

***CANADA 6: WHOOPING CRANE SUMMER RANGE,
ALBERTA/NORTHWEST TERRITORIES***

Information Sheet on Ramsar Wetlands

Effective Date of Information: The information provided is taken from the List of Canadian Wetlands Designated as of International Importance, May 1982 and updated by the Canadian Wildlife Service – Prairie and Northern Region in October 2001.

Reference: 6th Ramsar site designated in Canada.

Name and Address of Compiler: Environmental Conservation Branch, Environment Canada, Twin Atria, 2nd Floor, 4999 - 98th Avenue, Edmonton, Alberta, T6B 2X3.

Date of Ramsar Designation: 24 May 1982.

Geographical Coordinates: 60°15'N., 113°15'W.

General Location: Situated in northeast Alberta and in the adjoining southern portion of the District of MacKenzie, Northwest Territories (NWT). The town of Fort Smith in the NWT lies 80 km southeast of the area.

Area: 1 689 500 ha.

Wetland Type (Ramsar Classification System): *Inland wetlands:* Type O - permanent freshwater lakes; Type Tp - permanent freshwater ponds, marshes and swamps; Type U - peatlands; Type Xp - forested peatlands.

Altitude: 150-250 m.

Overview (Principal Characteristics): The Whooping Crane Summer Range is a natural area comprising 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.

Physical Features (Geology, Geomorphology, Hydrology, Soils, Water, Climate): The thousands of water bodies in the area vary in depth from several centimetres to about a metre, with the average depth of the nesting ponds of the whooping crane 26 cm. The area has a boreal continental climate characterised by long cold winters and short warm summers. Mean daily temperatures are -17.8- -23.3 °C in January and 15.6-18.3 °C in July. Annual precipitation is about 350 mm but annual evaporation is 410 mm. The brief frost-free period extends from early June to early September, but much of the area is permanently underlain with discontinuous permafrost. Daylight period is short in winter but in mid-summer is over 20 hours. Most of the bedrock in the area is Devonian or Cretaceous limestones, sandstones, shales, and evaporites such as gypsum and halite which were deposited during many periods of marine inundation of the region throughout the past 400 million years. The area is therefore influenced by saline groundwater.

Ecological Features (Habitats, Vegetation): The marshland vegetation is dominated by bulrush *Scirpus validus*, sedge *Carex aquatilis* and cattail *Typha latifolia*. Dominant coniferous species include white spruce *Picea glauca*, black spruce *Picea mariana*, tamarack *Larix laricina*

and jack pine *Pinus banksiana*. Deciduous species include white birch *Betula papyrifera*, quaking aspen *Populus tremuloides* and balsam poplar *Populus balsamifera*. Understorey species include dwarf birch *Betula glandulosa*, buffalo berry *Sherpherdia canadensis*, willows *Salix* spp., Labrador tea *Ledum groenlandicum* and sphagnum moss.

The area contains 47 species of mammal including wolf *Canis lupus*, moose *Alces alces*, lynx *Lynx canadensis*, snowshoe hare *Lepus americanus*, black bear *Ursus americanus*, muskrat *Ondatra zibethica*, beaver *Castor canadensis*, mink *Mustela vison*, woodland caribou *Rangifer tarandus caribou* and wood and plains buffalo *Bison bison athabascæ* and *Bison bison bison*. Reptiles and amphibians, which are limited in number by the boreal climate, include boreal chorus frog *Pseudacris maculate* and wood frog *Rana sylvatica*, and at the northern limit of their ranges, Canadian toad *Bufo hemiphys*, leopard frog *Rana pipiens* and red-sided garter snake *Thamnophis sirtalis*. The fish of the area are not well known but preliminary information suggests that pearl dace, fathead minnow and Iowa darter are at their northern limit. A circumpolar species, the inconnu *Stenodus leucichthys*, spawns in Buffalo Lake at the western edge of the Whooping Crane Summer Range. Bird species include those characteristic of all boreal forest habitats.

Land Tenure:

(a) Site: Most of this Ramsar site lies within Wood Buffalo National Park which is owned by the Government of Canada. About 14% of the Whooping Crane summer range area lying outside of the park is on federal Crown land in the Northwest Territories.

(b) Surrounding Area: Federal Crown land.

Conservation Measures Taken: Most of the Whooping Crane summer range lies within Wood Buffalo National Park and in an area of Zone 1 Special Preservation, protected under the *National Parks Act* and administered by Parks Canada. Wood Buffalo Park is a World Heritage site. The range includes the International Biological Program (IBP) sites 12 and 13, and Whooping Crane nesting area.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: Most of the area is under the management of Parks Canada which is currently evaluating and planning future management requirements. The nesting area evolved with fire, therefore no natural forest fires in the area are extinguished unless they are in danger of leaving the boundaries of Wood Buffalo National Park or threaten structural facilities. Hunting and trapping of fur bearers by native inhabitants is permitted, however these activities are restricted during the whooping crane breeding season. Ground access and aerial traffic under 600 m is prohibited in the Whooping Crane nesting area, except by researchers. Environment Canada carries out aerial Whooping Crane breeding pair and production surveys annually.

(b) Surrounding Area: Limited forestry operations exist outside the National Park area.

Threats to Integrity of:

(a) Site: An extra-heavy voltage powerline running parallel to Highway 5 is a constant danger to low flying birds and electrical power transmission lines from the dam site (I have no idea where this dam site is) to the Fort McMurray, Alberta area pose a serious hazard to migratory birds including Whooping Crane. It is likely that traffic along Highway 5 north and west of Fort Smith, Northwest Territories will increase, particularly if there is large-scale industrial development (not likely) near Fort Smith. Highway 5 is the only road access to the Whooping Crane summer range. It bisects the Whooping Crane nesting area and runs within five km of a known nesting site. During dry summers, food availability and increasing vulnerability to terrestrial predators is a threat to the Whooping Crane population.

(b) Surrounding Area: A feasibility study to examine positive and negative effects of a proposed hydro-electric dam across the Slave River near Fort Smith has been conducted. It is possible that a dam on the Slave River could change or disrupt water levels and/or drainage patterns in the Whooping Crane summer range. The regional moisture deficit together with up to 40 thunderstorms per season creates an extreme forest-fire weather zone in the area. Seasonal drought in some years also greatly affects water levels in the nesting ponds.

Hydrological/Physical Values:

Social/Cultural Values:

Noteworthy Fauna: The area contains the only known nesting locality of the endangered Whooping Crane *Grus americana*. In 1982 there were 19 breeding pairs and this area is critical to its survival; by 2001 there were 53 pairs and a total population of 175 birds. The vulnerable Peregrine Falcon *Falco peregrinus* and Bald Eagle *Haliaeetus leucocephalus* also occur in the region.

Noteworthy Flora:

Current Scientific Research and Facilities: The Canadian Wildlife Service conducts spring nesting and pre-migration nesting success surveys of Whooping Cranes.

Current Conservation Education: Parks Canada conducts a broad conservation education program for Wood Buffalo National Park, of which wetlands and the Whooping Crane nesting range is a major component.

Current Recreation and Tourism: Recreational activities are minimal due to the remoteness and limited access.

Management Authority:

Superintendent
Wood Buffalo National Park
P.O. Box 750
Fort Smith, Northwest Territories
X0E 0P0

Jurisdiction: Federal - Department of Canadian Heritage and Indian and Northern Affairs Canada.

Selected Bibliography:

- Airphoto Analysis Associate Consultants Ltd. 1979. The biophysical resource inventory, Wood Buffalo National Park. Volume I-IV. Environment Canada. Ottawa, Ontario.
- Beckel, D.K.B. (ed.). 1976. IBP ecological sites in subarctic Canada. Contribution of the Canadian Committee of the International Biological Program, Region 10 Panel. University of Lethbridge. Lethbridge, Alberta.
- Kienzle, B. 1972. The Wood Buffalo National Park area: a bibliography. Calgary, Alberta.
- Scace, R.A. 1974. An initial bibliography of Wood Buffalo National Park. Scace and Associates Ltd. Calgary, Alberta.
- Scace and Associates Ltd. 1974. Wood Buffalo National Park: a literature review. Canadian Parks Service, Environment Canada. Ottawa, Ontario.

Reasons for Ramsar Designation: A vast wetland complex, this area is the last natural nesting area in the world for the endangered Whooping Crane *Grus americana*.

Status of Management Plan: A draft long-range *Wood Buffalo National Park Ecosystem Conservation Plan* was produced by Parks Canada in August 1993. It is currently undergoing review and consultation. The *Wood Buffalo National Park Draft Management Plan* also was released for review by Parks Canada in November 1993. The management of Whooping Cranes follows guidelines in the Canada/United States Memorandum of Understanding on the Conservation of the Whooping Crane 2001 and the National Recovery Plan for the Whooping Crane 1994.