

Status of the Porcupine Caribou Herd

An aerial photograph showing a massive herd of caribou (reindeer) spread across a vast, flat, green tundra landscape. The animals are densely packed in some areas, particularly in the lower right quadrant, and more sparsely distributed in others. The terrain is a uniform green, suggesting a rich, grassy or mossy environment. The sky is not visible, as the horizon is very low.

A presentation to the PCH Annual Harvest Meeting
8 Feb 2011, Inuvik, NT

Outline

- Background
- Population
- Harvest
- Caribou Body Condition
- Habitat



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PORCUPINE CARIBOU
ANNUAL SUMMARY REPORT

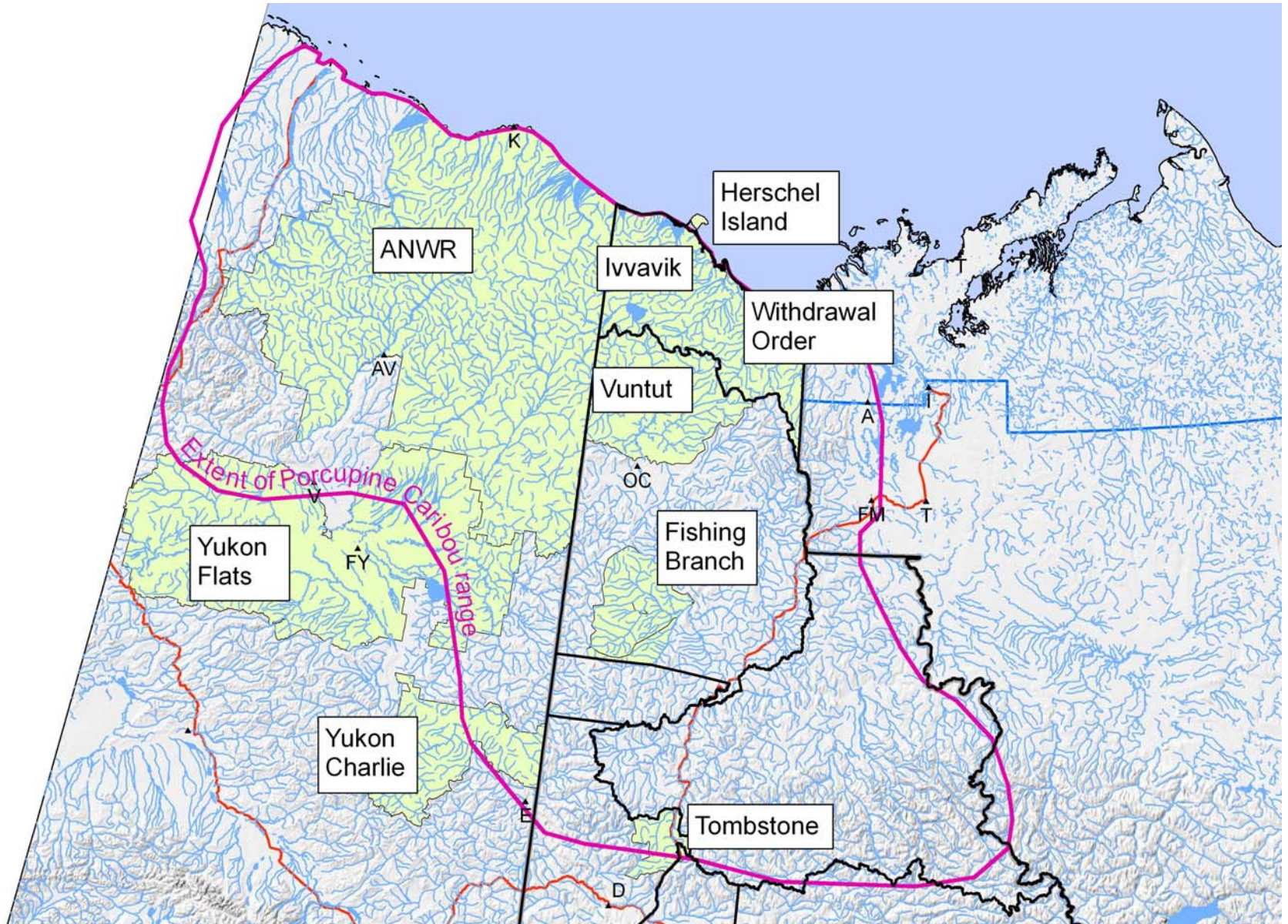
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Submitted to the Porcupine Caribou Management Board
February 2011

By the Porcupine Caribou Technical Committee
In preparation for the Porcupine Caribou Annual Harvest Meeting, 2011

BACKGROUND

Protected areas



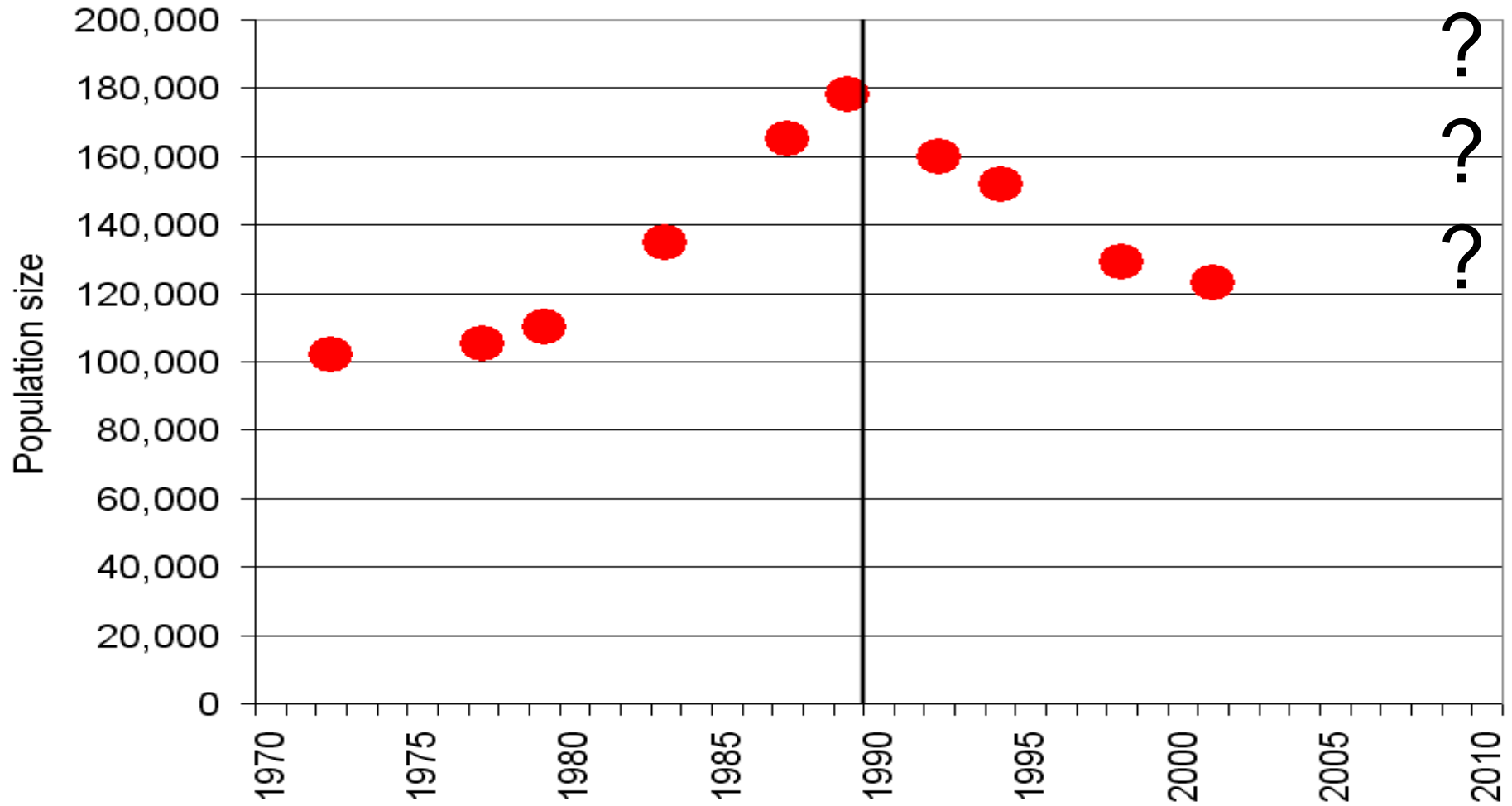
BACKGROUND

PCH Co- management

- *Porcupine Caribou Management Agreement (1985)*
 - Porcupine Caribou Management Plan written by the PCMB
- *Agreement between the Government of Canada and the Government of the United States of America on the Conservation of the Porcupine Caribou Herd (1987)*
 - Plan for the International Conservation of the Porcupine Caribou Herd written by the IPCB

POPULATION

Population estimates



Apply new harvest strategy to the following years

2001-06 2007-11 2012-15

Harvest and herd movements

Harvest level varies each year

Fixed harvest level

Total harvest level

No change to total harvest

Reduce total harvest

Increasing demand for meat

Sex ratio of harvest

No change to current practice

Fewer cows, more bulls

Far less cows, but more bulls

Wounding loss

Low

Medium

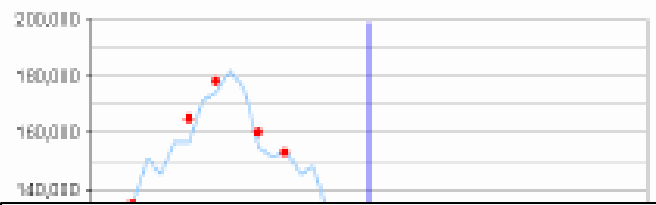
High

Time-area closures

Denominator restrictions in Fall

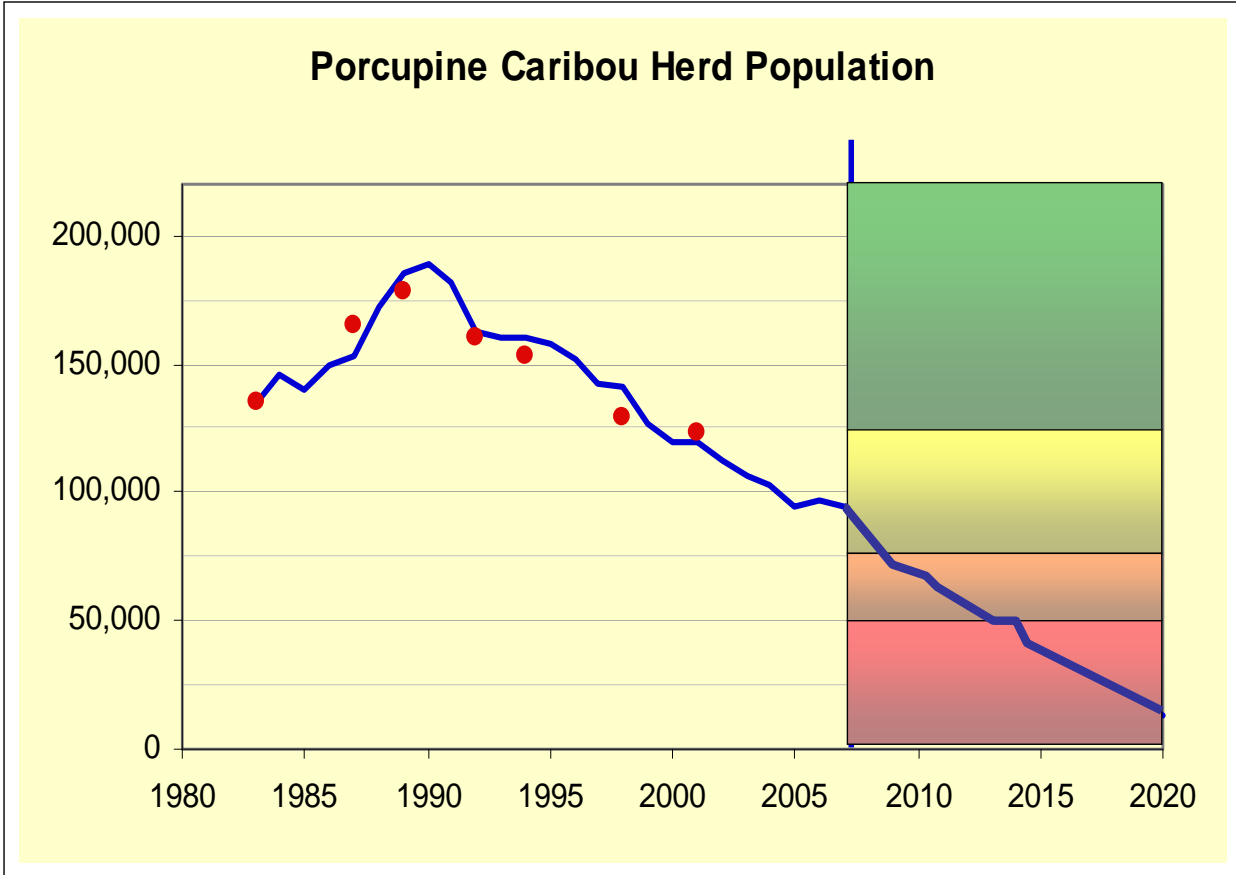
*note: time-area closures aren't entered in yet
(as of April 12th)*

Porcupine Caribou Herd Census



Business as usual

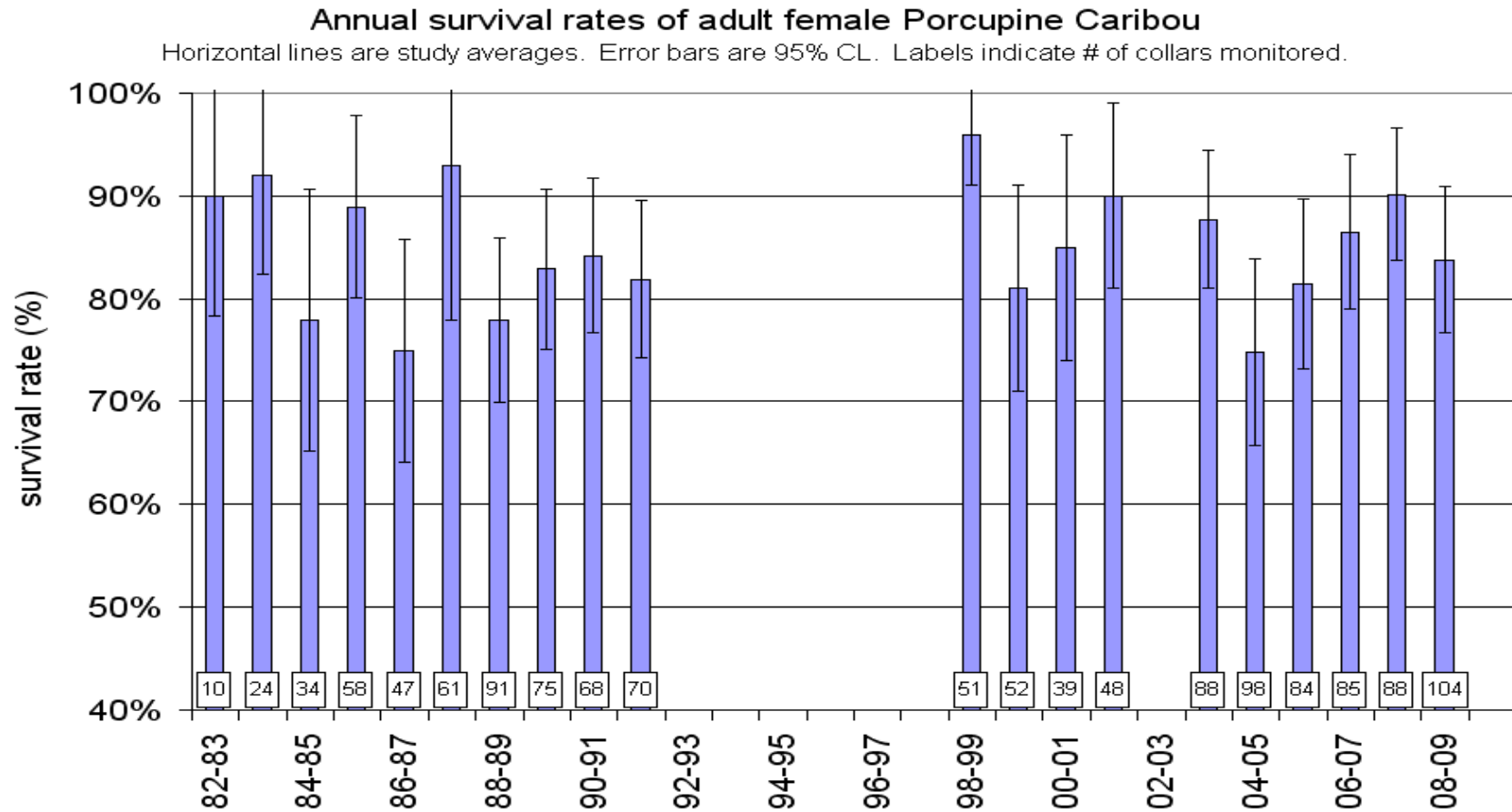
Porcupine Caribou Herd Population



POPULATION

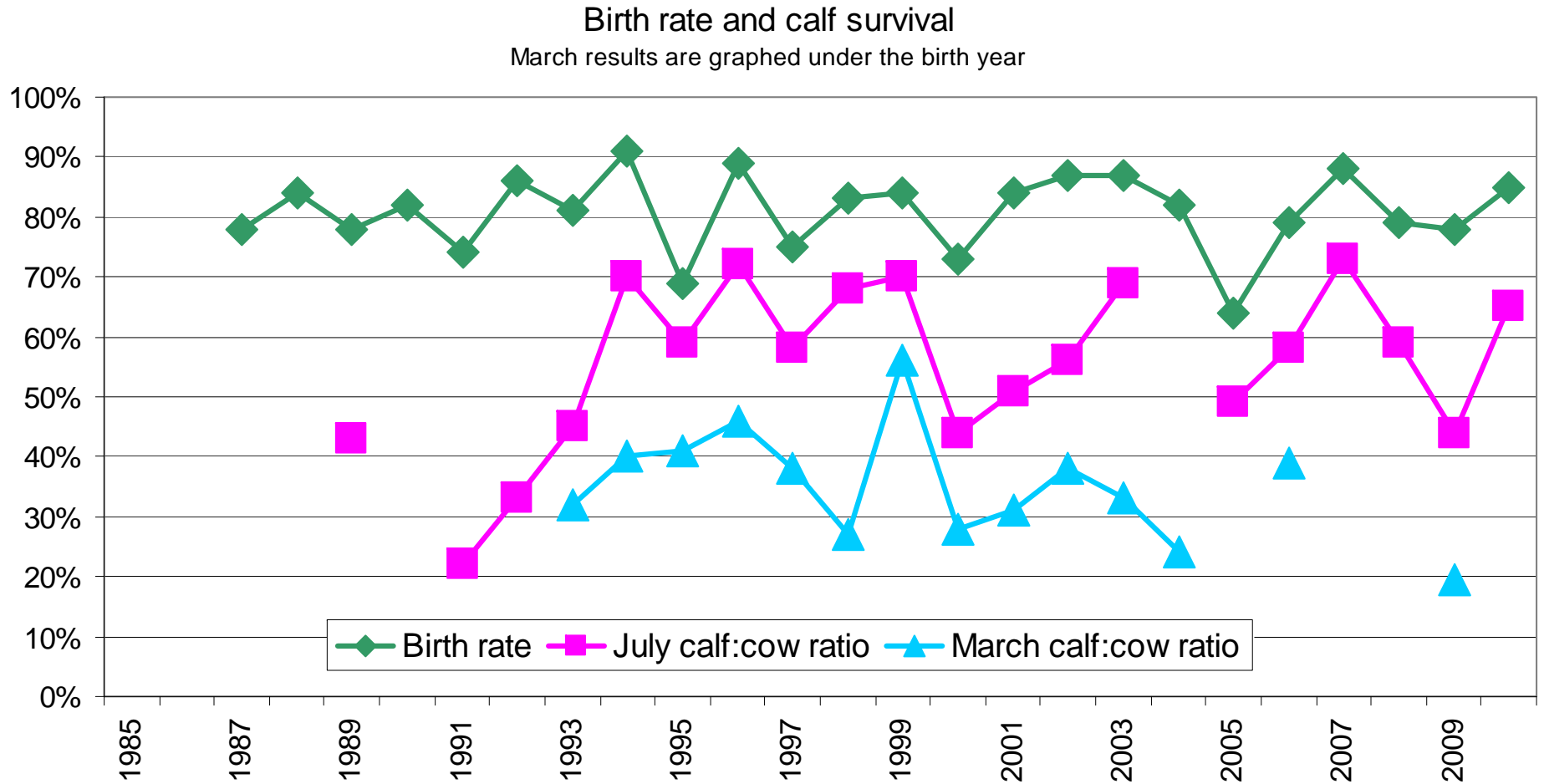


Adult cow survival



POPULATION

Calf birth rates and survival



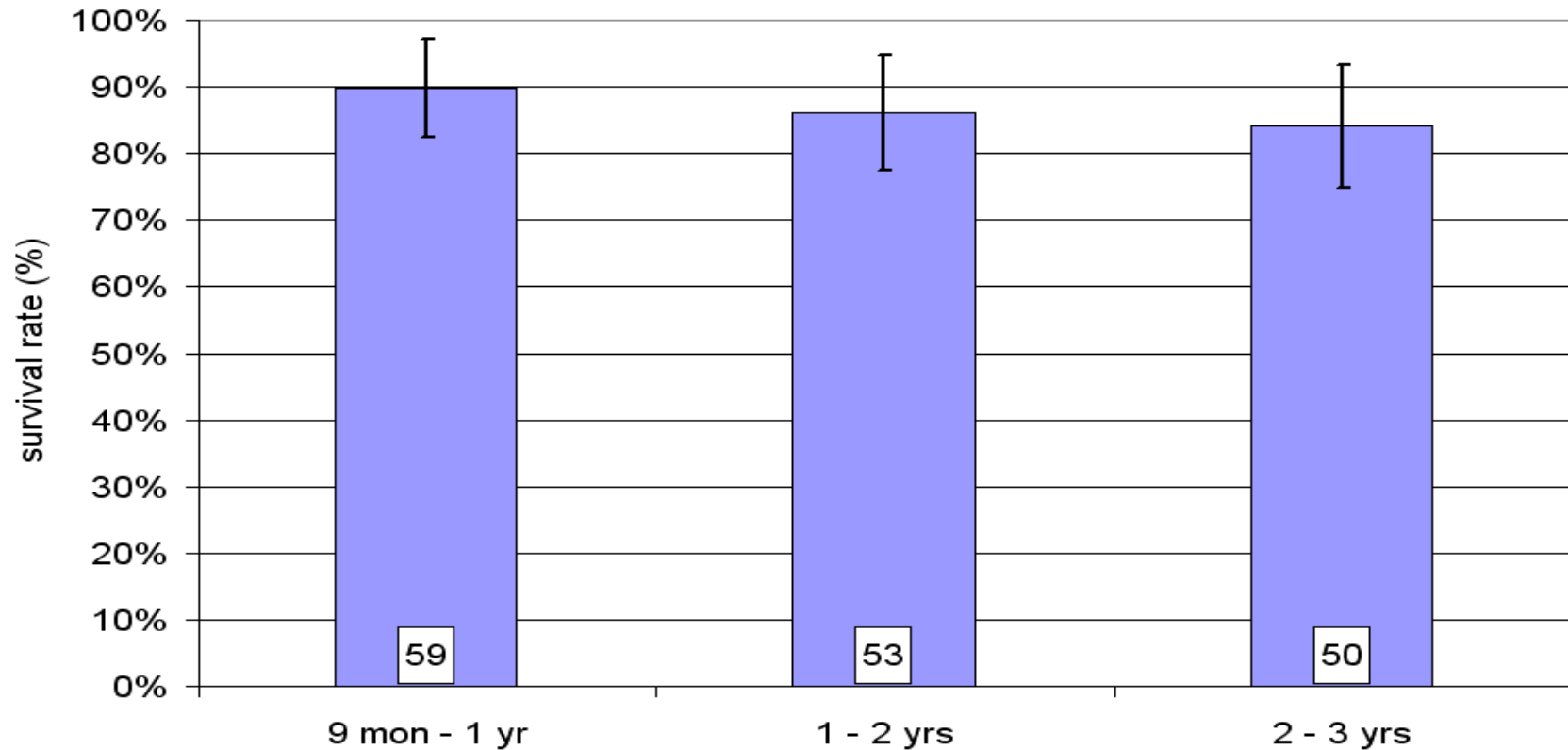
POPULATION



Young Cow survival

Survival rates of female Porcupine Caribou from 9 months to 3 years of age.

Study started in 2003. Error bars are 95% CL. Labels indicate # of collars monitored.



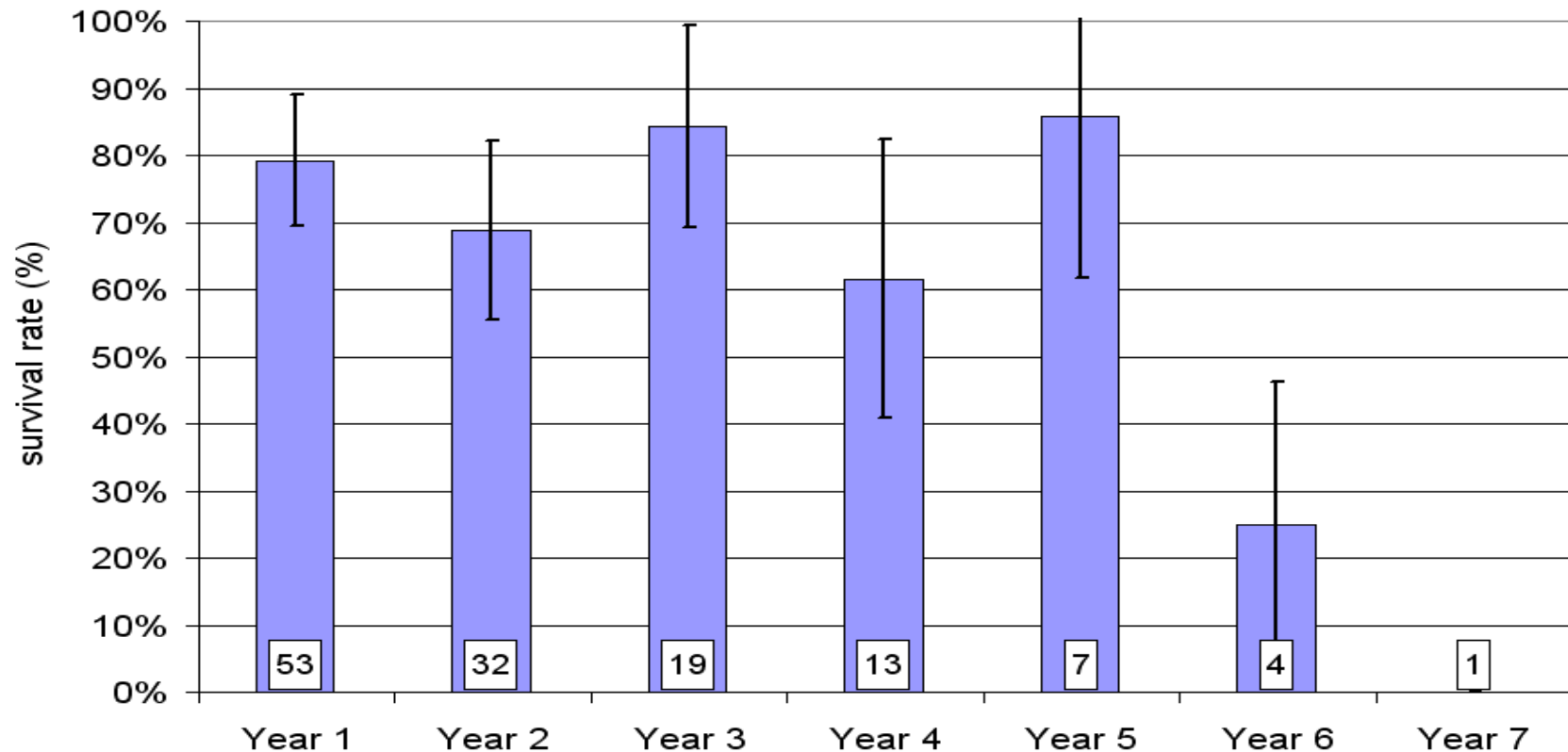
POPULATION



Adult bull survival

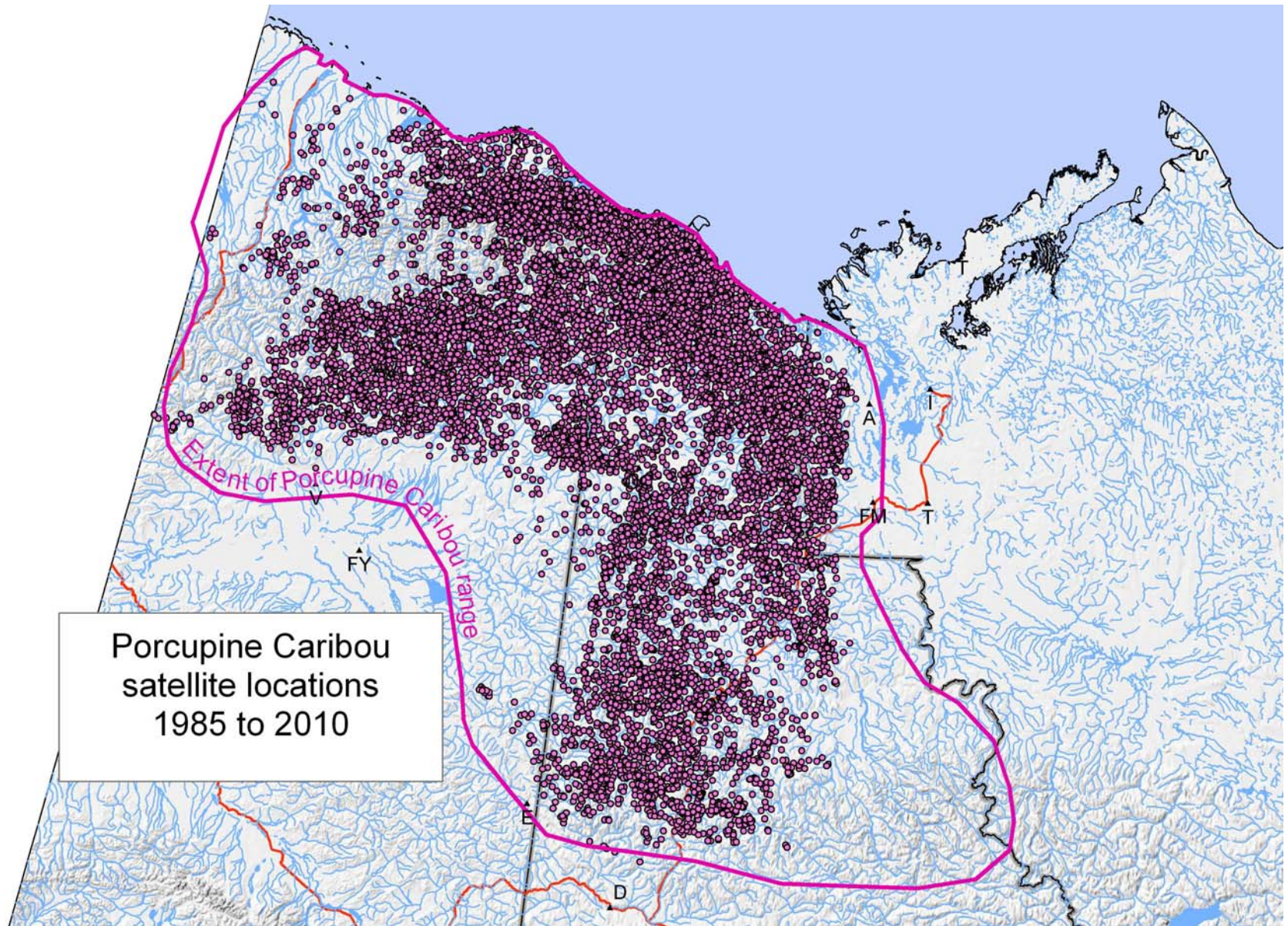
Survival rates of adult bull Porcupine Caribou in years following capture

Study started in 2003. Error bars are 95% CL. Labels indicate # of collars monitored.



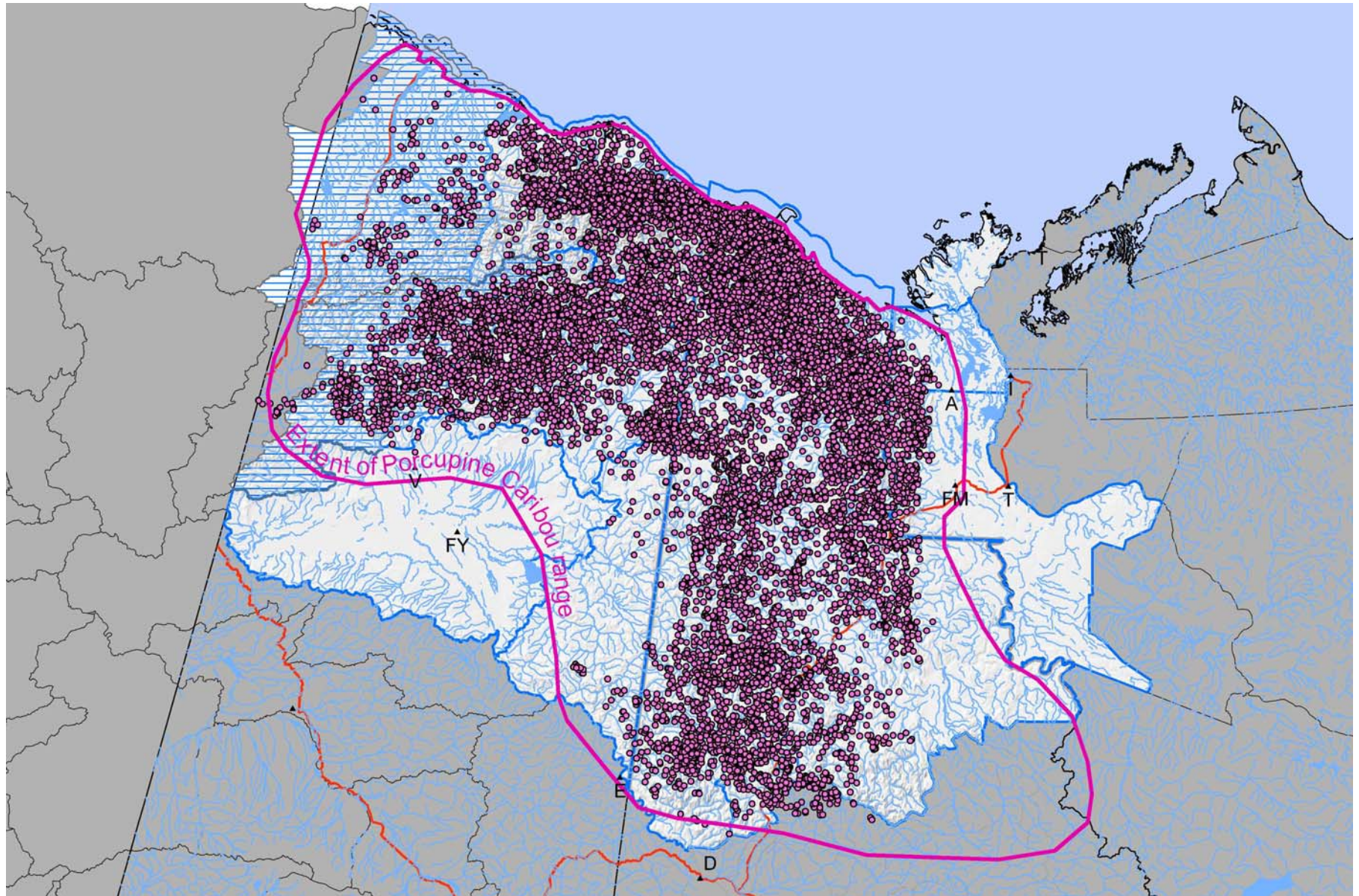
HARVEST

PCH satellite locations
1985 - 2010



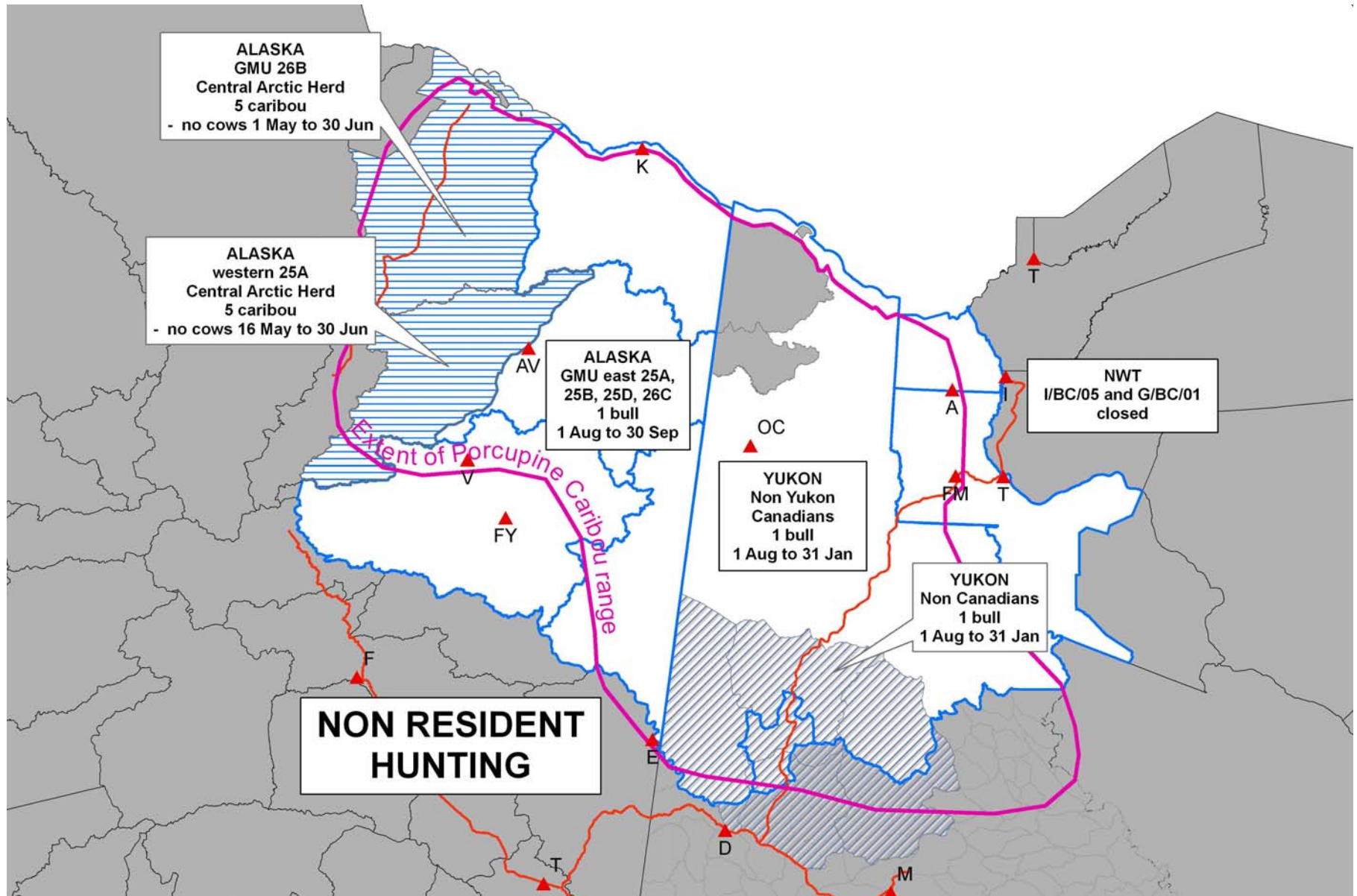
HARVEST

Hunting zones



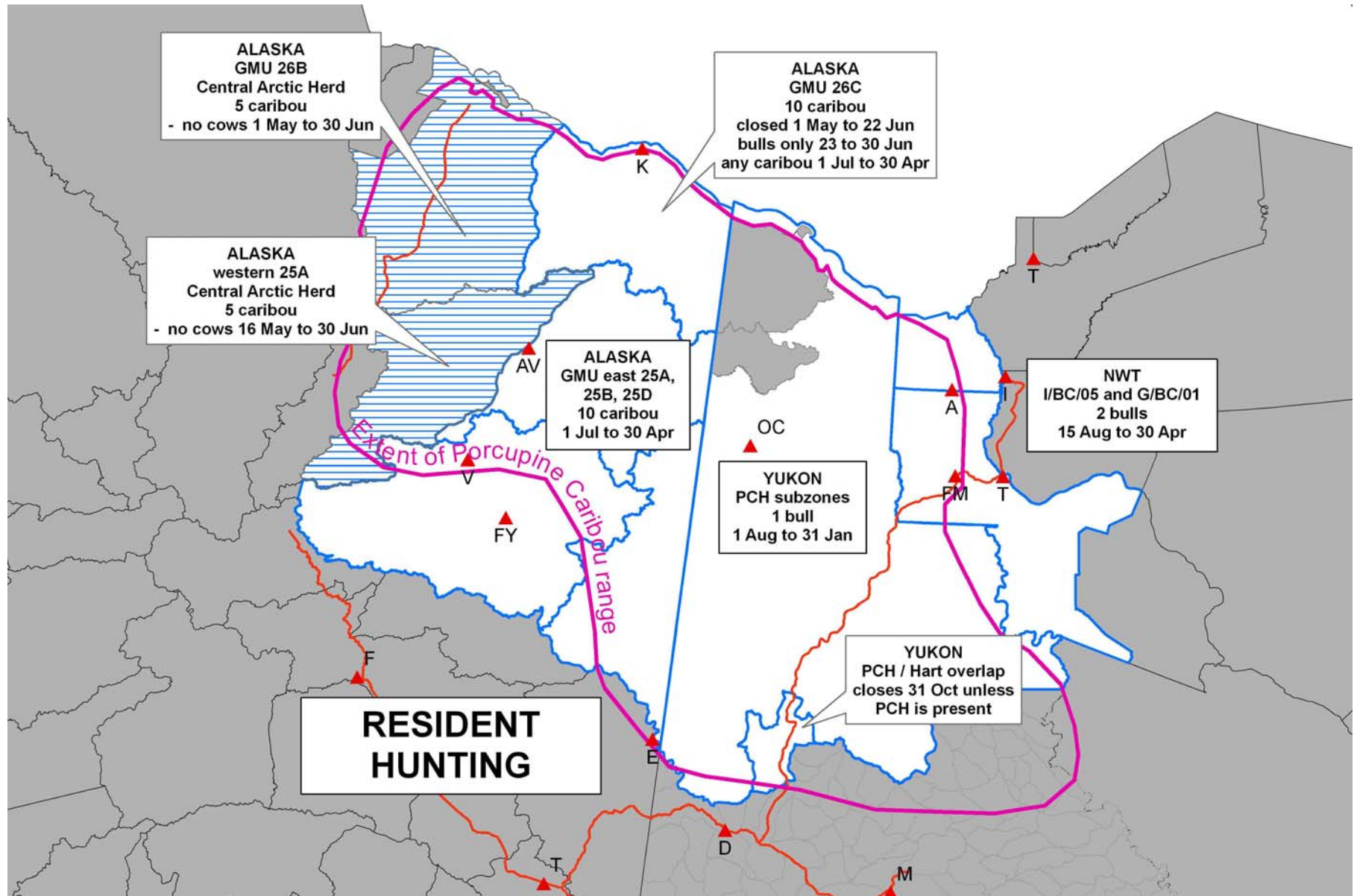
HARVEST

Hunting regulations



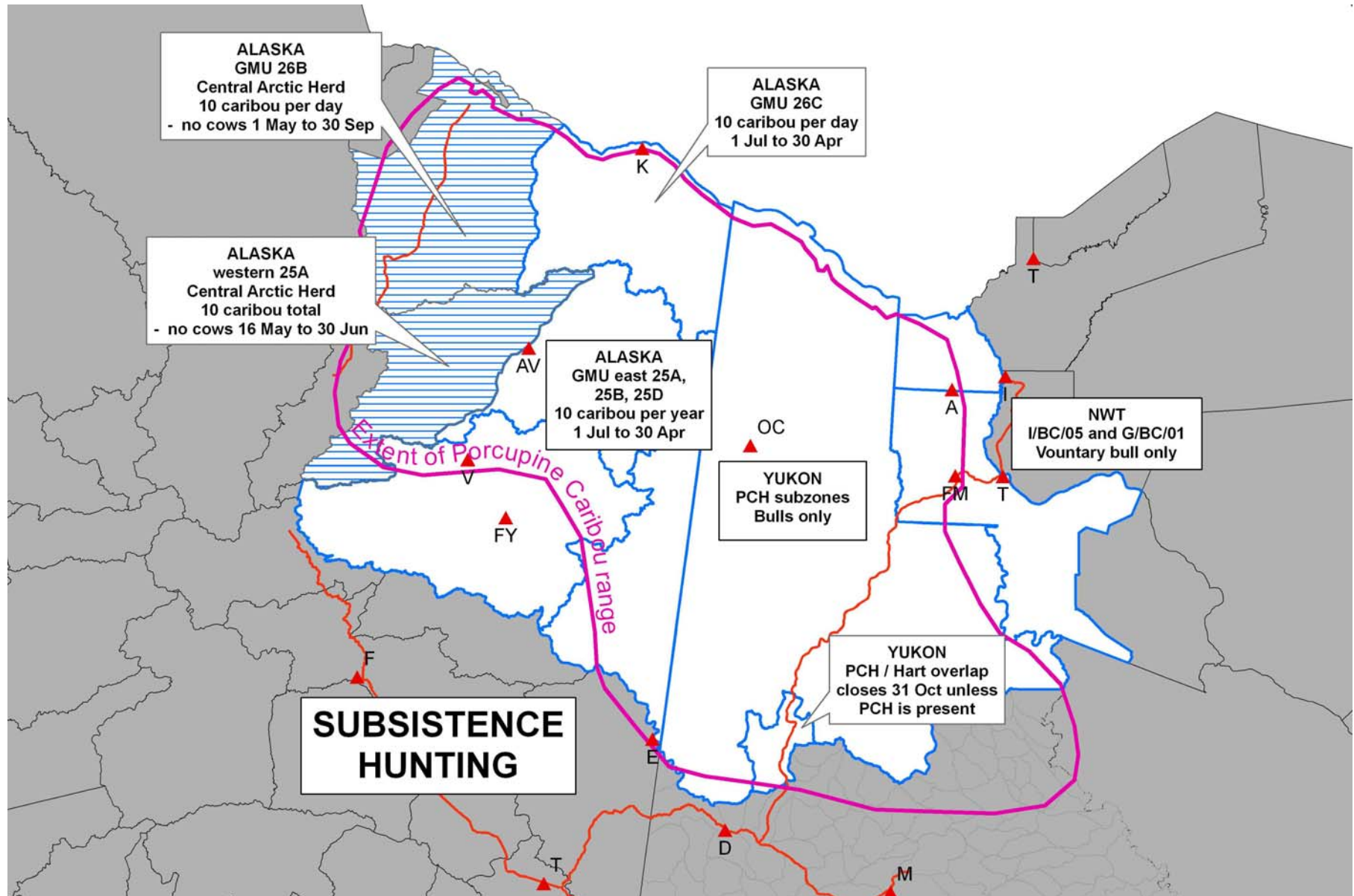
HARVEST

Hunting regulations



HARVEST

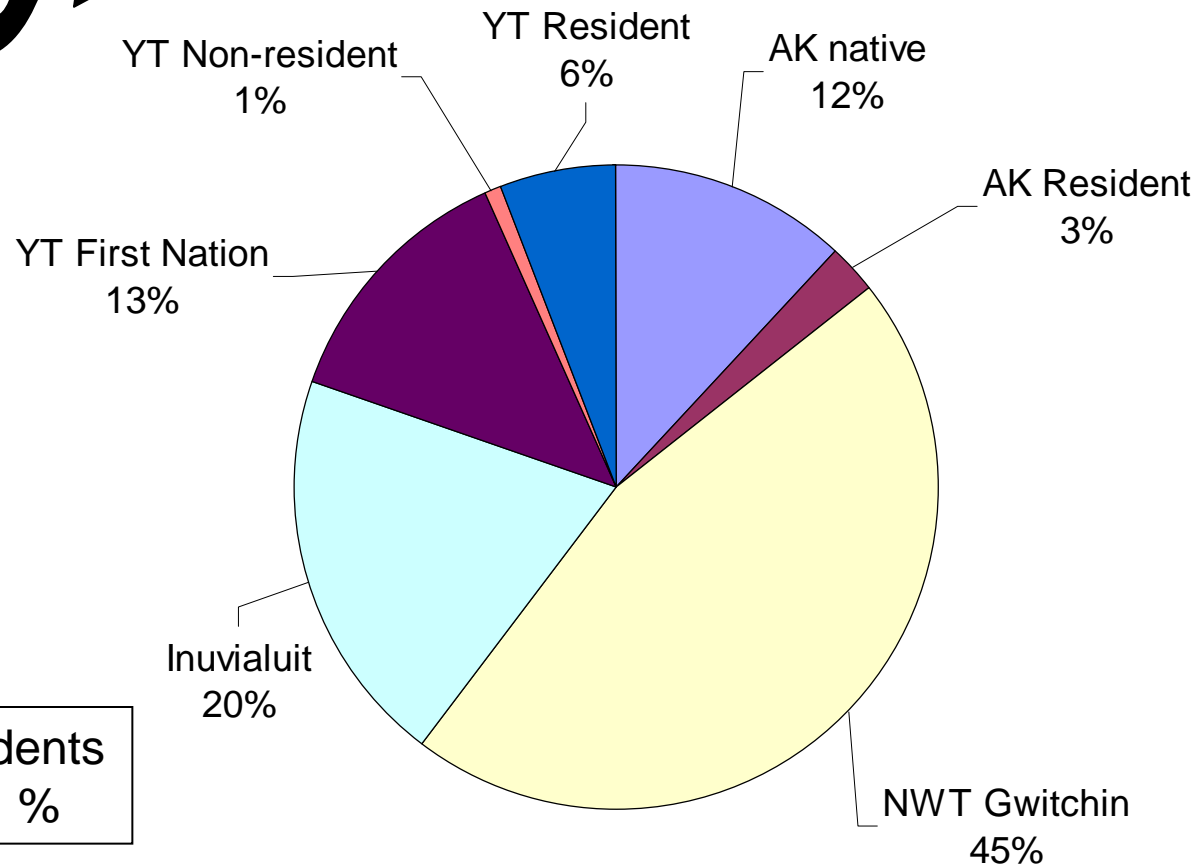
Hunting regulations



HARVEST

Total AVERAGE harvest 1979 - 2006
2,571 caribou

2007



HARVEST

Harvest reporting

Reported harvest of Porcupine Caribou by Canadian Users, June 2009 to July 2010										
# Active Harvesters	35									
# Harvesters Contacted	22									
# Harvesters Interviewed	21									
UserGroup	HunterID	Period covered	# Bulls	# Cows	Unknown	Total	Community	Month	Year	Grid\Subzone
Purple People Eaters	1	1 June 2009 to 31 July 2010	10	2		12	Timbuku	7	2009	AY2042
Purple People Eaters	2	1 June 2009 to 31 July 2010	2			2	Timbuku	7	2009	AY2042
Purple People Eaters	3	1 June 2009 to 31 July 2010	3			3	Timbuku	7	2009	AY2042
Purple People Eaters	4	1 June 2009 to 31 July 2010	6	2		8	Timbuku	7	2009	AY2042
Purple People Eaters	5	1 June 2009 to 31 July 2010	9			9	Timbuku	7	2009	AY2042
Purple People Eaters	6	1 June 2009 to 31 July 2010	3			3	Timbuku	7	2009	AY2042
Purple People Eaters	7	1 June 2009 to 31 July 2010	6			6	Timbuku	8	2009	AY2042
Purple People Eaters	15	1 June 2009 to 31 July 2010	6			6	Timbuku	9	2009	GMS 154
Purple People Eaters	16	1 June 2009 to 31 July 2010	4			4	Timbuku	9	2009	GMS 154
Purple People Eaters	17	1 June 2009 to 31 July 2010	8			8	Timbuku	9	2009	GMS 154
Purple People Eaters	18	1 June 2009 to 31 July 2010	2	1		3	Timbuku	10	2009	GMS 154
Purple People Eaters	19	1 June 2009 to 31 July 2010	5			5	Timbuku	10	2009	GMS 154
Purple People Eaters	20	1 June 2009 to 31 July 2010	9			9	Timbuku	1	2010	GMS 154
Purple People Eaters	21	1 June 2009 to 31 July 2010	10			10	Timbuku	1	2010	GMS 154
Purple People Eaters	22	1 June 2009 to 31 July 2010	5			5	Timbuku	1	2010	GMS 154
Purple People Eaters	23	1 June 2009 to 31 July 2010	6	3		9	Timbuku	2	2010	GMS 154
Purple People Eaters	24	1 June 2009 to 31 July 2010	4			4	Timbuku	2	2010	GMS 154
Purple People Eaters	25	1 June 2009 to 31 July 2010	7			7	Timbuku	2	2010	GMS 154
Purple People Eaters	26	1 June 2009 to 31 July 2010	5			5	Timbuku	2	2010	GMS 154
Purple People Eaters	27	1 June 2009 to 31 July 2010	3			3	Timbuku	2	2010	GMS 154
Purple People Eaters	28	1 June 2009 to 31 July 2010	4			4	Timbuku	3	2010	GMS 154
		Sum	117	8	0					
		Average	5.57	0.38						
		Variance bulls	6.26							
		Variance cows + unknown	0.67							

HARVEST

Harvest reporting

Estimated harvest of Porcupine Caribou by Canadian Users, June 2009 to July 2010									
Updated for PCH Annual Harvest Meeting, Feb 8 - 10, 2011									
	YT Resid	YG NR	NWT Resid	VGG	NND	TH	IGC	GTC	All Users
Period									
# Active Harvesters									
# Harvesters Contacted									
# Harvesters Interviewed									
Total reported bulls									
Total reported cows									
Total reported unknown									
Estimated harvest bulls									
Estimated harvest cows + unkn									



HARVEST

February 2010

- Have data from most of the user groups
- Technical issues to be worked out eg:
 - Different reporting periods
 - Need to define what people are covered in each project
 - Need the total # of active hunters etc
- THANKS for sending your data but no estimate yet...
- Harvest will be another input into model

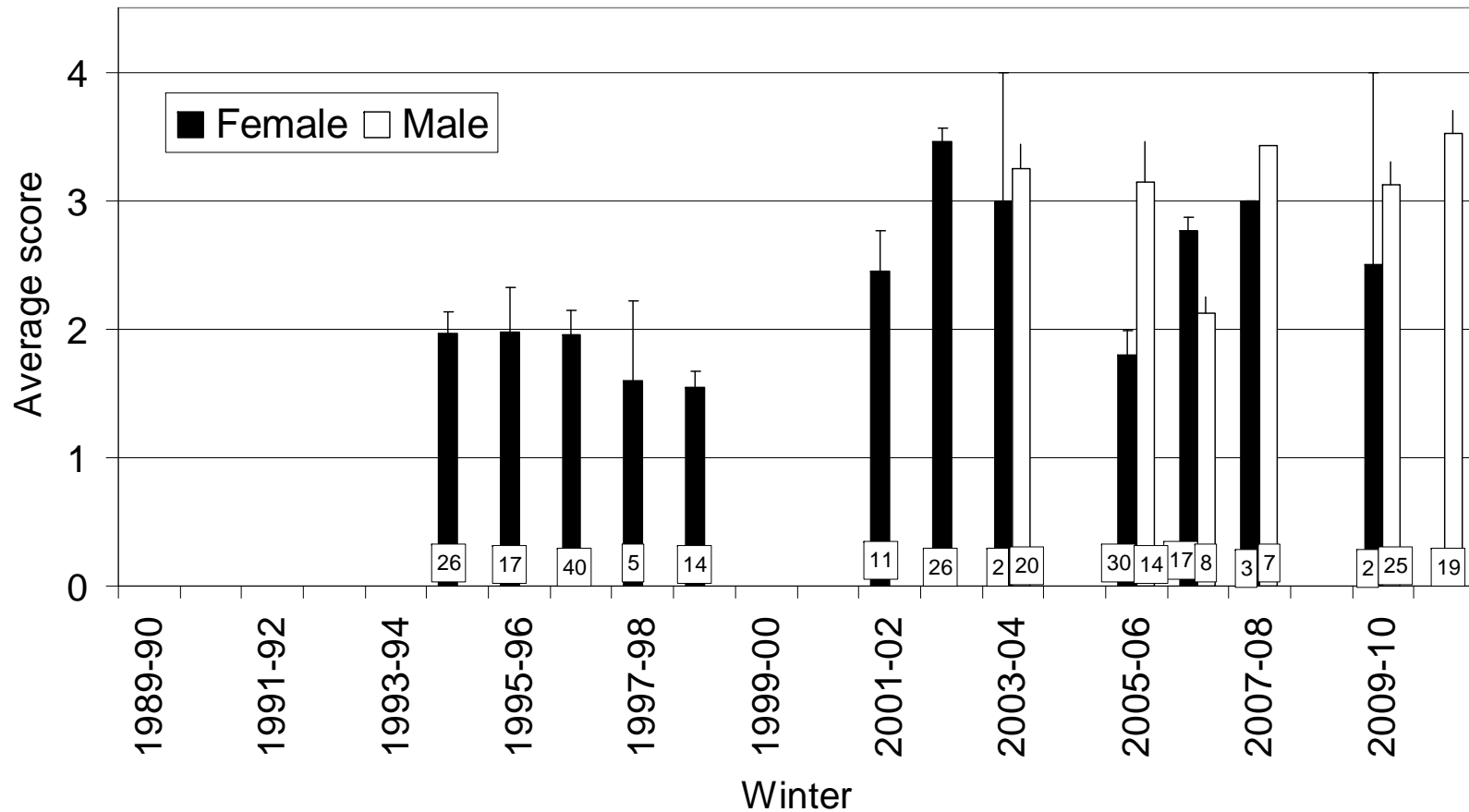
BODY CONDITION

Hunter assessments

Hunter assessment of caribou condition

1=poor 2=fair 3=good 4=very good.

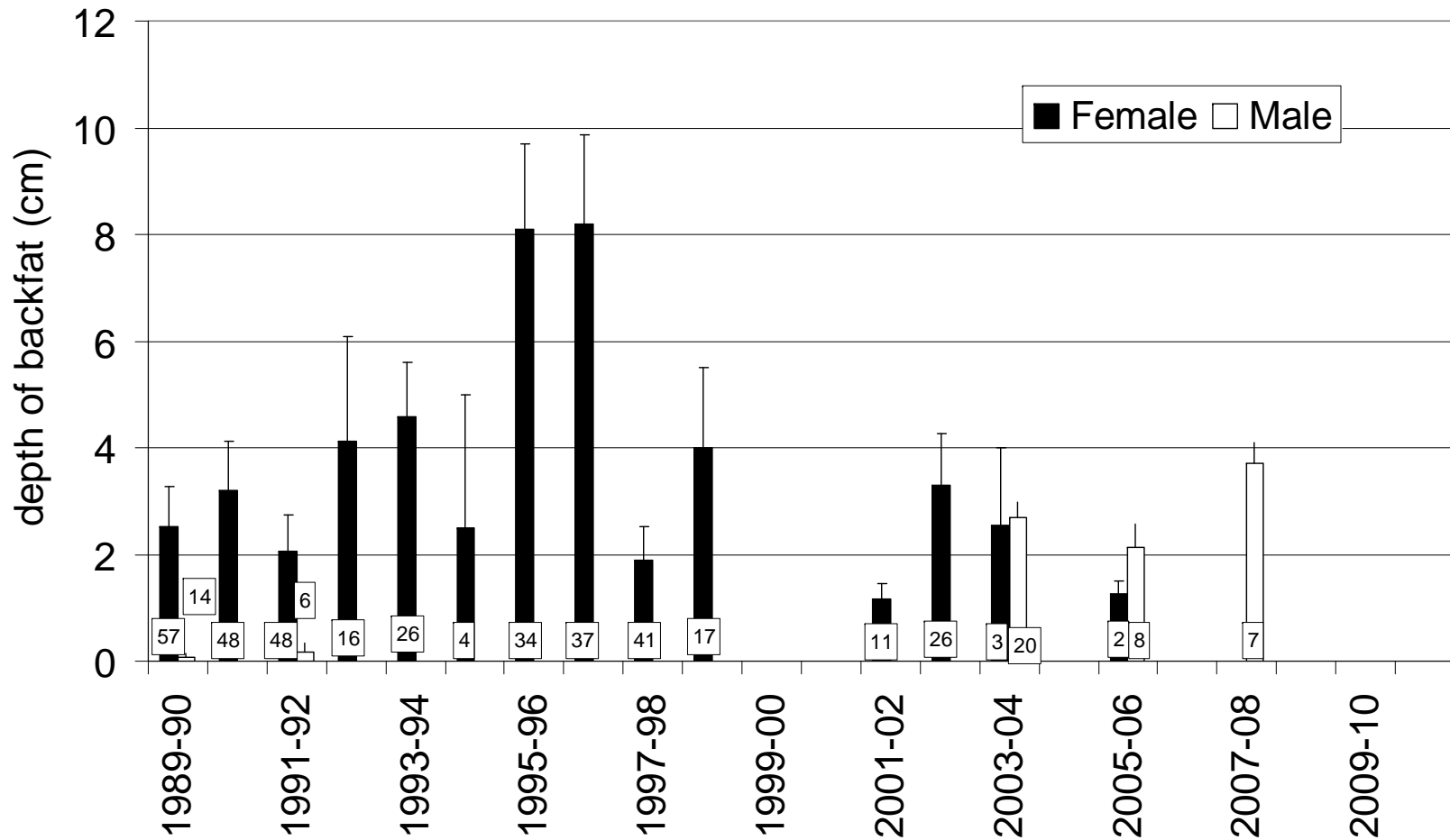
Error bars are standard errors. Labels indicate # of caribou sampled.



BODY CONDITION

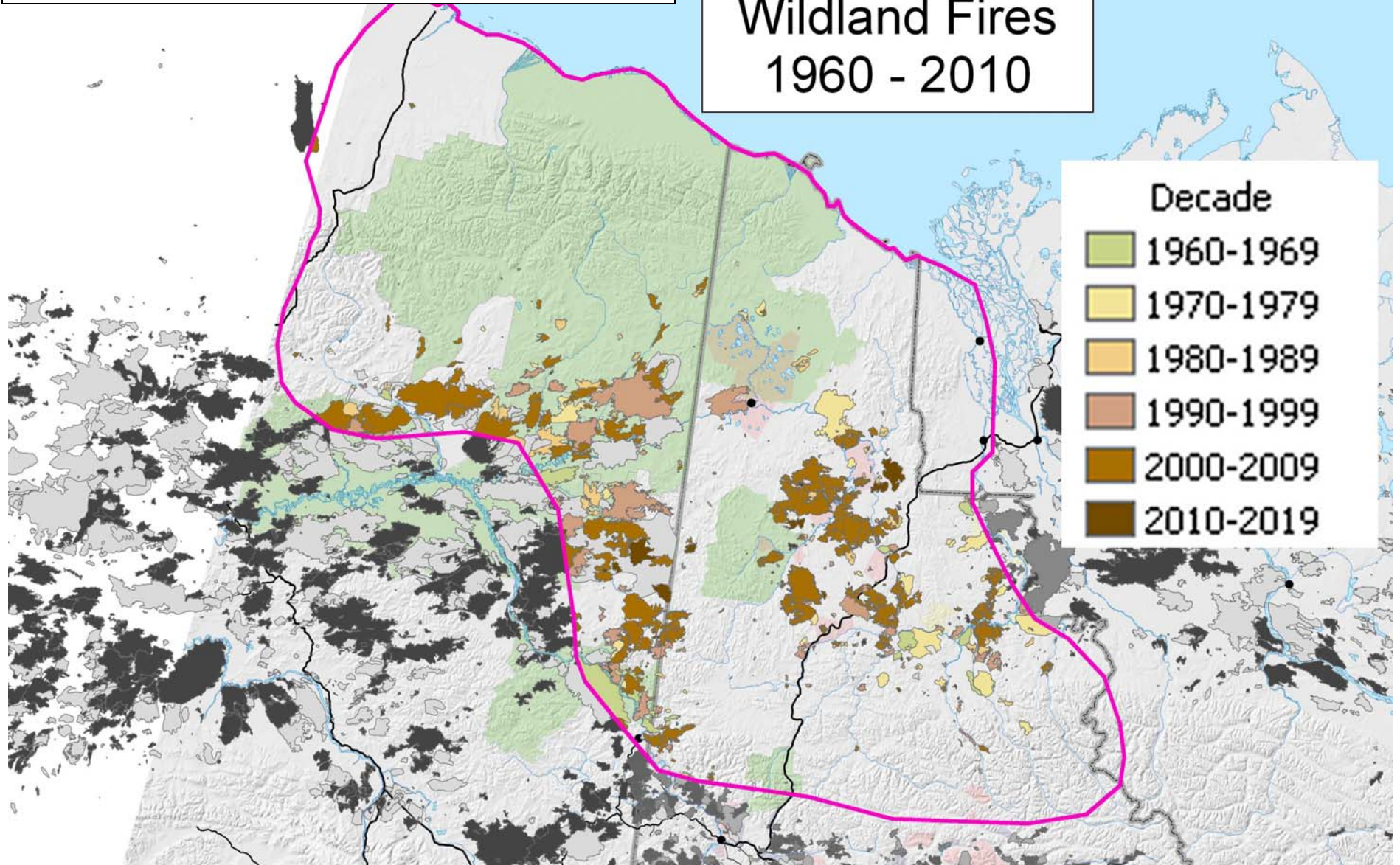
Back fat measurements

Depth of backfat, Body Condition Monitoring project
Error bars are standard errors. Labels indicate # of caribou sampled.



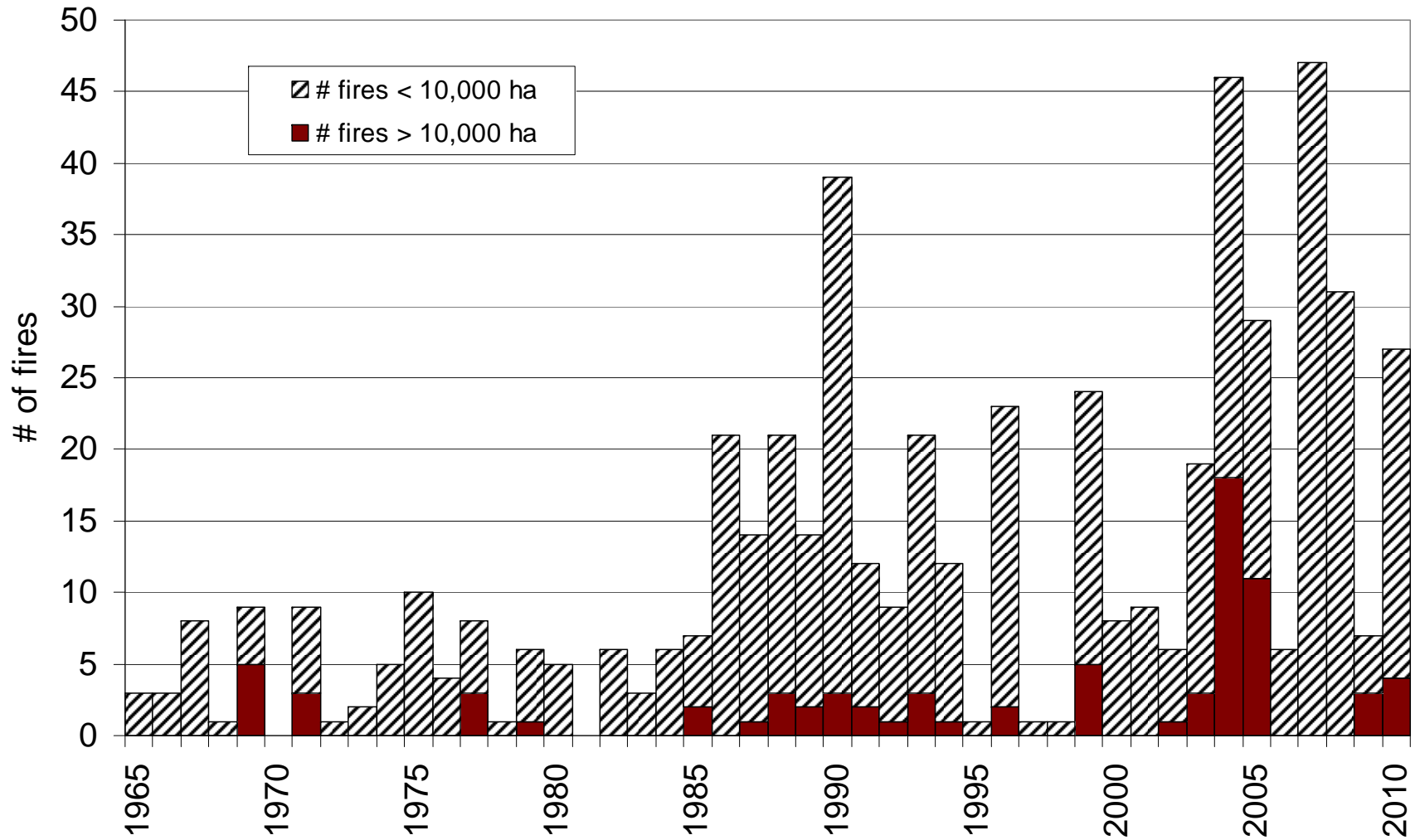
HABITAT

Wildland Fires
1960 - 2010



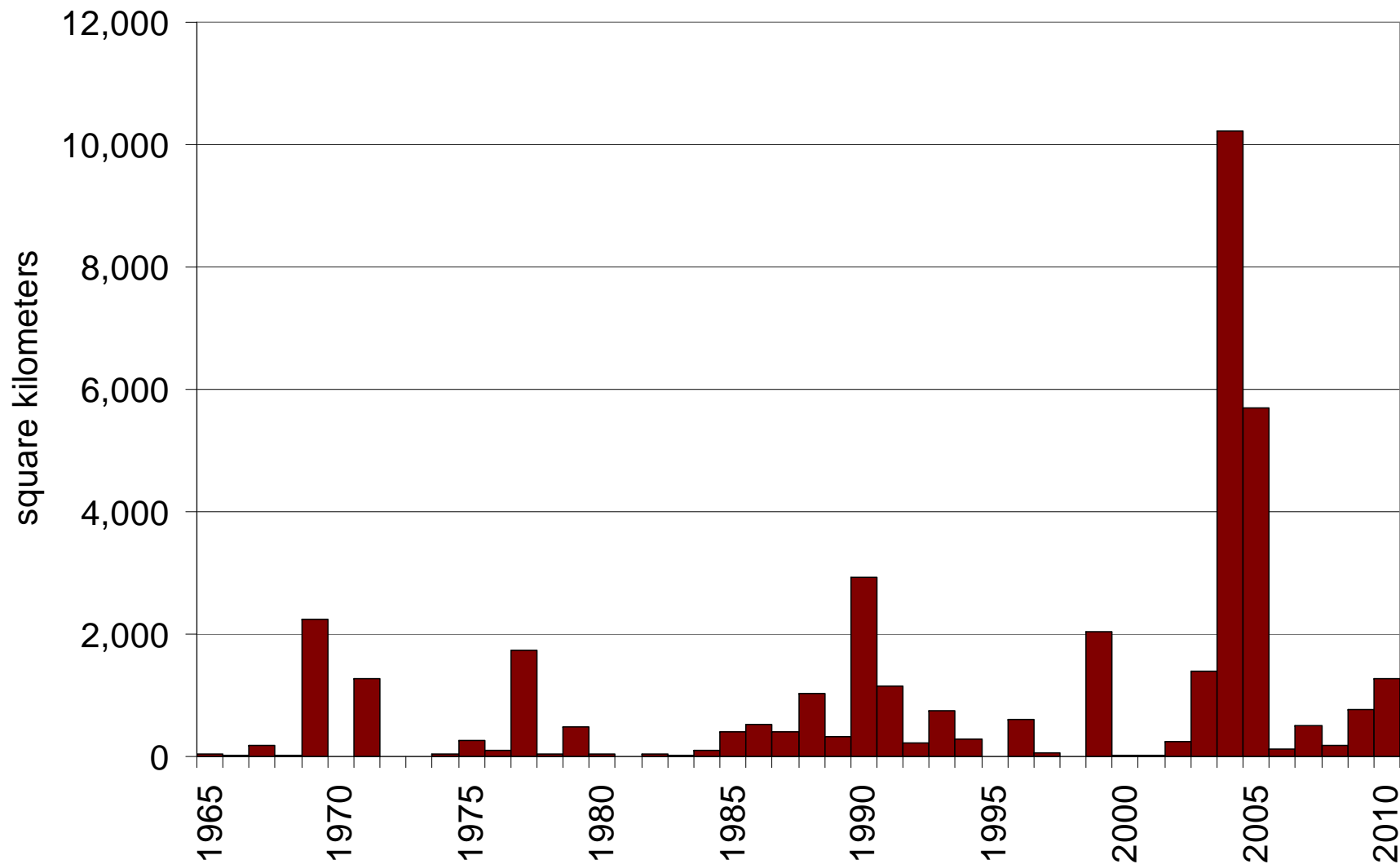
HABITAT

Total number of fires and number of large fires
(greater than 10,000 hectares) in PCH range, by year

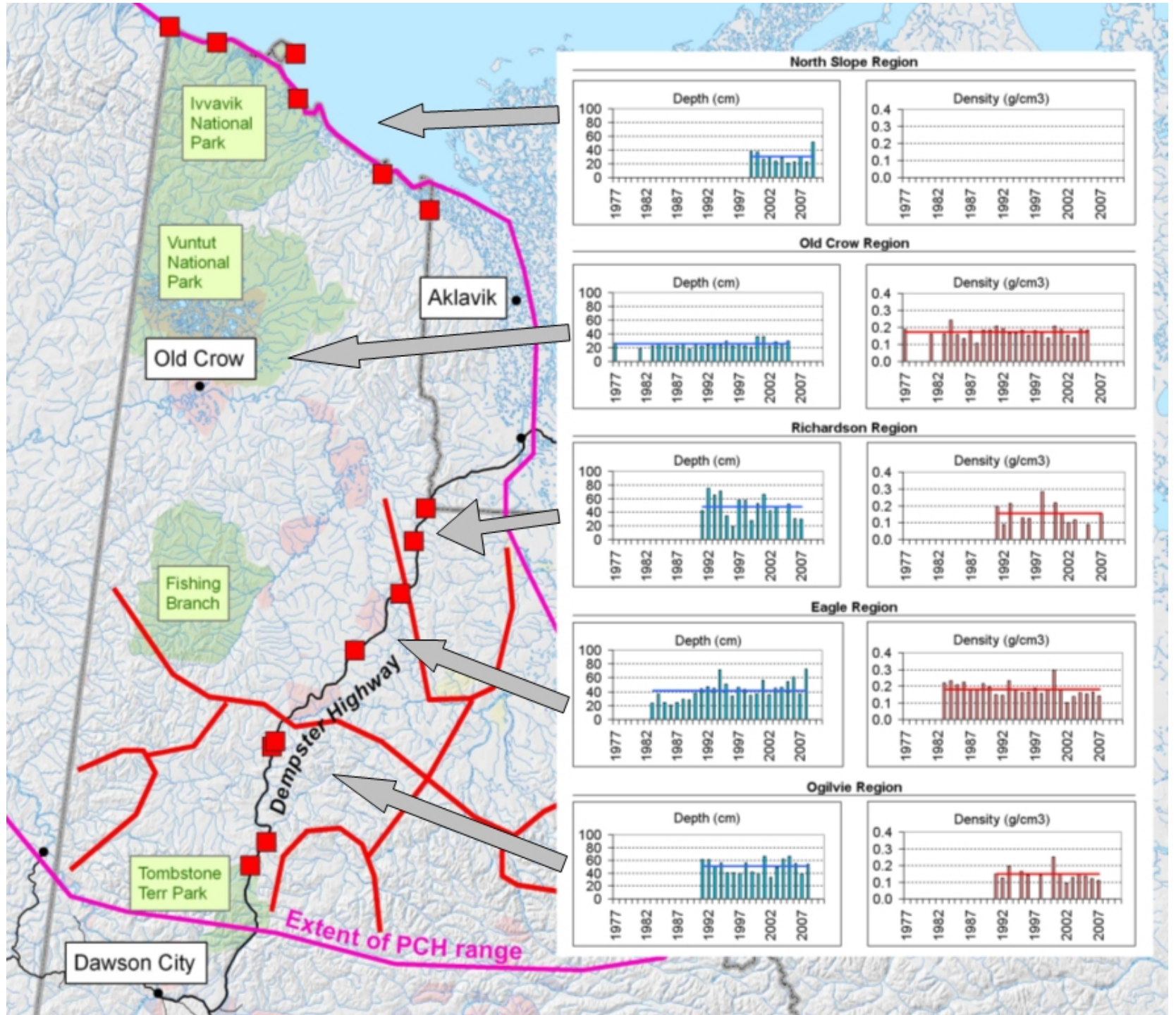


HABITAT

Total area of PCH range burned, by year



HABITAT



Indicator Table

Annual Summary Report for AHM Feb 2011

Prepared for the Porcupine Caribou Management Board

Indicator	Value	5 year average	Notes	Assessment
Population size and trend				
Population size (2001)	123,000 in 2001	---	<i>Declined by 55,000 caribou since peak in 1989. New herd size estimate from 2010 is coming but it expected to be greater than 123,000 caribou.</i>	
Estimated population (2007)	90,000 to 100,000 in 2009	---	<i>Based on the trend from the computer model run in 2007</i>	
Population trend	Decline between 1989 and 2001	---	<i>Recovering</i>	
Adult cow survival	2003 to 2006 study = 0.825	---	<i>Similar to 2001 estimate (herd declining). Lower than when herd was increasing. Annual survival is quite variable.</i>	
Calf birth rate	2010 = 0.85	0.82	<i>24-year average = 0.81</i>	
Calf survival to 9 months	2006 = 0.39	0.36 (13 years)	<i>We like to see at least 0.30. Missing 2005, 2007 to 2010 due to overlap with other herds.</i>	
Peak of calving	30 May to 2 June	2 June	<i>A bit early but still good</i>	
Harvest				
Total harvest				
% females in harvest				
Hunters' needs met?				
Body condition				
Average backfat				
Hunter assessment	2009 = 2.6 of 4	3.0	<i>10 sampled in 2009, none in 2008.</i>	

- Any questions?

