

**Petition for the Protection of Critical Habitat for Five Local
Populations of Boreal Caribou in Northeastern Alberta**

November 2017

ecojustice

Table of Contents

1.0 Introduction	1
BIOLOGICAL REVIEW: APPROACHES TO CARIBOU RECOVERY IN ALBERTA ..	1
2.0 Description of Herds.....	1
2.1 Population Numbers and Historical Trends	2
3.0 Federal and Provincial Caribou Objectives.....	8
3.1 Provincial Recovery Strategy.....	8
3.2 Provincial Range Plans	8
4.0 Recovery Actions in Alberta.....	9
5.0 Critical Habitat Identification.....	9
5.1 Activities Likely to Result in Destruction of Critical Habitat	10
6.0 Current Anthropogenic Disturbance and Herd-Specific Risks from Industrial Developments in Alberta.....	10
SAFETY-NET LEGAL ANALYSIS	19
7.0 Introduction to the Legal Analysis.....	19
8.0 The Test for Effective Protection	19
8.1 SARA	20
8.2 National Accord for the Protection for Species at Risk	21
8.3 Draft Policy on Critical Habitat Protection on Non-federal Lands.....	21
8.4 Previous Critical Habitat Protection Assessments	22
8.5 Case Law	23
9.0 Alberta Legislation	24
9.1 <i>Alberta Land Stewardship Act</i> , RSA 2000, c A-26.8, and the Lower Athabasca Regional Plan	24
9.2 <i>Wildlife Act</i> , RSA 2000, c W-10	25
9.3 <i>Wilderness Areas, Ecological Reserves, Natural Areas and Heritage Rangelands Act</i> , RSA 2000, c W-9	27
9.4 <i>Provincial Parks Act</i> , RSA 2000, c P-35	28
9.5 <i>Environmental Protection and Enhancement Act</i> , RSA 2000, c E-12.....	29
9.6 <i>Forests Act</i> , RSA 2000, c F-22	31
9.7 Beneficial Management Actions: Industry Initiatives	34
9.8 <i>Public Lands Act</i> , RSA 2000, c P-40	35
9.9 <i>Mines and Minerals Act</i> , RSA 2000, c M-17.....	37
9.10 <i>Oil Sands Conservation Act</i> , RSA 2000, c O-7	37

9.11	<i>Oil and Gas Conservation Act</i> , RSA 2000, c O-6	38
9.12	<i>Coal Conservation Act</i> , RSA 2000, c C-17	39
10.0	Federal Legislation	40
10.1	<i>Species at Risk Act</i> , S.C. 2002, c 29.....	40
10.1.1	Recovery Strategy for the Woodland Caribou (<i>Rangifer tarandus caribou</i>), Boreal population in Canada	40
10.1.2	<i>Proposed Action Plan for the Woodland Caribou (Rangifer tarandus caribou), Boreal Population in Canada – Federal Actions</i>	41
10.1.3	<i>Report on the Progress of Recovery Strategy Implementation for the Woodland Caribou (Rangifer tarandus caribou), Boreal population, in Canada for the Period 2012-2017</i>	42
10.2	Canadian Environmental Assessment Act, 2012, SC 2012, c 19, s 52.....	43
10.3	<i>National Energy Board Act</i> , RSC 1985, c N-7	44
11.0	Conclusion of Legal Analysis.....	46

1.0 Introduction

Boreal woodland caribou (“boreal caribou”) were listed as threatened under the *Species at Risk Act (SARA)* when it was first enacted in 2002. Boreal caribou are endemic to Canada, in the boreal forest region of seven provinces and two territories, and are distributed across 51 local populations, also referred to as herds.¹ Boreal caribou require large areas of suitable habitat, low levels of anthropogenic disturbance and low threats from predation in order to survive and thrive.

The focus of this petition is boreal caribou in the province of Alberta, specifically five of the herds in the northeastern corner of the province (the “northeastern herds”). We have compiled and analyzed existing population data and range disturbance levels for these boreal caribou herds in Alberta, and conducted a review of the applicable federal and provincial laws in place for the protection of boreal caribou and their critical habitat on non-federal lands. Our analysis shows that boreal caribou populations continue to decline in northeastern Alberta, while industrial development continues at a scale that continues to threaten these herds. Yet, despite recognizing the declining and imperiled status of these boreal caribou populations for decades, the Government of Alberta has not implemented adequate recovery measures necessary to effectively protect these populations. Our analysis also demonstrates that none of the applicable provincial or federal laws ensures that critical habitat of the northeastern herds will not be destroyed, and the lack of legal protections continues to jeopardize the survival and recovery of these herds.

We therefore conclude and request through this petition that the Minister recommend to the Governor in Council that the critical habitat of the herds be protected by an order under section 61 of *SARA*.²

BIOLOGICAL REVIEW: APPROACHES TO CARIBOU RECOVERY IN ALBERTA

This review describes and analyzes the current state of select boreal caribou populations and their habitat in northeastern Alberta in order to determine whether these populations are being adequately protected and recovered.

2.0 Description of Herds

There are 12 boreal caribou herds in Alberta, with a current population estimate of roughly 2300 individual caribou. All 12 populations are at an elevated risk of extirpation, and none is self-sustaining. While it is clear that all boreal caribou herds in Alberta are in need of protection, we are focusing this petition on five specific herds whose ranges are in northeastern Alberta:

- Cold Lake
- Richardson
- Red Earth
- West Side Athabasca River (WSAR)
- East Side Athabasca River (ESAR)

¹ Environment Canada, *Recovery Strategy for the Woodland Caribou (Rangifer tarandus caribou), Boreal population, in Canada*, Species at Risk Act Recovery Strategy Series (Ottawa: Environment Canada, 2012) [*Recovery Strategy*] [**Compendium, Tab 1**].

² *Species at Risk Act*, SC 2002, C 29, s 61(1) [*SARA*] [**Compendium, Tab 2**].

Connectivity in boreal caribou habitat and distribution is important for genetic continuity, and isolation of local populations as a result of disturbance to the landscape can result in smaller and ever-declining populations, which can lead to a significant reduction in genetic diversity. Given there is some movement between local populations, Alberta's approach will have implications beyond the province, as bordering populations in Saskatchewan and the Northwest Territories are and will be affected by declines (or the potential extirpation) of the northeastern herds that are the focus of this petition.³ On a larger scale, the biological consequences of declining population numbers and the loss of these herds for this threatened wildlife species is reduced range and loss of genetic viability, which can impact its ability to persist across its entire range.

Therefore, these northeastern herds are important to protect because of their key contribution to evolutionary diversity within the species, their role as a bridge between herds in Saskatchewan and the Northwest Territories, and as a key component of the Alberta boreal landscape. These herds are critically and uniquely threatened by the combination of oil sands development, forest harvesting, associated infrastructure, and other activities.

2.1 Population Numbers and Historical Trends

The boreal caribou herds in Alberta have been well-monitored for roughly 20 years, and population numbers and trends are relatively well-known. Population size (the most current estimates of the total animals in the population) and trend information was compiled for the populations that are the focus of this petition. Table 1 shows population size estimates, trends, as well as the degree of disturbed habitat from anthropogenic sources for the selected northeastern herds.

³ Memorandum from Environment Canada to the Minister: Decision on the Use of an Emergency Order under the *Species at Risk Act* to Protect Woodland Caribou, Boreal Population [2 February 2011], at 4. [**Compendium, Tab 3**].

Table 1: Population size estimate and trends, and degree of disturbed habitat, Alberta caribou northeastern populations.

Range Name	Population Size Estimate⁴	Population Trend⁵	% Disturbed Habitat (Anthropogenic)⁶
Cold Lake	150	Declining	76
Red Earth	172-206	Declining	48
West Side Athabasca River	204-272	Declining	70
Richardson	150	Stable	23
East Side Athabasca River	90-150	Declining	78

All boreal caribou populations overlapping oil and gas development in Alberta are in rapid decline.⁷ A 2013 study confirms similar population numbers as those from the federal *Recovery Strategy*, including widespread and dramatic declines in almost all herds (except for Little Smoky, Richardson and Yates), with an estimate that herds in Alberta are declining by about 50% every 8 years.⁸

⁴ *Recovery Strategy*, *supra* note 1, at 68.

⁵ Environment and Climate Change Canada, *Report on the Progress of Recovery Strategy Implementation for the Woodland Caribou (Rangifer tarandus caribou), Boreal population in Canada for the period 2012-2017, Species at Risk Act*, Recovery Strategy Series (Ottawa: Environment and Climate Change Canada, 2017), at 31-32 [*Progress Report*] [**Compendium, Tab 4**].

⁶ *Ibid.*

⁷ Mark Hebblewhite, “Billion dollar boreal woodland caribou and the biodiversity impacts of the global oil and gas industry” (2017) *Biological Conservation*. 206:102-111 [Hebblewhite] [**Compendium, Tab 5**].

⁸ David Hervieux et al, “Widespread declines in woodland caribou (*Rangifer tarandus caribou*) continue in Alberta” (2013) *Canadian Journal of Zoology*. 91:872-882 [Hervieux] [**Compendium, Tab 6**].

We have acquired the most current population estimates⁹ and trends from Alberta Environment and Parks¹⁰ in the form of lambda values¹¹ for Alberta boreal caribou local populations, as shown in Table 2.

Table 2: Lambda values (CVs) for Alberta boreal caribou local populations.

Herd	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Red Earth	0.83	0.99	0.82	0.89	0.92	0.85	0.85	0.72	0.96	0.83	0.86	1.06	0.84	0.92	1.00	0.78	1.07	0.54
WSAR	0.94	0.90	0.95	0.95	0.83	0.96	0.97	0.97	0.97	0.89	0.84	1.03	0.91	0.67	0.84	0.79	0.89	0.97
ESAR	1.09	0.93	0.81	0.92	1.00	0.94	0.84	0.93	0.88	0.84	0.84	0.85	0.90	0.95	0.91	0.89	0.88	0.93
Richardson											0.77	1.01	0.96	0.91	1.02	0.94	0.95	0.99
Cold Lake (AB)	1.04	1.02	0.94	0.95		0.90	0.94	0.74	0.80	0.81	0.63	0.89	0.76	0.79	0.93	0.76	0.89	0.91

Using these lambda values, we calculated cumulative population change over multiple years¹², as shown in Figure 1.

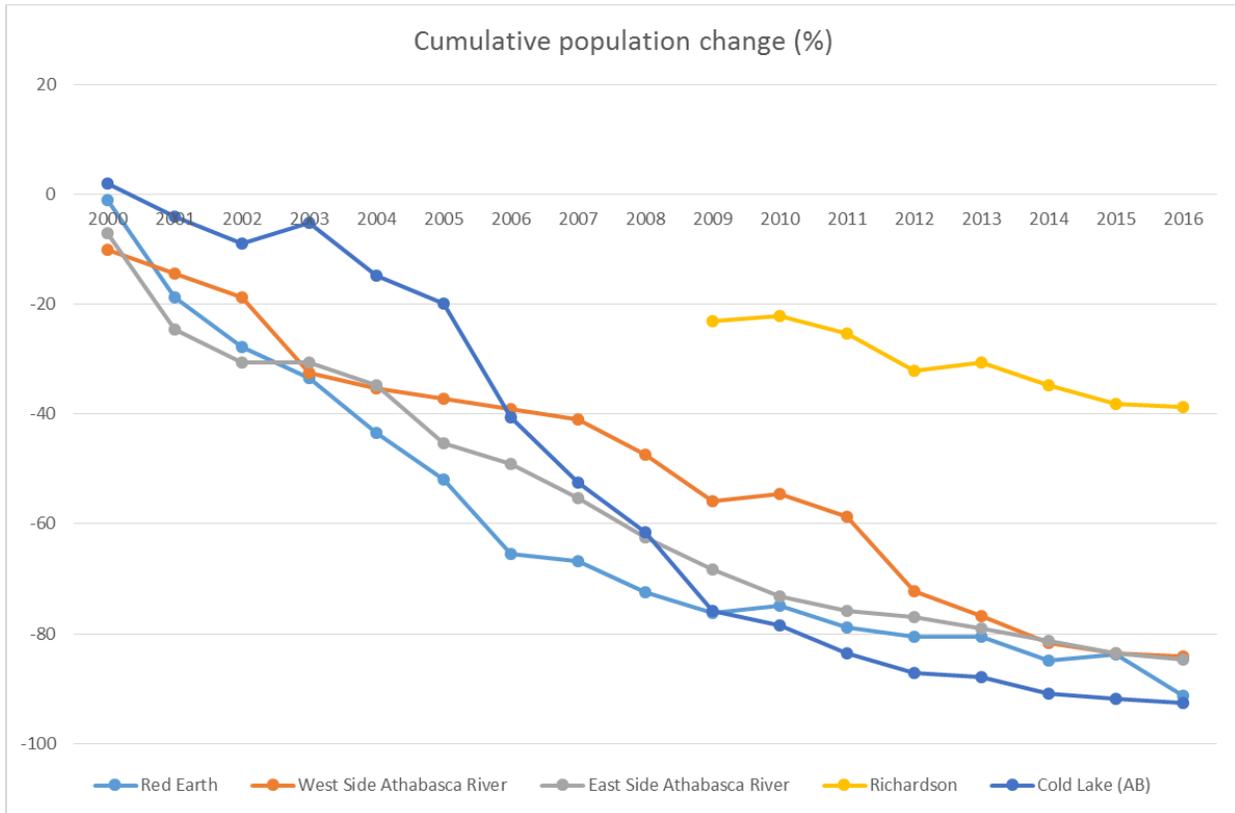
⁹ Recent population estimates based on genetic sampling from fecal DNA surveys estimate 687 individuals for the East Side Athabasca River herd and 408 individuals for the Cold Lake herd (source: Alberta Environment and Parks, Response to inquiry by the Alberta Chapter of the Wildlife Society, June 2017 [ACWS Response] [**Compendium, Tab 7**]). These are higher than the 2012 *Recovery Strategy* population estimates (based on aerial surveys) and likely more accurate, as those based on aerial surveys are known to be problematic, given the large range size and amount of mature forest required to conduct the surveys in. However, the "gold standard" continues to be to rely on lambda as the means of tracking trends in boreal caribou populations and the higher genetic population estimates do not change the lambda values that are based on annual aerial surveys of cow mortality and calf recruitment (not actual population counts). Therefore, our calculated population declines (following in Figure 1), as a percentage over time, are representative of population decline despite the higher population estimates for these two herds.

¹⁰ ACWS Response, supra note 9.

¹¹ Lambda values are the average annual population growth: a value of 1.0 is a stable population, values greater than 1.0 indicate population growth, and a value less than 1.0 indicates population decline.

¹² We used the method described to calculate "realized population change" from Hervieux, *supra* note 8, at 876.

Figure 1: Cumulative population declines from 2000-2016 for five northeastern boreal caribou populations on Alberta.



It is clear that, with the exception of Richardson, the northeastern herds have been in a state of steep and continuous decline since 2000.

Figures 2 and 3 present spatial data for the occurrence of boreal caribou populations in northeastern Alberta.¹³ It is apparent that the home ranges of the Richardson and Cold Lake herds extend into Saskatchewan and that there is some overlap between the ranges of the herds.

¹³ ACWS Response, supra note 9.

Figure 2: Locations of radio-collared caribou in northeast Alberta caribou populations.

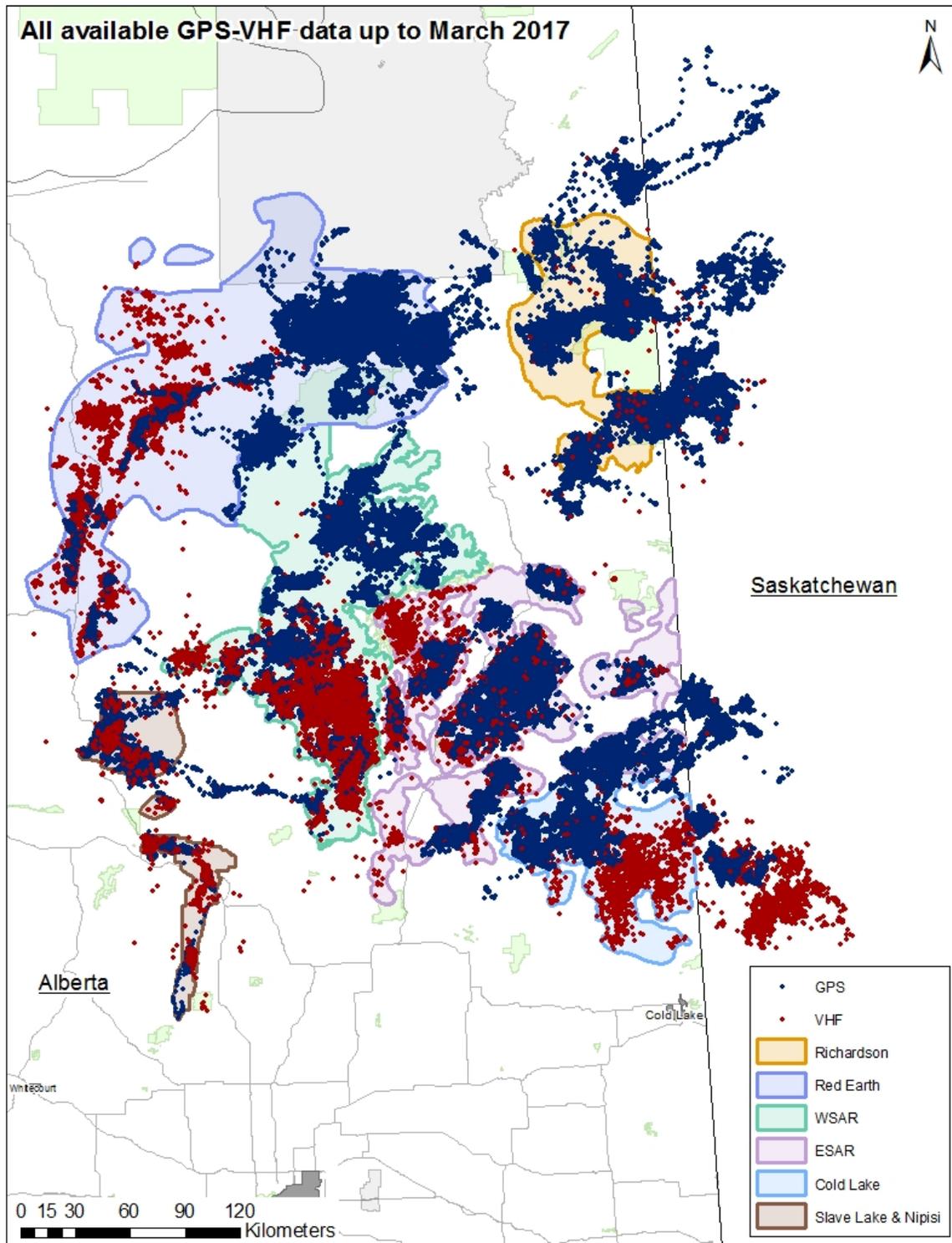
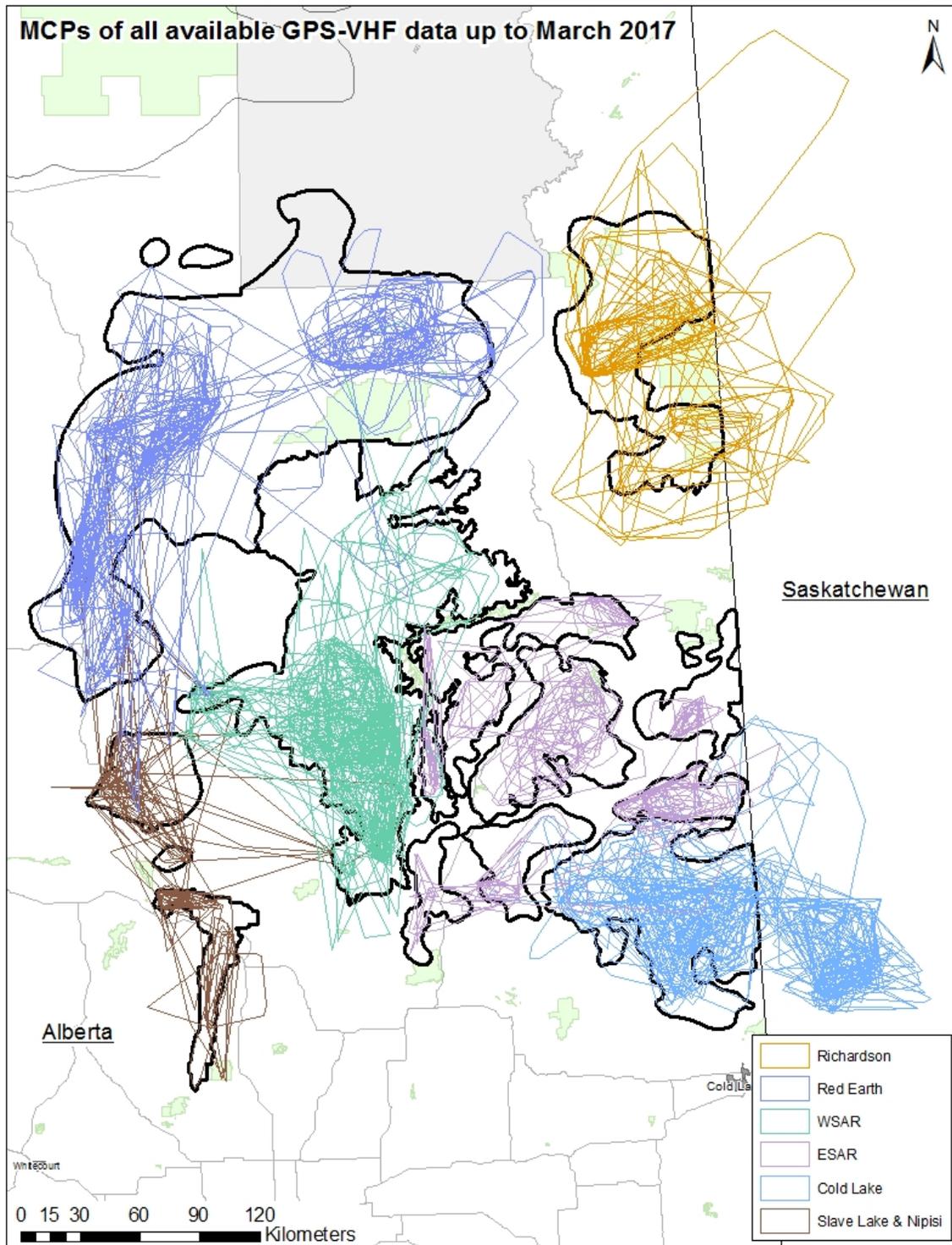


Figure 3: Home ranges of radio-collared caribou in northeast caribou populations.



In regard to the home range boundaries in Figure 3 above, the simplest way to draw a home range boundary from a set of location data is to construct the smallest possible convex polygon

around the data, referred to as the minimum convex polygon (MCP) method. This method is widely used but has noted drawbacks including overestimation of the size of home ranges.¹⁴

3.0 Federal and Provincial Caribou Objectives

The federal *Recovery Strategy* for boreal caribou was released in 2012. The *Recovery Strategy* establishes the critical habitat target requirement as a minimum of 65 percent undisturbed habitat within the range of a local population in order to give the population a 60 percent chance of becoming self-sustaining.¹⁵ As defined by the federal *Recovery Strategy*, a self-sustaining local population is one that on average demonstrates stable or positive population growth over the short-term (≤ 20 years), and is large enough to withstand stochastic events and persist over the long-term (≥ 50 years), without the need for ongoing active management intervention. The *Recovery Strategy* assessed that it is biologically and technically feasible for all herds to become self-sustaining.

Due to large-scale human disturbance and wildfire within boreal caribou ranges, no herds in Alberta currently meet the target of 65 percent undisturbed habitat, and none is self-sustaining.

In addition to the federal *Recovery Strategy*, there are several provincial plans and strategies that focus on boreal caribou recovery in Alberta.

3.1 Provincial Recovery Strategy

The Alberta Woodland Caribou Recovery Plan¹⁶ (“*Alberta Recovery Plan*”) was adopted by the Government of Alberta in 2005. It has a recovery goal of achieving self-sustaining populations and maintaining the distribution of boreal caribou in Alberta, while ensuring their habitat requirements are met in their ranges.

It also laid out concrete steps to protect caribou in the province. However, numerous issues with the *Alberta Recovery Plan* and its implementation have led to continuously declining boreal caribou herds as opposed to protected and recovering ones. The *Alberta Recovery Plan* notes that action is needed to reduce industrial and human interventions in the ranges. It does not, however, recommend specific limits on industrial activity in the ranges, nor does it clearly recommend creating protected areas or long-term deferrals to industrial activities in caribou habitat as an option. It is also outdated relative to the science, as the federal *Recovery Strategy* came after this. The *Alberta Recovery Plan* is discussed in more detail in section 9.2 below.

3.2 Provincial Range Plans

Under the federal *Recovery Strategy*, provinces are required to produce range plans that outline how 65 percent of boreal caribou habitat will be restored to undisturbed habitat and maintained undisturbed over time, and how the land and activities within each range will be managed for

¹⁴ M.A. Burgman and J.C. Fox, “Bias in species range estimates from minimum convex polygons: implications for conservation and options for improved planning” (2003) *Animal Conservation*. 6(1):19–28 [**Compendium, Tab 8**].

¹⁵ *Recovery Strategy*, *supra* note 1, at 14.

¹⁶ Alberta Woodland Caribou Recovery Team, *Alberta Woodland Caribou Recovery Plan 2005/04 – 2013/14*, Alberta Species at Risk Recovery Plan No. 4 (Edmonton: Alberta Sustainable Resource Development, Fish and Wildlife Division, 2005) [*Alberta Recovery Plan*] [**Compendium, Tab 9**].

habitat protection. These provincial range plans were due October 2017. At the time of the writing of this petition, none has been produced for the northeastern herds.¹⁷

4.0 Recovery Actions in Alberta

The federal *Recovery Strategy* describes the critical need to restore boreal caribou ranges that are below the minimum 65 percent management threshold for undisturbed habitat using habitat protection and landscape-level planning. However, recovery actions in Alberta have been weak and inadequate at protecting boreal caribou; populations continue to decline, and the Government of Alberta has been ineffective in restricting industrial activity within existing caribou ranges, including those of the northeastern herds.

The main recovery action adopted by Alberta thus far has been predator management in the form of wolf control, which has been carried out in two ranges.¹⁸ However, reliance on wolf control is a short-term solution and only stabilizes caribou populations but does not recover them, especially without habitat protection. Predator control also requires regular culling of significant numbers of wolves, which has social value trade-offs.¹⁹

The lack of adequate habitat protection coupled with industrial disturbance in Alberta, particularly in the oil sands region, is the main contributing factor to the continuously declining boreal caribou populations. For example, Cold Lake is one of the most rapidly declining boreal caribou populations in Alberta.²⁰ The Cold Lake range overlaps with federal leased lands of the Cold Lake Air Weapons Range. Although there is a seismic line restoration program in portions of the range, it is not being coordinated at the range level with ongoing oil sands drilling.²¹ There are also no industrial disturbance limits within this range: from 2012 to 2014, industry drilled 3,847 wells within the range.²² Further, the Government of Alberta has indicated that the Cold Lake herd in particular is “in demographic crisis” and “will be gone within a few years in the absence of immediate delivery of effective management actions.”²³

5.0 Critical Habitat Identification

Caribou require large tracts of undisturbed habitat to be self-sustaining. The federal *Recovery Strategy* defines “critical habitat” as the habitat necessary for the species to achieve its life processes, and identifies critical habitat in each range as:

- The area within the boundary of each boreal woodland caribou range that provides an overall ecological condition that will allow for an ongoing recruitment and retirement cycle of

¹⁷ The only draft range plans produced as of Oct 2017 have been for the Little Smoky and A La Pêche herds.

¹⁸ David Hervieux et al., “Managing wolves (*Canis lupus*) to recover threatened woodland caribou (*Rangifer tarandus caribou*) in Alberta” (2014) *Canadian Journal of Zoology*. 92:1029-1037 [Compendium, Tab 11].

¹⁹ Hebblewhite, *supra* note 7.

²⁰ Hervieux, *supra* note 8.

²¹ Hebblewhite, *supra* note 7.

²² *Ibid.*

²³ Alberta Environment and Parks, “Woodland Caribou Management and Recovery in Alberta”, n.d., at 1 [Backgrounder] [Compendium, Tab 76].

habitat, which maintains a perpetual state of a minimum of 65 percent of the area as undisturbed habitat; and

- Biophysical attributes required by boreal woodland caribou to carry out life processes.

As described in the federal *Recovery Strategy*, the minimum 65 percent undisturbed habitat is a management threshold, which provides a 60 percent chance of self-sustaining populations.

5.1 Activities Likely to Result in Destruction of Critical Habitat

As per the *Recovery Strategy*, the following broad groupings of activities have the potential to impact caribou critical habitat:²⁴

- Forest harvesting–related (including road building);
- Mining-related (including coal and mineral exploration; road / transmission line building); and
- Oil and gas-related (including road building, pipelines, and forest harvesting as a precursor).

The *Recovery Strategy* also provide examples of human land-use activities likely to destroy critical habitat through habitat alteration (loss, degradation or fragmentation):²⁵

- Any activity resulting in the direct loss of boreal caribou critical habitat, such as: conversion of habitat to agriculture, forestry cut blocks, mines, and industrial and infrastructure development.
- Any activity resulting in the degradation of critical habitat leading to a reduced, but not total loss of both habitat quality and availability for boreal caribou, such as: pollution, drainage of an area, and flooding.
- Any activity resulting in the fragmentation of habitat by human-made linear features, such as: road development, seismic lines, pipelines, and hydroelectric corridors.

6.0 Current Anthropogenic Disturbance and Herd-Specific Risks from Industrial Developments in Alberta

Caribou avoid habitat within close proximity to linear features, and the ultimate cause of population declines are human-caused habitat changes through creation of linear features, which results in habitat loss, avoidance of areas by caribou, and increased mortality due to increases in predator populations.²⁶ There is forestry activity, oil and gas activity, or both in every boreal caribou range in Alberta.²⁷ If these activities continue in ranges that are approaching or already

²⁴ *Recovery Strategy*, *supra* note 1, at 14-15.

²⁵ *Ibid.*, at 36-37.

²⁶ Environment Canada, *Scientific Assessment to Inform the Identification of Critical Habitat for Woodland Caribou (Rangifer tarandus caribou), Boreal Population, in Canada: 2011 update*. (Ottawa: Environment Canada, 2011) [*Scientific Assessment*] [**Compendium, Tab 12**].

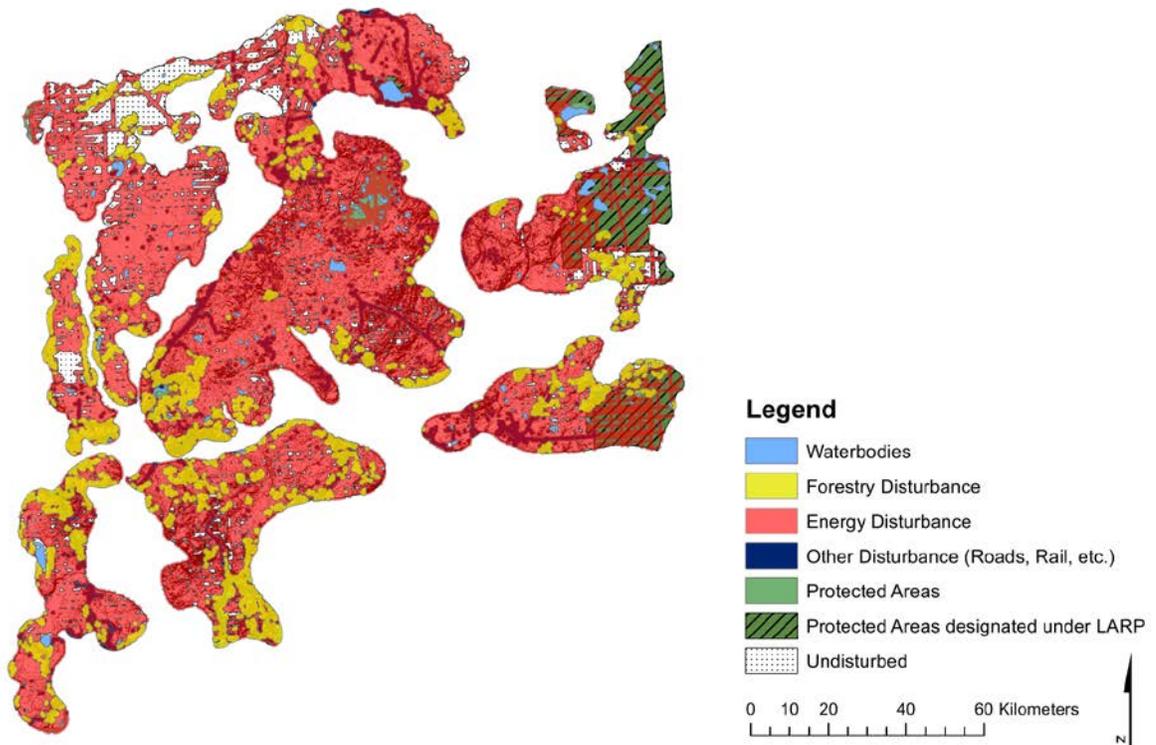
²⁷ Global Forest Watch Canada estimated in 2012 that 53.7% of the area within caribou ranges in Alberta had been disturbed by industrial activity. Source: Global Forest Watch Canada, *Canada's woodland caribou: industrial disturbances in their ranges and implications for their survival* (2012) online: https://globalforestwatch.ca/sites/gfwc/files/publications/20120110A_Caribou_Industrial_Disturbances.pdf [**Compendium, Tab 13**].

above the 35% disturbance threshold (i.e. 65% undisturbed), they are likely destroying boreal caribou critical habitat.

The following maps²⁸ document evidence of specific anthropogenic disturbance in each of the five northeastern herd ranges, including the amount of habitat disturbance for each herd, and the overlap of linear features. Disturbances include all industrial activity – such as oil and gas activity, seismic lines, pipelines, roads, well sites, cut blocks, and others – and includes a 500 meter buffer on each disturbance. The amount of total disturbance in these maps includes only human activities, and does not include fire disturbance.

Figure 4: Human Disturbance in the East Side Athabasca River range.

East Side Athabasca River Range 2014 Disturbance (Not Including Wildfire)



²⁸ The maps were prepared by CPAWS Northern Alberta using provincial data layers from the ABMI Human Footprint Inventory 2014. The methodology is described in detail in Appendix 1.

Figure 5: Human Disturbance in the Cold Lake range.

Cold Lake Range 2014 Disturbance (Not Including Wildfire)

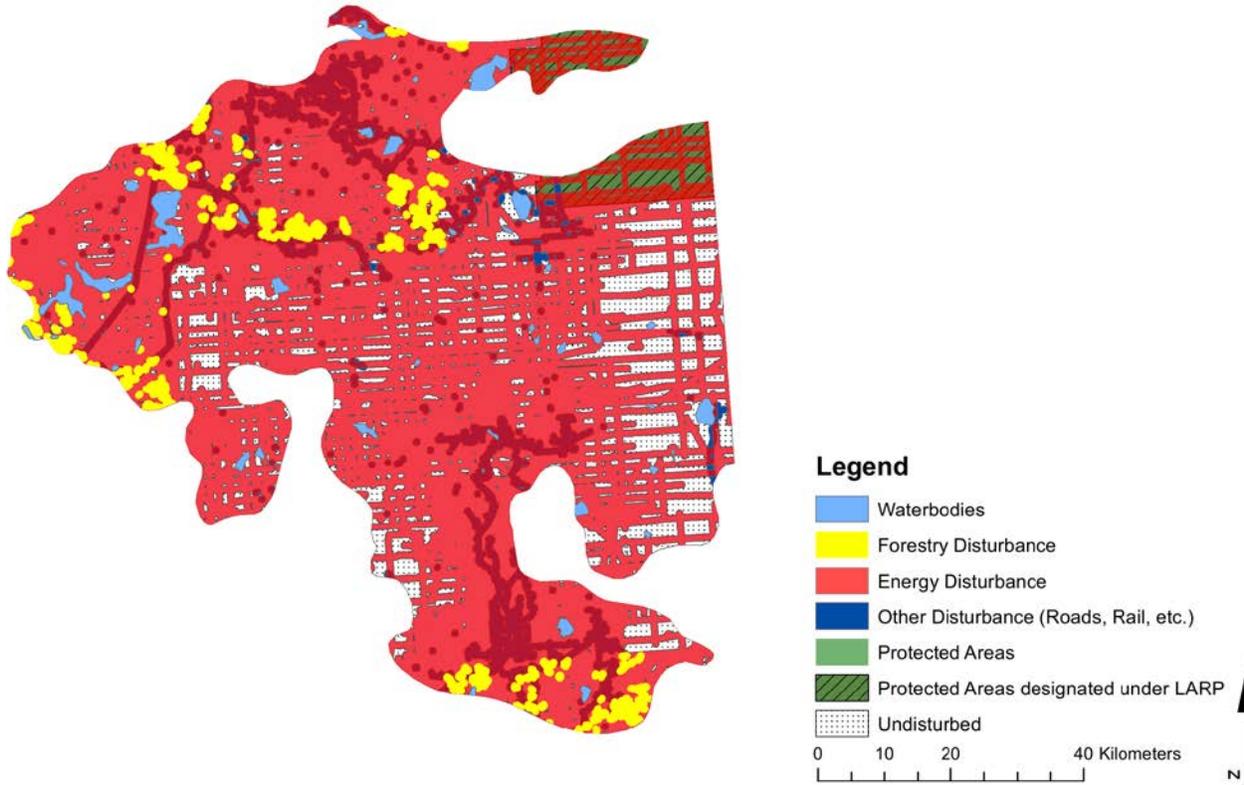


Figure 6: Human Disturbance in the Richardson range.

Richardson Range 2014 Disturbance (Not Including Wildfire)

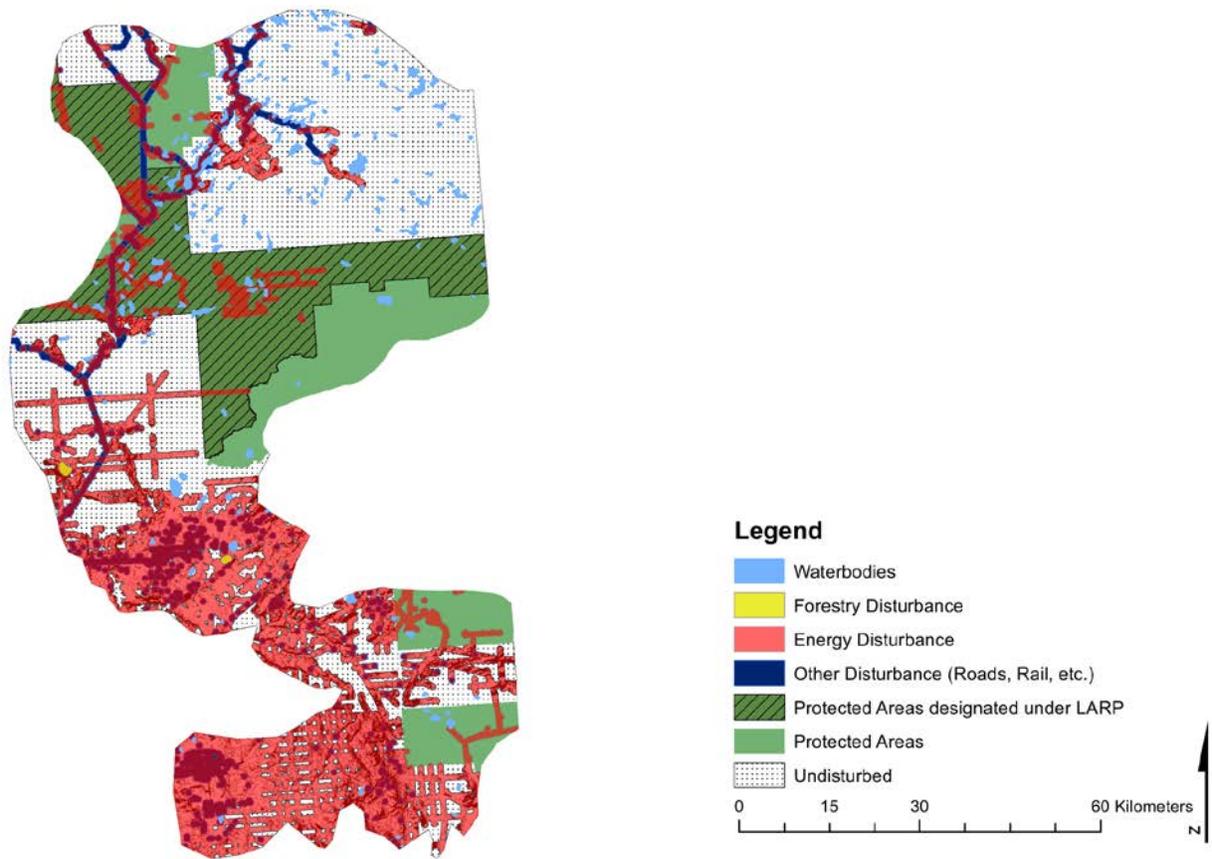


Figure 7: Human Disturbance in the West Side Athabasca River range.

West Side Athabasca River Range 2014 Disturbance (Not Including Wildfire)

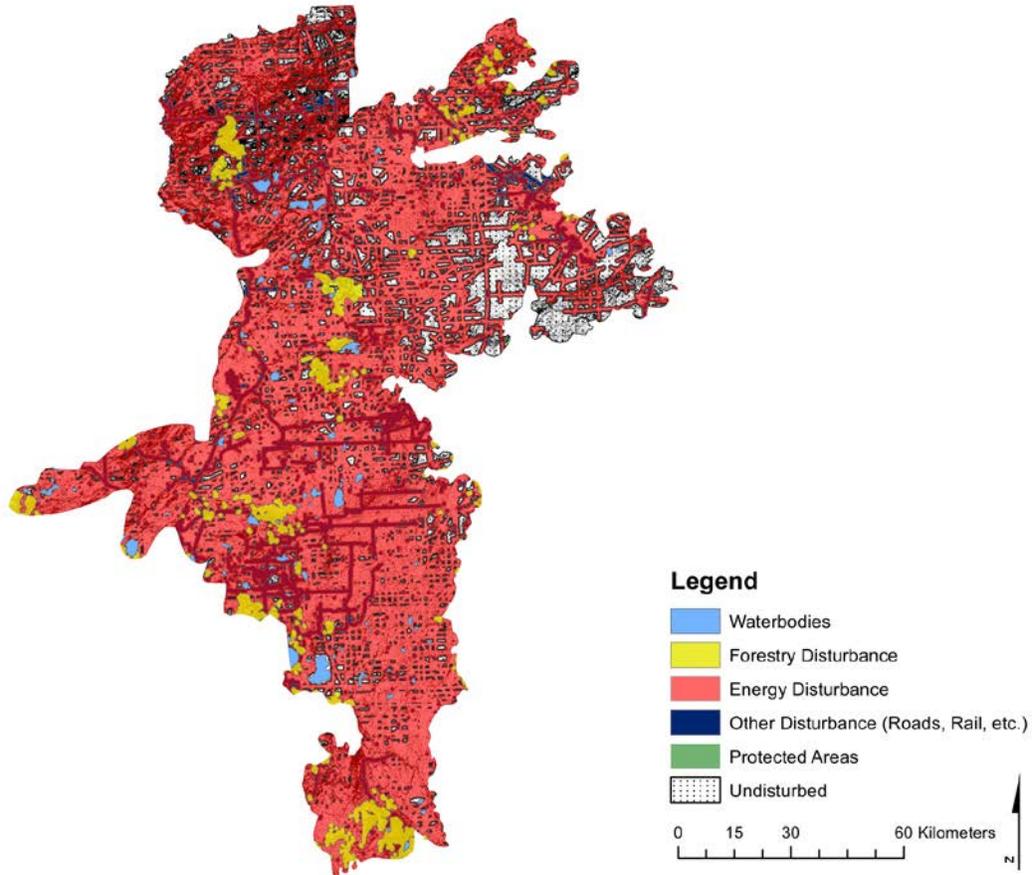
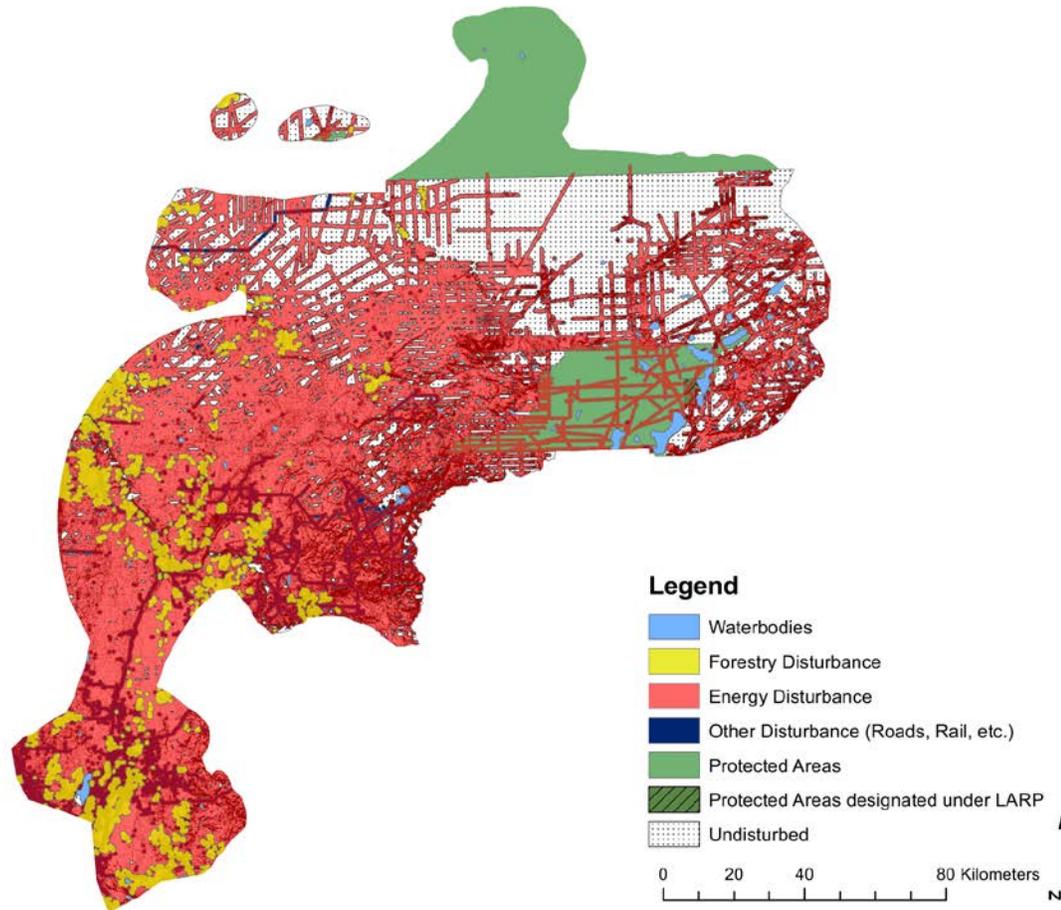


Figure 8: Human Disturbance in the Red Earth range.

Red Earth Range 2014 Disturbance (Not Including Wildfire)



It is evident from these maps and from Table 3 below that the overall levels of anthropogenic disturbance caused by industrial activity in each range is high, ranging from 37 percent disturbed for the Richardson range up to 93 percent disturbed in the ESAR range, and that they are increasing over time. Between 2012 and 2014, the amount of disturbance in each range increased.

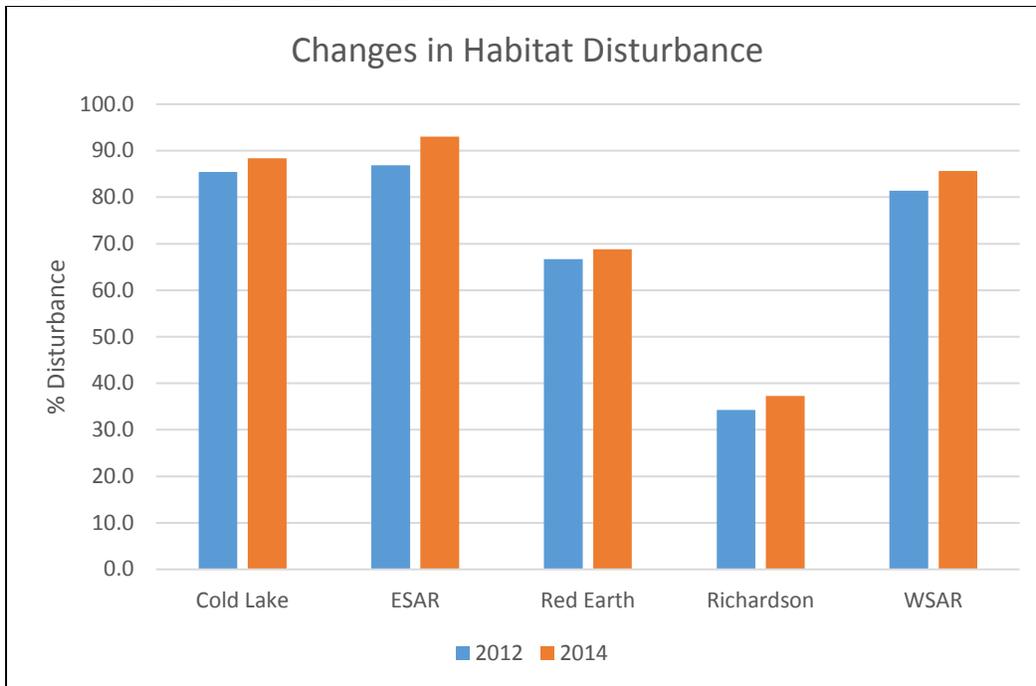
Table 3: Changes in habitat disturbance 2012-2014 as a result of industrial activity in the northeastern caribou herds in Alberta.²⁹

Change in Disturbance								
2012			2014			Increase in Disturbance		
Cold Lake			Cold Lake					
	km ²	%		km ²	%	km ²	%	
Range Size	6725.9		Range Size	6725.9				
Forestry	336.2	5.0	Forestry	368.6	5.5			
Energy	5711.9	84.9	Energy	5896.9	87.7			
Other	760.8	11.3	Other	1027.7	15.3			
Cold Lake Disturbance	5747.4	85.4		5942.8	88.3	195.4	2.9	
Undisturbed	978.5	14.5	Undisturbed	783.1	11.6			
ESAR			ESAR					
	km ²	%		km ²	%			
Range Size	13119.0		Range Size	13119.0				
Forestry	2183.5	16.6	Forestry	2469.0	18.8			
Energy	11195.9	85.3	Energy	11912.3	90.8			
Other	1083.1	8.3	Other	1625.8	12.4			
ESAR Disturbance	11399.8	86.9		12208.5	93.0	808.6	6.2	
Undisturbed	1719.2	13.1	Undisturbed	910.5	6.9			
Red Earth			Red Earth					
	km ²	%		km ²	%			
Range Size	24702.0		Range Size	24702.0				
Forestry	1769.3	7.2	Forestry	1945.8	7.9			
Energy	16388.8	66.3	Energy	16855.4	68.2			
Other	2120.2	8.6	Other	2481.0	10.0			
Red Earth Disturbance	16472.9	66.7		16999.7	68.8	526.8	2.1	
Undisturbed	8229.2	33.3	Undisturbed	7702.3	31.2			
Richardson			Richardson					
	km ²	%		km ²	%			
Range Size	7073.9		Range Size	7073.9				
Forestry	5.9	0.1	Forestry	5.9	0.1			
Energy	1959.2	27.7	Energy	2557.4	36.2			
Other	658.2	9.3	Other	564.7	7.9			
Richardson Disturbance	2425.4	34.3		2637.5	37.3	212.2	2.9	

²⁹ The numbers in this table were by generated by CPAWS Northern Alberta using the provincial data available in the ABMI Human Footprint Inventory.

Undisturbed	4648.5	65.7	Undisturbed	4436.4	62.7
WSAR			WSAR		
	km ²	%		km ²	%
Range Size	15707.1		Range Size	15707.1	
Forestry	787.9	5.0	Forestry	928.6	5.9
Energy	12636.7	80.4	Energy	13258.2	84.4
Other	1588.7	10.1	Other	2208.9	14.1
WSAR Disturbance	12790.5	81.4		13448.9	85.6
Undisturbed	2916.6	18.6	Undisturbed	2258.2	14.4
				658.4	4.2

Figure 4: Changes in habitat disturbance 2012-2014 as a result of industrial activity in the northeastern caribou herds in Alberta.



It is important to note that the degree of anthropogenic disturbance differs depending on data source. The numbers presented in the above maps and Table 3 were generated from provincial data layers, and are higher than those presented in the federal *Recovery Strategy and Progress Report*. A summary is presented in Table 4 below to illustrate the differences, and to demonstrate that regardless of the actual amount of disturbance, both federal and provincial analyses show increasing levels of disturbance over similar time periods. Table 4 includes anthropogenic disturbance only. If fire disturbance is included as well, all ranges, including the Richardson range, exceed the management threshold of a minimum 65 percent undisturbed habitat for self-sustaining populations.

Table 4: Comparison of anthropogenic disturbed habitat, Alberta caribou northeastern populations.

Range Name	% Disturbed Habitat 2012 (federal) ³⁰	% Disturbed Habitat 2015 (federal) ³¹	% Disturbed Habitat 2012 (provincial) ³²	% Disturbed Habitat 2014 (provincial) ³³
Cold Lake	72	76	85	88
Red Earth	44	48	67	69
WSAR	68	70	81	86
Richardson	22	23	34	37
ESAR	77	78	87	93

Whether using federal or provincial data, it is clear that boreal caribou ranges in northeastern Alberta are highly disturbed by linear features, and the amount of industrial disturbance continues to increase. While these ranges needed aggressive habitat restoration at the time the *Recovery Strategy* was released, they have instead been further degraded by additional disturbance.

Further, there is likelihood for even more future human-caused disturbance rather than less. Summaries of oil and gas mineral leases (individual lease holders, number of leases held, and area) and forestry leases for each range can be found in Appendices 2 and 3, respectively. These illustrate the degree of potential future disturbances as these leases are developed in each range. The Government of Alberta has stated that “[t]he ranges are often complex landscapes where industrial development cannot continue based on a business-as-usual approach if caribou populations and critical habitat are to be maintained or increased.”³⁴

³⁰ *Recovery Strategy*, *supra* note 1, at 68.

³¹ *Progress Report*, *supra* note 5, at 31-32.

³² CPAWS Northern Alberta analysis, *supra* note 29.

³³ *Ibid.*

³⁴ Alberta Environment and Parks, “Briefing Note: Advice to Honourable Shannon Phillips, Minister of Environment and Parks, Agenda Item 4 – Conserving Species at Risk”, (3 February 2017) at 2 [Briefing Note] [**Compendium, Tab 75**].

SAFETY-NET LEGAL ANALYSIS

7.0 Introduction to the Legal Analysis

Subsection 61(1) of *SARA* prohibits the destruction of any part of the critical habitat of a listed threatened species that is in a province or territory that is not part of federal lands.³⁵ This subsection applies only to those portions of critical habitat on non-federal lands that the Governor in Council has specified by order on the recommendation of the Minister.³⁶ The Minister must recommend that the Governor in Council make such an order if she is of the opinion that:

- (a) there are no other provisions under *SARA* or other federal Acts that protect the particular portion of critical habitat, including agreements under section 11 of *SARA*; and
- (b) the laws of the province do not effectively protect the critical habitat.³⁷

The purpose of the following analysis is to determine if there are any provisions under *SARA* or other federal legislation, or if there are any laws of Alberta, that effectively protect the critical habitat of the northeastern herds. Our conclusion is that neither federal nor provincial laws provide effective legal protection of the specified critical habitat. The Government of Alberta itself has indicated that “Alberta/Provincial legislation does not provide many protections for species at risk habitat and it is probable that significant gaps in protection will be identified.”³⁸ Therefore, the Minister must recommend that the Governor in Council make an order under section 61 to protect the northeastern herds’ critical habitat on provincial lands.

8.0 The Test for Effective Protection

The overarching test we are using to evaluate whether a federal or provincial law provides effective protection to critical habitat is as follows:

Does the provincial or federal law prevent the destruction of the portion or parts of the critical habitat on non-federal lands to an extent that results in a protection outcome equivalent to the outcome that would be achieved if subsection 61(1) of *SARA* was in effect?

This overarching test and the four assessment criteria set out below are based on and informed by *SARA* itself, various policies on critical habitat protection and the assessment of effective protection, the application of those policies in other critical habitat protection assessments, and the common law.

We will use the following four criteria to assess whether a federal or provincial law provides effective protection:

- Does the provincial or federal law contain mandatory prohibitions that prevent the destruction of critical habitat?

³⁵ *SARA*, *supra* note 2, s 61(1).

³⁶ *Ibid*, s 61(2)

³⁷ *Ibid*, s 61(4)

³⁸ Briefing Note, *supra* note 34, at 2.

- Does the provincial or federal law provide broader exceptions, exemptions or discretion than those *SARA* provides, or include permitting provisions with a lower (i.e. less protective) threshold than those set out in *SARA*?
- Are the offence, enforcement and penalty provisions for breach of the provincial or federal laws at least as strong as those in *SARA*?
- Is there a history of effective application of the provincial or federal law?

8.1 *SARA*

The purposes of *SARA* are to prevent wildlife species from being extirpated or becoming extinct, to provide for the recovery of wildlife species that are extirpated, endangered or threatened as a result of human activity, and to manage species of special concern to prevent them from becoming endangered or threatened.³⁹ The preamble to *SARA* recognizes that “the habitat of species at risk is key to their conservation.”⁴⁰ In recognition of the importance of addressing habitat loss and degradation to the survival and recovery of threatened species, *SARA* contains prohibitions against the destruction of critical habitat on federal lands and on designated non-federal lands.⁴¹ In light of this recognition, the alternative federal or provincial laws being assessed under subsection 61(4) must provide the same protection outcome as would be the case if the subsection 61(1) prohibition were in place.

SARA contains certain discretionary measures under which the Minister may enter into agreements or issue permits authorizing activities that may affect critical habitat. Under section 73, the Minister may enter into agreements or issue permits for scientific research, for activities that benefit the species, or where the effects on the species are incidental to the activity.⁴² However, the authorizations may be granted only if certain pre-conditions have been met, including that all reasonable alternatives to the activity that would reduce the impacts have been considered, all feasible measures to reduce the impact will be taken, and the activity will not jeopardize the survival or recovery of the species.⁴³

In order to provide effective protection, any discretionary permitting and licensing provisions under provincial or federal laws must include pre-conditions at least as stringent as those provided by section 73 of *SARA*.

Section 83 of *SARA* provides that the prohibition under section 61(1) does not apply to a person who is engaging in activities related to the protection of public safety, health or national security and authorized by a federal Act.⁴⁴ The person engaging in an activity necessary for the protection of public safety, health or national security must exercise that power in a manner that respects the purposes of *SARA* to the greatest extent possible.⁴⁵ Therefore, in order to provide effective protection, the exceptions under other provincial or federal laws for such emergency actions must be as narrow as those under section 83 of *SARA* and exercised in a manner that respects the purposes of *SARA* to the greatest extent possible.

³⁹ *SARA*, *supra* note 2, s 6.

⁴⁰ *Ibid*, preamble.

⁴¹ *Ibid*, s 58(1), 61(1) and (2).

⁴² *Ibid*, s 73(2).

⁴³ *Ibid*, s 73(3).

⁴⁴ *Ibid*, s 83(1), (2)(a).

⁴⁵ *Ibid*, s 83(2)(b).

8.2 National Accord for the Protection for Species at Risk

The Government of Canada and the Government of Alberta are signatories to the 1996 *National Accord for the Protection of Species at Risk* (“*National Accord*”).⁴⁶ In the *National Accord*, the Province of Alberta agreed to establish legislation and programs that will provide for effective protection of species at risk, including providing protection for the habitat of threatened and endangered species.⁴⁷ Section 61 of *SARA* is the mechanism by which the federal government can ensure effective protection of the critical habitat of a threatened or endangered species on non-federal lands where a province has failed to meet its obligations under the *National Accord*.

8.3 Draft Policy on Critical Habitat Protection on Non-federal Lands

In September 2016, the Minister released the draft *Policy on Critical Habitat Protection on Non-federal Lands* (the “*Critical Habitat Policy*”). The *Critical Habitat Policy* defined the test for effective critical habitat protection and the “protection outcome” as follows:

Critical habitat will be considered to be protected or effectively protected for the purposes of subsection 61(4), where provisions in, or measures under *SARA* or other Acts of Parliament (as per paragraph 61(4)(a)), or the laws of the province or territory (as per paragraph 61(4)(b)), are, based on the available evidence, having the same protection outcome as would be the case if *SARA* subsection 61(1) prohibitions were in place. The protection outcome is that critical habitat is not being and will not be destroyed, except in ways that *SARA*’s discretionary measures would allow.⁴⁸

The *Critical Habitat Policy* proposes criteria for determining if a provincial law will provide the same protection outcome as would be the case if the *SARA* subsection 61(1) prohibitions were in place:

- The criteria considered with respect to whether the law is mandatory in its application are: limitations, exemptions, discretion, and permitting authorities.
- The criteria considered with respect to whether the law is enforceable are: prohibitions and offences, enforcement regime, and penalties or consequences.
- The strength assessment considers both the literal interpretation and the history of the application of the law in relation to the criteria noted above, thus assessing whether the law is both capable of and actually preventing destruction of critical habitat.
- The assessment will not evaluate whether provincial or territorial laws are equivalent to the content and structure of *SARA* with respect to the above criteria; rather, that the protection outcome of preventing destruction of critical habitat is being achieved, including an evaluation of whether any authorized destruction of critical habitat is subject to similar conditions as provided in *SARA*.⁴⁹

⁴⁶ Government of Canada, “National Accord for the Protection of Species at Risk”, (1996), online: <https://www.registrelep-sararegistry.gc.ca/6B319869-9388-44D1-A8A4-33A2F01CEF10/Accord-eng.pdf> [Compendium, Tab 14].

⁴⁷ *Ibid.*

⁴⁸ Environment and Climate Change Canada, *Policy on Critical Habitat Protection on Non-federal Lands [Proposed]*, (Ottawa: Environment and Climate Change Canada, 2016) at 1 [Compendium, Tab 15].

⁴⁹ *Ibid.*, at 3.

The *Critical Habitat Policy* proposes to apply the same criteria to the assessment of federal laws applicable on non-federal lands.⁵⁰

The protection outcome and the criteria found in the *Critical Habitat Policy* informed and are reflected in the test and criteria articulated in Section 8.0 above.

8.4 Previous Critical Habitat Protection Assessments

A recent assessment of the protection of Western Chorus Frog individuals, residences and habitat on federal and non-federal land examined provincial and federal laws to determine the extent to which they prevented the destruction of critical habitat.⁵¹ The analysis examined statutory definitions, the nature of the prohibitions, offences and penalties, enforcement, limitations or exceptions, exemptions, discretion, permitting and the history of the legal instrument's application.⁵² The assessment considered whether the applicable laws "included mandatory, enforceable prohibitions against the destruction of the species' habitat."⁵³ The assessment found, for example, that while the provisions of certain federal Acts included prohibitions against the destruction of habitat, the measures were "not equivalent to those required under SARA."⁵⁴ For several federal and provincial Acts, the assessment found that the penalties under those Acts were small in comparison to SARA and this was a factor in determining that the provisions did not provide equivalent protection.⁵⁵

In June 2017, the federal Minister of Environment and Climate Change and the British Columbia Minister of the Environment jointly released the final *Canada-British Columbia Southern Mountain Caribou (Central Group) Protection Study* ("*SMC Protection Study*").⁵⁶ The *SMC Protection Study* was intended to inform decisions under sections 34, 61 and 63 of SARA as to whether the critical habitat of the Southern Mountain Caribou (Central Group) was protected. The *SMC Protection Study* applied the criteria from the draft *Critical Habitat Policy* including prohibitions and offences, penalties or consequences, enforcement regime, limitations, exemptions, discretion and permitting.⁵⁷

The *SMC Protection Study* analysed the legislative instruments on a spatial basis and identified:

- areas for which there are no spatially-explicit legislative instruments in place that would constrain any of the relevant groups of activities;

⁵⁰ *Ibid*, at 4.

⁵¹ Government of Canada, *Protection assessment of Western Chorus Frog individuals, residences and habitat on federal and non-federal land*, (2015), Species at Risk Registry, on-line: <https://www.registrelep-sararegistry.gc.ca/default.asp?lang=En&n=2903667C-1>, at 1 [WCF Assessment] [Compendium, Tab 16].

⁵² *Ibid*.

⁵³ *Ibid*, at 6.

⁵⁴ *Ibid*.

⁵⁵ *Ibid*, at 3, 5, 6, 7 and 10.

⁵⁶ Environment and Climate Change Canada and British Columbia Ministry of the Environment, *Canada-British Columbia Southern Mountain Caribou (Central Group) Protection Study*, (2017), Species at Risk Registry, online: http://www.registrelep-sararegistry.gc.ca/virtual_sara/files/SmcStudy%2Dv00%2D2017June%2DComple%2DEng%2Epdf [Compendium, Tab 17].

⁵⁷ *Ibid*, at 35.

- areas in which some, but not all, activities are constrained by the application of legislative instruments; and
- decision-making related to authorizing activities that is not constrained by a substantive requirement to meet threshold conservation objectives, in this case protection of caribou critical habitat.⁵⁸

These previous protection assessments were reviewed and informed the test and criteria in section 8.0 above and informed the analysis and structure of this current assessment.

8.5 Case Law

In *Minister of Fisheries and Oceans v David Suzuki Foundation*, 2012 FCA 40 (“*Orca*”), the Federal Court of Appeal dealt with the question of whether the Minister of Fisheries and Oceans could rely on discretionary provisions of the *Fisheries Act* in finding that critical habitat was legally protected under section 58 of *SARA*. Section 58(1) of *SARA* parallels section 61(1) in prohibiting any person from destroying any part of the critical habitat of a listed endangered or threatened species on federal land or where the listed species is an aquatic species or migratory bird. Section 58(5) requires that the Minister make an order protecting the critical habitat if the critical habitat is not protected by the provisions of *SARA* or other federal acts.

The Court in *Orca* found that the non-discretionary critical habitat protection scheme under *SARA* could not be replaced by the discretionary management scheme under the *Fisheries Act*.⁵⁹ The Court stated:

Section 57 of the *SARA* provides in no uncertain language that the purpose of section 58 is to ensure that all the critical habitat is protected by provisions in, or measures under, an Act of Parliament or by a protection order issued under subsections 58(1) and (4) of the *SARA*. Surely this is an indication that there must be some equivalence between the two contemplated means of protection. They need not be the same, but surely they must have the same objective. Pursuant to subsection 58(1), the objective of a protection order is to ensure that “no person [...] destroy any part of the critical habitat of any listed endangered species or of any listed threatened species [...] if the listed species is an aquatic species”. Provisions in, or measures under, an Act of Parliament should thus – in principle – achieve the same objective if they are to be resorted to as a substitute to a protection order.⁶⁰

We have applied this same test in our analysis of the Minister’s obligation under section 61(4), namely that the federal or provincial law must meet the same objective of ensuring that no part of the critical habitat of the listed threatened species is destroyed.

⁵⁸ *Ibid*, at 71.

⁵⁹ *Minister of Fisheries and Oceans v David Suzuki Foundation*, 2012 FCA 40, at para 109 [Compendium, Tab 18].

⁶⁰ *Ibid*, at para 117.

9.0 Alberta Legislation

This section evaluates the relevant laws of the Province of Alberta to determine if those laws provide effective protection of the critical habitat of the northeastern herds using the test and criteria identified in section 8.0 above.

9.1 *Alberta Land Stewardship Act, RSA 2000, c A-26.8, and the Lower Athabasca Regional Plan*

Pursuant to the *Alberta Land Stewardship Act* (“ALSA”), the Lieutenant Governor in Council may establish planning regions and may prepare regional plans for those regions.⁶¹ The Government of Alberta has established seven planning regions and has completed regional plans for two of those regions. The Lower Athabasca Regional Plan (“LARP”) covers northeast Alberta and is the only plan relevant to the protection of the critical habitat of the northeastern herds.

A regional plan is an expression of the public policy of the Government of Alberta.⁶² However, a regional plan binds decision-makers only to the degree explicitly stated in the plan itself.⁶³

For example, only those sections of the LARP specifically identified as being part of the Regulatory Details Plan are legally binding. According to the LARP itself, all other portions of the LARP are non-binding policy statements:

Except as otherwise provided in this LARP Regulatory Details Plan, the provisions of the LARP Strategic Plan are not intended to have binding legal effect, and are statements of provincial policy to inform the Crown, decision-makers, local government bodies and all other persons in respect of the [listed] activities in the planning region...⁶⁴

In the LARP, the Government of Alberta commits to completing a biodiversity management framework for the region by the end of 2013 for the purpose of setting targets for selected biodiversity indicators and specifically to address caribou habitat needs.⁶⁵ However, the requirement to complete the biodiversity management framework is not included in the Regulatory Details Plan and is not mandatory. The Alberta Minister of Environment and Parks has not yet released the biodiversity management framework and therefore the issue of caribou habitat needs has not been addressed under the LARP. Even if a biodiversity management framework with limits on caribou habitat disturbance was prepared and released, it would be a statement of policy only and would not be enforceable unless it was specifically referenced in an amendment to the Regulatory Details Plan.

The LARP also proposes that new conservation areas be established under provincial parks legislation or the *Public Lands Act*.⁶⁶ However, the Regulatory Details Plan contains only a discretionary provision that the Minister may implement the steps necessary to establish those

⁶¹ *Alberta Land Stewardship Act*, RSA 2000, c A-26.8, s 3(1), 4(1) [ALSA] [Compendium, Tab 19].

⁶² *Ibid*, s 13(1), 15(1).

⁶³ *Ibid*, s 15(1)-(2).

⁶⁴ Government of Alberta, *Lower Athabasca Regional Plan, 2012-2022*, (Edmonton: Government of Alberta, 2012) at 8 [LARP] [Compendium, Tab 20].

⁶⁵ *Ibid*, at 28.

⁶⁶ *Ibid*, at 30.

new conservation areas.⁶⁷ See section 9.4 below for a more detailed discussion of new proposed wildland provincial parks within the range of the northeastern herds. However, the Regulatory Details Plan further states that all agreements issued under the *Mines and Minerals Act* and all dispositions under the *Public Lands Act* continue and may be renewed in new and existing conservation areas, even if inconsistent with or non-compliant with the regional plan.⁶⁸

The LARP also indicates that a landscape management plan for the region will be completed by the end of 2013.⁶⁹ The landscape management plan would address biodiversity through a well-coordinated, planned and managed land disturbance footprint.⁷⁰ The landscape management plan is intended to minimize the land disturbance footprint through integrated land management practices, including coordinating industry access corridors, progressive and timely reclamation of oil sands developments, and timely restoration of linear disturbances.⁷¹ To date, no landscape management plan has been prepared for any portion of the LARP region.

In addition, the *ALSA* provides that a regional plan may permanently protect, conserve, manage or enhance environmental, natural scenic, esthetic or agricultural values by means of a conservation directive expressly contained in a regional plan.⁷² There are no conservation directives in the LARP.

In summary, the LARP could have specified, as mandatory provisions under the Regulatory Details Plan, a biodiversity management plan, new conservation areas with mandatory habitat protections, a landscape management plan, and conservation directives, and such actions would have been enforceable under the *ALSA*. Instead, all of the documents discussed are policy statements only and do not provide mandatory protection of caribou critical habitat.

9.2 Wildlife Act, RSA 2000, c W-10

Section 36 of the *Wildlife Act* prohibits anyone from wilfully molesting, disturbing, or destroying a house, nest or den of prescribed wildlife.⁷³ This prohibition applies to endangered animals as defined under the Act.⁷⁴ Woodland caribou are a listed endangered animal.⁷⁵ However, caribou do not have “houses, nests or dens” and therefore this prohibition does not protect caribou habitat.

Section 6 of the Act provides that the Minister shall establish a committee to advise the Minister with respect to the preparation and adoption of recovery plans for endangered species.⁷⁶ The recovery plans “may” include population goals, and identification of critical habitats and strategies to enable populations to recover.⁷⁷ The Act does not require that the Minister establish

⁶⁷ *Ibid*, at 43.

⁶⁸ *Ibid*.

⁶⁹ *Ibid*, at 28.

⁷⁰ *Ibid*.

⁷¹ *Ibid*.

⁷² *ALSA*, *supra* note 62, s 37.

⁷³ *Wildlife Act*, RSA 2000, c W-10, s 36(1) [**Compendium, Tab 21**].

⁷⁴ *Wildlife Regulation*, AR 143/1997, s. 3(p), 4(1)(i), Schedule 6 [**Compendium, Tab 22**].

⁷⁵ *Ibid*, Schedule 6.

⁷⁶ *Wildlife Act*, *supra* note 74, s 6(1)(a).

⁷⁷ *Ibid*, s 6(3).

a committee to advise with respect to the preparation of a recovery plan and does not require that the Minister prepare such a plan.

In 2005, the Government of Alberta released the *Alberta Recovery Plan*.⁷⁸ The *Alberta Recovery Plan* indicates that it was prepared to meet provincial requirements for recovery planning as described in the *Wildlife Act*.⁷⁹ The *Alberta Recovery Plan* indicates that it was intended as advice to the Minister responsible for fish and wildlife management and to all Albertans.⁸⁰ The *Alberta Recovery Plan* identifies the general habitat requirements for woodland caribou but does not spatially identify or map critical habitat.⁸¹

The *Alberta Recovery Plan* provides recommended goals, objectives, strategies and actions to the minister for the recovery of woodland caribou in Alberta.⁸² The *Alberta Recovery Plan* lists the Red Earth, Cold Lake and East Side Athabasca River herds as in decline as of 2005. The West Side Athabasca River herd was listed as stable, while the status of the Richardson herd was unknown.⁸³ For herds in decline, the *Alberta Recovery Plan* recommended that industrial and other human activities on the caribou range be addressed,⁸⁴ though it did not contain any prohibition on these activities. For stable herds, the *Alberta Recovery Plan* recommended that specific guidelines for project and landscape-level industrial and human activities be implemented.⁸⁵ To date, no guidelines have been prepared that protect the critical habitat of the northeastern herds from destruction.

The *Woodland Caribou Policy for Alberta*⁸⁶, released in June 2011, states that efforts will be made to stabilize, recover and sustain woodland caribou populations in Alberta by identifying, maintaining and restoring sufficient habitat, including prudent management of the land base and associated development to reduce the impact on and facilitate the restoration of caribou habitat.

The *Policy* states that range plans will be prepared that will establish range-specific population and habitat objectives, set specific measurable targets, and determine the required mix of management activities.⁸⁷ As noted in section 3.2 above, no range plans have been released for the northeastern herds.

Further, the Government of Alberta concedes that while there have been efforts over the years to develop provincial, regional and local caribou habitat and population management plans, these

⁷⁸ *Alberta Recovery Plan*, *supra* note 16.

⁷⁹ *Ibid*, at viii.

⁸⁰ *Ibid*, at iii.

⁸¹ *Ibid*, at 6-7.

⁸² *Ibid*, at 2.

⁸³ *Ibid*, at 6.

⁸⁴ *Ibid*, at 13.

⁸⁵ *Ibid*, at 14.

⁸⁶ Government of Alberta, *A Woodland Caribou Policy for Alberta* (2011) online: <http://aep.alberta.ca/fish-wildlife/wildlife-management/caribou-management/documents/WoodlandCaribouPolicy-Alberta-Jun2011.pdf> [*Alberta Caribou Policy*] **[Compendium, Tab 10]**.

⁸⁷ *Ibid*, at 2.

proposed plans and the related recommendations have not been adopted or implemented by Alberta.⁸⁸

Clearly, the *Wildlife Act*, and the *Alberta Recovery Plan* and the *Woodland Caribou Policy for Alberta* do not require the identification or protection of critical habitat for woodland caribou. The *Wildlife Act* does not provide effective protection of any portion of critical habitat for the northeastern herds.

9.3 Wilderness Areas, Ecological Reserves, Natural Areas and Heritage Rangelands Act, RSA 2000, c W-9

The *Wilderness Areas, Ecological Reserves, Natural Areas and Heritage Rangelands Act* (“*Wilderness Areas Act*”) provides for four different designations that may be applied to land in Alberta.⁸⁹

A wilderness area is the most protective of these designations, as all industrial activity is prohibited and only access by foot is permitted.⁹⁰ However, there are no designated wilderness areas within the ranges of the northeastern herds.

Pursuant to subsection 4(1) of the *Wilderness Areas Act*, the Lieutenant Governor in Council may designate as an ecological reserve any area of public land that, amongst other things, contains rare or endangered plants or animals that should be preserved.⁹¹ The Act contains a general prohibition against the issuance of dispositions of land within the ecological reserve under the *Public Lands Act*, *Forests Act*, *Mines and Minerals Act*, and other Acts.⁹² However, the Minister maintains the discretion to continue existing petroleum and natural gas dispositions under the *Mines and Minerals Act* and to continue or renew dispositions under the *Public Lands Act* and the *Forests Act* within the ecological reserve.⁹³

There are two ecological reserves within the ranges of the northeastern herds: the Athabasca Dunes Ecological Reserve (3,770 hectares) within the range of the Richardson herd and the Crow Lake Ecological Reserve (938 hectares) within the range of the East Side Athabasca River herd.⁹⁴ However, the ecological reserves are small relative to the ranges, representing 0.5 percent of the Richardson range and 0.07 percent of the East Side Athabasca River range.⁹⁵ Therefore, even if the Minister were to exercise her discretion to exclude all industrial activities from the ecological reserves, the vast majority of the ranges would remain unprotected from activities that could destroy critical habitat.

⁸⁸ Backgrounder, *supra* note 23, at 1.

⁸⁹ *Wilderness Areas, Ecological Reserves, Natural Areas and Heritage Rangelands Act*, RSA 2000, c W-9, s 3-4.1 [*Wilderness Areas Act*] [**Compendium, Tab 23**].

⁹⁰ *Ibid*, s 7.

⁹¹ *Ibid*, s 4(1)(d).

⁹² *Ibid*, s 7(1).

⁹³ *Ibid*, s 6(2), (3).

⁹⁴ Alberta Environment and Parks, “Parks by Class: Ecological Reserves”, (2017) online: <http://www.albertaparks.ca/albertaparksca/library/land-reference-manual/parks-by-class/?id=Ecological%20Reserve> [**Compendium, Tab 24**].

⁹⁵ *Recovery Strategy*, *supra* note 1, 101-102.

Pursuant to sections 4.01 and 4.1 respectively of the *Wilderness Areas Act*, the Lieutenant Governor in Council may designate any area of land as a natural area or as a heritage rangeland.⁹⁶ Dispositions under the *Public Lands Act* for petroleum and natural gas purposes and dispositions under the *Forests Act* are permitted in natural areas.⁹⁷ Existing public land dispositions for grazing and mineral extraction are continued in heritage rangelands, and existing dispositions under the *Public Lands Act* may be renewed.⁹⁸ Therefore, natural areas and heritage rangelands do not provide any non-discretionary protection to critical habitat. Further, there are no natural areas or heritage rangelands within the ranges of the northeastern herds.⁹⁹

In summary, the two ecological reserves offer the potential for protection of caribou habitat, particularly if the provincial minister exercises her discretion to discontinue land dispositions within those reserves. If that discretion is exercised, the ecological reserves may offer effective protection of caribou habitat. However, the ecological reserves would protect only a miniscule portion of the critical habitat in the relevant caribou ranges.

9.4 Provincial Parks Act, RSA 2000, c P-35

Under the *Provincial Parks Act* and related regulations, the Lieutenant Governor in Council may designate public land as a provincial park, wildland provincial park or recreation area.¹⁰⁰

The *Provincial Parks Act* and related regulations grant the Minister the discretion to grant and renew public land dispositions of all types within provincial parks and recreation areas, including dispositions for mineral mining, grazing leases, pipelines, sand and gravel extraction, and utility projects.¹⁰¹ Existing dispositions under the *Public Lands Act* at the time the provincial park, wildland provincial park or recreation is established are continued and may be renewed by the Minister.¹⁰²

Generally new dispositions are not permitted within wildland provincial parks although new dispositions for the extraction of minerals may be granted if the right to the subsurface mineral existed on the date the park was designated, and new grazing leases may be granted if grazing was occurring on the land at the time the park was designated.¹⁰³

Wildland provincial parks offer the greatest potential to protect critical caribou habitat if existing dispositions are not renewed. However, existing dispositions under the *Public Lands Act* are continued for the life of the disposition and new dispositions may be issued for mining and grazing in wildland provincial parks. Therefore, wildland provincial parks fail to provide a

⁹⁶ *Wilderness Areas Act*, *supra* note 90, s 4.01, 4.1.

⁹⁷ *Ibid*, s 7.1.

⁹⁸ *Ibid*, s 7.2

⁹⁹ Alberta Environment and Parks, “Parks by Class: Natural Areas”, (2017) online: <https://www.albertaparks.ca/albertaparksca/library/land-reference-manual/parks-by-class/?id=Natural%20Area> [**Compendium, Tab 25**].

¹⁰⁰ *Provincial Parks Act*, RSA 2000, c 35, s 6 [**Compendium, Tab 26**]; *Provincial Parks (General) Regulation*, AR 102/85, s 1(n) [**Compendium, Tab 27**].

¹⁰¹ *Provincial Parks Act*, *supra* note 101, s 8; *Provincial Parks (Dispositions) Regulation*, AR 241/77, s 28, 35, 47, 58, 74 [**Compendium, Tab 28**].

¹⁰² *Provincial Parks Act*, *supra* note 101, s 8.1.

¹⁰³ *Provincial Parks (Dispositions) Regulation*, *supra* note 102, s 2.1.

mandatory prohibition against the destruction of critical habitat until all existing dispositions and mineral rights expire.

Eight existing wildland provincial parks, totalling 481,535 hectares, overlap in whole or in part with the ranges of the northeastern herds.¹⁰⁴ These existing wildland provincial parks represent 7.1 percent of the ranges of the northeastern herds.¹⁰⁵ The Lower Athabasca Regional Plan has proposed three new wildland provincial parks totalling 615,911 hectares, but these parks have not yet been designated.¹⁰⁶ These new wildland provincial parks, if designated, would represent an additional 9.1 percent of the ranges of the northeastern herds.¹⁰⁷

However, as indicated in Figures 4-8 above, there are many existing public land dispositions within the existing and proposed protected areas and wildland provincial parks. If the provincial minister fully exercised her discretion to discontinue all existing dispositions within the existing and proposed wildland provincial parks and did not issue any new dispositions, the wildland provincial parks could potentially protect critical habitat in up to 16.2 percent of the ranges of the northeastern herds. However, critical habitat in over 80 percent of the ranges would remain unprotected.

Therefore, existing and new wildland provincial parks established under the *Provincial Parks Act* would not provide a mandatory prohibition against destruction of critical habitat in the majority of the area covered by the ranges of the northeastern herds.

9.5 Environmental Protection and Enhancement Act, RSA 2000, c E-12

The *Environmental Protection and Enhancement Act* (“EPEA”) establishes a process for the environmental assessment of certain projects prior to their approval. The *Environmental Assessment (Mandatory and Exempted Activities) Regulation* provides the first screen for determining which projects will require an environmental assessment. For example, an oil sands mine, a heavy oil upgrading plant producing more than 2,000 cubic metres of bitumen per day, a coal mine producing more than 45,000 tonnes per year, or a coal processing plant would require a mandatory environmental assessment prior to approval.¹⁰⁸ For example, the drilling of an oil or gas well, or a gravel pit less than 2 hectares in size, are exempt activities.¹⁰⁹ For projects that are

¹⁰⁴ Alberta Environment and Parks, “Parks by Class: Wildland Provincial Parks”, online: <https://www.albertaparks.ca/albertaparksca/library/land-reference-manual/parks-by-class/?id=Wildland%20Provincial%20Park> [Compendium, Tab 29]; Richardson River Dunes Wildland (32,033 ha); Maybelle River Wildland (15,309 ha); Marguerite River Wildland (196,302 ha); Grande Rapids Wildland (26,332 ha); Gipsy Lake Wildland (35,766 ha); Stony Mountains Wildland (13,974 ha); La Biche River Wildland (17,314 ha); Birch Mountains Wildland (144,505 ha).

¹⁰⁵ *Recovery Strategy*, *supra* note 1, at 99-103.

¹⁰⁶ LARP, *supra* note 65, at 84. Richardson Wildland (proposed) (265,825 ha); Dillon River Wildland (proposed) (191,544 ha); Gipsy-Gordon Wildland (proposed) (158,542 ha).

¹⁰⁷ The existing and proposed wildland provincial parks do not overlap entirely with the identified caribou ranges. The estimates of 7.1 and 9.1 percent are the maximums if the existing and proposed wildland provincial parks were entirely within caribou ranges.

¹⁰⁸ *Environmental Assessment (Mandatory and Exempted Activities) Regulation*, AR 111/93, s 1, Schedule 1 [Compendium, Tab 30].

¹⁰⁹ *Ibid*, s 2, Schedule 2.

neither mandatory nor exempt, the director or the minister may make a discretionary decision that an environmental assessment is required.¹¹⁰

Where an environmental impact assessment report is required, the proponent must prepare terms of reference for approval by the director.¹¹¹

EPEA requires that the environmental impact assessment report contain a description of the environmental impacts of the project.¹¹² The *Guide to Preparing Environmental Impact Assessment Reports in Alberta* states that proponents must:

- describe how they will meet the federal recovery strategy for boreal caribou;
- describe how the project will influence undisturbed caribou habitat;
- describe how the project will affect caribou habitat recovery efforts and meet the overarching goal to achieve and maintain at least 65 percent undisturbed habitat in each caribou range; and
- describe impacts to caribou range, implementing a 500 meter buffer around all disturbances.¹¹³

After a technical review of the environmental impact assessment report has been completed and the director has deemed the report to be complete, the director must direct the report to the Alberta Energy Regulator (“AER”) (for energy related projects), the Natural Resources Conservation Board (“NRCB”) (for non-energy natural resource projects), or the minister (for all other projects) to make a public interest decision on whether the project should proceed.¹¹⁴

On approval, the AER, NRCB or minister, as appropriate, may set conditions on the approval of the project. However, there is no requirement that the conditions protect the critical habitat of caribou or any other species at risk.

As an example of the discretionary nature of environmental approvals and the setting of conditions under *EPEA*, the environmental assessment of Shell’s Jackpine Mine Expansion Project in 2013 concluded that the project would cause adverse and irreversible effects to caribou habitat.¹¹⁵ Despite the identification of these irreparable harms to caribou critical habitat, the AER determined that the project was in the public interest and the necessary approvals were granted. The approvals did not require the project to meet pre-conditions equivalent to those set out in subsection 73(3) of *SARA*, namely assuring that all feasible measures would be taken to minimize the impact of the activity on the species or its critical habitat, or to ensure that the

¹¹⁰ *Environmental Protection and Enhancement Act*, RSA 2000, c E-12, s 45(1), 47 [**Compendium, Tab 31**].

¹¹¹ *Ibid*, s 48.

¹¹² *Ibid*, s 49(d).

¹¹³ Government of Alberta, *Guide to Preparing Environmental Impact Assessment Reports in Alberta*, (Edmonton: Government of Alberta, 2013) at 10 [**Compendium, Tab 32**].

¹¹⁴ *EPEA*, *supra* note 111, s 53.

¹¹⁵ Joint Review Panel for the Shell Jackpine Expansion Report, *Report of the Joint Review Panel Established by the Federal Minister of the Environment and the Energy Resources Conservation Board: Decision 2013 ABAER 011: Shell Canada Energy, Jackpine Mine Expansion Project, Application to Amend Approval 9756, Fort McMurray Area* (Ottawa: Canadian Environment Assessment Agency, 2013), at para 8 [*Jackpine Expansion JRP Report*] [**Compendium, Tab 33**].

activity would not jeopardize the survival or recovery of the species.¹¹⁶ In the case of the Jackpine Mine Expansion, it was determined that there was “a lack of proposed mitigation measures [that have] been proven to be effective...”, yet the AER still approved the project.¹¹⁷

In addition, the Joint Review Panel in the Jackpine Mine Expansion hearing recommended that the Government of Alberta work toward the timely completion of the LARP biodiversity management framework and that the framework address such principles as no net loss of caribou habitat, limiting linear disturbances in critical caribou habitat, and restoration of historical and present caribou ranges.¹¹⁸ The Panel stated that “[i]t is critical that the frameworks...identified in LARP be put in place as quickly as possible.”¹¹⁹ The Government of Alberta indicated during the hearing that the biodiversity management framework would be complete by the end of 2013.¹²⁰ As discussed in section 9.1 above, the biodiversity management framework has not been released and there are no protections in place for the critical habitat of the northeastern herds.

In summary, the environmental assessment process under *EPEA* does not provide any mandatory prohibition against destruction of critical habitat in the ranges the northeastern herds.

9.6 Forests Act, RSA 2000, c F-22

Forestry cut blocks and road development are activities likely to destroy critical caribou habitat.¹²¹ The *Forests Act* prohibits the cutting, damaging or destruction of forest growth without authorization.¹²² Crown timber may be harvested pursuant to a forest management agreement, a timber quota certificate, or a timber permit.¹²³ Forest management agreements (“FMAs”) cover almost all of the ranges of the northeastern herds.¹²⁴ The FMAs establish the conditions and forest management practices that must be followed by the FMA holder.

The FMAs that are relevant to the northeastern herds do not contain any prohibitions from destroying critical caribou habitat.¹²⁵ The minister maintains a limited right to withdraw land from the forest management area for certain specified purposes, but not for the protection of critical wildlife habitat.¹²⁶ The minister maintains the right to maintain and enhance fish and

¹¹⁶ *SARA*, *supra* note 2, s 73(3)(b)-(c).

¹¹⁷ *Jackpine Expansion JRP Report*, *supra* note 116, at para 9.

¹¹⁸ *Ibid*, at 376-378 (Recommendations 29-30, 37, 47).

¹¹⁹ *Ibid*, at para 14.

¹²⁰ *Ibid*, at para 657.

¹²¹ *Recovery Strategy*, *supra* note 1, at 36-37.

¹²² *Forests Act*, RSA 2000, c F-22, s 10.

¹²³ *Ibid*, s 15.

¹²⁴ Alberta Agriculture and Forestry, “Forest Management Agreement Boundaries”, online: [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/ba3468a2a8681f69872569d60073fde1/24481e0cf600d9687257f64008147bd/\\$FILE/FMA-BoundariesMap-Feb2016.pdf](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/ba3468a2a8681f69872569d60073fde1/24481e0cf600d9687257f64008147bd/$FILE/FMA-BoundariesMap-Feb2016.pdf).

¹²⁵ Government of Alberta, “Forest Management Agreement – Alberta-Pacific Forest Industries Inc.” (27 July 2011) [**Compendium, Tab 34**]; Government of Alberta, “Forest Management Agreement – Daishowa-Marubeni International Ltd.” (28 July 2009) [**Compendium, Tab 35**]; Government of Alberta, “Forest Management Agreement – Tolko Industries Ltd., Norbord Inc. and La Crete Sawmills Ltd.” (24 November 2011) [**Compendium, Tab 36**]; Government of Alberta, “Forest Management Agreement – Tolko Industries Ltd.” (13 April 2017) [**Compendium, Tab 37**].

¹²⁶ See for example, Alpac FMA, *supra* note 126, at clause 6(1).

wildlife resources on the forest management area, provided that the FMA holder's right to establish, grow, harvest, and remove timber is not significantly impaired.¹²⁷

Each FMA holder is required to prepare a forest management plan in accordance with standards set by the minister.¹²⁸ The *Alberta Forest Management Planning Standard* ("Standard") adopts and interprets the Canadian Standards Association CAN/CSA-Z809-2002 *Sustainable Forest Management: Requirements and Guidance Document* as the standard for forest management planning in Alberta.¹²⁹ The *Standard* requires that, as a minimum, a forest management plan address habitat requirements and access management strategies to address species of special concern.¹³⁰ The *Standard* sets an objective to maintain habitat for identified species at risk.¹³¹

The Alberta-Pacific Forest Industries Ltd. ("Alpac") forest management plan states that the company will participate in the Alberta Caribou Committee as established under the *Alberta Woodland Caribou Recovery Plan* to better understand the effects of disturbance on biodiversity and to adjust management practices as new information is available.¹³² Alpac states that it will continue to follow provincially approved land-use guidelines for industrial operations in caribou range.¹³³

The Daishowa-Marubeni International Ltd. ("DMI") forest management plan states that the company will participate in Alberta Caribou Committee studies and will participate in other collaborative regional and provincial forums.¹³⁴ DMI also states that it will submit annual caribou protection plans to the regulator and will coordinate with other industrial operators to reduce disturbance in caribou habitat.¹³⁵

The Tolko Industries Ltd. (High Prairie) ("Tolko") forest management plan, under an objective to manage forestry operations to maintain habitat features for species of concern, states that the company will plan operations in accordance with the Boreal Caribou Committee Guidelines in any known caribou zone.¹³⁶

¹²⁷ *Ibid*, at clause 8(1)(c).

¹²⁸ *Ibid*, at clause 10.

¹²⁹ Alberta Sustainable Resource Development, *Alberta Forest Management Planning Standard – Version 4.1*, (Edmonton: Alberta Sustainable Resource Development, April 2006) at 7 [Standard] [**Compendium, Tab 38**].

¹³⁰ *Ibid*, at 53.

¹³¹ *Ibid*, at 97.

¹³² Alberta-Pacific Forest Industries Ltd., *Forest Management Plan*, (2007) online: [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/formain15754/\\$file/ALPAC-FMP-Chapter3-Sep2007.pdf?OpenElement](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/formain15754/$file/ALPAC-FMP-Chapter3-Sep2007.pdf?OpenElement), at 93 [**Compendium, Tab 39**].

¹³³ *Ibid*, at 95.

¹³⁴ Daishowa-Marubeni International Ltd., *East FMA Targets and Implementation, Detailed Forest Management Plan, FMA 0900044, 2009-2018*, online: [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/formain15758/\\$FILE/DMIEastForestManagementPlan-Jun09-2014A.pdf](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/formain15758/$FILE/DMIEastForestManagementPlan-Jun09-2014A.pdf) at 279-280 (pdf 1149-1150) [DMI FMP] [**Compendium, Tab 40**].

¹³⁵ *Ibid*, at 280.

¹³⁶ Tolko Industries Ltd., *Detailed Forest Management Plan – High Prairie OSB Division*, (2005), online: [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/formain15780/\\$file/DFMP_31Jan2005.pdf?OpenElement](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/formain15780/$file/DFMP_31Jan2005.pdf?OpenElement), at 3-29 [**Compendium, Tab 41**].

In 2005, the Boreal Caribou Committee produced a *Strategic Plan and Industrial Guidelines for Boreal Caribou Ranges in Northern Alberta* (“*Interim Guidelines*”).¹³⁷ With respect to forestry operations, the *Interim Guidelines* proposed only that winter work in caribou winter range be scheduled early in the winter season.¹³⁸ In late 2005, Alberta Sustainable Resource Development amalgamated the Boreal Caribou Committee and the West-Central Alberta Caribou Committee into the single Alberta Caribou Committee.¹³⁹ In 2010, the Alberta Caribou Committee’s efforts to produce land use guidelines were merged into the LARP planning process with the intent that the biodiversity management framework would address land use issues with respect to caribou habitat.¹⁴⁰ As discussed in section 9.1 above, the biodiversity management framework has not been released.

Alpac, DMI and Tolko are all signatories to the Canadian Boreal Forest Agreement (“CBFA”).¹⁴¹ The core elements of the CBFA include:

- the completion of a network of protected areas that, taken as a whole, represents the diversity of ecosystems within the boreal region and serves as ecological benchmarks; and
- the recovery of species at risk within the boreal forests including species such as Woodland Caribou.¹⁴²

In the CBFA, the signatories agreed to jointly advocate for and work with governments and others to promote the recovery of boreal caribou.¹⁴³ Further, the signatories agreed that priority should be placed on the completion and implementation of government caribou action plans and agreed to advocate for and support the completion of such plans.¹⁴⁴ The signatories also agreed to work to develop their own proposed caribou action plans.¹⁴⁵ Further, the industry participants agreed to defer harvesting in a portion of the caribou range within their management areas between April 1, 2009 and March 31, 2012.¹⁴⁶

In 2014, the CBFA released *Recommendations and proposed contributions towards caribou conservation in northeastern Alberta: West Side of the Athabasca River, East Side of the Athabasca River and Cold Lake Caribou Ranges* (“*Northeast Plan*”).¹⁴⁷ The *Northeast Plan* set

¹³⁷ Boreal Caribou Committee, *Strategic Plan and Industrial Guidelines for Boreal Caribou Ranges in Northern Alberta*, (2005), online: <https://capft.ca/forms/Boreal%20Caribou%20Committee.DOC>.

¹³⁸ *Ibid*, at 5-6 [**Compendium, Tab 42**].

¹³⁹ David Samson, “Will a New Committee Really Save the Woodland Caribou?”, (2005) 13(5) Wild Lands Advocate at 18-19 [**Compendium, Tab 43**].

¹⁴⁰ DMI FMP, *supra* note 135, at 7-117.

¹⁴¹ Canadian Boreal Forest Agreement, *The Canadian Boreal Forest Agreement*, (2010), online: http://cbfa-efbc.ca/wp-content/uploads/2014/12/CBFAAgreement_Full_NewLook.pdf [**Compendium, Tab 44**].

¹⁴² *Ibid*, at 7.

¹⁴³ *Ibid*, at 22.

¹⁴⁴ *Ibid*, at 23-24.

¹⁴⁵ *Ibid*, at 24.

¹⁴⁶ *Ibid*, at 25-26.

¹⁴⁷ Canadian Boreal Forest Agreement, *Recommendations and proposed contributions towards caribou conservation in northeastern Alberta: West Side of the Athabasca River, East Side of the Athabasca River and Cold Lake Caribou Ranges*, (Ottawa: Canadian Boreal Forest Agreement, 2014) [Northeast Plan] [**Compendium, Tab 45**].

out a series of recommendations with the objective of minimizing the forest industry footprint in the WSAR, ESAR and Cold Lake caribou ranges.¹⁴⁸ The recommendations included deferral of forest harvesting within certain identified zones, integrated land management to reduce industry footprint, and accelerated restoration and reclamation of the industrial footprint.¹⁴⁹ The *Northeast Plan* acknowledges that it is a draft set of recommendations intended to inform government range and action plans which are the regulatory mechanism for the coordination of caribou conservation actions.¹⁵⁰ The *Northeast Plan* also acknowledges that many of the areas covered by the plan are rich in bitumen and likely will be developed in the next couple of decades.¹⁵¹

While the *Northeast Plan* represents an effort by the forest industry to reduce the industrial footprint and to influence future government range plans and action plans, the *Northeast Plan* does not provide legal protection for the caribou critical habitat within the specified ranges.

Certain forestry companies operating within the ranges of the northeastern herds have obtained voluntary certifications of their forest management plans. However, the certification standards themselves, such as the Forest Stewardship Council standard and the CAN/CSA-Z809-2002 *Sustainable Forest Management: Requirements and Guidance Document*, defer to established recovery strategies developed by the federal and provincial governments. In other words, the certification requirements are no more stringent than those required in the existing provincial and federal laws, which as demonstrated in this *Petition*, do not effectively protect caribou habitat in Alberta.

While the FMA holders indicate a willingness to contribute to and participate in province-led caribou habitat protection policies and plans, the only commitments stated in their management plans rely on an interim guideline that addresses only the timing of operations, the Alberta Caribou Committee that no longer exists, and a biodiversity management framework that has never been released.

The approvals granted under forest management plans, quotas and timber permits do not set conditions equivalent to the pre-conditions required under subsection 73(3) of *SARA*, namely ensuring that all feasible measures be taken to minimize the impact of the activity on the species or its critical habitat and that the activity will not jeopardize the survival or recovery of the species. None of the approved management plans or harvest approvals precludes harvesting within the critical habitat of the northeastern herds. Therefore, none of these instruments results in the same protection outcome as would be the case if the *SARA* subsection 61(1) prohibition was in place.

9.7 Beneficial Management Actions: Industry Initiatives

Despite the high level of ongoing industrial disturbance in these ranges, it is worth noting that some corporations in Alberta are voluntarily researching, monitoring and undertaking restoration work in Alberta's boreal forest, including for the benefit of boreal caribou. For example, Canada's Oil Sands Innovation Alliance (COSIA) is a collaboration of oil sands producers. Two

¹⁴⁸ *Ibid*, at 2.

¹⁴⁹ *Ibid*, at 17-18.

¹⁵⁰ *Ibid*, at 8.

¹⁵¹ *Ibid*, at 2.

major COSIA initiatives address legacy linear disturbances and return of the boreal forest to high quality caribou habitat. The Linear Deactivation Project (LiDea) and the Algar Historic Restoration Project (Algar) are both focused on rehabilitating old seismic lines.¹⁵² The LiDea project restored some seismic linear disturbance in the Cold Lake Air Weapons Range to original forest characteristics, and vegetation and wildlife response are being measured to gauge program effectiveness. The Algar project is a collaborative program working to restore disturbed caribou habitat in northeast Alberta. There are six participating companies¹⁵³ though the land involved in the project is outside their licence areas. The project is testing forest restoration techniques, and includes a five-year program to replant trees and shrubs along the linear footprint within the region.

Similarly, the Regional Industry Caribou Collaboration (RICC)¹⁵⁴ is a collaborative effort between forestry and oil sands companies in the Cold Lake and East Side Athabasca River ranges that aims to support the Government of Alberta's development of range plans and to help restore caribou habitat in northeastern Alberta.¹⁵⁵

Though these efforts are noteworthy, they are still limited in effectiveness: the caribou herds and the conditions of the ranges continue to decline and clearly more needs to be done. Further, none of these actions offers legal protections equivalent to those under subsection 61(1) of *SARA*.

9.8 Public Lands Act, RSA 2000, c P-40

Industrial uses of public lands in Alberta, including use for oil, oil sands, gas, coal, and sand and gravel development and extraction, and for roads and pipelines, require an authorization under the *Public Lands Act*.¹⁵⁶ The holder of a disposition under the *Public Lands Act* is required to use the land in a manner that promotes conservation.¹⁵⁷ The *Public Lands Act* does not contain any specific reference to species at risk or their habitat.

An Alberta Environment and Parks policy document indicates that Caribou Protection Plans (CPPs) are required for all new exploration and construction activities that fall within caribou zones as shown on the provincially-approved caribou land-use referral map.¹⁵⁸ CPPs must

¹⁵² See: <http://www.cosia.ca/caribou-habitat-restoration>.

¹⁵³ ConocoPhillips Canada, Nexen Inc., Shell Canada, Statoil Canada, Suncor Energy Inc. and Total E&P Canada.

¹⁵⁴ RICC members include Canadian Natural Resources Ltd, Cenovus Energy Inc., Devon Canada Corp., Imperial, MEG Energy Corp., Statoil, Alberta-Pacific Forest Ind., and TransCanada Pipelines Ltd.

¹⁵⁵ Regional Industry Caribou Collaboration, 2016 Fact Sheet, (2016) online:<https://www.cosia.ca/uploads/files/casestudies/RICC%20Technical%20Fact%20Sheet.pdf> [**Compendium, Tab 46**]

¹⁵⁶ *Public Lands Act*, RSA 2000, c P-40, s 20(1), 47(1) [**Compendium, Tab 47**].

¹⁵⁷ *Ibid*, s 63(d).

¹⁵⁸ Alberta Environment and Parks, "Caribou Protection Plan", (accessed 15 September 2017), online: <http://aep.alberta.ca/fish-wildlife/wildlife-management/caribou-management/caribou-protection-plans/default.aspx> [**Compendium, Tab 48**].

describe the mitigation measures that will be applied to reduce caribou habitat loss.¹⁵⁹ There is no specific reference in the CPP guidelines to the protection of critical habitat.

AER *Manual 008: Oil Sands and Coal Exploration Guide* requires that an application for an oil sands exploration program or a coal exploration program on public lands include the submission of a CPP and that the CPP must be accepted by a land use officer.¹⁶⁰ There is no requirement for formal approval of the CPP.

On April 28, 2017, the AER implemented a new public lands formal disposition application process for licences of occupation (roads), mineral surface leases, and pipeline agreements. Under the new process, the applicant is no longer required to submit a CPP for those applications. Instead the applicant must complete a Landscape Analysis Tool (“LAT”) report. Based on the location and type of disposition requested, the LAT automatically generates a standard set of conditions.¹⁶¹ The *Master Schedule of Standards and Conditions* indicates that the following possible conditions may be set on dispositions in caribou ranges:

- prohibiting site preparation and construction activities between February 15th and July 15th;
- permitting access on Class V (frozen, temporary) roads only;
- installing access control;
- designing access routes as dead-ends;
- requiring rollback of surface materials on the easement;
- requiring construction of plant sites, campsites and remote sumps within 100 metres of an existing all-weather permanent access;
- prohibiting the use of legumes in re-vegetation.¹⁶²

None of the possible conditions prevents the removal of vegetation or the destruction of critical habitat.

Pursuant to subsection 71.1(1) of the *Public Lands Act*, the Lieutenant Governor in Council may make regulations declaring any area of land to be a public land use zone (“PLUZ”) and setting restrictions on permitted activities within the PLUZ.¹⁶³ The *Public Lands Administration Regulation* establishes the PLUZs and sets the restrictions on activities within each PLUZ.¹⁶⁴

¹⁵⁹ Alberta Environment and Sustainable Resource Development, *Caribou Protection Plan Guidelines and Caribou Calving Information*, (2012), online: <http://aep.alberta.ca/fish-wildlife/wildlife-management/caribou-management/caribou-protection-plans/documents/CaribouProtectionPlan-CaribouCalvingInfo-2012.pdf> at 1-2 [**Compendium, Tab 49**].

¹⁶⁰ Alberta Energy Regulator, *Manual 008: Oil Sands and Coal Exploration Guide*, (19 August 2014), at 1, 4 [**Compendium, Tab 50**].

¹⁶¹ Alberta Energy Regulator, “Public Land Disposition Process”, (accessed 15 September 2017), online: <http://www.aer.ca/applications-and-notice/application-process/pla-disposition-process> [**Compendium, Tab 51**].

¹⁶² Government of Alberta, *Master Schedule of Standards and Conditions*, (28 June 2017), online: <http://aep.alberta.ca/forms-maps-services/industry-online-services/public-lands-dispositions/step-one-pre-application/documents/MasterSchedStandardsConditions-Jun28-2017.pdf>, at 63-64 [**Compendium, Tab 52**].

¹⁶³ *Public Lands Act*, *supra* note 157, s 71.1(1).

¹⁶⁴ *Public Lands Administration Regulation*, AR 187/2011, s 178, Schedule 4.

PLUZs have been established primarily to limit off-highway vehicle use on designated public lands. However, a PLUZ could theoretically limit all industrial, commercial and recreational land uses and provide effective protection to caribou critical habitat. Currently there are no PLUZs within the ranges of the northeastern herds. Further, in some cases where PLUZs have been established, monitoring of compliance with the restrictions within the PLUZ has been limited and the PLUZ has not been managed in accordance with its mandate, regulations or stated purpose.¹⁶⁵

In summary, none of the public land disposition processes under the *Public Lands Act*, including the submission of CPPs or the establishment of PLUZs, requires the mandatory protection of the critical habitat of the northeastern herds or prevents that critical habitat from being destroyed.

9.9 *Mines and Minerals Act, RSA 2000, c M-17*

The *Mines and Minerals Act* governs the management and disposition of rights in Crown owned mines and minerals including oil, natural gas, oil sands and coal. The *Mines and Minerals Act* does not grant surface access for the extraction of mines and minerals. As discussed in section 9.8 above, surface access is granted under the *Public Lands Act*.

A mine or mineral lease posted for sale may indicate that the disposition is located within a caribou range and that there may be surface access restrictions.¹⁶⁶ However, the restriction notation does not have any legal impact on surface access. The notation simply alerts the lease holder that there may be surface restrictions under the *Public Lands Act*. As discussed above in section 9.8, the *Public Lands Act* does not provide effective protection of caribou critical habitat.

The *Mines and Minerals Act* does not contain any other conditions or prohibitions that would protect the critical habitat of the northeastern herds.

9.10 *Oil Sands Conservation Act, RSA 2000, c O-7*

The *Oil Sands Conservation Act* (“OSCA”) and the *Oil Sands Conservation Rules* (“OSC Rules”) regulate the approval process and operation of oil sands mines, in situ operations and processing plants. The stated purposes of OSCA make no reference to environmental protection.¹⁶⁷ Rather, OSCA requires that operators carry out oil sands mining operations in a manner that maximizes the recovery of oil sands within the mine site.¹⁶⁸

Section 2 of the *OSC Rules* requires that applications for oil sands schemes and operations include the information set out in the applicable directives.¹⁶⁹ *AER Directive 023: Guidelines Respecting an Application for a Commercial Crude Bitumen Recovery and Upgrading Project* sets out general guidelines for the information required in an application for a scheme for the

¹⁶⁵ Peter Lee and Matthew Hanneman, *Castle Area Forest Land Use Zone (Alberta) – Linear disturbances, access densities and grizzly bear habitat security areas*, (Edmonton: Global Forest Watch Canada, 2011) at 53 [**Compendium, Tab 53**].

¹⁶⁶ Alberta Energy, *Restrictions, Mineral Resources Search, Detailed Descriptions*, (2006), online: <http://www.energy.gov.ab.ca/Org/pdfs/ETS-RestrictionSearch.pdf>, at 16-17 [**Compendium, Tab 54**].

¹⁶⁷ *Oil Sands Conservation Act*, RSA 2000, c O-7, s 2 [**Compendium, Tab 55**].

¹⁶⁸ *Ibid*, s 27.

¹⁶⁹ *Oil Sands Conservation Rules*, AR 76/88, s 2 [**Compendium, Tab 56**].

recovery of oil sands.¹⁷⁰ *Directive 023* states that all applications for commercial crude bitumen recovery and upgrading projects must include an environmental impact assessment.¹⁷¹ However, as discussed in section 9.5 above, environmental assessments under *EPEA* are only required for an oil sands mine or a heavy oil upgrading plant producing more than 2,000 cubic metres of bitumen per day. An environmental assessment is not required under *EPEA* for an in situ well or battery. It is noted that *Directive 023* preceded the passage of *EPEA* in 1992 and that the guideline in *Directive 023* requiring an environmental impact assessment for all oil sands facilities has been superseded by *EPEA*.

Directive 023 further states that the environmental impact statement requires an inventory of rare or endangered species and their critical habitat, and an evaluation of the impacts of the project on that habitat.¹⁷² However, as discussed under section 9.5 above, even if the environmental assessment finds that there will be significant adverse effects on caribou habitat, the project may still be approved.

Directive 056: Energy Development Applications and Schedules also applies to applications for licences for surface facilities associated with oil sands mines and in situ operations.¹⁷³ *Directive 056* states that if a proposed well site is within caribou range, the applicant must follow the requirements and guidelines in *Information Letter IL 94-22: Operating Guidelines for Industrial Activity in Caribou Range – North-West Alberta*.¹⁷⁴ However, *IL 94-22* was rescinded by the AER in 2013, apparently in contemplation of the completion of a biodiversity management framework, which, as discussed in section 9.1 above, has never been completed.¹⁷⁵

Surface access for oil sands mines, in situ wells and facilities is granted under the *Public Lands Act* as discussed in section 9.8 above.

The *OSCA*, *OSC Rules* and related directives do not contain any other conditions or prohibitions that would protect the critical habitat of the northeastern herds or that apply preconditions comparable to subsection 73(3) of *SARA*.

9.11 Oil and Gas Conservation Act, RSA 2000, c O-6

The *Oil and Gas Conservation Act* (“*OGCA*”) and the *Oil and Gas Conservation Rules* (“*OGC Rules*”) regulate the approval process and operation of oil and gas wells and facilities. The stated purposes of *OGCA* make no reference to environmental protection other than the control of pollution.¹⁷⁶

¹⁷⁰ Alberta Energy Regulator, *Directive 023: Guidelines Respecting an Application for a Commercial Crude Bitumen Recovery and Upgrading Project*, (1991), at 1 [**Compendium, Tab 57**].

¹⁷¹ *Ibid*, at 28.

¹⁷² *Ibid*, at 37-38.

¹⁷³ Alberta Energy Regulator, *Directive 056: Energy Development Applications and Schedules*, (1 September 2011), at 5-6 [**Compendium, Tab 58**].

¹⁷⁴ *Ibid*, at 7-27.

¹⁷⁵ Energy Resources Conservation Board, *Bulletin 2013-07: Regulatory Document Review*, (13 February 2013), at 2 [**Compendium, Tab 59**].

¹⁷⁶ *Oil and Gas Conservation Act*, RSA 2000, c O-6, s 4 [**Compendium, Tab 60**].

The *OGCA* requires that an application be made for a licence for oil and gas wells and facilities.¹⁷⁷ The *OGC Rules* require that an application for a licence for an oil or gas well and an application for an approval for a gas battery or compressor station include the documentation required by *Directive 056*.¹⁷⁸ As discussed in section 9.10 above, *Directive 056* does not require any specific information with respect to caribou habitat.

Surface access for oil and gas wells and facilities is granted under the *Public Lands Act* as discussed in section 9.8 above.

The *OGCA*, *OGC Rules* and related directives do not contain any other conditions or prohibitions that would protect the critical habitat of the northeastern herds or that apply preconditions comparable to subsection 73(3) of *SARA*.

9.12 Coal Conservation Act, RSA 2000, c C-17

The *Coal Conservation Act* regulates coal development in Alberta. Coal development is very limited in northeastern Alberta and has limited potential to impact the ranges of the northeastern herds. The Coal Activity Map for Alberta indicates one coal lease application that overlaps with the range of the Richardson herd and no developed coal leases overlapping with the ranges of the northeastern herds.¹⁷⁹

A proposed coal development requires an approval pursuant to the *Coal Conservation Act*.¹⁸⁰ The purposes of the *Coal Conservation Act* include ensuring environment conservation in the development of coal.¹⁸¹

The *Coal Conservation Act* requires permits or approvals for coal exploration and to develop coal mines, coal processing plants and in situ coal schemes.¹⁸² In situ coal schemes are operations for the purpose of in situ coal gasification or liquefaction.¹⁸³ An application under the *Coal Conservation Rules* is required for permits or approvals for coal developments.¹⁸⁴

AER Directive 061: How to Apply for Government Approval of Coal Projects in Alberta appears to apply to all coal projects and contains a number of conditions relevant to habitat protection. However, under the *Coal Conservation Rules*, an application in accordance with *Directive 061* is only required for in situ coal schemes.¹⁸⁵

Directive 061 states that “no detailed exploration and development will be permitted in areas where the environment, including plant and wildlife, cannot be properly protected.”¹⁸⁶ *Directive 061* further states that coal rights may be granted “subject to conditions that ensure no significant

¹⁷⁷ *Ibid*, s 11(1), 15(1).

¹⁷⁸ *Oil and Gas Conservation Rules*, AR 151/71, s 2.010, 15.210 [**Compendium, Tab 61**].

¹⁷⁹ Alberta Energy, “Coal Activity Map”, (accessed 18 September 2017), online: <http://www.energy.gov.ab.ca/xdata/mapProducts/coal.pdf>. [**Compendium, Tab 62**].

¹⁸⁰ *Coal Conservation Act*, RSA 2000, c C-17, s 10, 11, 24, 29 [**Compendium, Tab 63**].

¹⁸¹ *Ibid*, s 4(e)

¹⁸² *Ibid*, s 10, 11, 24, 29.

¹⁸³ *Ibid*, s 1(1)(f.4).

¹⁸⁴ *Coal Conservation Rules*, AR 270/81, s 3(d), 4(1)(d), 14(1), 21.1(1) [**Compendium, Tab 64**].

¹⁸⁵ *Ibid*, s 21.1 – 21.5.

¹⁸⁶ Alberta Energy Regulator, *Directive 061: How to Apply for Government Approval of Coal Projects in Alberta*, (August 1983), at 13 [**Compendium, Tab 65**].

adverse environmental effect.”¹⁸⁷ *Directive 061* further requires an environmental impact assessment for proposed coal projects, including data on threatened or endangered species, and an inventory of habitat used by rare species.¹⁸⁸ However, there is no obligation to protect the habitat of rare, threatened or endangered species.

While *Directive 061* appears to have broad application to coal developments, it refers to several regulations, guidelines and processes that no longer exist and have been superseded by subsequent legislation and policies. Further, as noted above, regulatory reference to *Directive 061* is found only with respect to in situ coal schemes. Therefore, it would appear that *Directive 061* does not currently apply to coal exploration, coal mines or coal processing facilities.

As indicated in section 9.5 above, a coal mine producing more than 45,000 tonnes per year or a coal processing plant would require a mandatory environmental assessment under *EPEA*. However, as discussed, an environmental assessment under *EPEA* does not preclude the approval of a project having significant adverse effects on caribou habitat.

The *Coal Conservation Act*, *Coal Conservation Rules* and related directives and policies do not contain other conditions or prohibitions that would protect the critical habitat of the northeastern herds or apply preconditions comparable to subsection 73(3) of *SARA*.

10.0 Federal Legislation

This section evaluates the relevant federal laws applicable to non-federal lands to determine if those laws provide effective protection of the critical habitat of the northeastern herds using the test and criteria identified in section 8.0 above.

10.1 *Species at Risk Act*, S.C. 2002, c 29

Subsection 61(4) of *SARA* provides that the minister must make a recommendation to specify habitat to be protected by subsection 61(1) if the minister is of the opinion that there are no provisions or measures under *SARA* or any other federal law that protect that particular portion of the critical habitat, including agreements under section 11 of *SARA*.

The Minister has not made a recommendation pursuant to subsection 61(4) with respect to the critical habitat of the northeastern herds. Therefore, no protection is currently offered pursuant to subsection 61(1). Further, there are no conservation agreements in place with respect to the critical habitat of the northeastern herds pursuant to section 11 of *SARA*.

Therefore, *SARA* does not directly offer any protection to the critical habitat of the northeastern herds on non-federal lands.

10.1.1 Recovery Strategy for the Woodland Caribou (*Rangifer tarandus caribou*), Boreal population in Canada

Pursuant to subsection 37(1) of *SARA*, the Minister was required to prepare a recovery strategy for listed extirpated, endangered or threatened species.¹⁸⁹ Pursuant to subsection 42(2) and section 43 of *SARA*, the Minister was required to post the final recovery strategy for boreal

¹⁸⁷ *Ibid*, at 15.

¹⁸⁸ *Ibid*, at 48, 61, 102I.

¹⁸⁹ *SARA*, *supra* note 2, s 37(1).

caribou by September 2007.¹⁹⁰ The final *Recovery Strategy* was posted on October 5, 2012, over five years later than required by law.

The *Recovery Strategy* identified habitat alteration from both anthropogenic and natural sources, and increased predation as a result of habitat alteration, as the primary causes of population declines.¹⁹¹ The *Recovery Strategy* set a recovery goal for boreal caribou to achieve self-sustaining local populations in all boreal caribou ranges, to the extent possible.¹⁹²

The *Recovery Strategy* specified that range-specific plans would be developed that would specify how the given range would be managed to maintain or attain a minimum of 65% undisturbed habitat over time.¹⁹³ Range plans were to be developed by the responsible jurisdiction within 3-5 years of the posting of the *Recovery Strategy*. As noted previously, no range plans have been released for the northeastern herds as of the end of October 2017.

Pursuant to section 47 of *SARA*, the Minister was required to prepare an action plan for boreal caribou. The *Recovery Strategy* required that the Minister complete an action plan for boreal caribou by December 31, 2015.¹⁹⁴ The Minister released a proposed action plan for boreal caribou on July 27, 2017, over 18 months after the required deadline. The action plan was to provide information on recovery measures that Environment Canada, the provinces and other agencies would take.¹⁹⁵

The *Recovery Strategy* relies on range plans and action plans to implement the habitat and population recovery measures required to achieve self-sustaining local populations. As discussed, no range plans have been released for the northeastern herds and the final action plan has not been released as of October 2017. Therefore, the *Recovery Strategy* does not contain any conditions or prohibitions that would protect the critical habitat of the northeastern herds.

10.1.2 Proposed Action Plan for the Woodland Caribou (*Rangifer tarandus caribou*), Boreal Population in Canada – Federal Actions

The proposed *Action Plan for the Woodland Caribou (*Rangifer tarandus caribou*), Boreal Population in Canada – Federal Actions* (“*Action Plan*”) was released on July 27, 2017.¹⁹⁶ The *Action Plan* concedes that it is a partial action plan that does not meet all of the requirements of *SARA*.¹⁹⁷ Fulfilment of the *SARA* requirements would require the filing and adoption of range plans which have not yet been completed.

The *Action Plan* sets out three Government of Canada actions to help achieve recovery of boreal caribou:

- creation of a National Boreal Caribou Knowledge Consortium;

¹⁹⁰ *Ibid*, s 42(2), 43.

¹⁹¹ *Recovery Strategy*, *supra* note 1, at vi.

¹⁹² *Ibid*.

¹⁹³ *Ibid*, at 38.

¹⁹⁴ *Ibid*, at 43.

¹⁹⁵ *Ibid*.

¹⁹⁶ Environment and Climate Change Canada, *Action Plan for the Woodland Caribou (*Rangifer tarandus caribou*), Boreal Population, in Canada – Federal Actions [Proposed], Species at Risk Act Action Plan Series* (Ottawa: Environment and Climate Change Canada, 2017) [**Compendium, Tab 66**].

¹⁹⁷ *Ibid*, at 1.

- recovery and protection activities; and
- reporting on progress.¹⁹⁸

The *Action Plan* provides that the Minister will:

- undertake protection assessments of critical habitat on non-federal lands during 2017-2018;
- explore the use of *SARA* section 11 conservation agreements with provinces to codify provincial measures to protect and recover caribou after range plans are provided;
- report on steps taken to protect critical habitat by April 2018.¹⁹⁹

None of these proposed actions is currently implemented. The proposed *Action Plan*, although almost two years overdue from the timeline set out in the *Recovery Strategy*, remains incomplete.

The proposed use of section 11 conservation agreements, even if implemented, may not be effective or lawful. In order to provide effective protection, a section 11 conservation agreement would need to protect critical habitat in a manner equivalent to an order under section 61 of *SARA*. Further, it is not apparent how a section 11 conservation agreement could have an enforcement and penalty provision equivalent to the penalties under *SARA* without an amendment to *SARA*.

The proposed *Action Plan* does not provide any legal conditions or prohibitions that protect the critical habitat of the northeastern herds.

10.1.3 Report on the Progress of Recovery Strategy Implementation for the Woodland Caribou (*Rangifer tarandus caribou*), Boreal population, in Canada for the Period 2012-2017

Section 48 of *SARA* requires that the Minister report on the implementation of the *Recovery Strategy* and the progress towards its objectives, within five years after the *Recovery Strategy* was released. The Minister released the *Report on the Progress of Recovery Strategy Implementation for the Woodland Caribou (*Rangifer tarandus caribou*), Boreal population, in Canada for the Period 2012-2017* (“*Progress Report*”) on October 31, 2017.²⁰⁰

The *Progress Report* states that the provinces and territories have not fully met the October 5, 2017 deadline for completing range plans.²⁰¹ Alberta committed to completing a draft provincial range plan for all ranges by December 2017.²⁰² The *Progress Report* records that anthropogenic habitat disturbance has increased for all of the northeastern herds between the 2012 *Recovery Strategy* and the 2017 *Progress Report* (based on 2010 and 2015 imagery respectively).²⁰³ The population trend is declining for all of the northeastern herds except for the Richardson herd, which is recorded as stable.²⁰⁴

¹⁹⁸ *Ibid.*, at ii-iv.

¹⁹⁹ *Ibid.*, at 10, 14-15.

²⁰⁰ *Progress Report*, *supra* note 5.

²⁰¹ *Ibid.* at iii.

²⁰² *Ibid.*

²⁰³ *Ibid.*, at 31-32.

²⁰⁴ *Ibid.*

The *Progress Report* states that Environment and Climate Change Canada will assess whether boreal caribou and its critical habitat are effectively protected across the species' Canadian distribution based on an evaluation of provincial and territorial range plans and other similar documents, and will complete these assessments by early 2018.²⁰⁵ The *Progress Report* states that if any portion of critical habitat is unprotected, a report on steps being taken to protect that critical habitat will be published by April 2018.²⁰⁶ The *Progress Report* acknowledges that, if the Minister determines that a portion of the critical habitat is not protected, the Minister is obligated to make a recommendation that the Governor in Council make an order to protect the species and its habitat.²⁰⁷

It is clear from the *Progress Report* that at this time no federal government actions or federal laws provide effective protection of the critical habitat of the northeastern herds. Pursuant to section 63 of *SARA*, the Minister was required to undertake an assessment of the protection of critical habitat and report on the steps taken to protect unprotected portions of critical habitat within 180 days of the posting of the *Recovery Strategy*. The Minister's proposed reporting date of April 2018 will be more than 5 years after the legally required deadline for such reporting.

10.2 Canadian Environmental Assessment Act, 2012, SC 2012, c 19, s 52

The *Canadian Environmental Assessment Act, 2012* (“*CEAA 2012*”) applies to certain designated projects and activities on non-federal lands that may destroy caribou critical habitat. An environmental assessment under *CEAA 2012* is only required for projects designated by regulation, including fossil-fuel fired or hydroelectric generating facilities with a production capacity of 200 MW or more, the creation of a dam or dyke that would create a reservoir of 1,500 hectares or more, the construction of a structure for the diversion of 10 million cubic metres or more of water per year, or the construction of an oil sands mine with a bitumen production capacity of 10,000 cubic metres per day or more.²⁰⁸

Environmental assessments under *CEAA 2012* are not required for all activities likely to harm caribou habitat on non-federal lands. For example, most in situ oil sands projects do not require an environmental assessment under *CEAA 2012*. Approximately 80 percent of the oil sands in Alberta will be recovered by in situ operations and will not be subject to environmental assessment under *CEAA 2012*.²⁰⁹ There is a significant overlap between oil sands deposits that will be developed by in situ operations and the ranges of the northeastern herds. Also, forestry operations do not require an environmental assessment under *CEAA 2012*.

Even where *CEAA 2012* may apply, Environment and Climate Change Canada has noted that *CEAA 2012* “incorporates several points of discretion such that it is not mandatory in its application.”²¹⁰ First, the Canadian Environmental Assessment Agency can decide, after

²⁰⁵ *Ibid.*, at v.

²⁰⁶ *Ibid.*

²⁰⁷ *Ibid.*

²⁰⁸ *Canadian Environmental Assessment Act, 2012*, SC 2012, c 19, s 52, at paras 6-7 [*CEAA 2012*] [**Compendium, Tab 67**]; *Regulations Designating Physical Activities*, SOR/2012-147, s 2(a), (c), 4, 6, 9 [**Compendium, Tab 68**].

²⁰⁹ Alberta Energy Regulator, “In Situ Impacts”, (accessed 19 September 2017) online: <https://www.aer.ca/about-aer/spotlight-on/oil-sands/in-situ-impacts> [**Compendium, Tab 69**].

²¹⁰ WCF Assessment, *supra* note 52, at 7.

completing a screening, that no environmental assessment is required for a designated project.²¹¹ If an environmental assessment of a designated project is conducted, the responsible authority determines if the designated project is likely to cause significant adverse environmental effects.²¹² If a determination is made that a project is likely to cause significant adverse environmental effects, the Governor in Council then has absolute discretion to determine whether those effects are “justified in the circumstances”.²¹³ As stated by Environment and Climate Change Canada, none of these decision points requires that decision makers ensure that “habitat will not be destroyed, or that survival and recovery of the species not be jeopardized as a result of proposed projects.”²¹⁴

As discussed in section 9.5 above, in the environmental assessment of the Shell Jackpine Expansion Project under *CEAA 2012*, the Joint Review Panel determined that there “would [be] significant adverse cumulative effects on caribou largely due to the catastrophic loss of caribou habitat from the preindustrial case (PIC) to the application case.”²¹⁵ Despite the Joint Review Panel determination that the project would result in the destruction of caribou critical habitat, the Governor in Council issued a Decision Statement concluding that those significant adverse effects were justified in the circumstances, allowing the project to proceed.²¹⁶ The Decision Statement also failed to include any conditions related to mitigating the impacts to caribou critical habitat.²¹⁷ The environmental assessment and decision statement failed to provide for the protection of critical habitat equivalent to that under subsection 61(1) of *SARA* or with pre-conditions equivalent to subsection 73(3).

Even if conditions requiring the protection of critical habitat were included in a *CEAA 2012* decision statement, the maximum penalties for failing to comply with such conditions are lower under *CEAA 2012* than the penalties for failing to comply with subsection 61(1) of *SARA*.²¹⁸ Further, *SARA* provides that directors or officers who directed, authorized, assented to, or acquiesced in the commission of the offence may be prosecuted and convicted.²¹⁹ *CEAA 2012* does not contain a similar provision.

In summary, the environmental assessment process under *CEAA 2012* does not provide any mandatory prohibition against destruction of the northeastern herds’ critical habitat.

10.3 National Energy Board Act, RSC 1985, c N-7

The *National Energy Board Act* (“*NEB Act*”) regulates the construction and operation of interprovincial pipelines on non-federal lands that may overlap with caribou critical habitat. Subsection 52(3) of the *NEB Act* requires the National Energy Board’s (“*NEB*’s”) report with respect to an application to construct a pipeline must include an environmental assessment under

²¹¹ *CEAA 2012*, *supra* note 209, at para 10.

²¹² *Ibid*, at para 52(1).

²¹³ *Ibid*, at para 52(2).

²¹⁴ WCF Assessment, *supra* note 52, at 7.

²¹⁵ *Jackpine Expansion JRP Report*, *supra* note 116, at para 29.

²¹⁶ Minister of the Environment, “Decision Statement for the Jackpine Mine Expansion Project”, (6 December 2013), online at <https://www.ceaa.gc.ca/050/documents/p59540/96773E.pdf>, at 1 [Compendium, Tab 70].

²¹⁷ *Ibid*, at 5-15.

²¹⁸ *CEAA 2012*, *supra* note 209, s 6, 99(1); *SARA*, *supra* note 2, s 97(1), (1.1).

²¹⁹ *SARA*, *supra* note 2, at 98.

CEAA 2012 if the application relates to a designated project under *CEAA*.²²⁰ The construction and operation of a new pipeline with a length of 40 kilometres or more is a designated project that requires an environmental assessment under *CEAA 2012*.²²¹

If an environmental assessment is required, the NEB must submit its report with respect to the application to the Governor in Council, including its recommendation as to whether the pipeline project will result in significant adverse environmental effects.²²² After the report has been submitted, the Governor in Council can make an entirely discretionary decision as to whether the pipeline is likely to cause significant adverse environmental effects and, if so, if those effects can be justified in the circumstances.²²³

The operation of these provisions may be seen in the approval of an application by NOVA Gas Transmission Ltd. (“NGTL”) for a 230 kilometre gas pipeline that runs through 40 kilometres of identified caribou range in the East Side Athabasca River and West Side Athabasca River caribou ranges.²²⁴

In a comment letter to the NEB during the environmental assessment of the NGTL project, Environmental and Climate Change Canada stated:

In Table 7.10-8: *Residual Effects for Wildlife and Wildlife Habitat* (ESA Section 7, Exhibit B2-14) and in Table 8.11-18: *Cumulative Effects for Wildlife and Wildlife Habitat* (ESA Section 7, Exhibit B2-14), the Proponent states that the Project effects and contribution to cumulative effects, respectively, on boreal caribou in the Chinchaga, ESAR and WSAR ranges are not significant. ECCC disagrees with this assessment. The Project will destroy critical habitat. It is ECCC’s position that the Project’s contribution to direct and indirect effects on caribou is additive and significant, and the additive cumulative effects of this Project with other past, proposed and reasonably foreseeable activities is significant. Each of these caribou ranges are considerably below the 65% undisturbed habitat threshold required for recovery and survival.

The Chinchaga, ESAR and WSAR ranges are 76, 81 and 69% disturbed, respectively, and are deemed unsustainable (Recovery Strategy for the Woodland Caribou, Boreal Population, 2012). All remaining habitat for these ranges is considered critical habitat until otherwise identified in a provincial range plan. No range plans have been released to date. The Project will remove critical habitat and there will be a considerable time lag before this habitat can be restored.

ECCC considers any direct or indirect destruction of boreal caribou critical habitat significant and recommends that the ESA be amended to reflect

²²⁰ *National Energy Board Act*, RSC 1985, c N-7, s 52(3) [**Compendium, Tab 71**].

²²¹ *Regulations Designating Physical Activities*, *supra* note 209, s 46.

²²² *CEAA 2012*, *supra* note 209, s 29(1), 31(1)(a).

²²³ *Ibid*, at 31(1)(a).

²²⁴ National Energy Board, *Report, Nova Gas Transmission Ltd., GH-002-2015*, (June 2016), at 101 [NGTL Report] [**Compendium, Tab 72**].

this. The Proponent’s response to NEB IR 1.13 (Exhibit B8-01) does not address these concerns.²²⁵

(Emphasis in original.)

Despite this submission by Environment and Climate Change Canada, the NEB concluded that the NGTL project was not likely to cause significant adverse environmental effects.²²⁶ The Certificate issued for the NGTL project required that NGTL file with the NEB an updated Environmental Protection Plan including “a list of measures to be taken during construction to minimize disturbance to caribou and caribou habitat and help accelerate habitat restoration including:... any provincial and federal best practices, requirements and timing restrictions specifically related to minimizing construction disturbance.”²²⁷ In addition, NGTL was required to file a Revised Caribou Habitat Restoration and Offset Measures Plan for areas of the project in critical caribou habitat.²²⁸

However, neither of these conditions prevented critical caribou habitat from being destroyed. They only required that disturbances be minimized. Neither of these conditions provided for the protection of critical habitat equivalent to subsection 61(1) of SARA. The project was approved despite the fact that the disturbance threshold for both the ESAR and WSAR ranges had been exceeded and the project would contribute to further to that exceedance.

Therefore, while an NEB approval process may set conditions that would prevent the destruction of critical habitat in the ranges of the northeastern herds, that has not been the case to date. Even if conditions were set prohibiting the destruction of caribou critical habitat on the pipeline route, the protection would apply only to a small portion of the critical habitat of the northeastern herds.

In summary, the *NEB Act*, and its reliance on the environmental assessment process under *CEAA 2012*, does not provide any mandatory prohibition against destruction of critical habitat in the ranges of the northeastern herds.

11.0 Conclusion of Legal Analysis

As the above analysis demonstrates, none of the provincial or federal laws applicable to the ranges of the northeastern herds on non-federal lands in Alberta has the same protection outcome as would be the case if the *SARA* subsection 61(1) protection was in place for critical habitat within the ranges of those herds. None of the applicable provincial or federal laws ensures that critical habitat of the northeastern herds is not and will not be destroyed. The lack of effective legal protection continues to jeopardize the survival and recovery of those herds.

Several provincial and federal laws have the potential to provide protection of critical habitat. The Alberta Lieutenant Governor in Council could establish wilderness areas that protect the critical habitat of the northeastern herds and prohibit all industrial activities within those ranges.

²²⁵ Environment and Climate Change Canada, “Letter to National Energy Board Re: Hearing Order GH-002-2015 – NOVA Gas Transmission Ltd., 2017 NGTL System Expansion Project”, (18 December 2015), online: <https://apps.neb-one.gc.ca/REGDOCS/Item/View/2897789>, at 2 [**Compendium, Tab 73**].

²²⁶ NGTL Report, *supra* note 225, at 149.

²²⁷ National Energy Board, “Certificate GC-126”, (4 November 2016), online at <http://www.ceaa.gc.ca/050/documents/p80099/116389E.pdf>, at 4 [**Compendium, Tab 74**].

²²⁸ *Ibid*, at 5.

The Lieutenant Governor in Council could establish ecological reserves that protect the critical habitat of the herds and the Minister could exercise her discretion to discontinue all industrial dispositions within those reserves. Environmental assessments under *EPEA*, *CEAA 2012* or the *NEB Act* could establish mandatory conditions protecting the critical habitat of the northeastern herds.

However, the test is not whether provincial or federal laws are *capable* of protecting the critical habitat of the northeastern herds. The test is whether the provincial or federal laws have been implemented in a manner that provides for mandatory protection of critical habitat and that would have the same protection outcome as would be the case if the *SARA* subsection 61(1) prohibition were in place for critical habitat within the ranges of the northeastern herds. They have not.

Our conclusion, therefore, is that the Minister must recommend to the Governor in Council that the critical habitat of the northeastern herds be protected by an order under section 61 of *SARA*.

Appendix 1: CPAWS Northern Alberta Mapping Methodology

The purpose of this mapping exercise was to show the amount of anthropogenic disturbance within five caribou ranges in northeast Alberta, the Cold Lake range, East Side Athabasca River (“ESAR”) range, Red Earth range, Richardson range, and West Side Athabasca River (“WSAR”) range. The change in disturbance levels was then evaluated by comparing the amount of disturbance within each range over time.

The boundaries for the five caribou ranges used in this work were selected from a Government of Alberta dataset, which contained all twelve boreal caribou ranges (Alberta Environment and Parks, 2013). Disturbance data was derived from the Alberta Biodiversity Monitoring Institute’s (ABMI) Wall-to-Wall Human Footprint Inventory (ABMI, 2017) and from petroleum & natural gas and oil sands lease information (Alberta Energy, 2017). The data were imported and displayed in the mapping software ArcGIS, then both the disturbance data and the leases which lay within each caribou range of interest were selected using the clip tool. Data outside of the five ranges were not considered further.

First, the ABMI data, 2012 and 2014 versions, were processed. Each version contained a range of disturbance types from roads to pipelines to cutblocks etc. (see below). Due to labeling inconsistencies and increased detail in the 2014 version, disturbance types with a corresponding Public Code to the 2012 data were selected from the 2014 data in order to ensure accurate comparison between the versions,. The disturbance types were grouped into three main categories, Energy, Forestry, and Other (the individual disturbance types within each category for each version are also listed below). All disturbances were buffered by 500 metres to account for the functional caribou habitat loss due to avoidance, which is incorporated in the federal government’s recovery strategy.

To calculate the total area of disturbance, and the area of disturbance for each category, the dissolve tool was used to aggregate the disturbance types together. This was done to avoid double counting disturbances, as they are often overlapping in this region of high industrial land-use. For this reason the total area disturbed when summed from each category will result in a greater area of disturbed land than the total disturbed area. In order to show the amount of undisturbed area within each caribou range, the erase tool was used to calculate the inverse of the total disturbance.

Second, petroleum & natural gas leases and oil sands leases from 2012 and 2016 (Alberta Energy, 2017) were processed. Lease information and area within each caribou range were exported into excel and compared. Leases may be overlapping spatially, and due to the format of the data file we are unable to separate this in the accompanying excel file.

Finally, the total disturbance and disturbance for each category from the ABMI data were compared between the 2012 and 2014, and the number of leases were assessed between 2012 and 2016 to understand the total amount of anthropogenic disturbance in each of the five caribou ranges.

Additional data:

Alberta's current parks and protected areas (Alberta Parks, 2012), protected area designated under the Lower Athabasca Regional Plan (Alberta Environment and Parks, 2011), and forestry management agreement areas (AltaLIS, 2014) were included in the range maps for illustrative purposes but were not used in the disturbance analysis. Additionally, hillshade, derived from a digital elevation model (Natural Resources Canada, 2013), was included as a background layer in the final maps.

Data Sources:

Alberta Parks. (2012). Protected Areas (Shapefile) [Data file]. Retrieved from <https://www.albertaparks.ca/albertaparksca/library/downloadable-data-sets/>

Alberta Environment and Parks. (2013). Caribou Ranges [Data file]. Retrieved from <http://aep.alberta.ca/forms-maps-services/maps/wildlife-sensitivity-maps/default.aspx>

Alberta Energy. (2017). Petroleum Natural Gas and Oil sands Leases (2012, 2016) [Data File]

Natural Resources Canada. (2015). Canadian Digital Elevation Model [Data file]. Retrieved from <http://open.canada.ca/data/en/dataset/7f245e4d-76c2-4caa-951a-45d1d2051333>

Alberta Environment and Parks. (2011). LAR and LPR Proposed Conservation and Recreation Areas Map 2011-04 [Data file]. Retrieved from <https://www.landuse.alberta.ca/Pages/MapsShapefiles.aspx>

Alberta Biodiversity Monitoring Institute. (2017). Wall-to-Wall Human Footprint Inventory (2012, 2014) [Data file] Retrieved from <http://www.abmi.ca/home/data-analytics/da-top/da-product-overview/GIS-Human-Footprint-Land-Cover-Data/HF-inventory.html?scroll=true>

Natural Resources Canada. (2015). Canadian Digital Elevation Model [Data file]. Retrieved from <http://open.canada.ca/data/en/dataset/7f245e4d-76c2-4caa-951a-45d1d2051333>

AltaLIS. (2014). Base Features. Forest Management Agreements [Data file]. Retrieved from http://www.altalis.com/products/base/20k_base_features.html

ABMI Disturbance Categories:

2012 HF Categories

Forestry – “CUTBLOCK”

Energy – “PIPELINE”, “SEISMIC LINE”, “TRANSMISSION LINE”, “WELL SITE”

Other – “BURROW-PITS/DUGOUTS/SUMPS”, “CULTIVATION (CROP/PASTURE/BARE GROUND)”, “INDUSTRIAL SITE RURAL”, “OTHER DISTURBED VEGETATION”, “RAIL-HARD SURFACE”, “RAIL-VEGETATED VERGE”, “ROAD-HARD SURFACE”,

“ROAD-VEGETATED VERGE”, “ROAD/TRAIL(VEGETATED)”, “RURAL (RESIDENTIAL/INDUSTRIAL) (MINE SITE)”

2014 HF Categories

Forestry – ‘CUTBLOCK’

Energy – 'LOW-IMPACT-SEISMIC' 'PIPELINE' 'PRE-LOW-IMPACT-SEISMIC' 'TRAIL' 'TRANSMISSION-LINE' 'WELL-ABAND' 'WELL-BIT' 'WELL-CASED' 'WELL-CLEARED-DRILLED' 'WELL-CLEARED-NOT-DRILLED' 'WELL-DRILLED-OTHER' 'WELL-GAS' 'WELL-OIL' 'WELL-OTHER'

Other – 'BORROWPIT-DRY' 'BORROWPIT-WET' 'BORROWPITS' 'CAMP-INDUSTRIAL' 'CAMPGROUND' 'CLEARING-UNKNOWN' 'CLEARING-WELLPAD-UNCONFIRMED' 'COUNTRY-RESIDENCE' 'CROP' 'CULTIVATION_ABANDONED' 'DISTURB_VEG' 'FACILITY-OTHER' 'FACILITY-UNKNOWN' 'GREENSPACE' 'GRVL-SAND-PIT' 'LANDFILL' 'MILL' 'MINES-COAL' 'MINES-PITLAKE' 'MISC-OIL-GAS-FACILITY' 'OIL-GAS-PLANT' 'OPEN-PIT-MINE' 'RECREATION' 'RLWY-SGL-TRACK' 'RLWY-SPUR' 'ROAD-GRAVEL-1L' 'ROAD-GRAVEL-2L' 'ROAD-PAVED-1L' 'ROAD-PAVED-2L' 'ROAD-PAVED-3L' 'ROAD-PAVED-4L' 'ROAD-PAVED-DIV' 'ROAD-PAVED-UNDIV-1L' 'ROAD-PAVED-UNDIV-2L' 'ROAD-UNCLASSIFIED' 'ROAD-UNIMPROVED' 'ROAD-UNPAVED-2L' 'ROAD-WINTER-ACCESS' 'ROUGH_PASTURE' 'RUNWAY' 'RURAL-RESIDENCE' 'SUMP' 'SURROUNDING-VEG' 'TAME_PASTURE' 'VEGETATED-EDGE-RAILWAYS' 'VEGETATED-EDGE-ROADS'

Appendix 2: Industry Mineral Lease Holders in the Northeastern Caribou Ranges (as of 2016)

Table A1. Oil Sands companies in the Cold Lake range

Lease Holder	Number of Leases Held	Mineral Lease Area (km²)
CENOVUS FCCL LTD.	79	2108.44
CANADIAN NATURAL RESOURCES LIMITED	32	1363.29
IMPERIAL OIL RESOURCES LIMITED	7	963.51
DEVON NEC CORPORATION	27	620.86
HUSKY OIL OPERATIONS LIMITED	2	143.72
MEG ENERGY CORP.	17	130.8
CENOVUS ENERGY INC.	1	92.28
DEVON CANADA	5	30.88
GRIZZLY OIL SANDS ULC	1	26.51
HARVEST OPERATIONS CORP.	1	23.11
STANDARD LAND COMPANY INC.	1	12.73
PARAMOUNT RESOURCES LTD.	2	5.12
OSUM PRODUCTION CORP.	1	2.59

Table A2. Petroleum and Natural Gas companies in the Cold Lake range

Lease Holder	Number of Leases Held	Mineral Lease Area (km²)
CENOVUS ENERGY INC.	157	1987.54
CANADIAN NATURAL RESOURCES LIMITED	123	960.8
DEVON CANADA	83	835.53
IMPERIAL OIL RESOURCES LIMITED	5	210.62
ISH ENERGY LTD.	12	152.38
CENOVUS FCCL LTD.	11	102.91
DEVON NEC CORPORATION	24	95.17
SEQUOIA RESOURCES CORP.	9	87.4
HUSKY OIL OPERATIONS LIMITED	12	73.67
MEG ENERGY CORP.	13	56.52
CANADIAN OIL & GAS INTERNATIONAL INC.	7	34.91
PARAMOUNT RESOURCES LTD.	2	12.84
LENDE INVESTMENTS LTD.	1	10.26

HARVEST OPERATIONS CORP.	2	5.15
MANITOK ENERGY INC.	1	2.59

Table A3. Oil Sands companies in the ESAR range

Lease Holder	Number of Leases Held	Mineral Lease Area (km²)
MEG ENERGY CORP.	182	2055.9
CONOCOPHILLIPS CANADA RESOURCES CORP.	23	1845.33
CANADIAN NATURAL RESOURCES LIMITED	25	991.76
IMPERIAL OIL RESOURCES LIMITED	17	930.67
SUNCOR ENERGY INC.	22	891
ATHABASCA OIL CORPORATION	86	866.15
NEXEN ENERGY ULC	55	823.5
GRIZZLY OIL SANDS ULC	38	746.1
CENOVUS ENERGY INC.	50	695.17
PTTEP CANADA LIMITED	44	585.11
KOCH OIL SANDS OPERATING ULC	26	474.52
JAPAN CANADA OIL SANDS LIMITED	5	373.27
CENOVUS FCCL LTD.	49	367.95
CONNACHER OIL AND GAS LIMITED	21	320.24
1435008 ALBERTA LTD.	9	290.15
LARICINA ENERGY LTD.	22	213.5
SOUTHERN PACIFIC RESOURCE CORP.	7	199.52
VALUE CREATION INC.	3	127.2
TOTAL E&P CANADA LTD.	3	97.42
HUSKY OIL OPERATIONS LIMITED	2	89.2
ANTELOPE LAND SERVICES LTD.	2	84.31
SUNSHINE OILSANDS LTD.	2	83.85
SCOTT LAND & LEASE LTD.	7	66.7
BROADVIEW ENERGY LTD.	2	66.62
OSUM OIL SANDS CORP.	7	61.63
SURMONT ENERGY LTD.	4	48.62
BLACKPEARL RESOURCES INC.	5	28.51
MARQUEE ENERGY LTD.	5	26.72
NORDIC AMERICA'S INC.	2	25.92
PETROLAND SERVICES (1986) LTD.	1	23.42

WINDFALL RESOURCES LTD.	6	17.95
OAK POINT ENERGY LTD.	6	15.34
SANDSTONE LAND & MINERAL COMPANY LTD.	1	12.87
ALPINE CAPITAL CORP.	1	10.28
ALTERREN LAND SERVICES LTD.	1	7.74
STOMP ENERGY LTD.	2	5.19
MADISON LAND CO. LTD.	1	5.15
MERIDIAN LAND SERVICES (90) LTD.	1	5.12
PAN PACIFIC OILS LTD.	2	3.55
CHARTER LAND SERVICES INC.	1	2.54
BRION ENERGY CORPORATION	1	1.29

Table A4. Petroleum and Natural Gas companies in the ESAR range

Lease Holder	Number of Leases Held	Mineral Lease Area (km²)
CANADIAN NATURAL RESOURCES LIMITED	582	4482.43
SEQUOIA OPERATING CORP.	124	939.38
MEG ENERGY CORP.	96	634.97
ICONOIL LAND LTD.	13	537.13
DEVON CANADA	37	407.31
HUSKY OIL OPERATIONS LIMITED	73	370.12
ATHABASCA OIL CORPORATION	33	307.55
CONNACHER OIL AND GAS LIMITED	35	269.45
BLACKPEARL RESOURCES INC.	19	234.04
CENOVUS ENERGY INC.	22	223.73
POINT LOMA RESOURCES LTD.	41	214.19
CONOCOPHILLIPS CANADA RESOURCES CORP.	16	198
BRITT RESOURCES LTD.	3	87.98
WINDFALL RESOURCES LTD.	3	66.83
CENOVUS FCCL LTD.	9	51.32
RIFE RESOURCES LTD.	2	38.52
PTTEP CANADA LIMITED	1	35.8
WHITE SWAN ENVIRONMENTAL LTD.	7	30.8

BELLATRIX EXPLORATION LTD.	2	28.23
NEXEN ENERGY ULC	6	25.88
STONEWATER RESOURCES INC.	3	25.65
IMPERIAL OIL RESOURCES LIMITED	1	23.31
SANDSTONE LAND & MINERAL COMPANY LTD.	1	23.12
SINOPEC DAYLIGHT ENERGY LTD.	3	22.29
DEVON NEC CORPORATION	4	15.38
CHAIR RESOURCES INC.	5	12.88
PARAMOUNT RESOURCES LTD.	2	12.85
ISH ENERGY LTD.	1	11.01
TOTAL PETROLEUM LAND SERVICES LTD.	2	5.18
SCOTT LAND & LEASE LTD.	2	5.16
CANPAR HOLDINGS LTD.	1	2.58
CHARTER LAND SERVICES INC.	1	2.56
PETROLAND SERVICES (1986) LTD.	1	2.56
STANDARD LAND COMPANY INC.	1	2.56
THE LAND GROUP INC.	1	2.56
WHITECAP RESOURCES INC.	1	2.56

Table A5. Oil Sands companies in the Red Earth range

Lease Holder	Number of Leases Held	Mineral Lease Area (km²)
ATHABASCA OIL CORPORATION	89	1664.29
SUNSHINE OILSANDS LTD.	34	1182.48
SCOTT LAND & LEASE LTD.	35	885.37
CENOVUS ENERGY INC.	22	646.13
STOMP ENERGY LTD.	16	426.1
PERPETUAL OPERATING CORP.	7	391.83
ANTELOPE LAND SERVICES LTD.	8	379.19
MERIDIAN LAND SERVICES (90) LTD.	4	369.16
SUNCOR ENERGY INC.	13	363.47
SCCC PETROLEUM CORPORATION	15	346.21

BP CANADA ENERGY GROUP ULC	6	345.81
WINDFALL RESOURCES LTD.	12	343.42
VALUE CREATION INC.	7	335.86
RANGER LAND SERVICES LTD.	4	238.42
PLUNKETT RESOURCES LTD.	5	230.19
GRIZZLY OIL SANDS ULC	10	217.82
HUSKY OIL OPERATIONS LIMITED	10	212.72
BOUNTY DEVELOPMENTS LTD.	6	210.1
MOUNT BASTION OIL & GAS CORP.	9	184.76
LARICINA ENERGY LTD.	16	166.67
CANADIAN NATURAL RESOURCES LIMITED	7	95.02
SHELL CANADA LIMITED	2	94.91
ALTERREN LAND SERVICES LTD.	2	94.72
CANADA WEST LAND SERVICES LTD.	2	92.32
1435008 ALBERTA LTD.	1	92.29
MARATHON OIL CANADA CORPORATION	3	87.43
CHEVRON CANADA LIMITED	1	61.56
DEVON CANADA	6	61.54
BRION ENERGY CORPORATION	18	52.66
KOCH OIL SANDS OPERATING ULC	1	46.16
HARVEST OPERATIONS CORP.	2	33.34
BRITT RESOURCES LTD.	2	30.63
DEVON NEC CORPORATION	2	25.66
BAYTEX ENERGY LTD.	1	23.07
PROSPER PETROLEUM LTD.	4	23.05
HERITAGE FREEHOLD SPECIALISTS & CO. LTD.	1	20.51
SOUTHERN PACIFIC RESOURCE CORP.	1	17.95
LANDSOLUTIONS INC.	1	15.32
CENTENNIAL LAND SERVICES LTD.	1	12.85
366337 ALBERTA LTD.	1	5.12

BASM LAND & RESOURCES LTD.	1	2.56
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Table A6. Petroleum and Natural Gas companies in the Red Earth range

Lease Holder	Number of Leases Held	Mineral Lease Area (km²)
CANADIAN NATURAL RESOURCES LIMITED	184	741.02
1852797 ALBERTA ULC	17	729.11
CENOVUS ENERGY INC.	46	671.35
PREDATOR OIL LTD.	86	318.54
MOUNT BASTION OIL & GAS CORP.	138	241.17
PRAIRIE PROVIDENT RESOURCES CANADA LTD.	121	235.25
BAYTEX ENERGY LTD.	70	230.64
PERPETUAL OPERATING CORP.	31	170.66
HARVEST OPERATIONS CORP.	92	167.16
RALLY CANADA RESOURCES LTD.	2	164.28
CONOCOPHILLIPS CANADA RESOURCES CORP.	4	123
SONOMA RESOURCES LTD.	16	118.15
DEERGARDEN ENERGY LTD.	4	110.29
GUNNARR RESOURCES INC.	11	87.94
SCOTT LAND & LEASE LTD.	2	83.08
DRAGONWELL LTD.	2	82.04
CREST JINN PETROLEUM CORPORATION	3	76.87
DEVON NEC CORPORATION	3	61.65
SEQUOIA RESOURCES CORP.	14	45.65
DEVON CANADA	7	37.16
WEST LAKE ENERGY CORP.	10	28.25
ATHABASCA OIL CORPORATION	2	25.64
BARNWELL OF CANADA, LIMITED	10	21.28
SPARTAN ENERGY CORP.	7	16.68
PARAMOUNT RESOURCES LTD.	2	12.77
CRIMSON OIL & GAS LTD.	10	11.52
SUMMERLAND ENERGY INC.	8	9.89
CARDINAL ENERGY LTD.	5	9.01

WHITEHALL ENERGY LTD.	8	5.8
PENGROWTH ENERGY CORPORATION	1	5.14
TAYLOR HILL EXPLORATION LTD.	1	4.47
IGNITE ENERGY CORP.	2	3.22
MANITOK ENERGY INC.	2	3.22
GEOROX RESOURCES INC.	4	2.9
CANAMAX ENERGY LTD.	2	2.58
TAQA NORTH LTD.	1	2.58
PLUNKETT RESOURCES LTD.	1	2.57
PRAIRIESKY ROYALTY LTD.	1	2.57
QUATTRO EXPLORATION AND PRODUCTION LTD.	1	2.57
BOUNTY DEVELOPMENTS LTD.	2	1.92
SCCC PETROLEUM CORPORATION	1	1.29
COASTAL RESOURCES LIMITED	2	1.27
KAISEN ENERGY CORP.	2	1.27
1688901 ALBERTA LTD.	1	0.65
BROTHERIN ENERGY LTD.	1	0.65
L & C HOLDINGS LTD.	1	0.65
SIGNALTA RESOURCES LIMITED	1	0.65
SYDCO ENERGY INC.	1	0.65
FAR WEST ENERGY CORP.	1	0.64
GRYPHON PETROLEUM CORP.	1	0.64
BORDER PETROLEUM LIMITED	1	0.01

Table A7. Oil Sands companies in the Richardson range

Lease Holder	Number of Leases Held	Mineral Lease Area (km²)
SUNCOR ENERGY INC.	14	1157.71
CENOVUS TL ULC	23	619.96
IMPERIAL OIL RESOURCES LIMITED	11	597.53
TECK RESOURCES LIMITED	4	368.79
VALUE CREATION INC.	7	292.85
TOTAL E&P CANADA LTD.	4	277.1
GRIZZLY OIL SANDS ULC	2	182.71
CENOVUS ENERGY INC.	2	99.9
KOCH OIL SANDS OPERATING ULC	2	92.16

SHELL CANADA LIMITED	1	86.88
PAN PACIFIC OILS LTD.	2	77.19
HUSKY OIL OPERATIONS LIMITED	1	23.01

Table A8. Petroleum and Natural Gas companies in the Richardson range

Lease Holder	Number of Leases Held	Mineral Lease Area (km ²)
HUSKY OIL OPERATIONS LIMITED	1	25.57
ICONOIL LAND LTD.	3	151.22

Table A9. Oil Sands companies in the WSAR range

Lease Holder	Number of Leases Held	Mineral Lease Area (km ²)
CANADIAN NATURAL RESOURCES LIMITED	103	2517.9
SUNSHINE OILSANDS LTD.	58	1843.93
CENOVUS ENERGY INC.	40	1117.99
SHELL CANADA LIMITED	20	1080.38
BRION ENERGY CORPORATION	127	1072.97
GRIZZLY OIL SANDS ULC	52	1065.69
HUSKY OIL OPERATIONS LIMITED	22	920.58
KOCH OIL SANDS OPERATING ULC	65	911.1
SUNCOR ENERGY INC.	31	909.33
ATHABASCA OIL CORPORATION	79	824.4
OSUM OIL SANDS CORP.	15	535.42
CONOCOPHILLIPS CANADA RESOURCES CORP.	3	477.41
LARICINA ENERGY LTD.	78	407.56
1435008 ALBERTA LTD.	22	395.14
CHEVRON CANADA LIMITED	9	340.69
CANADA WEST LAND SERVICES LTD.	17	325.87
PERPETUAL OPERATING CORP.	15	286.91
SCOTT LAND & LEASE LTD.	13	177.37
STANDARD LAND COMPANY INC.	5	147.85
SOUTHERN PACIFIC RESOURCE CORP.	11	136.04
CRESCENT POINT ENERGY CORP.	13	128.46

MEG ENERGY CORP.	6	123.62
PLUNKETT RESOURCES LTD.	4	119.21
TOTAL E&P CANADA LTD.	11	112.77
BLACKPEARL RESOURCES INC.	5	110.76
BP CANADA ENERGY GROUP ULC	4	110.43
ROLAND RESOURCES 2012 INC.	2	109.25
WINDFALL RESOURCES LTD.	2	106.48
ANTELOPE LAND SERVICES LTD.	4	89.66
BRITT RESOURCES LTD.	2	84.19
LANDSOLUTIONS INC.	3	76.97
MINERAL CONSULTING SERVICES LTD.	3	76.82
PETROLAND SERVICES (1986) LTD.	1	74.59
BOUNTY DEVELOPMENTS LTD.	4	74.4
MARATHON OIL CANADA CORPORATION	6	54.07
MARQUEE ENERGY LTD.	12	51.72
CNPC INTERNATIONAL (CANADA) LTD.	11	51.6
CHARTER LAND SERVICES INC.	2	51.44
PETROLEO RESOURCES INC.	1	46.61
BAYTEX ENERGY LTD.	5	43.42
BASM LAND & RESOURCES LTD.	1	33.09
QUATTRO EXPLORATION AND PRODUCTION LTD.	4	32.1
TOWNSHIP LAND CO. LTD.	1	30.92
PAN PACIFIC OILS LTD.	4	29.58
BRISTOL LAND & LEASING LTD.	2	23.05
HERITAGE FREEHOLD SPECIALISTS & CO. LTD.	1	15.35
MAVERICK LAND CONSULTANTS 2012 LTD.	1	10.29
WHITECAP RESOURCES INC.	3	7.69
STOMP ENERGY LTD.	2	5.19
OAK POINT ENERGY LTD.	1	5.16

CAITERRA INTERNATIONAL ENERGY CORPORATION	1	5.15
PRAIRIE PROVIDENT RESOURCES CANADA LTD.	1	5.14
658903 ALBERTA LIMITED	1	5.13
DEVON CANADA	1	2.57
STONE PETROLEUMS LTD.	1	2.57
O & G RESOURCE GROUP LTD.	1	2.56
PROTERRA LANDWORKS INC.	1	0.64

Table A10. Petroleum and Natural Gas companies in the WSAR range

Lease Holder	Number of Leases Held	Mineral Lease Area (km²)
CANADIAN NATURAL RESOURCES LIMITED	152	1639.16
HUSKY OIL OPERATIONS LIMITED	202	1216.18
SEQUOIA RESOURCES CORP.	130	895.45
CENOVUS ENERGY INC.	78	866.77
ATHABASCA OIL CORPORATION	99	833.75
ICONOIL LAND LTD.	5	257.89
PERPETUAL OPERATING CORP.	30	212.7
SUNCOR ENERGY INC.	2	164.86
PARAMOUNT RESOURCES LTD.	7	90.94
BLACKPEARL RESOURCES INC.	3	77.18
BRION ENERGY CORPORATION	6	76.95
BONAVISTA ENERGY CORPORATION	5	71.65
WHITECAP RESOURCES INC.	10	35.98
SUNSHINE OILSANDS LTD.	8	30.69
PROGRESS ENERGY CANADA LTD.	3	25.68
KOCH OIL SANDS OPERATING ULC	4	20.53
BADGER PASS MINERALS INC.	1	12.85
SIGNALTA RESOURCES LIMITED	3	10.26

CONOCOPHILLIPS CANADA RESOURCES CORP.	1	7.71
MANCAL ENERGY INC.	2	5.14
TAQA NORTH LTD.	1	5.14
MANITOK ENERGY INC.	1	5.13
SRIVASTAVA, NEHA	2	5.12
MCNALLY LAND SERVICES LTD	1	2.6
INSIGNIA ENERGY LTD.	1	2.57
TOTAL PETROLEUM LAND SERVICES LTD.	1	0.64

Appendix 3: Forest Company Dispositions in Each Range (as of 2012)

Table A11. Forestry companies in the Cold Lake range

	Forest Management Agreement Holder	Area of FMA (km ²)
	Alberta Pacific Forest Product	1904.976354
Forest Management Units	Companies operating within FMU	
L1	AL-Pac Forest Products Inc Vanderwall Contractors (1971) Ltd.	
L11	Al-Pac Forest Products Inc	
	Area of FMA allocations	
	Total Area Allocated to FMAs	1904.976354
	Total area of Cold Lake range	6725.856874
	Percent of range allocated to FMAs	28.32317711

Table A12. Forestry companies in the ESAR range

	Forest Management Agreement Holder	Area of FMA (km ²)
	Alberta Pacific Forest Product	11457.14
Forest Management Units	Companies operating within FMU	
A15	Al-Pac Forest Products Inc. Millar Western Forest Products Ltd.	
L1	AL-Pac Forest Products Inc Vanderwall Contractors (1971) Ltd.	
L3	Al-Pac Forest Products Inc. Millar Western Forest Products Ltd.	
L8	Al-Pac Forest Products Inc. St. Jean Lumber 1984 Ltd.	
L11	Al-Pac Forest Products Inc	
	Area of FMA allocations	
	Total area of forestry allocations	11457.13672
	Total area of ESAR range	13119.01845
	Percent of range allocated to forestry	87.3322708

Table A13. Forestry companies in the Red Earth range

	Forest Management Agreement Holder	Area of FMA (km ²)
	Al-Pac Forest Products Ltd.	4693.926425
	Tolko Industries Ltd. (High Prairie)	10.93425735
	Tolko Industries Ltd., Norbord Inc., and A La Crete Sawmills Ltd.	1693.476284
	Daishowa-Marubeni International Ltd. (East)	2346.233508
Forest Management Units	Company operating within FMU	
A15	Al-Pac Forest Products Inc Northland Forest Products Ltd.	
P21	Daishowa-Marubeni International Ltd., Boucher Bros. Lumber Ltd., West Fraser Mill Ltd., 1113341 Alberta Ltd., Seehta Forest Products Ltd., Tolko Industries Ltd.	
S11	Al-Pac Forest Products Inc. S11 Logging Company Ltd.	
S19	Tolko Industries Ltd., Tolko Industries/1088459 Alberta Ltd. Joint Venture., Alberta Plywood Ltd., Lakeshore Timber Company., Smoky River Loggers Ltd.	
S22	Al-Pac Forest Products Inc. Vanderwell Contractors (1971) Ltd.	
	Total Area of FMA Allocations	8744.570475
	Area of Red Earth range	24702.03103
	Percent of range allocated to Forestry	35.40020845

Table A14. Forestry companies in the Richardson range

	Forest Management Agreement Holders	Area of FMA (km ²)
	Alberta Pacific Forest Product	421.3098991
Forest Management Units	Companies operating within FMU	
A10	Northland Forest Products	
A15	Al-Pac Forest Products Inc Northland Forest Products Ltd.	

	Total area allocated to FMAs	421.3098991
	Total area of Richardson range	7073.900905
	Percent of range allocated to forestry	5.955835468

Table A15. Forestry companies in the WSAR range

	Forest Management Agreement Holder	Area of FMA (km2)
	Al-Pac Forest Products Ltd.	15461.28702
Forest Management Units	Companies operating within FMU	
A14	Al-Pac Forest Products Inc. Millar Western Forest Products Ltd.	
A15	Al-Pac Forest Products Inc Northland Forest Products Ltd.	
L2	AL-Pac Forest Products Inc. Spruceland Millworks Inc. Vanderwell Contractors (1971) Ltd.	
L3	Al-Pac Forest Products Inc. Millar Western Forest Products Ltd.	
S11	Al-Pac Forest Products Inc. S11 Logging Company Ltd.	
S18	Al-Pac Forest Products Inc. Alberta Plywood Ltd. Vanderwell Contractors (1971) Ltd.	
S22	Al-Pac Forest Products Inc. Vanderwell Contractors (1971) Ltd.	
	Total Area Allocated to FMAs	15461.28702
	Area of WSAR range	15707.11975
	Percent of range with forestry allocations	98.43489618