

Critical Habitat Identification: Maxhamish (British Columbia)

The identification of critical habitat for boreal caribou is described by three factors for each local population: i) Location of habitat; ii) Amount of habitat; and iii) Type of habitat.

A) **Location:** Where critical habitat is found.

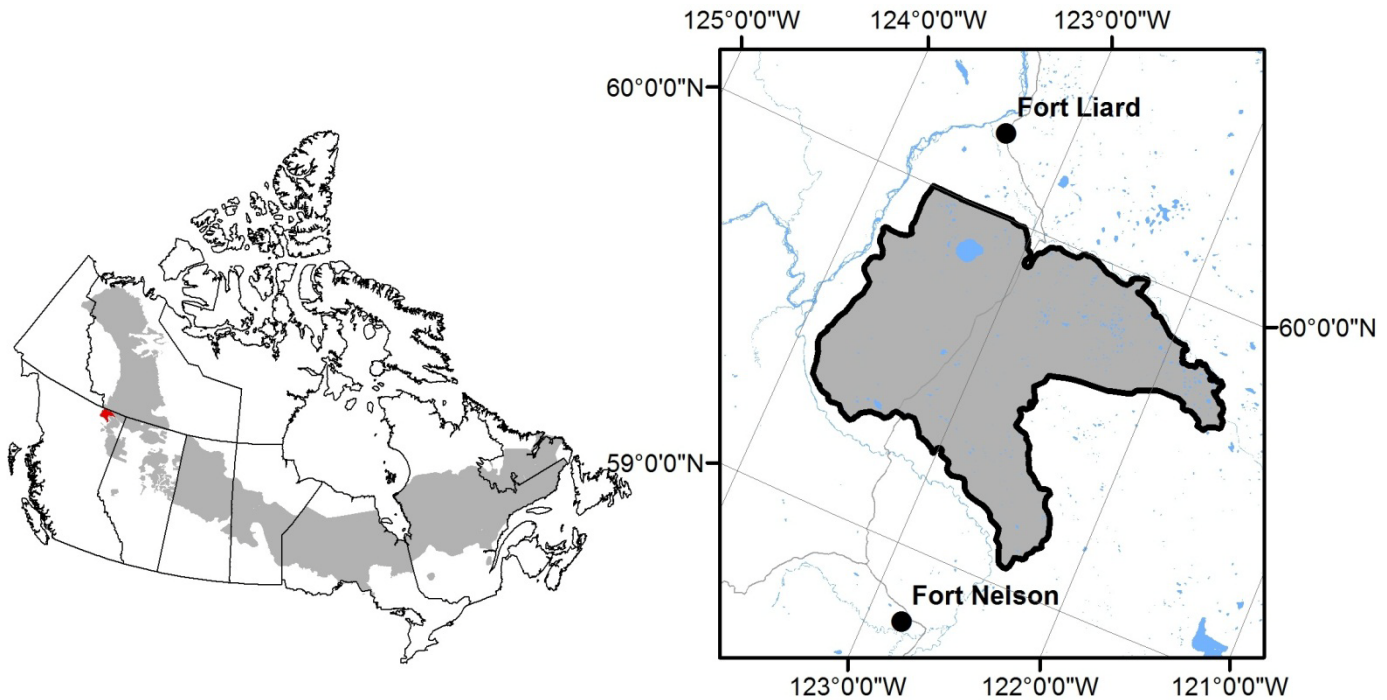


Figure 1: Keymap of the general location of the local population (in red).

Figure 2: The geographic boundary within which critical habitat is located (in grey).

B) **Amount:** Quantity of critical habitat.

Table 1: Range Attributes and the Amount of Habitat Required		
Range Attributes	Range Size	710,105 ha
	Population size	306
	Population trend	Unknown
	Total Habitat Disturbance	404,760 ha
Range Assessment	Assessment of the likelihood of the current condition of the range to support a self-sustaining local population	Not Self-Sustaining
Determination of Amount of Critical Habitat	A) Range Size	710,105 ha (100%)
	B) Total Habitat Disturbance ¹	404,760 ha (57%)
	C) Undisturbed Habitat, Initial Critical Habitat ²	305,345 ha (43%)
¹ Total Habitat Disturbance reflects loss of functional habitat. It will be more than the associated disturbance footprint (e.g. 100 ha footprint could lead to 400 ha loss of functional habitat).		
² The initial Critical Habitat is the current amount of undisturbed habitat. This may be decreased over time, if demonstrated that local populations are being stabilized.		

Critical Habitat Identification: Maxhamish (British Columbia)

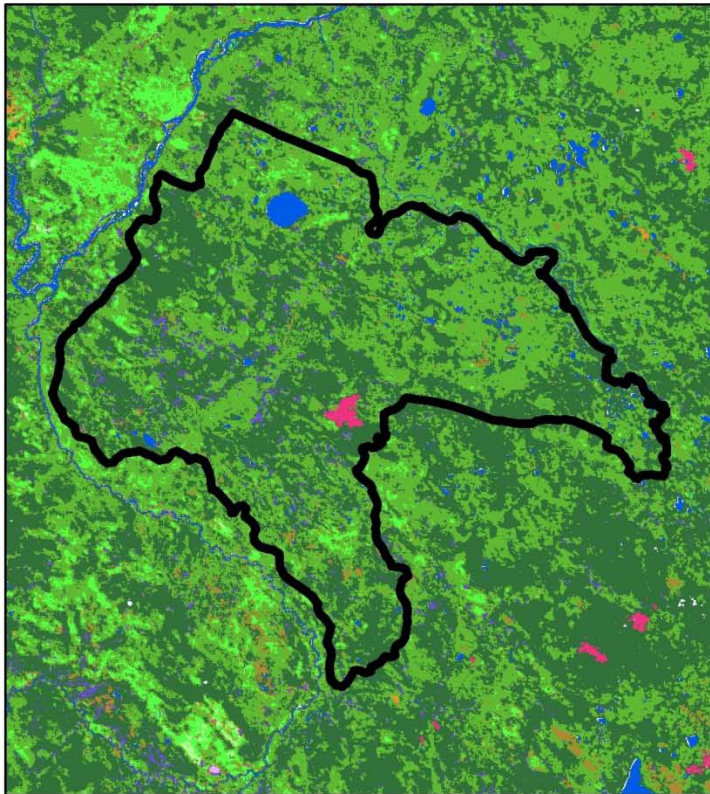
C) Type: Biophysical attributes.

Table 1: Biophysical attributes of boreal caribou habitat in the Taiga Plains ecozone.

Type of selection	
Broad scale	Mature forests (jack pine, spruce, tamarack) of 100 years or older, and open coniferous habitat. Large areas of spruce peatland and muskeg with preference for bogs over fens and upland and lowland black spruce forests with abundant lichens and sedge and moss availability. Flatter areas with smaller trees and willows, hills and higher ground.
Calving	Open coniferous forests, tussock tundra, low shrub, riparian, recent burned areas, south and west aspects and Hills and higher locations. Muskegs, marshes, staying close to water sources. Caribou observed on small islands of mature black spruce or mixed forests within peatlands, in old burns at the edge of wetlands, in alder thickets with abundant standing water and on lake shores.
Post-calving	Muskegs or areas with access to muskegs, open meadows on higher ground, close to water (lakes and rivers) and mixed bush areas. Open coniferous forests with abundant lichens, low shrub, riparian, tussock tundra, sparsely vegetative habitat, recent burns and west aspects. Old burns and neighbouring remnant unburned forests selected in late spring and early summer.
Rutting	Open coniferous and mixedwood forests, low shrub, riparian, tussock tundra, recent burns and west aspect. Still use muskegs that harbor ground lichen and sedges, mixed bush areas, areas of higher ground. Regenerating burns and sparsely vegetated habitat.
Winter	Open coniferous forests (black spruce and pine) that provide adequate cover with abundant lichens, riparian areas. Caribou observed in muskeg areas in early winter. Spruce-lichen forests, fire regenerated, sparsely vegetated habitat, herbaceous and tall shrub habitat and sphagnum moss with scattered spruce. As snow depth increases, they remain more often in areas of dense pine or thickly wooded black spruce, with hanging lichen and remains access to open, mixed vegetation for ground forage.
Travel	Females show high fidelity to calving sites among years (i.e. within 14.5 km). Many caribou shift the pattern of use based on seasonal preferences, in large multi-habitat areas. Rates of movement increase during the rut and are greatest in winter.
Avoidance	Avoid edge habitat. Avoid closed mixed forests, and water during calving. Avoid closed deciduous and mixed forest in summer, fall. Closed coniferous forests may be avoided in winter but are used as snow accumulates. Caribou may avoid water in the fall, although there are reports that they are seen along or crossing water bodies. Avoid forest stand < 10 yrs old during summer. Avoid roads (including winter roads), cutlines and open bog areas. Do not frequent burned areas in the mid- to late winter even as travel corridors. Avoid lower and wetter muskeg areas in mid to late winter.

Critical Habitat Identification: Maxhamish (British Columbia)

D) Additional Information:

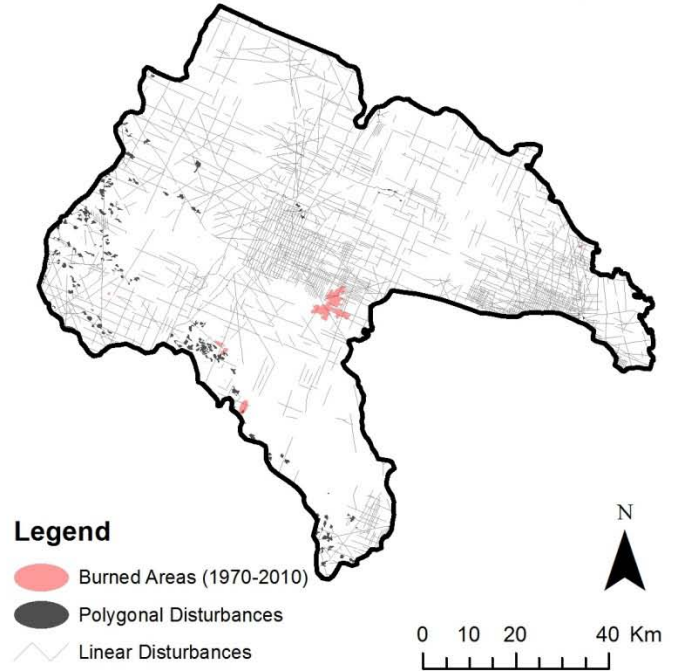


Landcover

- | | | |
|-------------------|------------|--------------|
| Water | Shrub | Rock Outcrop |
| Coniferous Forest | Herbaceous | Recent Burn |
| Deciduous Forest | Wetland | Old Burn |
| Mixed Forest | Cropland | Built-Up |

MODIS 2005 Landcover (250m Pixels) (Generated by CCRS)
 Legend reclassified by EC
 With NTDB 1:250,000 Hydrology Layer

Disturbances Across Caribou Range



*Based on fire data provided by jurisdictions

Disturbance Type and Amount:

Burned Areas = 0.5%
 Buffered³ Anthropogenic (no reservoirs) = 57%
 Total Habitat Disturbance = 57%⁴

³ Buffered means a 500m buffer is applied to linear and polygonal disturbances.

⁴ Total Habitat Disturbance is non-overlapping which means anthropogenic disturbances and burned areas that overlap are not counted twice in the total.

Critical Habitat Identification: Snake-Sahtahneh (British Columbia)

The identification of critical habitat for boreal caribou is described by three factors for each local population: i) Location of habitat; ii) Amount of habitat; and iii) Type of habitat.

A) **Location:** Where critical habitat is found.

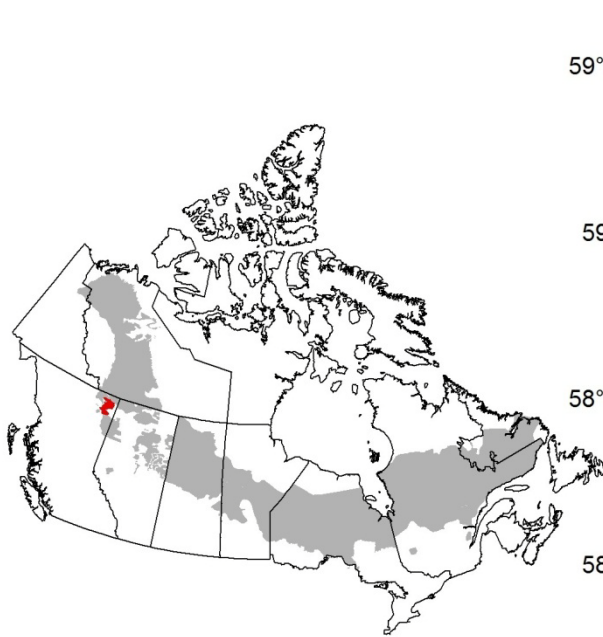


Figure 1: Keymap of the general location of the local population (in red).

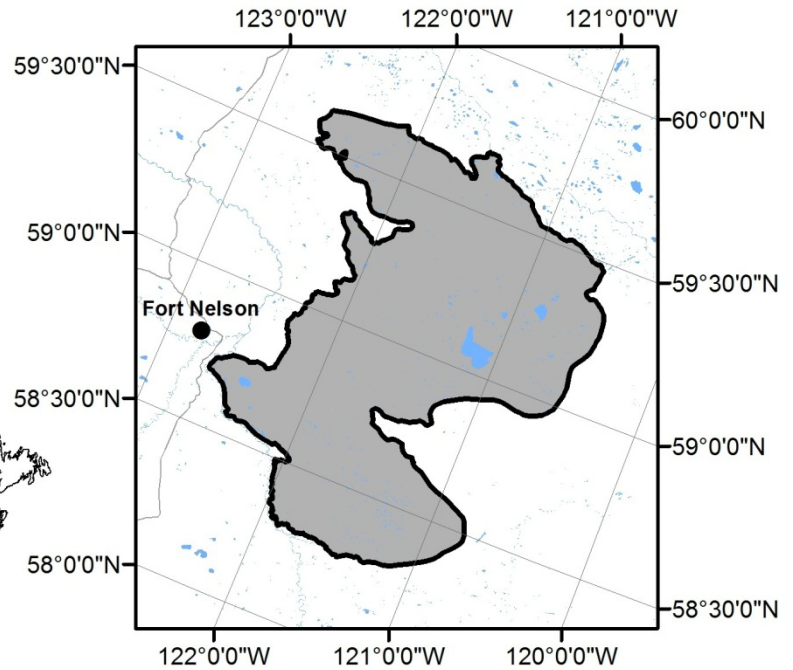


Figure 2: The geographic boundary within which critical habitat is located (in grey).

B) **Amount:** Quantity of critical habitat.

Table 1: Range Attributes and the Amount of Habitat Required

Range Attributes	Range Size	1,198,752 ha
	Population size	365
	Population trend	Declining
	Total Habitat Disturbance	1,042,914 ha
Range Assessment	Assessment of the likelihood of the current condition of the range to support a self-sustaining local population	Not Self-Sustaining
Determination of Amount of Habitat	A) Range Size	1,198,752 ha (100%)
	B) Total Habitat Disturbance ¹	1,042,914 ha (87%)
	C) Undisturbed Habitat, Initial Critical Habitat ²	155,838 ha (13%)

¹ Total Habitat Disturbance reflects loss of functional habitat. It will be more than the associated disturbance footprint (e.g. 100 ha footprint could lead to 400 ha loss of functional habitat).

² The initial Critical Habitat is the current amount of undisturbed habitat. This may be decreased over time, if demonstrated that local populations are being stabilized.

Critical Habitat Identification: Snake-Sahtahneh (British Columbia)

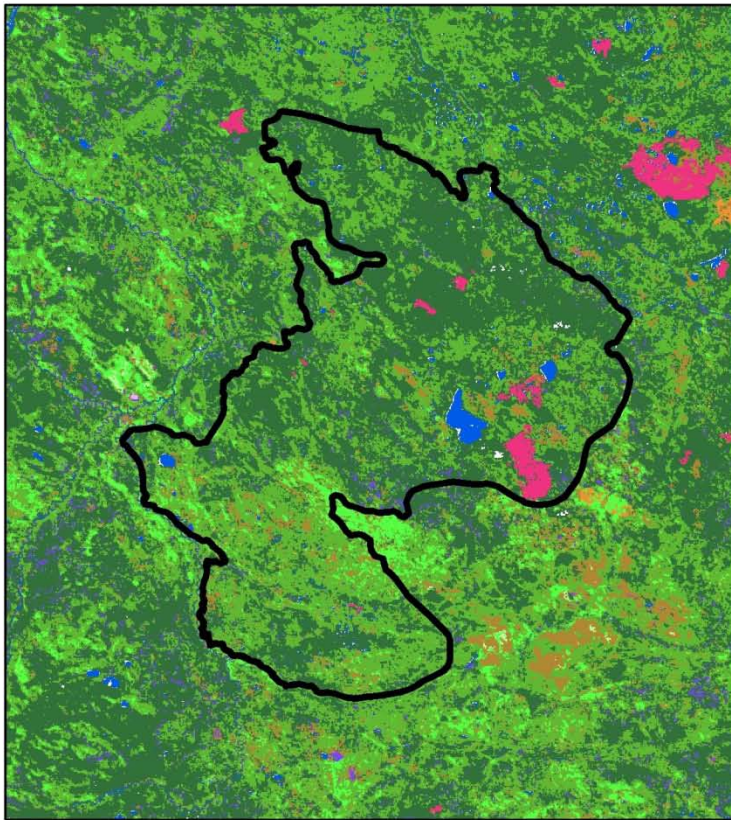
C) Type: Biophysical attributes.

Table 1: Biophysical attributes of boreal caribou habitat in the Taiga Plains ecozone.

Type of selection	
Broad scale	Mature forests (jack pine, spruce, tamarack) of 100 years or older, and open coniferous habitat. Large areas of spruce peatland and muskeg with preference for bogs over fens and upland and lowland black spruce forests with abundant lichens and sedge and moss availability. Flatter areas with smaller trees and willows, hills and higher ground.
Calving	Open coniferous forests, tussock tundra, low shrub, riparian, recent burned areas, south and west aspects and Hills and higher locations. Muskegs, marshes, staying close to water sources. Caribou observed on small islands of mature black spruce or mixed forests within peatlands, in old burns at the edge of wetlands, in alder thickets with abundant standing water and on lake shores.
Post-calving	Muskegs or areas with access to muskegs, open meadows on higher ground, close to water (lakes and rivers) and mixed bush areas. Open coniferous forests with abundant lichens, low shrub, riparian, tussock tundra, sparsely vegetative habitat, recent burns and west aspects. Old burns and neighbouring remnant unburned forests selected in late spring and early summer.
Rutting	Open coniferous and mixedwood forests, low shrub, riparian, tussock tundra, recent burns and west aspect. Still use muskegs that harbor ground lichen and sedges, mixed bush areas, areas of higher ground. Regenerating burns and sparsely vegetated habitat.
Winter	Open coniferous forests (black spruce and pine) that provide adequate cover with abundant lichens, riparian areas. Caribou observed in muskeg areas in early winter. Spruce-lichen forests, fire regenerated, sparsely vegetated habitat, herbaceous and tall shrub habitat and sphagnum moss with scattered spruce. As snow depth increases, they remain more often in areas of dense pine or thickly wooded black spruce, with hanging lichen and remains access to open, mixed vegetation for ground forage.
Travel	Females show high fidelity to calving sites among years (i.e. within 14.5 km). Many caribou shift the pattern of use based on seasonal preferences, in large multi-habitat areas. Rates of movement increase during the rut and are greatest in winter.
Avoidance	Avoid edge habitat. Avoid closed mixed forests, and water during calving. Avoid closed deciduous and mixed forest in summer, fall. Closed coniferous forests may be avoided in winter but are used as snow accumulates. Caribou may avoid water in the fall, although there are reports that they are seen along or crossing water bodies. Avoid forest stand < 10 yrs old during summer. Avoid roads (including winter roads), cutlines and open bog areas. Do not frequent burned areas in the mid- to late winter even as travel corridors. Avoid lower and wetter muskeg areas in mid to late winter.

Critical Habitat Identification: Snake-Sahtahneh (British Columbia)

D) Additional Information:

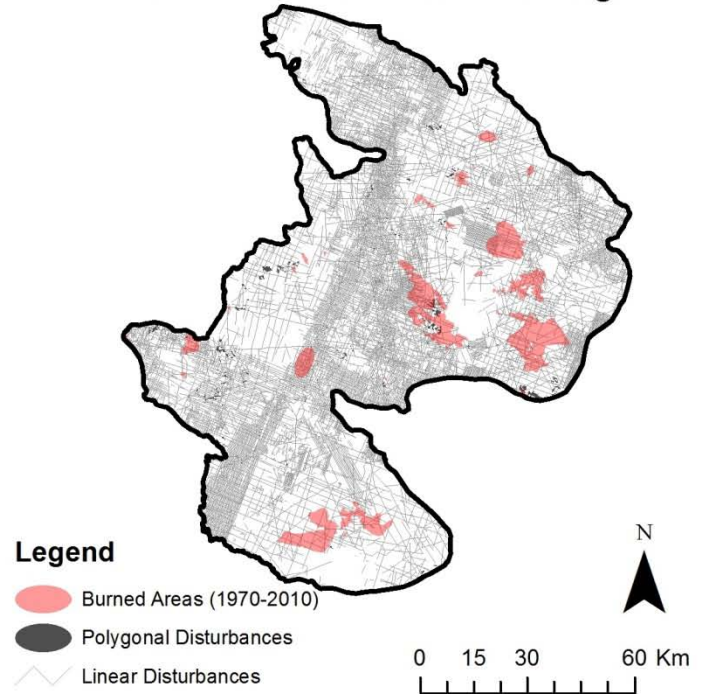


Landcover

- | | | |
|-------------------|------------|--------------|
| Water | Shrub | Rock Outcrop |
| Coniferous Forest | Herbaceous | Recent Burn |
| Deciduous Forest | Wetland | Old Burn |
| Mixed Forest | Cropland | Built-Up |

MODIS 2005 Landcover (250m Pixels) (Generated by CCRS)
 Legend reclassified by EC
 With NTDB 1:250,000 Hydrology Layer

Disturbances Across Caribou Range



*Based on fire data provided by jurisdictions

Disturbance Type and Amount:

Burned Areas = 6%
 Buffered³ Anthropogenic (no reservoirs) = 86%
 Total Habitat Disturbance = 87%⁴

³ Buffered means a 500m buffer is applied to linear and polygonal disturbances.

⁴ Total Habitat Disturbance is non-overlapping which means anthropogenic disturbances and burned areas that overlap are not counted twice in the total.

Critical Habitat Identification: Parker (British Columbia)

The identification of critical habitat for boreal caribou is described by three factors for each local population: i) Location of habitat; ii) Amount of habitat; and iii) Type of habitat.

A) **Location:** Where critical habitat is found.

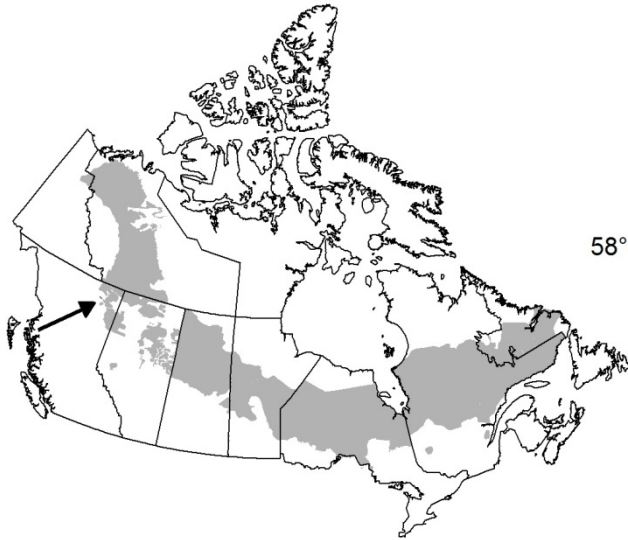


Figure 1: Keymap of the general location of the local population (in red).

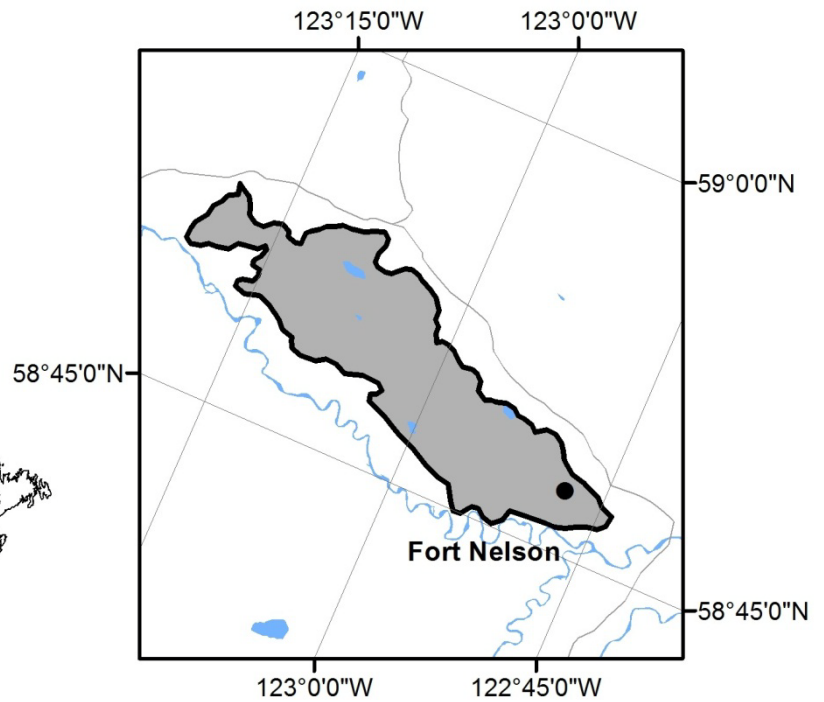


Figure 2: The geographic boundary within which critical habitat is located (in grey).

B) **Amount:** Quantity of critical habitat.

Table 1: Range Attributes and the Amount of Habitat Required

Range Attributes	Range Size	22,452 ha
	Population size	25
	Population trend	Unknown
	Total Habitat Disturbance	7,634 ha
Range Assessment	Assessment of the likelihood of the current condition of the range to support a self-sustaining local population	Not Self-Sustaining
Determination of Amount of Habitat	A) Range Size	22,452 ha (100%)
	B) Total Habitat Disturbance ¹	7,634 ha (34%)
	C) Critical Habitat ²	14,594 ha (65%)

¹ Total Habitat Disturbance reflects loss of functional habitat. It will be more than the associated disturbance footprint (e.g. 100 ha footprint could lead to 400 ha loss of functional habitat).

² The available undisturbed habitat is more than 65% of the range.

Critical Habitat Identification: Parker (British Columbia)

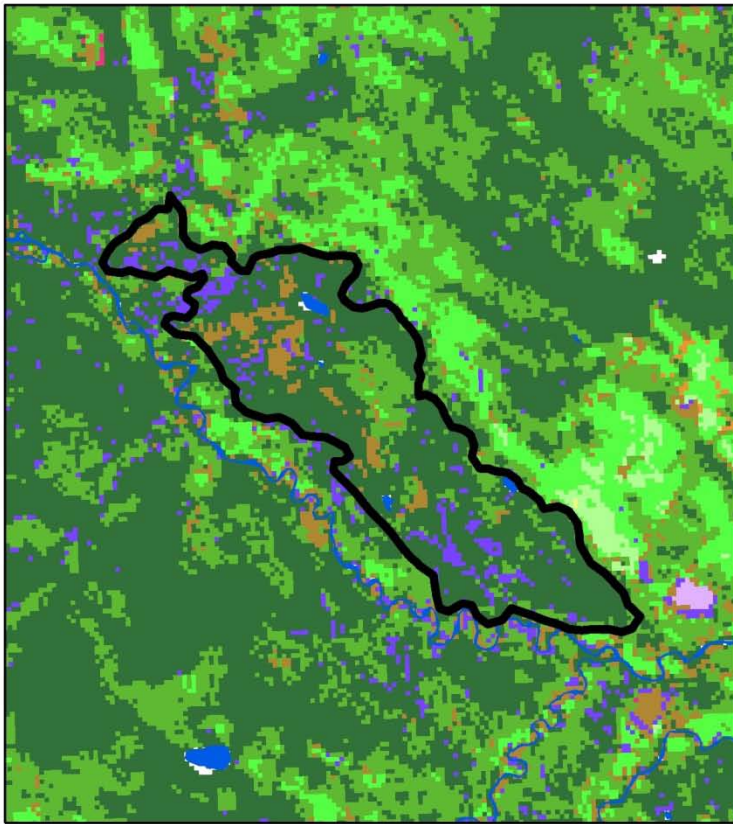
C) **Type:** Biophysical attributes.

Table 1: Biophysical attributes of boreal caribou habitat in the Taiga Plains ecozone.

Type of selection	
Broad scale	Mature forests (jack pine, spruce, tamarack) of 100 years or older, and open coniferous habitat. Large areas of spruce peatland and muskeg with preference for bogs over fens and upland and lowland black spruce forests with abundant lichens and sedge and moss availability. Flatter areas with smaller trees and willows, hills and higher ground.
Calving	Open coniferous forests, tussock tundra, low shrub, riparian, recent burned areas, south and west aspects and Hills and higher locations. Muskegs, marshes, staying close to water sources. Caribou observed on small islands of mature black spruce or mixed forests within peatlands, in old burns at the edge of wetlands, in alder thickets with abundant standing water and on lake shores.
Post-calving	Muskegs or areas with access to muskegs, open meadows on higher ground, close to water (lakes and rivers) and mixed bush areas. Open coniferous forests with abundant lichens, low shrub, riparian, tussock tundra, sparsely vegetative habitat, recent burns and west aspects. Old burns and neighbouring remnant unburned forests selected in late spring and early summer.
Rutting	Open coniferous and mixedwood forests, low shrub, riparian, tussock tundra, recent burns and west aspect. Still use muskegs that harbor ground lichen and sedges, mixed bush areas, areas of higher ground. Regenerating burns and sparsely vegetated habitat.
Winter	Open coniferous forests (black spruce and pine) that provide adequate cover with abundant lichens, riparian areas. Caribou observed in muskeg areas in early winter. Spruce-lichen forests, fire regenerated, sparsely vegetated habitat, herbaceous and tall shrub habitat and sphagnum moss with scattered spruce. As snow depth increases, they remain more often in areas of dense pine or thickly wooded black spruce, with hanging lichen and remains access to open, mixed vegetation for ground forage.
Travel	Females show high fidelity to calving sites among years (i.e. within 14.5 km). Many caribou shift the pattern of use based on seasonal preferences, in large multi-habitat areas. Rates of movement increase during the rut and are greatest in winter.
Avoidance	Avoid edge habitat. Avoid closed mixed forests, and water during calving. Avoid closed deciduous and mixed forest in summer, fall. Closed coniferous forests may be avoided in winter but are used as snow accumulates. Caribou may avoid water in the fall, although there are reports that they are seen along or crossing water bodies. Avoid forest stand < 10 yrs old during summer. Avoid roads (including winter roads), cutlines and open bog areas. Do not frequent burned areas in the mid- to late winter even as travel corridors. Avoid lower and wetter muskeg areas in mid to late winter.

Critical Habitat Identification: Parker (British Columbia)

D) Additional Information:

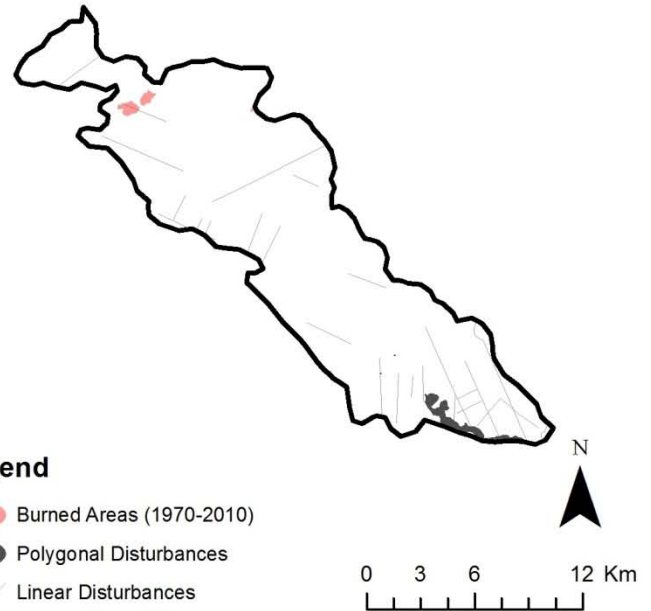


Landcover

- | | | |
|-------------------|------------|--------------|
| Water | Shrub | Rock Outcrop |
| Coniferous Forest | Herbaceous | Recent Burn |
| Deciduous Forest | Wetland | Old Burn |
| Mixed Forest | Cropland | Built-Up |

MODIS 2005 Landcover (250m Pixels) (Generated by CCRS)
 Legend reclassified by EC
 With NTDB 1:250,000 Hydrology Layer

Disturbances Across Caribou Range



Legend

- Burned Areas (1970-2010)
- Polygonal Disturbances
- Linear Disturbances

*Based on fire data provided by jurisdictions

Disturbance Type and Amount:

Burned Areas = 0.4%
 Buffered⁴ Anthropogenic (no reservoirs) = 34%
 Total Habitat Disturbance = 34%⁵

⁴ Buffered means a 500m buffer is applied to linear and polygonal disturbances.

⁵ Total Habitat Disturbance is non-overlapping which means anthropogenic disturbances and burned areas that overlap are not counted twice in the total.

Critical Habitat Identification: Prophet (British Columbia)

The identification of critical habitat for boreal caribou is described by three factors for each local population: i) Location of habitat; ii) Amount of habitat; and iii) Type of habitat.

A) **Location:** Where critical habitat is found.



Figure 1: Keymap of the general location of the local population (in red).

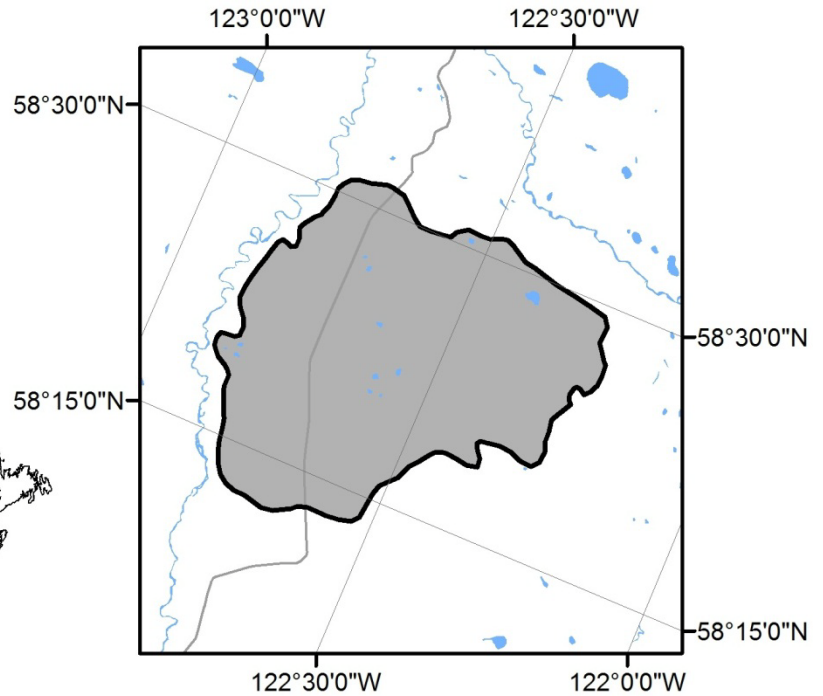


Figure 2: The geographic boundary within which critical habitat is located (in grey).

B) **Amount:** Quantity of critical habitat.

Table 1: Range Attributes and the Amount of Habitat Required

Range Attributes	Range Size	91,581 ha
	Population size	54
	Population trend	Unknown
	Total Habitat Disturbance	72,349 ha
Range Assessment	Assessment of the likelihood of the current condition of the range to support a self-sustaining local population	Not Self-Sustaining
Determination of Amount of Habitat	A) Range Size	91,581 ha (100%)
	B) Total Habitat Disturbance ¹	72,349 ha (79%)
	C) Undisturbed Habitat, Initial Critical Habitat ²	19,232 ha (21%)

¹ Total Habitat Disturbance reflects loss of functional habitat. It will be more than the associated disturbance footprint (e.g. 100 ha footprint could lead to 400 ha loss of functional habitat).

² The initial Critical Habitat is the current amount of undisturbed habitat. This may be decreased over time, if demonstrated that local populations are being stabilized.

Critical Habitat Identification: Prophet (British Columbia)

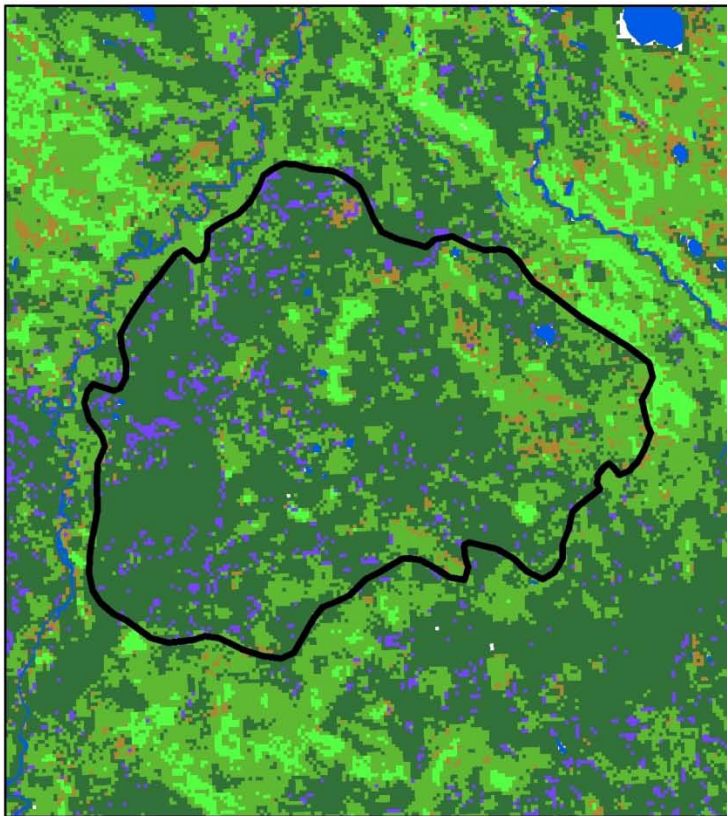
C) Type: Biophysical attributes.

Table 1: Biophysical attributes of boreal caribou habitat in the Taiga Plains ecozone.

Type of selection	
Broad scale	Mature forests (jack pine, spruce, tamarack) of 100 years or older, and open coniferous habitat. Large areas of spruce peatland and muskeg with preference for bogs over fens and upland and lowland black spruce forests with abundant lichens and sedge and moss availability. Flatter areas with smaller trees and willows, hills and higher ground.
Calving	Open coniferous forests, tussock tundra, low shrub, riparian, recent burned areas, south and west aspects and Hills and higher locations. Muskegs, marshes, staying close to water sources. Caribou observed on small islands of mature black spruce or mixed forests within peatlands, in old burns at the edge of wetlands, in alder thickets with abundant standing water and on lake shores.
Post-calving	Muskegs or areas with access to muskegs, open meadows on higher ground, close to water (lakes and rivers) and mixed bush areas. Open coniferous forests with abundant lichens, low shrub, riparian, tussock tundra, sparsely vegetative habitat, recent burns and west aspects. Old burns and neighbouring remnant unburned forests selected in late spring and early summer.
Rutting	Open coniferous and mixedwood forests, low shrub, riparian, tussock tundra, recent burns and west aspect. Still use muskegs that harbor ground lichen and sedges, mixed bush areas, areas of higher ground. Regenerating burns and sparsely vegetated habitat.
Winter	Open coniferous forests (black spruce and pine) that provide adequate cover with abundant lichens, riparian areas. Caribou observed in muskeg areas in early winter. Spruce-lichen forests, fire regenerated, sparsely vegetated habitat, herbaceous and tall shrub habitat and sphagnum moss with scattered spruce. As snow depth increases, they remain more often in areas of dense pine or thickly wooded black spruce, with hanging lichen and remains access to open, mixed vegetation for ground forage.
Travel	Females show high fidelity to calving sites among years (i.e. within 14.5 km). Many caribou shift the pattern of use based on seasonal preferences, in large multi-habitat areas. Rates of movement increase during the rut and are greatest in winter.
Avoidance	Avoid edge habitat. Avoid closed mixed forests, and water during calving. Avoid closed deciduous and mixed forest in summer, fall. Closed coniferous forests may be avoided in winter but are used as snow accumulates. Caribou may avoid water in the fall, although there are reports that they are seen along or crossing water bodies. Avoid forest stand < 10 yrs old during summer. Avoid roads (including winter roads), cutlines and open bog areas. Do not frequent burned areas in the mid- to late winter even as travel corridors. Avoid lower and wetter muskeg areas in mid to late winter.

Critical Habitat Identification: Prophet (British Columbia)

D) Additional Information:

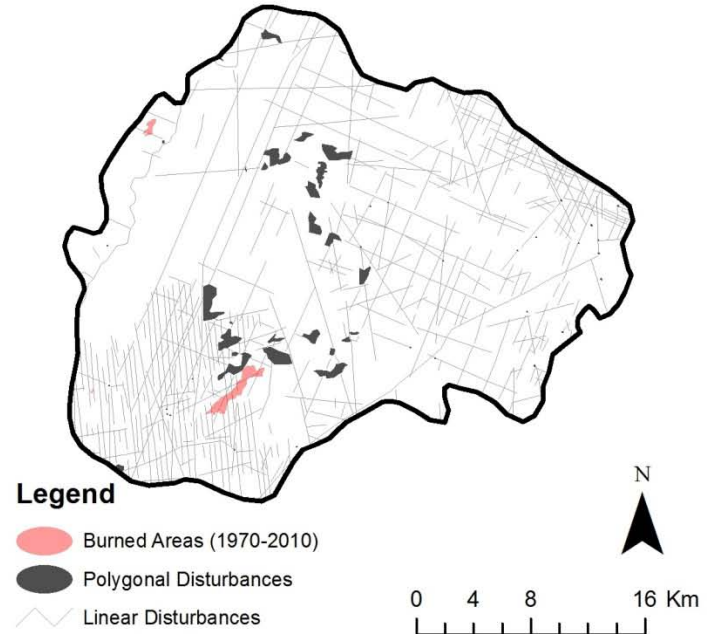


Landcover

- | | | |
|-------------------|------------|--------------|
| Water | Shrub | Rock Outcrop |
| Coniferous Forest | Herbaceous | Recent Burn |
| Deciduous Forest | Wetland | Old Burn |
| Mixed Forest | Cropland | Built-Up |

MODIS 2005 Landcover (250m Pixels) (Generated by CCRS)
 Legend reclassified by EC
 With NTDB 1:250,000 Hydrology Layer

Disturbances Across Caribou Range



- Legend**
- Burned Areas (1970-2010)
 - Polygonal Disturbances
 - Linear Disturbances

*Based on fire data provided by jurisdictions

Disturbance Type and Amount:

Burned Areas = 0.4%
 Buffered³ Anthropogenic (no reservoirs) = 79%
 Total Habitat Disturbance = 79%⁴

³ Buffered means a 500m buffer is applied to linear and polygonal disturbances.

⁴ Total Habitat Disturbance is non-overlapping which means anthropogenic disturbances and burned areas that overlap are not counted twice in the total.

Critical Habitat Identification: Chinchaga (Alberta/British Columbia)

The identification of critical habitat for boreal caribou is described by three factors for each local population: i) Location of habitat; ii) Amount of habitat; and iii) Type of habitat.

A) **Location:** Where critical habitat is found.



Figure 1: Keymap of the general location of the local population (in red).



Figure 2: The geographic boundary within which critical habitat is located (in grey).

B) **Amount:** Quantity of critical habitat.

Table 1: Range Attributes and the Amount of Habitat Required

Range Attributes	Range Size	3,162,612 ha
	Population size	250
	Population trend	Declining
	Total Habitat Disturbance	2,403,585 ha
Range Assessment	Assessment of the current condition of the range to support a self-sustaining local population	Not Self-Sustaining
Determination of Amount of Habitat	A) Range Size	3,162,612 ha (100%)
	B) Total Habitat Disturbance ¹	2,403,585 ha (76%)
	C) Undisturbed Habitat, Initial Critical Habitat ²	759,027 (24%)

¹ Total Habitat Disturbance reflects loss of functional habitat. It will be more than the associated disturbance footprint (e.g. 100 ha footprint could lead to 400 ha loss of functional habitat).

² The initial Critical Habitat is the current amount of undisturbed habitat. This may be decreased over time, if demonstrated that local populations are being stabilized.

Critical Habitat Identification: Chinchaga (Alberta/British Columbia)

C) Type: Biophysical attributes.

Table 1: Biophysical attributes of boreal caribou habitat in the Taiga Plains ecozone.

Type of selection	
Broad scale	Mature forests (jack pine, spruce, tamarack) of 100 years or older, and open coniferous habitat. Large areas of spruce peatland and muskeg with preference for bogs over fens and upland and lowland black spruce forests with abundant lichens and sedge and moss availability. Flatter areas with smaller trees and willows, hills and higher ground.
Calving	Open coniferous forests, tussock tundra, low shrub, riparian, recent burned areas, south and west aspects and Hills and higher locations. Muskegs, marshes, staying close to water sources. Caribou observed on small islands of mature black spruce or mixed forests within peatlands, in old burns at the edge of wetlands, in alder thickets with abundant standing water and on lake shores.
Post-calving	Muskegs or areas with access to muskegs, open meadows on higher ground, close to water (lakes and rivers) and mixed bush areas. Open coniferous forests with abundant lichens, low shrub, riparian, tussock tundra, sparsely vegetative habitat, recent burns and west aspects. Old burns and neighbouring remnant unburned forests selected in late spring and early summer.
Rutting	Open coniferous and mixedwood forests, low shrub, riparian, tussock tundra, recent burns and west aspect. Still use muskegs that harbor ground lichen and sedges, mixed bush areas, areas of higher ground. Regenerating burns and sparsely vegetated habitat.
Winter	Open coniferous forests (black spruce and pine) that provide adequate cover with abundant lichens, riparian areas. Caribou observed in muskeg areas in early winter. Spruce-lichen forests, fire regenerated, sparsely vegetated habitat, herbaceous and tall shrub habitat and sphagnum moss with scattered spruce. As snow depth increases, they remain more often in areas of dense pine or thickly wooded black spruce, with hanging lichen and remains access to open, mixed vegetation for ground forage.
Travel	Females show high fidelity to calving sites among years (i.e. within 14.5 km). Many caribou shift the pattern of use based on seasonal preferences, in large multi-habitat areas. Rates of movement increase during the rut and are greatest in winter.
Avoidance	Avoid edge habitat. Avoid closed mixed forests, and water during calving. Avoid closed deciduous and mixed forest in summer, fall. Closed coniferous forests may be avoided in winter but are used as snow accumulates. Caribou may avoid water in the fall, although there are reports that they are seen along or crossing water bodies. Avoid forest stand < 10 yrs old during summer. Avoid roads (including winter roads), cutlines and open bog areas. Do not frequent burned areas in the mid- to late winter even as travel corridors. Avoid lower and wetter muskeg areas in mid to late winter.

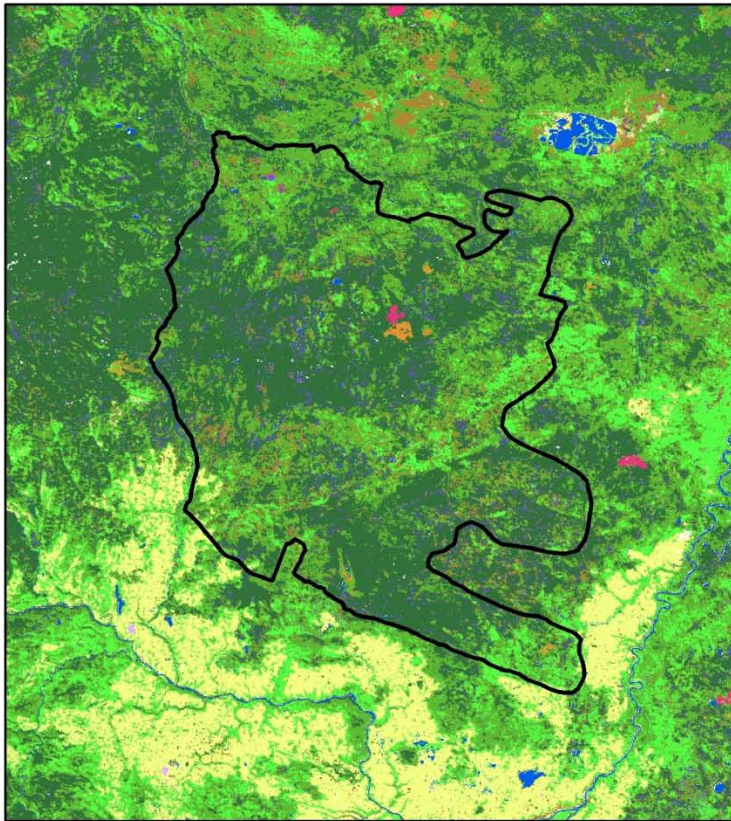
Table 2: Biophysical attributes of boreal caribou habitat in the Boreal Plains ecozone.

Type of selection	Description
Broad scale	Late seral-stage (> 50 yrs old) conifer forest (jack pine, black spruce, tamarack), treed peatlands, muskegs or bogs, use dry islands in the middle of muskegs, with abundant lichens. Hilly or higher ground and small lakes. Restricted primarily to peatland complexes. Elevations of 1135 m. Selected old (>40 yrs) burns.
Calving	Bogs and mature forests selected for calving as well as islands and small lakes. Peatlands and stands dominated by black spruce and lowland black spruce stands within muskeg are used for calving.
Post-calving	Forest stands older than 50 yrs. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands and muskeg are also selected during summer. Use lichen and low muskeg vegetation. In some areas, sites with abundant arboreal lichen are selected during summer.
Rutting	Mature forests. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands and muskeg during summer.

Critical Habitat Identification: Chinchaga (Alberta/British Columbia)

Type of selection	Description
Winter	Treed peatlands, treed bog and treed fen and open fen complexes with > 50% peatland coverage with high abundance of lichens. Use of small lakes, rock outcrops on lakes for lichen access. Mature forest > 50 yrs old. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands.
Avoidance	Avoid upland and fen habitats, aspen dominated stands, immature stands and large rivers all year round. Avoid matrix-type habitat, including areas with abundant shrubs, disturbed/fragmented habitats, hardwood/deciduous dominated forest stands, and edge habitat. Avoid recent burns, main roads, seismic lines, well sites and areas with a high density of cut blocks. Avoidance of water.

D) Additional Information:

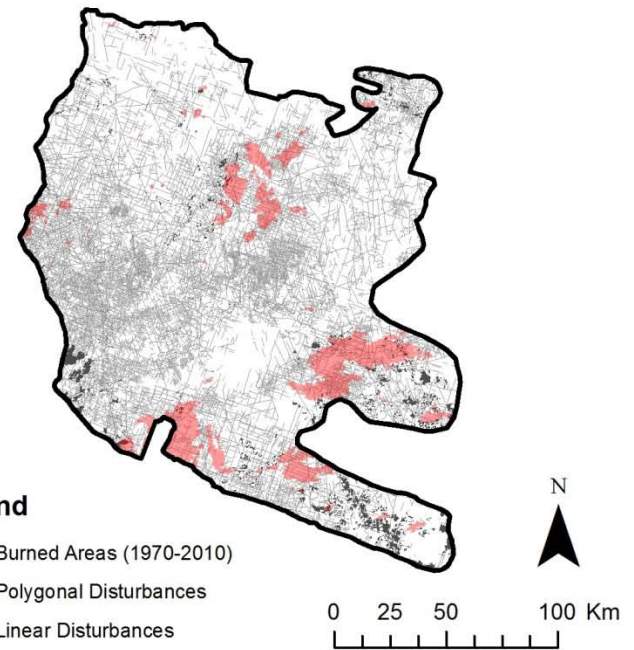


Landcover

- Water (Blue circle)
- Shrub (Light Green circle)
- Rock Outcrop (Brown circle)
- Coniferous Forest (Dark Green circle)
- Herbaceous (Tan circle)
- Recent Burn (Red circle)
- Deciduous Forest (Light Green circle)
- Wetland (Purple circle)
- Old Burn (Orange circle)
- Mixed Forest (Green circle)
- Cropland (Yellow circle)
- Built-Up (Purple circle)

MODIS 2005 Landcover (250m Pixels) (Generated by CCRS)
Legend reclassified by EC
With NTDB 1:250,000 Hydrology Layer

Disturbances Across Caribou Range



*Based on fire data provided by jurisdictions

Disturbance Type and Amount:

Burned Areas = 8%
Buffered³ Anthropogenic (no reservoirs) = 74%
Total Habitat Disturbance = 76%⁴

³ Buffered means a 500m buffer is applied to linear and polygonal disturbances.

⁴ Total Habitat Disturbance is non-overlapping which means anthropogenic disturbances and burned areas that overlap are not counted twice in the total.

Critical Habitat Identification: Little Smoky (Alberta)

The identification of critical habitat for boreal caribou is described by three factors for each local population: i) Location of habitat; ii) Amount of habitat; and iii) Type of habitat.

A) **Location:** Where critical habitat is found.

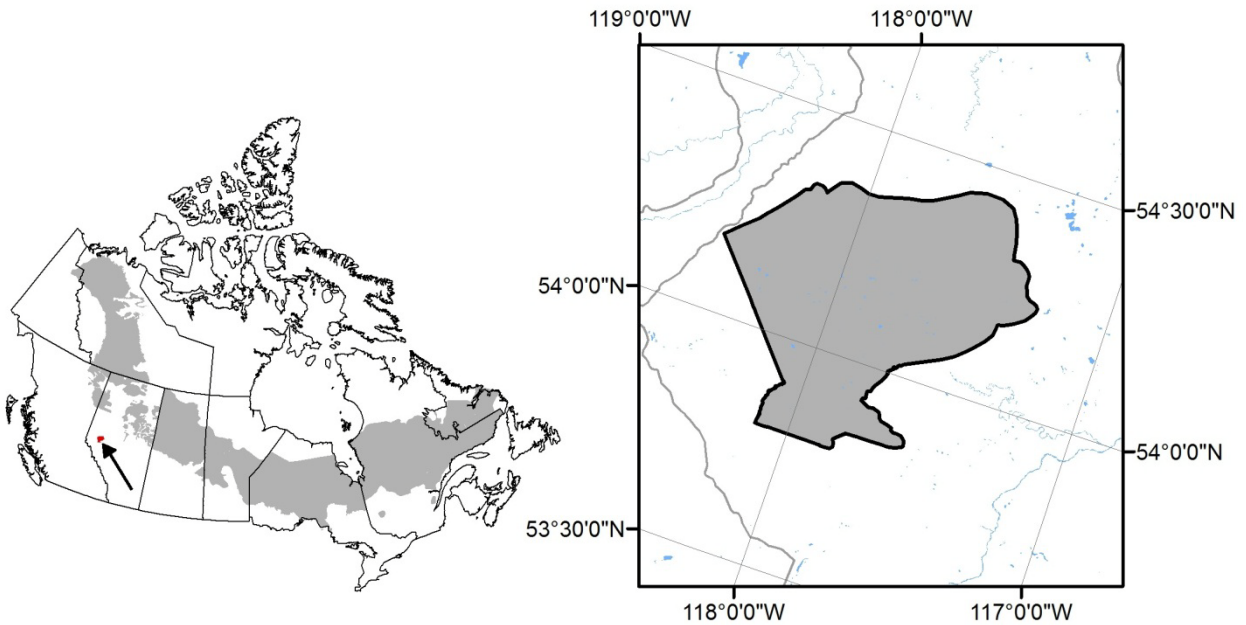


Figure 1: Keymap of the general location of the local population (in red).

Figure 2: The geographic boundary within which critical habitat is located (in grey).

B) **Amount:** Quantity of critical habitat.

Table 1: Range Attributes and the Amount of Habitat Required

Range Attributes	Range Size	308,606 ha
	Population size	78
	Population trend	Declining
	Total Habitat Disturbance	293,176 ha
Range Assessment	Assessment of the likelihood of the current condition of the range to support a self-sustaining local population	Not Self-Sustaining
Determination of Amount of Habitat	A) Range Size	308,606 ha (100%)
	B) Total Habitat Disturbance ¹	293,176 ha (95%)
	C) Critical Habitat ²	264,779 ha

¹ Total Habitat Disturbance reflects loss of functional habitat. It will be more than the associated disturbance footprint (e.g. 100 ha footprint could lead to 400 ha loss of functional habitat).

² Since the Total Habitat Disturbance is 95%, critical habitat is the existing habitat which is the area within the Little Smoky local population range that excludes fire disturbance within the last 40 years and unbuffered anthropogenic footprints.

Critical Habitat Identification: Little Smoky (Alberta)

C) Type: Biophysical attributes.

Table 1: Biophysical attributes of boreal caribou habitat in the Boreal Plains ecozone.

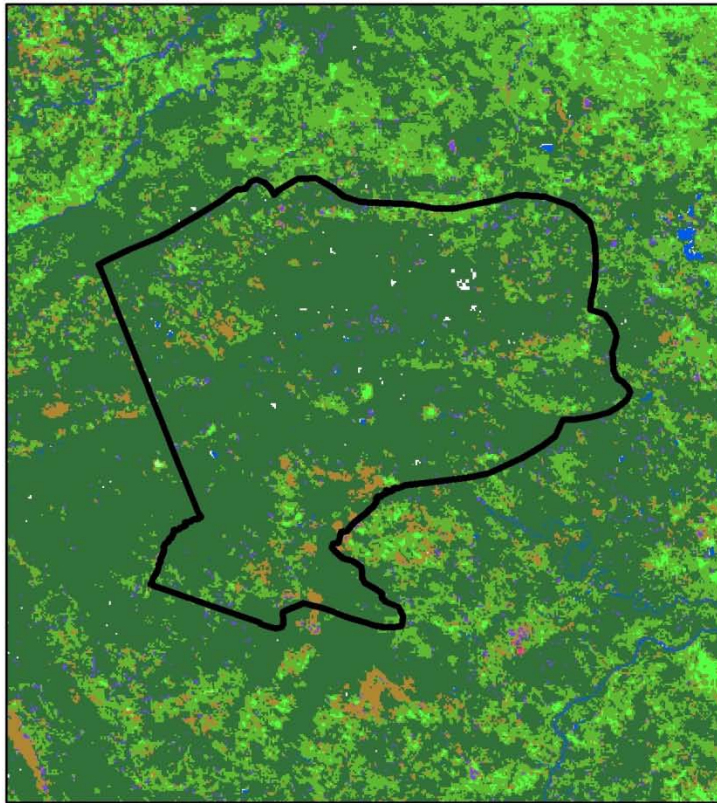
Type of selection	Description
Broad scale	Late seral-stage (> 50 yrs old) conifer forest (jack pine, black spruce, tamarack), treed peatlands, muskegs or bogs, use dry islands in the middle of muskegs, with abundant lichens. Hilly or higher ground and small lakes. Restricted primarily to peatland complexes. Elevations of 1135 m. Selected old (>40 yrs) burns.
Calving	Bogs and mature forests selected for calving as well as islands and small lakes. Peatlands and stands dominated by black spruce and lowland black spruce stands within muskeg are used for calving.
Post-calving	Forest stands older than 50 yrs. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands and muskeg are also selected during summer. Use lichen and low muskeg vegetation. In some areas, sites with abundant arboreal lichen are selected during summer.
Rutting	Mature forests. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands and muskeg during summer.
Winter	Treed peatlands, treed bog and treed fen and open fen complexes with > 50% peatland coverage with high abundance of lichens. Use of small lakes, rock outcrops on lakes for lichen access. Mature forest > 50 yrs old. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands.
Avoidance	Avoid upland and fen habitats, aspen dominated stands, immature stands and large rivers all year round. Avoid matrix-type habitat, including areas with abundant shrubs, disturbed/fragmented habitats, hardwood/deciduous dominated forest stands, and edge habitat. Avoid recent burns, main roads, seismic lines, well sites and areas with a high density of cut blocks. Avoidance of water.

Table 2: Biophysical attributes of boreal caribou habitat in the Montane Cordilla ecozone.

Type of selection	Description
Broad scale	Upland lodge pole pine, mixed conifer lodgepole pine/black spruce and treed muskeg areas with abundant lichens. Open, pine dominated stands of 80 yrs or more.
Calving	Areas closer to cut-blocks with a high proportion of larch are selected during calving. Lower mountain peaks.
Post-calving	Homogeneous areas of conifer dominated stands.
Winter	Caribou use areas with a high proportion of larch and pine forests during winter.
Avoidance	Avoid areas with a large proportion of cut blocks. Avoidance of seismic lines greatest during calving season. Avoid white spruce stands which generally have a low abundance of lichens, aspen stands and large rivers.

Critical Habitat Identification: Little Smoky (Alberta)

D) Additional Information:

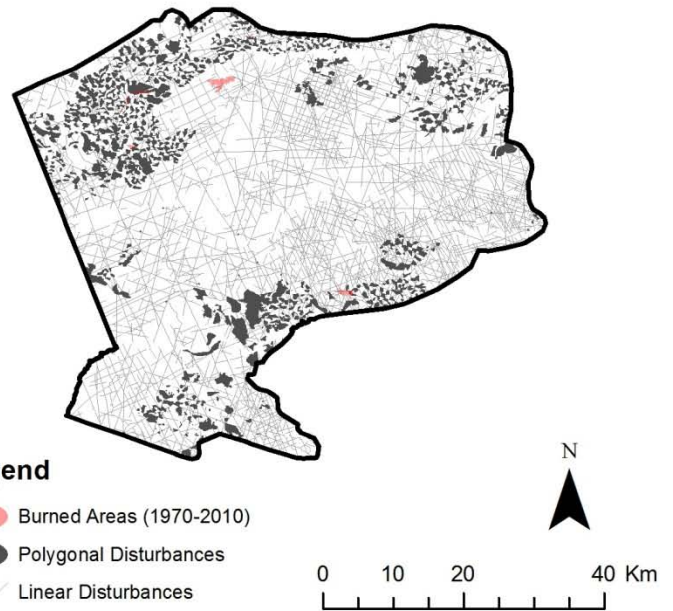


Landcover

- | | | |
|-------------------|------------|--------------|
| Water | Shrub | Rock Outcrop |
| Coniferous Forest | Herbaceous | Recent Burn |
| Deciduous Forest | Wetland | Old Burn |
| Mixed Forest | Cropland | Built-Up |

MODIS 2005 Landcover (250m Pixels) (Generated by CCRS)
 Legend reclassified by EC
 With NTDB 1:250,000 Hydrology Layer

Disturbances Across Caribou Range



Legend

- Burned Areas (1970-2010)
- Polygonal Disturbances
- Linear Disturbances

*Based on fire data provided by jurisdictions

Disturbance Type and Amount:

- Burned Areas = 0.2%
- Buffered³ Anthropogenic (no reservoirs) = 95%
- Total Habitat Disturbance = 95%⁴

³ Buffered means a 500m buffer is applied to linear and polygonal disturbances.

⁴ Total Habitat Disturbance is non-overlapping which means anthropogenic disturbances and burned areas that overlap are not counted twice in the total.

Critical Habitat Identification: West Side Athabasca River (Alberta)

The identification of critical habitat for boreal caribou is described by three factors for each local population: i) Location of habitat; ii) Amount of habitat; and iii) Type of habitat.

A) **Location:** Where critical habitat is found.



Figure 1: Keymap of the general location of the local population (in red).

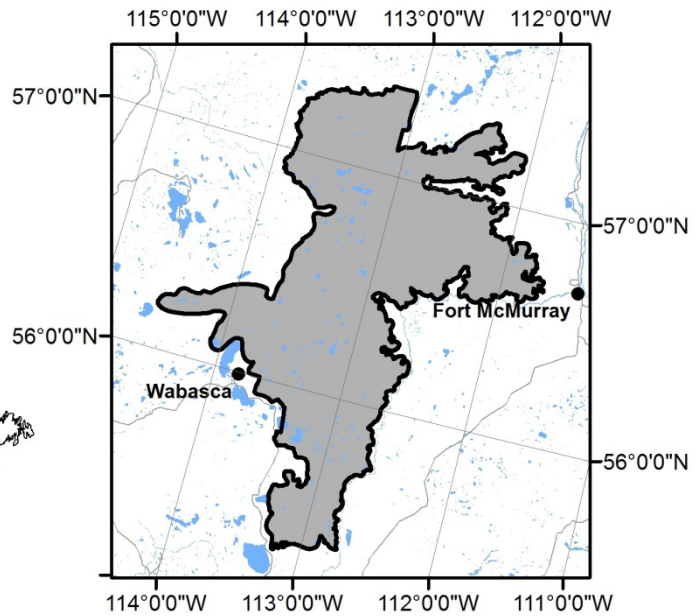


Figure 2: The geographic boundary within which critical habitat is located (in grey).

B) **Amount:** Quantity of critical habitat.

Table 1: Range Attributes and the Amount of Habitat Required

Range Attributes	Range Size	1,572,652 ha
	Population size	204-272
	Population trend	Declining
	Total Habitat Disturbance	1,085,130 ha
Range Assessment	Assessment of the likelihood of the current condition of the range to support a self-sustaining local population	Not Self-Sustaining
Determination of Amount of Habitat	A) Range Size	1,572,652 ha (100%)
	B) Total Habitat Disturbance ¹	1,085,130 ha (69%)
	C) Undisturbed Habitat, Initial Critical Habitat ²	487,522 ha (31%)
¹ Total Habitat Disturbance reflects loss of functional habitat. It will be more than the associated disturbance footprint (e.g. 100 ha footprint could lead to 400 ha loss of functional habitat).		
² The initial Critical Habitat is the current amount of undisturbed habitat. This may be decreased over time, if demonstrated that local populations are being stabilized.		

Critical Habitat Identification: West Side Athabasca River (Alberta)

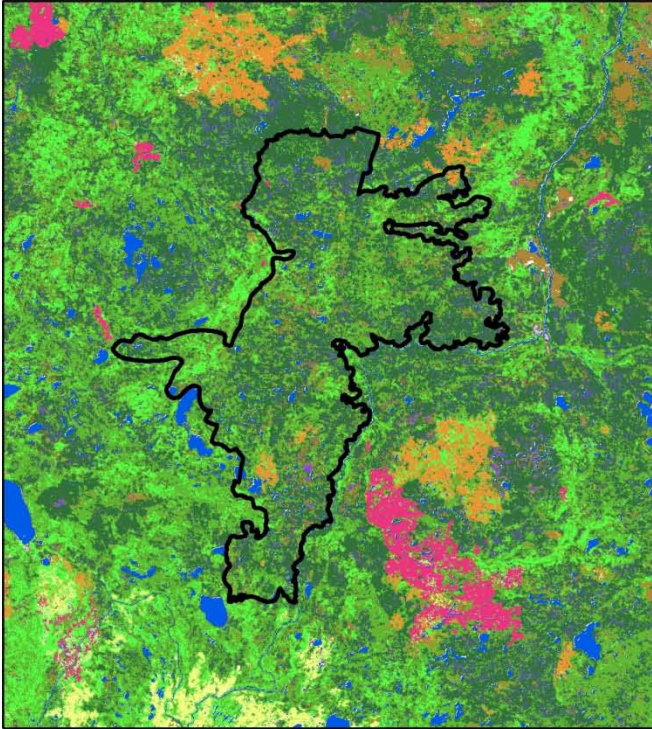
C) **Type:** Biophysical attributes.

Table 1: Biophysical attributes of boreal caribou habitat in the Boreal Plains ecozone.

Type of selection	Description
Broad scale	Late seral-stage (> 50 yrs old) conifer forest (jack pine, black spruce, tamarack), treed peatlands, muskegs or bogs, use dry islands in the middle of muskegs, with abundant lichens. Hilly or higher ground and small lakes. Restricted primarily to peatland complexes. Elevations of 1135 m. Selected old (>40 yrs) burns.
Calving	Bogs and mature forests selected for calving as well as islands and small lakes. Peatlands and stands dominated by black spruce and lowland black spruce stands within muskeg are used for calving.
Post-calving	Forest stands older than 50 yrs. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands and muskeg are also selected during summer. Use lichen and low muskeg vegetation. In some areas, sites with abundant arboreal lichen are selected during summer.
Rutting	Mature forests. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands and muskeg during summer.
Winter	Treed peatlands, treed bog and treed fen and open fen complexes with > 50% peatland coverage with high abundance of lichens. Use of small lakes, rock outcrops on lakes for lichen access. Mature forest > 50 yrs old. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands.
Avoidance	Avoid upland and fen habitats, aspen dominated stands, immature stands and large rivers all year round. Avoid matrix-type habitat, including areas with abundant shrubs, disturbed/fragmented habitats, hardwood/deciduous dominated forest stands, and edge habitat. Avoid recent burns, main roads, seismic lines, well sites and areas with a high density of cut blocks. Avoidance of water.

Critical Habitat Identification: West Side Athabasca River (Alberta)

D) Additional Information:

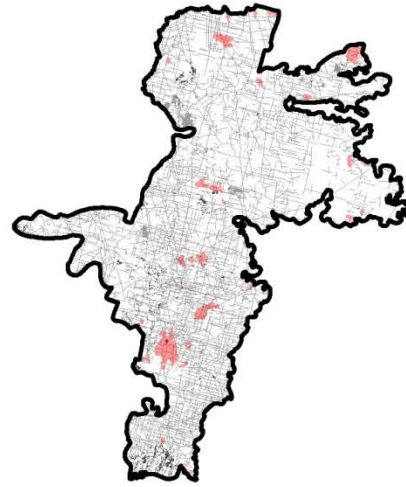


Landcover

- | | | |
|-------------------|------------|--------------|
| Water | Shrub | Rock Outcrop |
| Coniferous Forest | Herbaceous | Recent Burn |
| Deciduous Forest | Wetland | Old Burn |
| Mixed Forest | Cropland | Built-Up |

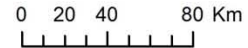
MODIS 2005 Landcover (250m Pixels) (Generated by CCRS)
 Legend reclassified by EC
 With NTDB 1:250,000 Hydrology Layer

Disturbances Across Caribou Range



Legend

- Burned Areas (1970-2010)
- Polygonal Disturbances
- Linear Disturbances



*Based on fire data provided by jurisdictions

Disturbance Type and Amount:

- Burned Areas = 4%
- Buffered³ Anthropogenic (no reservoirs) = 68%
- Total Habitat Disturbance = 69%⁴

³ Buffered means a 500m buffer is applied to linear and polygonal disturbances.
⁴ Total Habitat Disturbance is non-overlapping which means anthropogenic disturbances and burned areas that overlap are not counted twice in the total.

Critical Habitat Identification: East Side Athabasca River (Alberta)

The identification of critical habitat for boreal caribou is described by three factors for each local population: i) Location of habitat; ii) Amount of habitat; and iii) Type of habitat.

A) **Location:** Where critical habitat is found.

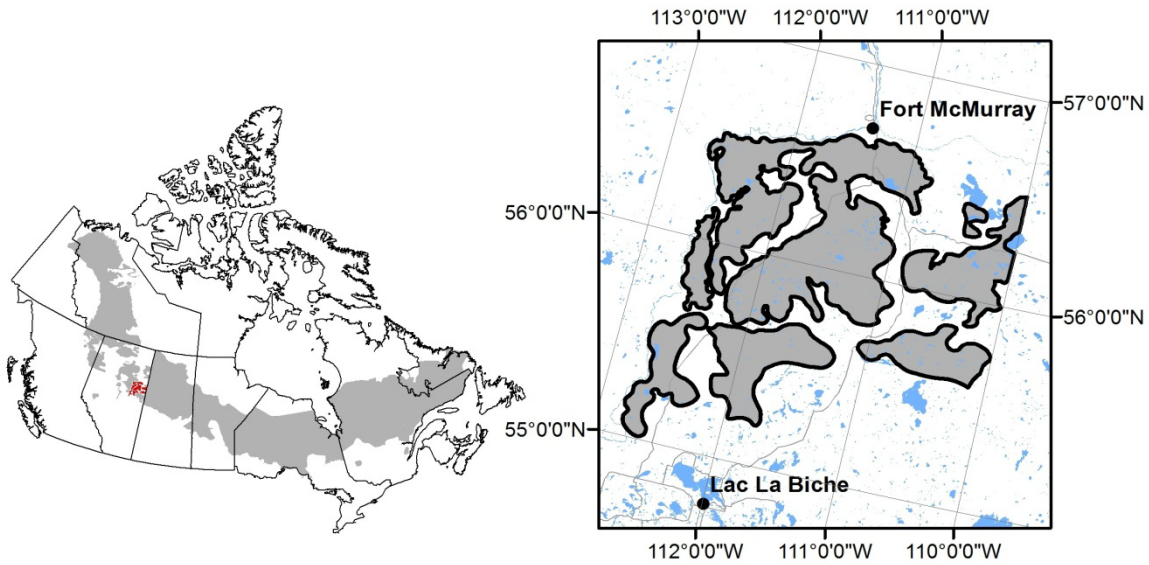


Figure 1: Keymap of the general location of the local population (in red).

Figure 2: The geographic boundary within which critical habitat is located (in grey).

B) **Amount:** Quantity of critical habitat.

Table 1: Range Attributes and the Amount of Habitat Required

Range Attributes	Range Size	1,315,980 ha
	Population size	90-150
	Population trend	Declining
	Total Habitat Disturbance	1,065,944 ha
Range Assessment	Assessment of the current condition of the range to support a self-sustaining local population	Not Self-Sustaining
Determination of Amount of Habitat	A) Range Size	1,315,980 ha (100%)
	B) Total Habitat Disturbance ¹	1,065,944 ha (81%)
	C) Undisturbed Habitat, Initial Critical Habitat ²	250,036 ha (19%)

¹ Total Habitat Disturbance reflects loss of functional habitat. It will be more than the associated disturbance footprint (e.g. 100 ha footprint could lead to 400 ha loss of functional habitat).

² The initial Critical Habitat is the current amount of undisturbed habitat. This may be decreased over time, if demonstrated that local populations are being stabilized.

Critical Habitat Identification: East Side Athabasca River (Alberta)

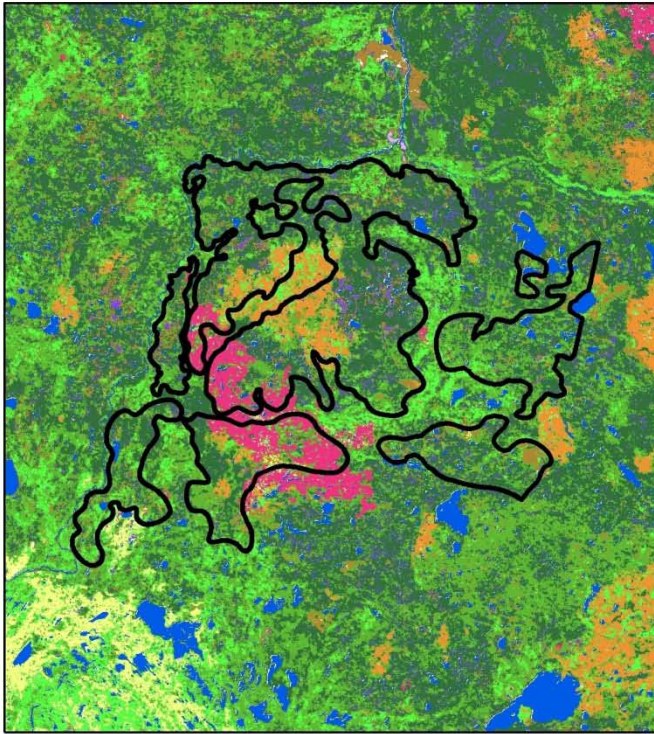
C) **Type:** Biophysical attributes.

Table 1: Biophysical attributes of boreal caribou habitat in the Boreal Plains ecozone.

Type of selection	Description
Broad scale	Late seral-stage (> 50 yrs old) conifer forest (jack pine, black spruce, tamarack), treed peatlands, muskegs or bogs, use dry islands in the middle of muskegs, with abundant lichens. Hilly or higher ground and small lakes. Restricted primarily to peatland complexes. Elevations of 1135 m. Selected old (>40 yrs) burns.
Calving	Bogs and mature forests selected for calving as well as islands and small lakes. Peatlands and stands dominated by black spruce and lowland black spruce stands within muskeg are used for calving.
Post-calving	Forest stands older than 50 yrs. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands and muskeg are also selected during summer. Use lichen and low muskeg vegetation. In some areas, sites with abundant arboreal lichen are selected during summer.
Rutting	Mature forests. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands and muskeg during summer.
Winter	Treed peatlands, treed bog and treed fen and open fen complexes with > 50% peatland coverage with high abundance of lichens. Use of small lakes, rock outcrops on lakes for lichen access. Mature forest > 50 yrs old. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands.
Avoidance	Avoid upland and fen habitats, aspen dominated stands, immature stands and large rivers all year round. Avoid matrix-type habitat, including areas with abundant shrubs, disturbed/fragmented habitats, hardwood/deciduous dominated forest stands, and edge habitat. Avoid recent burns, main roads, seismic lines, well sites and areas with a high density of cut blocks. Avoidance of water.

Critical Habitat Identification: East Side Athabasca River (Alberta)

D) Additional Information:

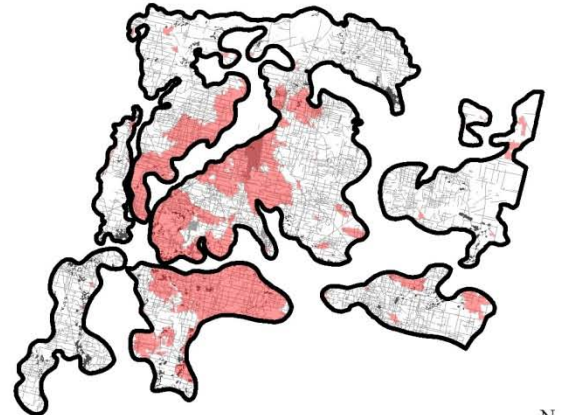


Landcover

- | | | |
|-------------------|------------|--------------|
| Water | Shrub | Rock Outcrop |
| Coniferous Forest | Herbaceous | Recent Burn |
| Deciduous Forest | Wetland | Old Burn |
| Mixed Forest | Cropland | Built-Up |

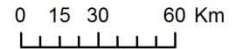
MODIS 2005 Landcover (250m Pixels) (Generated by CCRS)
 Legend reclassified by EC
 With NTDB 1:250,000 Hydrology Layer

Disturbances Across Caribou Range



Legend

- Burned Areas (1970-2010)
- Polygonal Disturbances
- Linear Disturbances



*Based on fire data provided by jurisdictions

Disturbance Type and Amount:

- Burned Areas = 26%
- Buffered³ Anthropogenic (no reservoirs) = 77%
- Total Habitat Disturbance = 81%⁴

³ Buffered means a 500m buffer is applied to linear and polygonal disturbances.

⁴ Total Habitat Disturbance is non-overlapping which means anthropogenic disturbances and burned areas that overlap are not counted twice in the total.

Critical Habitat Identification: Cold Lake (Alberta)

The identification of critical habitat for boreal caribou is described by three factors for each local population: i) Location of habitat; ii) Amount of habitat; and iii) Type of habitat.

A) **Location:** Where critical habitat is found.

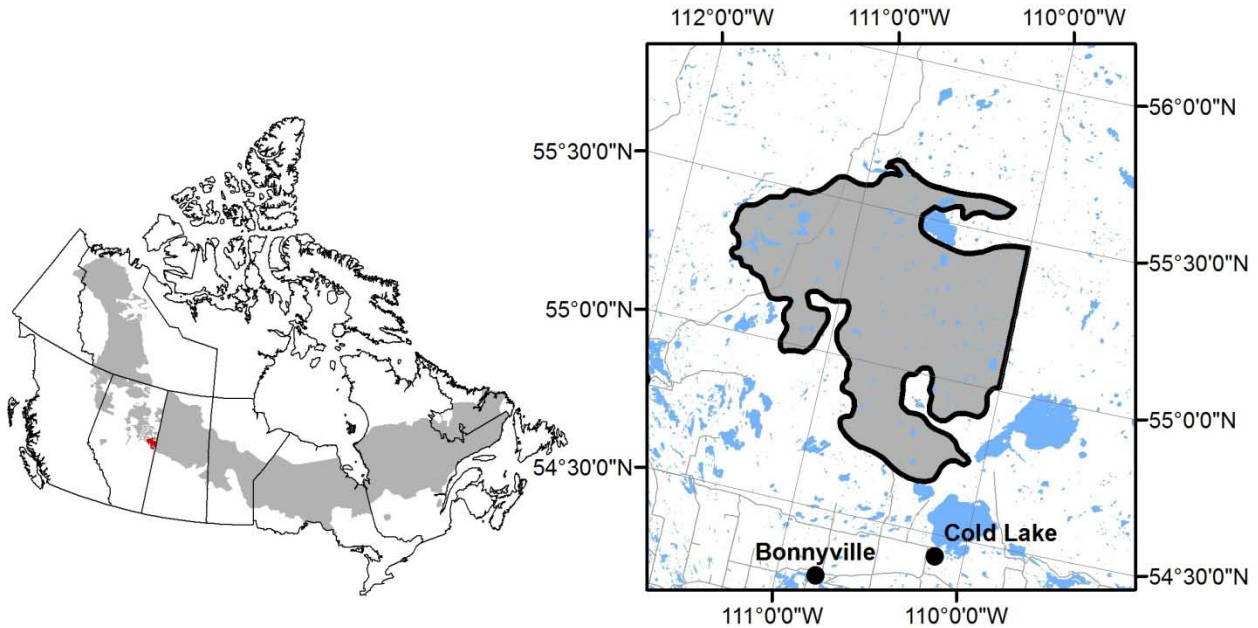


Figure 1: Keymap of the general location of the local population (in red).

Figure 2: The geographic boundary within which critical habitat is located (in grey).

B) **Amount:** Quantity of critical habitat.

Table 1: Range Attributes and the Amount of Habitat Required

Range Attributes	Range Size	672,422 ha
	Population size	150
	Population trend	Declining
	Total Habitat Disturbance	571,559 ha
Range Assessment	Assessment of the current condition of the range to support a self-sustaining local population	Not Self-Sustaining
Determination of Amount of Habitat	A) Range Size	672,422 ha (100%)
	B) Total Habitat Disturbance ¹	571,559 ha (85%)
	C) Undisturbed Habitat, Initial Critical Habitat ²	100,863 ha (15%)

¹ Total Habitat Disturbance reflects loss of functional habitat. It will be more than the associated disturbance footprint (e.g. 100 ha footprint could lead to 400 ha loss of functional habitat).

² The initial Critical Habitat is the current amount of undisturbed habitat. This may be decreased over time, if demonstrated that local populations are being stabilized.

Critical Habitat Identification: Cold Lake (Alberta)

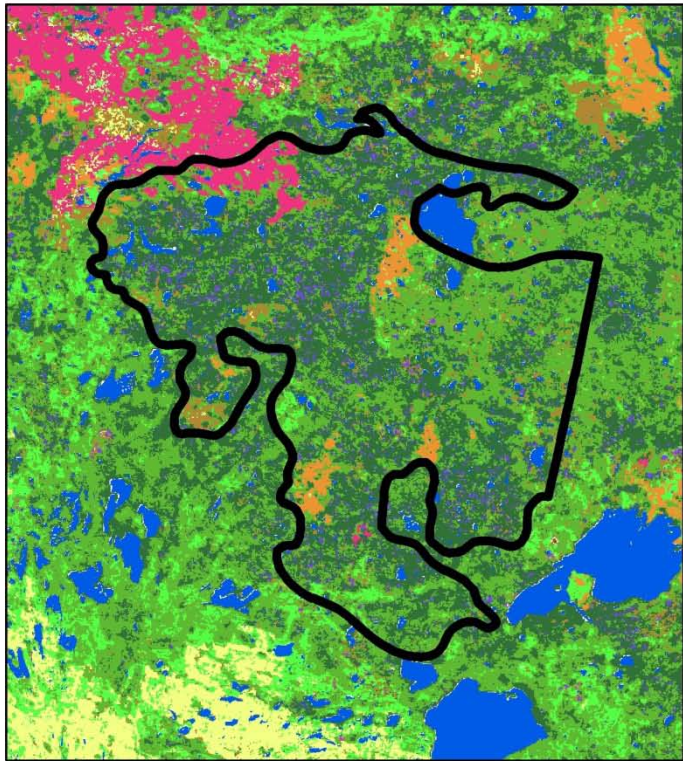
C) **Type:** Biophysical attributes.

Table 1: Biophysical attributes of boreal caribou habitat in the Boreal Plains ecozone.

Type of selection	Description
Broad scale	Late seral-stage (> 50 yrs old) conifer forest (jack pine, black spruce, tamarack), treed peatlands, muskegs or bogs, use dry islands in the middle of muskegs, with abundant lichens. Hilly or higher ground and small lakes. Restricted primarily to peatland complexes. Elevations of 1135 m. Selected old (>40 yrs) burns.
Calving	Bogs and mature forests selected for calving as well as islands and small lakes. Peatlands and stands dominated by black spruce and lowland black spruce stands within muskeg are used for calving.
Post-calving	Forest stands older than 50 yrs. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands and muskeg are also selected during summer. Use lichen and low muskeg vegetation. In some areas, sites with abundant arboreal lichen are selected during summer.
Rutting	Mature forests. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands and muskeg during summer.
Winter	Treed peatlands, treed bog and treed fen and open fen complexes with > 50% peatland coverage with high abundance of lichens. Use of small lakes, rock outcrops on lakes for lichen access. Mature forest > 50 yrs old. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands.
Avoidance	Avoid upland and fen habitats, aspen dominated stands, immature stands and large rivers all year round. Avoid matrix-type habitat, including areas with abundant shrubs, disturbed/fragmented habitats, hardwood/deciduous dominated forest stands, and edge habitat. Avoid recent burns, main roads, seismic lines, well sites and areas with a high density of cut blocks. Avoidance of water.

Critical Habitat Identification: Cold Lake (Alberta)

D) Additional Information:



Landcover

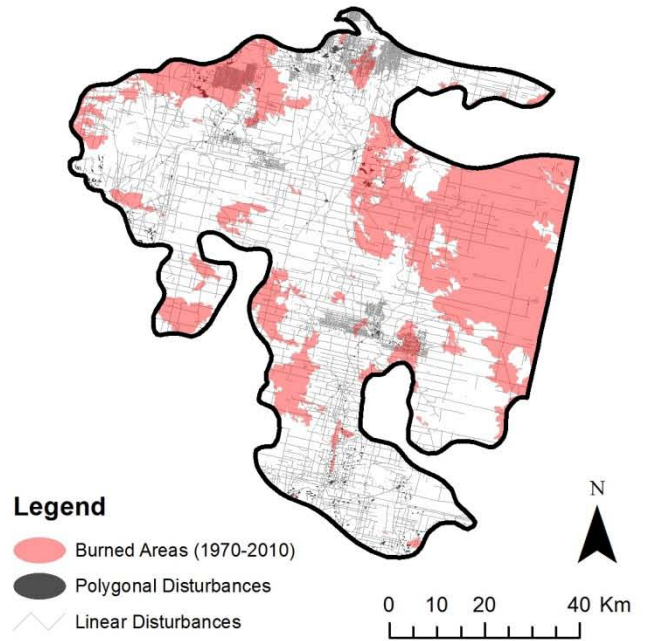
- | | | |
|-------------------|------------|--------------|
| Water | Shrub | Rock Outcrop |
| Coniferous Forest | Herbaceous | Recent Burn |
| Deciduous Forest | Wetland | Old Burn |
| Mixed Forest | Cropland | Built-Up |

MODIS 2005 Landcover (250m Pixels) (Generated by CCRS)

Legend reclassified by EC

With NTDB 1:250,000 Hydrology Layer

Disturbances Across Caribou Range



Legend

- Burned Areas (1970-2010)
- Polygonal Disturbances
- Linear Disturbances

*Based on fire data provided by jurisdictions

Disturbance Type and Amount:

Burned Areas = 32%

Buffered³ Anthropogenic (no reservoirs) = 72%

Total Habitat Disturbance = 85%⁴

³ Buffered means a 500m buffer is applied to linear and polygonal disturbances.

⁴ Total Habitat Disturbance is non-overlapping which means anthropogenic disturbances and burned areas that overlap are not counted twice in the total.

Critical Habitat Identification: Nipisi (Alberta)

The identification of critical habitat for boreal caribou is described by three factors for each local population: i) Location of habitat; ii) Amount of habitat; and iii) Type of habitat.

A) **Location:** Where critical habitat is found.



Figure 1: Keymap of the general location of the local population (in red).



Figure 2: The geographic boundary within which critical habitat is located (in grey).

B) **Amount:** Quantity of critical habitat.

Table 1: Range Attributes and the Amount of Habitat Required

Range Attributes	Range Size	210,771 ha
	Population size	55
	Population trend	Unknown
	Total Habitat Disturbance	143,324 ha
Range Assessment	Assessment of the current condition of the range to support a self-sustaining local population	Not Self-Sustaining
Determination of Amount of Habitat	A) Range Size	210,771 ha (100%)
	B) Total Habitat Disturbance ¹	143,324 ha (68%)
	C) Undisturbed Habitat, Initial Critical Habitat ²	67,447 ha (32%)

¹ Total Habitat Disturbance reflects loss of functional habitat. It will be more than the associated disturbance footprint (e.g. 100 ha footprint could lead to 400 ha loss of functional habitat).

² The initial Critical Habitat is the current amount of undisturbed habitat. This may be decreased over time, if demonstrated that local populations are being stabilized.

Critical Habitat Identification: Nipisi (Alberta)

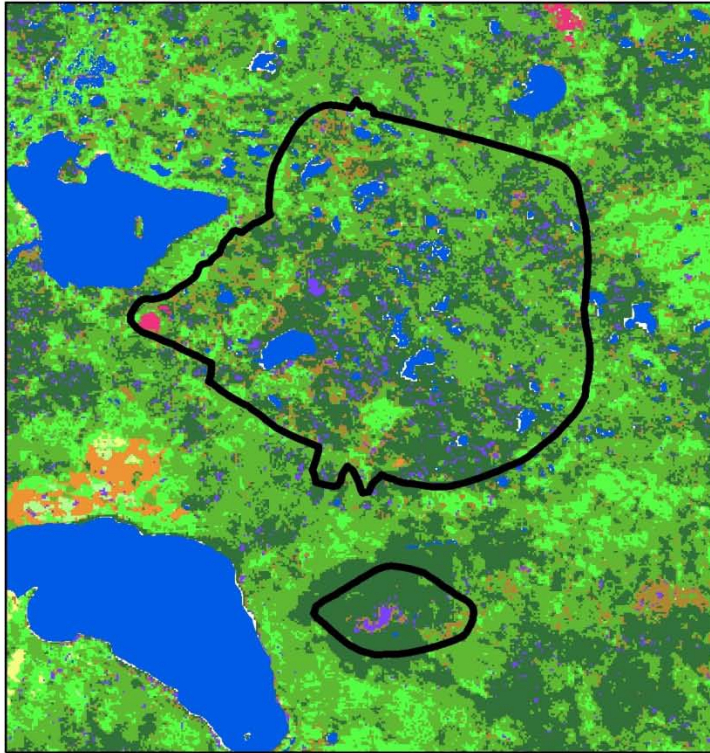
C) **Type:** Biophysical attributes.

Table 1: Biophysical attributes of boreal caribou habitat in the Boreal Plains ecozone.

Type of selection	Description
Broad scale	Late seral-stage (> 50 yrs old) conifer forest (jack pine, black spruce, tamarack), treed peatlands, muskegs or bogs, use dry islands in the middle of muskegs, with abundant lichens. Hilly or higher ground and small lakes. Restricted primarily to peatland complexes. Elevations of 1135 m. Selected old (>40 yrs) burns.
Calving	Bogs and mature forests selected for calving as well as islands and small lakes. Peatlands and stands dominated by black spruce and lowland black spruce stands within muskeg are used for calving.
Post-calving	Forest stands older than 50 yrs. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands and muskeg are also selected during summer. Use lichen and low muskeg vegetation. In some areas, sites with abundant arboreal lichen are selected during summer.
Rutting	Mature forests. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands and muskeg during summer.
Winter	Treed peatlands, treed bog and treed fen and open fen complexes with > 50% peatland coverage with high abundance of lichens. Use of small lakes, rock outcrops on lakes for lichen access. Mature forest > 50 yrs old. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands.
Avoidance	Avoid upland and fen habitats, aspen dominated stands, immature stands and large rivers all year round. Avoid matrix-type habitat, including areas with abundant shrubs, disturbed/fragemented habitats, hardwood/deciduous dominated forest stands, and edge habitat. Avoid recent burns, main roads, seismic lines, well sites and areas with a high density of cut blocks. Avoidance of water.

Critical Habitat Identification: Nipisi (Alberta)

D) Additional Information:

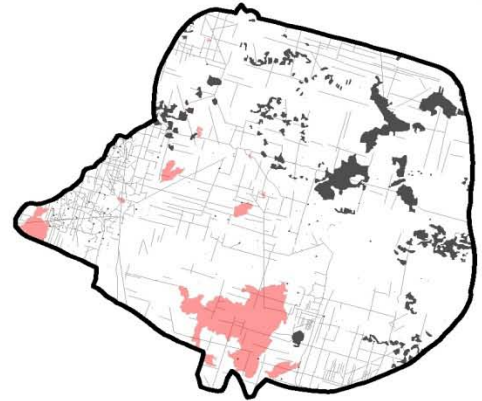


Landcover

- | | | |
|-------------------|------------|--------------|
| Water | Shrub | Rock Outcrop |
| Coniferous Forest | Herbaceous | Recent Burn |
| Deciduous Forest | Wetland | Old Burn |
| Mixed Forest | Cropland | Built-Up |

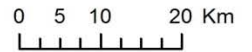
MODIS 2005 Landcover (250m Pixels) (Generated by CCRS)
 Legend reclassified by EC
 With NTDB 1:250,000 Hydrology Layer

Disturbances Across Caribou Range



Legend

- Burned Areas (1970-2010)
- Polygonal Disturbances
- Linear Disturbances



*Based on fire data provided by jurisdictions

Disturbance Type and Amount:

Burned Areas = 6%

Buffered³ Anthropogenic (no reservoirs) = 66%

Total Habitat Disturbance = 68%⁴

³ Buffered means a 500m buffer is applied to linear and polygonal disturbances.

⁴ Total Habitat Disturbance is non-overlapping which means anthropogenic disturbances and burned areas that overlap are not counted twice in the total.

Critical Habitat Identification: Slave Lake (Alberta)

The identification of critical habitat for boreal caribou is described by three factors for each local population: i) Location of habitat; ii) Amount of habitat; and iii) Type of habitat.

A) **Location:** Where critical habitat is found.



Figure 1: Keymap of the general location of the local population (in red).

Figure 2: The geographic boundary within which critical habitat is located (in grey).

B) **Amount:** Quantity of critical habitat.

Table 1: Range Attributes and the Amount of Habitat Required

Range Attributes	Range Size	151,904 ha
	Population size	65
	Population trend	Unknown
	Total Habitat Disturbance	121,523 ha
Range Assessment	Assessment of the current condition of the range to support a self-sustaining local population	Not Self-Sustaining
Determination of Amount of Habitat	A) Range Size	151,904 ha (100%)
	B) Total Habitat Disturbance ¹	121,523 ha (80%)
	C) Undisturbed Habitat, Initial Critical Habitat ²	30,381 ha (20%)

¹ Total Habitat Disturbance reflects loss of functional habitat. It will be more than the associated disturbance footprint (e.g. 100 ha footprint could lead to 400 ha loss of functional habitat).

² The initial Critical Habitat is the current amount of undisturbed habitat. This may be decreased over time, if demonstrated that local populations are being stabilized.

Critical Habitat Identification: Slave Lake (Alberta)

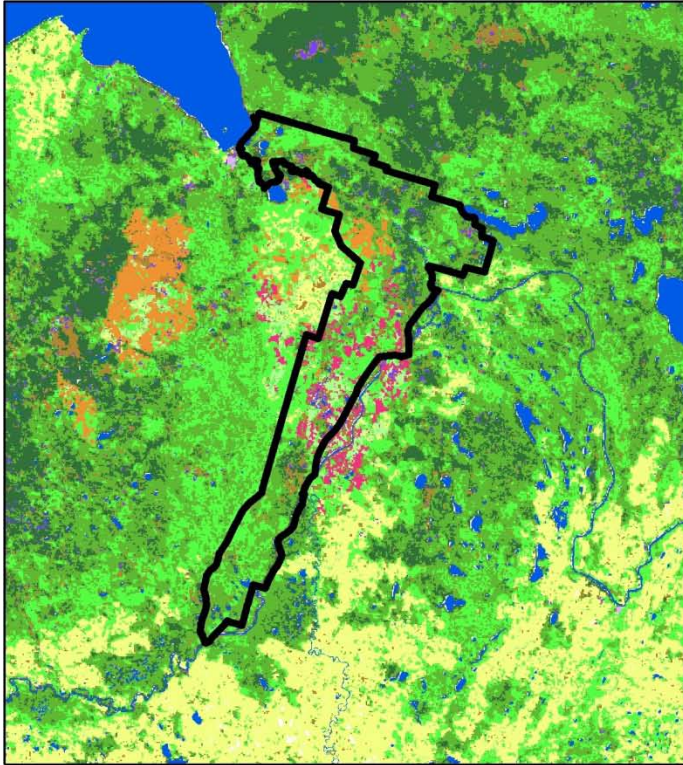
C) **Type:** Biophysical attributes.

Table 1: Biophysical attributes of boreal caribou habitat in the Boreal Plains ecozone.

Type of selection	Description
Broad scale	Late seral-stage (> 50 yrs old) conifer forest (jack pine, black spruce, tamarack), treed peatlands, muskegs or bogs, use dry islands in the middle of muskegs, with abundant lichens. Hilly or higher ground and small lakes. Restricted primarily to peatland complexes. Elevations of 1135 m. Selected old (>40 yrs) burns.
Calving	Bogs and mature forests selected for calving as well as islands and small lakes. Peatlands and stands dominated by black spruce and lowland black spruce stands within muskeg are used for calving.
Post-calving	Forest stands older than 50 yrs. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands and muskeg are also selected during summer. Use lichen and low muskeg vegetation. In some areas, sites with abundant arboreal lichen are selected during summer.
Rutting	Mature forests. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands and muskeg during summer.
Winter	Treed peatlands, treed bog and treed fen and open fen complexes with > 50% peatland coverage with high abundance of lichens. Use of small lakes, rock outcrops on lakes for lichen access. Mature forest > 50 yrs old. Upland black spruce/jack pine forests, lowland black spruce, young jack pine and open and treed peatlands.
Avoidance	Avoid upland and fen habitats, aspen dominated stands, immature stands and large rivers all year round. Avoid matrix-type habitat, including areas with abundant shrubs, disturbed/fragmented habitats, hardwood/deciduous dominated forest stands, and edge habitat. Avoid recent burns, main roads, seismic lines, well sites and areas with a high density of cut blocks. Avoidance of water.

Critical Habitat Identification: Slave Lake (Alberta)

D) Additional Information:

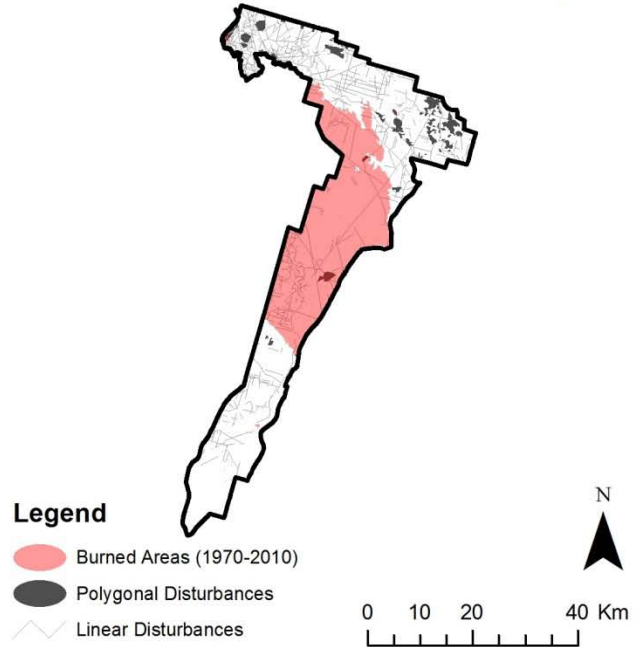


Landcover

- | | | |
|-------------------|------------|--------------|
| Water | Shrub | Rock Outcrop |
| Coniferous Forest | Herbaceous | Recent Burn |
| Deciduous Forest | Wetland | Old Burn |
| Mixed Forest | Cropland | Built-Up |

MODIS 2005 Landcover (250m Pixels) (Generated by CCRS)
 Legend reclassified by EC
 With NTDB 1:250,000 Hydrology Layer

Disturbances Across Caribou Range



Legend

- Burned Areas (1970-2010)
- Polygonal Disturbances
- Linear Disturbances

*Based on fire data provided by jurisdictions

Disturbance Type and Amount:

- Burned Areas = 37%
- Buffered³ Anthropogenic (no reservoirs) = 63%
- Total Habitat Disturbance = 80%⁴

³ Buffered means a 500m buffer is applied to linear and polygonal disturbances.

⁴ Total Habitat Disturbance is non-overlapping which means anthropogenic disturbances and burned areas that overlap are not counted twice in the total.