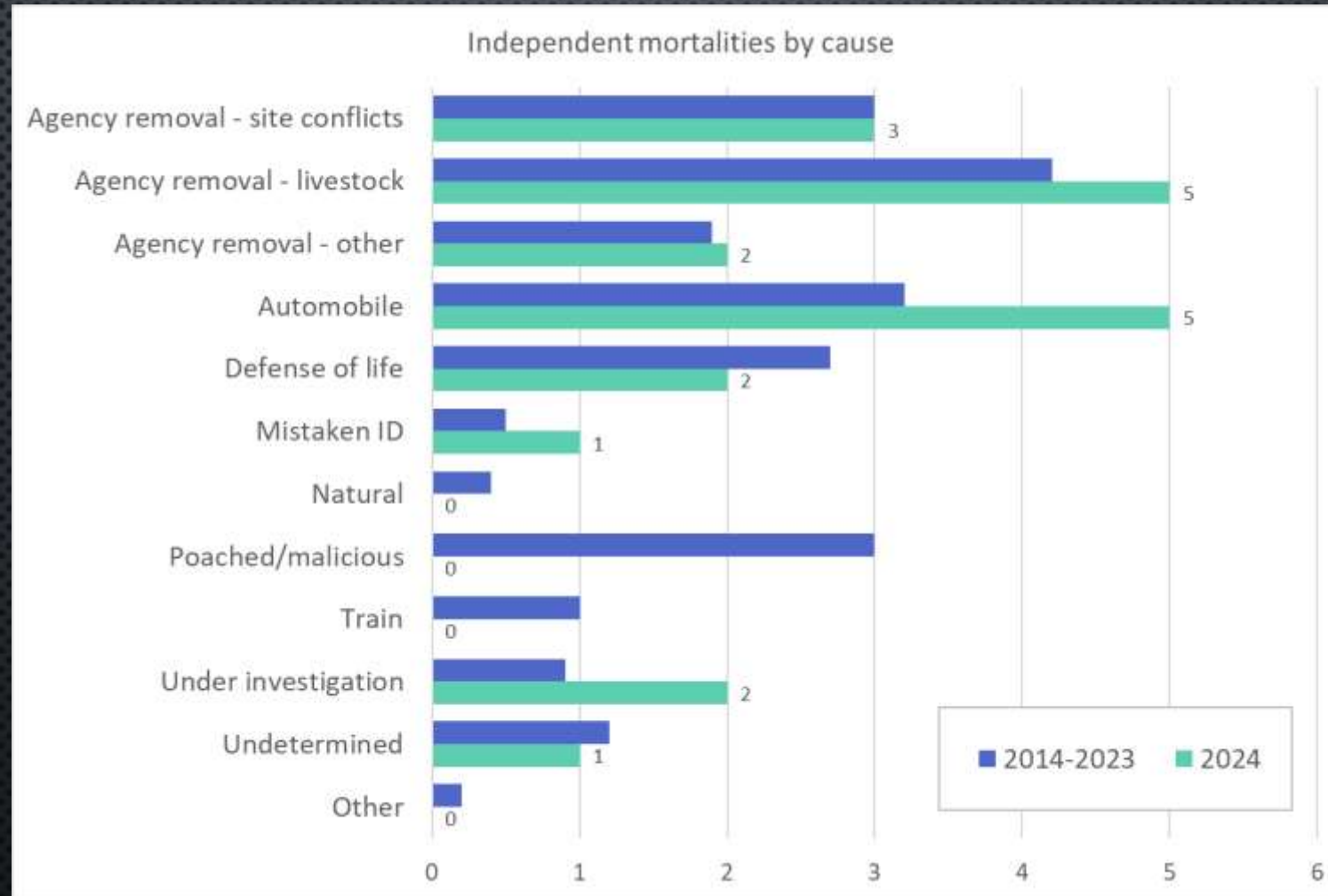
Conservation Strategy Zone

Independent bears only



Cause of Death

Independent bears inside DMA



Conservation Strategy Demographic Objectives

Occupancy thresholds - Maintain the documented presence of females with dependent offspring, at least every 6 years, in at least:

≥ 21 of 23 Bear Management Units of the PCA/Recovery Zone

≥ 6 of 7 Occupancy Units of Zone 1

Reproductive Female Occupancy



*preliminary data, do not cite

Female Occupancy PCA

Bear Management Unit (PCA)	2019	2020	2021	2022	2023	2024
Murphy Lake		x		x	x	x
Upper North Fork Flathead	x	x	x	x	x	x
Northeast Glacier	x	x	x	x	x	x
Stillwater River	x	x	x	x	x	x
Lower North Fork Flathead	x	x	x	x	x	x
Hungry Horse	x	x	x			x
Lower Middle Fork Flathead	x	x	x	x	x	x
Southeast Glacier	x	x	x	x	x	x
Sullivan	x	x	x	x	x	x
Upper Middle Fork Flathead				x	x	x
Badger Two Medicine	x	x		x	x	x
Mission Range	x	x	x	x	x	x
Bunker	x	x	x		x	x
Continental Divide		x		x		
Birch Teton	x	x	x		x	x
Big Salmon	x	x	x	x	x	x
North Fork Sun River	x	x		x	x	x
Teton Sun River	x	x	x	x	x	x
Rattlesnake			x			x
Upper South Fork Flathead			x			x
South Fork Sun Beaver Willow	x	x	x	x	x	x
Monture Landers Fork	x	x	x	x	x	x
Dearborn Elk Creek	x	x	x	x	x	

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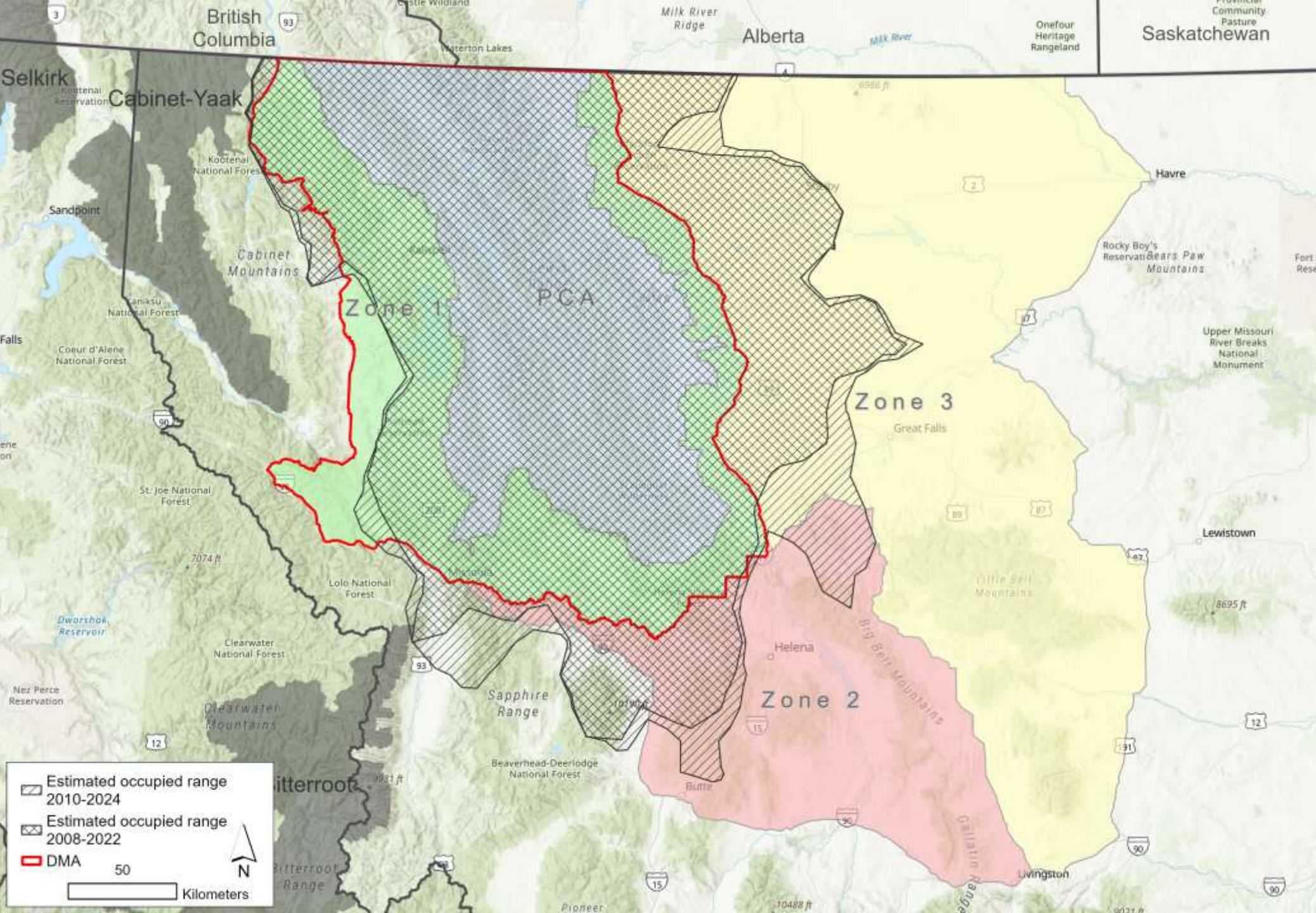
Female Occupancy Zone 1

Occupancy Unit (Zone 1)	2019	2020	2021	2022	2023	2024
Salish Connectivity Area	x	x	x	x	x	x
Flathead Valley	x	x	x	x	x	x
Flathead Reservation	x	x	x	x	x	x
Ninemile Connectivity Area	x	x				
South End	x	x	x	x	x	x
East Front	x	x	x	x	x	x
Blackfeet Reservation	x	x	x	x	x	x

*preliminary data, do not cite

Conservation Strategy Demographic Objectives

- Estimate spatial distribution of the population biennially
- Identify population of origin for individuals sampled inside and outside of the DMA

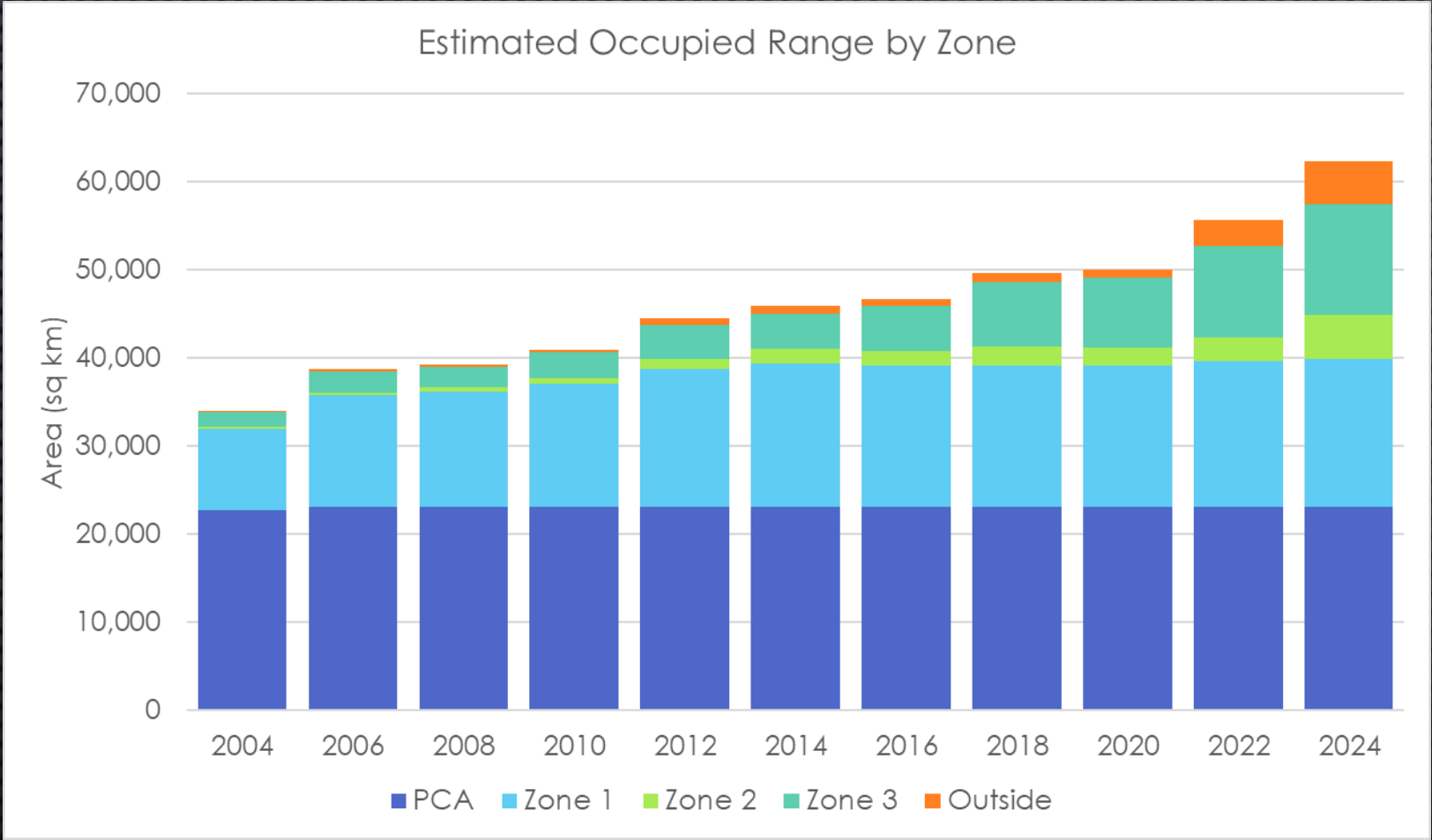


Estimated Occupied Range

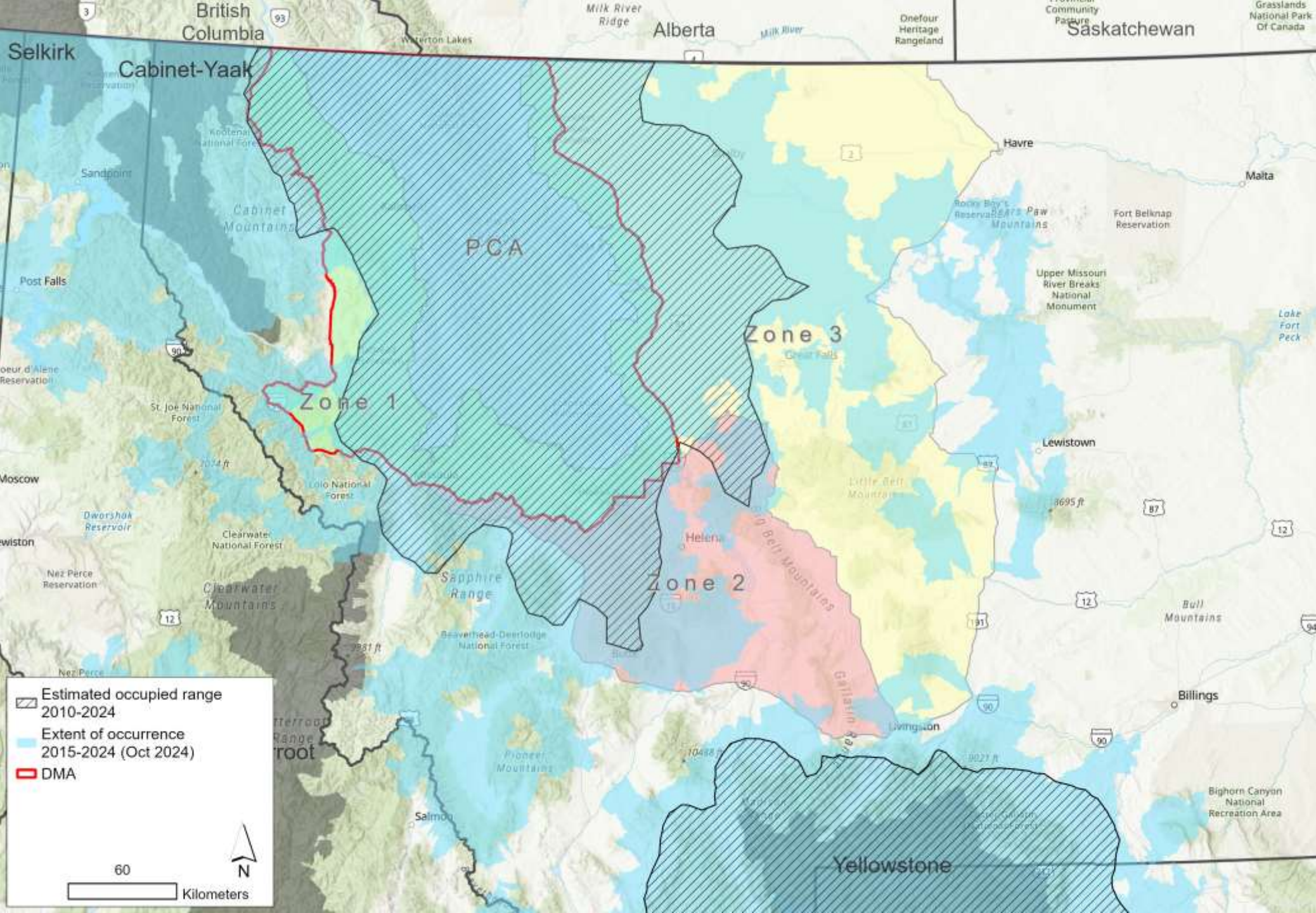
- Continued expansion
- Increased range in BE area
- Mountain ranges
Sapphires
Boulders
Adels
Big Belts

*preliminary data, do not cite

Estimated Occupied Range



- PCA 100% occupied
- Zone 1 86% occupied
- Zone 2 26% occupied
- Zone 3 26% occupied



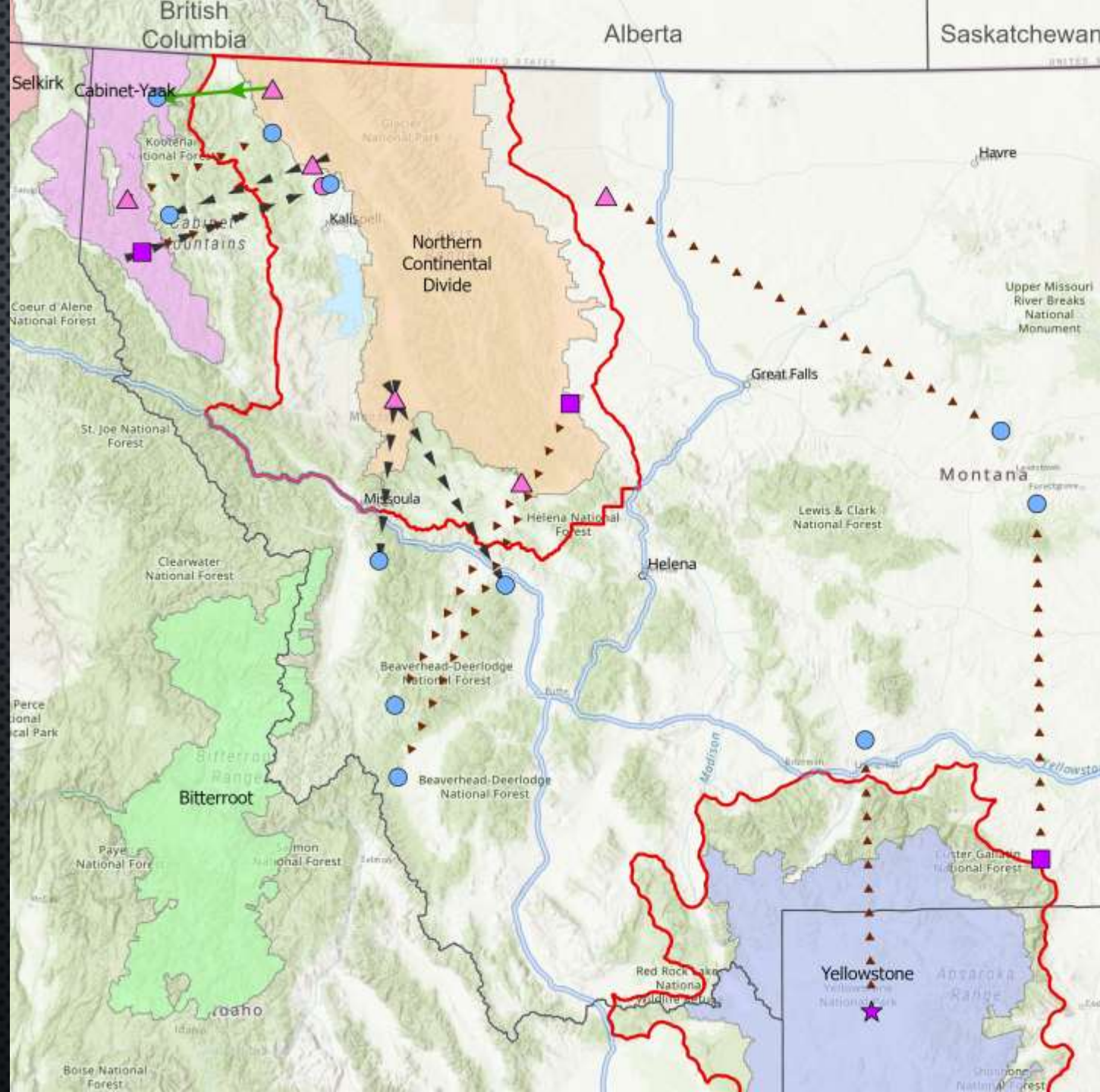
Extent of Occurrence

- Additional outlier observations
- Distance to GYE 72 km

*preliminary data, do not cite

Movements between Ecosystems

- Earliest observed movement (2010) has resulted in gene flow
- Other movements are more recent (2019-2023)
- Distances = 61-244 km
- Occupied range of NCDE to GYE = 72 km



Movements to or from the NCDE area documented through genetic relationships and field data, 2010-2023

Sex of bear that moved

- Female
- Male

Closest relative from source

- Mother
- Other
- Population

Movement type detected

- Temporary movement or single detection
- Residency or dispersal
- Gene flow

Demographic Monitoring Areas

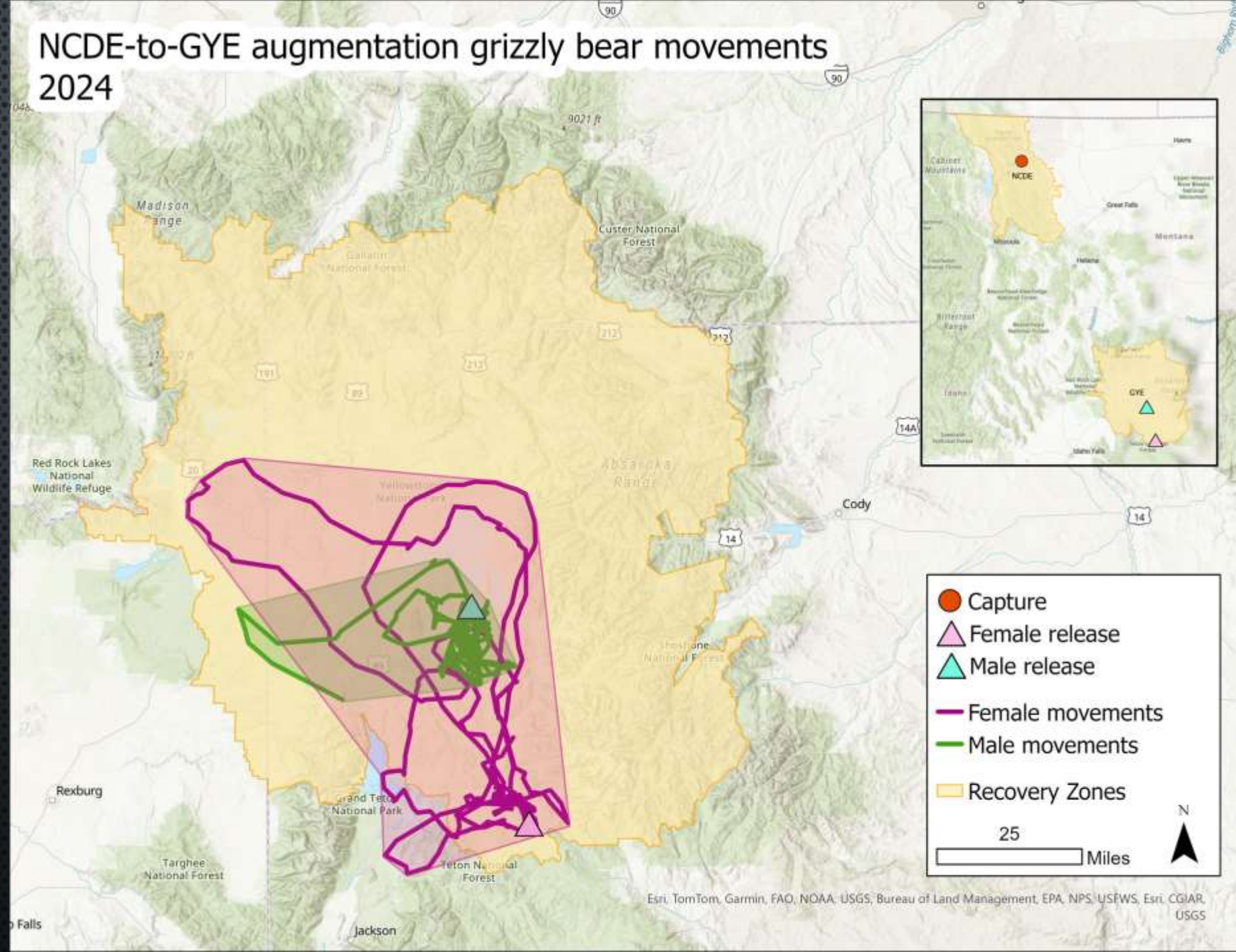
70

Kilometers



GYE Genetic Augmentation from NCDE

- Female and male translocated in July 2024
- Denned and emerged in GYE in 2025



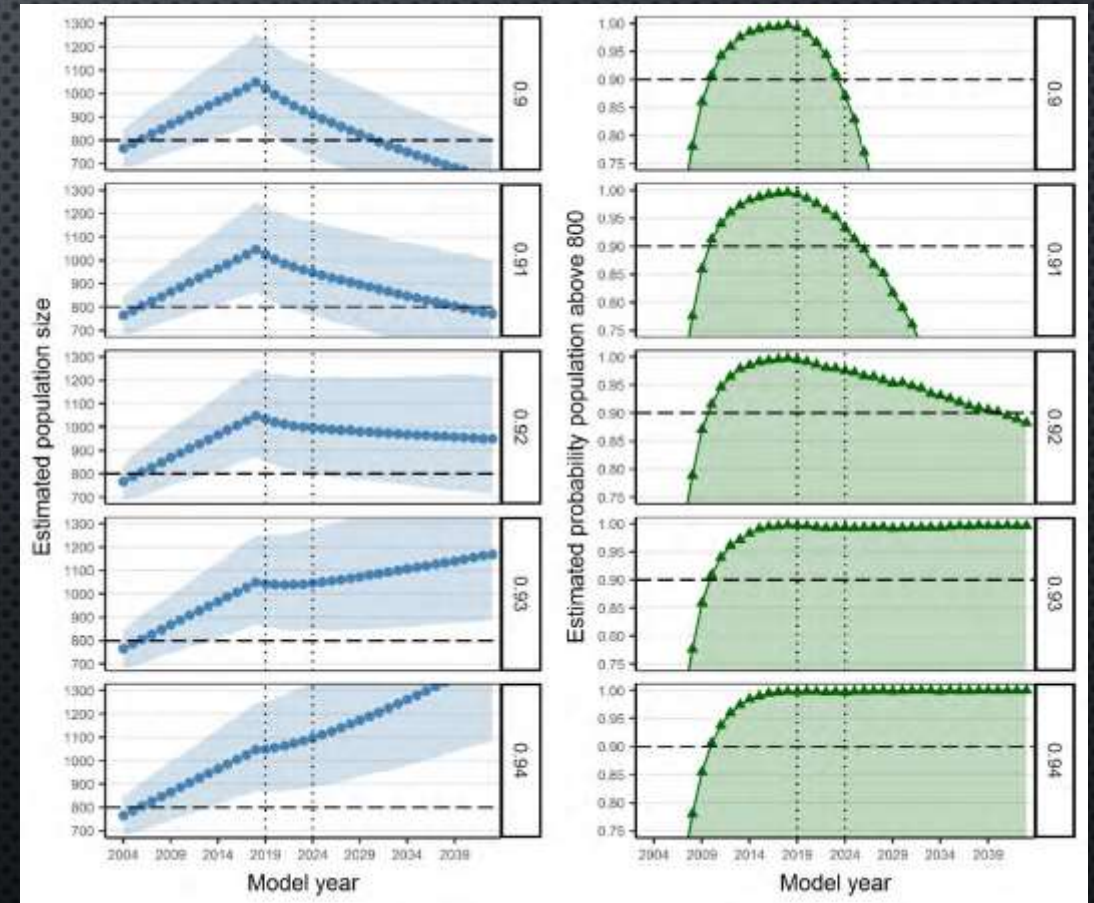
Conservation Strategy Demographic Objectives

Independent female survival threshold

Independent female and male mortality thresholds

Rates and values consistent with maintaining a 90% probability that the population remains above 800 bears.

- Population modeling still underway
- Vital rates analyzed and ready
- Working on dispersal outside of the DMA



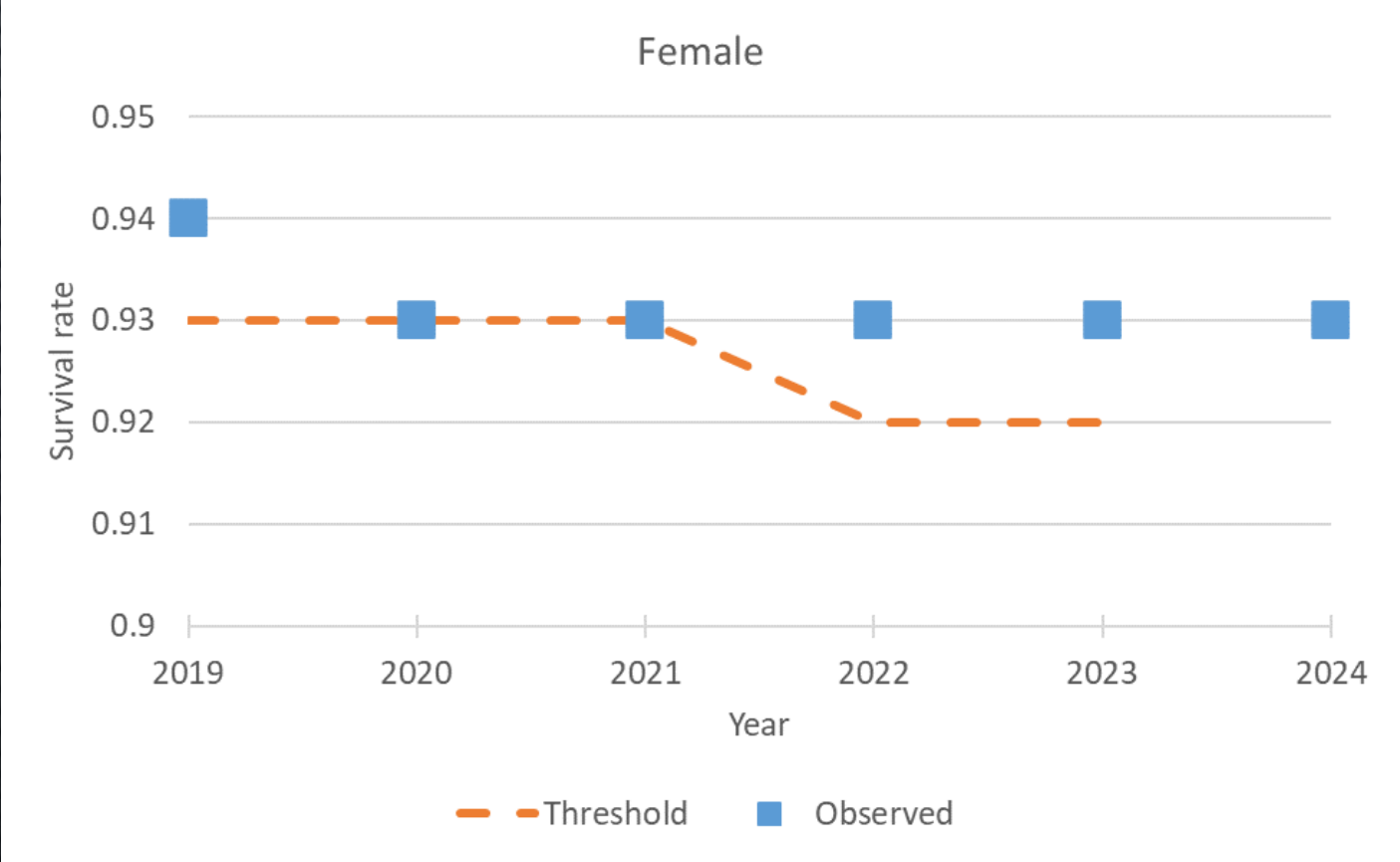
Conservation Strategy Demographic Objectives

Independent female survival threshold - Using a six-year running average, maintain estimated annual survival of independent females of:

At least 0.90

No specific 2024 threshold set, because population modeling still underway

Female Survival DMA



Conservation Strategy Demographic Objectives

Independent mortality thresholds Using a 6-year running average, limit annual estimated number of total reported and unreported mortalities (TRU mortalities) to:

Females

No specific 2024 thresholds set, population modeling still underway

Males

No specific 2024 thresholds set, population modeling still underway

Independent Bear Mortalities DMA

Documented mortalities 2024

	Ageclass	Female	Male	Unknown	Total
Inside DMA	Independent	10	10	1 (M)	21

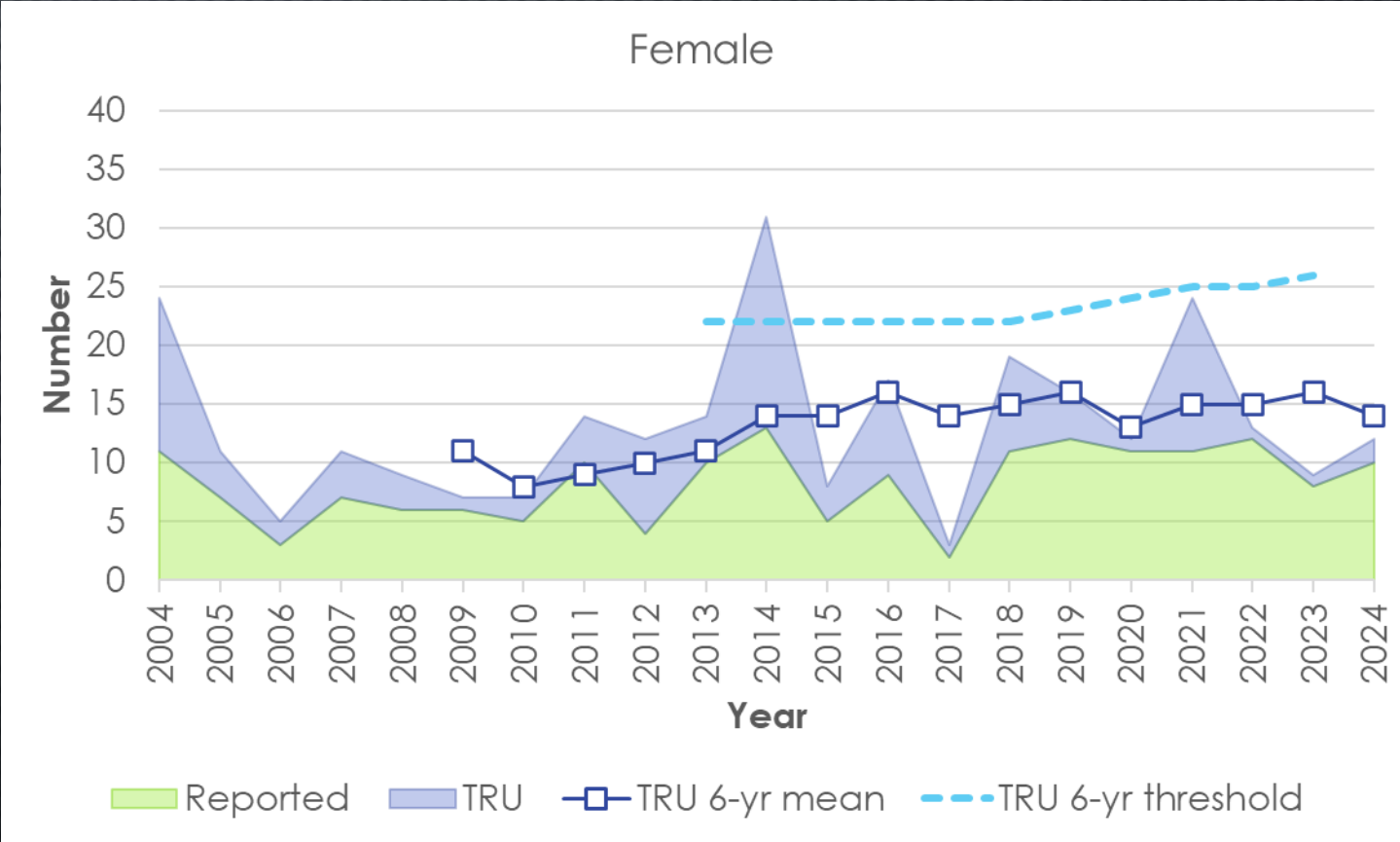
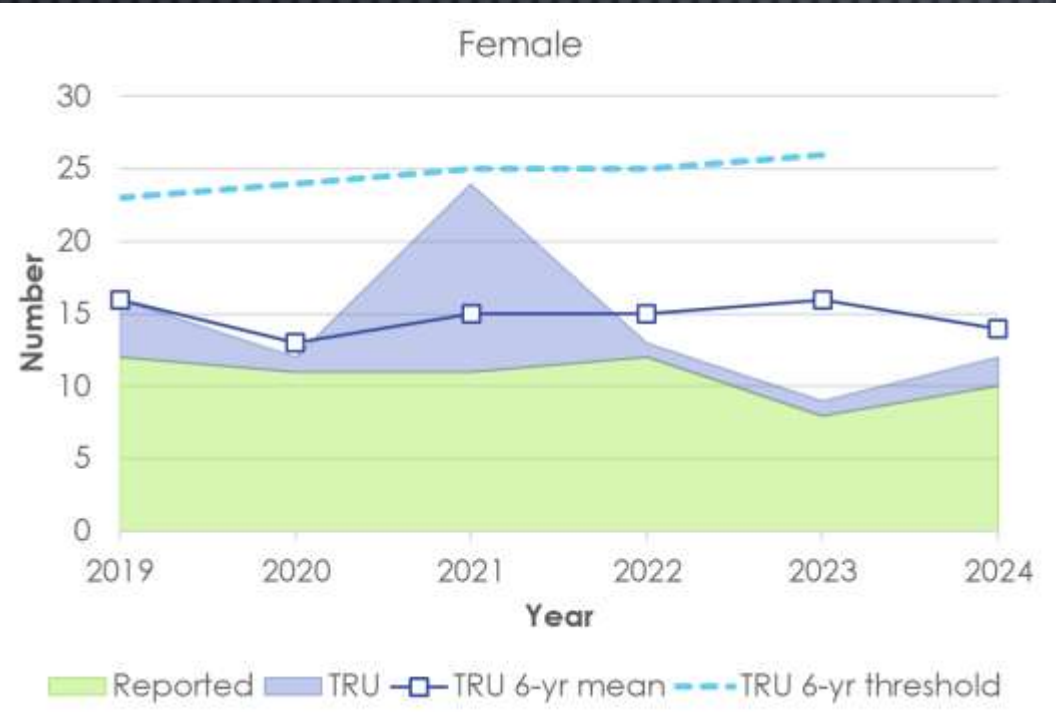


Estimated total reported & unreported (TRU) mortality 2024

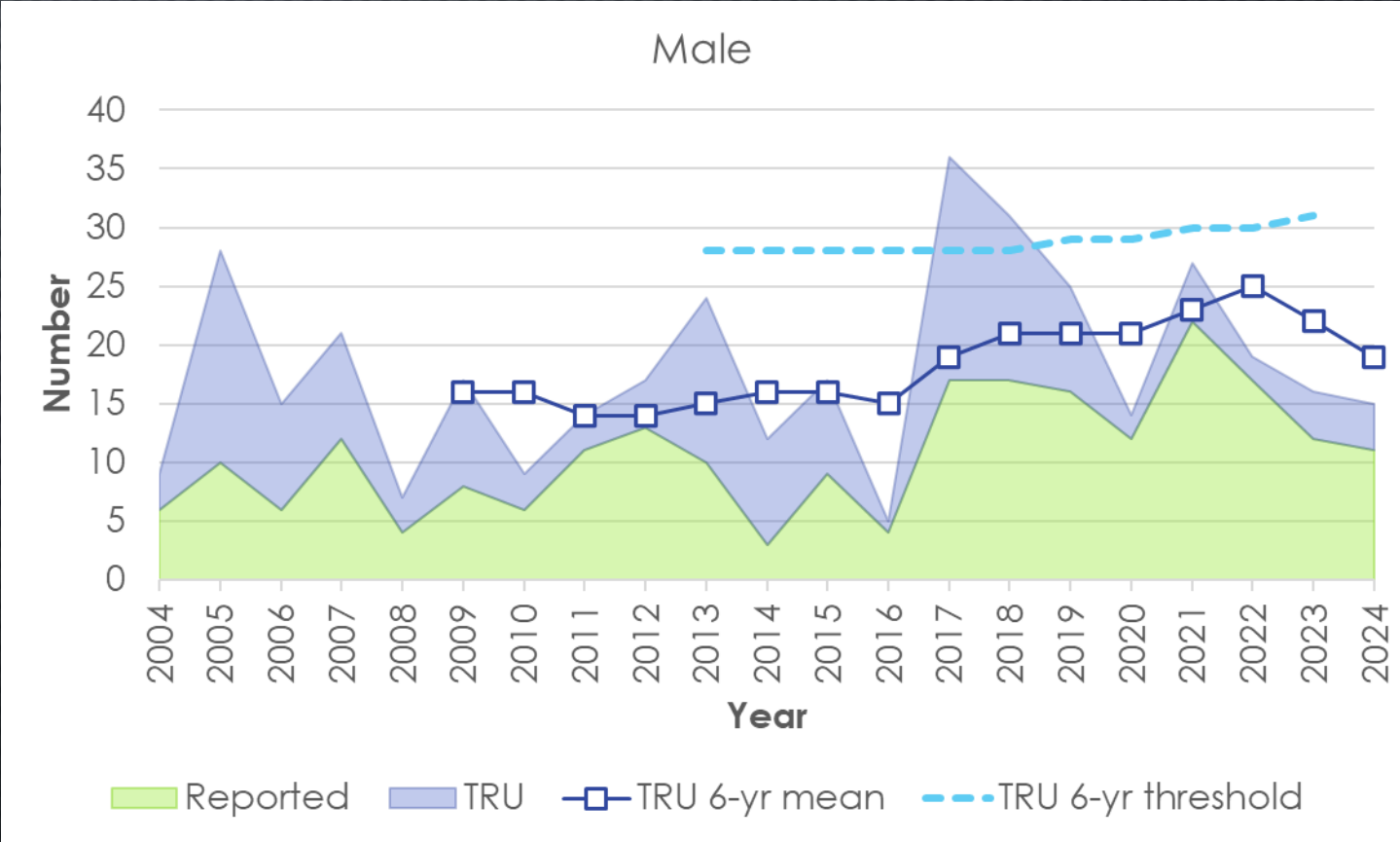
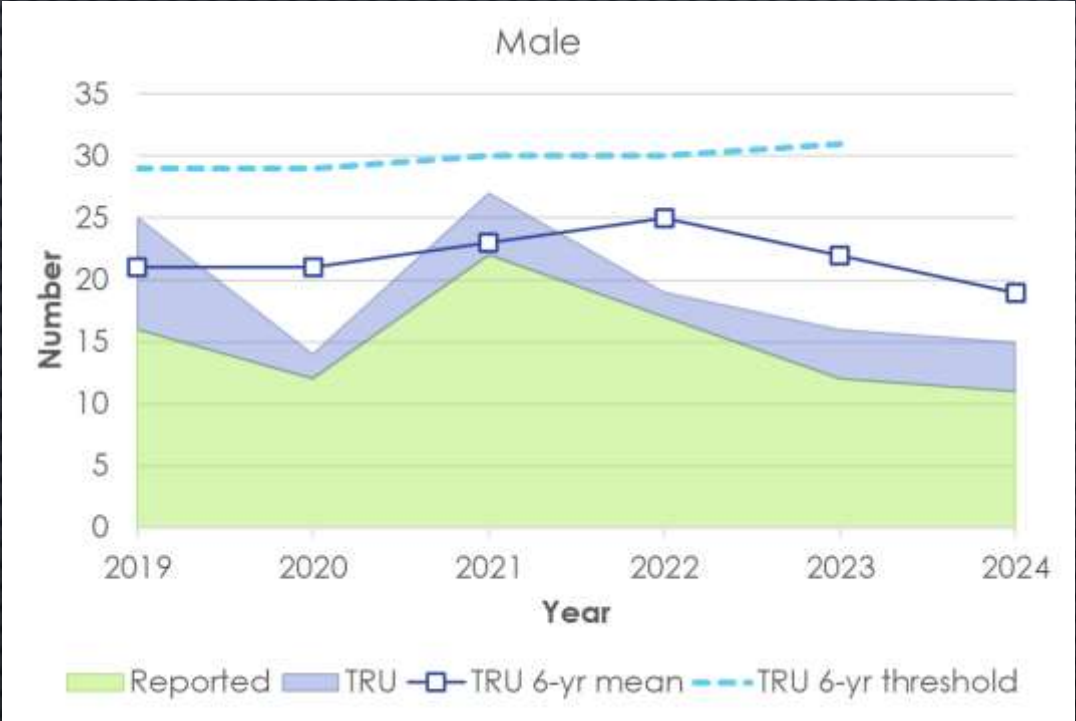
	Agency removal (A)	Telemetry (B)	Reported (high)	Reported (low)	Estimated reported and unreported (C)	Estimated total mortality (A+B+C)
Sex						
Female	4	0	6	0	8	12
Male	6	0	4	1	9	15

*preliminary data, do not cite

Female Independent Mortalities DMA



Male independent mortalities DMA



*preliminary data, do not cite

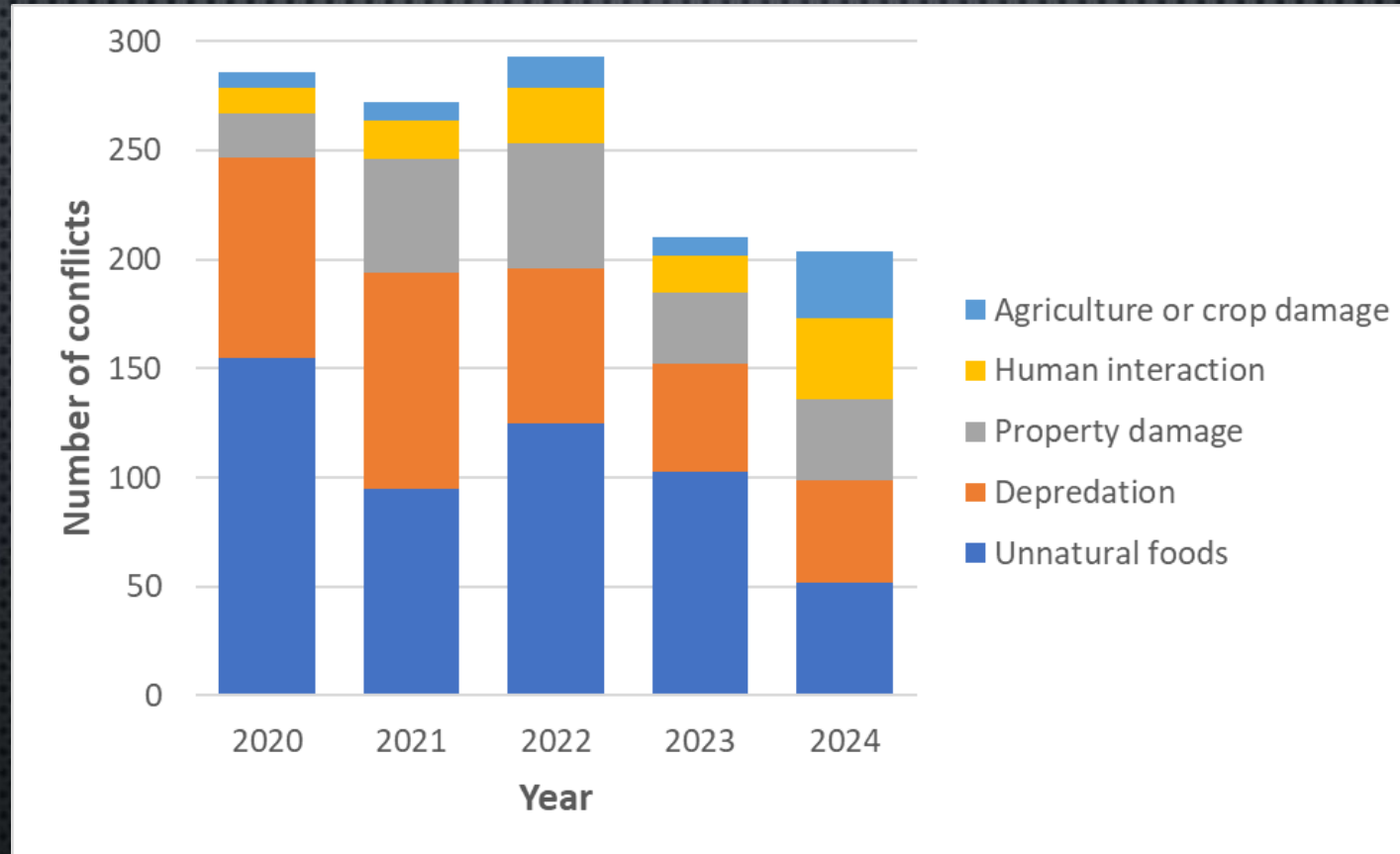
Management Summary

Interagency management database, started in 2020

- Record human-grizzly bear conflicts
- Record preventative actions
- Records observations, including females with offspring and outliers
- Record opportunistic DNA samples obtained

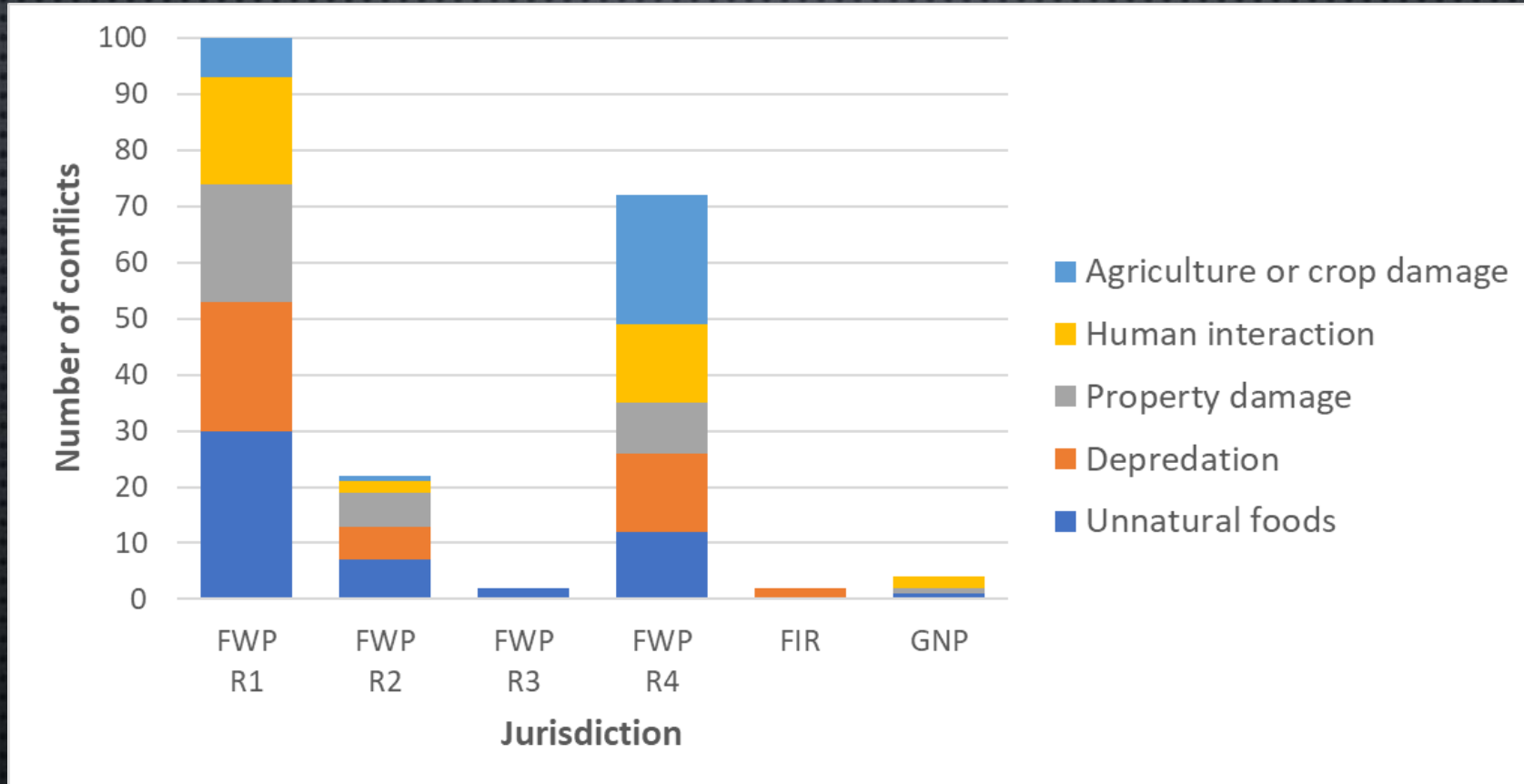
Human-Grizzly Bear Conflicts 2020-2024

By Type



Human-Grizzly Bear Conflicts 2024

By Type and Jurisdiction



Number of conflicts 2024

- 1
- 2
- 3 - 5
- 6 - 8
- 9 - 11
- DMA

50 Kilometers

Number of conflicts 2024

1
2
3 - 5
6 - 8
9 - 11
DMA

50 Kilometers

N



Thank you to the many
people that contribute
to the trend monitoring
program