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Wood Bison (*Bison bison athabasca*)

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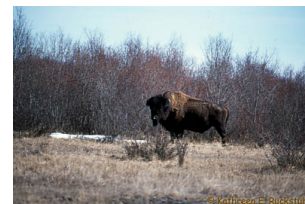
Permits **17**

- 2022 1
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Footnotes

Species summary

COSEWIC scientific name	<i>Bison bison athabasca</i>
Taxonomic group	Mammals (terrestrial)
Range	Alberta, British Columbia, Manitoba, Northwest Territories, Yukon



Legal list

Legal common name	Wood Bison
Date added	June 5, 2003
Status on Schedule 1	Threatened
SARA status history	This species was initially assessed as "Threatened". In 2003, the species was added to Schedule 1 with the same status. In November 2013, the species was reassessed by COSEWIC and its status was changed for "Special Concern".
GIC decision	Add

COSEWIC assessment

COSEWIC common name	Wood Bison
COSEWIC scientific name	<i>Bison bison athabasca</i>
Previous common names	Buffalo
Last assessment date and status change	November 2013 (in a lower risk category)
COSEWIC status	Special Concern
COSEWIC status history	Designated Endangered in April 1978. Status re-examined and designated Threatened in

COSEWIC reason for designation

April 1988 and May 2000. Status re-examined and designated Special Concern in November 2013.

This bison only occurs in the wild in Canada. There are currently 5,136 to 7,172 mature individuals in nine isolated wild subpopulations. The population has increased since 1987, mostly due to the establishment of new wild subpopulations within the original range. About 60% of the overall population is included in Wood Buffalo National Park and surrounding areas, and is affected by two cattle diseases, bovine brucellosis and tuberculosis. Two wild subpopulations have recently experienced significant mortality events demonstrating the inherent vulnerability of small isolated populations. The Mackenzie herd decreased by 53% due to an outbreak of anthrax and the Hay-Zama decreased by 20% due to starvation during a severe winter. Further increases to the population size or the addition of new wild subpopulations is not likely, as recovery is constrained by fragmented or unsuitable habitat, road mortality, disease management associated with livestock and commercial bison

Show less

Last minister's receipt date

October 15, 2014

Species details

On this page, you will learn about the life cycle of this wildlife species. You can access different types of information about this species and how it relates to the Species at Risk Act.

Description

The Wood Bison is the largest Canadian terrestrial mammal. It is dark brown, with a massive head, a high hump on its large shoulders, and long shaggy hair on its shoulders and front legs. The short legs end in rounded hooves. The short and black horns curve inward on the males, but are straight on the females. There are two moults every year, one in the spring and one in the fall. The males are larger than the females; an adult male measures 3.04 to 3.8 m in length and 1.67 to 1.82 m in height (at the shoulders), and weighs between 350 and 1000 kg. Wood Bison are generally taller and less stocky than Plains Bison. Both Wood and Plains Bison are considered by some to be subspecies of the American Bison, but their actual systematic status is unclear and controversial.

Distribution and population

The Wood Bison, considered a northern subspecies of the American Bison, is a Canadian endemic (occurs only in Canada). In the past, it was found in northeastern British Columbia, northern Alberta, northwestern Saskatchewan, Yukon, and southwestern Northwest Territories. Today, there are herds of wood bison in Alberta, Manitoba, British Columbia, Yukon, and southwestern Northwest Territories. A recovery program established in 1957 has aided the population of Wood Bison to increase from 200 in 1957, to over 3,000 free-roaming bison in 1999. Historical estimates suggest that there once were over 168,000 Wood Bison in Canada. The latest population estimates count 3,536 bison, with 2,828 in

the wild and 708 in captivity, free of brucellosis and tuberculosis. There are six populations in the wild and four captive breeding herds. Two wild herds exceed the minimum viable population of 400 individuals. In 2000, the species was re-examined using new criteria and reaffirmed as threatened.

Habitat

Wood Bison are found in the open boreal and aspen forests where there are large wet meadows and slight depressions caused by ancient lakes. The population in the Mackenzie Bison Sanctuary (NWT) uses wet meadows and willow savannas in summer and winter and forests in the fall.

Biology

The Wood Bison is a long-lived species, living up to 40 years. Both males and females reach sexual maturity at 2-4 years of age, but males usually mate at about 6 years of age or older - when they can compete with larger bulls for females. The rut is in August and early September. After a gestation period of 270 to 300 days, cows give birth to a single red calf in May; twins are rare. Females usually give birth twice in three years. Wood Bison feed mainly on sedges and grasses, but also on the leaves and bark of trees and shrubs (primarily willow) and lichens. The wolf is the bison's main predator (other than humans), but newborn calves can be taken by bears.

Threats

Disease (anthrax, brucellosis, and tuberculosis), cross-breeding with Plains Bison, and habitat loss through human development, agriculture,

and forestry and petroleum resource development are the main threats faced by Wood Bison. Anthrax is a fatal disease for herbivores, that is contracted through bacteria found where the ground has been contaminated by infected carcasses. Anthrax was a major cause of death for the Wood Bison before 1978 and could easily recur, especially in particularly wet years. The Wood Bison in Wood Buffalo National Park were infected with bovine tuberculosis and brucellosis (and began hybridizing) when Plains Bison were moved to the park from 1925-1928. The Plains Bison had contracted the two diseases from domestic cattle with which they had been held, and during cross-breeding experiments. Wood Bison can drown during spring floods or when they venture onto thin ice; in 1961 and 1974 several hundred bison drowned in a flood. These events likely do not affect bison populations over the long term. However, the periodic floods supplied water to elevated ponds and wet meadows where the bison feed. With the construction of the W.A.C. Bennett Dam, flooding has been largely controlled and the meadows and ponds have dried. As a result, the vegetation has converted from sedges, which provided important winter forage, to grasses and shrubs, which are thought to be less suitable as food. The conversion of lands for agriculture or other development has limited the habitat of the Wood Bison. Biting insects are a problem for the herds in captivity, since their movements are restricted by fences and they thus cannot escape the insects; this has resulted in reproduction problems and mortality. Also, so-called pure blood Wood Bison are kept apart from Plains Bison and bison hybrids to protect the genetic integrity of the subspecies. This limits the habitat which can be used to reintroduce the Wood Bison, since part of the habitat is occupied by other bison.

Protection

SARA contains provisions that allow for the protection of certain listed species at risk individuals, their residences as well as their critical habitat. The responsibility for conservation of species at risk is shared by all jurisdictions in Canada. The Act recognizes this joint responsibility and that all Canadians have a role to play in the protection of wildlife. More information about SARA, including how it protects individual species, is available in [A guide to your responsibilities under the Species at Risk Act](#). For information on how provincial or territorial laws protect the species, consult the provinces' and territories' websites.

Recovery initiatives

Status of recovery planning

Summary of Progress to Date

Historically Wood Bison ranged throughout the boreal forest of northern Alberta, northeastern British Columbia, northwestern Saskatchewan, the southwestern Northwest Territories, and much of Yukon and Alaska. In the early 1800s, Wood Bison numbers were estimated at 168,000 animals, but by the late 1800s only a few hundred animals remained. In 1978, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assessed Wood Bison as Endangered. As a result of an active recovery program, Wood Bison were reassessed as Threatened by COSEWIC in 2000. Since then numbers have continued to increase. As of 2006, there were an estimated 4188 Wood Bison in seven free-ranging, disease-free herds, 6216 animals in four diseased, free-ranging herds, and 1029 animals in captive conservation (public and private) and research herds.

Summary of Research/Monitoring Activities

The Wood Bison Reproduction Research Group was established in 2006 to further collaboration among the University of Saskatchewan, University of Calgary, Calgary Zoo, Government of the Northwest Territories, and the Parks Canada Agency. The objective of the research program is to characterize and understand the reproductive cycle in bison and to further develop reproductive technologies for the conservation of valuable genetic material from diseased wood bison populations. Three male and 15 female wood bison are being raised in captivity at the Western College of Veterinary Medicine, University of Saskatchewan, as part of these studies.

Other studies are underway to address the management of genetic diversity for captive and free-ranging bison herds.

Summary of Recovery Activities

The Government of the Northwest Territories has initiated an enhanced disease surveillance program for the Mackenzie and Nahanni herds to confirm the disease-free status established through previous ongoing testing efforts.

In March 2006, the Hook Lake Wood Bison Recovery Project was terminated and the herd was destroyed after Tuberculosis was detected in one of the founder animals and several captive born bison.

In various locations, captive herds are being maintained to provide stock for reintroductions, free-ranging populations are being protected, and the growth of small, disease-free, populations is being promoted.

In April 2006, 30 surplus wood bison calves were transferred from Elk Island National Park to Lenski Stolby Nature Park near Yakutsk, Sakha Republic (Yakutia), Russia. This project was supported by the Recovery Team on the basis of contributing to the global security of wood bison. It

was considered an additional opportunity to secure survival of the subspecies within a geographically separate population.

URLs

Parks Canada: Elk Island National Park of Canada:

www.pc.gc.ca/pn-np/ab/elkisland/natcul/natcul1biii_E.asp

Hinterland Who's Who: North American Bison:

www.hww.ca/hww2.asp?cid=8&id=97

Yukon Wood Bison:

<http://www.yfwmb.yk.ca/comanagement/mgmtplans/bisonplan/yukon.html>

Wildlife at Risk in BC: Wood Bison:

<http://www.env.gov.bc.ca/wld/documents/wbison.pdf>

Recovery team

Bison Recovery Team

Cormack Gates

Chair/Contact

University or college

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Fax: (403) 284-4399

ccgates@nucleus.com

Documents

9

COSEWIC Annual Reports

1

COSEWIC Annual Report - 2013-2014

Under Canada's *Species at Risk Act* (SARA), the foremost function of COSEWIC is to "assess the status of each wildlife species considered by COSEWIC to be at ri...

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Attachments:

COSEWIC Annual Report - 2013-2014 (2014-10-14)

[pdf](#) | [html](#)

Document type:

COSEWIC Annual Reports

COSEWIC Status Reports

1

COSEWIC Assessment and Status Report on the Plains Bison *Bison bison bison* and the Wood Bison *Bison bison athabasca* in Canada

The American bison is a member of the wild cattle family and is the largest land mammal in North America. The two recognized subspecies--Plains Bison (

Show more

Attachments:

COSEWIC Assessment and Status Report on the Plains Bison *Bison bison bison* and the Wood Bison *Bison bison athabasca* in Canada (2014-10-15)

[pdf](#) | [html](#)

Document type:

COSEWIC Status Reports

Conservation Agreements

1

Canada Alberta conservation agreement for the Wabasca and Ronald Lake Bison Herds: In support of Wood Bison recovery in Alberta



Conserving wildlife is integral to Canada's culture and natural environment and supports our health and economy. The Government of Canada is committed to working with the p...

Show more

Attachments:

Canada Alberta conservation agreement for the Wabasca and Ronald Lake Bison Herds: In support of Wood Bison recovery in Alberta (2020-06-25)

[pdf](#) | [html](#)

Consultation period:

2021-06-25 to 2021-08-24

Document type:

Conservation Agreements

Consultation Documents

1

Consultation on Amending the List of Species under the Species at Risk Act : Terrestrial Species - January 2015



The Government of Canada is committed to preventing the disappearance of wildlife species at risk from our lands. As part of its strategy for realizing that commitment, on ...

Show more

Attachments:

Consultation on Amending the List of Species under the Species at Risk Act : Terrestrial Species - January 2015 (2015-01-13)

[pdf](#) | [html](#)

Consultation period:

2015-01-13 to 2015-10-15

Document type:

Consultation Documents

Recovery Document Posting Plans

1

Environment and Climate Change Canada's Three-Year Recovery Document Posting Plan

Environment and Climate Change Canada's Three-Year Recovery Document Posting Plan identifies the species for which recovery documents will be posted each fiscal year starti...

Show more

Attachments:

Environment and Climate Change Canada's Three-Year Recovery Document Posting Plan (2016-07-06)

[pdf](#) | [html](#)

Document type:

Recovery Document Posting Plans

Recovery Strategies

1

Recovery Strategy for the Wood Bison (*Bison bison athabasca*) in Canada



The Minister of Environment and Climate Change and Minister responsible for the Parks Canada Agency is the competent minister under the *Species at Risk Act* (SA...

Show more

Attachments:

Recovery Strategy for the Wood Bison (*Bison bison athabasca*) in Canada (2018-08-28) [pdf](#) | [html](#)

Recovery Strategy for the Wood Bison (*Bison bison athabasca*) in Canada [Proposed] (2016-05-06) [pdf](#) | [html](#)

Consultation period:

2016-05-06 to 2016-07-05

Document type:

Recovery Strategies

Document recovery status:

Final

Related Information

2

Environment and Climate Change Canada's Species at Risk Act (SARA) Listing Plan 2016 to 2018

The status of wildlife species is assessed by an independent panel of expert Canadian scientists, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

Show more

Attachments:

Environment and Climate Change Canada's Species at Risk Act (SARA) Listing Plan 2016 to 2018 (2017-09-29) [pdf](#) | [html](#)

Document type:

Related Information

Imminent Threat Assessment for Wood Bison (*Bison bison athabasca*)

On January 29, 2020, the Minister of Environment and Climate Change announced that he had determined that Wood Bison are facing imminent threats to their recovery. The full...

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Attachments:

Imminent Threat Assessment for Wood Bison (<i>Bison bison athabasca</i>) (2021-06-08)	pdf html
Imminent Threat Assessment for Wood Bison (<i>Bison bison athabasca</i>) [Superseded] (2021-02-25)	pdf html
Summary of the imminent threat assessment for the Wood Bison (2020-01-29)	pdf html

Document type:

Related Information

Response Statements

1

Response Statement - Wood Bison (2015)

This bison only occurs in the wild in Canada. There are currently 5,136 to 7,172 mature individuals in nine isolated wild subpopulations. The population has increased since 19...

Show more

Attachments:

Wood Bison (2015) - Response Statement (2015-01-13)	pdf html
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Document type:

Response Statements

Permits

17

2022

1

Explanation for issuing permit (SARA-PNR-2022-0644) pursuant to the provisions of section 73 of SARA - Wood Bison



This permit authorizes the permit holder to handle and be in possession of Wood Bison (*Bison bison athabasca*) individuals at the Edmonton International Airport for the pur...

Show more

Issuing authority:

Environment Canada

Permit period:

2022-03-01 to 2025-02-28

2021

1

Explanation for issuing permit (WB-2020-37479) pursuant to the provisions of section 74 of SARA - Wood Bison



Wood Bison movement, home range size, and habitat use in the southern region of Wood Buffalo National Park will be tracked by fitting adult and sub-adult cow and bull bison...

Show more

Issuing authority:

Parks Canada Agency

Permit period:

Explanation for issuing permit (WB-2020-36397) pursuant to the provisions of section 74 of SARA - Wood Bison



The viability of bison populations can be affected by factors such as population size, level of inbreeding, genetic diversity, differential reproductive success and gene fl...

Show more

Issuing authority:

Parks Canada Agency

Permit period:

2020-08-15 to 2021-04-01

Explanation for issuing permit (SARA-PNR-2020-0528) pursuant to the provisions of section 73 of SARA - Wood Bison



This permit authorizes the permit holder to handle and be in the possession of Wood Bison (*Bison bison athabasca*) individuals at the Edmonton International Airport for the...

Show more

Issuing authority:

Environment Canada

Permit period:

2020-02-28 to 2022-05-01

Explanation for issuing permit (WBNP-2019-31478) pursuant to the provisions of section 74 of SARA - Wood Bison

This permit continues work started in 2018 under permit WBNP-2018-27578. There is concern that the development of a mine 30km from the southern boundary of the park will pu...

Show more

Issuing authority:

Parks Canada Agency

Permit period:

2019-03-29 to 2019-03-31

Explanation for issuing permit (WB-2018-27578) pursuant to the provisions of section 74 of SARA - Wood Bison

There is concern that the development of a mine 30km from the southern boundary of the park will push the Ronald Lake bison herd, which is disease-free and genetically pure...

Show more

Issuing authority:

Parks Canada Agency

Permit period:

2018-03-24 to 2018-03-31

Explanation for issuing permit (EINP-2018-001) pursuant to the provisions of section 74 of SARA - Wood Bison



The removal of surplus wood bison from Elk Island National Park is necessary to mitigate possible adverse impacts of a hyperabundant species on the ecological integrity and...

Show more

Issuing authority:

Parks Canada Agency

Permit period:

2018-02-20 to 2020-04-01

2015

1

Explanation for issuing permit (WB-2015-18571) pursuant to the provisions of section 74 of SARA - Wood Bison



Reconnaissance flights will be carried out by fixed wing in late June or early July, to locate large, mixed groups of bison. During the segregation count, a helicopter wil...

Show more

Issuing authority:

Parks Canada Agency

Permit period:

2015-06-15 to 2017-12-31

2013

1

Explanation for issuing permit (EINP-2013-001) pursuant to the provisions of section 74 of SARA - Wood Bison



Large grazing herbivores such as the northern bison that once roamed the landscape are now absent from the Sakha Republic. Sakha's goal is to restore the closest living anc...

Show more

Issuing authority:

Parks Canada Agency

Permit period:

2013-02-05 to 2013-03-30

2011

1

Explanation for issuing permit (WB-2011-8733) pursuant to the provisions of section 74 of SARA - Wood Bison



Reconnaissance flights will be carried out by fixed wing in late June or early July, to locate large, mixed groups of bison. During the segregation count, a helicopter wil...

Show more

Issuing authority:

Parks Canada Agency

Permit period:

2011-06-20 to 2013-07-15

2010

1

Explanation for issuing permit (10-01-56818) pursuant to the provisions of section 73 of SARA - Wood Bison



Thirty wood bison calves from the National Wood Bison Conservation Herd at Elk Island National Park (EINP) will be translocated to the Republic of Sakha, Russian Federation...

Show more

Issuing authority:

Parks Canada Agency

Permit period:

2010-06-01 to 2013-05-31

2009

1

Explanation for issuing permit (WB08-1006) pursuant to the provisions of section 74 of SARA - Whooping Crane, Wood Bison



The BBC is proposing to film Bison/wolf interactions in Wood Buffalo National Park for a new series, 'Our Frozen Planet'. The project is scheduled to begin in late Februar...

Show more

Issuing authority:

Parks Canada Agency

Permit period:

2009-02-16 to 2009-04-06

2008

2

Explanation for issuing permit (WB-2008-1719) pursuant to the provisions of section 74 of SARA - Whooping Crane, Wood Bison



An aerial reconnaissance will be carried out using a fixed wing to locate large mixed groups of bison and this will be followed up with a ground-based count. The ground-ba...

Show more

Issuing authority:

Parks Canada Agency

Permit period:

2008-07-20 to 2010-07-15

Explanation for issuing permit (EINP 2008-01) pursuant to the provisions of section 73 of SARA - Wood Bison



Elk Island National Park is a fenced environment preventing both the dispersal and predation of large mammals. Large mammal populations, including wood bison, must be acti...

Show more

Issuing authority:

Parks Canada Agency

Permit period:

2008-01-01 to 2010-12-31

Explanation for issuing permit (7) pursuant to the provisions of section 73 of SARA - Wood Bison



Transfer (possession) of Wood Bison at the Edmonton International Airport. This is an international cooperative conservation and recovery project between the Government of...

Show more

Issuing authority:

Environment Canada

Permit period:

2006-04-03 to 2006-04-30

Explanation for issuing permit (06-01-17529) pursuant to the provisions of section 74 of SARA - Wood Bison



Thirty wood bison calves from the National Wood Bison Conservation Herd at Elk Island National Park (EINP) will be translocated to the Republic of Sakha, Russian Federation...

Show more

Issuing authority:

Parks Canada Agency

Permit period:

2006-03-01 to 2007-02-28

Explanation for issuing permit (06-01-17530) pursuant to the provisions of section 74 of SARA - Wood Bison



Twenty-five wood bison calves from the National Wood Bison Conservation

Herd at Elk Island National Park (EINP) will be translocated to the Western College of Veterinary Me...

Show more

Issuing authority:

Parks Canada Agency

Permit period:

2006-03-01 to 2007-02-28

Footnotes

Date modified: 2021-02-02

-
- 1 COSEWIC wildlife species assessment: quantitative criteria and guidelines
-