INTERVIEWER/COMMUNITY MONITOR NAME:	·
	SURVEY FORM #:
ID # FROM ONLINE	DATA ENTRY SITE:

# COMMUNITY ECOSYSTEM MONITORING INTERVIEW QUESTIONS

OBSERVATIONS FROM THE
2016 SEASON
ON THE LAND

Date of Interview (DD/MN/YR):	
Name of Community & Population:	
(i.e. Inuvik - Gwich'in)	
Name of person being interviewed (Interviewee):	
Gender: † O Male † O Female	

# **Arctic Borderlands Ecological Knowledge Society 2016/17 Community-Based Monitoring Program**

	(Please print Interviewee Name & Community)
	This is the 20 <sup>th</sup> year of the Arctic Borderlands Ecological Knowledge Society (ABEKS) monitoring program. rticipants and members are from the communities of Old Crow, Aklavik, Fort McPherson, Tsiigehtchic, Inuvik, ktoyaktuk, Arctic Village and Kaktovik, as well as government agencies, and co-management boards.
on we pre be	The Community Monitor will interview knowledgeable people in the community and record people's observations the interview forms. Questions are about what you have seen on the land this past year – the plants, animals, and eather in traditional homelands. Your observations will be recorded on the survey question form. The monitor will esent a summary of what was heard at a Community Gathering, which will be held in March. This summary will also put in a report that will be sent to all those who were interviewed and will be distributed to communities and ganizations.
	Your name will remain confidential and will not be used beside any quotes in the report. If you would like to re your permission, we will include your name in the final report.
mo kn	This information is being collected to learn what is changing in the environment. It is part of an ecological politoring system that records what people are seeing on the land. Having this information recorded can bring local owledge together with scientific research for future study. Access to this information is provided by Arctic rderlands only by community consent and the information is securely housed in the Arctic Borderlands office.
an co the	This interview will take about 1 to 2 hours to complete and includes questions on weather, berries, fish, caribou, d other animals. There are also general questions about what changes you are seeing on the land and in the mmunity. You can end the interview at any time if you so wish. The information recorded until that point would en be destroyed.  You will receive an honorarium when you complete the interview.  Inderstand that:
>	My name will remain confidential unless I give permission for its use.
>	A copy of the information I provide will be available at the local RRC or HTC office.
>	Results from the interviews in all the communities will be summarized and widely distributed.
>	A copy of the summary report from this year's interviews will be mailed to me.
	willing to be interviewed:

Thank you!

Date:\_\_\_\_ Signature

# ARCTIC BORDERLANDS ECOLOGICAL KNOWLEDGE SOCIETY (ABEKS) COMMUNITY ECOSYSTEM MONITORING

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#### Introduction

The objective of the Community Ecosystem Monitoring Interviews is to engage local experts who hunt, fish, gather berries, and observe wildlife to relay observations about their local ecosystem. These recorded observations are an essential component of long term monitoring, management planning, and conservation.

Arctic Borderlands Ecological Knowledge Society (ABEKS) has organized this long-term data gathering since 1996. The data is securely stored in the ABEKS database for community and scientific study. ABEKS is comprised of and partners with Inuvialuit and Gwich'in organizations and governments, co-management groups, scientists and other government agencies.

The local land use experts access land encompassing the Porcupine Caribou Herd range and adjacent Mackenzie Delta area in NWT, Yukon & Alaska. Interviewers and local land use experts live in the communities of Arctic Village, Kaktovik, Old Crow, Aklavik, Fort McPherson, Tsiigehtchic, Inuvik and Tuktoyaktuk. Community interviewers conduct interviews annually, recording observations about berries, fish, birds, caribou, unusual animal sightings, weather conditions, and other aspects of the environment and community.

One of the benefits of the interviewing exercise is that it allows people to engage with those who spend time on the land or who have local ecological knowledge about the ecosystem. Another main benefit is that the data gathered can be analyzed and used to monitor changes in hunting and gathering activity. Data gathering results may determine whether changes observed over time are directly related to extreme changes in weather or are because of other observed changes in the ecosystem.

The ABEKS interview survey captures indicators that can demonstrate strong trends and extreme events as well as unusual sightings. The survey is also designed to illustrate long term trends in the amount of time people spend hunting, fishing, and gathering, as well as climate, wildlife, and other environmental changes observed over time. This survey also includes indicators for measuring variables of health and distribution of individual caribou, the caribou population and other local animals including predators to young caribou, and other birds and mammals.

## **SECTION A: Time on Land**

I would like to start	by asking a coupl	le of questions al	bout you
-----------------------	-------------------	--------------------	----------

A1.	In what v	year were	you born?	

# A2. First, I'd like to get a sense of how much time you spent on the land and what things you were doing.

- In the last winter (January to March), how many days did you spend out on the land hunting, berry picking, fishing or doing other activities?
- How many days in the spring (April to June)?
- How many days in the summer (July, August, September)?
- And how many days in the fall (October, November and December)?

### \*INSERT "0" IF NO DAYS - DO NOT LEAVE BLANK.

(Max. = 90 days/	Winter	Spring	Summer	Fall
per season)	(Jan-Mar)	(Apr-June)	(July-Sep)	(Oct-Dec)
Total days on Land	#	#	#	#

### A3. For each season, how many of those days included: (read each activity)

Note: Number of days should match A. 2.

Type of Activity:	# of				
	Winter	Spring	Summer	Fall	
Hunting					Did not do this activity (in any season)
Trapping					
Fishing					
Berry picking					
Hauling wood					
Harvesting bark, sap, etc. (not berries)					
Camping					
Hiking					
Other:					
Other:					

## **SECTION B: Weather**

B1a. Now think about unusual, extreme or rare weather events. Can you recall any such events during the year?

(Circle yes or no for each season. If all "No" skip to B.2)

Winter (Jan – March)	Yes	No
Spring (April – June)	Yes	No
Summer (July – Sept)	Yes	No
Fall (Oct – Dec)	Yes	No

B1b. Please tell us the month(s) when you observed any of the following unusual, extreme or rare weather related events:

Check  $\checkmark$  each weather event under the month it occurred, or  $\checkmark$  "No unusual" if none. Each month should have one or more option checked.

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Colder than normal												
Hotter than normal												
More snow than normal												
Less snow than normal												
Torrential Rain												
More Thunder storms												
Icing Event (rain that freezes on snow/ makes crust)												
Really Frosty												
More Wind												
Drought - Very dry conditions												
Other (Specify):												
Other (Specify):												
Other (Specify):									_			
No unusual, extreme or rare weather this month												

).	-	$\bigcirc$ No $\rightarrow$ Go to C1	noticed about weather this past year?  O Don't know				
	B2b. IF Yes → Specify:						
	· ·						

SECT	ION	C·	R۵	rriac
<b>JEUI</b>		L.	DE	11162

R	F	P	P	IES
D		П	П	IES

C1.	Did you go	berry picking	this year?
-----	------------	---------------	------------

- **○** Yes  $\rightarrow$  Go to Table C2.
- O No  $\rightarrow$  Go to D1.

### C2. Time of year, abundance and quality of berries during berry-picking season

- a. Circle the month they picked each berries (or circle "none")
- b. Circle the amount of berries. Scale 1 to 4. (1 =Very Few, 2=Few, 3=Many, 4=Very Many).
- c. Circle the quality of the berries. Scale of 1 to 4. (1=Low, 2=Average, 3=Good, 4=Excellent).
- d. Circle description of berry season overall. Scale of 1 to 4. (1= Poor, 2=Average, 3=Good, 4=Excellent)

Berry Name	a. Picked When?	b. Abundance	c. Quality		erall excell	. •	od, average
Salmonberry	July Aug Sep None	Few>Many 1 2 3 4	Low>High 1 2 3 4	Poor	Average	_	Excellent
(akpik, yellowberry, cloudberry, knuckles)  Cranberry	July Aug Sep None	Few>Many	Low>High	Poor	Average		Excellent
,		1 2 3 4	1 2 3 4 Low>High	1 Door	2 Average	3 Cood	4 Evallant
Blueberry	July Aug Sep None	Few>Many 1 2 3 4	1 2 3 4	Poor 1	Average 2	Good 3	Excellent 4
Other (Circle/ Specify:)(e.g. blackberry, red bearberry, kinnickinnick, crowberry, toad flax, soapberry) Other:	July Aug Sep None	Few>Many 1 2 3 4	Low>High 1 2 3 4	Poor 1	Average 2	Good 3	Excellent 4
Other (Circle/ Specify):	July Aug Sep None	Few>Many 1 2 3 4	Low>High 1 2 3 4	Poor 1	Average 2	Good 3	Excellent 4

C3.	Did you meet your needs for berries in berry-picking season this year?				
	O Yes † C	O No O Don't Know			
C4a.	Are there any o	ther particular things that y	ou noticed about berries this past year?		
	O Yes	○ No -> Go to D1	O Don't know		
	C4b. IF Yes →	Snecify.			

# **SECTION D: Fish**

	Type of Fish	Enter the number of fish caught (no range, mid-point # is okay)
	Whitefish (broad whitefish)	(no range, ma point in is oray)
	Crooked Back (lake whitefish)	
	Coney (inconnu)	
	Arctic Char	
	Lake Trout	
	Bull Trout	
	Salmon (Record by type)	
	Coho	
	Chinook/King	
	Chum,	
	Pink	
	Sockeye	
	Kokanee	
	Unknown type	
	Grayling	
	Dolly Varden	
	Jackfish	
	Loche burbot	
	Herring	
	Other (specify):	
D3a.	Did you meet your needs for fish this year?  O Yes † O No O Don't Know	

### **SECTION E: Birds**

### **GAME BIRDS**

# E1. Based on your observations in the past year, are there more, the same or fewer game birds than usual?

If you noticed a trend in a species not listed, put it in under 'Other'. If you noticed a trend in a group of species overall (e.g. geese as a group), as well as a trend in a particular species in that group (i.e Snow Geese), indicate the trend for the group in the group's row and fill in the species' trend under "Other". Note that these trends may differ (for example, you may have noticed that there were a lot more dabbling ducks in general but that there were fewer Wigeon than usual.)

#### E2. Game Birds Observed in Past Year

Bird Type	Abundance	
Dabbling Ducks (e.g. Mallard, Wigeon, etc.)	† More   † Same   † Less	DK
Sea ducks/diving ducks (i.e. Scooters, Goldeneye, etc.)	† More † Same † Less	DK
Geese	† More † Same † Less	DK
Ptarmigan/grouse	† More   † Same   † Less	DK
Sandhill Cranes	† More   † Same   † Less	DK
Other (Specify):	† More   † Same   † Less	DK
(i.e. rails, coots, snipes)		
Other (Specify):	† More   † Same   † Less	DK

E3a.	Did you hunt for game birds this year?  ↑ ○ Yes – Go to E3b ↑ ○ No - Skip to E4
E3b.	Did you meet your needs for game birds this year?  ↑ ○ Yes ○ No ↑ ○ Don't Know
E3c.	How many people are you providing birds for this year?
	WATERBIRDS

# E4. Based on your observations in the past year, are there more or fewer non-game waterbirds than

If you noticed a trend in a group of species overall, as well as in a particular species in that group, indicate the trend for the group in the group's row and fill in the species' trend under "Other".

Bird Type	Δ.	bundance		
Loons	<b>† More</b>	† Same	<b>† Less</b>	DK
Swans	<b>† More</b>	† Same	<b>† Less</b>	DK
Shorebirds (e.g. sandpipers)	<b>† More</b>	† Same	<b>† Less</b>	DK
Other (Specify):	<b>† More</b>	† Same	<b>† Less</b>	DK
Other (Specify):	† More	† Same	† Less	DK
Other (Specify):	† More	† Same	† Less	DK

### **BIRDS OF PREY**

E5. Based on your observations in the past year, are there more or fewer *birds of prey* than usual? If you noticed a trend in a group of species overall (e.g. owls as a group), as well as in a particular species (e.g. Great Horned Owl), indicate the trend for the group in the group's row and fill in the species' trend under "Other".

Bird Type	А			
Falcons (e.g. Peregrines, Kestrels)	<b>† More</b>	<b>† Same</b>	<b>† Less</b>	DK
Eagles	<b>† More</b>	† Same	<b>† Less</b>	DK
Hawks	<b>† More</b>	† Same	<b>† Less</b>	DK
Owls	<b>† More</b>	† Same	† Less	DK
Other (Specify):	<b>† More</b>	† Same	† Less	DK
Other (Specify):	<b>† More</b>	† Same	† Less	DK
Other (Specify):	<b>† More</b>	† Same	† Less	DK

### **SONGBIRDS**

E6. Based on your observations in the past year, are there more or fewer *songbirds or other birds not covered in the categories above* than usual?

If you noticed a trend in a group of species overall, as well as in a particular species in that group, indicate the trend for the group in the group's row and fill in the species' trend under "Other".

Bird Type	Α	bundance		
Woodpeckers	<b>† More</b>	<b>† Same</b>	<b>† Less</b>	DK
Nighthawks	<b>† More</b>	<b>† Same</b>	<b>† Less</b>	DK
Kingfishers	<b>† More</b>	† Same	<b>† Less</b>	DK
Other (Specify):	<b>† More</b>	<b>† Same</b>	<b>† Less</b>	DK

E7a.	Have you noticed any unusual birds around this year (i.e. hummingbirds or other)?					
	† † ○ Yes	$\mathbf{O}$ No $\mathbf{\rightarrow}$ Go to E8				
	E7b. If Yes, Describe:					

# **BIRD MIGRATION**

E8.

Songbirds:	
· · · · · · · · · · · · · · · · · · ·	Left (departed)  ↑ ○ noticeably early  ↑ ○ noticeably late  ↑ ○ no change from usual
Waterfowl:	
Arrived  † ○ noticeably early † ○ noticeably late † ○ no change from usual  Other birds:	•
Arrived  † ○ noticeably early † ○ noticeably late † ○ no change from usual	† O noticeably late
E9a. Are there any other particular $\bigcirc$ Yes $\bigcirc$ No $\rightarrow$ Go to	lar things you noticed about birds this year? to F1.
E9b. If Yes, Describe:	

Did birds arrive or leave at the normal time this past year?

# **SECTION F: Caribou**

F1. Based on your observation for each season, were there more, equal or fewer Porcupine Caribou over the last year than usual? (Please do not leave a section blank, just circle "Don't know": DK)

Porcupine Caribou	Winter Abundance (Jan-Mar)			Spring Abundance (Apr-June)			Sun	nmer Abı (July-Se			Fall Abundance (Oct – Dec)					
Male Bulls	<b>† More</b>	<b>† Same</b>	† Less	DK	<b>† More</b>	<b>† Same</b>	† Less	DK	<b>† More</b>	<b>† Same</b>	† Less	DK	<b>† More</b>	<b>† Same</b>	† Less	DK
Adult Female	† More	† Same	† Less	DK	† More	† Same	† Less	DK	† More	† Same	† Less	DK	† More	† Same	† Less	DK
Calf	† More	† Same	† Less	DK	<b>† More</b>	<b>† Same</b>	† Less	DK	<b>† More</b>	<b>† Same</b>	† Less	DK	<b>† More</b>	† Same	† Less	DK
Young Male	† More	† Same	† Less	DK	† More	† Same	† Less	DK	<b>† More</b>	† Same	† Less	DK	† More	† Same	† Less	DK
Young	† More	† Same	<b>† Less</b>	DK	<sup>†</sup> More	† Same	† Less	DK	<sup>†</sup> More	† Same	<b>† Less</b>	DK	† More	† Same	<b>† Less</b>	DK
Female																

F2.	Was there anything in particular you noticed about caribou abundance in the past year?  ○ Yes → Specify:
	O No
F3a.	Were your households' needs meet for caribou this year?
	O ↑ Yes → Go to F3b.
	$\bigcirc$ $\uparrow$ No $\rightarrow$ What prevented your Porcupine caribou hunting needs from being met? (Check all that apply)
	☐ Not enough Caribou   ☐ Availability/Location of caribou   ☐ No Time ☐ Cost of Gas/Equipment ☐ Not enough shared caribou ☐ Other (Specify):
F3b.	Did you go out to hunt for caribou this year?  ○ † Yes → Go to F3c.
	O ↑ No → Main reason why not? (circle only ONE)
	□ No Time □ Cost of Gas/Equipment □ Not enough caribou □ Caribou too far/bad location □ Illness/health □ Had enough caribou
	Other: Explain: Go to F5a.
F3c.	If Yes – Did you get any (harvest) caribou?
	O Yes†
	O No → Go to F5a.

## **CARIBOU CHARACTERISTICS**

F4.	The following questions are about body condition and health of caribou you observed in
	each season over the past year. Please check one or more that applies.

Overal	l Condition	Winter	Spring	Summer	Fall
Excellent (E)					
Good (G)					
Mixed (M)					
Fair (F)					
Poor (P)					
Don't know					
	Size	Winter	Spring	Summer	Fall
Muscular/Fit/S	itrong				
Skinny/Lean					
Average					
Fat					
Don't know					
		1	1		
Physical /	Abnormalities	Winter	Spring	Summer	Fall
Cysts, white sp	ots in meat				
Sores & puss					
Wounded/limp	oing				
Swollen joints,	testes or glands				
Bad liver					
None of these					
Don't know					
	re the mosquitoes,		other biting inse	ects like last sum	mer?
	Worse than other yo				
	About normal/avera				
	Fewer mosquitoes t	han usual			
	Don't know				
Other co	omments:			<del></del>	
F6a. Was ther	e anything unusual	you noticed she	out insects last	summer?	
Yes O Yes	O No → Go	=	out misells last	Juilliel:	
J 103	<b>3</b> 110 / 30 (				
F6b. If Y	es, Describe:				
	,				

### **CARIBOU PREDATORS**

F7. In your observations, would you say there were more, the same, or fewer caribou predators present in the past year than usual? (Check box that applies)

Presence of Predator		Winter		Spring				Summer				Fall				
Golden Eagles <sup>1</sup>					<sup>†</sup> More	<b>† Same</b>	† Less	DK	<b>† More</b>	<b>† Same</b>	† Less	DK	<sup>†</sup> More	† Same	† Less	DK
Grizzly & Black Bears <sup>2</sup>					<b>† More</b>	<b>† Same</b>	† Less	DK	<b>† More</b>	<b>† Same</b>	† Less	DK	† More	† Same	† Less	DK
Wolves <sup>3</sup>	† Mor e	† Same	† Less	DK	† More	† Same	† Less	DK	<b>† More</b>	<b>† Same</b>	† Less	DK	† More	† Same	† Less	DK
Lynx	† Mor e	† Same	† Less	DK	† More	† Same	† Less	DK	† More	† Same	† Less	DK	<b>† More</b>	† Same	† Less	DK
Wolverine	† Mor e	† Same	† Less	DK	† More	† Same	† Less	DK	<b>† More</b>	<b>† Same</b>	† Less	DK	<b>† More</b>	† Same	† Less	DK
Other- Specify: (e.g. coyote)	† Mor e	† Same	† Less	DK	† More	† Same	† Less	DK	<sup>†</sup> More	† Same	† Less	DK	† More	† Same	† Less	DK

F8.	How many caribou predator kill sites or caribou predation events have you seen in the past year?

Golden Eagles are the primary main predator of Porcupine Caribou calves
 Grizzly & Black Bears are secondary the main predator of Porcupine Caribou calves

<sup>&</sup>lt;sup>3</sup> Wolves are the tertiary main predator of Porcupine Caribou calves

# **SECTION G: Mammals**

G1. In your observations, would you say there were more, the same, or fewer of the following mammals in your area in the past year than usual?

Animal	-	-	r same # t lease circl	Did you trap or hunt this animal? Circle one answer			
Beavers	More	Same	Fewer	Don't Know	Yes	No	N/A
Muskrats	More	Same	Fewer	Don't Know	Yes	No	N/A
Squirrels	More	Same	Fewer	Don't Know	Yes	No	N/A
Rabbits	More	Same	Fewer	Don't Know	Yes	No	N/A
Marten	More	Same	Fewer	Don't Know	Yes	No	N/A
Mink	More	Same	Fewer	Don't Know	Yes	No	N/A
Weasel	More	Same	Fewer	Don't Know	Yes	No	N/A
Coyote	More	Same	Fewer	Don't Know	Yes	No	N/A
Wolverine	More	Same	Fewer	Don't Know	Yes	No	N/A
Red Fox	More	Same	Fewer	Don't Know	Yes	No	N/A
White Fox	More	Same	Fewer	Don't Know	Yes	No	N/A
Lynx	More	Same	Fewer	Don't Know	Yes	No	N/A
Wolves	More	Same	Fewer	Don't Know	Yes	No	N/A
Caribou	More	Same	Fewer	Don't Know	Yes	No	N/A
Moose	More	Same	Fewer	Don't Know	Yes	No	N/A
Muskoxen	More	Same	Fewer	Don't Know	Yes	No	N/A
Mountain/Dall Sheep	More	Same	Fewer	Don't Know	Yes	No	N/A
Black Bears	More	Same	Fewer	Don't Know	Yes	No	N/A
Black Bear Cubs	More	Same	Fewer	Don't Know	Yes	No	N/A
<b>Grizzly Bear</b>	More	Same	Fewer	Don't Know	Yes	No	N/A
<b>Grizzly Bear Cubs</b>	More	Same	Fewer	Don't Know	Yes	No	N/A
Polar Bear	More	Same	Fewer	Don't Know	Yes	No	N/A
Polar Bear Cubs	More	Same	Fewer	Don't Know	Yes	No	N/A
Otters	More	Same	Fewer	Don't Know	Yes	No	N/A
Beluga whales	More	Same	Fewer	Don't Know	Yes	No	N/A
Other:	More	Same	Fewer	Don't Know	Yes	No	N/A
(e.g. bowhead whale)							

G2a.	Did you observe any unique, rare, unusual or special wildlife or wildlife habitat occurrences (including unusual birds, fish or insects or excessive erosion of land)?										
	O Yes	O No $\rightarrow$ Go to H1									
	G2b. If Yes, Describe:										

# **SECTION H: Concluding Remarks**

H1.	Was this interview a good experience for you?
	O Yes † O No † O Somewhat † O Don't know O Refused to answer
H2.	Would you do this survey again in the future?
	O Yes † O No † OMaybe ODon't know † O Refused to answer
Н3.	Do you have any comments or suggestions regarding this community monitoring survey for our future reference?
	↑ O Yes → Summarize:
	<b>O</b> No comments at this time.
	(Survey comments can also be directed to arcticborderlands@gmail.com)

THANK YOU VERY MUCH FOR PARTICIPATING IN THE ARCTIC BORDERLANDS
COMMUNITY ECOSYSTEM MONITORING INTERVIEW!

# A Note on the ABEKS Indicators and the Community Ecosystem Monitoring Interview Survey

Community Ecosystem Monitoring Interview questions derive from indicators that identify strong trends and extreme events.

Questions and indicators were also derived from the list of survey topics reviewed in analysis based on community interviews (2000-2007) by Don Russell and Michael Svoboda in their paper presented at the 2010 Arctic Borderlands Ecological Knowledge Society Review Meeting (pp. 3-11). The indicators of caribou condition, availability and harvest were derived from this study in order to preserve the capacity for consistent use of good indicators used in the previous Community Ecosystem Monitoring Interview survey instrument and to carry forward relevant, tangible data stored within the ABEKS database. The authors have worked with these data in the past in order to render data that is meaningful to co-management bodies, stewards and communities.

The main indicators addressed in the questions within this survey are: time spent doing activities such as fishing and hunting, unusual and extreme weather events, observations of environmental change by people who work on the land including fishers (collection, health and abundance of berries, fish, birds and caribou), environmental indicators, individual level wildlife population indicators, caribou population level indicators (caribou predators and kill sites observed in an area), and mammals. Content within these main indicators was developed in cooperation with the ABEKS working group on the Community Ecosystem Monitoring Survey.

Community-based local knowledge about the Porcupine Caribou herd gathered from interview survey results may be analyzed in comparison with scientific data gathered on the annual caribou population estimates where available as well as other variables such as monthly weather patterns over the year in order to provide a more thorough, long-term picture of the state of local ecosystems and the caribou population.

For questions, comments and suggestions regarding the interview survey form, please contact:

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#### **REFERENCES**

Johnston, Brian. Environmental Conservation Branch. Environment Canada. April 2005. Arctic Borderlands Ecological Knowledge Co-op-Making Data Relevant to Policy and Decision Makers.

Porcupine Caribou Management Board. March 2005. Summer Ecology of the Porcupine Caribou Herd. 2<sup>nd</sup> Edition.

Russell, Don and Joan Emer. January 1996. State of the Northern Yukon Ecosystem. Presentation given at the Ecological Monitoring and Assessment Netword Second National Science Meeting.

Russell, Don and Michael Svoboda. 2010. Monitoring the condition, availability and harvest of the Porcupine Caribou Herd 2000-2007: an analysis based on community interviews. Paper presented at Arctic Borderlands Ecological Knowledge Society Review Meeting. February 11-13, 2010. High Country Inn. Whitehorse, Yukon.

Yukon Government. Department of Environment Report. September 2009. Yukon Environment and Rationale for Yukon Governments transitional conservation measures to protect the Porcupine Caribou Herd.