

Northern Lights (Aurora borealis) over Pine Lake in moonlight, Wood Buffalo National Park, Alberta, Canada (Credit: Age Fotostock / Alamy Stock Photo)

## Wood Buffalo National Park, Canada

## Summary

Situated on the Boreal plains in the north-central region of Canada, Wood Buffalo National Park includes one of the world's largest inland delta systems located at the confluence of the Peace-Athabasca river systems and is home to the world's largest population of free-roaming wood bison. The area contains two Ramsar Sites covering a combined area of more than 2 million hectares, primarily within the 4,480,000 ha World Heritage property.

Wood Buffalo National Park is an outstanding example of ongoing ecological and biological processes encompassing some of the largest mostly undisturbed grass and sedge meadows left in North America. The large inland delta, salt plains and gypsum karst add to the Park's uniqueness. North of the Peace-Athabasca Delta, the Whooping Crane Summer Range Ramsar Site is comprised of a complex of marshes, shallow ponds, streams, lakes and bogs located near the northern limit of the Boreal Forest Region and west of the Canadian Shield. It is the only remaining natural nesting place of the endangered whooping crane.



The Park is composed of three river deltas and three large freshwater lakes with rich growths of aquatic vegetation and linked to Lake Athabasca by meandering river channels. Underlain by discontinuous permafrost, there are large expanses of open grass and sedge meadows interspersed with hundreds of perched wetland basins, giving rise to thousands of kilometres of shoreline during spring high water. The area is one of the most important nesting, resting and feeding areas for numerous species of waterbirds in North America. Up to 400,000 birds occur during spring migration, and more than one million occur in the fall. The delta meadows provide grazing for large herds of free-roaming bison, one of over 40 other mammals recorded.

The dual designations help safeguard the ecological character of the site and contribute to the delivery of several of the criteria which underpin the Outstanding Universal Value of the area. Maintaining and strengthening the cultural and traditional practices and knowledge of eleven local indigenous peoples (First Nations and Métis) living in the Park are vital in order to deliver on the wider conservation management objectives.

### Site Description

Located within the Boreal Forest Region, Wood Buffalo National Park spans the boundary of Alberta and the Northwest Territories of Canada, extending over an area of more than 44,800 km2. It is Canada's largest national park, the second largest national park in the world and considered an icon of the Canadian wilderness. The Park sustains the world's largest herd of wood bison and provides critical wetland habitats for the endangered whooping crane. Eleven First Nations and Métis peoples conduct traditional harvesting and wider activities which contribute to the significant cultural value of the area. Two Ramsar Sites are present within the Park, the Peace-Athabasca Delta in the south east and the Whooping Crane Summer Range in the north east. The Peace-Athabasca Delta comprises three large rivers and a series of freshwater lakes, meandering channels and wetlands. The entire delta complex is underlain by discontinuous permafrost resulting in an extraordinary series of perched basins and mosaics of wet meadows, flooded lakes and bare shorelines. The Whooping Crane Summer Range comprises a mosaic of marshes, shallow pools, streams, bogs and lakes.

# World Heritage and Ramsar designations

Inscribed on the World Heritage List as a result of outstanding ecological and biological processes, Wood Buffalo National Park encompasses some of the largest remaining undisturbed grass and sedge meadows in North America. The site qualifies under three Outstanding Universal Value criteria. The superlative concentrations of migratory wildlife and the exceptional inland delta, salt plains and gypsum karst are all equally internationally significant (Criterion vii). The Park represents the largest intact example of the Great Plains-Boreal grassland ecosystem and is the only place where the predator-prey relationship between wolves and wood bison has continued unbroken over time (Criterion ix). The northern reaches of the Park, within the Whooping Crane Summer Range Ramsar Site, represents the only breeding grounds in the world for whooping cranes (Criterion x). The sheer size of the Park contributes to the protection of entire ecosystems and the delivery of in situ conservation that form the basis for the Park's Outstanding Universal Value.

The Peace-Athabasca Delta, whilst only representing a relative small area of the larger National Park, still qualifies for inclusion on the List of Wetlands of International Importance through several criteria. The area is one of the largest boreal inland deltas in the world (Criterion 1) and supports species at risk, such as the wood bison (Criterion 2). The Delta, lying at the intersection of all four major North American migratory flyways, is also one the most important waterfowl nesting and staging areas in North America for ducks and geese on their way to their breeding grounds further north (Criterion 4). In spring up to 400,000 birds may use the Delta, and more than one million birds congregate in the area in the autumn (Criterion 5). The Whooping Crane Summer Range Ramsar Site qualifies as an example of a rare natural mosaic of wetland types

(Criterion 1) supporting internationally important numbers of waterbirds (Criterion 6). The area also qualifies based on the number of species, including 47 species of mammal, and range of ecological communities (Criteria 2, 3 and 4).

# The role of cultural values, practices and traditions in wetland conservation

The First Nations and Métis peoples have a long-standing and ongoing relationship with the land and eight First Nations reserves are present within the Park. Archaeological finds reveal that the human interactions extend back thousands of years. People from the Beaver, the Slavey, the Chipewyan and the Cree communities have inhabited the area for generations and to them the land represents a reservoir of knowledge that connects the inhabitants of today with their ancestors. Many of them continue their culture and traditional ways of life, including hunting and trapping and the gathering of berries and medicinal herbs.

Since the establishment of the National Park, the role of the traditional uses has represented a sometimes contentious rights-versus-privilege based issue. Rights have been formally recognised through a Supreme Court of Canada decision and this has led to collaborative revision of the Park's management practices grounded in mutual recognition, respect and trust. This approach has resulted in the incorporation of traditional knowledge with contemporary science in projects like the Peace-Athabasca Delta Ecological Monitoring Program, a response to growing concerns about the cumulative impact of development (flow regulation, pulp and paper mills, oil and gas exploration and extraction, forestry, and agriculture) and climate change on the delta. This Program includes First Nations and Métis governments, traditional harvesters, government, and non-governmental organizations and uses both science and traditional knowledge to measure, evaluate and communicate the state of the delta. Park management practices are also informed by the Co-operative Management Committee which consists of local First Nations and Métis governments and park management who work together on a variety of topics including: management planning, wildlife management, monitoring initiatives, tourism, hiring, harvesting and other items related to the management of Wood Buffalo National Park and of mutual interest.

Visitors to Wood Buffalo can connect not just with nature but the unique culture, history and people of the area. Through personal contacts, visitors can have meaningful interactions and experience first-hand the life, history and traditional ways of the local First Nations and Métis peoples. The added value that such important and traditional connections provide to visitors is part of the management vision for the Park:

"Wood Buffalo National Park is a cultural landscape valued by local Aboriginal peoples because of their complex and enduring relationship with the land. Wood Buffalo National Park has a respectful and meaningful relationship with local



Dawn skies reflected in a beaver pond, Wood Buffalo National Park, Alberta, Canada (Credit: Age Fotostock / Alamy Stock Photo)

Aboriginal people and in the spirit of working towards a shared vision, they will help to guide the long-term direction and management of park resources; identifying issues and establishing protocols that guide and contribute to the ongoing monitoring of cultural resources and ecological integrity."

#### Future outlook

Despite protection of the park, concerns have been raised about potential negative impacts on the delta and its inhabitants. A petition from the Mikisew Cree First Nation resulted in a World Heritage Committee Decision requesting the State Party of Canada to invite a joint World Heritage Centre/IUCN Reactive Monitoring mission to better understand the situation. The findings and subsequent recommendations of this mission (UNESCO & IUCN, 2017) emphasised the mutual reinforcing of the dual designations and they have also catalysed political support and commitments. The Government of Canada fully recognises that in order to maintain the importance of the Park a shared vision is required which embraces First Nations and Métis peoples and their cultural traditions and, as result of the Reactive Monitoring mission, a collaborative action plan will be developed to take this forward. However, to ensure that the site's cultural and natural heritage are secured, a wide range of complex issues need to be addressed. These include the negative effects of flow regulation activities associated with operation of dams on the Peace River; the potential cumulative impacts on ecological processes and the hydrological regime of the Peace-Athabasca Delta of existing and planned hydropower development; and the impacts of existing and planned oil sands projects in the Athabasca oil sands region, as well as their associated tailings ponds, including the impact on movement of migratory birds and the ecosystems that support the traditional ways of life of First Nations and Métis peoples.

### Lessons learned

Across Wood Buffalo National Park, cultural traditions are intertwined with the natural landscape. A variety of key lessons can be learned from this example, including:

- As recognized explicitly in the management plan, cultural traditions need to maintained and integrated into the ecological management of the Park. Building and improving relationships with partners and stakeholders is identified as one of the main objectives of the plan.
- There is a strong appreciation that by engaging with stakeholders and partners in an open, transparent and equitable manner it is possible to foster appreciation and understanding for Wood Buffalo National Park and the heritage of the system.
- Park management is best undertaken when both traditional knowledge and contemporary science are used to inform decision making, and when local First Nations and Métis governments and park managers work co-operatively. The Co-operative Management Committee and initiatives such as the Peace-Athabasca Delta Ecological Monitoring Program demonstrate this evolving management philosophy which benefits areas designated under both Conventions.
- The World Heritage Centre/IUCN Reactive Monitoring mission resulting from a World Heritage Committee Decision has been a key instrument in ensuring that the mutually reinforcing nature of the dual designations is clearly acknowledged and that indigenous rights and perspectives are genuinely integrated into the governance and management of the Park.