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**Lessons Learned in Cooperative Management:
Commercial Grizzly Bear Viewing in the Fishing Branch (Ni'iinlį Njik) Protected Area
(Yukon, Canada)**

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Introduction

Over the last two decades the settlement of First Nations land claims in Canada's northern territories has led to the creation of national and territorial parks and protected areas. Located in the Yukon Territory, the Fishing Branch (Ni'iinlį Njik) Ecological Reserve is a protected area which is conserved through the 1995 Vuntut Gwitchin Final Claim Agreement. The area protects cultural and natural resources, most notably the unusually high concentrations of salmon and grizzly bear. The protected area consists of public and First Nation lands, a first in Canada. The area is cooperatively managed in partnership as an ecological unit by the Yukon and Vuntut Gwitchin Governments.

In 2000 a jointly developed and approved management plan identified objectives and guidelines to protect the area's natural and cultural resources. The plan further identified the essential prerequisites for commercial grizzly bear viewing to occur in the protected area, which started in fall 2006 as a controlled pilot project.

This paper will document the steps taken over the last ten years to prepare for commercial bear viewing operations at the Fishing Branch Protected Area. The paper will conclude with a summary of lessons learned related to cooperatively preparing for and managing such activities in remote wilderness areas.

Geographic, Historic and Political Setting

The Yukon is one of Canada's three northern territories, and spans an area from the Northern Rockies in British Columbia to the Beaufort Sea. While large in area (450,000 km²), the territory is sparsely populated (30,000). First Nations make up about a fifth of the population. The City of Whitehorse is the service centre and seat of government for the Yukon. Fifteen small, predominately First Nation villages are scattered across the territory. The small 400 person Vuntut Gwitchin First Nation community of Old Crow is located in the northern part of the territory on the Porcupine River.

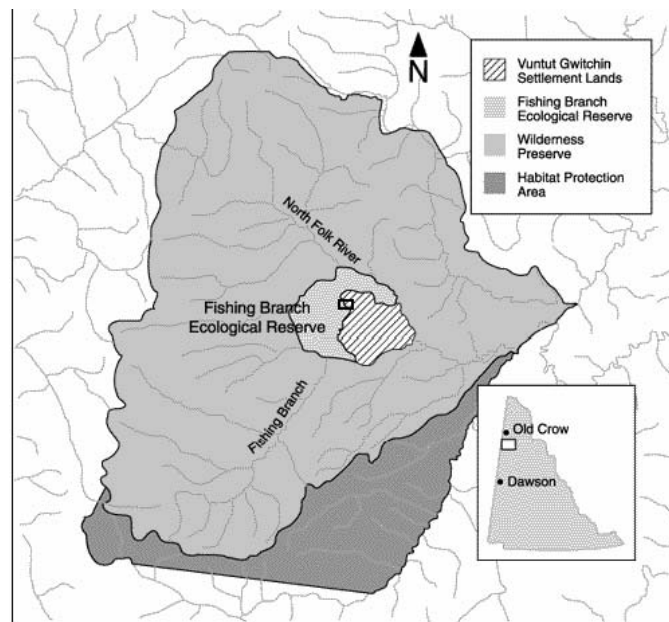
Protected Areas in the Yukon

Over the last three decades negotiations have been conducted across northern Canada to settle First Nation and Inuit land claims. Similar to the effect that the 1971 Alaska Native Claims Settlement Act had in creating over 100 million acres of protected areas through the 1980 Alaska National Interest Lands Conservation Act, settled land claims in the Yukon have created large tracts of protected areas. Land claims have established new or confirmed existing national and territorial parks, park reserves, Heritage Rivers, national wildlife areas and territorial habitat protection areas. These areas total about 61,500 km² or some 13% of the territory. Settled claims define the management objectives for these protected areas, cooperative management regimes for public and First Nations governments, and how First Nations can benefit economically from protected area establishment and operations.

The Features and History of the Fishing Branch Protected Area

In 1995 the Vuntut Gwitchin First Nation of Old Crow settled its land claim agreement. The settlement included the creation of a 170 km² territorial ecological reserve on the Fishing Branch River, which is located 100 km south of Old Crow and crosses the Arctic Circle. An additional 140 km² of First Nation settlement lands were added to this protected area through the land claim agreement, a ground breaking first in Canada, if not North America. Subsequently, a wilderness preserve and a habitat protection area were added in 2004, creating in total a protected area of 6,500 km².

Map of the Fishing Branch Protected Area



The small square within the ecological reserve is the site of the ranger and bear viewing facilities

The ecological reserve and the settlement lands are cooperatively managed by the Yukon and Vuntut Gwitchin Governments under a jointly developed management plan, which was approved in 2000. The primary objective of the plan is to manage the area as an ecological unit to protect the full diversity of wildlife (particularly salmon and grizzly bears) in a Beringian karst landscape. While wildlife protection is the priority, the plan also recognizes commercial grizzly bear viewing as a means to provide visitor opportunities, to promote ecological awareness and wilderness tourism, and to provide economic benefits for the First Nation.

The Ecological and Cultural Significance of the Fishing Branch Protected Area

The Fishing Branch River is located in the Ogilvie Mountains of northern Yukon, and is of exceptional ecological significance. The area is characterized by a unique karst landscape which has developed over millennia as the limestone has been continually eroded by water. This dissolution process has resulted in towers, fissures, sinkholes, complex underground drainage systems and caves, which have maintained constant groundwater temperatures. Spawning salmon in late September and October depend on the constant water temperature of the river, which wells up through the karst substrate. Because of the regular abundance of salmon, Grizzly bears come there every fall to feed prior to hibernating in the local mountain caves.

The Fishing Branch area is also of cultural significance. The area was not glaciated in the last ice age, and along with the cold, dry environment in the ancient caves located in the surrounding mountains has created an environment optimal for preserving organic matter. The caves contain evidence of human occupation that date to the last ice age. Human altered caribou and mammoth bones located in an area northwest of the Fishing Branch have been dated to about 25,000 years ago, and may be the oldest known traces of human occupation in North America.

For thousands of years, the Vuntut Gwitchin, who now live in Old Crow have depended on the land for all aspects of life. The elders call the Fishing Branch River *Ni'iinlii Njik*, "where the fish spawn" and have considered the area as the source of life and food. The Grizzly bear of the area play an important role in the spiritual life of the Vuntut Gwitchin.

The Preparations for Commercial Grizzly Bear Viewing

The Vuntut Gwitchin land claim agreement defines the management objectives for the Fishing Branch Protected Area, which includes protection of the full diversity of wildlife, particularly salmon and grizzly bears. The claim also identifies the need for visitor services, learning opportunities, public education, and economic opportunities for the First Nation.

Based on these broad objectives, the protected area management plan states that while bear viewing is secondary to protection of wildlife and their habitat, effectively managed viewing has the potential to: 1) increase public understanding and appreciation of bears and bear ecology; 2) increase public understanding of appropriate human behaviour in bear habitat; and, 3) increase tourism and provide economic benefits under controlled circumstances.

The Yukon and Vuntut Gwitchin Governments have established a Committee of Managing Agencies to ensure effective management of the protected area. The committee includes the Lands and Heritage Branch of the Vuntut Gwitchin Government, the Parks and the Fish and Wildlife Branches of Yukon Environment, the North Yukon Renewable Resources Council and the federal Department of Fisheries and Oceans (which operates a fish counting weir down stream from the viewing site). When required the Archaeological Survey of Canada and the Heritage Branch of Yukon Tourism also participate.

The management plan defines the conditions and operational guidelines required for commercial bear viewing. These conditions and guidelines included:

Visitor Access and Use: Visitor access to the settlement lands and ecological reserve during the September 1 to November 1 bear viewing season is by permit only and limited to a maximum of 5 persons per day (4 visitors and 1 guide) with a maximum stay of 7 days. This approach maintains the wilderness character of the area, avoids disturbance to fish, bears, and other wildlife, and limits the need for facility development.

Qualified Bear Viewing Guide: During the viewing season, visitors are required to use the services of a qualified bear viewing guide who requires a permit to provide such services. This approach provides a safe and high quality wilderness experience.

Bear-Human Risk Management Plan: Before full commercial bear viewing operations start, a detailed bear-human risk management plan is required along with a controlled pilot trial. The operational and emergency procedures in the plan are designed primarily to: 1) minimize the adverse effect of human activities on bears and salmon; 2) minimize the probability of conflict

between bears and humans; and, 3) define appropriate responses in human-bear conflicts.

Bear Behaviour Research and Monitoring: Research and monitoring is required as an essential part of assessing and evaluating whether management principles and operational procedures are effectively implemented. Three years of research were undertaken by a graduate student from Simon Fraser University before viewing operations started. This research documented bear and salmon populations and baseline patterns of bear behavior in the viewing area, and developed a bear behavior data collection protocol. These data will be used to assess the impact, if any, of viewing operations on bear behaviour, primarily their spatial and temporal patterns of feeding.

Limited Facility Development: Consistent with the management principles and in keeping with the wilderness character of the area, facility development is to be kept to a minimum, consisting of a main cabin/wash house, three sleeping cabins, an outhouse and a storage cache. Built and owned by the Yukon Government, these facilities support several activities including: 1) management operations year round, 2) commercial bear viewing in the fall; and, 3) non commercial activity at other times of the year that support research, monitoring, and public education.

Bear Hunting Prohibition: In order to protect the bear population in the ecological reserve and settlement lands, no resident or non-resident non-aboriginal harvesting is permitted. Although the First Nation has the right to harvest moose and bear under their land claim agreement, they have voluntarily closed the area for hunting these species.

In addition to the required steps identified in the management plan, a number of other initiatives were undertaken prior to viewing operations starting:

Commercial Joint Venture: To effectively and safely provide bear viewing opportunities a First Nation-private sector joint venture, Bear Cave Mountain Eco-Adventures, was created. This joint venture is managed by a bear viewing guide with over 20 years of experience who is familiar with area. He has partnered with the Vuntut Development Corporation, the business arm of the First Nation.

Bear Viewing Plan: This eco-adventure company developed a commercial bear viewing plan for the trial operation and for the subsequent full operation. This plan is closely linked to the operational and emergency procedures described in the bear-human risk management plan.

Use Permit: Under the *Parks and Land Certainty Act*, Yukon Parks regulates activities and development in territorial parks through the issuance of permits. To prepare for issuing the permit at Fishing Branch, Yukon Justice undertook a thorough review of the bear-human risk management plan. As a matter of due diligence, the review ensured that all mandatory requirements of the plan were recorded as legal terms and conditions of the permit. The permit was issued for a 3 year term to the joint venture company to allow trial operations to start in September 2006.

Partnerships Leading to Commercial Bear Viewing

Appendix 1 summarizes the key steps and partnerships leading to the creation of bear viewing operations at the Fishing Branch Protected Area. This process started in 1995 with the settlement of the Vuntut Gwichin Land Claim Agreement and continued to September 2006 when trial operations started. Throughout the process, the partners, included the First Nation and Yukon Governments, Simon Fraser University, a professional bear consultant and an experienced bear viewing guide.

Critical factors in the development of this activity hinged around the nature of bear behavior, the careful planning and construction of facilities and controlling human activity. The protected area and risk management plans provided the means to prepare for the operation. Outside expertise to complete these steps was critical in the process. Gaining experience from the experience of similar activities in Alaska and northern British Columbia was valuable. Facility development demanded careful planning and sensitive construction practices and scheduling. The comprehensive bear-human risk management plan was essential in achieving a level of confidence for a safe bear viewing operation. Monitoring the viewing operation is critical in assessing the impacts on the bears and promoting visitor safety.

Lessons Learned Related to Planning for Commercial Bear Viewing

The 10 year process leading up to commercial bear viewing at the Fishing Branch demonstrated a number of important lessons:

Establish Protected Areas Through Land Claims: Settled land claims provided the legislative means to establish the protected area which, in this case, included the contribution of First Nation owned lands, a first in conservation in Canada. This provided an equal partnership between the Yukon and First Nation Governments.

Develop Management Plans with First Nations: The joint development of the management plan ensured the First Nation's participation in determining the objectives for the protected area, which included commercial viewing as a means to protect the bears and to provide visitors safe viewing opportunities.

Cooperate and Partner Early: Taking a cooperative shared approach to planning and management was fundamental to success. Working with other key players, such as the Vuntut Development Corporation, the bear viewing guide, Simon Fraser University, and the consulting expert on bears early and continuously throughout all stages of planning and operating was crucial.

Apply the Precautionary Principle: A measured, conservative approach to an activity such as bear viewing was essential to preparing the management plans. In the absence of fully knowing all implications, the precautionary principle was used by setting restrictive use limits and conditions.

Be Comprehensive and Patient: In spite of mounting pressure from wilderness tour operators and photographers to view bears before planning was complete, no access was allowed until the required work was done. The viewing operations will be phased in slowly, which will allow operating procedures to be tested and adjusted when necessary.

Build Capacity through Joint Ventures: The commercial joint venture between the viewing guide and First Nation Development Corporation was encouraged and provided the expertise needed for safe operations. The joint venture also will provide the training and experience necessary for the First Nation eventually to assume control of the operation.

Integrate Planning and Operations: An integrated approach was taken in the planning of the viewing operations. The human-bear risk management plan reflected the objectives of the management plan. The commercial viewing plan reflected the operating conditions of the risk

management plan. The terms and conditions of the permit allowing operations reflected the requirements of the risk management plan.

Involve Legal Council: Legal council helped prepare the use permit to ensure due diligence and demonstrate that all reasonable steps have been taken to minimize the risks of the operation. The exact operating procedures and protocols contained in the risk management plan were used as the mandatory terms and conditions of the use permit, thereby ensuring consistency and clarity.

Government Owned Facilities: The Yukon Government built and owns the facilities. They were kept to a minimum and are leased for bear viewing to the joint venture in the fall and are used for ranger operations and research for the rest of the year. Government ownership ensures control over the facilities and, if required, makes it simpler for Yukon Parks to cancel or not renew the use permit should problems occur.

Conclusion:

In summary, this case study demonstrates the positive role land claims can have in promoting conservation and the effectiveness of partnerships in managing and operating protected areas.

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Appendix 1: Activities and Partnerships Leading to Commercial Bear Viewing at the Fishing Branch Protected Area

Key	Result	Key
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Activities		Partners & Contributions					
				First Nation (VG)	Government (YG)	University (SFU)	Private Sector*
Settle Land Claim 1995	<ul style="list-style-type: none"> - established objectives & boundaries - outlined management plan - recognized bear viewing 	settlement land (143 km2)	designation (PLCA) public lands (170km2)	not applicable	not applicable		
Prepare Management Plan 2000	identified co-management structure (CMA) & operational conditions: <ul style="list-style-type: none"> - viewing only with qualified guide - viewing limited to 5 including guide - bear-human risk management plan - baseline bear behavior research 	co-developed & approved with YG	co-developed & approved with VGFN	not applicable	not applicable		

	<ul style="list-style-type: none"> - bear behavior monitoring protocol - limited facility development - bear harvesting prohibition - start operations on trial basis 				
Prepare risk management plan 2004-05	identified detailed operational requirements & safety procedures to minimize risk to bears & viewers	CMA member/reviewer	CMA member/reviewer technical oversight coordinated & funded	not applicable	consultant prepared guide reviewed
Complete research & monitoring 2004-06	<ul style="list-style-type: none"> - established pre-viewing patterns - developed monitoring protocol 	CMA member/reviewer	CMA member/reviewer technical oversight coordinated & funded	researched & prepared monitoring protocol	consultant & guide reviewed
Develop facilities 2004-06	constructed basic facilities : <ul style="list-style-type: none"> - 1 cook cabin, 2 sleep cabins, 1 outhouse, 1 wash cabin & 1 food 	contracted community labor	built & funded	not applicable	consultant & guide reviewed

	cache				
Establish First Nation/private sector joint venture 2005	<ul style="list-style-type: none"> - provided viewing opportunities - ensured experience & expertise - provided First Nation benefits - prepared bear viewing plan 	First Nation participated by Development Corporation & provided resources	not applicable	not applicable	guide provided experience & expertise
Prepare& issue use permit/commence operations 2006	<ul style="list-style-type: none"> - issued 3 year permit to joint venture for trial operation - permit conditions based risk management plan 	issued use permit to joint venture for settlement lands	issued use permit for ecological reserve Justice involved to ensure due diligence	not applicable	as joint venture partner, guide

Vuntut Gwitchin (**VG**) Yukon Government (**YG**) Simon Fraser University (**SFU**) *Private Sector (bear consultant & viewing guide) Committee of Managing Agencies (**CMA**)