



Woodland Caribou in the Boreal Shield (SK1): Background Information

Woodland caribou are an integral part of Saskatchewan’s forests and a culturally significant species to Indigenous peoples. Woodland caribou rely on older conifer forests and peatlands and are impacted by disturbances including industrial activity, roads, forest harvest and wildfire.

A summary of current knowledge

This document outlines Saskatchewan’s current understanding of woodland caribou populations and habitat conditions in the Boreal Shield (SK1). The material is for discussion. New information will be included through the SK1 range planning process.



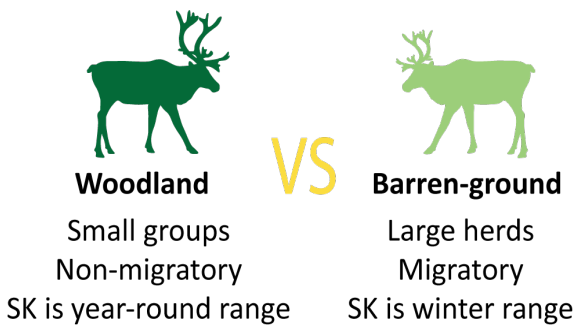
SK1 covers the largest area of woodland caribou range in Saskatchewan and will be the next range plan to be developed.

The SK1 Landscape

The SK1 Caribou Conservation Unit roughly follows the Boreal Shield ecozone in Saskatchewan and overlaps the traditional territories of the Dene and Cree and the home of the Métis. It encompasses rocky shield, sandy plains and varying topography of the Athabasca Plain ecoregion in the northwest and Churchill River Upland ecoregion in the southeast.

The forest of the Boreal Shield is shaped by some of the highest rates of wildfire in Canada. Compared with the Boreal Plain (SK2), the amount and intensity of land use activities are much lower, resulting in large areas with limited human-caused habitat alteration.

The Current Situation for Woodland Caribou



Woodland caribou have experienced declines through much of their range in Canada and were listed as threatened under the federal *Species at Risk Act* in 2002.

The population size for SK1 is estimated to be approximately 4,000 animals, based on a study of radio-collared caribou from 2015-18 (McLoughlin et al. 2019). This population is currently considered stable. Ongoing monitoring will be needed to confirm population status and trends. Land user caribou observations can assist in understanding caribou occupancy.

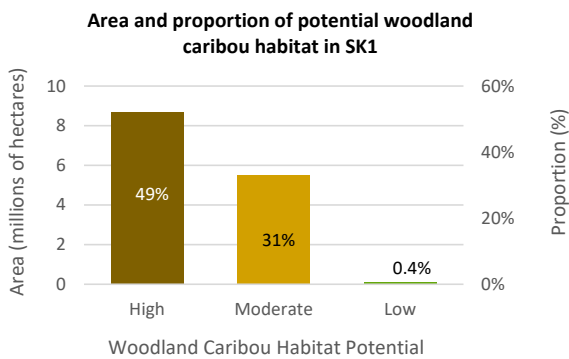
Woodland Caribou Ecology and Habitat

Woodland caribou inhabit forested regions at low densities and have slow population growth as females normally only have one calf per year.

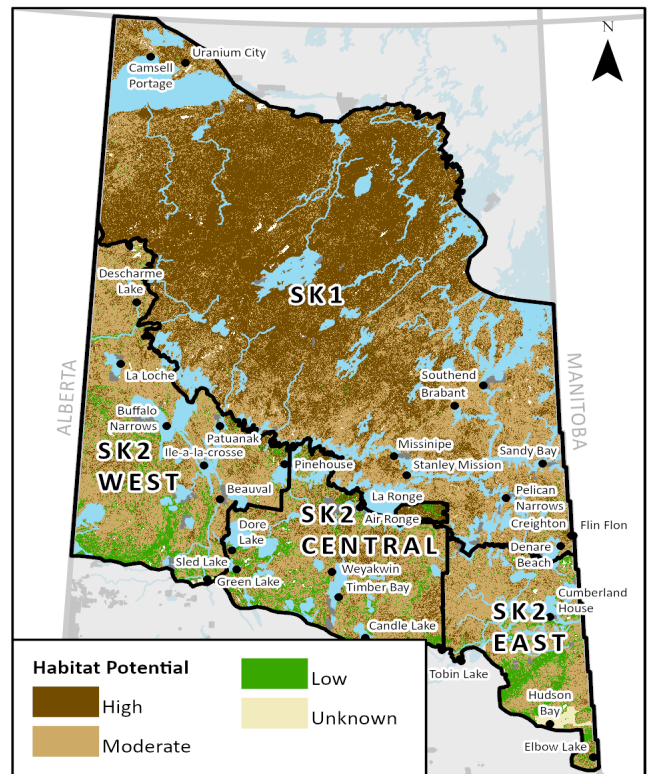
In SK1, at the population scale, caribou select for black spruce bogs, open wetlands, and mature jack pine and black spruce forests (McLoughlin et al. 2019), although use varies seasonally.

Maintaining connections between habitat patches is important for woodland caribou. Habitat connectivity facilitates movement in response to disturbance and resource needs. In SK1, it is predicted that increases in human-caused disturbance could lead to uncertain future population status (ECCC 2020). Currently, landscape scale genetic analysis indicates that discrete caribou population boundaries do not exist across Saskatchewan.

Woodland caribou habitat potential (high, moderate, low) has been identified within SK1. Habitat potential refers to the capability of a habitat type to support a species for its various life cycle requirements, not considering current disturbance (e.g. recently burned, harvested or affected by human development).



Most of SK1 is comprised of moderate or high potential habitat, while caribou range in the Boreal Plain (SK2) has a larger amount of low potential habitat.



Land Uses and Industry

Land uses in SK1 include traditional harvesting, mineral exploration and development, trapping, commercial and recreational fishing, hunting and adventure seeking, and forest harvesting. These land uses are based on the abundant natural resources of the region.

Traditional Land Use

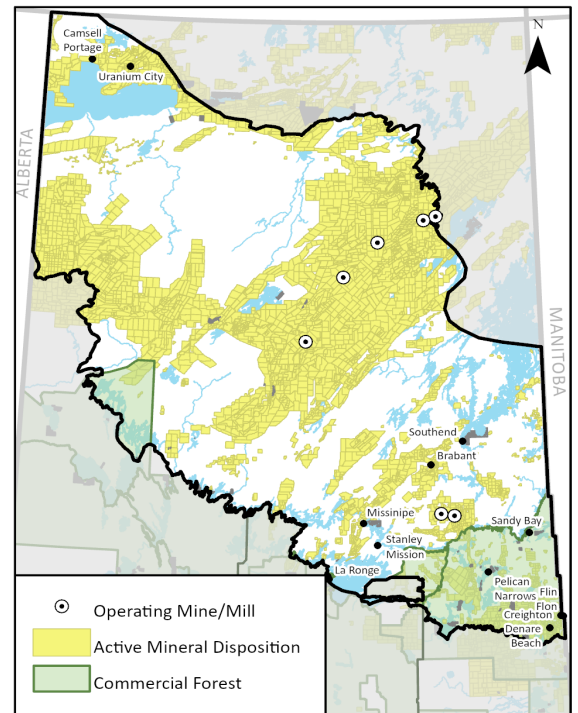
- Hunting, fishing and trapping are important activities for subsistence harvesting, cultural activities and recreation.

Mineral Exploration and Development

- Approximately 4,700 active mineral dispositions with 44 advanced exploration projects.
- There are seven operating mines and mills, one mine in care and maintenance and 37 closed mines.
- Uranium and gold are currently the main commodities.

Forestry

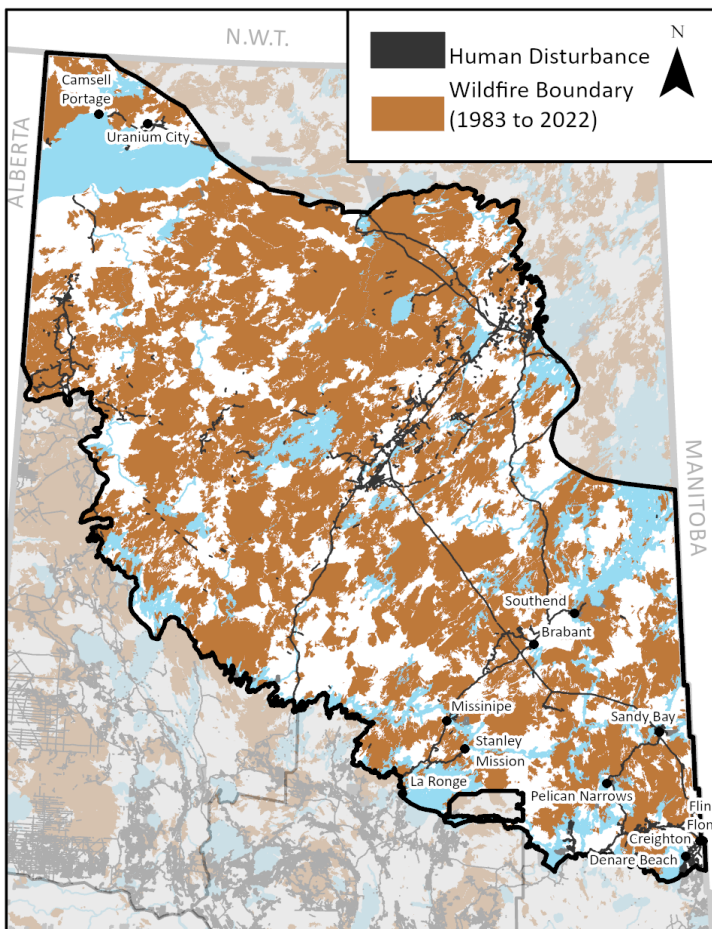
- Ten per cent of SK1 is available for licensing for forest harvesting in the commercial forest zone.



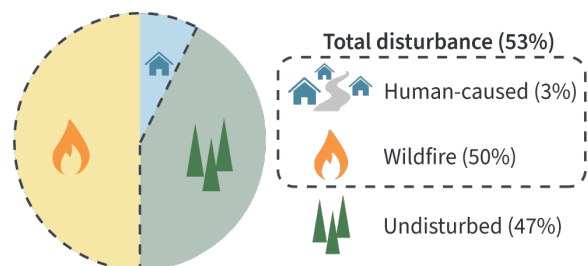
Note: Mineral dispositions are granted by the province and provide the exclusive right to explore for Crown minerals although they do not provide a right to surface access.

Preliminary Disturbance Assessment

The amended federal recovery strategy specifies a unique disturbance threshold of 40 per cent undisturbed habitat for SK1. Habitat disturbance is assessed by the combination of human-caused disturbance (e.g. roads, industrial infrastructure) with a 500 metre buffer and wildfire perimeters (less than 40 years old). Based on the federal assessment, an estimated 53 per cent of SK1 is considered disturbed, with 47 per cent undisturbed.



Disturbance in SK1:



There are limitations to provincial and federal government data for disturbance assessment. Available data for human-caused disturbances are not current, do not consistently include small features and do not consider regeneration. Available wildfire data accurately represents wildfire perimeters but burn severity (residuals) has only been mapped since 1988.

What is the Future Situation in SK1?

The Government of Saskatchewan is committed to sustainable growth of the economy and managing and protecting the environment for the well-being of the province and its people. The goal of the SK1 range plan is to achieve and maintain a self-sustaining woodland caribou population by managing habitat, while acknowledging traditional land use and allowing for continued economic activity in northern Saskatchewan.

A Plan for Economic Growth

- Double the number of critical minerals being produced and increase the annual value of uranium sales to \$2 billion.
- Double the growth of Saskatchewan's forestry sector.
- Increase mineral exploration.



A Focus on Sustainability

- Increase the area that is protected by a network of conservation lands.
- Ensure commercial forests are sustainably harvested and managed.
- Ensure critical habitats are identified and managed to support continued use by sensitive species.



Future risks to caribou are expected to include increasing levels of human land use and climate change. Increased interest in exploring for and developing critical minerals may result in higher levels of sensory and habitat disturbance. The expansion of forest harvesting into the southern part of SK1 may lead to higher habitat disturbance. Climate change is expected to lead to degradation and loss of caribou habitat, increased frequency and extent of wildfires related to reduced precipitation and increased temperatures, changes in snow pack and ice conditions, and new risks for caribou health.

Setting the Stage for the SK1 Range Plan

This document summarizes key information for the SK1 range planning area. The Ministry of Environment recognizes there are gaps in its understanding of caribou populations and habitat use in SK1. Traditional Indigenous or local knowledge from SK1 communities and land users is not currently included. Additional knowledge will improve the understanding of caribou and caribou habitat to support the management and conservation of caribou in SK1.

For further information or to be involved in the SK1 Planning Table, contact woodlandcaribouproject@gov.sk.ca

Literature Cited

Environment and Climate Change Canada. 2020. Amended recovery strategy for the woodland caribou (*Rangifer tarandus caribou*), Boreal population, in Canada. Species at Risk Act Recovery Strategy Series. Environment and Climate Change Canada, Ottawa. xiii + 143pp

McLoughlin, P.D., Superbie, C., Stewart, K., Tomchuk, P., Neufeld, B., Barks, D., Perry, T., Greuel, R., Regan, C., Truchon-Savard, A., Hart, S., Henkelman, J., and J.F. Johnstone. 2019. Population and habitat ecology of boreal caribou and their predators in the Saskatchewan Boreal Shield. Final Report. Department of Biology, University of Saskatchewan, Saskatoon. 238 pp.

To learn more about woodland caribou and range planning in Saskatchewan visit saskatchewan.ca/environment