KASKA WILDLIFE MANAGEMENT UPDATE

MOOSE MONITORING AND SURVEYS

DENA KAYEH INSTITUTE (DKI) AND DANE NAN YÉ DĀH (DNYD) GUARDIANS HAVE BEEN CONDUCTING AERIAL SURVEYS TO BETTER UNDERSTAND MOOSE POPULATION STATUS WITHIN THE KASKA TERRITORY IN BC TO HELP INFORM MOOSE MANAGEMENT DECISIONS .

BELOW IS INFORMATION FROM GOVERNMENT OF BC ON THE WAYS KASKA ARE MONITORING MOOSE NUMBERS (Source: *Moose Monitoring in Omineca – BC Government Infographic*)

How we are monitoring moose:

For non-herding animals like moose, counting every individual in every location is not possible. However, since moose use relatively predicable habitats during winter, a representative sample of these habitats can be surveyed to estimate moose numbers across the larger survey area. From these surveys, we can collect information on moose population numbers, trends, density, and composition (bull/cow/calf ratios).
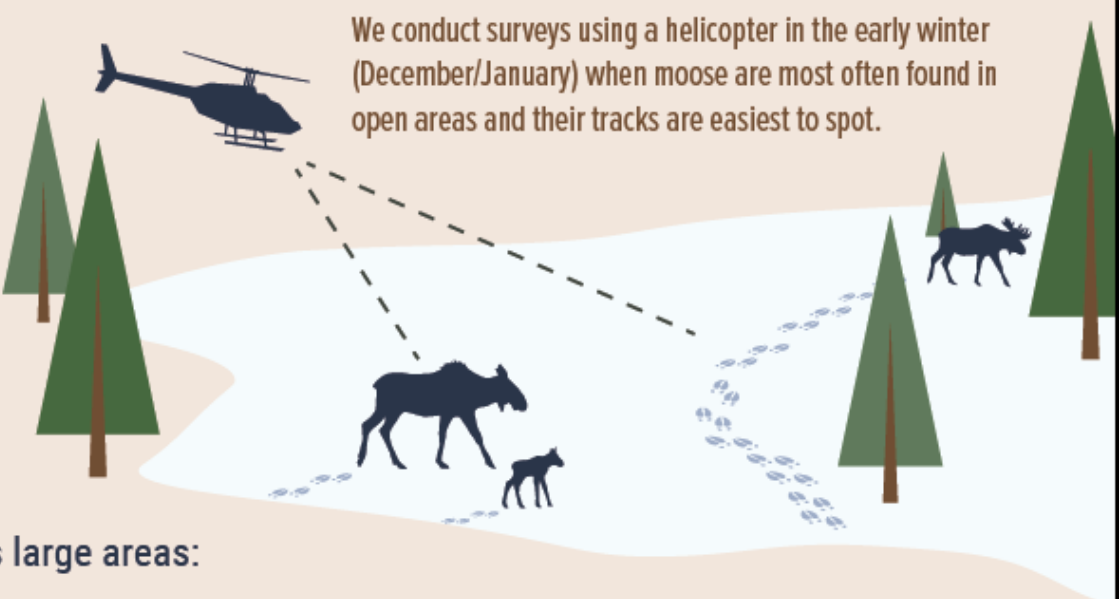
We conduct surveys using a helicopter in the early winter (December/January) when moose are most often found in open areas and their tracks are easiest to spot.

We conduct two different types of aerial surveys across large areas:

1 **Larger more intensive surveys,** called stratified random block (SRB) counts, are used to estimate moose abundance, density and composition. These population-scale areas are typically surveyed every five years to assess population trends over time.

2 **Smaller (often single day) and less intensive composition surveys** are used to assess moose population demographics (bull/cow/calf ratios)—an indicator of moose population health.

How SRB counts work:

1 A survey area is divided into blocks.
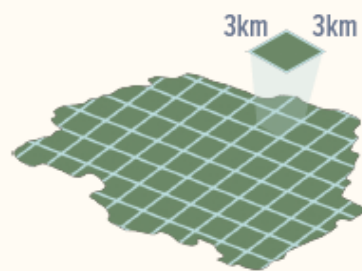
2 The habitat within each block is classified into areas ("strata") that are likely to have high or low numbers of moose.

3 A sample of blocks are then randomly selected for helicopter surveys where all visible moose within each strata are counted. More effort is spent in strata classified as good moose habitat.

3km 3km

GIS (mapping software)

The strata are often flown in straight parallel lines to ensure the whole area is covered.

4 When a moose is spotted, surveyors record its location, sex, and age.

5 Results are compiled to provide a moose population estimate.

Not all moose in a survey block can be observed, especially in denser forests. To account for moose that are not observed, we use a calculation called a "sightability correction factor." Moose in areas with thicker vegetation require a larger correction factor.

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BELOW IS A SUMMARY OF RESULTS

Bulls:100 cows (chart)

Year	
2023	~33
2020	~42
2019	~68
2015	~97
1997	~90

Scale: 0, 50, 100

Map labels:
- Tets'élúgé' - Watson Lake
- D'aelyu' - Lower Post
- Fireside
- Moose Monitoring Area
- Kidēshā - Good Hope Lake

Moose /sq. km (chart)

Year	
2023	~0.18
2015	~0.19
1997	~0.35

Scale: 0, 0.1, 0.2, 0.3, 0.4

Calves:100 cows (chart)

Year	
2023	~27
2020	~30
2019	~34
2015	~31
1997	~22

Scale: 0, 50, 100

🫎 Bulls have decreased since 1997 and 2015

🫎 Moose on the land have decreased with lower numbers since 1997

Low Density Moose Management (0.2 moose/km^2)
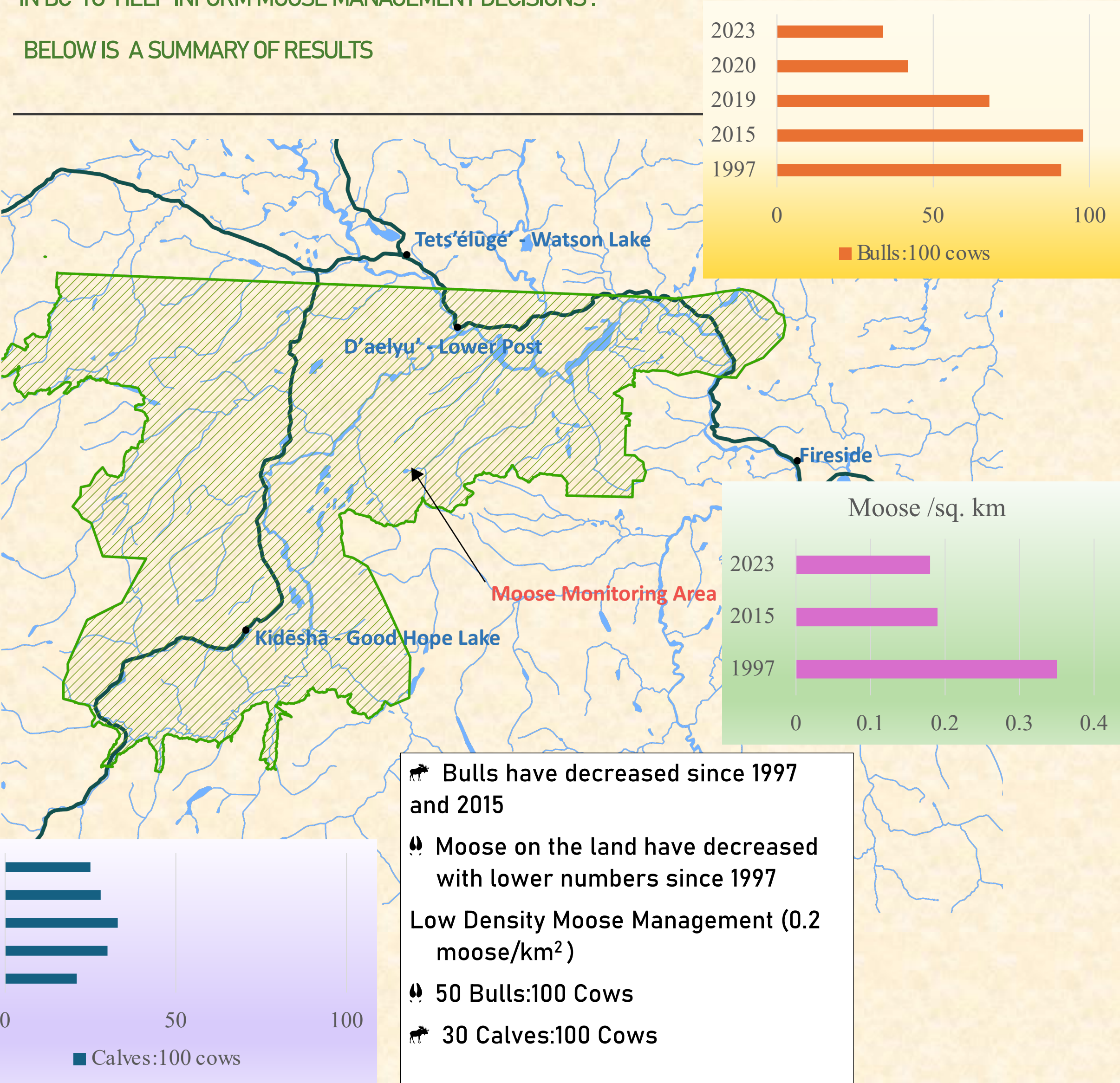
🫎 50 Bulls:100 Cows

🫎 30 Calves:100 Cows

KASKA WILDLIFE MANAGEMENT UPDATE

CARIBOU AND SHEEP MONITORING AND SURVEYS

DENA KAYEH INSTITUTE (DKI) AND DANE NAN YĚ DĀH (DNYD) GUARDIANS WERE INVOLVED IN SURVEYS WITH GOVERNMENT OF BRITISH COLUMBIA

LITTLE RANCHERIA CARIBOU SURVEY WAS A POPULATION ESTIMATE SURVEY (OCT 22)

CASSIAR STONE'S SHEEP SURVEY WAS A TOTAL COUNT (FEB 2024)

Tetş'élūǵé' - Watson Lake

D'aelyu' - Lower Post

2022 Little Rancheria Caribou Monitoring Areas

Kídēshā - Good Hope Lake

2024 Cassiar Sheep Monitoring Areas

Little Rancheria Caribou Survey Results Summary

(See BC handout for more information)

Date: October 3-14, 2022 Hours Flown: 69.6

Bull:cow ratio: 33:100

Calf:cow ratio: 6:100

Estimated population size: 742 (665-838, 90% CI)

Population trend: likely declining

Sheep Survey 2024 Results

Species	©⎴²/∂ⁱ⁴⎔Ǫ →¾	±á± x	Sheep					Goat		Other	
			Ewe like	xǏ σ¦	Ram Class 2	Ram Class 3	Ram Class 4	Adult	Kid	YOY	Un-classified
Golder Eagle	B-GOEA	10									
Gyrfalcon	B-GYFA	1									
Peregrine Falcon	B-PEFA	1									
Ptarmigan	B-PTAR	228									
Spruce Grouse	B-SPGR	1									
Swan	B-SWAN	4									
Whitetail Ptarmigan	B-WTPT	1									
Mountain Goat	M-ORAM	37						26	7		4
Stone's Sheep	M-OVDA	101	52	18	15	8	9				
Caribou	M-RATA	149								12	137