

CANADA 10: OLD CROW FLATS, YUKON TERRITORY

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 updated by the Canadian Wildlife Service - Pacific and Yukon Region in October 2001.

Reference: 10th Ramsar site designated in Canada.

Name and Address of Compiler: Environmental Conservation Branch, Environment Canada, RR No. 1, 5421 Robertson Road, Delta, British Columbia, V4K 3N2.

Date of Ramsar Designation: 24 May 1982.

Geographical Coordinates: 67°34'N., 139°50'W.

General Location: About 60 km north of the village of Old Crow in Yukon Territory, 110 km south of the Beaufort Sea (Arctic Ocean) and 120 km north of the Arctic Circle. Bordered in the north by the British Mountains, in the east by the Driftwood Hills of the Richardson Mountains and in the south by Old Crow and Keele Ranges.

Area: 617 000 ha.

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

Altitude: 260 - 300 m.

Overview (Principal Characteristics): Old Crow Flats is a lacustrine plain pocked by over 2 000 shallow freshwater lakes.

Physical Features (Geology, Geomorphology, Hydrology, Soils, Water, Climate): The lakes in this area were presumably formed by the melting of ice blocks in the substrate. The lakes vary in size from 0.5 ha to 4 700 ha with an average depth of 0.5-1 m and a maximum depth of 4 m. Permafrost underlies the area and forms the lake margins. The area is traversed by the meandering Old Crow River valley, which is down-cut well below the plain. The highly productive lakes and marshes are exceptional at such a high latitude.

Ecological Features (Habitats, Vegetation): The primary function of the area is seen as a moulting and pre-migrational staging area. It is also a haven in years when there is drought in the Prairies. Ducks are able to move north here after abandoning any attempt at breeding in Prairie regions. Several species of *Potamogeton* dominate the aquatic systems; the associated invertebrate fauna is unusually varied and productive. When ice-rich margins erode causing sudden changes in water level, a marsh habitat dominated by sedge develops. The sedge first forms floating mats and, eventually, shore-fast wet sedge beach which provides nesting habitat for waterfowl. Scattered and stunted black spruce *Picea mariana* dominate the areas between the lakes and the poorly drained sites develop peatlands. Better drained sites develop scattered forest stands with an understorey of dwarf birch *Betula* spp. and willow *Salix* spp.

Land Tenure:

(a) Site: Under the terms of the *Vuntut Gwich'in Final Agreement*, which was ratified in 1993, the northern portion of Old Crow Flats will become Vuntut National Park under the administration of the Government of Canada. Of the remainder, part is Settlement Land belonging to the Vuntut Gwich'in First Nation and the rest remains federal Crown land administered by the federal government subject to the *Territorial Lands Act* and Territorial Land Use Regulations.

(b) Surrounding Area: Upon ratification of the *Vuntut Gwich'in Final Agreement*, surrounding lands will be partially federal Crown land and partially private lands of the Vuntut Gwich'in First Nation.

Conservation Measures Taken: Despite the three different land tenures noted above, the land claims agreement under the *Vuntut Gwich'in Final Agreement* also designate the entire area as the Old Crow Flats Special Management Area. This area will be managed to maintain the integrity of the area as one ecological unit, with the conservation of fish and wildlife and wildlife and their habitats, and the protection of the current and traditional uses of the area by the Vuntut Gwich'in as guiding principles for management. Under these principles, a management plan will be prepared jointly by the governments and the Vuntut Gwich'in. It will incorporate a management plan for Vuntut National Park.

Conservation Measures Proposed: The Agreement has been ratified and the necessary legislation has been passed.

Current Land Use/Activities in:

(a) Site: Issue of permits to regulate access for exploration and development are under the Territorial Land Use Regulations. Development assessment legislation will be amended under the terms of the *Vuntut Gwich'in Final Agreement*. The existing moratorium on the exercise of oil and gas rights in the area will continue until such rights are terminated by the federal government. At present, the only significant uses of the area are hunting, fishing and trapping by the residents of Old Crow.

A three-year program of field studies of waterfowl and their habitat on the Old Crow Flats was initiated in 1993. This is a cooperative effort led by the Vuntut Gwich'in First Nation and the Canadian Wildlife Service. It involves additional partners such as the United States Fish and Wildlife Service and the Pacific Flyway Council. One major goal of these studies is to gather information needed to produce an effective management plan for the area.

(b) Surrounding Area: Hunting, fishing, and trapping are practised by the residents of Old Crow.

Threats to Integrity of:

(a) Site: The provisions of the *Vuntut Gwich'in Final Agreement* will likely ensure that any future activities in the Old Crow Flats Special Management Area will not threaten its integrity as wildlife habitat.

(b) Surrounding Area: Oil exploration has been proposed for the area, and some seismic line construction has occurred. Heavy machinery would possibly damage the ice-retention properties of the shoreline and could lead to draining of the lakes. There are also proposals for the construction of roads and at least one gas pipeline near the area. Disturbance to wildlife may also be caused by the major archaeological and paleontological field programs being carried out or planned. The future security of the area has figured highly in native land claim negotiations between Canada and the native people of the Vuntut Gwich'in First Nation. As noted above, a moratorium on oil and gas exploration in this region continues.

Hydrological/Physical Values: Lakes in the Old Crow region are extensive and present an unusual patterned landscape with frequent rectangular lake shapes.

Social/Cultural Values: The deep alluvial substrate underlying the area has been identified as an extremely important palaeontological and archaeological study area containing a rich assortment of pleistocene material. The area continues to be extremely important for the traditional lifestyle of the Vuntut Gwich'in people of Old Crow.

Noteworthy Fauna: The area is important to some 500 000 waterbirds including 20 000-80 000 White-winged Scoter *Melanitta fusca* and Surf Scoter *Melanitta perspicillata*, 50 000-100 000 Scaup *Aythya marilla* and *Aythya affinis*, 10 000-100 000 Pintail *Anas acuta*, 20 000-100 000 American Wigeon *Anas americana*, 5 000-40 000 Canvasback *Aythya valisineria*, and 10 000-30 000 Oldsquaw *Clangula hyemalis*. The area also supports Tundra Swan *Cygnus columbianus*, White-fronted Goose *Anser albifrons*, Loon *Gavia* sp., and a variety of other waterbirds. It provides habitat for an important population of Peregrine Falcon *Falco peregrinus*. Mammals include muskrat *Ondatra zibethicus* and moose *Alces alces*.

Noteworthy Flora:

Current Scientific Research and Facilities: Since 1957, annual aerial surveys of waterfowl have been conducted on the Old Crow Flats in early June by the United States Fish and Wildlife Service as part of the continental survey program. The Fish and Wildlife Branch of the Yukon Territorial Government conducted aerial and ground-based studies of waterfowl and wetland ecology from 1974 to 1977. A muskrat survey was conducted in 1985 and 1986 under the auspices of the Yukon Department of Renewable Resources. Archaeological and paleontological work has been conducted in the area for several decades. A small cabin located on Schaeffer Lake in the area has served as the base for a number of biological research studies over the past 25 years.

Current Conservation Education:

Current Recreation and Tourism:

Management Authority: There will be three management authorities on the Old Crow Flats when the *Vuntut Gwich'in Final Agreement* is implemented: Native - the Vuntut Gwich'in First Nation; Federal - Department of Indian and Northern Affairs and Department of Canadian Heritage; Territorial - Government of Yukon. The primary bodies for wildlife

management will be the local Renewable Resource Council and the Yukon Fish and Wildlife Management Board which will make recommendations to the appropriate minister. A management plan will provide an umbrella which all three management authorities must adhere to.

Jurisdiction: Federal - Indian and Northern Affairs Canada; Territorial - Yukon Department of Renewable Resources; and Native - Vuntut Gwich'in First Nation.

Selected Bibliography:

- Ovenden, L.E. 1981. Vegetation history of a polygonal peatland, Old Crow Flats, northern Yukon. M.Sc. thesis, University of Toronto. Toronto, Ontario. Unpublished. See also *Boreas* 11: 209-224.
- Ovenden, L.E. and G.R. Brassard. Wetland vegetation near Old Crow, northern Yukon. *Canadian Journal of Botany* 67: 954-960.
- Russell, D., D. Mossop, and C. Goodfellow. 1978. Remote sensing and waterfowl nesting habitat, Old Crow Flats, Yukon Territory. *Proceedings, Pecora IV Symposium*, pp. 147-152.
- Wiken, E.B., D.M. Welch, G.R. Ironside, and D.G. Taylor. 1981. *The Northern Yukon: an Ecological Land Survey*. Ecological Land Classification Series, No. 6. Lands Directorate, Environment Canada. Ottawa, Ontario. 147 p.

Reasons for Ramsar Designation: Old Crow Flats is an exceptional example of a wetland lacustrine plain pocked by over 2 000 shallow freshwater lakes. These highly productive lakes and marshes are also exceptional at such a high latitude. The area is important as a moulting and pre-migrational staging area for several hundred thousand migratory birds of many species. It is also a haven in years when there is drought in the Prairies of Canada. The Old Crow Flats also provide essential support to the traditional hunting and fishing lifestyle of the Vuntut Gwich'in people.

Status of Management Plan: An approved management plan is called for under the terms of the final Land Claim Agreement within five years of the signing of the Agreement. The enabling legislation for this Agreement has been passed.