

Cabinet-Yaak / Selkirk Mountains Monitoring Update

- Research capture results
- Cabinet Mountains Augmentation
- Monitoring of collared bears
- Hair snag collection and remote cameras
- Review genetic results 2013-14
- Review preliminary recovery criteria for 2015



2015 Captures (10)

- Cabinet Mtns: subadult male, adult male (management)
- Yaak River: 3 adult females (one with 2 yearlings), subadult male
- Selkirk Mtns: adult male US, subadult female and 2 adult females BC



Cabinet Mountains Grizzly Bear Augmentation

- Male Grizzly 924 captured 8/3/15 15 miles northwest Whitefish, MT
- 2 year old male weighed 165 lbs
- Released at Spar Lk
- Monitor 2 females released 2014 with a mortality
- 18th bear released since 1990 (13F 5M)



Grizzly Bear 920

Released 6/18/14

Natural Mortality 05/24/15

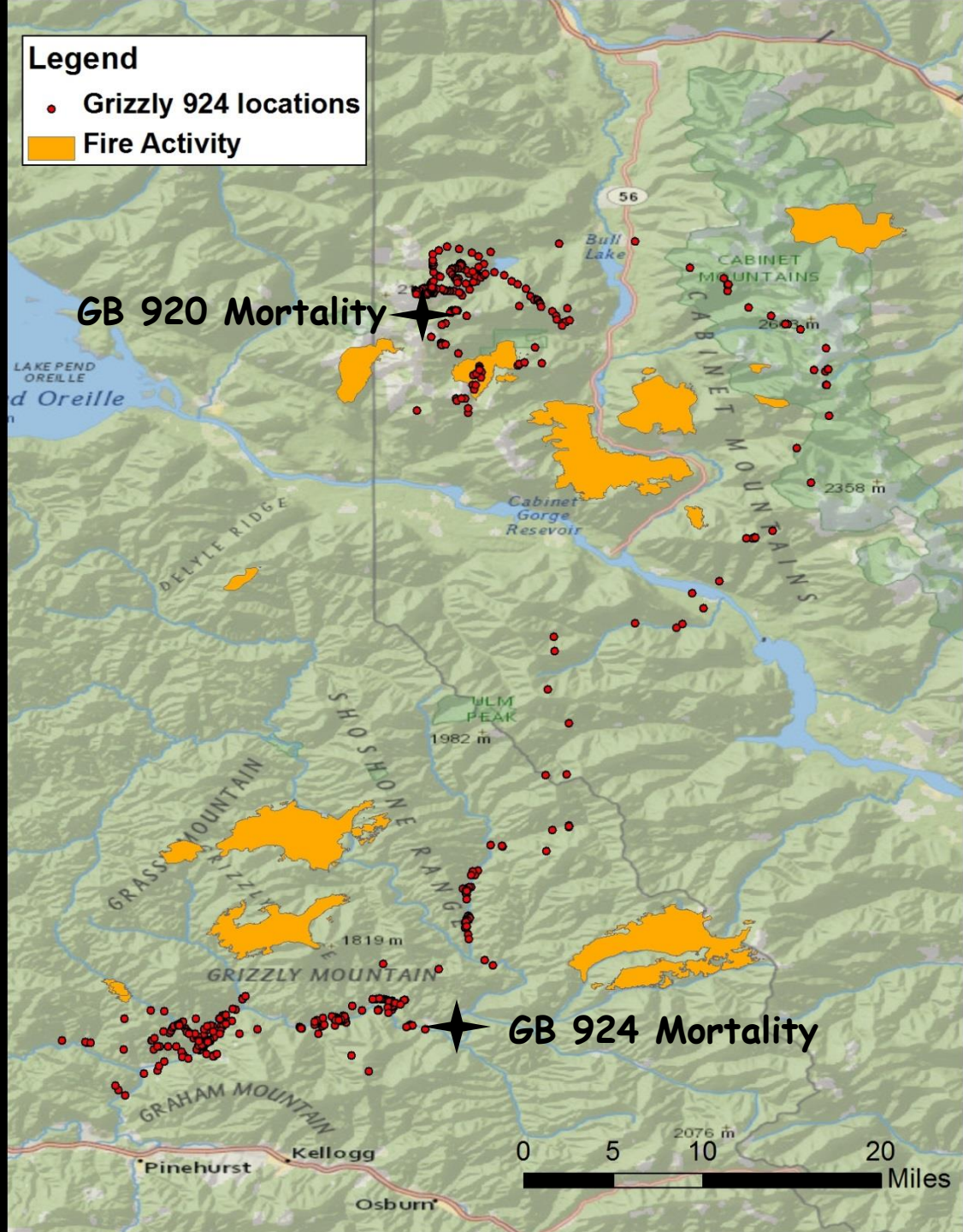
Grizzly Bear 924 Movements

Release 8/4/15 Spar Lake
Lightning Storm and Fires
8/12/15

Cross Hwy 200 8/17/15
Cross ID / MT Border
8/18/15

Coeur d'Alene River
8/24/15

Several sightings early
September
Killed 9/30/15



Augmentation Grizzly Bear DNA Family Tree for the Cabinet Mountains

Pink Circles = Females

Blue Boxes = Males

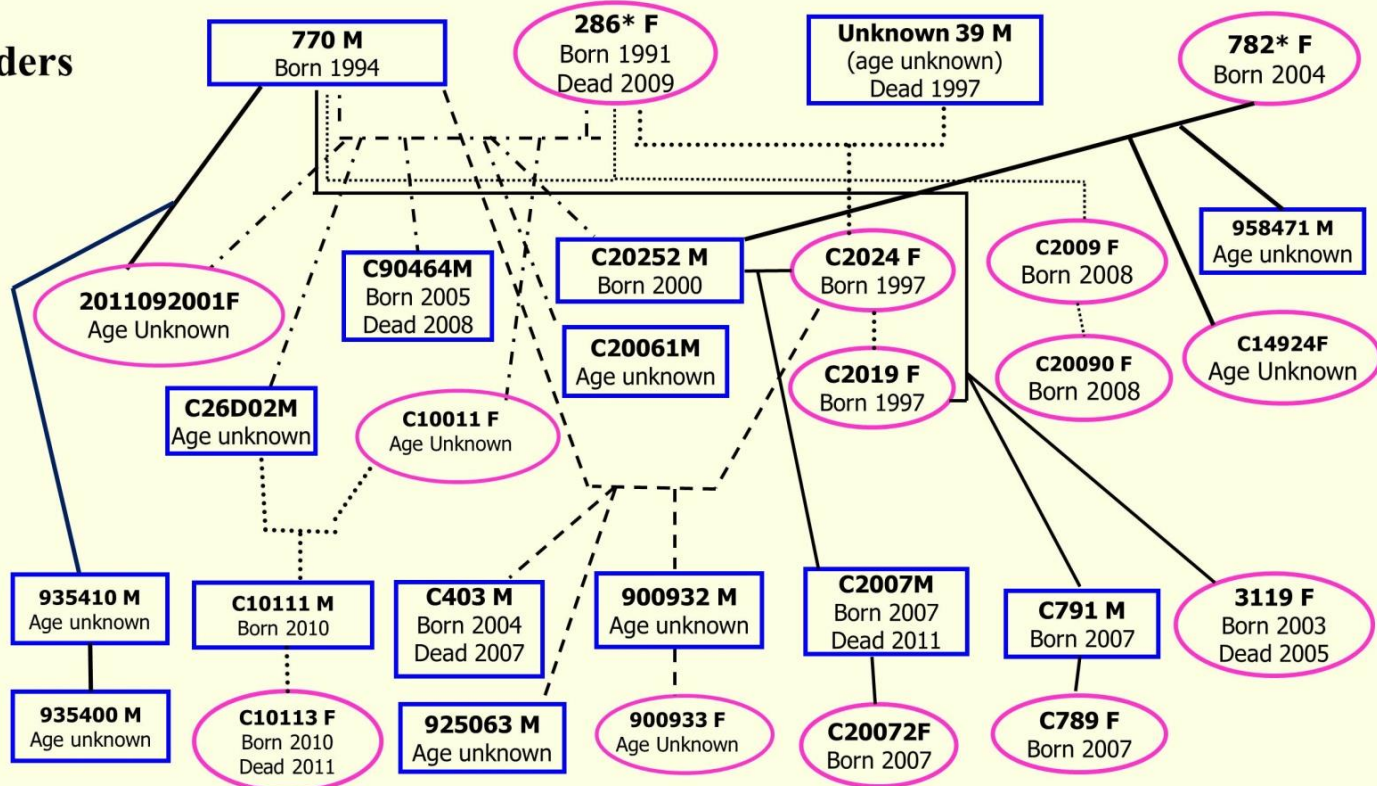
DNA relationships for grizzly bears in the Cabinet Mountains from 1990 through 2014

(* Bear 286 was the augmentation bear placed in the Cabinet Mountains in 1993 and Bear 782 was released in 2006)

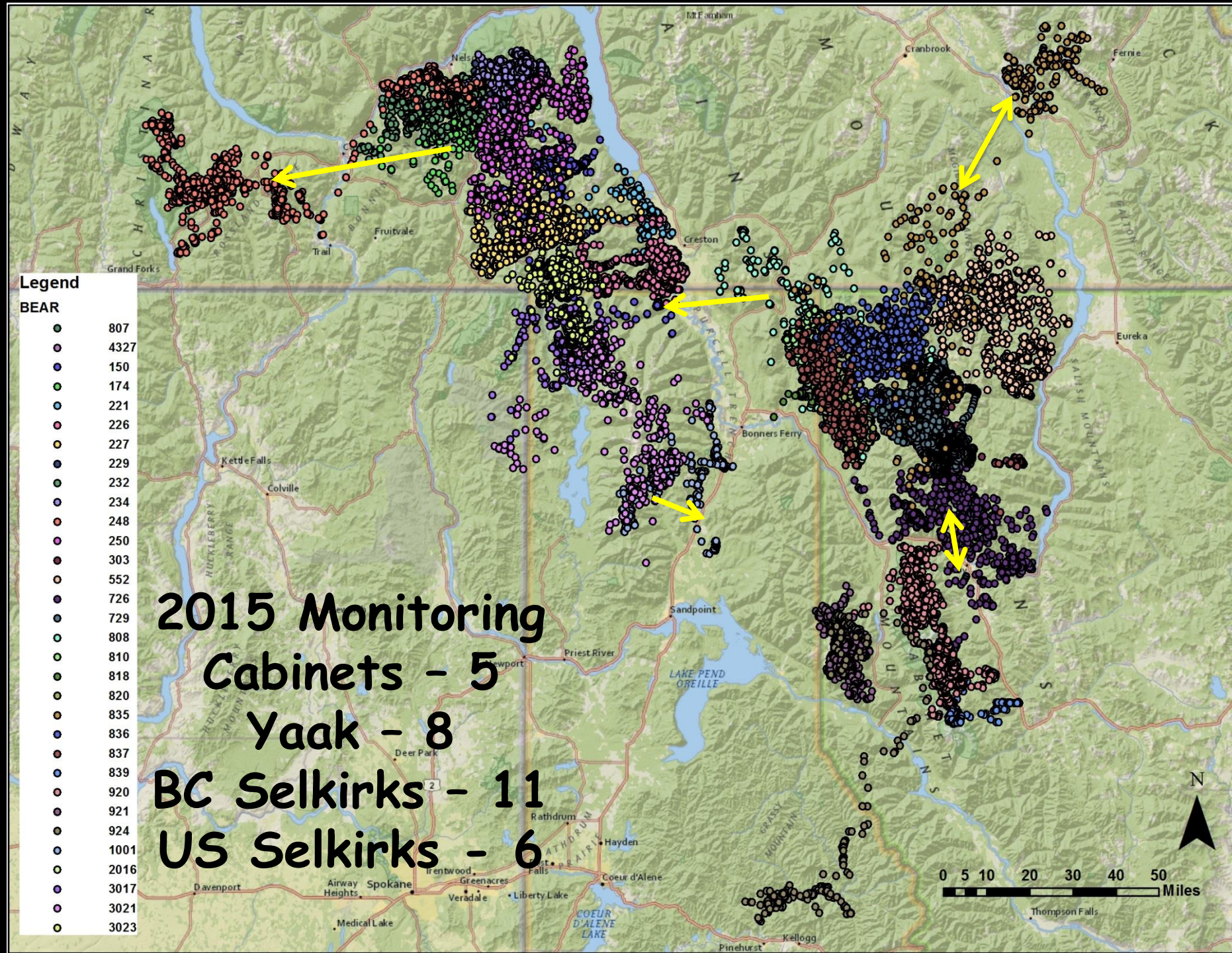
Founders

F1

F2

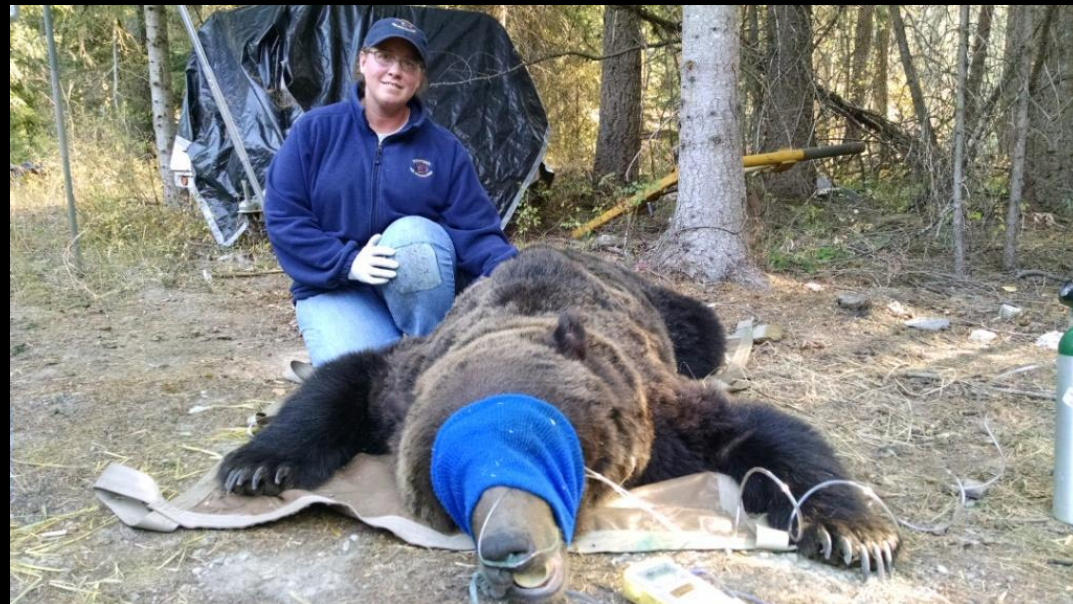


- 18 bears transplanted to Cabinet Mountains 1990-2015 (13 F, 5 M)
- Six bears left target area , one recaptured and returned , one returned naturally
- 5 bears known dead within 1.5 years (2 Natural, 2 Shot, Train)
- At least two bears have reproduced and offspring have reproduced
- One bear has 10 1st Generation and 13 2nd generation offspring



Grizzly 726

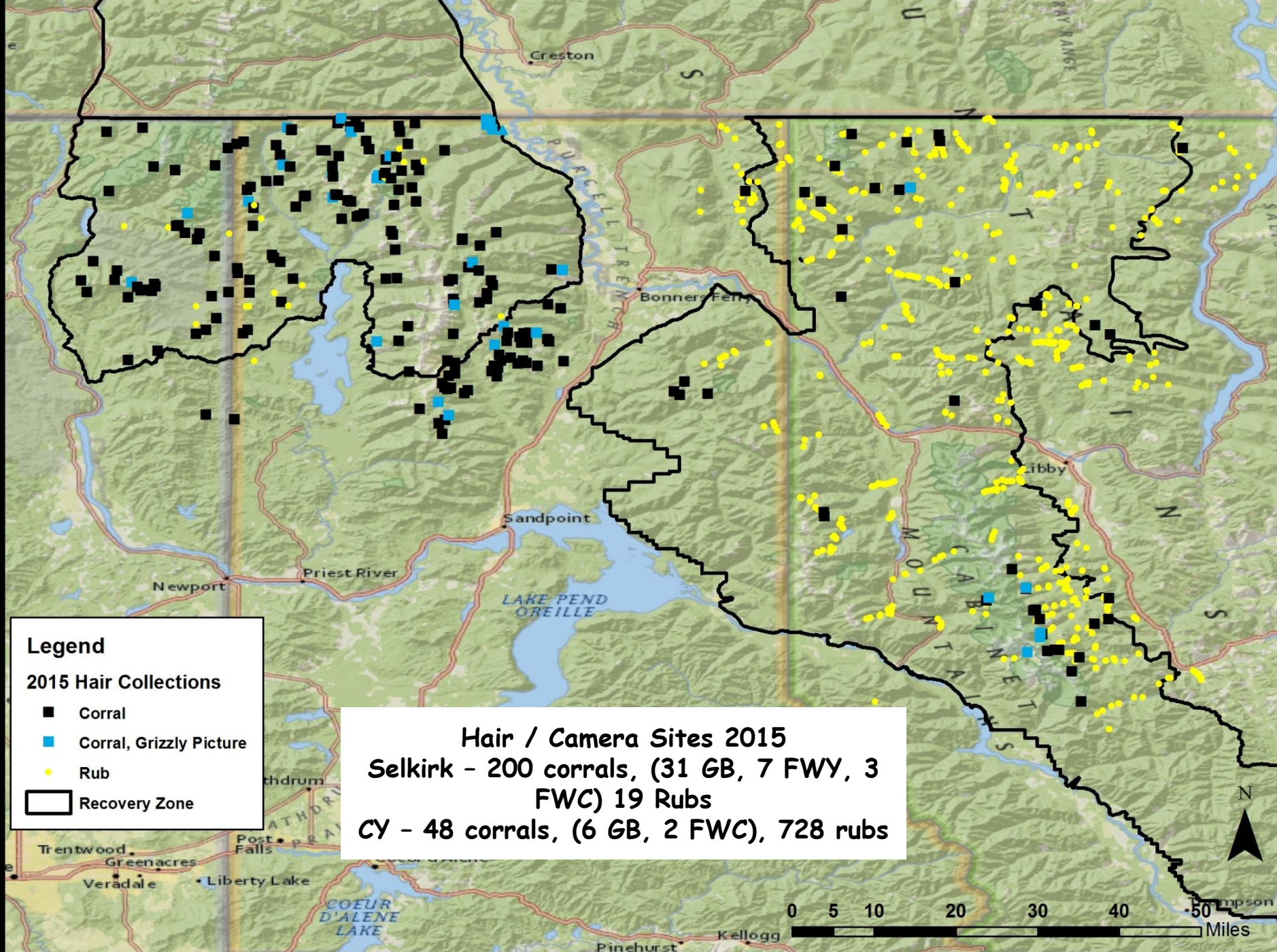
- Original capture 5/24/2011
Meadow Creek (ID/MT) 170 lbs
- Lost collar Oct 2012
- Hair snagged 2012, 2014 in Yaak
- Recaptured 10/5/2015 south of Libby in Cabinets 500 lbs
- Currently collared and moved back into Yaak
- First documentation of native bear moving between Yaak and Cabinets
- Movement, but not gene flow

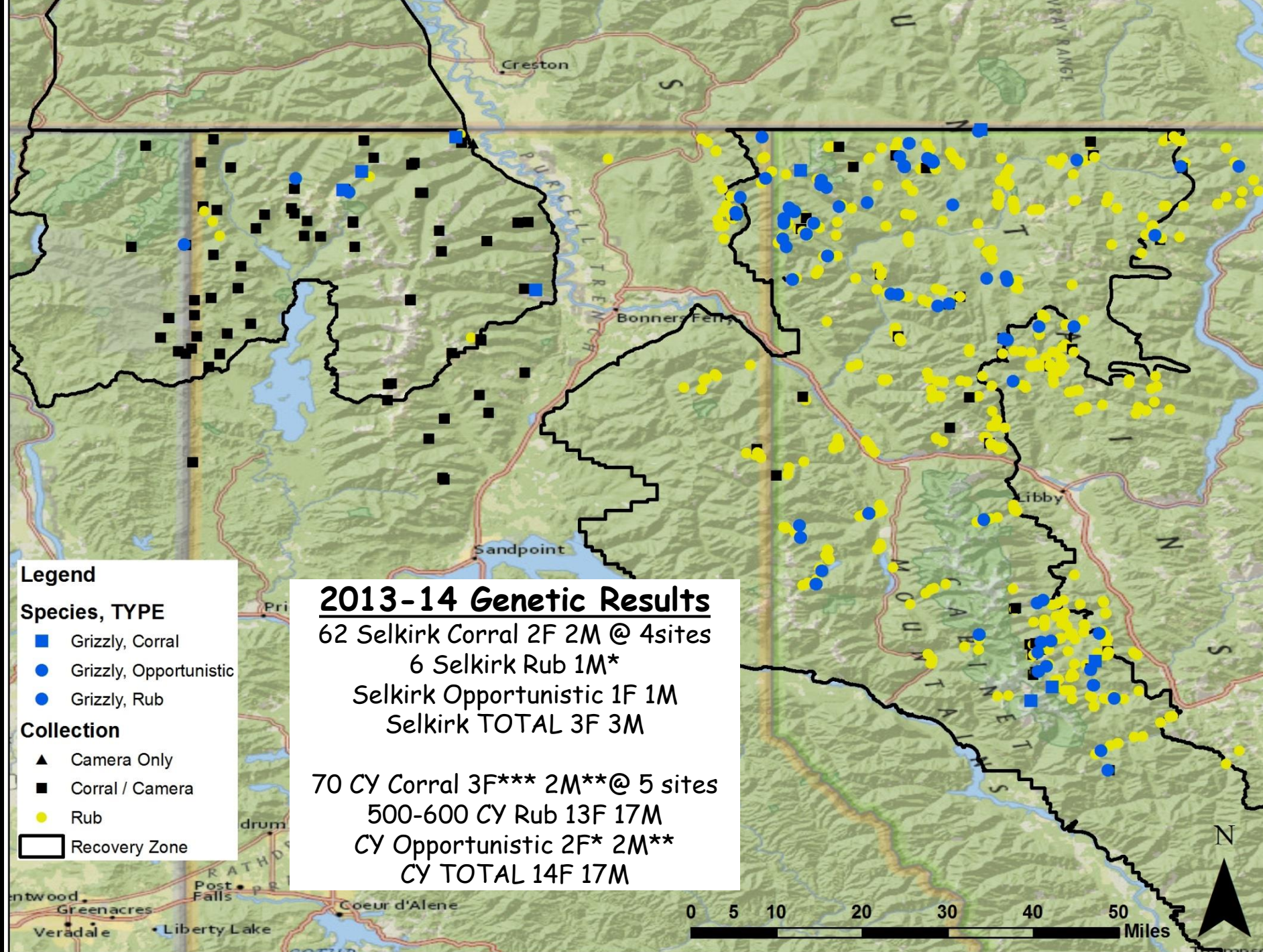


Hair Sample Collection

- Corrals 2-3 weeks
- Rub trees monthly May- September







GRIZZLY
B E A R

RECOVERY

P L A N



NCDE subunits =

CY and SM Recovery Criteria

Population of about 90 -100 bears, judged by the Number and Distribution of Females with cubs, Human-caused Mortality limits. Populations need to be linked to other populations.



Females with cubs over a running 6 year average.

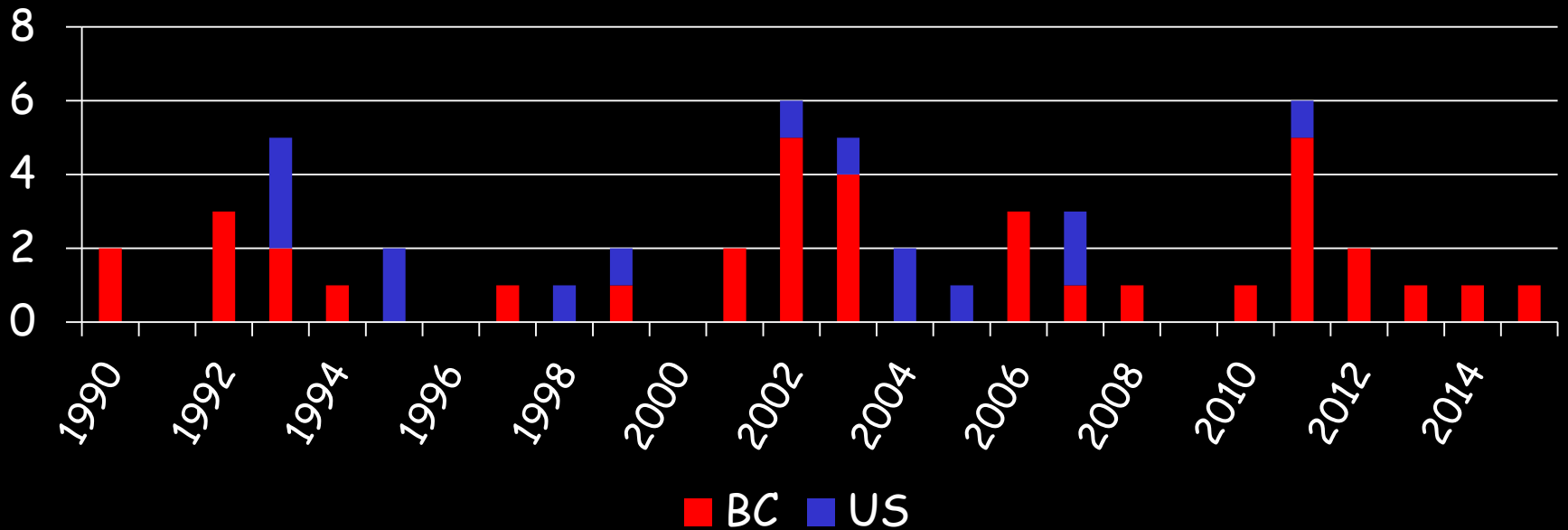
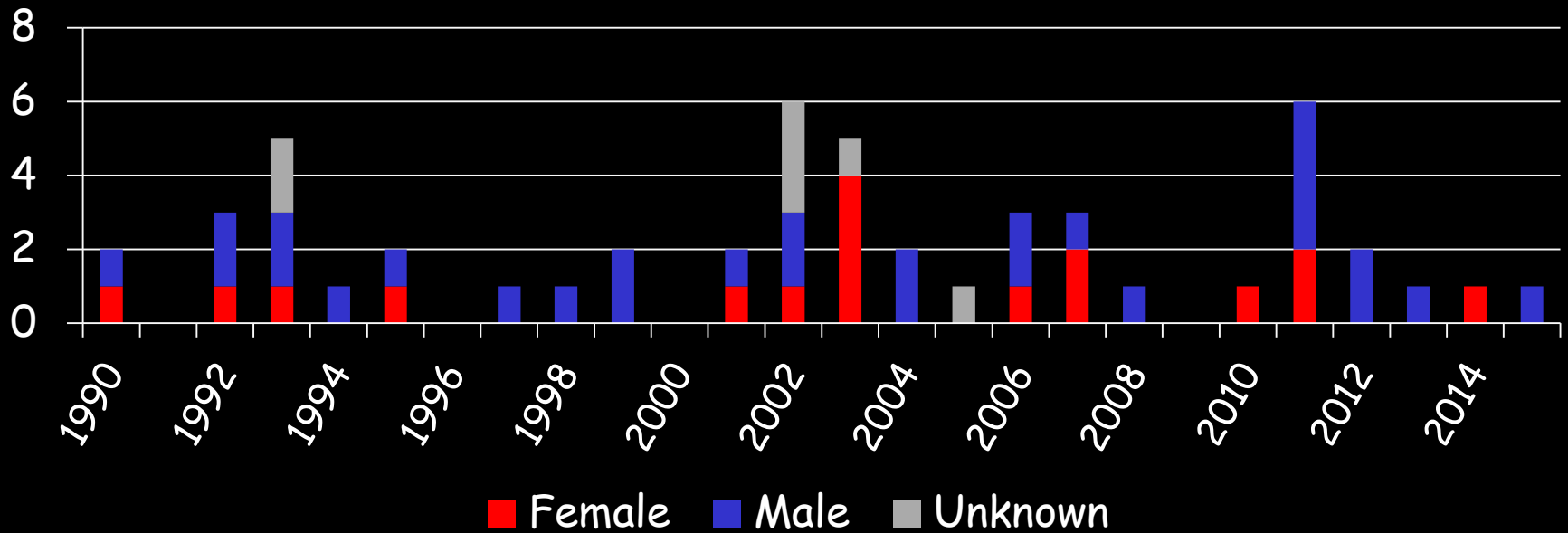
Number of BMUs occupied by females with young over 6 years.

Minimum calculated population size = (Sum of 3 years FWC - Mortality)
X Sightability X % Adult Females in Population

Known human-caused mortality not to exceed 4% of population and
female mortality should not exceed 30% of total mortality.



Selkirk Mountains Human Caused Mortality

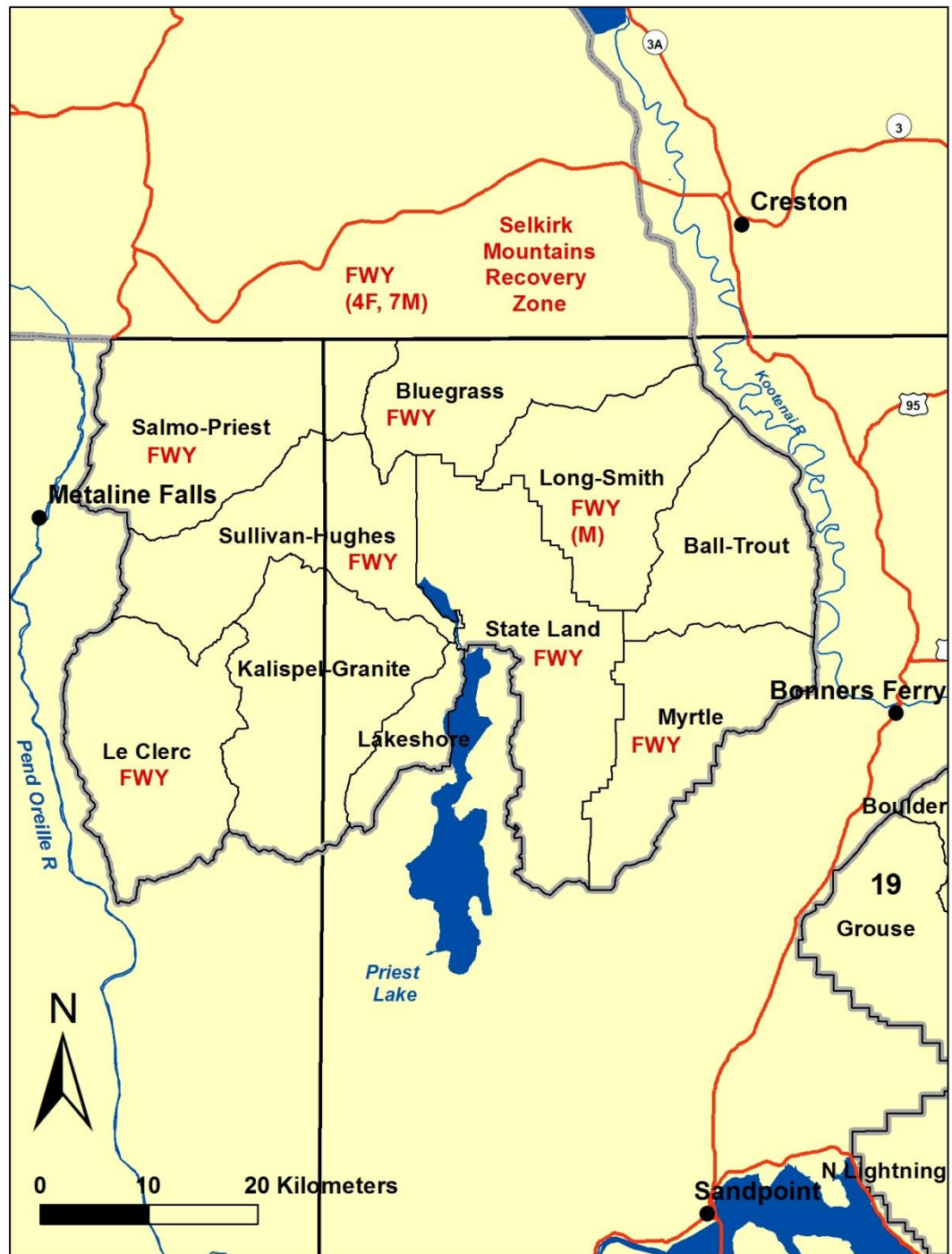


Female with young BMU occupancy and Human-caused Mortality, 2010-2015

FWY = Occupancy
() = Human-caused
Mortality

7 of 10 BMUs
occupied (Goal 7 of 10)

12 Human-caused
Mortalities (4F, 8M)



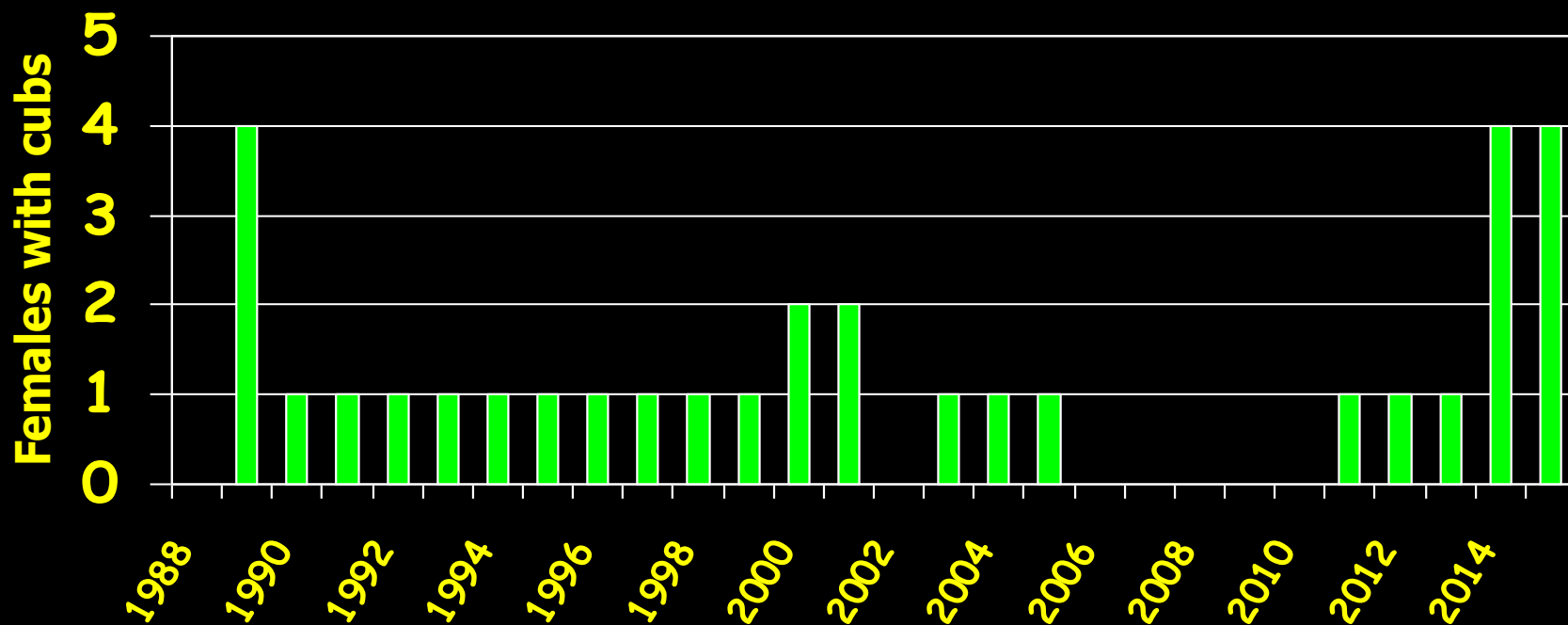


PCBS RAPIDFIRE PRO

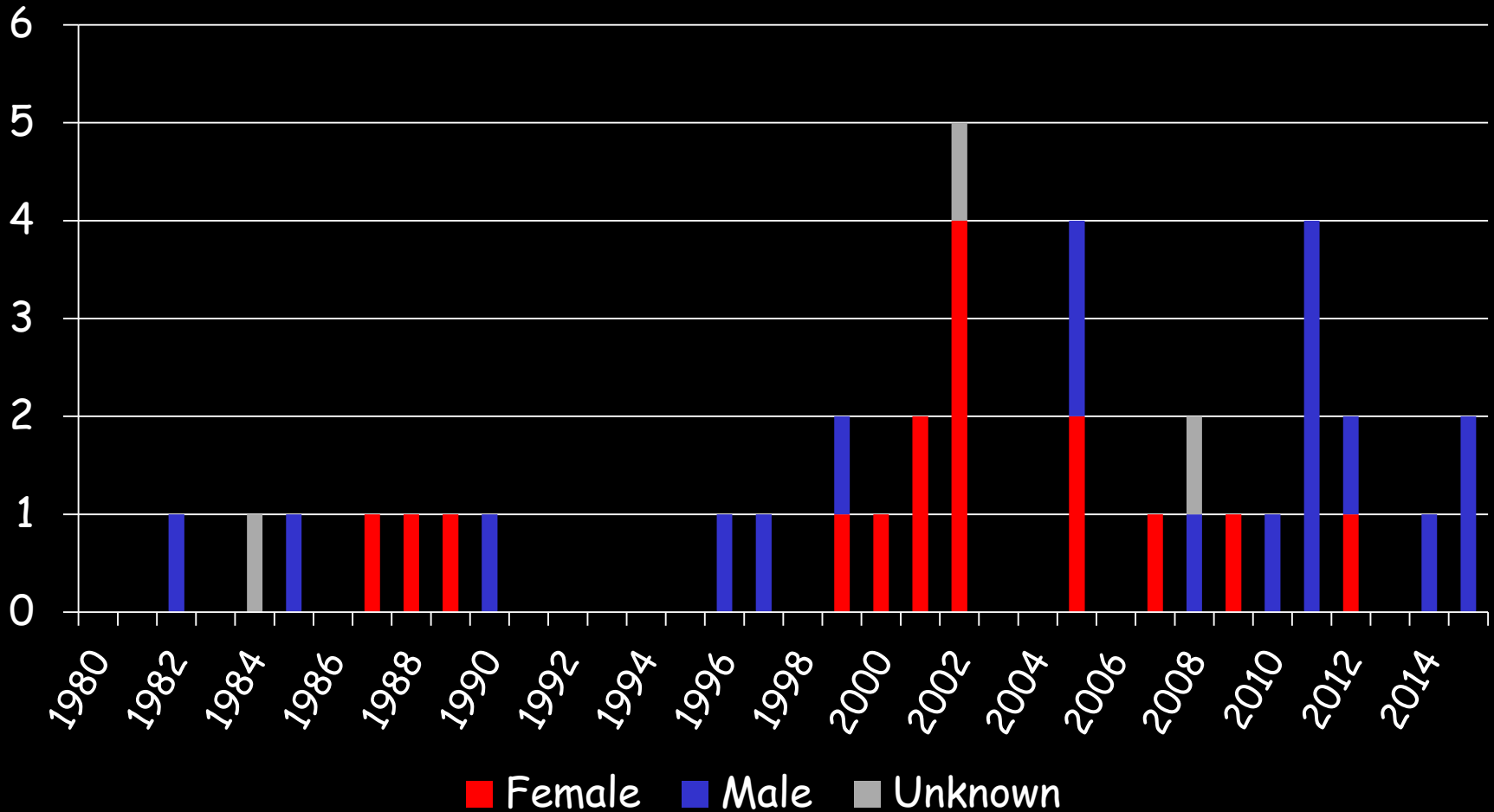
RECONIX

Selkirk Goal - 6 FWC over 6 years
Total mortality not to exceed 4% of
minimum population and female mortality
should not exceed 30% of total mortality

2010-15 - 11 FWC / 6 years = 1.8 FWC
2010-15 - 12 Mortalities / 6 years = 2.0 per year
2.0 / Minimum Pop 45 = 0.044 or 4.4% mortality
4 of 12 Mortalities were female = 33%



Cabinet Yaak Human Caused Mortality

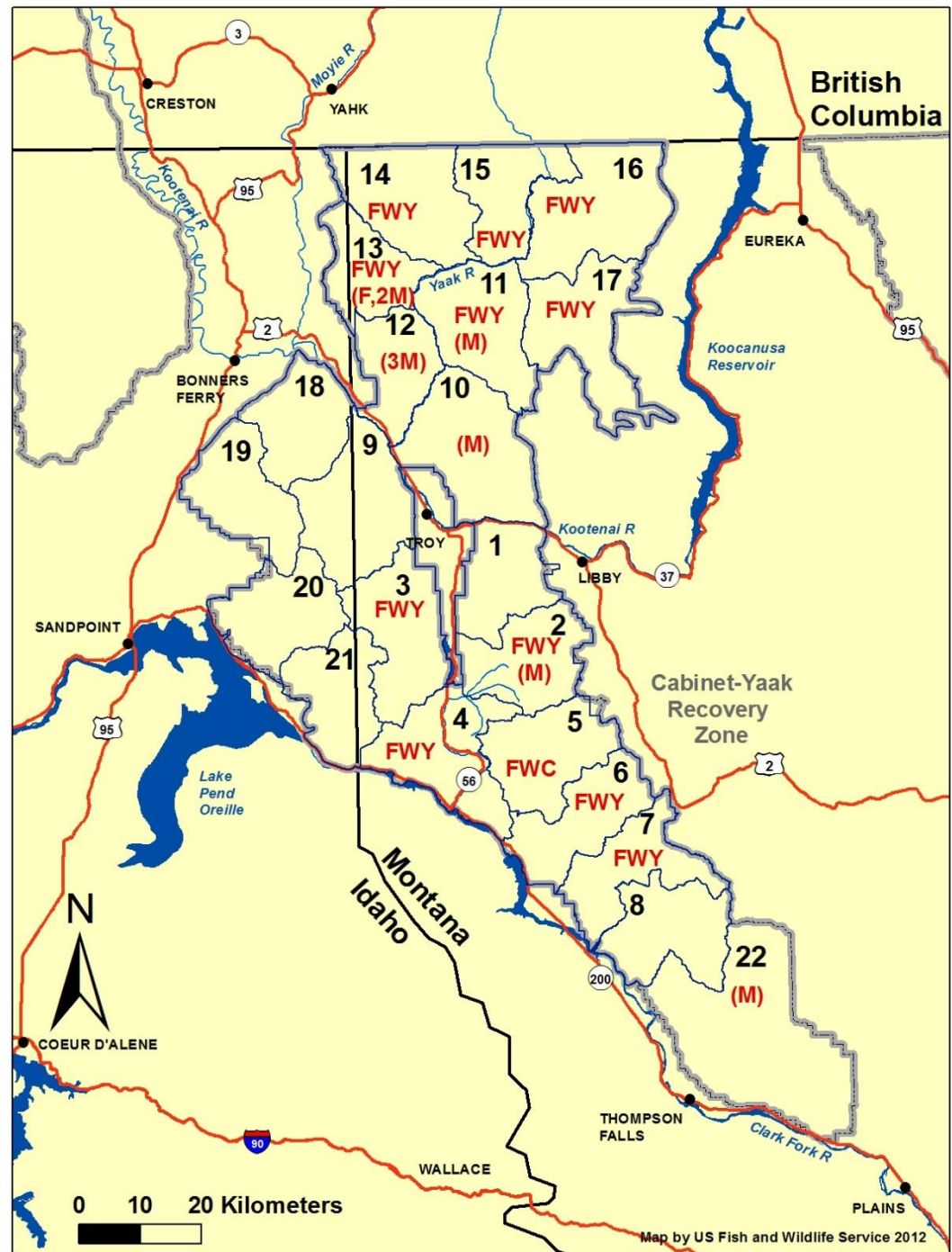


Female with young BMU occupancy and Human-caused Mortality, 2010-2015

FWY = Occupancy
() = Human-caused Mortality

12 of 22 BMUs occupied
(Goal 18 of 22)

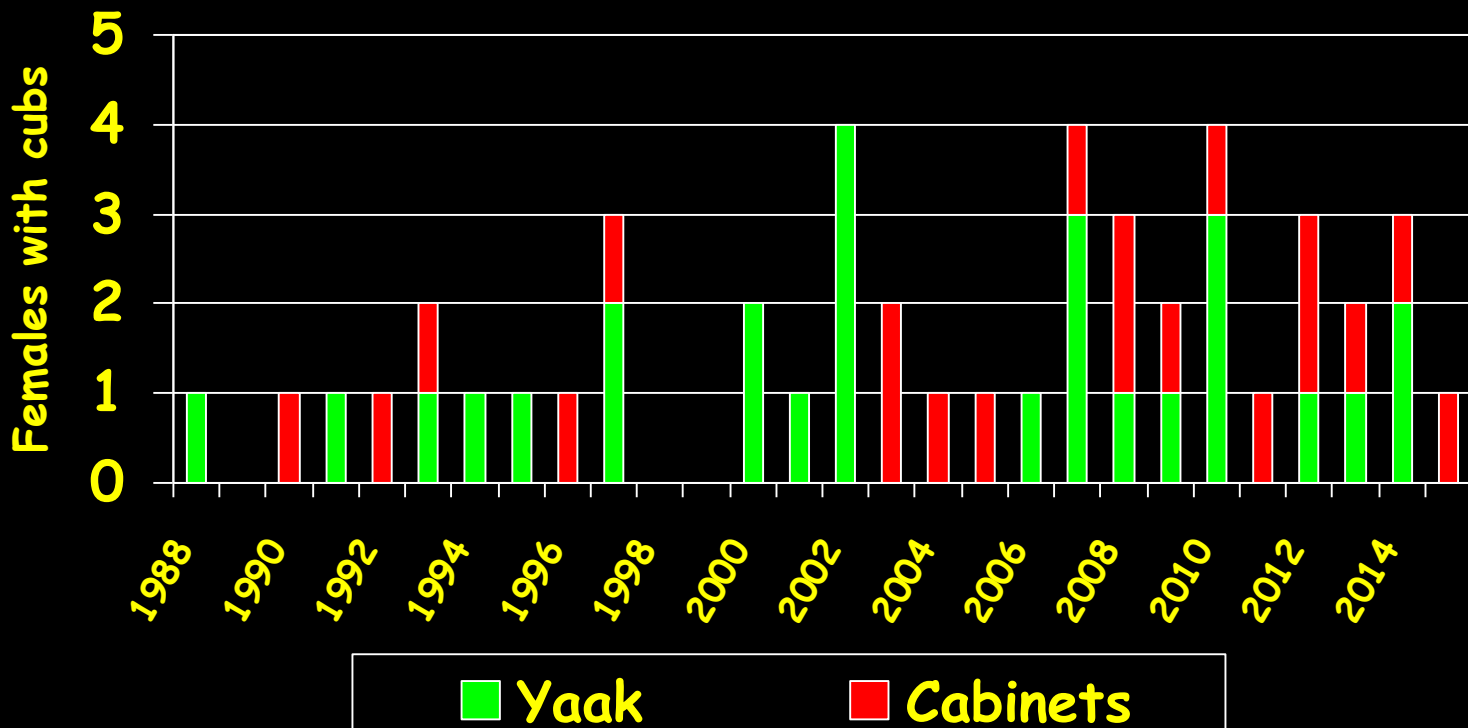
10 Human-caused Mortalities (1F, 9M)





Cabinet-Yaak Goal - 6 FWC over 6 years
 Total mortality not to exceed 4% of
 population and female mortality should not
 exceed 30% of total mortality

2010-15 = 14 FWC / 6 years = 2.3 FWC
 2010-15 = 10 Mortalities / 6 years = 1.7 per year
 $1.7 / \text{Minimum Pop } 35 = 0.049$ or 4.9% mortality
 1 of 10 Mortalities were female = 10%

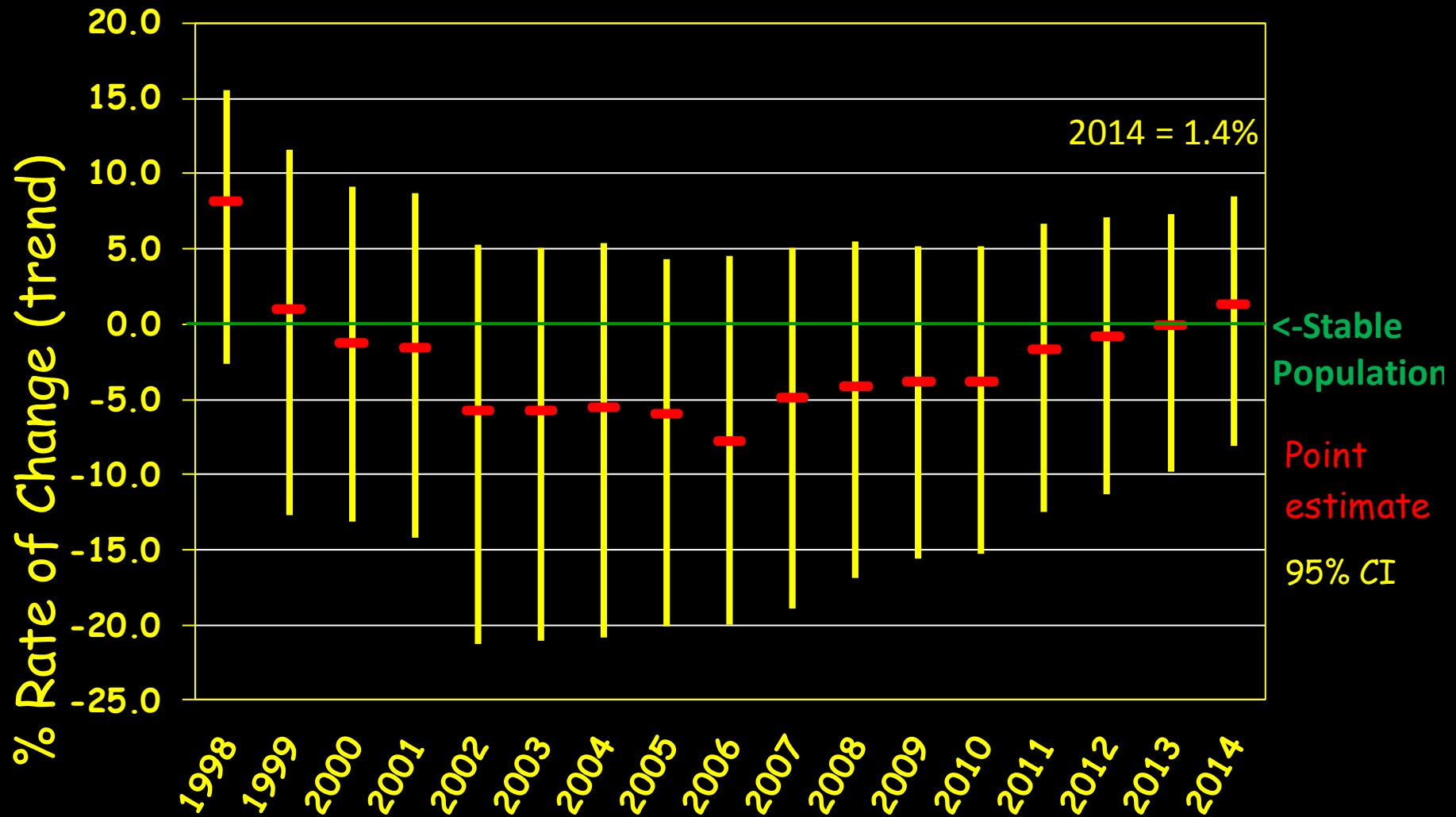


Radio collared bears are the basis for determining population trend

- Survival information based on time wearing collar alive
- Mortality cause information
- Reproduction data
- Survival of young
- Calculations compare reproductive rates with survival/mortality rates to determine if population growing



Cabinet-Yaak Cumulative Population Rate of Change (trend) from 1983



QUESTIONS?

Reports found at: <http://www.igbconline.org/index.php/scy-reports>

or

<http://www.fws.gov/mountain-prairie/species/mammals/grizzly/cabinetarchive.html>

We wish to extend a special thanks to the citizens of the province of British Columbia for allowing us to remove grizzly bears from the Flathead River drainage to augment populations in the Cabinet Mountains.



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• M. Burcham