

Caribou Patrol Project

*Final Report to Alberta Environment and Sustainable Resource
Development*

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**Aseniwuche Winewak
Nation of Canada**



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Final review of 2012 project including, overview, lessons learned, data collection forms, sample photos, data collected and related statistics.

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AESRD Weekly Reports

1 Project Overview – excerpt from “Aboriginal Funds for Species at Risk” application

1.1 Project Overview

The overall purpose of the project is for caribou - a federally listed species at risk. The Aseniwuche Winewak Nation (AWN) has a strong desire to actively participate in recovery actions and has become frustrated with past processes and discussions with no substantive actions. This project as a whole would get the AWN directly involved in support for caribou recovery strategies and will directly contribute to the FLMF proposed “innovative strategies” for caribou as outlined in a larger landscape level project “Foothills Land Stewardship Project (FLSP)” which proposes a collaborative management model to pro-actively address responsible resource development and the effective management of environmental values such as water and species at risk. The FLSP will be managed by the Foothills Landscape Management Forum (FLMF) activity lead under the umbrella of the Foothills Research Institute (FRI) of which AWN is a member. The broader FLSP concept outlines how management of human use, habitat, anthropogenic footprint and population management strategies will be simultaneously managed for the recovery of caribou. The caribou patrol project focuses on the human use and population aspects and more importantly directly engages the local aboriginal communities to support and provide input into the overall FLSP project in a meaningful way. The overall purpose is to reduce vehicle collisions with woodland caribou on area roadways, by initiating fall patrols and caribou harassment actions, enhancing awareness of risk, and encouraging industrial users to implement effective proactive vehicle operation policies applicable to staff and contractors. This project will also assist Alberta Environment and Sustainable Resource Development (ESRD) in efforts to educate the public on wildlife management of woodland caribou.

1.2 Project Objective & Description

Road patrols (caribou): This project will employ four AWN members for approximately three months during the fall of 2012. The intent is to hire one older experienced member and an AWN youth per vehicle so that traditional knowledge transfer and mentoring will occur for the duration of this project.

Objectives:

1. Reduce all sources of human-caused direct caribou mortality associated with anthropogenic features (i.e. hunting, poaching, and vehicle collision).

Methodology: Reduce vehicle collisions with woodland caribou on area roadways, by conducting fall patrols and employing caribou harassment actions.

2. Increase awareness of caribou concerns with industry and public road users within the study area. This project will also assist ESRD in efforts to educate the public on wildlife management of woodland caribou.

Methodology: Provide a physical visual presence on resource roads along with signage on main corridors and hand out brochures enhancing awareness of risk, and encouraging industrial users to implement effective proactive vehicle operation policies applicable to staff and contractors.

3. Conduct an inventory of physical barriers within the study area.

Methodology: Visit each barrier/gate, collect a GPS location, complete data collection forms and, take pictures of specified features of the barrier including, signs, locks, and the barrier itself.

1.3 Executive Summary

The AWN is a member of the FLMF operating under the FRI. The focus of the FLMF for the past six years has been to reduce the industrial access requirements of industry through the application of Integrated Land Management (ILM) principles thereby mitigating the effects that access has on other values such as grizzly bear, caribou, and fish. The area is located within the traditional territory of the AWN near the town of Grande Cache, Alberta, called the Berland Smoky region. This project will address the effects of access on direct caribou mortality. This project overall will provide a meaningful way for the AWN to directly participate as an active partner with industry and government in recovery efforts for caribou.

1.4 Rationale for the Project

This project meets national and regional priorities for caribou. The project addresses mortality risk and community level outreach and education: traditional knowledge.

- Supports Government of Canada goal - to recover species at risk, specifically the Boreal and Southern Mountains populations of woodland caribou.
- Supports Government of Alberta (GOA) goal – The high quality of Alberta’s environment will be sustained.
- Supports GOA goal – Alberta will have a prosperous economy. Alberta’s natural resources must be managed in a manner that is fair and in the public interest of Albertans. Alberta’s forests, fish and wildlife, water, land and air must be sustained for the economic, recreational and social benefits of future generations.
- Supports ESRD goal – The values Albertans receive from wild species are sustained and enhanced for future generations.
- Supports industry efforts in ILM planning and future access requirements (Berland Smoky Regional Access Development (RAD) plan, 2011).
- Supports GOA and industry: management of public use and education of access use.
- Supports AWN’s voluntary cessation of caribou subsistence harvest and will directly engage the AWN in recovery efforts.
 - Our Elders have been advocating for the preservation of Caribou for decades.
 - AWN as an organization has been active in Caribou recovery working groups.
 - In our consultation process with industry Caribou is one of the top considerations.
 - Some herds have stopped migrating and our people fear that this will affect nature’s balance.

2 Summary of Results

2.1 Brief Overview of Results – AWN

For decades, AWN, the “Rocky Mountain People”, have witnessed the decline of the Woodland Caribou. Despite lobbying government and industry for increased habitat protection and following the advice of the elders who said, “We must speak for those that have no voice”, AWN was unable to effect any real change that deterred further extirpation of local caribou herds.

The Caribou Patrol Project gave the Rocky Mountain People an opportunity to change that. The project provided AWN a venue to share traditional ecological knowledge and the means to employ AWN’s core value of Protection and Preservation of the Environment in a hands-on, meaningful way out on the land. The project’s Caribou “Cowboys” were community youth and elders who worked in two worlds; the traditional aboriginal world, using knowledge passed down through the generations to observe animal behavior, and the modern world, using cutting edge technology to populate GIS databases and create electronic records.

“It was enjoyable learning about the area around Grande Cache. The back roads, the animals and this job taught me to be so much more aware and spot animals quicker. I even saw animals I’ve only seen on videos. All in all, it was a great experience.”

~ Dallas Flamand, Caribou “Cowboy”

2.1.1 Possible influences on results – AWN

AWN started the project out strong with two patrol crews each consisting of one elder and one youth however, there was significant turnover in patrol crew staff resulting in only one original crew member still patrolling by the close of the project. A total of eleven individuals were used to fill the four patrol crew positions.

The project also saw personnel change-overs in the management staff. The two staff responsible for the proposal development and subsequent project planning left AWN during the beginning of the patrols. The Executive Director of AWN stepped in and saw the project to completion along with the two staff hired to fill the vacant management positions.

2.2 Brief Overview of Results – Education

Through the course of the project, twelve signs (pictured in [Appendix A](#)) were installed along the major roadways leading in to and out of the Caribou Patrol Zone (for map of sign locations see [Appendix B](#)). These signs served as constant reminders to those using the roads that caribou are known to frequent the area and that drivers should exercise caution.

In addition to signs, patrol crews handed out more than 40 informational pamphlets to both industry and public access users (see [Appendix C](#)). These pamphlets provided additional information about the

Caribou Patrol Project, including the purpose of the patrols, caribou management, patrol persons/"Cowboys", and contact information should someone wish to acquire additional or detailed information about the project.

Only one of the patrol crews encountered a member of the public who seemed to have negative feelings/feedback about the Caribou Patrol Project. This member of the public stated that he had heard that the patrol crews were supposed to be scaring caribou off of Highway 40 and that he had seen two dead caribou along the highway the week before (unconfirmed by our crews and AESRD). He questioned why they were all the way out on the [back] roads and not on the highway where they were supposed to be. The crew explained about the full purpose of the project and gave the gentleman an information pamphlet. The crew felt unwelcome and chose to leave the area after the confrontation.

For photo samples related to education and observations, see the digital folder *Pictures/Observations* submitted with this report.

For detailed results relating to the Education portion of this project please refer to the *Observations* table in the *CaribouPatrolData_2012.accdb* submitted with this report.

2.2.1 Possible influences on results – Education

1. Though it was originally anticipated that only five signs would be installed on key access corridors, due to reduced pricing it was possible for twelve signs to be installed on key access corridors. Because of the labour intensive process for securing permits to install the signs along the roadways, and the belief that this project will run again in 2013, it has been decided that the signs will remain installed along the roadways throughout the year.
2. According to feedback received during the November 9th, 2012 meeting with the patrol crews, it would seem that the crews were unaware that they were supposed to be tracking the detailed number of information pamphlets being handed out. As a result, the total number of pamphlets handed out, stated in the above summary as "more than 40", reflects only the number of pamphlets handed out that could be confirmed through the patrol crews data entry forms. There is a strong possibility that the number of pamphlets handed out could be significantly more than 40.
3. Also according to feedback received during the November 9th, 2012 meeting with the patrol crews, it would seem that the crews were directed to and were also hesitant to approach members of the public who appeared to be hunting. Due to this directive/hesitation fewer pamphlets were handed out to the public than perhaps had been anticipated.

2.3 Brief Overview of Results – Caribou

The Caribou Patrol crews began patrolling roads within the Caribou Patrol Zone (map in [Appendix D](#)) on September 19th, 2012 and finished patrolling on December 14th, 2012. During this time there were no reported cases of human-caused direct caribou mortality associated with anthropogenic features such as vehicle collisions, poaching, or hunting.

The Caribou “Cowboys” reported a total of ten instances of woodland caribou sightings over the course of the project. A total of 36 caribou were observed during these ten instances, including males and females, both young and old. There were six instances of “caribou diversion”. For the purposes of this report, a “caribou diversion” is any action that results in caribou leaving the roadway, including the presence of the patrol vehicle.

For a map showing locations of caribou sightings see [Appendix E](#).

For photo samples related to wildlife sightings, see the digital folder *Pictures/Wildlife* submitted with this report.

To view the Wildlife Sightings data collection form, from which the digital collection form used by Patrol Crews was based, see [Appendix F](#).

For a breakdown of wildlife sighting statistics see [Appendix G](#).

For detailed results relating to the Caribou/Wildlife portion of this project please refer to the *Wildlife* table in the *CaribouPatrolData_2012.accdb* submitted with this report.

2.3.1 Possible influences on results – Caribou

1. Although requested, crews did not receive any direction from Fish & Wildlife as to how to “divert/harass” caribou off of roadways. As a result, crews relied on the simple tactic of driving their trucks close to the caribou in order to persuade them to leave the roadways.
2. It was necessary for patrol crews to drive along Highway 40 in order to get to and from the field each day. As a result, there were a high number of wildlife sightings along the Highway 40 corridor. This also resulted in a significant number of wildlife sightings where animals were reported to be dead by manner of “road kill”. See [Appendix H](#) for a map showing wildlife sightings classified by “alive/dead” status.

2.4 Brief Overview of Results – Barriers

As part of the Caribou Patrol Project, patrol crews completed surveys of existing gates and barriers. In total, 347 surveys were performed. The data collected through these surveys indicate that close to 65% of gates or barriers were either open or unlocked at the time of the survey. A small number of closed gates were reported to be ineffective in stopping on-highway vehicle traffic.

For a map showing locations of barriers, including their open/closed status, see [Appendix I](#).

For photo samples related to barriers including, types, potential to detour, and signs, see the digital folder *Pictures/Barriers* submitted with this report.

To view the Barriers data collection form, from which the digital collection form used by Patrol Crews was based, see [Appendix J](#).

For a breakdown of barrier statistics see [Appendix K](#).

For detailed results relating to the Barriers portion of this project please refer to the *Barriers*, *SignInfo*, and *LockInfo* tables in the *CaribouPatrolData_2012.accdb* submitted with this report.

2.4.1 Possible influences on results - Barriers

1. Patrol crews were reluctant to pass through open gates where they perceived that there may have been a risk of the gate being closed and locked upon their return home. As a result, crews did not collect data beyond these gates.
2. Patrol crews did not have the ability to gain access to roads beyond closed and locked gates. As a result, crews did not collect data beyond these gates.
3. Patrol crews did not purposefully re-survey any barriers/gates during the 2012 inventory/patrol season. As a result, there is very little information indicating whether or not the “open/closed” status of a gate changed over the course of the patrol season. The re-inspection of barriers/gates was in the scope of the original project, but was not performed by crews due to miscommunication. Re-inspection provides valuable gate management history and should be included in any future versions of this project.
4. Data collected by patrol crews regarding the presence of a sign at the barrier location was not based on the content of the sign. That is, it was not communicated to the crews or the FRI staff that the criteria for indicating that a sign was present was that the content of the sign must be related to the authority and requirement for the barrier. As a result, there are many instances where it is marked that a sign is present, however, the sign does not refer to any legislation. For photo samples of signs posted at barriers see the digital folder *Pictures/Barriers/Sign Types* submitted with this report.

3 Recommendations

3.1 Lessons Learned

3.1.1 What went well/not well

1. Patrol crews appreciated having the means to collect and submit data digitally using the tablets and GPS units. This also reduced the likelihood of transcription errors common to projects where data is collected using paper forms and later transcribed to digital files.
2. Adapters that would have allowed for crews to charge tablets while in the patrol trucks would have been useful.

3.1.2 What needs to be done differently

1. Communication with patrol crews over expectations and priorities should have been communicated throughout the project especially in light of the high staff turnover among the patrol crews. Confirmation that each new crew person has read and understands the *Caribou Road Patrol Persons Operating Practices* document (see [Appendix L](#)) is essential.
2. A check-in system needs to be established for the crews during weekend shifts.

3.1.3 Unanticipated project circumstances

1. The high degree of staff turnover was relatively unexpected.
2. The sharing of a single patrol truck for a period of time at the beginning of the project was not expected by the FRI or AESRD as budgets suggested that two patrol trucks would be used for the full duration of the project.

3.2 Recommendations for the Future

The Caribou Patrol Project is intended to be a multi-year program. Initial feedback from partners has been positive.

“On behalf of the FLMF members, it was gratifying to work with the AWN staff and community to get some caribou recovery action on the ground with very short notice. I am hopeful that AWN and FLMF are successful in continuing and improving on this initial project in the future.”

~ Wayne Thorp, Managing Director, FLMF

3.2.1 Recommendations for the FLMF

1. Conduct an inventory of gate lock combinations/key locations for use by future caribou patrol crews that will reduce the risk of patrollers being locked behind a gate.
2. Ensure that the relational database design and structure is sufficient for both spatial and non-spatial data. Data needs to be query-able, reportable and map-able. Ensure data integrity is maintained during data collection and during import into the database. A relational database was created in March, 2013 for the pilot project and should be used as a base for data collection in future years. See [Appendix M](#) for the relation data model of the *CaribouPatrolData_2012.accdb* submitted with this report.
3. If required, ensure previously collected data is available for use by future caribou patrol crews/projects in a way that is appropriate and meaningful to them (ie. on their GPS units, maps, as well as in binders).
4. Work with FRI, CEP and partners to create an important communication tool (AKA “education kit”) for delivery by AWN to various groups (industry, schools, public) prior to future patrol projects.
5. Prior to future patrol projects, meet with the FRI Caribou Program Lead to discuss the possibility of patrol crews collecting caribou fecal samples if the opportunity presents itself. This will require more information (methods, storage, label information, etc) from the FRI Caribou Program.

3.2.2 Recommendations for ESRD

1. Gate authorizations should be identified prior to future patrol projects.
2. Develop a mechanism that legally allows the patrollers to be behind all gates.
3. Identify preferred locations of traffic counts prior to future patrol projects.

3.2.3 Overall Recommendations for the Caribou Patrol Project

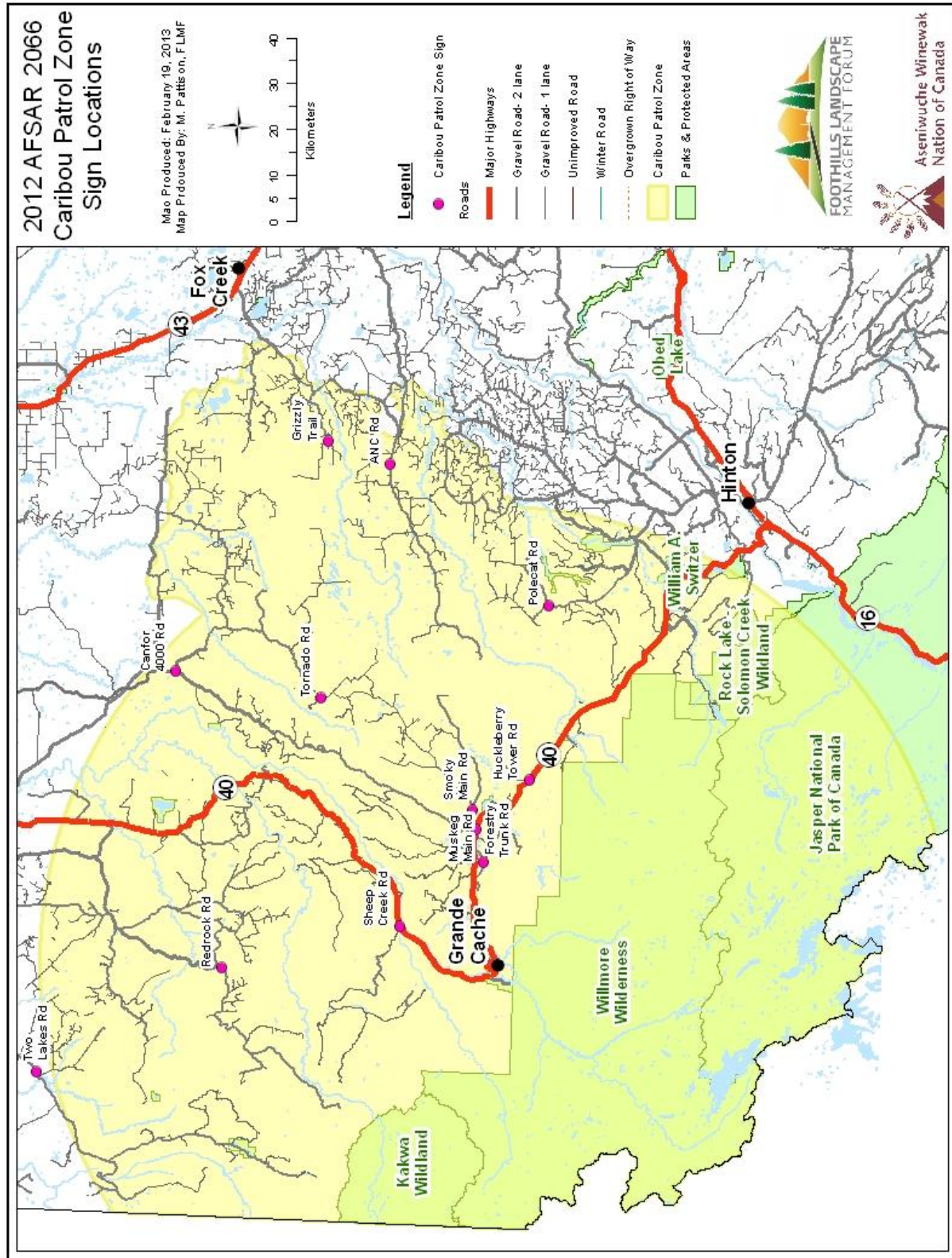
1. Develop a communication plan prior to future patrol projects (including contact person(s) and key messages) as there were several newspaper articles that developed from this pilot project. See [Appendix N](#) for communication materials and media articles related to the 2012 Caribou Patrol Project.
2. Create a Terms of Reference prior to future patrol projects.
3. Ensure more lead-in time is provided in order to allow for adequate recruitment and proper training of patrol staff.
4. Identify training requirements prior to future patrol projects.
5. Hold monthly “check-in” meetings with patrol crews to answer any questions they have, validate any concerns and adjust where necessary.
6. Identify “patrol routes” for each crew prior to future patrol projects. These routes may be used during certain time periods.
7. When reviewing data collection requirements, ensure that all partners provide clear direction on what is valuable to them and any intent that may not be clear to other parties.
8. Identify any additional major route locations into the caribou zones where a “caribou patrol” sign may be required to be installed.
9. Review and edit as necessary the document titled *caribou road patrol persons operating practices – September 11, 2012* (see [Appendix L](#)). Ensure this is reiterated to the crews during monthly “check-in” meetings.
10. Review permitted use of partner logos by crews on trucks, signs, etc. prior to future patrol projects.

Appendices

Appendix A: Picture of Caribou Patrol Zone Sign



Appendix B: Map of Caribou Patrol Sign Locations





Caribou Patrols:

The program was established to contribute to recovery efforts for Woodland Caribou in the region.

The objectives of the program are to:

- Reduce vehicle collisions with woodland caribou on area roadways, by initial fall patrols and caribou harassment actions;
- Enhance awareness of caribou management;
- Collect data on wildlife sightings, and;
- Collect data on physical highway vehicle barriers

Caribou Management:

Woodland caribou (*Rangifer tarandus*) are classified as threatened in Alberta. The outcome of the patrol project will contribute to the overall caribou recovery plan by reducing mortality of caribou and collection of human use data to assist in successful implementation of broader landscape recovery strategies.

Patrol persons: Q & A

What authority do the patrol persons have?

The patrol person has no more authority than a member of the public. They are employed to collect information for resource managers, educate users of the roads (public and industrial) and reduce collisions with wildlife only.

What type of information are the patrol persons collecting?

As part of their duties, the patrolpersons will be collecting information on wildlife sightings and on effectiveness of physical barriers to vehicle traffic, public and industrial use intensity.

How does the patrol person project contribute to caribou recovery?

While vehicular collisions are not a major cause of caribou mortality, collisions do occur on roadways in the region. Modeled after a "Caribou Cowboy" project that successfully ran for several years along highway 40 south of Grande Cache, the patrol persons would target areas where caribou are known to cross roadways. The patrol persons will install information signs and use actions to persuade caribou to leave the roadways.

Who do the patrol person work for?

The patrol persons are employed by the Aseniwuche Environmental Corporation (AEC) under contract to Aseniwuche Winewak Nation of Canada with funding provided by Foothills Landscape Management Forum, and the Alberta and federal governments.

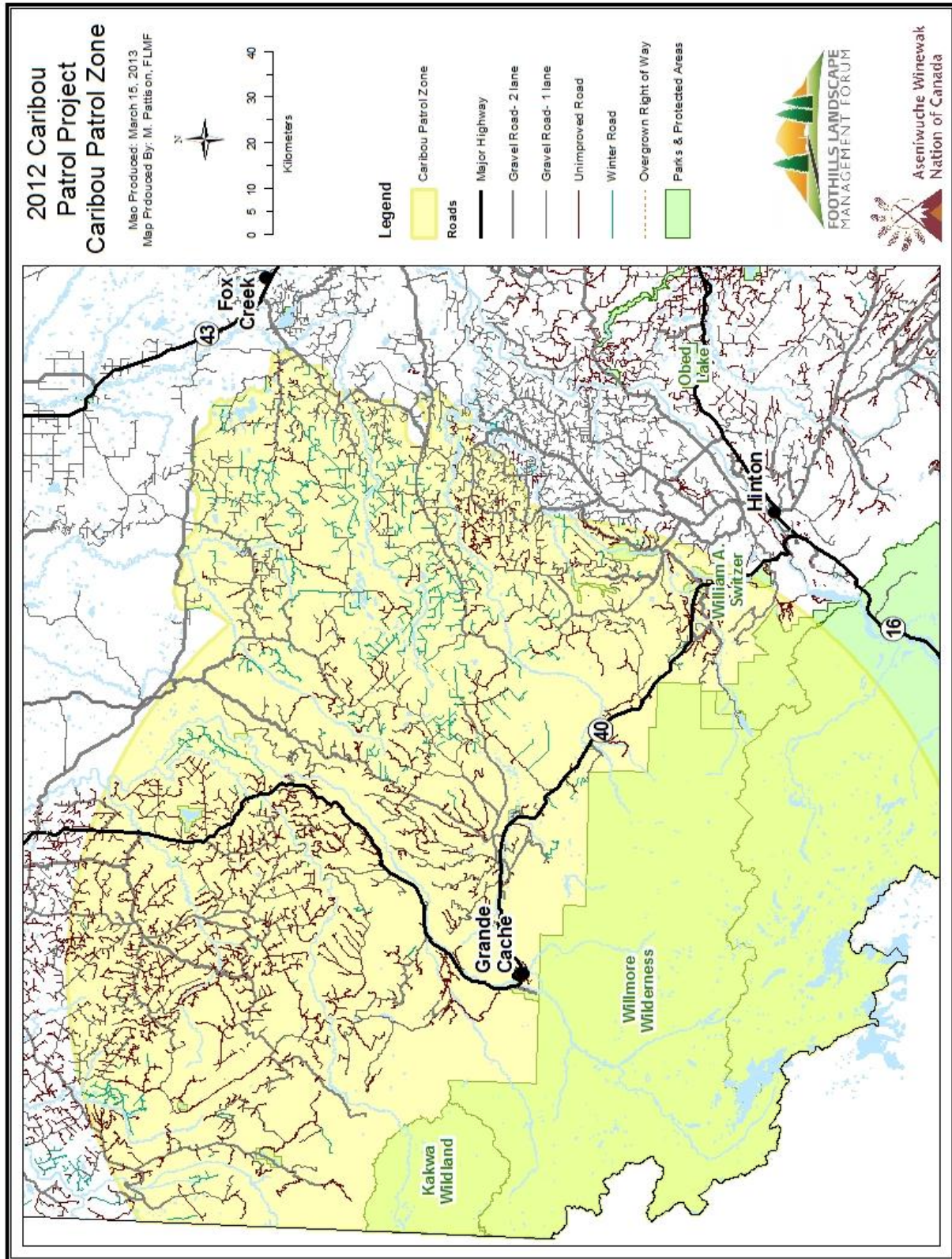
How long does the project last?

The first year of the project is targeting regulated hunting season from mid-September to the end of November. Patrols will continue to December 14, 2012. If proven successful, it may be extended at any time by the partners.

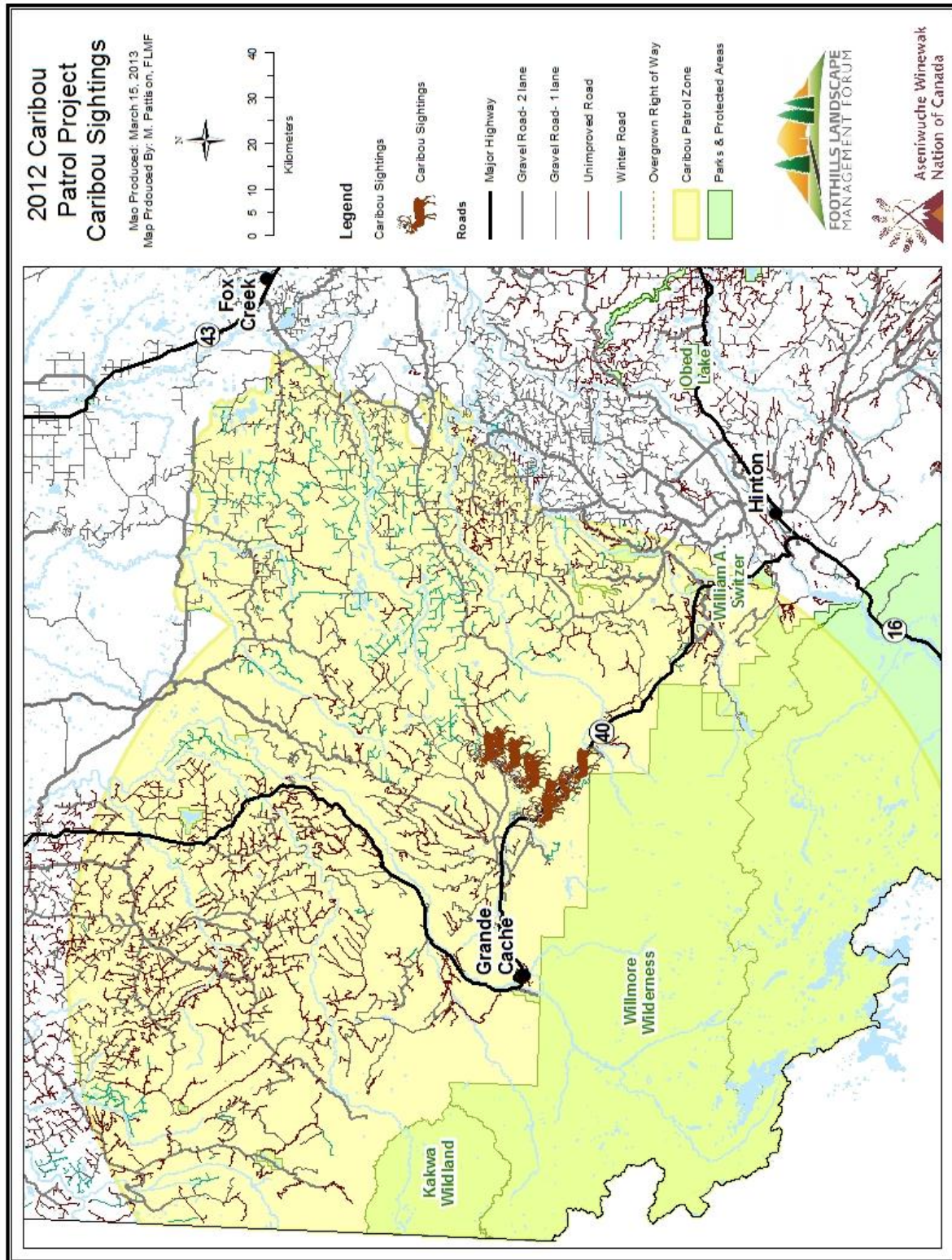
For additional information about the Caribou Patrol project contact:

Julie Newall, AEC: (780) 827-4014

Wayne Thorp, FLMF: (780) 625-1732



Appendix E: Map of Caribou Sightings



Caribou and Grizzly Bear sightings

Date			
Time			
Location			
Alive?	Yes or No		
Picture taken?	Yes or No		
Species	Caribou	Elk	Black bear
	Grizzly bear	Deer	Other
	Moose	Wolf	
Age	Adult	Young	Unknown
Sex	Male	Female	Unknown
Number(s)			
Behaviour			
Comments			

DATE and TIME: write down the date AND time that you observed the wildlife

LOCATION: write down the GPS coordinates. Please do not write down a verbal description, as it is almost impossible to use this data without exact coordinates.

ALIVE: Yes or No

PICTURE TAKEN: Yes or No

SPECIES: select the species observed (caribou, grizzly bear, moose, elk, deer, wolf, black bear, other). For sightings of live wildlife, ESRD is mainly concerned with capturing data on caribou and grizzly bear. However, other species have been included in the list for dead animals.

AGE: write down if the animals are adults or young (i.e. calves/cubs) if you can determine based on antlers/size of animal/behaviour. If you are not sure, just write down "Unknown" in this column. Do not guess.

SEX: write down if the animals are male or female if you can determine based on antlers/size of animal/behaviour. If you are not sure, just write down "Unknown" in this column. Do not guess.

NUMBER(s): write down the number of animals you observed in this group

BEHAVIOR: write down what the animals were doing when you observed them (i.e. feeding on side of road, running, dead on side of road, bedded, etc.).

COMMENTS: any other comments that you feel important to include here.

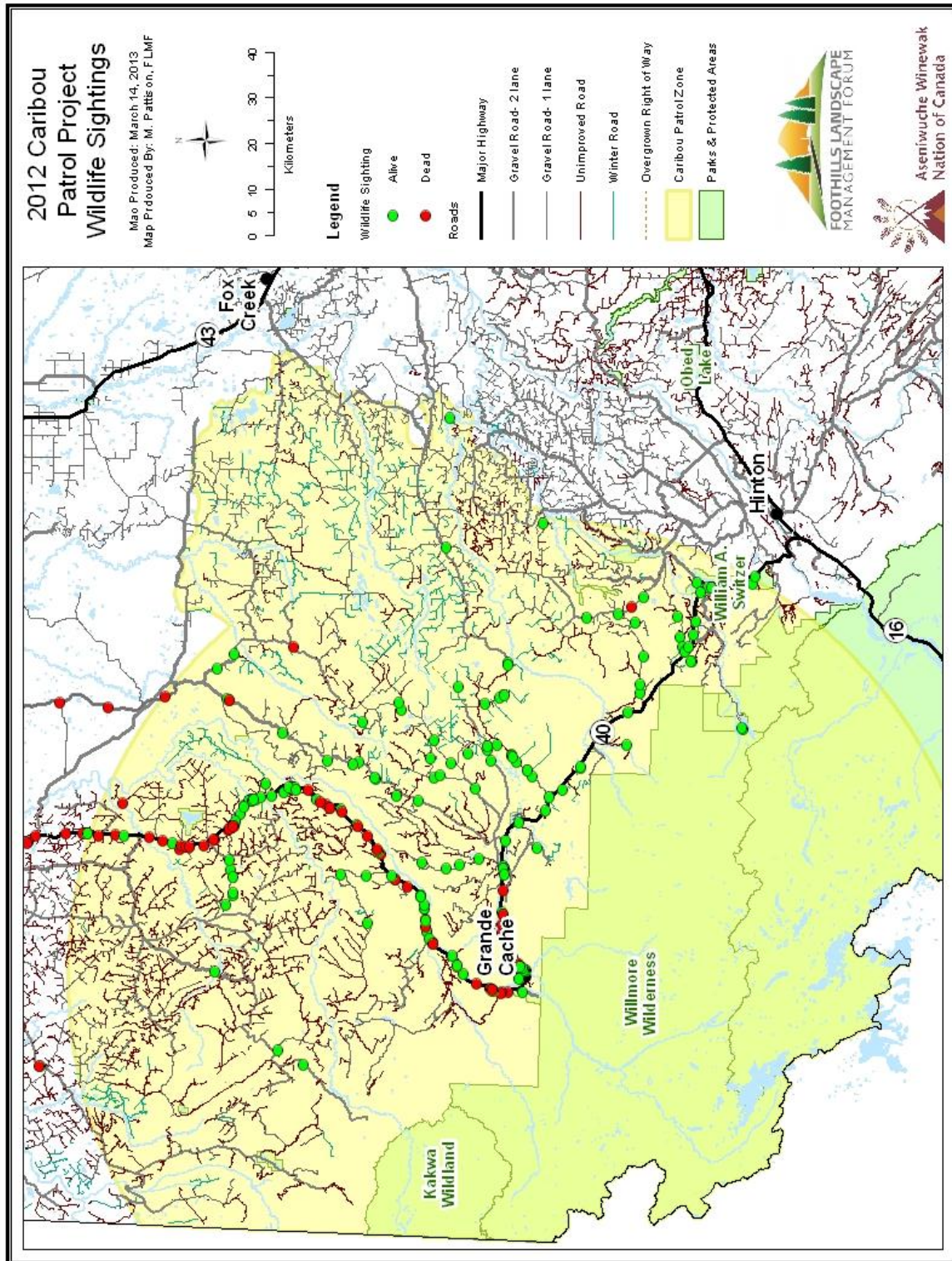
Appendix G: Wildlife Sightings statistics

Dataset	Attribute	Value	Count	Percent of Total
WildlifeSightings			251	100.00%
	Species			
		Caribou	10	3.94%
		Grizzly Bear	3	1.18%
		Black Bear	2	0.79%
		Deer	107	42.13%
		Elk	13	5.12%
		Moose	72	28.35%
		Wolf	4	1.57%
		Other	43	16.93%
			254	100.00%
	Alive_			
		Yes	162	64.54%
		No	89	35.46%
			251	100.00%
	Alive_ = No			
	If_dead_why			
		Road kill	72	80.90%
		Shot	4	4.49%
		Other	12	13.48%
		Not Recorded	1	1.12%
			89	100.00%
	Age__if_known__			
		Adult	131	52.19%
		Adult/Young	2	0.80%
		Young	1	0.40%
		Young (cubs/calves)	26	10.36%
		Unknown	89	35.46%
		Not Recorded	2	0.80%
			251	100.00%
	Sex__if_known__			
		Female	101	40.24%
		Male	39	15.54%
		Unknown	109	43.43%
		Not Recorded	2	0.80%
			251	100.00%

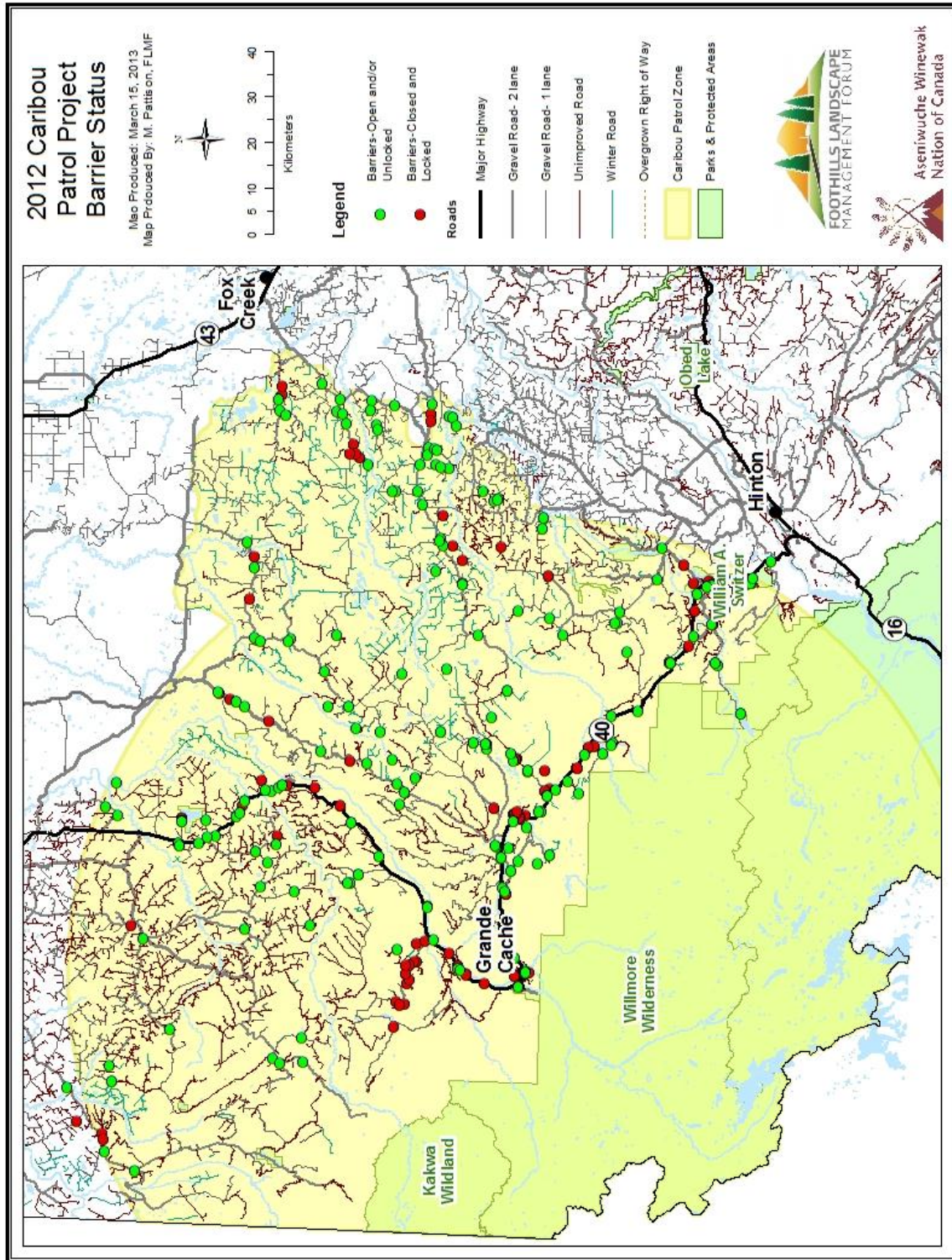
Appendix G: Wildlife Sightings statistics

	Number_s_			
		Caribou	36	8.55%
		Grizzly Bear	4	0.95%
		Black Bear	4	0.95%
		Deer	158	37.53%
		Elk	60	14.25%
		Moose	100	23.75%
		Wolf	3	0.71%
		Other	56	13.30%
			421	100.00%
	Species = Caribou			
	Attribute Summary by Number of Animals		36	100.00%
	Alive_	Yes	36	100.00%
		No	0	0.00%
			36	100.00%
	Age__if_known_			
		Adult	25	69.44%
		Adult/Young	0	0.00%
		Young	0	0.00%
		Young (cubs/calves)	8	22.22%
		Unknown	3	8.33%
		Not Recorded	0	0.00%
			36	100.00%
	Sex__if_known_			
		Female	10	27.78%
		Male	16	44.44%
		Unknown	10	27.78%
		Not Recorded	0	0.00%
			36	100.00%

Appendix H: Map showing wildlife sightings classified by “alive/dead” status



Appendix I: Map showing barrier locations classified by “open/closed” and “locked/unlocked” status



2012 Barriers Inventory Field Sheet				
Date (ie. Oct 24)			Time	
GPS Location				
Disposition Number				
Road Name				
Owner (company name)				
Contact Phone Number(s)				
Built Status (circle one)	Existing		Removed	
Photo ID of	Gate	Sign	Lock	
Barrier Types (circle those that apply)				
Fence Bridge Out Culvert Out Blowdown	Gate Concrete blocks Roll back Cross Ditches	Boulders Washout Logs Berm	Other (describe):	
Gate Type (circle one)	Manned		Unmanned	
Gate / Barrier Span	Barrier crosses whole road right of way (ROW)		Barrier crosses road surface only	
Barrier at bridge?	Yes		No	
Potential to detour barrier?	Yes		No	
Signage present?	Yes		No	
Sign Condition at time of visit	Good condition		Damaged	
Is sign visible and close to the barrier?	Yes		No	
Open Status at time of visit	Open		Closed	
Lock Status (circle those that apply)	Locked	Unlocked	No lock present	Lock broken
Lock Type (circle those that apply)	Key	Combination	No lock present	Lock broken
Effective barrier for on-highway vehicles?	Circle Yes, if <ul style="list-style-type: none"> Gate is closed and locked, AND No observations of public behind gate, AND No potential to detour gate OR gate was designed for passage 		No	
If barrier isn't stopping on-highway traffic... WHY?	Broken	Get Around	Lock Missing	Designed for passage
Comments				

Appendix K: Barrier Statistics

Dataset	Attribute	Value	Count	Percent of Total
Barriers			345	100.00%
	Build_Status			
		Removed	2	0.58%
		Existing	343	99.42%
		Total	345	100.00%
	Barrier_Types *			
		Berm	11	2.75%
		Boulders	2	0.50%
		Bridge Out	3	0.75%
		Concrete Blocks	4	1.00%
		Fence	12	3.00%
		Gate	345	86.25%
		Cross Ditches	2	0.50%
		Logs	4	1.00%
		Washout	1	0.25%
		Other	16	4.00%
			400	100.00%
*Note: Some locations indicated multiple barrier types therefore the total for Barrier_Types is greater than the total number of surveys.				
	Gate_Type			
		Unmanned	326	94.49%
		Manned	18	5.22%
		Not Recorded	1	0.29%
			345	100.00%
	Gate__Barrier_Span			
		Barrier crosses road surface only	197	57.10%
		Barrier crosses whole right-of-way (ROW)	148	42.90%
			345	100.00%
	Barrier_at_bridge			
		Yes	21	6.09%
		No	324	93.91%
			345	100.00%
	Potential_to_detour_barrier_			
		Yes	70	20.29%

Appendix K: Barrier Statistics

		No	275	79.71%
			345	100.00%
	Signage_present_ *			
		Yes	235	68.12%
		No	110	31.88%
			345	100.00%
	*Note: <i>Signage_Present</i> has a recorded value of "Yes" as long as there was some sort of sign present. Patrol crews were unaware that this value should have only been set to "Yes" if the sign was legislative in nature.			
	Signage_present_ = Yes			
	Sign_Condition			
		Damaged	13	5.53%
		Good Condition	222	94.47%
			235	100.00%
	Signage_present_ = Yes			
	Is_sign_visible_and_close_to_the_barrier			
		Yes	211	89.79%
		No	11	4.68%
		Not Recorded	13	5.53%
			235	100.00%
	*Note: Statistics provided only for surveys where <i>Signage_Present</i> had a recorded value of "Yes".			
	Open_Status			
		Open	186	53.91%
		Closed	159	46.09%
			345	100.00%
	Open_Status = Open			
	Lock_status			
		Lock Broken	2	1.08%
		Locked	19	10.22%
		No Lock	77	41.40%
		Unlocked	88	47.31%
			186	100.00%
	Lock_Type			
		Combination	31	16.67%

Appendix K: Barrier Statistics

		Key	56	30.11%
		Lock Broken	2	1.08%
		No Lock	97	52.15%
			186	100.00%
	Open_Status = Closed			
	Lock_status			
		Lock Broken	0	0.00%
		Locked	124	77.99%
		No Lock	29	18.24%
		Unlocked	6	3.77%
			159	100.00%
	Lock_Type			
		Combination	53	33.33%
		Key	77	48.43%
		Lock Broken	0	0.00%
		No Lock	29	18.24%
			159	100.00%
	Open_Status = Closed AND Lock_Type Not Equal to Lock Broken or No Lock			
	Effective_Barrier_			
		Yes	123	94.62%
		No	7	5.38%
			130	100.00%
	Where Effective_Barrier (immediately above) = No			
	If_barrier_isn_t_stopping_on_highway_traffic___why_			
		Designed for Passage	1	14.29%
		Get Around	4	57.14%
		Lock Missing	1	14.29%
		Other	1	14.29%
			7	100.00%
	InspectionType *			
		Initial Inspection	146	42.32%
		Re-inspection	199	57.68%
			345	100.00%
	<p>*Note: An <i>InspectionType</i> value of 'Re-inspection' simply indicates that the 2012 survey location falls near to a Barrier point captured during the FLMF's 2009 Barrier Inventory. It is not an indication that two or more 2012 Barrier surveys were completed for the same barrier.</p>			

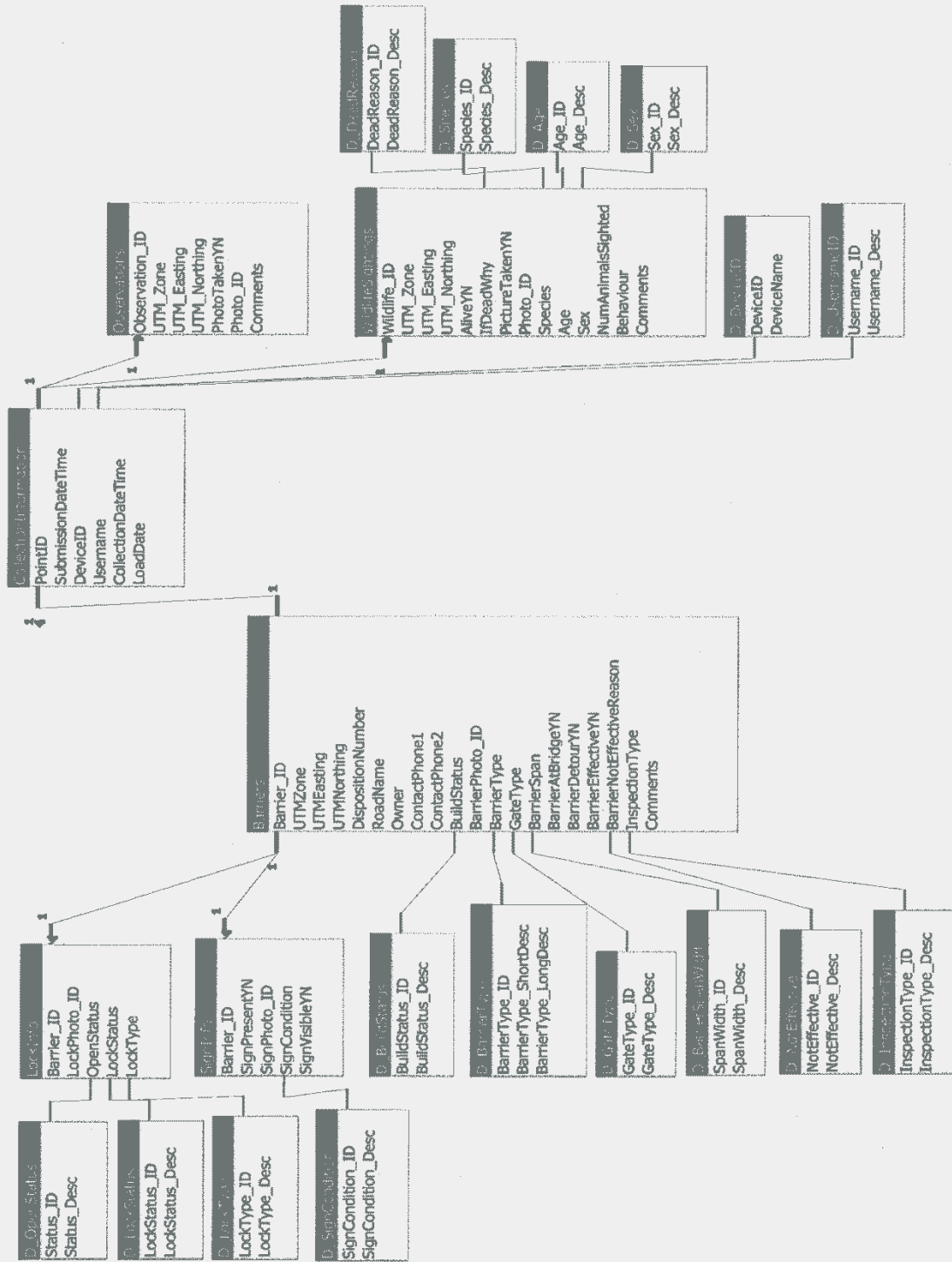
Caribou Road Patrol Persons Operating Practices

September 11, 2012

The following is a summary of the operating practises that the “Caribou Patrol” persons must adhere to:

- The patrol persons shall not carry firearms or fishing equipment and are not allowed to hunt or fish while on patrol.
- The patrol persons do not have the authority to stop people only to observe and report.
- Any enforcement actions, or actions that may be perceived as leading to enforcement, are not permitted.
- Patrol persons shall not have access behind barriers, however if a barrier is open the patrol persons are authorized to travel behind the barrier and observe/record activities. (a letter of authority will be sent to AWN from AESRD)
- Patrol persons will be issued Jackets with “Caribou Patrol” markings which must be returned to AWN upon completion of the project and/or upon termination of their employment.
- Jackets are to be worn only when on active patrol.
- Patrol persons will be expected to record wildlife sightings (live and dead) (see forms), conduct inventory of barriers and signs, conduct vehicle use monitoring and reporting, and caribou cowboy tactics to remove caribou from roadways (out of harm’s way).
- Patrol persons shall not miss-represent themselves as government of Alberta or Canada or industry (with road dispositions) employees; they are employees of AEC.
- Patrol persons are expected to adhere to all relevant laws with respect to road use in Alberta.
- When stopped on active roadways the patrol person shall turn on the vehicles 4 – way flashers and an amber flashing light for safety purposes.

2012 Caribou Patrol Project - Relational Data Model



FLMF Press Release:

Contact: Gerry Scott

Aseniwuche Environmental Corporation
Phone 780 827 4014

Wayne Thorp

Foothills Landscape Management Forum
Phone 780 625 1732



Press Release

“Caribou Cowboys” Return to Eastern Slopes

The Aseniwuche Winewak Nation (AWN) and Foothills Landscape Management Forum (FLMF) team up to help protect Woodland Caribou.

Grande Cache, Fox Creek, Hinton, Whitecourt, Grande Prairie, Edson, AB – September 27, 2012 :

Caribou patrols have returned to the northeastern slopes of the Rocky Mountains. On September 17, 2012, crews, each comprised of two Aseniwuche Winewak Nation (AWN) members – one older experienced member and one young adult – began patrolling the area within approximately a 100-km radius of the town of Grande Cache. Modeled after a “Caribou Cowboy” project which successfully ran for several years along Highway 40 south of Grande Cache, the purpose of these patrols is to encourage caribou to move off of the roads in efforts to reduce the risk of vehicle collisions. While working on industrial road networks the crew will also collect valuable information on road traffic levels helpful in identifying areas where access management to benefit caribou can be improved. Woodland caribou are classified as threatened in Alberta. The outcome of the patrol project will contribute to the overall recovery plan by reducing mortality of caribou and collecting human use data to assist in successful implementation of broader landscape recovery strategies.

The patrol persons will collect information on wildlife sightings and on effectiveness of physical barriers to vehicle traffic. They will educate users of the roads (both public and industrial), and will reduce collisions with wildlife by using actions to persuade caribou to leave the roadways. Patrols will continue until November 30, 2012. Patrol persons are observers and do not have any regulatory enforcement authority, although they can collect information that could be passed on to the Regulator. If proven successful, the project may be extended at any time by the partners.

The patrol crews are employed by the Aseniwuche Environmental Corporation (AEC) under contract to Aseniwuche Winewak Nation of Canada. Funding is provided by the Foothills Landscape Management Forum (FLMF) operating under the Foothills Research Institute (FRI), Government of Alberta, and Government of Canada under the Aboriginal Fund for Species at Risk.

For Immediate Release

more

Quotes:

"The AWN has a strong desire to actively participate in recovery actions and has become frustrated with past processes and discussions with no substantive actions. This project as a whole would get the AWN directly involved in support for caribou recovery strategies." – Rachelle McDonald, Executive Director, AWN

"This project will provide a meaningful way for the AWN to directly participate as an active partner with industry and government in recovery efforts for caribou." – Wayne Thorp, Managing Director, FLMF

Attachments:

1. Photo of the Caribou Patrol crews: CaribouPatrolCrews_PressReleasePhoto.jpg
2. Map showing area that crews will patrol: CaribouPatrol_PressReleaseMap.pdf

Article appearing in *The Grande Cache Mountaineer*, October 4, 2012

- 8 caribou cowboys

THE GRANDE CACHE MOUNTAINEER

Thursday October 4, 2012



THE NEW CARIBOU COWBOYS have started their patrols.

Caribou Cowboys on the job

Caribou patrols have returned to the northeastern slopes of the Rocky Mountains.

On Sept. 17, crews, each comprised of two Aseniwuche Winewak Nation (AWN) members – one older experienced member and one young adult – began patrolling the area within approximately a 100-km radius of the town of Grande Cache.

Modeled after a "Caribou Cowboy" project which successfully ran for several years along Highway 40 south of Grande Cache, the purpose of these patrols is to encourage caribou to move off of the roads in efforts to reduce the risk of vehicle collisions. While working on industrial road networks the crew will also collect valuable information on road traffic levels helpful in identifying areas where access management to benefit caribou can be improved.

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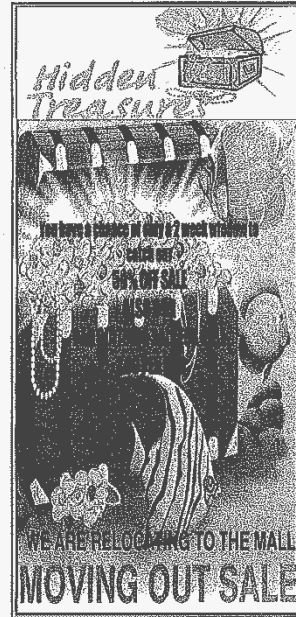
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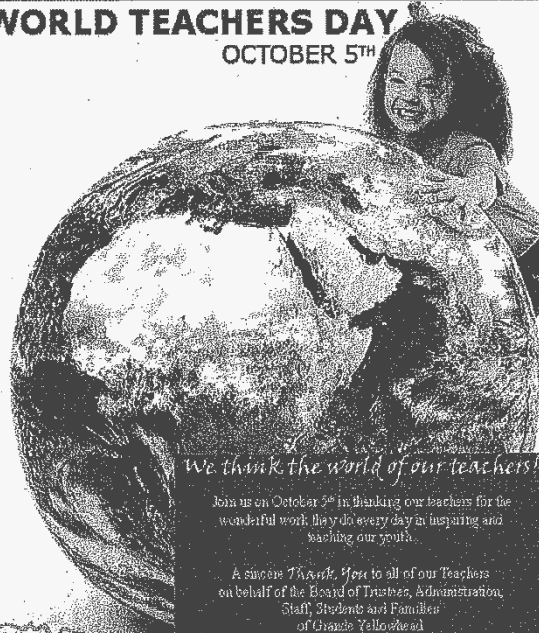
gies". The patrol crews are employed by the Aseniwuche Environmental Corporation (AEC) under contract to Aseniwuche Winewak Nation of Canada. Funding is provided by the Foothills Landscape Management Forum (FLMP) operating under the Foothills Research Institute (FRI),

Government of Alberta, and Government of Canada under the Aboriginal Fund for Species at Risk.

"This project will provide a meaningful way for the AWN to directly participate as an active partner with industry and government in recovery efforts for caribou," says Wayne Thorp, FLMP managing director.



WORLD TEACHERS DAY OCTOBER 5TH



We think the world of our teachers!

Join us on October 5th in thanking our teachers for the wonderful work they do every day in inspiring and teaching our youth.

A SINCERE THANK YOU to all of our Teachers on behalf of the Board of Trustees, Administration, Staff, Students and Families of Grande Yellowknife.

Grande Yellowknife
Kathleen Babin

For information about Grande Yellowknife's public schools, please contact us at 1-800-725-2264 or on our website at www.gy.sbc.ca.

Municipal District of Greenview No. 16



2013 GRANT REQUEST

The Municipal District of Greenview is currently in the process of preparing their 2013 Fiscal Budget. The MD provides grants to Non-Profit Organizations to assist with operational and/or capital projects that will enhance and support the needs of MD residents.

Grant Applications are available for pickup from the MD Administration Office in Valleyview, mail by calling (780) 524-7600 or on our website at www.greenview.ab.ca (dept.-finance-grants). The 2013 Grant Application deadline is October 5th, 2012 with the exception of any newly formed organizations since October 31, 2012.

If your organization requires more information or assistance in completing the grant application, please contact: Donna Ducharme, Manager of Finance at (780) 524-7632.

Article appearing in *The Hinton Parklander*, October 8, 2012 17

Mark Bradley / Parks Canada photo

A herd of caribou in Jasper National Park. The number of caribou has been declining in the foothills in recent years.

Aboriginals called upon for caribou patrolling

Eric Plummer
Hinton Parklander

Teams of Aboriginal observers have been hired to monitor factors affecting the ongoing decline of caribou in an area north of Hinton.

Since Sept. 17 two crews from the Asenitwuche Nation have been patrolling the 100-kilometre radius around Grande Cache. Each team is made up of an older experienced member and a young adult who carefully watch for caribou and document any environmental factors affecting herd populations.

The caribou patrols have taken on the role of clearing any animals away from Highway 40 or any of the surrounding industrial gravel roads, and the teams are collecting data to help give researchers a better understanding of why the migrating herds have been declining. Useful information being collected includes traffic volumes on the roads around Grande Cache, as well as numbers of caribou and other wildlife spotted in the area. Patrolers are also assessing the

presence of gates and other traffic-control barriers erected by industry to determine if these structures are serving their intended purpose.

The Asenitwuche pairs were contracted for the monitoring work by Alberta Environment and Sustainable Resources Development and the Foothills Landscape Management Forum, with additional funding from Canada's Aboriginal Fund for Species at Risk.

"It makes sense to us from the FLMF industrial sector that they would be the logical people with their background and traditional knowledge," said Wayne Thorp of the Foothills Landscape Management Forum.

Organizers chose to combine older and young Asenitwuche Nation members to provide a useful transfer of knowledge among the generations. The pairs also bring a useful combination of skills.

"[Elders] know the area very well and the youth wouldn't," Thorpe said. "Conversely, the youth would know some of the technology for loading the data that they collect. We're doing that electronically

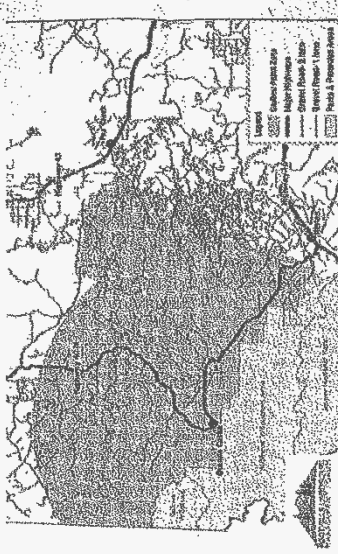
using an iPod type of technology." Alberta Environment estimates that the province's caribou populations have declined by nearly two thirds since the 1960s, leaving about 3,000 of the animals existing today. The two groups that roam the Grande Cache area include the Little Smokey and the A La Pêche herds, comprised of populations of 90 and 160 animals respectively.

Thorp believes that the current trend could lead the Little Smokey and A La Pêche herds to extinction.

"If we can do anything at all to reduce that it would be beneficial because the herds are relatively low in numbers," he said. "Most of the populations in Alberta and across Canada are in decline mode right now."

Thorp said there have been incidences in the past of caribou poaching, and the current patrolling was launched this fall to coincide with higher levels of traffic in the area during hunting season for other wildlife.

"We selected that as a window of opportunity to try and get these



FLMF graphic

A map showing the caribou patrol zone around Grande Cache. Patrols out when the hunters are actually out there," he said.

The current patrolling project has been modeled after the Caribou Cowboy monitoring program that was in place for several years along Highway 40 between Grande Cache and the Yellowhead.

"There have been incidences of upward of five and six animals a

Article appearing in *The Hinton Voice*, October 18, 2012

onvoice.ca

The Hinton Voice | Thursday, October 18, 2012

Caribou cowboys return to Eastern Slopes

Caribou patrols have returned to the northeastern slopes of the Rocky Mountains as the Aseniwuche Winewak Nation (AWN) and the Foothills Landscape Management Forum team up to protect an endangered herd near Hinton.

Around a month ago two teams of AWN members began patrolling an area within an estimated 100km radius of the town of Grande Cache. Modeled after a "Caribou Cowboy" project that successfully ran for several years along Hwy 40, the purpose of these patrols is to encourage caribou to move off the roads in efforts to reduce the risk of

vehicle collisions. While working on industrial road networks the crew will also collect valuable information on road traffic levels, helpful in identifying areas where access management to benefit caribou can be improved. Woodland caribou are classified as threatened in Alberta. Patrols will continue until Nov. 30, 2012. Patrol persons are observers and do not have any regulatory enforcement authority, although they can collect information that could be passed on to regulator. If proven successful, the project may be extended at any time by the partners.

Article appearing online from *The Hinton Parklander*, December 20, 2012

NEWS LOCAL

Caribou patrol continues near Grande Cache

Eric Plummer
Thursday, December 20, 2012 9:43:20 MST AM



There are an estimated 213 caribou remaining in two small herds in the foothills area around Grande Cache.

The most recent effort to preserve woodland caribou concluded this month with a monitoring project conducted by aboriginal teams around Grande Cache.

The caribou monitoring began Sept. 17, extending to Dec. 15 to cover a 100-kilometre radius around the town. With the goal of harnessing their traditional knowledge of the area, crews from the Aseniwuche Nation were contracted for the project by Alberta

Environment and Sustainable Resources Development and the Foothills Landscape Management Forum (FLMF), with additional funding from Canada's Aboriginal Fund for Species at Risk.

The crews patrolled the area with trucks, watching for caribou and documenting any environmental factors that might affect the survival of the threatened species. Data from the project will be compiled for presentation to Diana McQueen, Alberta's minister of environment, and Minister of Aboriginal Affairs Robin Campbell in February.

"The original plan was to try and cover as much of the hunting season as possible — that's when most of the public is out there during that time frame," said Wayne Thorpe of the FLMF. "As far as I'm concerned it was a successful project; we were able to engage the Aboriginal community on at least one level of caribou recovery planning."

Alberta Environment estimates that the province's caribou population has declined by nearly two thirds since the 1960s, including the extinction of herds roaming Alberta's southern slopes. Sixteen herds remain in the province, totaling roughly 3,000 animals. Caribou roaming the mountainous terrain of the west-central part of Alberta belong to the Little Smokey and A La Pêche herds, which contain estimated populations of 78 and 135 animals respectively, according to a 2010 study by Alberta Environment and the Alberta Conservation Association.

Dave Hervieux is the province's woodland caribou management coordinator with Alberta Environment's fish and wildlife division. He believes that since these population numbers were released two and a half years ago one of the nearby herds has declined.

"It's fair to say that the A La Pêche caribou population is probably less stable now, and is probably in some degree of decline," said Hervieux.

The recent monitoring study conducted around Grande Cache found no signs of caribou poaching or any of the animals killed by vehicles. As was the case with the 2010 study, the biggest threat to caribou is predatory wolves.

Thorpe said more wolves have come into the area as a result of changes to the landscape brought on by oil and gas developments as well as deforestation for the lumber industry.

"If you're harvesting or creating roads, openings, well sites, pipelines and what not, you're creating more suitable habitat for moose, elk [and] deer," he said.

Moose, elk and deer are attracted to the younger forests that such industrial activity creates, with changes to the landscapes from the creation of campsites, seismic clearings, roadways and power lines. This, in turn, brings more wolves, who end up preying on caribou. The threatened species is especially susceptible to the presence of wolves, as caribou do not breed until a cow is two and a half years old. A female caribou normally producing one calf a year, making population numbers more vulnerable than deer or elk, who can breed at a younger age.

"Our land use changes cause there to be more wolves because there's more prey," added Hervieux. "The habitat is now in favour of the other preyed species."

Making matters worse is that the many clearings created for the benefit of industry also help wolves, allowing them to travel faster.

"Wolves don't care; if they see an animal, whether it's a caribou or a deer, they're going to try and get it," Thorpe said. "The caribou numbers on their own wouldn't support the current wolf population. They use what we call primary prey - moose, elk, deer - as their main source of food, and incidentally they get the odd caribou, which is the cause of the decline."

But some encouragement can be found in the central foothills' smaller caribou herd, the Little Smokey. Hervieux believes their numbers are stable or slightly increasing, which he attributes to wolf control measures Alberta Environment has undertaken since 2005. Wolf populations in the foothills area south of Grande Cache and east of Highway 40 have been kept in check by wildlife officers shooting the animals from helicopters each winter, or in some cases poisoning the predators on the ground.

"If we hadn't started in 2005 the Little Smokey would be gone now," Hervieux said of shooting the wolves. "Across Canada it's one of the conservation treatments that has worked."

The Aseniwuche Nation hopes to undertake a more extensive Caribou monitoring initiative next year, and has applied to Environment Canada for funding that would allow the project to run again for a six-month term. The Foothills Landscape Management Forum has agreed to match the federal funding if the Aseniwuche are approved.

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