

Not out of the woods yet – Recovering the Klinse-Za caribou herd in Central BC.



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Outline

- Background
- Caribou Guardian
- Penning results and challenges
- Long-term recovery actions
- Take home messages





Starr Gauthier

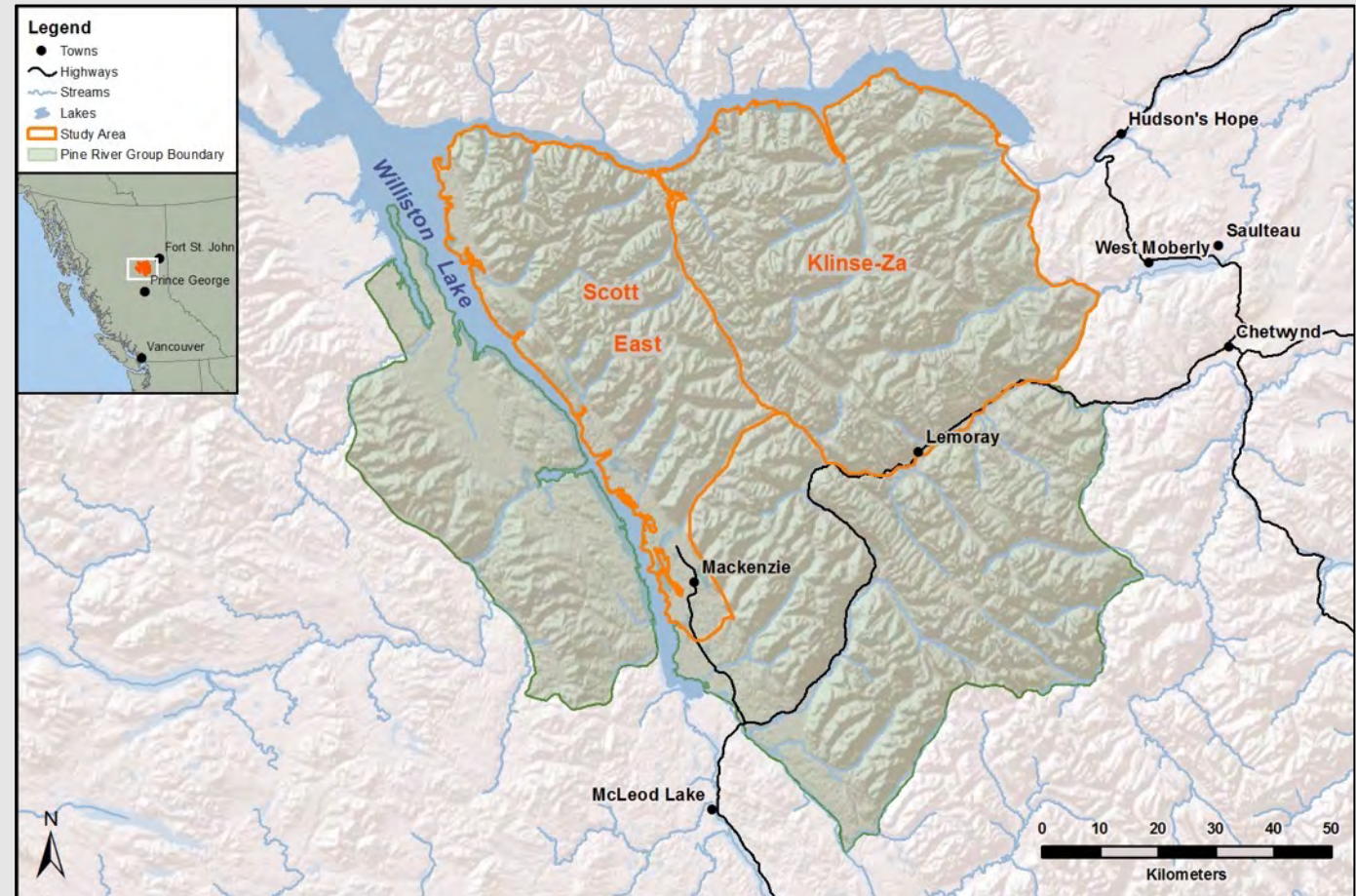
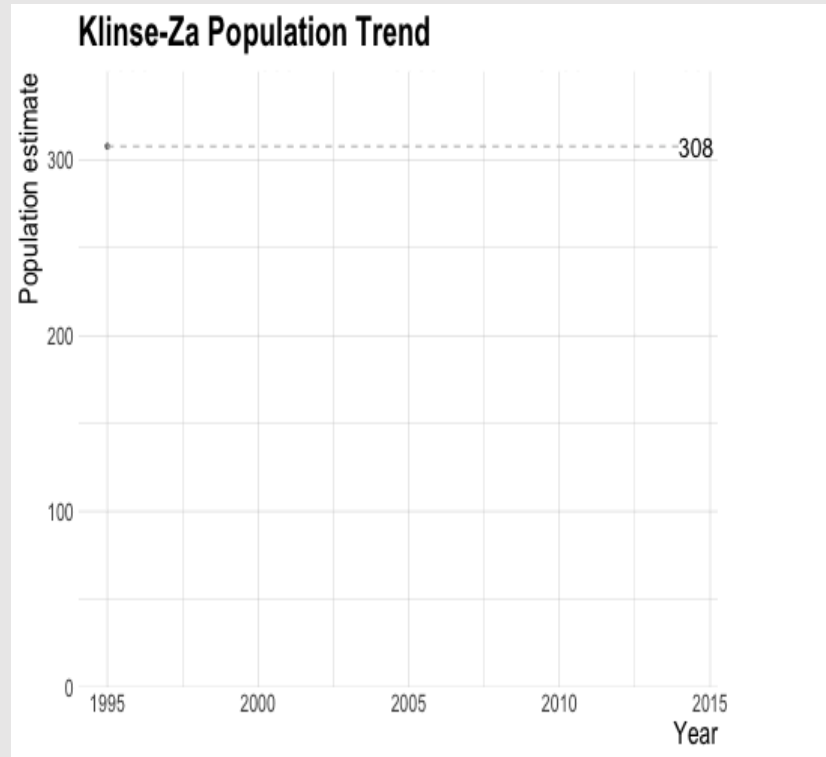


Landon Birch



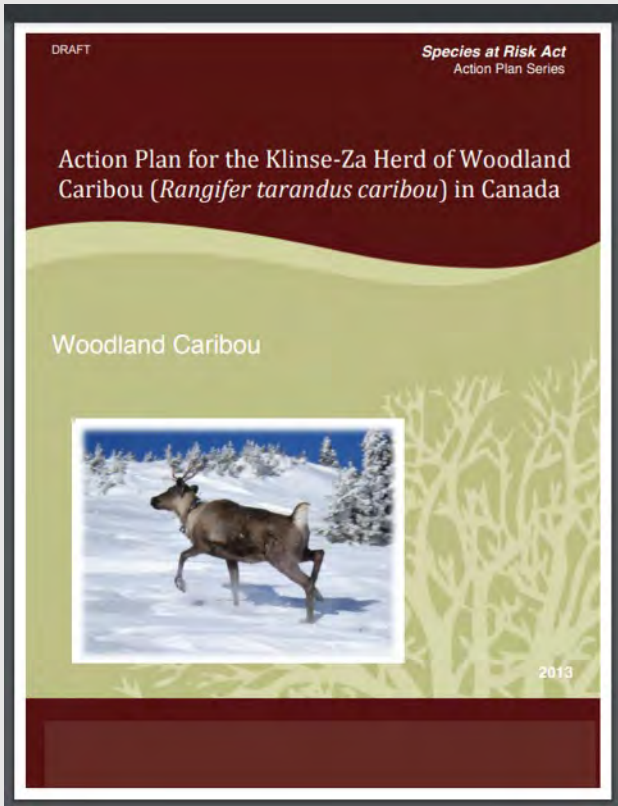
Blake Spencer

Background



- Nations voluntarily stopped hunting caribou in the 1970's
- 18+-yr decline (254 to 36 in 2013)
- Burnt Pine herd extirpated 2013-14
- Scott West herd functionally extirpated around 2017
- WAC Bennett Dam constructed 1961-68

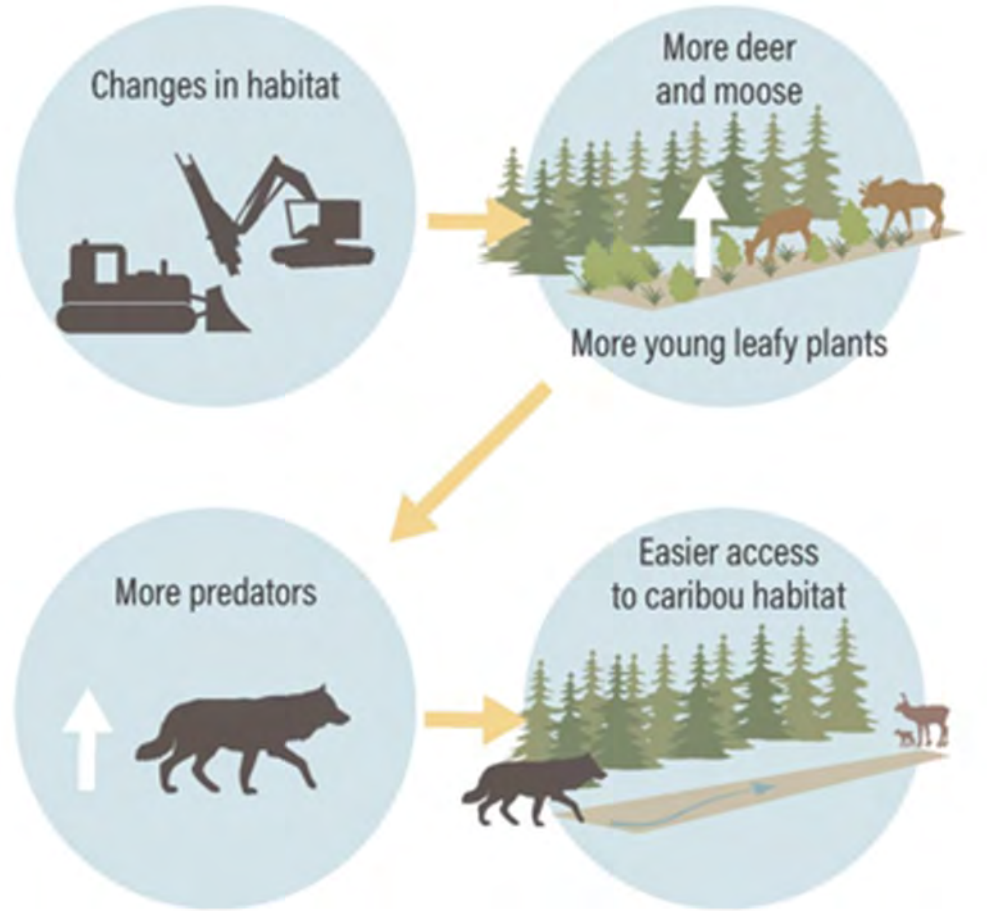
Klinse-Za Recovery Plan (2013)



The strategies, approaches, and actions identified in this Action Plan are designed to stop the population decline that is currently occurring and to restore population numbers in the short term. Habitat protection measures including disturbance thresholds are recommended in order to

1. Reduce mortality (reduce wolves and pen pregnant cows during the natal period) to caribou on and around Klinse-Za and augment the Klinse-Za herd with members from adjacent herd areas;
2. Establish thresholds for maximum levels of disturbance to critical habitat (0% HEWR, 5% CSR, 10% LER, and 20% matrix habitat) and adopt specific range plans to restore already disturbed land and protect against new disturbance where necessary to meet thresholds for disturbance; and
3. Establish a Stewardship Team to initiate implementation and management of this Action Plan and to coordinate actions with other planning initiatives.

Why penning??

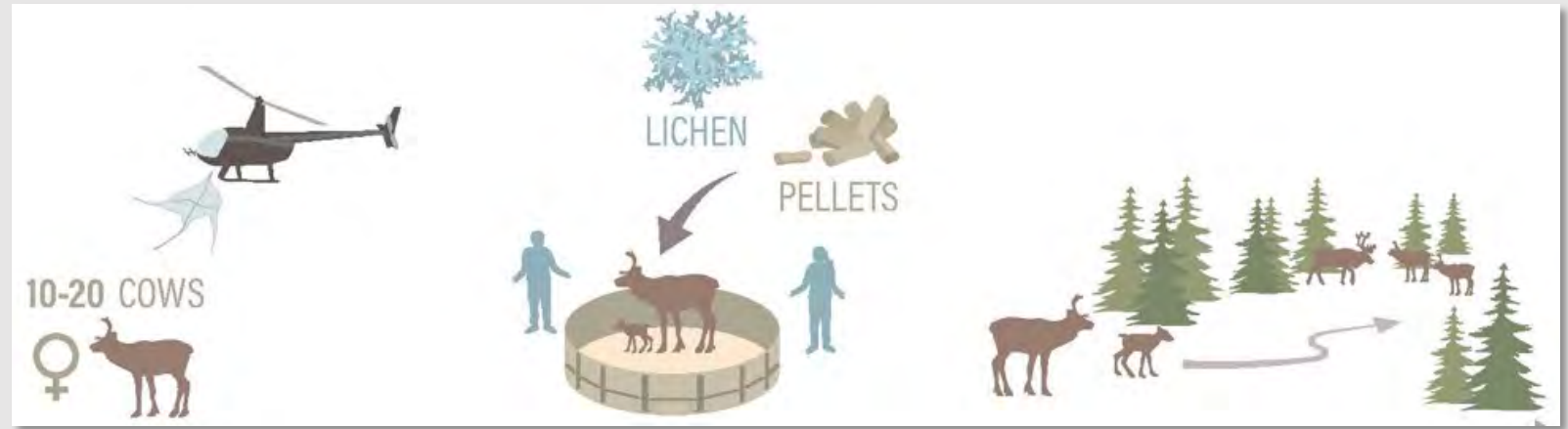




What does a pen look like?



How does maternal penning work?



March

August



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What is a caribou Guardian?

- Guardian team is composed of community members from Saulteau and West Moberly First Nation
- They are responsible for taking care of the caribou 24/7 for six months of the year while in the pen
- Maintaining fence integrity
- Collecting data to monitor effectiveness

Feeding the caribou

Lichen



Pelleted feed



Monitoring the caribou

Are they alive?



What are they doing?



Credit: Jesse Winter

Are they safe and healthy?



Credit: Jesse Winter

Fence work

Electric fence



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Geotextile fence



Observing,
capturing, marking
and collaring
newborn calves



Credit: Ryan Dickie



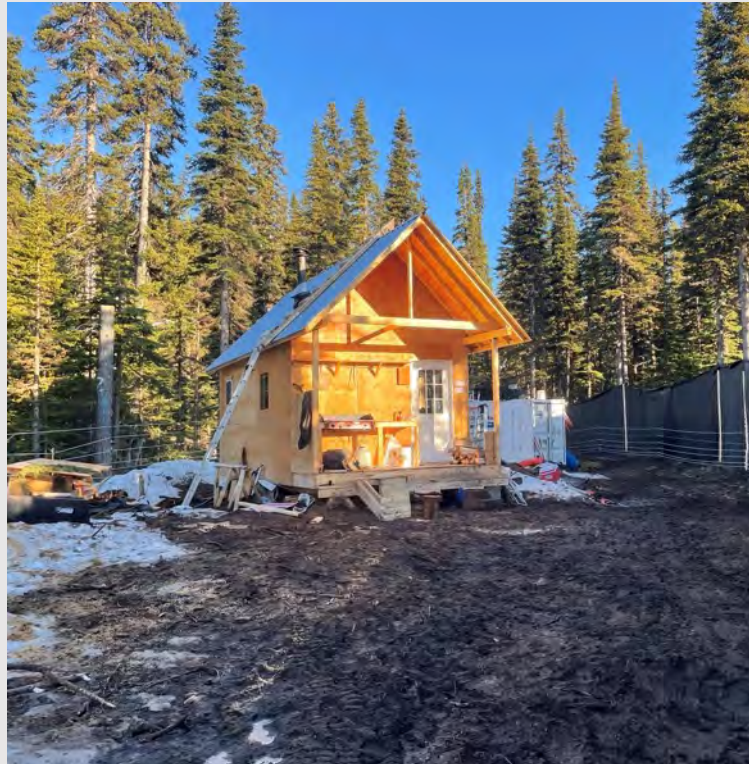
Unusual Movement

- Unexpected migration of a 4-month-old calf along with unknown number of adults
- Potentially cuts 2020-21 population growth in half



A Guardian season

- Can be isolating, monotonous and physically difficult
- Easy to become complacent
- Rewarding and meaningful





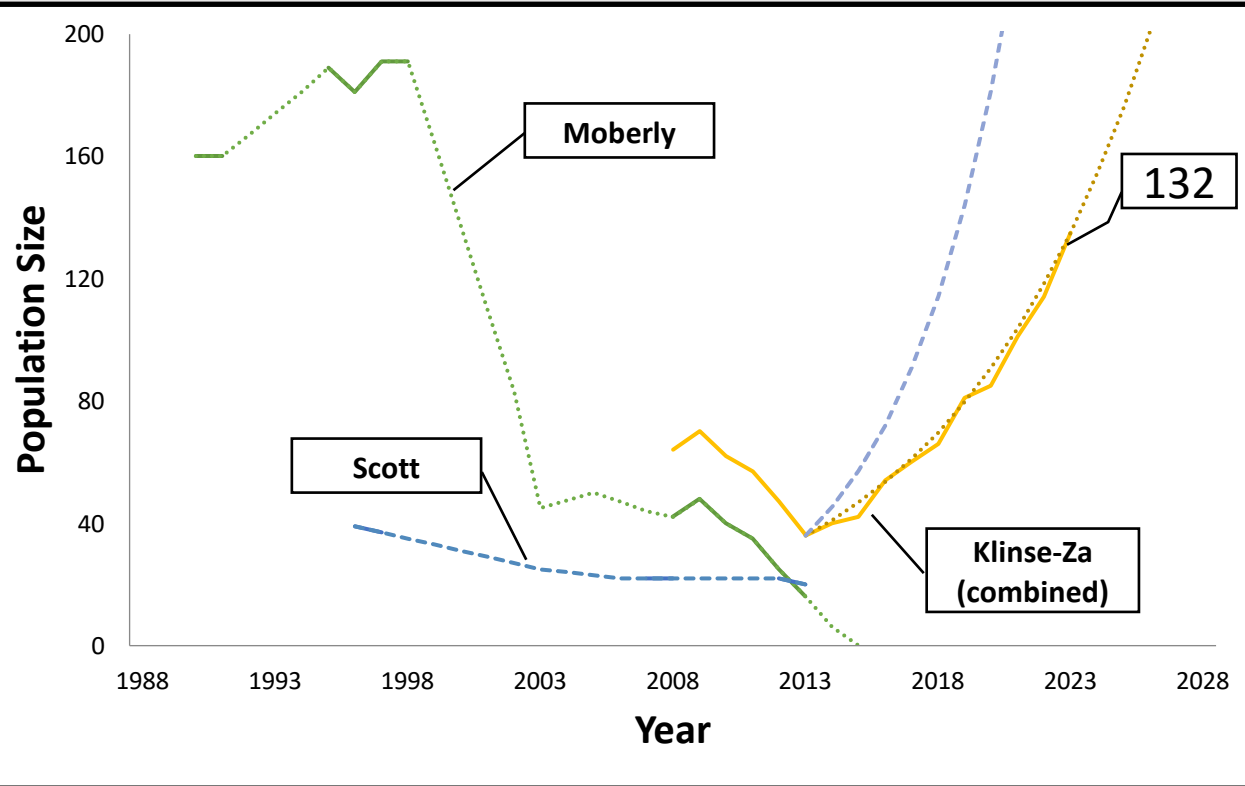
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Penning Results

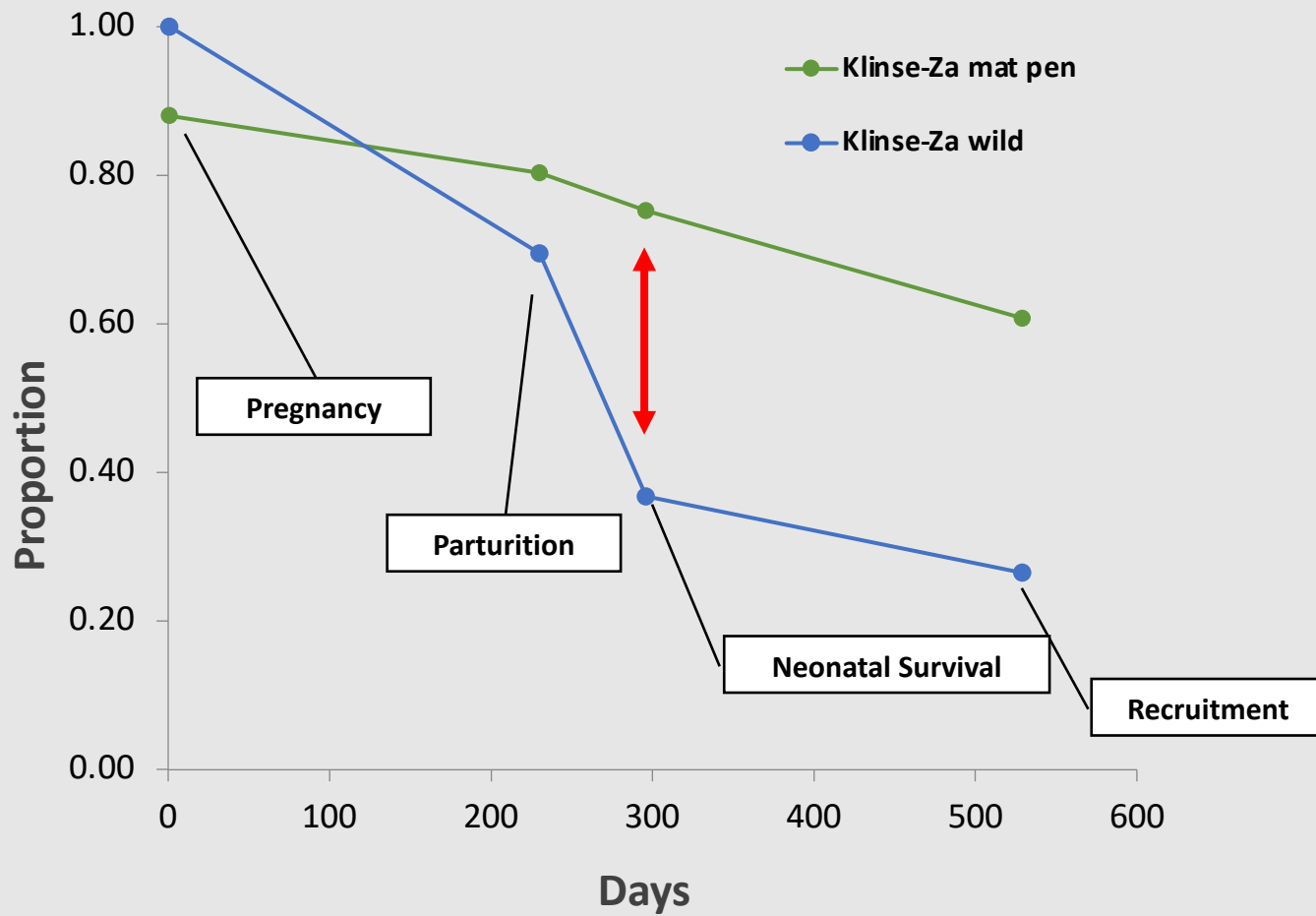


Population growth

- Average ~14% per year (intrinsic is 26%)
- Recruited adult female increases are still small (but growing)
 - 3 in 2014
 - 6 in 2022



Calf survival



Mortality causes

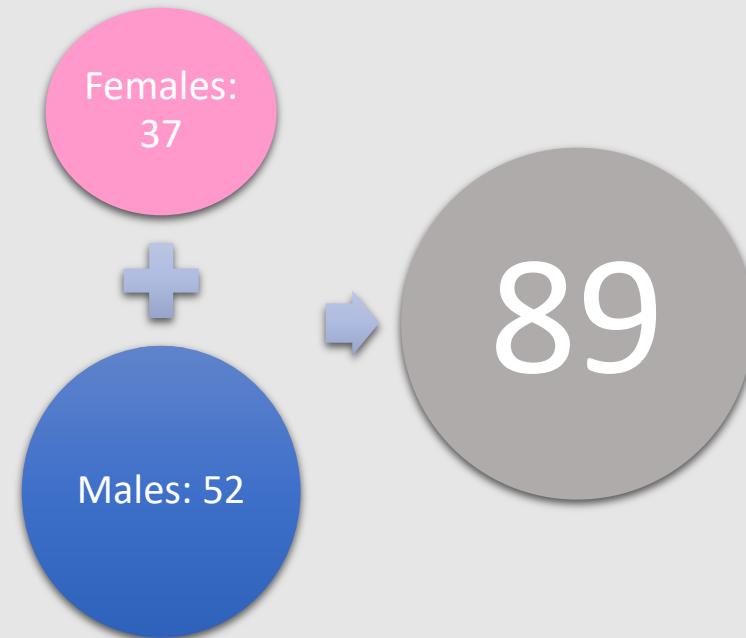
Mortality Cause	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Avalanche	0	0	6	0	2	1	1	1	1	12
Wolf	5	1	0	0	0	3	0	0	0	9
Accident	2	0	0	0	0	2	2	1	0	7
Unknown	0	1	1	1	1	0	1	1	0	6
Wolverine	0	0	0	1	0	0	0	2	2	5
Stillborn	0	1	0	2	1	0	0	0	0	4
Pred other	1	0	0	1	1	0	0	0	1	4
Abandonment	0	0	0	0	0	0	0	1	2	3
Health	0	0	0	0	0	0	0	0	2	2
	8	3	7	5	5	6	4	6	8	52

- Avalanches are always a problem
- Together predators account for 18 of 52 deaths (33%); wolves 9 of the 18, but none in the last three years
- Wolverines an emerging threat to calves



Challenges

Calf sex bias



Challenges

Raising an orphan

- Round-the clock
- Requires dedicated Guardians and caregivers
- Risk of habituation



Challenges

Partnerships and capacity building

- Capacity limited by seasonal nature of work, lure of higher-paying work elsewhere, need for remote living in some cases
- Most of the Indigenous Guardians have made sacrifices of one type or another in order to keep the program strong



Credit: Ryan Dickie



We've had an amazing team over the years

What long-term recovery might look like



Primary Cause of Caribou Decline in the Central Group

- Population declines attributed to habitat loss, degradation and fragmentation from both human-caused and natural sources, and increased predation as a result of habitat alteration¹.
- Habitat alteration negates components of caribou survival strategies while complementing the strategies of predators.



1: https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/plans/rs_woodland%20caribou_bois_s_mtn_0614_e.pdf

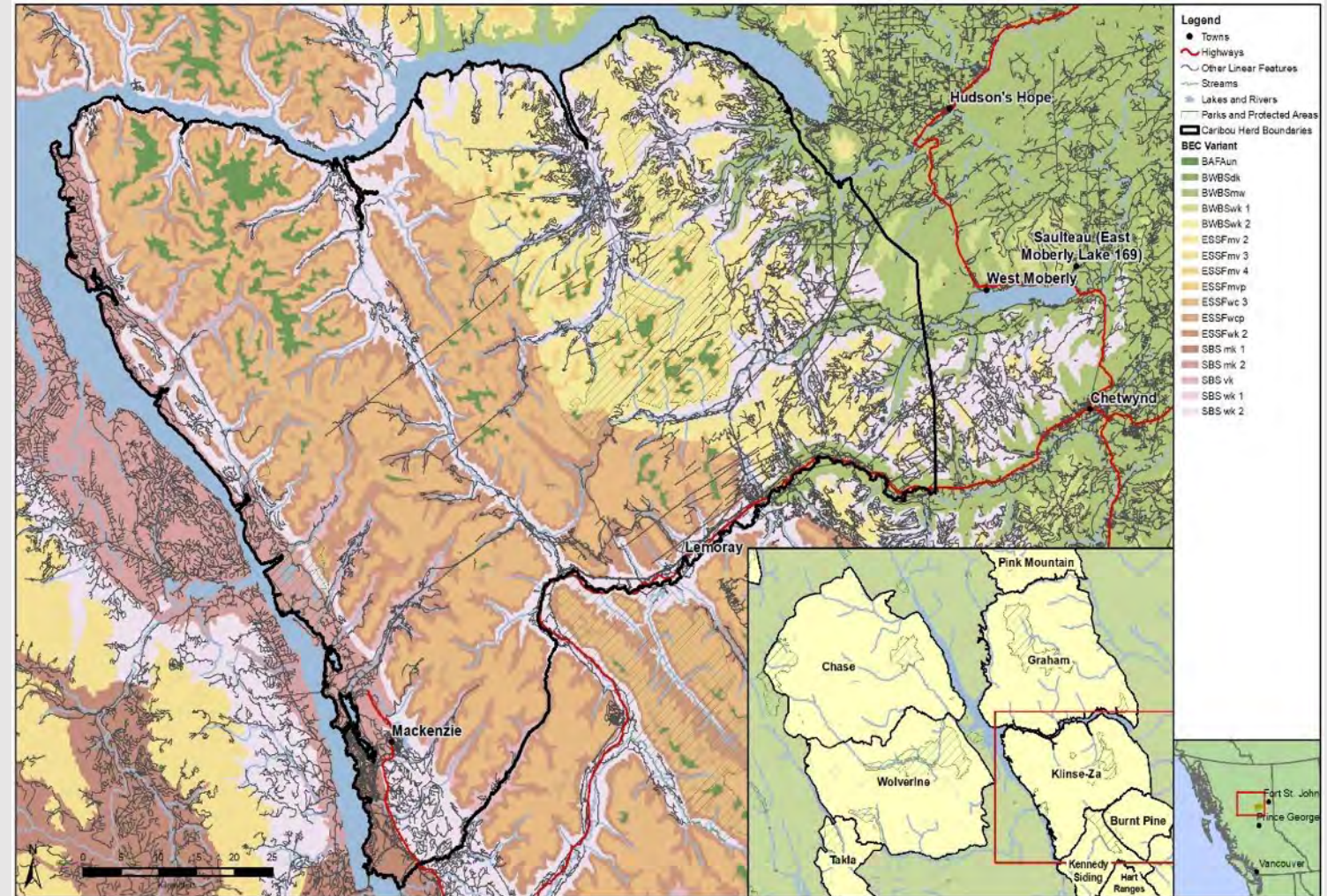
Methodology of Restoring Caribou Habitat

- Short-term; limit the utility of linear disturbance features as travel corridors
- Long-term; ensure an adequate density and distribution of suitable tree or shrub species



Caribou Herd Level Habitat Restoration

- Federal objective of 65% minimal undisturbed habitat level¹
- Klinse-Za herd currently estimated at 58.6%, up from 57.7% after 241km of linear disturbance features treated in one form or another.
- Can take +10 years after a restoration treatment before it can be functionally effective
- With current data, recently estimated that with +200% increase in amount of restoration per year, would take +5 years to achieve 65%.



Take home messages

This project is currently the most successful caribou maternity pen in Canada and contributes to an unprecedented population recovery program, but.....

- Recovery is a slow, expensive game if we wait until populations are small
- Continued support is needed to ensure recovery and long term-population stability.
- Without addressing long-term habitat restoration needs, there is no insurance on population recovery progress





Questions?