

SCHEDULE B

NI'IINLII NJIK
(Fishing Branch)

Ecological Reserve & Settlement Lands R-5A & S-3A1

HUMAN-BEAR RISK MANAGEMENT PLAN

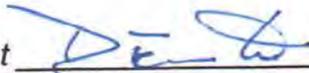
Approved 2006
Updated 2010



Yukon Government / D. Kuch

Signed on August 29, 2006 in Whitehorse, Yukon by:

Joe Linklater, Chief  _____
For the Vuntut Gwitchin Government.

Dennis Fentie, Minister of Environment  _____
For the Yukon Government.

2010 REVISIONS

The intent of the Risk Management Plan is to provide the most current standards and guidelines for promoting human safety and ecological integrity of the Ni'iinlii Njik (Fishing Branch). Originally approved in August, 2006, this document was revised, edited and approved by the Committee of cooperating agencies based on three years of commercial operation and new information. No substantive changes were made to the original 2006 plan; and, as such, this revised plan is consistent with the originally approved management plan for the ecological reserve and settlement lands. Questions relating to this document should be directed to the Yukon Parks Branch and Vuntut Gwitchin Government, Department of Natural Resources.

Acknowledgements

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PART 1: BACKGROUND

1. Purpose of the Risk Management Plan

The Ni'iinlii Njik (Fishing Branch) area is approximately 6,500 km² (see Figure 1, Appendix 1). It is comprised of four parcels that are managed jointly as an ecological unit (the “**Protected Area**”):

- a) Ni'iinlii Njik (Fishing Branch) Ecological Reserve (“**Ecological Reserve**”);
- b) Ni'iinlii Njik (Fishing Branch) Settlement Lands R-5A and S-3A1 (“**Settlement Lands**”);
- c) Ni'iinlii Njik (Fishing Branch) Wilderness Preserve (“**Wilderness Preserve**”); and
- d) Ni'iinlii Njik (Fishing Branch) Habitat Protection Area (“**HPA**”);

The Ecological Reserve and Settlement Lands were jointly established as a result of the 1993 signing of the Vuntut Gwitchin First Nation Final Agreement (“**Final Agreement**”) to protect the diversity of wildlife populations, particularly salmon (*Oncorhynchus* spp.) and grizzly bear (*Ursus arctos*), and cultural and natural values of the area.

The Wilderness Preserve and HPA were created to expand protection around the Ecological Reserve and Settlement Lands, and encompass the entire Fishing Branch River watershed and portions of adjacent watersheds. The areas were created with a view to long-term viability of the grizzly bear population that congregates there every fall. The boundaries of the Wilderness area and the HPA were proposed in the Final Agreement and were finalized through the Yukon Protected Areas Strategy in 1999.

Yukon Parks, Department of Environment, Government of Yukon maintains jurisdiction over the Ecological Reserve, the Wilderness Preserve, and the HPA. The Vuntut Gwitchin Government (“**VGG**”) maintains jurisdiction over the Settlement Lands. As a collective, these areas are managed jointly through two management plans as follows:

- a) *Ni'iinlii Njik (Fishing Branch) Ecological Reserve & Settlement Lands R-5A & S-3A1 Management Plan* (the “**Management Plan**”); and
- b) *The Ni'iinlii Njik (Fishing Branch) Wilderness Preserve & Habitat Protection Area Management Plan*.

The Final Agreement and the Management Plan provide for commercial wildlife viewing in the fall when grizzly bears congregate to feed on fall chum salmon (*O. keta*) spawning in the Fishing Branch River at the base of Bear Cave Mountain.

Section 7.2 of the Management Plan states that while viewing is secondary to protection of wildlife (particularly grizzly bears and their habitat), effectively managed viewing has the potential to increase public understanding and appreciation of bears and bear ecology, increase public understanding of appropriate human behaviour in bear habitat, and under controlled circumstances, increase tourism and provide economic benefit.

The Management Plan cautions that viewing bears requires special considerations to prevent stress that could cause them to abandon a habitat or put viewers at risk. The Management Plan requires that a “**Risk Management Plan**” be prepared for the Management Area prior to

beginning commercial wildlife viewing, and a controlled pilot trial be undertaken before committing to long-term commercial access.

In the fall of 2006, the Vuntut Development Corporation and a private bear viewing specialist initiated a joint 3-year pilot commercial wildlife-viewing venture. This Risk Management Plan was prepared to meet the requirements of the Management Plan and is being updated in 2009.

2. Management Principles

Chapter 10, Schedule B, Section 4 of the Final Agreement identifies the following management principles (the “**Management Principles**”):

- a) Manage the Ecological Reserve and Parcels R-5A and S-3A1 as an ecological unit;
- b) Recognize and protect the traditional and current use of the Ecological Reserve by Vuntut Gwitchin;
- c) Protect the full diversity of wildlife populations, particularly salmon and grizzly bear;
- d) Protect the habitat from activities which may reduce the capacity of the Ecological Reserve to support wildlife; and
- e) Preserve the integrity of the natural landforms, geology, hydrology and special features of the Ecological Reserve.

The Final Agreement further establishes that:

The Vuntut Gwitchin First Nation shall manage parcels R-5A and S-3A1 in a manner consistent with the principles in 4.2.

In 2000, a Management Plan was jointly approved for the Fishing Branch Ecological Reserve and Settlement Lands R-5A and S-3A1 (VGFN & YDRR 2000). The Management Plan outlines guidelines and management direction for human activity within the Ecological Reserve and Settlement Lands. An amendment to the Management Plan was approved in June 2004 to accommodate changes in legislation and to allow for the relocation of the ranger station (VGFN & YDOE 2004a) to a better location for the ranger station and wildlife viewing area.

3. Description of the Protected Area

The Protected Area crosses the Arctic Circle south of Old Crow and north of Dawson City (see Figure 1, Appendix 1). It is comprised of the 169.1 km² Ecological Reserve and adjacent 138.4 km² Settlement Lands, the surrounding 5,213 km² Wilderness Preserve and 979 km² HPA, totaling 6,500 km².

The south fork of Fishing Branch River, upstream of its confluence with the north fork, forms the eastern boundary of the Ecological Reserve. This boundary also extends along the west and north face of Bear Cave Mountain. Settlement Land Parcel R-5A is a category A land parcel adjacent to the Ecological Reserve on the east and south side of the south fork of the Fishing Branch River. Parcel R-5A includes all of Bear Cave Mountain. Settlement Land Parcel S-3A1 is approximately 0.1 km² immediately west of the confluence of the north and south forks of the Fishing Branch River.

The surrounding Wilderness Preserve and HPA were created as a representative example of the North Ogilvie Mountains ecoregion (the “**Ecoregion**”), which includes the northern portions of the non-glaciated Ogilvie Mountains and associated intermontane basins.

The mean annual temperature in the Protected Area is approximately -6 °C, with a summer mean of 9 °C and a winter mean of -21.5 °C. Strong temperature inversions exist through the winter and temperatures of -50.0 °C are not uncommon in valley bottoms. Mean annual precipitation ranges between 300-400 mm (Ecological Stratification Working Group 1996).

The Ecoregion is characterized by open white spruce (*Picea glauca*) growing in a matrix of ericaceous shrubs, dwarf willow (*Salix* spp.), scrub birch (*Betula glandulosa*), and a ground cover of moss and lichen. Paper birch (*Betula papyrifera*) can form extensive communities on lower-elevation and mid-slope terrain. Many mountain slopes are largely devoid of vegetation, particularly steeply-sloping calcareous rock outcrops. River valleys are frequently wide and flat-bottomed. J. Staniforth in MacHutchon (1998) described 18 major vegetation communities within the Protected Area.

Characteristic mammals of the Ecoregion include, grizzly bear, black bear (*Ursus americanus*), caribou (*Rangifer tarandus*), Dall’s sheep (*Ovis dalli*), moose (*Alces alces*), wolf (*Canis lupus*), red fox (*Vulpes vulpes*), snowshoe hare (*Lepus americanus*), and beaver (*Castor canadensis*). Some resident birds include, common raven (*Corvus corax*), rock ptarmigan (*Lagopus mutus*), and willow ptarmigan (*Lagopus lagopus*; Ecological Stratification Working Group 1996).

4. Special Ecological Significance - Salmon and Grizzly Bears

A combination of geological and biological factors resulted in a concentration of natural resources near Bear Cave Mountain within the Ecological Reserve and Settlement Lands. Unique features include limestone caves, year-round open water (despite being located on the Arctic Circle), salmon runs, and grizzly bear at concentrations rarely seen in an interior environment at high latitudes.

Numerous caves in the karst landscape of Bear Cave Mountain and to the north provided shelter and cache sites for some of the earliest recorded human inhabitants in North America. These caves were, and still are, used by grizzly bears as winter den sites.

Groundwater springs associated with the karst terrain keep sections of the south fork of the Fishing Branch River free of ice and provide a steady flow of oxygenated water. In summer, water is absorbed by the ground surface and upstream channel of the Fishing Branch River where the heat is stored in the deep gravels of the stream-bed. In winter, the warmer water, essential for incubating fall chum salmon eggs, wells up.

The Fishing Branch River supports a significant run of spawning fall chum salmon. Chinook salmon (*O. tshawytscha*) have been periodically recorded in the river in late summer and a small coho salmon (*O. kisutch*) run begins in late October.

Fishing Branch River fall chum salmon stocks are the mainstay of an aboriginal fishery located near Old Crow. They also contribute significantly to Alaskan commercial and subsistence fisheries in the Yukon River, downstream of the mouth of the Porcupine River.

In addition to historically supporting Vuntut Gwitchin subsistence activity, the fall salmon run attracts a significant number of grizzly bears to the area. Beginning about mid-September during the peak of salmon spawning, grizzly bears congregate to feed on fall chum salmon, which is a nutritional food source for the bears as they prepare for winter denning. Grizzly bears have been observed feeding here on chum salmon as late as early November during -40 °C temperatures.

The south fork of the Fishing Branch River is one of the most significant fall chum salmon spawning areas in the Yukon River drainage, particularly in the Canadian portion. The fall chum salmon run is monitored by Fisheries and Oceans Canada, Government of Canada and the VGG using aerial surveys and a counting fence or weir.

The weir is located on the south fork of the Fishing Branch River east of Bear Cave Mountain (Figure 2, Appendix 1) and has operated from 1972-1975 and from 1985 to the present (excluding 1990). In 1975, Fisheries and Oceans Canada recorded an escapement of 353,300 fall chum salmon. However, over the past 20 years, an average of 36,000 chum salmon have spawned in these sections of the Fishing Branch River each fall, with a high of 121,400 in 2005 and a low of 5,100 in 2000.

5. Description of the Ranger Station

The Management Plan provides for the development of facilities and infrastructure in the Ecological Reserve. It states that the facility and infrastructure is to be kept to a minimum, consistent with the management principles and in keeping with the wilderness character of the area. The Management Plan also allows for use of the building and contents to authorized persons only, specifically staff and permitted visitors.

A temporary camp was built on the Settlement Lands for initial management planning field studies. Yukon Parks built a camp in 2005 and 2006 in the Ecological Reserve to replace this camp (Figure 2, Appendix 1). The new camp (the “**Ranger Station**”) includes a main cabin/washhouse, three sleeping cabins, outhouse, interconnecting deck, walk-way and high storage cache designed to support several activities:

- a) Yukon Parks Ranger management activities throughout the year;
- b) Commercial wildlife viewing under a two-month lease (September 1st-October 31st);
and
- c) Authorized non-commercial activity in support of the management principles such as research, monitoring and education during the viewing season (Nov.1-August 30).

The Ranger Station was built near the Fishing Branch River in a closed white spruce/feather moss vegetation community. This vegetation community is high value grizzly bear habitat from spring through fall. Normally, an attempt is made to locate park facilities in low value bear habitat to avoid interactions with bears. However, the cabin was deliberately placed close to the river to ensure safe and positive interactions between people and bears during the commercial wildlife viewing season. A cabin was considered important because:

- a) People have a warm and secure building to get out of cold and inclement weather. With -30 to -40 °C temperatures possible in fall, this was considered essential for visitors' safety and well-being;
- b) The cabin is close to the main bear viewing site so people can easily retreat to the cabin when cold or tired and still remain closely supervised by the guide; and
- c) It provides a bear-resistant structure where people can cook and eat without direct interaction with bears and food, and garbage can be stored and made inaccessible to bears.

6. Description of the Viewing Sites

Four main viewing sites (the “**Viewing Sites**”) have been identified in the wildlife viewing area (Figure 3, Appendix 1):

- Site A: People can occupy this narrow flat point of riverbank protruding slightly out over a gravel bar. The unobstructed view is about 200 degrees including 300 m downstream on the same side and 200 m on the opposite side of the river, 50 m across (shallow spawning area), 300 m upstream on the opposite side (gravel bar) and 350 m upstream on the same side (forested riverbank). Site A is the main viewing site because it is close to the cabin and people can warm up or rest periodically.
- Site B: This site is situated in an open area atop a 2-m high cut bank a few metres from the river with an unobstructed view of about 160 degrees including downstream 200 m on both sides (gravel bar and spawning area) plus a further 100 m of open forest on Bear Cave Mountain. The opposite side of the river (gravel bar) is about 40 m across and looking upstream (opposite side) one can see the spawning area opposite the camp and site A. The highlight of site B is the view of a salmon spawning area across and downstream of site B that is not visible from site A.
- Site C: The unobstructed view is about 180 degrees including about 500 m downstream on the same side (river shore line) and across the river to a spawning area, upstream about 100 m on the same side (gravel bar, spawning area). The highlight of site C is a large vortex pool (eddy) near the site that is chum spawning habitat and where bears are often observed kicking up and even diving for fish carcasses that collect on the bottom of the pool.
- Site D: A viewing platform is planned to be erected at this site. In years of good fall salmon abundance (20,000 plus) there are enough salmon spawning in the back channel to attract bears, especially bears habituated to wildlife viewing.

While initially permitted in one lower elevation cave on Bear Cave Mountain opposite the viewing site, all access to the mountain and the caves is now prohibited for a 5-year period from 2009 to 2013. This moratorium was approved by the Vuntut Gwitchin Government in order to protect the bears and historic resources of the area.

Grizzly bear harvesting is prohibited in the Ecological Reserve. There is a voluntary ban in the Wilderness Preserve.

Routes used to access viewing sites (Figure 3, Appendix 1) are as follows:

- a) Site B is about 170 m (straight line) downstream from the camp (same side of the river). Access to the site from camp is via an existing wildlife trail then across a back channel and low bench floodplain gravel bar.
- b) Site C is about 300 m (straight line) downstream from camp on the opposite side of the river and is accessed by crossing the river near the camp and walking along an old flood channel that cuts the corner of the main river.
- c) Site D is about 95 m (straight line) from the camp and accessed by an existing bear trail along a back channel.

7. Description of the Fisheries and Oceans Canada Weir Site

The fall chum salmon weir site is located northeast of Bear Cave Mountain on Settlement Land R-5A (Figure 2, Appendix 1; the “Weir Site”). The associated infrastructure, which includes cooking and accommodation cabins, outhouse and the adjacent weir, is managed by Fisheries and Oceans Canada in cooperation with the VGG, and who are responsible for ensuring that weir operations are managed in accordance with the management principles set out in the Final Agreement and Management Plan.

Given the proximity of the Weir Site to the Ranger Station and the Viewing Sites, Yukon Parks, Fisheries and Oceans Canada, VGG, and the Operator will work cooperatively to minimize impacts on salmon and bears.

Many of the requirements in the Risk Management Plan are applicable to activities at the Weir Site. Every effort will be made to ensure procedures and responses at the Weir Site are consistent with the procedures outlined in the Risk Management Plan, particularly for maintaining consistency in response to bear encounters, monitoring bear activities and responses, communicating regularly between sites, preventing non-natural bear attractants, and supporting each other in the case of an emergency.

Of special note, during the fall commercial wildlife viewing program, visitation by weir staff to the Viewing Sites and Ranger Station is restricted to emergencies only in order to protect the integrity of the viewing program and to avoid unexpected disturbances to the viewers (some of whom may be filming wildlife for example) and to the bears and other wildlife during this period.

PART 2: OPERATIONAL AND EMERGENCY PROCEDURES MANUAL

1. **Definitions**

The following definitions are pertinent to this document:

- 1.1. **Adaptive Management:** a dynamic planning process that recognizes the future cannot be predicted perfectly; thus, planning and management strategies are modified frequently as better information becomes available so that decision-makers can learn from experience or monitoring and research, adapting to changing social expectations and demands. Such planning requires a continuous process of constant monitoring and an analysis of the results of past actions, which are then fed back into current decisions.
- 1.2. **Aversive Conditioning:** A structured program applying deterrents consistently and sustainably over an identified period of time to achieve modification of an animal's behaviour by pairing the undesired behaviour with pain or an unpleasant stimulus.
- 1.3. **Commercial Wildlife Viewing Season:** refers to the period during September, October and when fall chum salmon spawn in the Fishing Branch River and grizzly bear congregate at the base of Bear Cave Mountain.
- 1.4. **Displacement:** when a bear temporarily leaves an area of human disturbance or activity, or when a bear quits using an area of long-term human activity.
- 1.5. **Firearm:** includes any device that propels a projectile by means of an explosion, compressed gas, springs or strings and, without limiting the generality of the foregoing, includes a rifle, shotgun, handgun, spring gun, longbow or crossbow.
- 1.6. **Guide:** a trained individual who is an expert in bear behaviour and Human-Bear interactions and who is familiar with the Ranger Station and Viewing Sites, camp operation and maintenance, potential hazards and safety measures, emergency procedures, and natural and cultural history of the area. During the wildlife viewing season this person is the Operator, as defined below, or any person employed by an Operator that, for gain, reward, or for material or financial benefit received, accompanies and is responsible for another person in any wilderness tourism activity - in other seasons it may be a Park Ranger or other designated trained persons.
- 1.7. **Historic Resource:** includes a historic site, historic object, and any work or assembly of works of nature or of human endeavour that is of value for its archaeological, palaeontological, pre-historic, historic, scientific, or aesthetic features.
- 1.8. **Human Food-conditioning:** when bears have fed on attractants and learn to associate humans and/or human activity with potential sources of food. Conditioned

- describes bear behaviour defined by one or more of the following: has sought and possibly obtained non-natural foods, destroyed property, displays aggressive (non-defensive) behaviour towards human, or becomes otherwise overly familiar with humans.

- 1.9 Human-habituation:** a reduction in the frequency of a response when no consequence is perceived by an animal. Habituated bears have not become overly familiar with humans but are comfortable in the presence of humans, and have retained their natural foraging behaviour.
- 1.10. Managing Agencies:** refers to the agencies in addition to Yukon Parks and VGG involved in the Committee of Managing Agencies (**the “Committee”**) established according to the two Ni’iinlii Njik management plans to advise on management issues, including the North Yukon Renewable Resources Council, Fisheries and Oceans Canada, Yukon Heritage Branch, and others who may be involved from time to time.
- 1.11. Management Area:** the area encompassing the Ranger Station and the Viewing Sites used for the Commercial Wildlife Viewing Season, and includes the Weir Site and surrounding areas where the viewing bears may be influenced by humans.
- 1.12. Non-natural Attractants:** any artificial food source that may attract wildlife to an area such as human food, food waste, garbage, compost, grey water or wastewater, sewage, petroleum-based products, or animal feed.
- 1.13. Operator:** any person, partnership, society, company, or corporate body permitted to undertake activities within the Management Area whether or not for commercial gain, and includes any Guides employed by the permitted party.
- 1.14. Park Officer:** an individual appointed as, or is ex officio a park officer under section 50 of the *Parks and Land Certainty Act*, and includes a Park Ranger
- 1.15. Park Permit:** refers to a permit issued by Yukon Parks pursuant to the *Parks and Land Certainty Act* for specified uses and activities within the Ecological Reserve.
- 1.16. Park Ranger:** the primary Yukon Parks employee providing direct operational services to a park and who is also a Park Officer as noted above.
- 1.17. Pit Privy:** a structure within which human excrement may be evacuated into an excavated-pit latrine.
- 1.18 Precautionary Principle:** if a threat of serious or irreversible damage to the environment or human health exists, a lack of full scientific knowledge about the situation should not be allowed to delay containment or remedial steps if the balance of potential costs and benefits justifies enacting them.
- 1.19. Translocation:** is the movement of wildlife in conflict with humans to a location where there is less likelihood of interaction with humans.

1.20. Wildlife: a vertebrate animal of any species or type that is wild by nature, and includes wildlife in captivity, but does not include fish or a species of animal prescribed by the Wildlife Regulations not to be wildlife.

2. Purpose and Scope

2.1. The operational and emergency procedures are designed to:

2.1.1. Minimize adverse effect of human activities on the ecology of the Ecological Reserve and Settlement Lands, particularly on grizzly bears and salmon.

2.1.2. Minimize the probability of conflict between wildlife and humans and to respond appropriately if conflicts occur.

2.1.3. Minimize the chance of injury to human visitors from factors other than wildlife conflicts.

2.1.4. Promote continued co-operative human use management and information exchange between Yukon Parks, VGG, and users involved.

2.2. Every user group will abide by the following provisions related to operational and emergency procedures to ensure consistency in responses to bears, minimize disturbance to bears and other wildlife, ensure safety for users, and prevent damage to the site and facilities.

2.3. Officials from Yukon Parks and VGG will work closely with all user groups to ensure that the procedures outlined in this document are implemented appropriately.

3. Access Management

3.1. During the Commercial Wildlife Viewing Season, access to the Ecological Reserve and Settlement Lands will be limited to a maximum of five persons total per day, including the Guide, for a maximum of one week (seven days).

3.1.1. The Operator will ensure the maximum number of clients at any one time during the Commercial Wildlife Viewing Season will be four.

3.1.2. In addition, the Operator may employ an assistant/trainee (see Appendix 5).

3.1.3. In addition, Yukon Parks reserves the right to be on site at any time as necessary to ensure compliance and to inspect facilities and site conditions.

3.1.3.1. Yukon Parks will ensure that park management activity, and related research and monitoring, will be closely coordinated with the commercial wildlife viewing operations during the

Commercial Wildlife Viewing Season to maximize facility space for the viewing program.

- 3.2. During the Commercial Wildlife Viewing Season, permission for any non-commercial purposes, such as research and education, for either the Ecological Reserve or Settlement Lands will only be issued if Yukon Parks and VGG determine that there is a strong justification to such concurrent activity.
 - 3.2.1. Such justification will be required particularly if the request is to access the valley bottom of the south fork of the Fishing Branch River upstream of the Weir Site and downstream of the southwest ridge of Bear Cave Mountain.
 - 3.2.2. The number of people permitted access for non-commercial purposes to the Ecological Reserve or Settlement Lands will be determined respectively by Yukon Parks or VGG at the time of permitting. (See Section 15.2.4 of this document regarding use of temporary camps.)
- 3.3. The Operator shall not enter or venture near bear caves on Settlement Lands during the period of November 2008 to November 2013 as per VGG Chief and Council direction. The purpose of this decision is directly related to incorporating the Precautionary Principle with regards to bear denning.

4. *Permits, Licensing, Insurance and Waivers*

4.1. Commercial Use

- 4.1.1. The Operator must obtain written authorization for entry from VGG in order to enter the Settlement Lands.
- 4.1.2. The Operator will maintain a valid Park Permit prior to commencing any activity on the Ecological Reserve.
- 4.1.3. The Operator will include a Wildlife Viewing Plan with their Park Permit application, which describes the proposed wildlife viewing program in sufficient detail so as to enable Yukon Parks and VGG to assess the plan for compliance with the objectives and provisions of the Final Agreement, the Ecological Reserve Management Plan, and the Risk Management Plan.
- 4.1.4. Upon approval of the proposed plan, the Operator will be issued a Park Permit and an authorization for entry by the respective authorities enabling the Operator to provide the approved wildlife viewing program subject to any specified conditions that may apply along with the conditions stated herein.
- 4.1.5. For the purposes of every Park Permit and authorization for entry issued by respective authorities, the following conditions apply:

- 4.1.5.1. The Operator will agree to follow all procedures and regulatory requirements outlined in the Risk Management Plan.
- 4.1.5.2. The Operator will maintain a valid Wilderness Tourism License (“**WTL**”) at all times during operations.
- 4.1.5.3. The Operator will maintain Commercial General Liability Insurance in an amount not less than \$2,000,000, inclusive per occurrence against bodily injury, personal injury, and property damage, at all time during operations.
- 4.1.5.4. The Commissioner of Yukon Parks and VGG are to be named as insured under this policy.
- 4.1.5.5. The Operator will sign a waiver that releases all rights of recourse against Yukon Parks and VGG while within or in transit to the Ecological Reserve and Settlement Lands, which includes the release of the right to cause of action against the respective authorities related to damage to the Operator’s property, injury to the Operator, its partners, contractors, employees, agents, and clients.
- 4.1.5.6. The Operator will require staff and clients to sign a waiver that releases all rights of recourse against Yukon Parks and VGG.
- 4.1.5.7. The Operator will record all incidents in accordance with the provisions stated herein and file an annual report (“**Annual Report**”) with Yukon Parks by January 31 of each year following the Commercial Wildlife Viewing Season in accordance with Section 13 in this document.
- 4.1.5.8. The Annual Report will be filed in addition to any other reporting documents required pursuant to the WTL.
- 4.1.5.9. In the event that either Yukon Parks or VGG determine that the Operator’s commercial activity and operations must cease due to a serious human-bear conflict, forest fire, or any other emergency, the Operator agrees to release Yukon Parks and VGG from any claim for financial compensation that results from the termination of the operations.
- 4.1.5.10. The Operator will bear costs related to any emergency evacuation of staff and clients and is encouraged to retain business interruption and emergency evacuation insurance.
- 4.1.5.11. The Operator and his partners and contractors will:
 - 4.1.5.11.1. Maintain compliance with the *Workers’ Compensation Act*, R.S.Y. 2002, c. 231, in particular, will obtain and maintain the necessary insurance coverage for him and any employees.

- 4.1.5.11.2. Maintain compliance with the *Occupational Health and Safety Act*.
- 4.1.5.12. The Operator will obtain the proper license required if providing liquor to clients.
- 4.1.5.13. The Operator, staff, and clients will not hunt or fish in the Ecological Reserve or Settlement Lands.
- 4.1.5.14. The Operator will keep at least one 12-gauge shotgun capable of firing non-lethal deterrent rounds and slugs, one high-powered rifle, and other non-lethal deterrents on site at all times.
 - 4.1.5.14.1. The Operator must be licensed to use Firearms and trained to use non-lethal deterrents (see Appendix 5).

4.2. Non-commercial Use

- 4.2.1. Individuals wishing to access the Ecological Reserve and Settlement Lands for non-commercial purposes must obtain Park Permit and written authorization for entry from respective authorities.
- 4.2.2. For the purposes of every Park Permit and authorization for entry issued by respective authorities, the following conditions apply:
 - 4.2.2.1. The Operator will agree to follow all procedures and regulatory requirements outlined in this Risk Management Plan applicable to him.
 - 4.2.2.2. The Operator will sign a waiver that releases all rights of recourse against Yukon Parks and VGG while within or in transit to the Ecological Reserve and Settlement Lands, which includes the release of the right to cause of action against the respective authorities related to damage to the Operator's property, injury to the Operator, its partners, contractors, employees, agents, and clients.
 - 4.2.2.3. The Operator is encouraged to maintain emergency evacuation insurance and will bear costs related to any emergency evacuation for themselves, its employees, and its volunteers.
 - 4.2.2.4. If the Operator is carrying out research or scientific work, he/she will maintain a valid license issued under the *Scientists and Explorers Act* and submit required reports to the Yukon Parks and VGG after completion.

4.2.2.5. If applicable, the Operator will:

4.2.2.5.1. Maintain compliance with the *Workers' Compensation Act* and in particular obtain necessary coverage for him and any employees and volunteers.

4.2.2.5.2. Maintain compliance with the *Occupational Health and Safety Act*.

4.2.2.6. The Operator will provide proof of knowledge and skills to manage and control non-natural wildlife attractants, and principles of no-trace camping.

4.2.2.7. The Operator will provide proof of their familiarity, training, and experience conducting themselves safely in bear country, and proficiency in safe wilderness travel and living.

5. Helicopter Management

5.1. Any helicopter company planning to land in the Ecological Reserve will obtain a Park Permit from Yukon Parks, and obtain authorization for entry from VGG with respect to the Settlement Lands.

5.2. For the purposes of every Park Permit and authorization for entry issued by respective authorities, the following conditions apply to any helicopter company conducting operations in, over, or on the lands in the Ecological Reserve or Settlement Lands under normal circumstances:

5.2.1. Unless otherwise authorized, pilots will only land at one of the two following locations:

5.2.1.1. The main landing site on the gravel bar on the Fishing Branch River immediately west of the Ranger Station (66⁰ 30.085' N, 139⁰ 21.775' W, datum WGS84).

5.2.1.2. The alternate landing spot on the river edge adjacent to the large sedge meadow (66⁰ 29.935' N, 139⁰ 21.511' W, datum WGS84) about 350 m (straight line) southeast and upstream of the Ranger Station (this meadow is part of an old oxbow or side channel of the Fishing Branch River - see Figure 3, Appendix 1).

5.2.2. Pilots will maintain an altitude of at least 300 m when over the Ecological Reserve and Settlement Lands until they are on landing approach.

5.2.3. Pilots will approach the Ranger Station from the south, upstream on the south fork of the Fishing Branch River and on the west side of the river while transporting clients.

- 5.2.3.1. Exceptions to the above are only acceptable when poor weather or wind requires an alternate approach direction or the helicopter first needs to stop at the Weir Site.
- 5.2.4. When transporting the Operator, staff, equipment and supplies, pilots will approach the Ranger Station from the south on the west side of the Fishing Branch River as much as is feasibly possible.
- 5.2.5. The final approach for landing at the Ranger Station will routinely be made from the north because of prevailing southerly winds.
 - 5.2.5.1. It is preferable that the pilot follow an approach route approximately 500 m west of the river, turn over the forested area north west of the Ranger Station and approach the landing site from the north keeping west of the main river as far as possible.
 - 5.2.5.2. If the wind is from the north, the landing approach should also be as far west of the main river as possible. The take-off route should be as far west of the main river as possible.
- 5.2.6. Pilots will avoid disturbing wildlife to the extent practical, particularly along the Fishing Branch River and around den sites on Bear Cave Mountain.
 - 5.2.6.1. It is an offence under the *Wildlife Act* (section 92) for pilots to attempt to chase bears from the landing area before setting down, so if bears are at or near the main landing area the alternate landing site must be used.
- 5.2.7. Emergency landings will be reported to Yukon Parks and VGG respectively, depending on the landing location.
- 5.3. Fisheries and Oceans Canada and weir staff will land at the designated landing site for access to the Weir Site.
- 5.4. Managing Agencies will avoid helicopter landings in the Ecological Reserve and Settlement Lands during the Commercial Wildlife Viewing Season, especially landings on the valley bottom of the south fork of the Fishing Branch River upstream of the Weir Site and downstream of where the water of the Fishing Branch River disappears underground.
- 5.5. Strong justification will be necessary for applications for non-commercial purposes to land on the valley bottom of the south fork of the Fishing Branch River upstream of the Weir Site and downstream of the southwest ridge of Bear Cave Mountain while bears are fishing for salmon, and commercial wildlife viewing is occurring.

6. Facility Management

6.1. Camp Site Management

- 6.1.1. The Operator will follow the Camp Facility Use Directive (see Appendix 9) during operations.
- 6.1.2. Yukon Parks will attach skirting to buildings to prevent bears from taking refuge under them.
- 6.1.3. Yukon Parks, in collaboration with the Operator, will eliminate or reduce any feature on pathways, routes, trails and around buildings that may conceal a bear at close distance and increase the chance of a surprise encounter.
- 6.1.4. A washhouse is attached to the main cabin with grey water drain lines for safe disposal of wash waters (to be routed through the cabin grease trap).
- 6.1.5. When sewage in the Pit Privy reaches within 45 cm of the ground surface, Yukon Parks will abandon the pit and backfill it with suitable material to about 30 cm above the original ground level.
- 6.1.6. Any new privy pit will be dug west of the current site and further from the river and back channel to avoid long term seepage into the river. The Committee shall monitor privy pit construction to ensure continued action on the same.
- 6.1.7. Yukon Parks, in consultation with the Operator, will place sheet metal collars around the poles that support the cache platform, placed high enough to avoid damage by bears.
- 6.1.8. The Operator will discourage clients from climbing the ladder to the cache without instructions, to minimize the chance of a slip and fall.
- 6.1.9. Cabins will be heated by wood, at least in the short term, which should be used sparingly. The Committee will revisit the issue of cabin heating in future revisions of the Risk Management Plan.
- 6.1.10. The Operator will ensure an adequate supply of firewood is supplied in advance of the wildlife viewing season in accordance with the Facility Use Directive (Appendix 9).
- 6.1.11. Moss and vegetation disturbed or killed during the construction of the Ranger Station facilities will be allowed to regenerate naturally and there will be no seeding of non-native plants.
- 6.1.12. Yukon Parks, in collaboration with the VGG and the Operator, will follow recommended actions of the Camp Sanitation Regulations of the *Public*

Health and Safety Act and *Fishing Branch Ranger Cabin Directive* in facility construction, operation, and maintenance, as follows:

- 6.1.12.1. Ranger Station drainage, particularly from human waste and grey water, will be arranged so as to prevent pollution of the river.
- 6.1.12.2. The Ranger Station will be kept in a good state of repair and cleanliness.
- 6.1.12.3. All cabins will be equipped with adequate garbage receptacles with tight fitting covers that will not to be stored outside.
- 6.1.13. The Operator will follow other sanitation actions described in the Camp Facility Use Directive.
- 6.1.14. The Operator will ensure that water taken from the river for consumption will be treated according to the Federal guidelines in Appendix 10.
- 6.1.15. No domestic animals or pets are allowed. Only dogs trained by the Guide, specifically for the purpose of aversion, will be allowed on site.

6.2. Viewing Sites, Trails and Routes Management

- 6.2.1. The Operator will keep brush and debris trimmed as required at each viewing site to increase visibility and to reduce hazards; otherwise Viewing Sites A, B, and C will not be altered.
- 6.2.2. A viewing platform or tree stand may be set up at site D.
 - 6.2.2.1. The Operator will be responsible for construction and maintenance of the viewing platform, with Yukon Parks's approval of the plans.
 - 6.2.2.2. The platform will be raised at least 5 m off the ground and hang from a tree or be suspended between 3 or 4 trees, with a safety railing and removable ladder for access.
- 6.2.3. Yukon Parks installed a deck at the front and west side of the main cabin to connect the sleeping cabins and Pit Privy.
- 6.2.4. The Operator will provide on-demand lighting powered by solar charged 12-volt batteries in key spots to help illuminate the path between the main cabin, sleeping cabins and Pit Privy.
- 6.2.5. Yukon Parks constructed boardwalks over well-used pathways to help prevent erosion.
- 6.2.6. Viewing Sites B, C, and D will be accessed using the same preferred route each time.

- 6.2.6.1. Upon a familiar route being clearly established, Yukon Parks, in collaboration with the Operator and in consultation with VGG, will clear defined trails designed for improved client safety.
- 6.2.7. Yukon Parks will not approve any additional viewing sites, trails or routes until an assessment of the impact of human use on bears and bear use of salmon spawning areas has been completed.
- 6.2.8. Any future changes or additions to the Viewing Sites, trails and routes require approval by Yukon Parks and revisions to the Risk Management Plan.

6.3. Operator Qualifications and Training

- 6.3.1. The Operator will provide a minimum of one personnel with the qualifications necessary to ensure the safety and comfort of their clients.
- 6.3.2. The on-site manager and/or staff will maintain the following qualifications:
 - 6.3.2.1. Valid firearms possession and acquisition license(s), (formerly known as an FAC);
 - 6.3.2.2. A valid St. John Emergency or equivalent first aid certificate including CPR to meet the minimum standards of the *Yukon Workers Compensation Health and Safety Board (YWCHSB)* and preferably with a remote wilderness emphasis or wilderness first aid certificate, a spinal immobilization certificate, and training in the appropriate use of supplemental oxygen;
 - 6.3.2.3. Skill to operate communications and fire fighting equipment on site; and
 - 6.3.2.4. Understanding of the processes of Human Food-Conditioning and human habituation in bears, human safety around bears and other wildlife, non-natural attractant management, and skill with and appropriate use of deterrents.
- 6.3.3. In addition, the personnel will maintain:
 - 6.3.3.1. Working knowledge of applicable legislation and regulations;
 - 6.3.3.2. Leadership skills, training and/or experience;
 - 6.3.3.3. Other skills included in Appendix 5 under staff training.

- 6.3.4. The Operator will be responsible for training on-site personnel to meet the qualifications required in the Management Plan and the Risk Management Plan (see Appendix 5 for guidelines for minimal training).
 - 6.3.4.1. The Operator may train an assistant/trainee, preferably a Vuntut Gwitchin First Nation (VGFN) citizen who is recruited in consultation with VGG (see Appendix 5).
- 6.3.5. The principle of bear safety promoted by the Operator in guide training will be consistent with principles of bear safety promoted by Yukon Parks.
 - 6.3.5.1. The videos "Staying Safe in Bear Country" and "Working in Bear Country" may be useful tools for bear awareness and safety training (see Appendix 4 for directions to order copies).
- 6.3.6. With respect to the Operator's employees, the Operator will ensure that:
 - 6.3.6.1. The Ranger Station, equipment and processes under the employer's control are safe and without risks to health;
 - 6.3.6.2. Work techniques and procedures are adopted and used that will prevent or reduce the risk of injury;
 - 6.3.6.3. Workers are given necessary instruction and training and are adequately supervised, taking into account the nature of the work and the abilities of the workers;
- 6.3.7. The Operator will ensure that employees are made aware of their following obligations:
 - 6.3.7.1. Take all necessary precautions to ensure their own health and safety.
 - 6.3.7.2. Comply with health and safety procedures and provisions of the Risk Management Plan to ensure their own or any other person's health or safety.
 - 6.3.7.3. Immediately report to the Operator any situation which they have reason to believe would present a hazard and which they cannot correct, including unusually aggressive bears.
 - 6.3.7.4. Report any accident or injury that arises in the course of or in connection with their work.

7. *Wildlife Viewing Management*

7.1. Principles of Habituation of Bears for Wildlife Viewing

- 7.1.1. With respect to the operations, the following principles will be adhered to by the Operator, its employees, contractors, agents, and clients in terms of bear habituation (see Appendix 3):
 - 7.1.1.1. People must be willing to tolerate non-aggressive bears in close proximity.
 - 7.1.1.2. People must behave in a predictable manner.
 - 7.1.1.3. People must teach bears to respect human boundaries.
 - 7.1.1.4. Bears must not get access to Non-Natural Attractants.

7.2. Non-Natural Attractant Management

- 7.2.1. The Operator, in collaboration with Yukon Parks, will provide an incinerator at the Ranger Station sufficient for the amount of garbage generated during wildlife viewing and capable of burning at high enough heat to incinerate food solids and eliminate food odours. An air emissions permit is required for burning if the volume of waste incinerated is greater than 5 kg per day. Special (hazardous) waste must be shipped out to a proper disposal facility.
- 7.2.2. The Operator will follow provisions in the Camp Facility Use Directive designed to avoid bear attractants.

8. *Client Screening, Briefing and Education*

- 8.1. Prior to making a booking, the Operator will inform potential clients of the conditions they may experience while participating in a wildlife viewing program, such as:
 - 8.1.1. Remoteness potentially affecting access to supplies and medical services and facilities;
 - 8.1.2. Potential risks related to wildlife encounters/viewing;
 - 8.1.3. Potential weather conditions affecting travel schedules and emergencies;
 - 8.1.4. Conditions of rugged terrain that can be slippery with mud, snow, or ice.

- 8.2. An Operator must be capable of dealing with the health and fitness levels of all clientele.
 - 8.2.1. Operators will be clear about the physical demands of this activity when communicating with clients.
- 8.3. Only after clients have been made aware of risks and health and fitness requirements, will the Operator require clients to sign the waiver required before flying into the viewing site.
- 8.4. The Operator will inform clients to use only biodegradable soaps and shampoos and to refrain from bringing scented products that could be a bear attractant.
- 8.5. The Operator may wish to encourage clients to have travel medical insurance with emergency evacuation coverage.
- 8.6. The Operator will get client next-of-kin contact information in case of emergency.
- 8.7. The Operator will inform clients in advance of travel about conditions they need to prepare for, such as warm clothing before flying in the event that the helicopter is required to make an emergency landing en route in winter conditions.
- 8.8. The Operator will inspect the Ranger Station and Viewing Sites facilities prior to commercial clients arriving at the site to ensure any potential hazards are removed, including hazardous trees, protruding nails, vegetation noted in section 6.2, and that the facility is cleaned according to sanitation procedures in the Camp Facilities Use Directive.
- 8.9. The Operator will ensure clients are adequately informed of operational and emergency procedures regarding use of the Ranger Station and Viewing Sites facilities and the management of Non-Natural Attractants.
- 8.10. The Operator will provide clients with at least the following information about safety around bears:
 - 8.10.1. An overview of local grizzly bear ecology;
 - 8.10.2. The special ecology of the area, including the concentration of bears at a rich food source that allows people and bears to interact safely in close proximity, but that these conditions do not apply everywhere;
 - 8.10.3. How to avoid attracting bears to camp site;
 - 8.10.4. What are Human-Habituation and Food-Conditioning in bears;
 - 8.10.5. How to avoid Displacing bears from important habitat;
 - 8.10.6. Restrictions on movement within the Ranger Station and Viewing Sites;
 - 8.10.7. Any blind corners or areas of obscured visibility where clients need to be particularly attentive;

- 8.10.8. Protocols and timing of use of the specified Viewing Sites;
- 8.10.9. Expectations of clients when at Viewing Sites;
- 8.10.10. Potential risks associated with viewing bears at close range;
- 8.10.11. How to behave during a bear encounter;
- 8.10.12. The appropriate use of bear spray in case of an emergency;
- 8.10.13. An overview of other bear deterrents and how they may be used by the Operator if necessary;
- 8.11. The Operator will provide clients with at least the following information about staying safe from other natural hazards in the area:
 - 8.11.1. A requirement to stay on established pathways and trails;
 - 8.11.2. A warning to stay alert and aware of conditions underfoot, as well as, hanging branches, rocks, logs and roots;
 - 8.11.3. A warning to dress warmly whenever venturing out, particularly when they may be occupying a viewing site away from the Ranger Station for several hours;
 - 8.11.4. A suggestion that they try to keep dry in cold weather, particularly their underclothes and socks;
- 8.12. The Operator will instruct visitors to be extra cautious when walking along trails near waterways and when crossing rivers or back channels during times of high water.
 - 8.12.1. If a Guide chooses to take visitors across the main river in higher water conditions, he will have a rescue throw bag on hand.
- 8.13. The Operator will instruct visitors in the use of air horns, fire fighting equipment, satellite phone, camp facilities, and other safety equipment on site.
- 8.14. Procedures in the event that the Guide is incapacitated, which at minimum will include instructions on the location and use of the emergency transmitter, and satellite phone and phone numbers, location of first aid supplies, and instructions for personal safety and survival. In briefing clients, the Guide should consider the most common circumstances where he/she may be incapacitated (e.g., falls resulting in serious injury, maulings, or unexpected health issues).
- 8.15. Information or experiences the Operator provides to clients will attempt to meet two of the stated goals of wildlife viewing in the Yukon Grizzly Bear Management Guidelines and the Management Plan, which are:

- 8.15.1. To increase public understanding and appreciation of bears and bear ecology;
 - 8.15.2. To increase public understanding of appropriate human behaviour in bear habitat; and
 - 8.15.3. To increase visitors' understanding and appreciation of the other natural and cultural values of the area and the mechanisms required to protect them.
- 8.16. The Operator will ensure that clients do not damage or remove any items, including but not limited to stones, bones, feathers, artefacts, and plants.

9. Guiding the Clients

- 9.1. The Operator and clients will endeavor to be as predictable as possible in their movements to and occupation of Viewing Sites.
 - 9.1.1. The Operator will attempt to take clients to the above sites at similar times of the day and for a similar length of time.
- 9.2. The Operator will accompany clients to all Viewing Sites.
 - 9.2.1. Clients may return to the cabin on their own from Viewing Site A, but only under the watchful eye of the Guide.
 - 9.2.2. The Guide will accompany clients back from Viewing Sites B to D.
 - 9.2.3. Clients will also be provided with a hand-held radio when at Viewing Site D.
- 9.3. The Operator will accompany clients to and from the secondary helicopter landing site at the sedge meadow southeast of the Ranger Station.
- 9.4. The Operator will not allow clients to leave established pathways to sleeping cabins, the outhouse, or Viewing Site A.
- 9.5. The Operator will not allow clients to leave established trails to Viewing Sites B to D, or the alternate helicopter landing site.
- 9.6. The Operator shall not enter or venture near bear caves on Settlement Lands during the period of November 2008 to November 2013 as per VGG Chief and Council direction. The purpose of this decision is directly related to incorporating the Precautionary Principle with regards to bear denning.

10. Bear Awareness

10.1. The Operator will use the following methods, in order of importance, for detecting a bear at close range:

10.1.1. The visual and auditory alertness of the Guide.

10.1.2. If present, the olfactory, auditory, and visual alertness of a dog trained specifically to detect and help deter bears, under the care and attention of the Guide.

10.1.2.1. The dog referred to above will:

10.1.2.1.1. Be well trained, particularly on how to respond to potential human-bear conflicts;

10.1.2.1.2. Be responsive to its handler at all times, even when excited;

10.1.2.1.3. Not be permitted to run at large and not chase or harass wildlife, except if being used to deter a bear;

10.1.2.1.4. Be comfortable around people;

10.1.2.1.5. Not bark except when alerting the Guide and clients to a bear's presence, or responding to a potential bear-human conflict;

10.1.2.1.6. Not be overfed, enabling the dog to cache extra food.

10.1.3. The visual and auditory alertness of viewing clients.

10.2. The Operator will provide a pressure-zone microphone on the outside of the main cabin and turn it on as required, particularly at night when people are gathered for dinner or socializing before going to bed, to warn people inside the cabin about bear activity outside.

11. Separation Distances

11.1. The Operator will ensure client groups do not approach a bear or occupy a Viewing Site if the bear is at, or immediately adjacent to, the viewing site and is likely to be Displaced by human activity.

11.2. Once at a Viewing Site with clients, separation distances will be established by individual bears, based on the degree to which they habituate to people.

11.3. The Operator will ensure that no bear viewing takes place at the four specified Viewing Sites after dark, or in very poor visibility, such as during heavy fog or a white-out snow storm.

11.3.1. Clients may be able to view bears at night from the cabin porch when conditions provide sufficient natural lighting such as moonlight, starlight, or northern lights.

12. Emergency Procedures

12.1. Communication and First Aid Management

12.1.1. At the beginning of each Viewing Season, the Operator will brief RCMP, medical centres and helicopter companies in Old Crow and Dawson to prepare them in the event of an emergency.

12.1.2. The Operator will maintain a minimum of two satellite telephones for logistical and emergency communication.

12.1.2.1. One phone will be located in a designated emergency telephone site, such as on a wall in the main cabin, with clearly posted instructions in case an emergency call is required to be made in the absence of or incapacitation of the Guide.

12.1.2.2. The Operator should be able to communicate directly with the Weir Camp in the case of emergencies.

12.1.3. Yukon Parks will maintain an emergency Personal Locator Beacon device at the emergency phone location with written instructions posted on the wall as a back up in case of an emergency should communication by satellite phone not be possible.

12.1.4. The Operator will test the satellite phones on a regular basis to ensure they are maintained in good operating condition.

12.1.5. The Operator will ensure an approved YWCHSB #2 first aid kit, spine board, and neck brace is available at the Ranger Station and maintained in good working order, which requires replacing contents of the first aid kit as soon as possible after they are used and ensure the contents are properly maintained.

12.1.5.1. Additional recommended first aid supplies for the Ranger Station are outlined in (see Appendix 6).

12.1.6. The Operator will ensure a field-level first aid kit will be carried any time a group is away from the Ranger Station.

- 12.1.7. The Operator will ensure that all injuries and first aid treatments are properly recorded in a first aid log and included in a summary of incidents in the Annual Report.
- 12.1.8. To use the Ranger Station and to meet the minimum standards of the *Yukon Workers Compensation Health and Safety Board (YWCHSB)*, the Operator must have First-Aid certification referenced in 6.3.

12.2. Fire Management

- 12.2.1. The Operator will ensure the fire prevention measures referred to in the Camp Facility Use Directive are followed.
- 12.2.2. A Fire Protection Plan will be maintained by Yukon Parks, in collaboration with the Forest Services Branch, the Operator and VGG, to ensure fire fighting and equipment designed to meet the needs of the site are available and maintained in good working order at the Ranger Station.
- 12.2.3. The Operator will ensure that staff are trained and procedures are followed in accordance with the Fire Protection Plan (Appendix 8) as required.

12.3. Bear Deterrents

- 12.3.1. The Operator will ensure the following non-lethal bear deterrent options are on site and available for use when appropriate, and will know the capability and limitations of each deterrent:
 - 12.3.1.1. A trained bear dog under Operator's supervision (see 10.1.2);
 - 12.3.1.2. Other non-lethal deterrents carried by the Operator such as air horn, 12-gauge shotgun with deterrent rounds such as noise-makers and slugs made of rubber, not plastic, and that are stored and used at room temperature to ensure they remain pliable and not lethal;
 - 12.3.1.3. Pepper spray carried by the Operator and clients; and
 - 12.3.1.4. Grouping people together.
- 12.3.2. The following are general deterrent techniques for a bear acting in a non-defensive, aggressive way:
 - 12.3.2.1. Subtle vocal and body signals;
 - 12.3.2.2. Vocal and body signals to assert dominance over the bear;
 - 12.3.2.3. Vocal and body signals to assert dominance coupled with the presence of Aversive Conditioning through the use of non-lethal bear deterrents;.

- 12.3.2.4. Dominance action or Aversive Conditioning will escalate with any escalation in the non-defensive approach and aggressive behaviour of the bear.
- 12.3.3. If a bear challenges the Guide and/or clients to the point of imminent danger, the bear dog will respond, as trained, to challenge the bear.
- 12.3.4. The Guide will continue to use vocal and body signals and deterrents to assert dominance.
- 12.3.5. After the Operator uses non-lethal deterrents on a bear for Aversive Conditioning, it will be reported to a Conservation Officer providing all information required by the Conservation Officer, and then notify Yukon Parks and VGG respectively.
- 12.3.6. Any time a human-bear conflict occurs, the Operator will assess why it occurred and immediately implement any alternate action or behaviour required to remedy the situation and prevent it from happening again
- 12.3.7. If the Operator considers that all human actions and behaviour leading up to the incident were appropriate, they will assess whether any further action against the bear might be required to remedy the situation, such as further Aversive Conditioning or lethal removal.
- 12.3.8. The Operator will consult with a Parks Officer if further action is being considered, and with Yukon Parks, and VGG respectively.
- 12.3.9. All incidences and actions taken will be recorded according to the reporting procedures in Section 13.
- 12.3.10. Clients will not be allowed to use Firearms or non-lethal deterrents, other than bear spray, following Operator's instructions, unless in the case of an emergency when the guide is incapacitated.
- 12.3.11. Only the Operator, a VGFN citizen or other persons authorized by Yukon Parks are allowed to have a Firearm at the Ranger Station and must hold a valid Firearms Possession and Acquisition License.
- 12.3.12. The Operator will ensure Firearms are properly sighted and maintained in good working order, including cleaned regularly and after each time they are used.
- 12.3.13. The Operator will store ammunition in a cool, dry place well away from any flammable substance, and will transport out and discard any outdated ammunition.
- 12.3.14. The Operator will load a shotgun with the deterrents or rifled slugs they are most comfortable with, but will not have a round in the chamber, particularly when the shotgun is stored in the main cabin unattended by the Guide.

- 12.3.15. When transporting a Firearm in a helicopter or other vehicle, the Firearm must be unloaded, a trigger-lock in place, and the Firearm stored out of sight.
 - 12.3.15.1. It is advisable to carry it in a gun case.
- 12.3.16. The Operator will maintain and fix promptly or replace any deterrent equipment that expires or malfunctions and replace deterrent rounds before they expire.
- 12.3.17. An electric fence with multiple strands of alternating positive and negative charged wire will be maintained on the wall of the main cabin and the sleeping cabins.
 - 12.3.18. The Operator will activate the main cabin fence whenever people are not in the Ranger Station for more than a day and the fence around the sleeping cabins whenever people are not in the Ranger Station for extended periods, such as the end of the wildlife viewing season.
- 12.3.19. The Operator will supply each structure, including the outhouse and Viewing Site D, with an air horn so clients can alert them of any potentially hazardous situation.

12.4. Translocation of Bears

- 12.4.1. Translocation is not a feasible management tool for human-bear conflicts in the Ecological Reserve or Settlement Lands.
- 12.4.2. The priority alternatives to Translocation are:
 - 12.4.2.1. Strong Aversive Conditioning to make the wildlife leave the area or modify its behaviour around people; and
 - 12.4.2.2. If Aversive Conditioning fails, then to shut down the commercial wildlife viewing program, either temporarily or permanently (see 12.5.3).

12.5. Lethal Removal of Bears

- 12.5.1. The Operator will have a 12-gauge shotgun on site, capable of firing rifled slugs for lethal removal of a bear, if necessary.
 - 12.5.1.1. The Operator may keep a high-powered rifle on hand in case a bear or other wildlife needs to be killed from a distance beyond the range of a shotgun, such as an incident where the wildlife has been wounded and run-off.
- 12.5.2. Yukon Parks, in consultation with the Operator, Conservation Officer, Fisheries and Oceans Canada and the VGG, will take into consideration the Management Plan for the Ecological Reserve and Settlement Lands in

deciding whether they will shut down the wildlife viewing operation or by necessity consent to lethally remove the wildlife.

- 12.5.3. Yukon Parks, in consultation with the Operator, Conservation Officer, Fisheries and Oceans Canada and the VGG, will take into consideration the Management Plan for the Ecological Reserve and Settlement Lands and the Wildlife–Human Conflict Directive, including the following considerations, in determining if lethal removal is appropriate:

12.5.3.1. Human injury results or a situation where there is a very high risk of injury;

12.5.3.2. Significant property damage occurs;

12.5.3.3. Abnormal aggressive behaviour is apparent, especially predatory behaviour upon humans;

12.5.3.4. Recurring conflict situations are encountered with the specific animal, for example where wildlife has been relocated and causing conflict activity at a new location;

12.5.3.5. Injured or diseased condition is creating a public health concern and/or suffering in the animal; and

12.5.3.6. No other option exists, such as timely removal of people from the area.

- 12.5.4. In accordance with the Management Plan, evacuation of people using the area is prioritized as a management action over lethal removal of a bear. Therefore, where circumstance or bear behaviour is likely to lead to lethal removal of a bear, and the situation is not immediately life threatening, the Operator will consult with a Conservation Officer and prepare to evacuate the area as soon as practicable.

12.5.4.1. At the very least the Conservation Officer, Yukon Parks, Fisheries and Oceans Canada and VGG should be made aware if a serious situation exists, which will greatly assist an investigation if the bear is killed.

- 12.5.5. The Operator may kill a bear in defense of life if:

12.5.5.1. There is imminent or immediate threat of grievous bodily harm and all other practical means of averting the threat of bodily harm have been exhausted; or

12.5.5.2. There is imminent or immediate threat of irrecoverable and substantial damage to property and the property is essential for human safety, and all other practical means of averting the threat of damage to property have been exhausted.

- 12.5.6. A Conservation Officer may, in consultation with Yukon Parks and VGG, direct the Operator to lethally remove a bear if it appears necessary and no other option exists - and will notify Fisheries and Oceans Canada of any such action to be taken.
- 12.5.7. If a bear is killed in defence of life or property, or if a bear is killed accidentally, such as while using non-lethal deterrents, the Operator will report the killing to a Conservation Officer as soon as practicable.
- 12.5.8. Any other information deemed relevant to an investigation by the Conservation Officer must be provided.
- 12.5.9. The Conservation Officer will immediately contact Yukon Parks, VGG and Fisheries and Oceans Canada respectively, and the Operator will record the incident and report it to Yukon Parks and VGG respectively.
- 12.5.10. The Conservation Officer will instruct the Operator what is required for the investigation and whether there will be an on-site visit by a Conservation Officer or other delegate, such as a Parks Officer.
 - 12.5.10.1. If the Conservation Officer is satisfied that the Operator did all they could to prevent having to kill the bear, they may choose not to visit the site and may allow the bear to be skinned and the carcass be moved from where it was killed to a more distant location so that the remains do not draw scavenging wildlife into conflicts with people.
 - 12.5.10.1.1. In the above circumstance, moving the carcass will be the responsibility of the Operator.
- 12.5.11. The Conservation Officer investigating a report of a serious human-bear conflict if unable to travel to the site to investigate in person will, in consultation with Yukon Parks authorities, VGG, and Fisheries and Oceans Canada, try to assist with a solution.
- 12.5.12. Any time wildlife is killed the remains will be treated with respect and disposed of in accordance with the *Wildlife Act*.
- 12.5.13. The Conservation Officer will refer to the Yukon Parks's "Disposal of Found/Accidentally Killed/Defense Killed Wildlife Policy" for the disposal of lethally removed wildlife.
- 12.5.14. When a bear is killed in defence of life or property, the Operator must turn over the entire carcass to a Conservation Officer, including the skull and evidence of sex, such as the baculum (penis bone) attached to the hide.
 - 12.5.14.1. As an exception to the above due to the distance and expense involved, the Conservation Officer may choose an alternative, such as directions to turn over the skin including skull, feet, claws and baculum.

- 12.5.15. VGFN citizens may make application to a Conservation Officer to have any bear killed in defence of life or property be turned over to them with the purpose or the request specified.
 - 12.5.15.1. The Conservation Officer will refer the application to the Minister of the Department of Environment for authorization and may seek the appraised value of the hide.
 - 12.5.15.2. The Minister may consider the purpose of the request in light of the Management Plan, which requires that “no person shall benefit materially from the killing of any wildlife for defence of life or property”.
- 12.5.16. Yukon Parks, VGG, and the investigating Conservation Officer, in consultation with the Operator and all parties involved, will decide what remedial actions are required to ensure the situation does not happen again.

12.6. Bear Mauling and Other Human Injury

- 12.6.1. If a bear injures or mauls a person, the Operator should attend to the casualty, but not compromise personal safety for themselves or others to do so.
- 12.6.2. The Operator will arrange for emergency evacuation of the casualty.
 - 12.6.2.1. Even if the injuries do not seem serious, the Operator should instruct the person to get professional medical help as soon as possible as the risk of infection from bear bites or scratches is high.
- 12.6.3. The Operator will report the injury or mauling to a Conservation Officer as soon as possible.
 - 12.6.3.1. Any information deemed relevant to an investigation by the Conservation Officer must be provided.
- 12.6.4. The Conservation Officer will immediately contact Yukon Parks, VGG and Fisheries and Oceans Canada respectively, and the Operator will record the incident and report it to Yukon Parks, and VGG respectively.
- 12.6.5. The Conservation Officer will acquire whatever assistance they deem necessary from other trained personnel, such as other Conservation Officers, Parks Officers, and Royal Canadian Mounted Police (RCMP), for the investigation or to deal with the responsible bear.
- 12.6.6. The Operator will prevent disturbance to the scene and do as much as possible to preserve evidence in case an on-site investigation is required.

- 12.6.7. The Conservation Officer, in close consultation with Yukon Parks and VGG, will take into consideration the Management Plan for the Ecological Reserve and Settlement Lands and the Human-Wildlife Conflict Directive regarding the investigation of a mauling, the collection and preservation of evidence, documentation of the incident, capturing and handling or lethally removing the offending bear, and debriefing of the investigation.
- 12.6.8. The fact that an injury occurred is not, in itself, grounds to cease viewing or even to modify the Wildlife Viewing Plan, but this will be decided by Yukon Parks, VGG and conservation officer service, based on the circumstances of the incident, the behaviour of the bear, and the behaviour of people.
 - 12.6.8.1. If a specific cause can be established for the bear's behaviour, remedial steps will be taken to minimize the chance it will happen again.
- 12.6.9. The Conservation Officer and Yukon Parks, in consultation with the VGG, will coordinate information to be provided to respective communication officials regarding the incident including all the relevant details.
- 12.6.10. The Operator will maintain a written record of all injuries on an accident report form, provided in Appendix 6.
- 12.6.11. If necessary, the Operator will seek medical advice by satellite phone from one of the hospitals or health centres listed in Appendix 4.
- 12.6.12. If required, the Operator will arrange for evacuation by helicopter to the most suitable centre given weather conditions and nature of injuries, request a qualified medical person travel with the helicopter (as the Guide is legally obligated to go with the casualty unless relieved by a person with equal or greater training but it is important to have the Guide stay with the remaining visitors at the Ranger Station), notify the appropriate hospital or health centre that a casualty is inbound and give them all the information they request.
- 12.6.13. The Operator will not leave the casualty unattended unless there is no other choice.
- 12.6.14. If no ambulance attendant or nurse arrives with the helicopter, the Operator will accompany the casualty to the hospital or health centre and be ready to give a full account of what happened. The Operator will notify Yukon Parks and VGG immediately and arrangement to be replaced, return or remove remaining clients as soon as possible.
- 12.6.15. If a person is seriously injured by a bear, the Operator will follow the procedures for a serious injury above and have the person evacuated as soon as possible.

- 12.6.16. The Operator will consult with the Conservation Officer, Yukon Parks and VGG to determine whether evacuation of all visitors is required or not.
- 12.6.17. Yukon Parks, in consultation with the VGG, the investigating Conservation Officer and Operator, will decide what remedial actions are required to ensure the situation does not happen again.
- 12.6.18. In the event of human death caused from a wildlife incident:
 - 12.6.18.1. The Operator will notify the RCMP immediately and follow their instructions for evacuation of the victim.
 - 12.6.18.2. The Operator will notify the Conservation Officer, then Yukon Parks, VGG and Fisheries and Oceans Canada respectively, provide a full report and follow any instructions given.
- 12.6.19. Designated communication staff of Yukon Parks and VGG will handle all questions from the news media.

13. Reporting Requirements of Operators

- 13.1. Injuries will be entered in the First Aid Log Book including the following (see Appendix 6 for further reporting information):
 - 13.1.1. the name of the injured person;
 - 13.1.2. the date and time of injury;
 - 13.1.3. the date and time of reporting;
 - 13.1.4. a brief description of how the injury occurred;
 - 13.1.5. the names of witnesses;
 - 13.1.6. a brief description of the nature of the injury or injuries and the location on the person's body;
 - 13.1.7. a description of the treatment rendered;
 - 13.1.8. the patient's signature (when possible), and;
 - 13.1.9. the first-aid attendant's signature.
- 13.2. Wildlife-related incidents will be entered into the Incident Log Book including
 - 13.2.1. location of the incident;

- 13.2.2. nature of the incident and actions taken;
 - 13.2.3. identification, if possible, of the specific bear involved;
 - 13.2.4. behaviour of the bear or other animal in response to actions taken;
 - 13.2.5. analysis or recommendations for future reference.
- 13.3. Annual Reporting, in addition to requirements of the *Wilderness Tourism Licensing Act*, will be made by January 31 following the end of the wildlife viewing season. The report will include all information detailed in the template annual report found at Appendix II to this plan.

14. Management of Other Activities

14.1. Hunting, Trapping and Fishing

- 14.1.1. Anyone accessing the Ecological Reserve or Settlement Lands by helicopter is prohibited from hunting big game or transporting big game under section 25 of the *Wildlife Act*.
- 14.1.2. During the wildlife viewing season, the Operator and clients will not hunt or fish in the Ecological Reserve or Settlement Lands.
- 14.1.3. The Ranger Station will not be used for sport or subsistence hunting or fishing at any time.
- 14.1.4. No persons using the Ranger Station will hunt or fish in the Ecological Reserve or Settlement Lands.
- 14.1.5. Any hunting or fishing for emergency food source will be undertaken with due care and attention to prevent or eliminate any bear attractants.
- 14.1.6. Drying racks or storage of fish, which may attract and potentially cause conflict with bears, are not allowed in the Ecological Reserve or Settlement Lands.
- 14.1.7. Yukon Parks will work cooperatively with the VGG, North Yukon Renewable Resources Council, Conservation Officers, and other branches of Department of Environment (Yukon) to educate all hunters and fishers about the need to make their camps bear-resistant in order to minimize the chance of conflicts with bears and to minimize the chance bears will have access to Non-Natural Attractants.
- 14.1.8. The lethal removal of wildlife judged to be an immediate human risk is not considered hunting.

14.2. Research and Monitoring

14.2.1. Fisheries and Oceans Canada Weir Camp

14.2.1.1. Yukon Parks will collaborate with Fisheries and Oceans Canada and VGG to provide a copy of the Risk Management Plan for the weir camp site, highlighting all provisions that apply to the weir operations.

14.2.1.1.1. Fisheries and Oceans Canada will ensure weir staff abide by the applicable provisions of the Risk Management Plan.

14.2.1.1.2. During the Commercial Wildlife Viewing Season, visitation by weir staff to the Viewing Sites and Ranger Station is restricted to emergencies only, unless prearranged and approved by the Operator, in order to protect the integrity of the viewing program and to avoid unexpected disturbances to the viewers (some of whom may be filming wildlife for example) and to the bears and other wildlife.

14.2.1.2. Yukon Parks, Fisheries and Oceans Canada, and the VGG will work cooperatively to minimize impacts to salmon and bears and to ensure bears do not become food-conditioned at either the Weir Site or the Ranger Station and the Viewing Sites.

14.2.2. Other Research Activities

14.2.2.1. Persons wishing to use the Ecological Reserve or Settlement Lands for research purposes are considered “non-commercial” users under the Management Plan and for purposes of the Risk Management Plan.

14.2.2.2. Non-commercial users must obtain a Park Permit for use of the Ecological Reserve and an authorization for entry from VGG with respect to entry on the Settlement Lands.

14.2.2.3. Conditions of use will be put on the permit depending on the nature of the research at the discretion of Yukon Parks and in collaboration with VGG (see section 4.2 for a list of conditions that will be included on a Park Permit.)

14.2.2.4. Aside from the Fisheries and Oceans Canada weir project, other non-commercial research activity may be allowed in the Ecological Reserve and Settlement Lands during the Commercial Wildlife Viewing Season under special permission if it is compatible with the commercial viewing operation.

14.2.2.5. Other than research and monitoring aimed at assessing the impact of bear viewing on bears in the wildlife viewing area, Yukon

Parks and VGG will generally not permit research on the valley bottom of the south fork of the Fishing Branch River upstream of the Weir Site and downstream of the southwest ridge of Bear Cave Mountain while commercial wildlife viewing is occurring.

- 14.2.2.6. Strong justification will be necessary to allow permitted activities during this time and in this vicinity affecting the commercial wildlife viewing.
- 14.2.2.7. Yukon Parks or VGG respectively will require researchers in the area during the viewing period to be aware of and comply with the risk management procedures in the Risk Management Plan as it applies to their activities, including the prevention of Non-Natural Attractants and following no-trace camping and safety in bear country practices. A copy of the Risk Management Plan will be provided to researchers.
- 14.2.2.8. Specific provisions may be further included in the Park Permit or authorization for entry as required.
- 14.2.2.9. Research personnel shall not enter or venture near bear caves on Settlement Lands during the period of November 2008 to November 2013 as per VGG Chief and Council direction. The purpose of this decision is directly related to incorporating the Precautionary Principle with regards to bear denning.

15. Other Activities

15.1. Activities Undertaken Outside the Commercial Wildlife Viewing Season

- 15.1.1. Conditions on commercial wildlife viewing that fall outside the Commercial Wildlife Viewing Season are at the discretion of Yukon Parks or VGG respectively.
- 15.1.2. The maximum length of stay for any client will be specified in the Park Permit.
- 15.1.3. The Risk Management Plan may also form the basis for conditions to a Park Permit for commercial operations falling outside the Commercial Wildlife Viewing Season.

15.2. Activities in the Wilderness Preserve and Habitat Protection Area

- 15.2.1. In the “Yukon Hunting Regulations Summary” (2005-06), all hunters are respectfully requested to not hunt grizzly bears inside the Wilderness Preserve.
- 15.2.2. Yukon Parks will work cooperatively with VGG and Managing Agencies to educate all hunters, researchers, and industry operating in the region about

risk management provisions in the Risk Management Plan as it pertains to them, especially the need to make their camps and sites bear-resistant to minimize the chance of conflicts with bears and the chance bears will have access to Non-Natural Attractants.

15.2.3. Education will include information regarding the wildlife viewing program and the importance of preventing bears in the area becoming food-conditioned through access to garbage or stored food.

15.2.3.1. Increasing industry awareness will also mean contributing information as part of land applications, permits and *Yukon Environmental and Socio-economic Assessment Act* processes about safety in bear country principles and practices and how they relate with the region to the wildlife viewing program.

15.2.4. Use of Temporary Camps

15.2.4.1. Occupants of temporary camps will follow the provisions in the *Fishing Branch Ranger Cabin Directive* (See Appendix 1) to avoid bear attractants.

15.2.4.2. Yukon Parks's "Leave No Trace Practices" (Yukon 2003) will be followed. Among the options listed in this policy, disposal of waste water in the flow of streams is the preferred choice of action for reducing the chance of human-bear conflict.

15.2.4.3. Food will not be cooked or stored in sleeping tents.

15.2.4.4. Food and garbage will be stored using containers designed for effective control of food storage from bears and to prevent odours that may attract bears.

15.2.4.5. Smelly food and garbage will be avoided when choosing foods to bring to camp.

15.2.4.5.1. Any cooking oil, grease and meat scraps will be burned in a wood stove or incinerator and any trace removed from the ashes and stored in an airtight container with a lid, or clean plastic sealed bag within a bear-resistant storage container.

15.2.4.6. Cooking utensils and dishes will be cleaned and stored immediately after each use.

15.2.4.7. The use of soaps and shampoos will be minimized and will be unscented, biodegradable products.

15.2.4.8. Dishes and cooking implements will not be cleaned directly in bodies of water but will be cleaned as follows:

- 15.2.4.8.1. Dishes will be washed in a container then the dishwater drained into a hole dug well away from tents and standing water.
- 15.2.4.8.2. A small strainer will be used to catch food particles, which will then be burned if possible and any remains packed out in sealed containers as noted above.
- 15.2.4.8.3. The grey water hole will be refilled with soil before the camp is abandoned.
- 15.2.4.8.4. Strained waste-water or grey water also can be disposed of by throwing it well out into the current of a fast-flowing river, only if soaps or shampoos are biodegradable.
- 15.2.4.9. There will be no open fires unless for emergency purposes. Camp stoves will be used on fire-resistant surfaces only and care will be taken with the use of fuels to prevent potential fire hazards.
- 15.2.4.10. Portable toilets are recommended for use and the waste flown out and disposed of in the closest approved disposal site for sewage waste.
 - 15.2.4.10.1. If a portable toilet is not used then solid human excrement will be buried under at least 15 cm of soil not closer than 30 m from the ordinary high water mark of all bodies of water.
- 15.2.4.11. Waste toilet paper must be removed from the Ecological Reserve or Settlement Lands, or completely burned in a hot fire.
- 15.2.4.12. Temporary camps will leave little or no evidence of human presence beyond what existed previously.

16. Compliance and Enforcement

- 16.1. Under the *Wildlife Act*, a person is considered to have encouraged foxes, coyotes, wolves, or bears to become a public nuisance and risk if the person feeds it or leaves attractants in a place where they may have access to it and the person does not take reasonable precautions to prevent foxes, wolves or bears from having access to it or being attracted to the area by it.
- 16.2. If a Conservation Officer believes that the existence or location of an attractant in, on or about any building or other place, poses a risk to the safety of any person because it is attracting or could attract foxes, wolves, coyotes, or bears, the Conservation Officer may issue a Dangerous Wildlife Protection Order (DWPO) directing the persons responsible to contain, move or remove the attractant within a reasonable, specified period of time.

- 16.2.1. A DWPO could include removing people from the area if deemed necessary by a Conservation Officer.
- 16.3. Where applicable, Yukon Parks or VGG will make compliance with the Risk Management Plan, or specific provisions of it, a condition of a Park Permit or authorization for entry.
 - 16.3.1. Non-compliance with applicable provisions of the Risk Management Plan may result in revoking, or not renewing, a Park Permit or authorization for entry.

17. Plan Monitoring, Review and Adaptive Management

- 17.1. Yukon Parks, in collaboration with VGG, DFO, the Operator, and the Committee will design and implement simple and effective strategies to monitor the following:
 - 17.1.1. the diversity of wildlife species;
 - 17.1.2. salmon populations;
 - 17.1.3. grizzly bear numbers;
 - 17.1.4. bear behavioural change (e.g. avoidance);
 - 17.1.5. human numbers and behaviour;
 - 17.1.6. disturbance to wildlife or their habitats;
 - 17.1.7. disturbance to exceptional features, particularly the caves; and
 - 17.1.8. any disturbance to the area which could negatively affect the ecosystem.
- 17.2. In addition to the above, monitoring may include the “auditing” or inspection of a commercial wildlife viewing operation by a qualified inspector to determine compliance. A Yukon Parks Ranger may visit an active commercial wildlife viewing operation on two occasions each season, over the next three years, to monitor compliance and to collect monitoring data.
 - 17.2.1. An inspector for the above purposes is a person designated by the Yukon Parks pursuant to:
 - 17.2.1.1. the *Parks and Land Certainty Act*;
 - 17.2.1.2. the *Wildlife Act*;
 - 17.2.1.3. the *Wilderness Tourism Licensing Act*; and
 - 17.2.1.4. applicable First Nation legislation.

- 17.3. After the 2006-2008 pilot trial commercial viewing operations, Yukon Parks, in collaboration with the VGG and other members of the committee of managing agencies, reviewed and assessed annual final reports from the Operator and researchers monitoring the effects of the program, referred these to the Committee for consideration and recommendation of any adjustments to the Risk Management Plan. Yukon Parks shall continue to conduct such tasks in collaboration with the VGG during the term of this agreement.
- 17.4. In addition to research and monitoring of human impacts on bears and bear activity at the Viewing Sites, any revisions to the Yukon Wildlife–Human Conflict Directive concerning matters such as bear mauling guidelines and a management plan for bears in the Yukon will also be considered when updating the Risk Management Plan.
- 17.5. The Operator will be provided an opportunity to attend and address the Committee concerning any review and proposed changes of the Risk Management Plan.
- 17.6. Ongoing Adaptive Management changes to the Risk Management Plan will be the responsibility of Yukon Parks, in collaboration with VGG and the Committee.
- 17.7 For the purpose of becoming familiar with the commercial wildlife viewing activities, collecting monitoring data and contributing an active management presence within the Ecological Reserve and Settlement Lands, Yukon Parks will have a presence on-site during the operating season. Specifically, Yukon Parks will have one staff member stationed in the Management Area for two visitor stints within any operating seasons. Yukon Parks, together with the Operator, shall complete arrangements in respect of these two stints by August 1st of every year in which commercial viewing activities occur.

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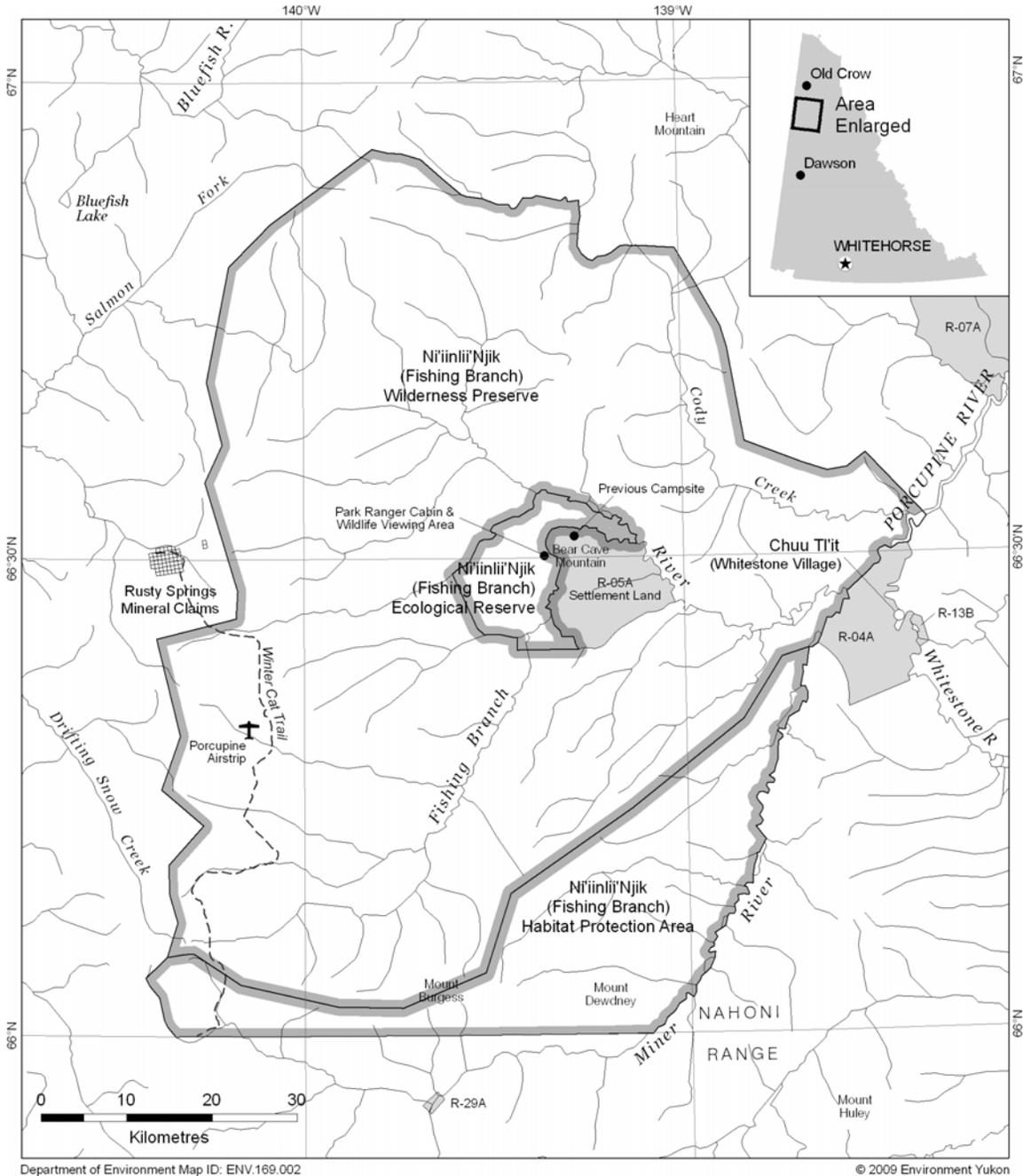
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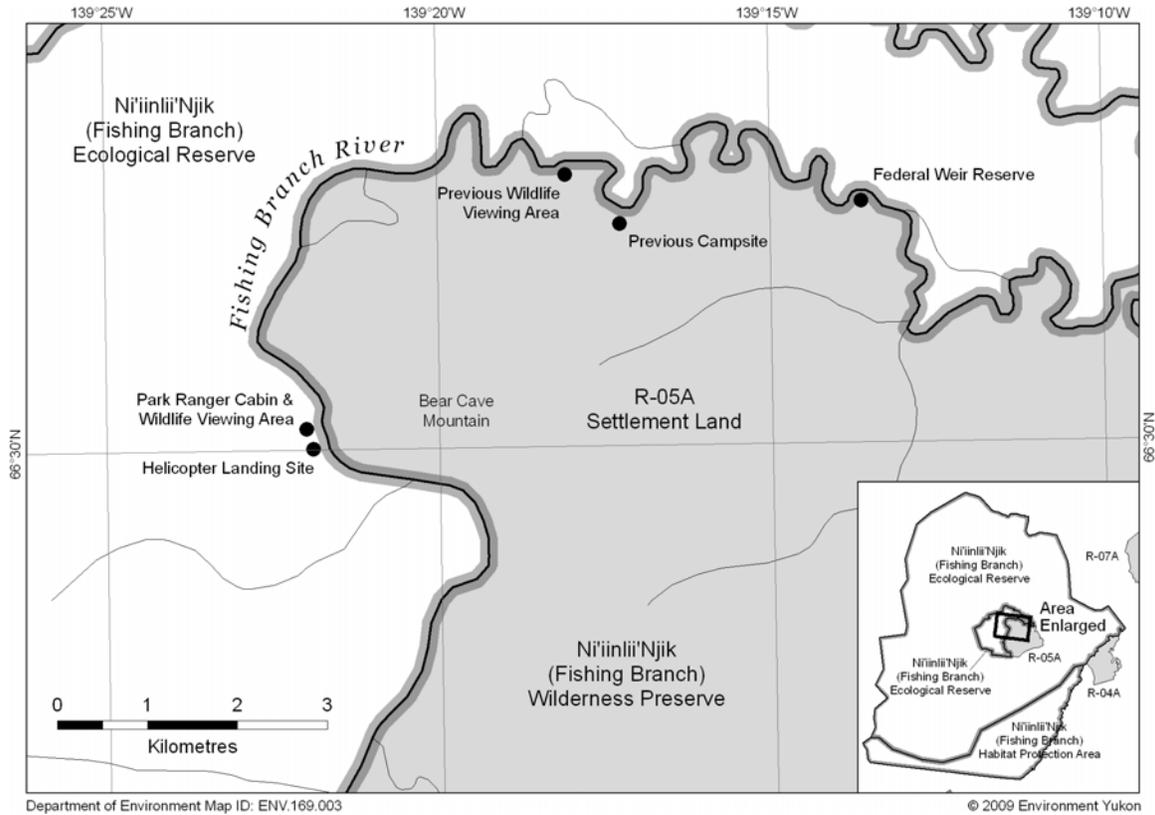
MAPS

FISHING BRANCH PROTECTED AREAS



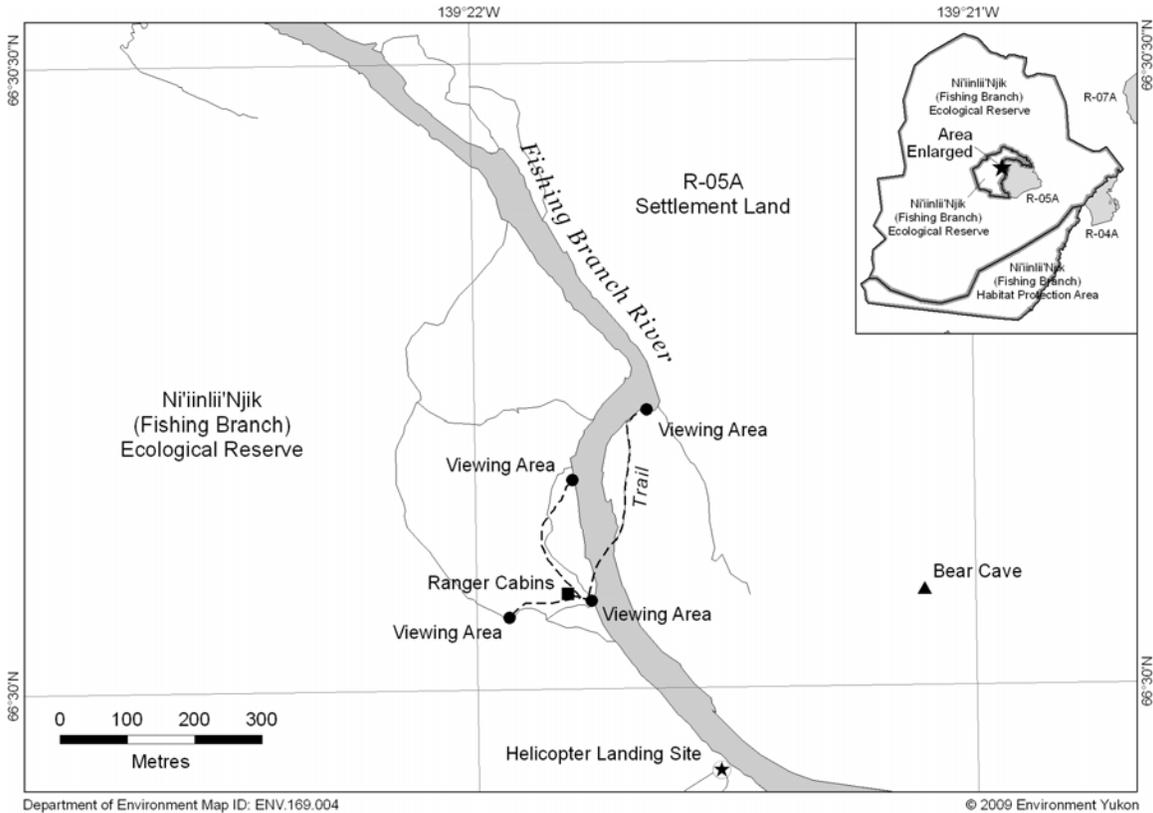
Map 1. The Ni'inlii Njik (Fishing Branch) protected area in northern Yukon. The arrow and small box indicate the area of the Yukon Parks's camp and commercial wildlife viewing site.

CAMP SITES IN THE ECOLOGICAL RESERVE & SETTLEMENT LANDS



Map 2. The location of the Yukon Parks camp and wildlife viewing site and Fisheries and Oceans Canada weir camp within the Ni'inlii Njik (Fishing Branch) Ecological Reserve and Vuntut Gwitchin Settlement Lands.

WILDLIFE VIEWING SITES, TRAILS AND ROUTES IN THE ECOLOGICAL RESERVE & SETTLEMENT LANDS



Map 3. The location of the camp and commercial wildlife viewing sites on the Fishing Branch River in the Ni'inlii'Njik (Fishing Branch) Ecological Reserve and Settlement Lands.

APPENDICES

APPENDIX 1 – FISHING BRANCH RANGER CABIN DIRECTIVE

This cabin is owned and operated by Yukon Parks, Department of the Environment, Yukon Government. Please report any damage or concerns to: Gord MacRae, Area Superintendent Tel: (867) 993 6850 or Dorian Amos, Senior Park Ranger Tel: (867) 993 5651

This cabin is not deemed essential to human life. DO NOT shoot a bear trying to enter it unless human life is in danger.

On Arrival

1. Check cabin and area for damage.
2. Check chimney and stove, if necessary clean chimney.
3. Check electric fence to see if working properly and in good repair.
4. Connect propane and check lines and fittings for leaks.

General Rules

1. Keep it clean.
2. Make sure no food, gas cans or rubbish are left outside at any time unless up in the cache.
3. After straining, throw waste gray water in the river away from the cabin.
4. Use biodegradable detergents.
5. Burn all rubbish in the wood stove/furnace to rid food odors.
6. Do not leave a roll of toilet paper in the outhouse.
7. Always put on the electric fence when leaving the area.
8. Keep noise to a minimum.

On flying out

1. Take all food and rubbish with you.
2. Leave fire wood and kindling already cut and stacked.
3. Leave stove ready laid (if possible) and matches handy.
4. Leave batteries fully charged.
5. Put electric fence on and check connections and lines – check it is working.
6. Close and board up windows.
7. Make sure no items are left in the area that will attract a bear – they are curious. Petrol cans etc should be put in the cache.
8. Turn off propane and disconnect bottles. Put bottle inside the cabin.
9. Close and lock cabin door return key to Parks office at Dawson City along with an inventory of supplies left such as fuel, propane, etc.

APPENDIX 2 – ANNUAL REPORTING REQUIREMENTS

The Operator shall submit and present the Annual Report to the Committee before March 31st of each year, in Old Crow.

The Annual Report's content shall adhere to the following template:

Part I: General Information

- a. Operator/business/company name;
- b. License number; and
- c. Viewing season dates

Part II: Clientele Details

For each visitor stint, please state:

- a. Date of visitor stint;
- b. Number of clients;
- c. Origin of clients (Country and Territory/Province/State)

Part III: Wildlife Viewing and Monitoring

- a. Summarize wildlife sightings and attach full Wildlife Sighting Log an appendix to the Annual Report (see Form A, attached); and
- b. Report results of wildlife monitoring efforts.

Part IV: Incident Reports

Summarize human-bear conflict incidents and attach completed Human-Bear Conflict Reports (Form B, attached) as an appendix to the Annual Report. Include copies of digital photos and/or videos of incidents if possible.

Part V: Comments and Recommendations

Please provide any additional comments and/or recommendations regarding the management of commercial viewing operations within Ni'iinlii Njik. These will help the Committee of Managing Agencies formulate future management directives in respect of the area. Possible areas of comments and recommendations include:

- ✓ Based on your experience as an Operator this year, what else needs to be done to improve the management of Ni'iinlii Njik?
- ✓ Do you have suggestions for how the Committee could better support or manage commercial viewing operations occurring within the area?

Appendices

In addition to completed Human-Bear Conflict Reports and Wildlife Sighting Log (see Parts III and IV, above), include all reports filed with the Yukon Government pursuant to the *Wilderness Tourism Licensing Act* as appendixes to the Annual Report.

These latter reports include but are not limited to:

- i) Day Trip Reporting Forms;
- ii) Multi-Day Trips Type Table;
- iii) Multi-Day Trips: Origin of clients;
- iv) Multi-Day Trips: Reporting form;
- v) Multi-Day Trips: Incidents; and
- vi) Accident Reports

Site Inspection

- Secure attack scene**

- Collect and label animal hair/tissue/scat/blood etc. in sealed paper bags (pull hair – do not cut)**

Label Identification #'s: _____

- Describe and list victim's equipment and clothing etc.:**

- Photograph and Video scene (use photo ID numbers and brief description if necessary)**

- Number of scene photographs: _____

- Incident site (including victim's view of approach into area and the bear's perspective): _____

- Scene location (GPS/VTM): _____

- Human and Animal Tracks: _____

- **Articles (victims):** _____

- **Blood/Tissue etc.:** _____

Map and sketch the location of the incident (with GPS reference points: path of animal, location and movement of people, key features, measured distances, etc). Obtain aerial photos if possible.

Injured Person Details (Use extra sheets as needed)

Number of people Involved: _____ **Number of Injured people:** _____

Injured Person:

Full Name:

Address:

Email

City & Territory/Province:

Phone: _____ **Age:** _____ **Sex:** _____

Witness:

Full Name:

Address:

Email

City & Territory/Province:

Phone: _____ **Age:** _____ **Sex:** _____

Injured Person Statement (summary of activity prior to attack, and account of the attack). Obtain recorded statement. If possible, have injured person/witness return to the site with Officer and video their description of what occurred.

other: _____

Distance from bear when first spotted

- Approximate: _____
- Unknown

What action did the person(s) take upon first seeing bears?

- Stand Still
- Move Towards Bear
- Move Away From Bear
- Run
- Climb a Tree
- Drop Pack/Equipment
- Yell or Shout

Other _____

Where was the person(s) just prior to the encounter?

- Trail
- Backcountry
- Roadway
- Other: _____

Were any of the women in the group menstruating?

- Yes
- No
- Unknown

Was food or garbage within 100 meters of the encounter site?

- Yes
- No
- Unknown

What action did the person(s) take when the bear attacked them?

- Remain quiet
- Yelled or shouted
- Played dead
- Stay still
- Try and get away
- Fend off bear's attack by hitting or kicking
- Use bear repellent

Used firearm

Other: _____

What action did the person(s) take upon realizing the bear was continuing toward them?

- Stand still
- Move towards the bear
- Move away from the bear
- Run
- Climb a tree
- Drop pack/equipment
- Yell or shout

Other: _____

Bear Details

Species

- Grizzly
- Black
- Polar
- Unknown

Sex

- Male
- Female
- Unknown

Estimated Age:

Did the bear have cubs?

- Yes – how many?
- No
- Unknown

Did the bear have a complaint history?

- Yes (specify): _____
- No

What was the bear's behavior before the attack?

- Eating berries or vegetation

Unknown

- Resting
- Walking
- Running
- Other: _____

Was the bear surprised?

- Yes
- No
- Unknown

What were the bear's actions upon sensing people? (Check more than one if applicable)

- Ignored people
- Flee area
- Rear up on hind legs
- Sniffed air
- Approached people
- Move away from people
- Circle people
- Make a noise such as a growling or woofing sound
- Charge people (different than walking towards)
- Make aggressive gesture such as biting, swatting, or attacking
- Other, specify: _____

Did the bear's actions change at all during the encounter?

Yes, describe new actions:

No

If more than one bear was actively involved in the incident, describe the circumstances: _____

The Encounter

Encounter Type

- Not aggressive
- Aggressive but no injury
- Injury
- Other:

Was the bear's behavior consistent with:

- Fear
- Curiosity
- Protective
- Aggression
- Defense
- Other:

Were there any other animals directly involved?

- Yes, specify:

- No

Encounter Duration: (from approach of bear until either bear or people left scene)

- _____ minutes
- _____ hours
- Unknown

How did the bear leave the scene?

- Run
- Walk
- Other:

What seemed to be the reason for the bear leaving?

- Person's actions
- Satisfied threat was gone
- Lost interest
- Returned to cub(s)
- Other:

Animal Evidence

***** To preserve evidence, immediately place paper bags on head and paws before moving animal from kill site. (Avoid shooting the bear in the head or abdomen to preserve samples for lab analysis. Shoot in the neck or throat). *****

Describe the location of the bear: _____

Animal Photographs (photo ID #):

- Body: _____
- Head: _____
- Paws: _____
- Teeth: _____

Animal Description (metric measurements)

- Body Length: _____
- Tail Length: _____
- Girth: _____
- Weight: _____

Teeth (refer to attached diagram) – cover head with paper bag

- Ensure lab collects material attached to teeth and collects victim's DNA sample from gum line, along teeth

- Upper inter canine: tip to tip: _____ mm max. width _____ mm
- Lower inter canine: tip to tip: _____ mm max. width _____ mm
- Upper inter – 3rd incisor: tip to tip: _____ mm max. width _____ mm
- Lower inter – 3rd incisor: tip to tip: _____ mm max. width _____ mm



(Example of Inter canine distance measurements. It is the same idea for the inter-incisor distance measurement) ** In the case of worn canines, measure from the center of the tip**

Teeth Condition

- Sharp
- Worn
- Broken
- Missing

Paw Description - cover paws with paper bags

- Left front paw, width measurement_____mm
- Right front paw, width measurement_____mm
- Left back paw, width measurement_____mm
- Right back paw, width measurement_____mm
- Describe any abnormalities:

Claw Condition

- Sharp
- Worn
- Broken
- Missing

Hair Samples (Pull, do not cut)

- Tag ID #:

**** Carcass. Place paper bags over head and paws and place carcass in plastic bag at kill site and in storage. ****

Additional Documentation

- Where possible, attach a copy of any additional/further report or treatment information/documentation. Identify the attached documentation here:

APPENDIX 3: OVERVIEW OF LEGAL AND REGULATORY FRAMEWORK

Below is a summary of major pieces of legislation that apply to the management area:

- *Vuntut Gwitchin First Nation Final Agreement*
- *First Nation (Yukon) Self Government Act*
- *Parks and Land Certainty Act*
- *Ni'iinlii Njik (Fishing Branch) Ecological Reserve & Settlement Lands Management Plan*
- *Wildlife Act and Regulations*
- *Wildlife–Human Conflict Directive*
- *Yukon Grizzly Bear Management Guidelines*
- *Wilderness Tourism Licensing Act and Regulations*
- *Scientists and Explorers Act and Regulations*
- *Historic Resources Act and Regulations*
- *Fisheries Act (Federal) and Regulations*
- *Firearms Act and Regulations*
- *Workers Compensation Act and Regulations*
- *Occupational Health and Safety Act and Regulations*
- *Public Health and Safety Act and Regulations*

[NOTE: It is the responsibility of each user group to ensure that it understands and is in compliance with applicable federal, territorial, and first nation laws. This list is not meant to be exhaustive but rather provides a useful starting point to assist user groups in understanding the legal and regulatory framework of the management area.]

APPENDIX 4: POSSIBLE CONSEQUENCES OF INTERACTION BETWEEN HUMANS AND BEARS REQUIRING MANAGEMENT ACTION

1. Introduction

Bear–human interaction is defined as any activity and its effect involving bears and humans, including observations, encounters, and conflicts. A bear–human encounter is a situation where a bear is aware of human presence, regardless of whether people are aware of the bear. During encounters, bears can be displaced, may ignore people, or may approach people. There are several reasons why a bear may approach a person. It may be acting defensively, that is, threatened by the person’s presence to the point it shows aggression. In contrast, the bear may be just curious, used to people (human-habituated), after a person’s food (food-conditioned), a bold bear testing its dominance, or, in rare cases, it may think a person is potential prey. A bear–human conflict or incident is considered a serious encounter when a bear aggressively approaches people, such as a charge, people have to take extreme evasive action in response to a bear, people use a deterrent on a bear, property is damaged, or a bear makes physical contact with a person (MacHutchon and Wellwood 2002).

Most interactions between people and bears have no negative consequences for either, particularly if people act appropriately around bears. In the absence of appropriate behaviour and action, however, interaction with humans can negatively affect bears by displacing them from important riparian habitat (Reinhart and Mattson 1990, MacHutchon et al. 1998, Olson and Gilbert 1994, Chi and Gilbert 1999), changing bear activity patterns (MacHutchon et al. 1998, Olson et al. 1998, Chi and Gilbert 1999), changing bear habitats (Schoen et al. 1994), or when conflicts occur, leading to the destruction or translocation of bears. Interactions can negatively affect humans through destruction of property, human injury, or, occasionally, death (Herrero 1985). However, most bears are tolerant of humans and the likelihood of being injured by a bear is low (Herrero 1985, Herrero and Fleck 1990). The main situations leading to human injury by bears are 1) when food conditioned bears that are also human-habituated, aggressively approach people for food, and 2) when humans suddenly surprise a bear at close range, particularly a female grizzly bear with cubs.

To better understand the management provisions required in this plan for minimizing any negative consequence associated with bear and human interaction, it is important to understand the context of the provisions in terms of bear behaviour and learning.

2. Bear Behaviour and Bear–Human Interaction

The individual response of bears to humans varies and depends on the experience, age, sex, and reproductive status of the bear. The past experience of bears with people can have a major effect on their future response to people and generally falls into three reinforcement categories: negative, neutral or positive (McCullough 1982, Gilbert 1989).

Bears will usually avoid areas near people after being harassed, hurt, or injured and past negative experiences with people can make bears wary of humans. Cubs may learn to fear people by observing their mother's behaviour (McCullough 1982, Gilbert 1989,

Herrero 1989). However, newly weaned immature bears usually undergo a curious or testing phase in their life during which they try to figure out on their own how to relate to other bears and people, irrespective of lessons they learned from their mother. During this time, they may investigate and interact with humans and their property regardless of what their mother's attitude toward people was. Past negative experiences with people, such as hunting, can make bears sensitive to human presence (McCullough 1982, Gilbert 1989, Herrero 1989). This process may involve selective removal of aggressive or unwary individuals and learning by survivors (McCullough 1982, Herrero 1989). That is, selection for wariness and non-aggression involves both genetic inheritance and learning. However, past experience is likely the most important in a long-lived, rapidly learning animal like a bear (McCullough 1982).

3. Food-Conditioning in Bears

Positive reinforcement for bears around people usually involves the acquisition of non-natural attractants, particularly human food or garbage. Non-natural attractants are considered to be any artificial food source that may attract bears to an area such as human food, food waste, garbage, compost, grey water or wastewater, sewage, petroleum-based products, animal feed, orchards, and livestock. Food-conditioning in bears occurs when they have fed on non-natural attractants and learn to associate humans and/or human development with potential sources of food (Gilbert 1989). Food-conditioned bears have low survival under most circumstances. They are predisposed to nuisance activity and they can become dangerous and unpredictable. Consequently, they are frequently killed in defence-of-life or property, killed in control actions or must be translocated. In rare cases, these bears have killed and eaten people, but most often the bear is the one killed. Even a low rate of exposure to non-natural attractants can reinforce problematic behaviour in bears. Safe human activity around bears is much more difficult where bears associate people with some form of food reward, therefore situations that may lead to food-conditioning in bears have to be strictly controlled.

It is important to make the distinction between human-habituated bears and food-conditioned bears (Aumiller and Matt 1994). A food reward or food conditioning is not necessary for habituation to occur (McCullough 1982, Gilbert 1989). Likewise, a bear can be food-conditioned, but still be wary of people (i.e., not human-habituated).

One third of all black bears reported killed in the Yukon are killed in defence of life and property (Smith and Hare 1988). Many of these kills occur because of easy access of non-natural attractants such as human food and garbage. One out of 5 grizzly bears killed in the Greater Kluane region, Yukon dies from causes other than hunting (McCann 1998).

In the Yellowstone ecosystem prior to 1970, food-conditioned bears were responsible for most injuries to humans. Yellowstone National Park significantly reduced conflicts with bears through proper bear proofing of food and storage of garbage. In recent years, habituated bears foraging for natural foods near areas of human use have been responsible for most bear-human conflicts, but the rate of injury is much lower than it was in the past (Gunther 1994).

Many jurisdictions have spent considerable time and money reacting to complex problems associated with food-conditioned bears (Meagher and Phillips 1983, Dalle-Molle and Van Horn 1989, Keay and Webb 1989, Smith and Lindsay 1989). Proactive management is the most efficient and cost effective way to deal with potential problems

(Follmann 1989). Proactively reducing food conditioning among bears can enhance human safety and bear conservation and reduce costs of dealing with food-conditioned bears (Aumiller and Matt 1994).

4. Human-Habituation in Bears

Neutral interactions with people can lead to human-habituation. Human-habituation is a reduction in the frequency of a response when no consequence is perceived by a bear (McCullough 1982, Jope 1985, Gilbert 1989), that is, a bear repeatedly exposed to humans at close range without negative experience learns to tolerate them at these distances. However, this does not mean such a bear is tame.

Human-habituated bears are not usually a risk to humans if people behave in a predictable manner and bears do not learn to associate humans with food or garbage (Aumiller and Matt 1994). However, a human-habituated bear is more likely to come in contact with carelessly stored food or garbage therefore, to maintain safe interactions between humans and habituated bears a few guiding principles need to be followed (Jope 1985, Aumiller and Matt 1994):

- people must be willing to tolerate some bears in close proximity,
- people must behave in a predictable manner,
- people must teach bears to respect human boundaries, and
- bears must not get access to non-natural attractants, such as human food or garbage.

In some jurisdictions or locations the presence of human-habituated bears may not be a desirable management outcome. In many areas, people are not tolerant of bears and do not accept them in close proximity to human activities and developments. As a result, habituation of bears to humans and increased encounters between bears and humans can lead to bears being killed in control actions or translocated, even if they are not human food-conditioned. In other areas, they may be more susceptible to road kill, legal hunting or poaching.

Consequently, habituation of bears to humans is only appropriate in situations where humans are willing to tolerate them in close proximity such as at controlled bear viewing sites. Even in these circumstances, bears and humans must be taught to respect specific boundaries to minimize the chance of human injury, so that bears can forage effectively and so that bears do not push their boundaries and access non-natural attractants or destroy human property.

APPENDIX 5: SOURCES OF RISK MANAGEMENT INFORMATION

1 Government Agencies

1.1 Yukon Department of Environment

- 1.1.1 A field guide to Yukon bears for the exploration and placer industries, May 1988
- 1.1.2 Grizzly bear management guidelines, 1997
- 1.1.3 Into the Yukon wilderness, 1999,
<http://www.environmentyukon.gov.yk.ca/ityw.html>
- 1.1.4 Bear safety
<http://www.environmentyukon.gov.yk.ca/fishwild/bearsafety.html>
- 1.1.5 Legislation <http://www.gov.yk.ca/legislation/>
- 1.1.6 Wilderness tourism licensing
<http://www.environmentyukon.gov.yk.ca/wtla.html>

1.2 Northwest Territories Ministry of Resources, Wildlife and Economic Development

- 1.2.1 Safety in bear country, a reference manual, N.W.T. Renewable Resources, 1992
- 1.2.2 Safety in grizzly and black bear country
<http://www.nwtwildlife.rwed.gov.nt.ca/Publications/safetyinbearcountry/safety.htm>

1.3 Nunavut Department of Environment

- 1.3.1 Nunavut bear/ human conflict management operations/ training manual, 2002 (McMullen 2002a)
- 1.3.2 Nunavut community-based bear risk management planning template, 2002 (McMullen 2002b).

1.4 Alaska Department of Fish and Game

- 1.4.1 The bear facts
<http://www.wildlife.alaska.gov/index.cfm?adfg=bears.main>
- 1.4.2 Living in harmony with bears
<http://www.wildlife.alaska.gov/index.cfm?adfg=bears.harmony>
- 1.4.3 Bear-resistant containers
<http://www.wildlife.alaska.gov/index.cfm?adfg=bears.containers>
- 1.4.4 Electric fences
<http://www.wildlife.alaska.gov/index.cfm?adfg=bears.efences>

- 1.4.5 Garbage incinerators
<http://www.wildlife.alaska.gov/index.cfm?adfg=bears.incinerators>

2 Non-Government Organisations

- 2.1 Safety in Bear Country Society
- 2.1.1 *Staying Safe in Bear Country* video/ DVD and *Working in Bear Country* video/ DVD module. Both programs are produced by the Safety in Bear Country Society in co-operation with the International Association for Bear Research and Management. These video/ DVDs are available from Distribution Access at: Toll-free 1-888-440-4640, Fax 1-780-440-8899, www.distributionaccess.com, or sales@distributionaccess.com
- 2.2 International Association for Bear Research and Management (IBA)
- 2.2.1 Scripts for the 2 safety videos *Staying Safe in Bear Country* and *Working in Bear Country* are at <http://bearbiology.com/stayingsafefront.html>
- 2.3 Living with Wildlife Foundation
- 2.3.1 <http://www.lwwf.org/index.htm>
- 2.3.2 Living with predators resource guide series – techniques and refuse management options for residential areas, campgrounds, and group-use facilities.
- 2.3.3 Living with predators resource guide series – predator behaviour modification tools for wildlife professionals.
- 2.3.4 Living with predators resource guide series – recreating in bear, wolf, and mountain lion country.
- 2.4 North Cascades Grizzly Bear Outreach Project
- 2.4.1 <http://www.bearinfo.org/home.htm>
- 2.5 Center for Wildlife Information
- 2.5.1 Be bear aware <http://bebearaware.org/indexnfnf.htm>

APPENDIX 6: STAFF TRAINING PROGRAM GUIDELINES

1 Staff Training Objectives

Guides operating in the Ni'inlii Njik (Fishing Branch) during the Commercial Wildlife Viewing Season will need to be highly qualified experts in understanding bear and human behaviour and the approach being taken to facilitate wildlife viewing at close range in this remote area. The following objectives will be the foundation of the training for Guides and Trainee Assistants:

- 1.1 Be consistent with the Management Principles.
- 1.2 Allow for a minimum of three seasons of on-site training in other training site locations and at least one month on-site at Ni'inlii Njik before assuming Guiding responsibilities.
- 1.3 Ensure that trainees are selected based on their long term interest and commitment to wildlife viewing and ability to work comfortably at close proximity to grizzly bears for two months of the year.
- 1.4 Strive for continuity of trained personnel so there will always be an individual qualified to oversee wildlife viewing in the absence of the main Guide.

2 Training Program Content

- 2.1 Staff training will occur in 3 contexts: classroom, field experience, and on-site instruction, initially in other locations with the benefit of other experienced personnel, and will cover the following subjects:
 - 2.1.1 Vuntut Gwitchin Use
 - 2.1.1.1 There will be a review of the Vuntut Gwitchin people's traditional use of the Ni'inlii Njik (Fishing Branch) area, the importance of the area to the Vuntut Gwitchin, their protection of the land through the VGFNFA, their rights and responsibilities in the area, and their current uses of the area.
 - 2.1.2 Wildlife Viewing
 - 2.1.2.1 The global interests in wildlife viewing and the evolution of bear viewing in North America.
 - 2.1.2.2 History, demand, current status and marketing of bear viewing in the world.
 - 2.1.2.3 An overview of different commercial bear viewing operations.
 - 2.1.2.4 Overview of present grizzly bear population at Ni'inlii Njik (Fishing Branch) and past and present human activities.
 - 2.1.2.5 Overview of the Ni'inlii Njik (Fishing Branch) Ecological Reserve and Settlement Land management plan and risk

management plan with emphasis and discussion on wildlife viewing.

2.1.3 Bear Biology, Ecology, and Management

2.1.3.1 Information on bear evolution, historical and current distribution, physical characteristics, reproduction, denning, movement and foraging strategies, vocalizations, senses, social structure, displacement, stress, species and sex identification, habituation, food conditioning, aversive conditioning, human response to encounters with bears, bear-human conflicts, and deterrents.

2.1.4 Food-Conditioning in Bears

2.1.4.1 Training will include information on Food-Conditioning and how it occurs in bears. A discussion of why situations leading to Food-Conditioning have to be strictly controlled. A safe, predictable, and effective wildlife viewing program is not possible where there are Food-Conditioned bears.

2.1.5 Human Habituation in Bears

2.1.5.1 Training will include information on how human habituation occurs and how bears habituated to people at viewing sites change the quality of bear viewing.

2.1.6 Terrestrial Wildlife and Plants

2.1.6.1 Training will include a review of the wildlife and plant species, other than bears, present at Ni'inlii Njik (Fishing Branch) Ecological Reserve and Settlement Land and their importance to the viewing program.

2.1.7 Safety around Bears and Other Wildlife

2.1.7.1 Trainees will learn how to recognize tolerance and stress behaviour in grizzly bears and other wildlife and the appropriate human responses to them.

2.1.8 Non-Natural Attractant Management

2.1.8.1 Such training will include information on proper management of Non-Natural Attractants to ensure bears can not access them.

2.1.9 Salmon Biology and Ecology

2.1.9.1 Such training will include a review of the salmon species spawning in the Fishing Branch River near Bear Cave Mountain, their life cycle, habitat requirements and reproductive behaviour as well as their importance to grizzly bears and the viewing program.

2.1.10 Wilderness First Aid, Helicopter Travel, and Safety in the Wilderness

2.1.10.1 Such training will include certification as required in the Risk Management Plan. Trainees will also learn how to work around a helicopter and general practices for safety in a remote field setting. Depending on their prior training and experience cooking for commercial groups, guides may be advised to take a food safe course.

2.1.11 Tourism Hospitality & Leadership Training

2.5.9.1 Such training will be related to etiquette associated with wildlife viewing tour guiding, including discussions on the importance and necessity of professional conduct and good communication skills. Leadership training and experience for understanding group dynamics and managing all aspects of good judgment as guide and leader under isolated conditions.

2.1.12 Liability and Responsibility

2.1.12.1 Such training will include the commitment and knowledge needed by individuals involved in operating a wildlife viewing program with emphasis on safety and the Management Principles and objectives of the Management Plan and Risk Management Plan.

2.1.13 Wildlife Viewing Planning

2.1.13.1 In addition to the regulatory requirements, include information on why a wildlife viewing plan is important for managing a high quality viewing operation. The emphasis will be on the potential impacts to various wildlife species as well as on human enjoyment and safety. Guides will be taught various ways of minimizing impacts to bears, salmon and local ecology and encouraged to pass this information on to guests. As an example, making sure clients stay on designated paths or trails to minimize erosion. Depending on their prior experience with leading groups, guides may be required to take a leadership training course.

2.1.14 Monitoring

2.1.14.1 There will be a review of the monitoring plan for Ni'inlii Njik (Fishing Branch) Ecological Reserve and Settlement Land, including its objectives, techniques, and the collection and treatment of data, at the end of the three-year pilot period.

2.1.15 Firearm Safety and Use of Deterrents

- 2.5.13.1 There will be a review of firearm safety and the use of deterrents, including hands-on training and practice. This topic may be covered in co-ordination with training courses run by YTG Conservation Officers.

2.1.16 Photography

- 2.1.16.1 There will be practical lessons in various aspects of 35 mm and digital still and motion picture camera operation. Trainees should have the knowledge to accommodate the needs of professional and non-professional photographers.

2.1.17 Previous Experience at Other Grizzly Bear Viewing Operations

- 2.1.17.1 Trainees will have experience at an established commercial grizzly bear viewing location, which may include opportunities provided by the Operator at other locations, as well as training and experiences undertaken at the trainee's initiative, to acquire the knowledge necessary to work competently within all aspects of this wildlife viewing program, including to:

- 2.5.15.1.1 understand what a client experiences when viewing grizzly bears at close distances;
- 2.5.15.1.2 learn how a viewing plan is practiced and monitored,
- 2.5.15.1.3 learn the proper response by humans when in close proximity to both habituated and non-habituated bears, and
- 2.5.15.1.4 understand bear behaviour with emphasis on stress levels, vocalizations, bear-bear interactions and how this knowledge can be used to determine their response to encounters with grizzly bears at Ni'inlii Njik (Fishing Branch).

3 On-Site Experience at Ni'inlii Njik (Fishing Branch)

- 3.1 On-site training at Ni'inlii Njik (Fishing Branch) is required before a Guide assumes full responsibilities in order to:
 - 3.1.1 Learn to operate within the principles of the Ni'inlii Njik (Fishing Branch) Ecological Reserve and Settlement Land Management Plan and the guidelines and action items of the Risk Management Plan,
 - 3.1.2 See the development of a high level of habituation of some individual bears as well as partial habituation of several others to guarantee a quality viewing experience for visitors,
 - 3.1.3 Become consistent and predictable in their behaviour toward bears,

- 3.1.4 Become familiar with the viewing area through the entire viewing season, and
- 3.1.5 Become efficient in collecting monitoring data where necessary.

APPENDIX 7: FIRST AID KIT REQUIREMENTS

The following list of supplies and equipment is taken from the Yukon Workers Compensation Health and Safety Board ("YWCHSB") and additional recommended first aid supplies for the Ni'inlii Njik (Fishing Branch) Camp. Regularly check first aid equipment and supplies and replace as necessary to maintain supplies and equipment in good condition and supply.

A. Required First Aid Supplies

Packet	Contents	No. of Packets	
		#1 Kit	#2 Kit
A	Four Hand Cleansers and twelve Gauze Cleaning Pads	2	4
B	One 2-ounce unbreakable container of antiseptic, in fluid or powder form or twenty Antiseptic Swabs	1	2
C	Twenty-five 1" x 3" Adhesive Dressings, individually wrapped	3	6
D	Four 2" Compress Dressings	1	2
E	One 4" Compress Dressing	2	6
F	Two Gauze Pads and two Eye Shields or equivalent cover	1	2
G	One 2 ounce or two 1 ounce tubes of Water Soluble Burn Treatment	1	2
H	One 4-ply Gauze Dressing, minimum size 17" x 17" square	1	3
I	Two 2" x 6 yards Gauze Bandage and one 1" x 5 yards Adhesive Tape	1	1
J	One Triangular Bandage	1	6
Scissors		1	1
Tweezers		1	1

B. Recommended Extra First Aid Supplies

EQUIPMENT	No.
Airway, soft plastic	1
Cold Packs	3
Forceps, 4 ½ " stainless steel, pointed	1
Forceps, 6" thin-nosed pliers-type	1
Forceps, 5" artery type	1
Hot Water Bottle	1
Neck brace	1
Oxygen tank, face mask, and lines	1
Safety pins	25
Scalpel, disposable	15
Spine board (plywood, 16' x 72" with handholds & retainer straps)	1
Splints (3/8" x 4" plywood notched and 1" padding) x 41" long	1 set
Splints (3/8" x 4" plywood notched and 1" padding) x 62" long	1 set
Thermometer	1
Antiseptic cream	1
Burn pads	6

YUKON PARKS ACCIDENT REPORT
To be filled out after Secondary Survey and given to Emergency Services

Report Date: ----- Time of Report: -----
Accident Date: ----- Time of Accident: -----
Casualty Name: ----- Age: -----
Address: -----
Person to Notify: ----- Relationship: ----- Telephone: -----
1st Witness Name: ----- 2nd Witness Name: -----
Describe location of the Accident (e.g., map coordinates, GPS points, Terrain):

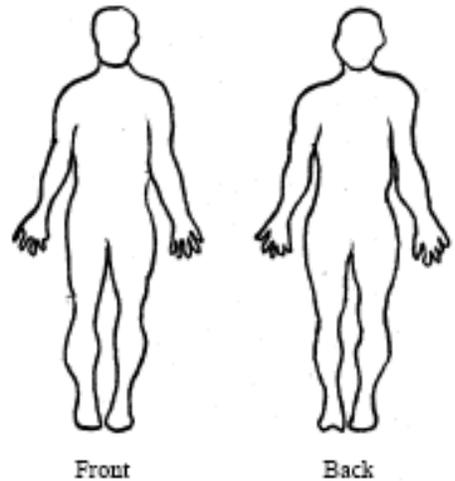
Mechanism of Injury / Accident:

Initial Assessment and Treatment

Level of Consciousness: ----- Allergies: -----
Airway: ----- Medication: -----
Breathing: ----- Medical History: -----
Circulation: ----- Last Meal: -----
Bleeding: -----

Location of Injuries
Number Each Injury and Describe:

1-----
2-----
3-----
4-----
5-----
6-----



Casualty Signature: ----- Attendant Signature: -----

APPENDIX 8: CONTACTS IN CASE OF EMERGENCY

Person	Position	Location	Telephone No.
Yukon Department of Environment			
Parks Branch		Whitehorse	867-667-5639
Erik Val	Director Parks Branch	Whitehorse	867-667-5639 home 867-393-3025 cell 867-334-3175
Gord MacRae	Regional Superintendent Parks Branch	Dawson City	867-993-6850 home 867-993-5901
Dorian Amos Alice McCully	Park Ranger Parks Branch	Dawson City	867-993-5651
Kris Gustafson	Conservation Officer Services	Whitehorse	867-667-5221 home 867-633-5072 cell 867-334-2511
24-Hour Emergency Line	Duty Officer	Whitehorse	1-800-661-0525
Torrie Hunter	Conservation Officer Services	Dawson City	867-993-5492 home 867-993-5713
Fish and Wildlife Branch		Whitehorse	867-667-5715
Ramona Maraj	Carnivore Biologist Fish and Wildlife Branch	Whitehorse	867-393-7423
Shelley Marshall	Carnivore Technician Fish and Wildlife Branch	Whitehorse	867-393-3872
Dorothy Cooley	Regional Biologist Northern Region	Dawson City	867-993-6461
Vuntut Gwitchin Government			
Shel Graupe, Director	Natural Resources Department	Old Crow	867-966-3261 ext.237
Megan Williams, Heritage Manager	Natural Resources Department	Old Crow	867-966-3235
Royal Canadian Mounted Police (RCMP)			
RCMP		Whitehorse	867-667-5555
RCMP		Dawson City	867-993-5555
RCMP		Old Crow	867-966-5555
RCMP		Inuvik	867-777-1111
Helicopter Companies			
Karl Scholz	Fireweed Helicopters	Dawson City	867-993-5700
Adam Morrison	Trans North Helicopters	Dawson City	867-993-5494
Trans North Helicopters		Whitehorse	867-668-2177
Canadian Helicopters		Inuvik	867-777-2424
Highland Helicopters		Inuvik	867-777-5151
Canadian Helicopters		Norman Wells	867-587-2136
Great Slave Helicopters		Norman Wells	867-587-2827

Medical Centres		
Old Crow Health Centre	Old Crow	867-966-4444
Community Health Centre	Dawson City	867-993-4444
Whitehorse Hospital	Whitehorse	867-393-8700
Inuvik Regional Hospital	Inuvik	867-777-8000
Community Health Centre	Norman Wells	867-587-2250

APPENDIX 9: FIRE PROTECTION PLAN

Ni'iinlii Njik (Fishing Branch) Fire Protection Plan

1 General

- 1.1 Fire fighting equipment will be installed on site by Yukon Parks in collaboration with EMR Forest Fire Management authorities using the attached list of equipment designed to service the site shown on the site map included with the list.
- 1.2 At the start of the operational season, Yukon Parks and/or the Operator of the camp will inspect fire fighting equipment to be sure it is in working order and any deficiencies or required repairs are taken care of as soon as possible.
- 1.3 At the end of the operational season, Yukon Parks and/or the Operator of the camp will inspect fire fighting equipment, disassemble and properly store the equipment according to specific directions provided with the equipment. Any missing items, or items requiring repairs or replacements, will be reported to Yukon Parks and taken out for repairs.
- 1.4 Fire extinguishers will be installed in each cabin. Extinguishers will be checked in the spring and in the fall to be sure they are charged, hoses and nozzles are unobstructed, and seal wires are intact. Immediately after use or when a pressure gauge indicates a low reading, extinguishers will be exchanged with new or recharged extinguishers.
- 1.5 No outdoor fires are permitted in the camp or viewing sites.
- 1.6 Use of flammable tobacco products in camp is discouraged and restricted. No cigarette or cigar butts will be disposed of on the ground. There will be no smoking in any of the cabins or park facilities. Smoking may only occur in designated areas where safe receptacles are provided. All smokers will ensure their product is completely extinguished within the receptacles. No butts will be left in receptacles after extinguished to avoid leaving behind a bear attractant.

2 Fire Emergency Procedures

- 2.1 Basic equipment will be provided on site by Yukon Parks to extinguish any initial, small-scale fires that may occur. These include dry chemical fire extinguishers, spades, polaskis backpack and water tanks. Any small fires will be recorded and reported to Yukon Parks and/or the Fire Management Officer in Dawson.
- 2.2 If the camp is threatened by fire, the Operator of the camp will arrange for evacuation by helicopter using the satellite phone or radio and will contact Yukon Parks as soon as possible.
- 2.3 If fire is threatening human life and quick helicopter evacuation from camp is not possible, head to an alternate safe location depending on wind direction and the fire's location. Potential alternate sites include non-forested areas high on Bear Cave Mountain, the alpine west of camp, and the weir camp east of Bear

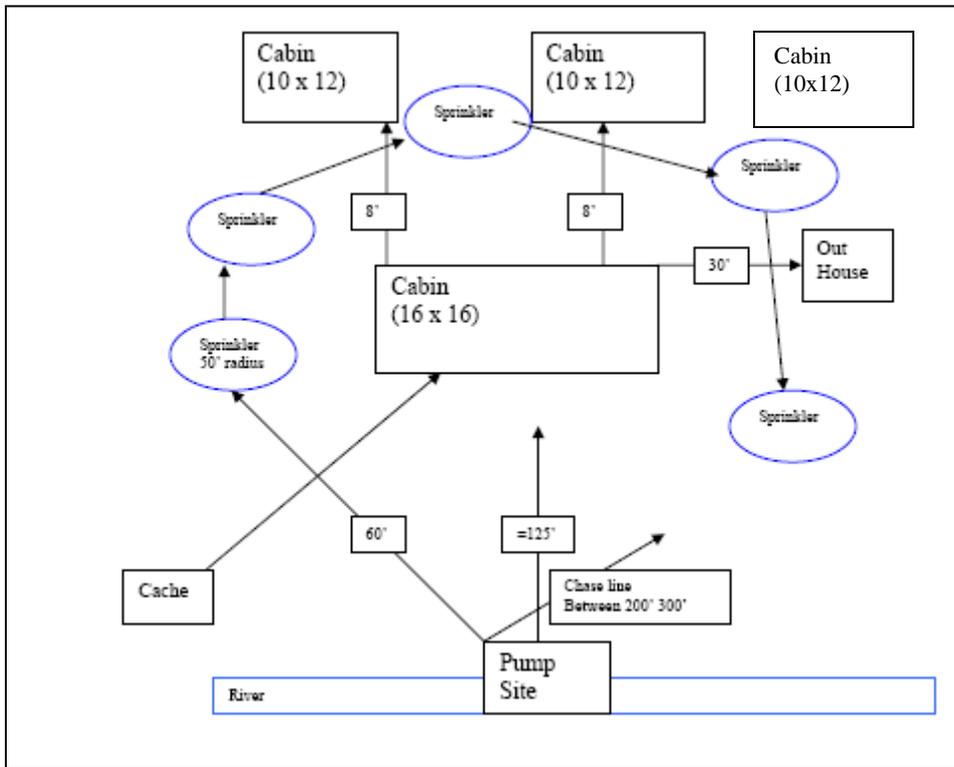
Cave Mountain, which has a large fire break and fire-fighting equipment. Carry a satellite telephone to maintain contact with the helicopter company as well as a GPS unit for navigation to coordinate pick up.

2.4 Prior to evacuation of the camp (due to threatening fire) the pump is to be set up to sprinkle the buildings as per Yukon Fire Protection protocol.

4 Minimum Fire Fighting Equipment List

- 1 gas water pump with attachments,
- Y-shaped connector from the pump,
- 1 Sprinkler kit,
- 2 boxes of hose,
- 2 gas cans

5 Map of Site Fire Fighting System



APPENDIX 10: CAMP FACILITIES

Ni'inlii Njik (Fishing Branch) Ecological Reserve Camp Facility

1. Introduction

The Management Plan provides for the development of facilities and infrastructure in the Ecological Reserve to provide safety in Arctic weather and relative comfort/security in bear habitat for staff and visitors.

The Plan states that the facility and infrastructure is to be kept to a minimum, consistent with the Management Principles and in keeping with the wilderness character of the area.

The Parks Camp includes a main cabin/wash-house where people can cook, eat and wash without direct interaction with bears, three sleeping cabins, outhouse, and high cache where food, garbage and supplies can be stored and made inaccessible to bears (see attached photos).

2. Who May Use the Camp Facilities

- 2.1. Staff including Park Officers, Conservation Officers, other authorized employees of Yukon Parks and VGG, and authorized contractors and contractor staff.
- 2.2. Operators of the wildlife viewing program and staff and clients,
- 2.3. Visitors including permitted researchers contributing to monitoring and furthering understanding of the natural and cultural heritage of the area.
- 2.4. Emergency users, including anyone traveling through the area that may, for reasons beyond their control, require use of the facility for safety purposes.

3. Rules for Camp Facility Use

- 3.1. General Rules
 - 3.1.1. The camp is for use by authorized persons only who are covered under a current park use permit.
 - 3.1.2. The camp may be used in the case of an emergency where there is potential risk to visitors beyond their control. Emergency users of the camp facility must follow rules and conditions of use as posted and described in this directive and, as soon as possible upon return to safety, notify Yukon Parks to report the circumstances concerning the emergency use.
 - 3.1.3. Users of the facility are responsible for ensuring bears do not gain access to food and garbage.
 - 3.1.4. All users are responsible to leave the premises in a clean and tidy condition.
 - 3.1.5. All users will ensure that precautions are taken to prevent damage by fires.

- 3.1.6. Any damages or problems are to be reported as soon as possible to Yukon Parks.
 - 3.1.7. Keep noise to a minimum unless there is an emergency, or a chainsaw or generator is operating.
 - 3.1.8. Drinking water will be treated by users of the facility according to recommended procedures in the Environment Canada reference "Drinking Water in the Great Canadian Outdoors".
 - 3.1.9. The User Log Book must be filled out and signed by all users to provide information about wildlife sightings, environmental conditions, facility conditions, etc. to help monitor and record data about the area and facility use and maintenance.
 - 3.1.10. Users of the camp and wildlife viewing site will enter all injuries in the first aid log.
 - 3.1.11. Users of the facility will not hunt or fish except in the case of an emergency.
 - 3.1.12. The facility will be posted as 'not for public use' with instructions for authorized and emergency use only.
 - 3.1.13. Outdoor fires are prohibited for any purpose.
 - 3.1.14. Do not feed wildlife.
 - 3.1.15. Do not remove any plants, animal parts or cultural artefacts from the area.
- 3.2. Opening Camp
 - 3.2.1. Ensure all electric fences are working properly and in good repair before turning them off.
 - 3.2.2. Inspect camp for any physical damage, and repair accordingly.
 - 3.2.3. Inspect wood stoves and chimneys and clean or repair as necessary.
 - 3.2.4. Connect the propane and inspect the lines and fittings for leaks using a soap solution to check for bubbles.
 - 3.2.5. Inspect the entire camp for potential safety hazards and reduce or eliminate them (refer to Risk Management Plan for details).
- 3.3. Managing Food, Garbage and Other Potential Wildlife Attractants
 - 3.3.1. Persons using the camp facility will manage food, garbage and other potential wildlife attractants as follows:
 - 3.3.2. Keep the camp clean and free of attractants. Attractants are any artificial food source, such as human food, food waste, garbage, grey water or wastewater, sewage, petroleum-based products, and animal feed that may attract bears or other wildlife to the camp.

- 3.3.3. Follow signs posted at strategic locations in camp, such as the cooking area, to explain proper food storage, and garbage and grey-water disposal.
- 3.3.4. Store perishable food in the main cabin where cooking facilities are located.
- 3.3.5. Store dry goods and bulk quantities of food in the high-cache, in secure containers that minimize smells and make them inaccessible to wildlife.
- 3.3.6. Do not store any food or garbage in sleeping cabins or leave foods unattended outside.
- 3.3.7. Store dog food in the main cabin or cache in airtight containers and do not leave any outside overnight.
- 3.3.8. Store garbage where bears cannot get it, either in the main cabin or the high cache, and do not allow it to pile up or develop strong odours.
- 3.3.9. Treat all grey-water as a potential bear attractant if not properly disposed of. Dispose of all waste water in the drain provided, not outside. A grease trap added to grey water discharge lines will allow the recovery of food particles, cooking grease, and soap residue.
- 3.3.10. Incinerate garbage and food waste in incinerator provided using a hot fire with a good oxygen supply. Do not overfill the incinerator. Incinerate garbage and food waste frequently depending on the volume produced relative to the capacity of the incinerator.
- 3.3.11. Store paper products in the main cabin equipped with a separate container for burnable paper products. Burn paper products in the wood stove or incinerator.
- 3.3.12. Burn combustible materials including food scraps in the incinerator provided and not in the wood stove to ensure it is fully burned and to limit odours.
- 3.3.13. Collect used cooking oil and grease and meat scraps separately from other garbage and store them in the airtight container in the main cabin until they can be incinerated.
- 3.3.14. Keep burnable garbage in tightly closed plastic bags in containers with tight fitting lids in the main cabin or high cache until it can be incinerated. Do not allow garbage to pile up or develop strong odours. Clean storage containers and garbage receptacles regularly to keep smells under control.
- 3.3.15. Wash incombustible garbage, such as tin and glass, and store them in the high cache until they can be flown out.
- 3.3.16. All unburned garbage or food waste must be removed from the fire ashes, sealed, stored in bear proof container in the cache, and removed from the site as soon as practical.

- 3.3.17. No garbage, food waste or refuse of any kind will be buried, or left behind when vacating the site.
- 3.3.18. Do not store perishable food in camp when it is closed for any length of time. Take it with you when you vacate the camp. Any packaged, dry food left in camp will be stored in air-tight containers in the high cache or in the main cabin.
- 3.3.19. Clean the grease trap regularly and burn the contents in the incinerator.
- 3.3.20. Use of tobacco products is discourage and must only occur in designated locations to prevent fire and attracting bears. Users of snuff and chewing tobacco are prohibited from spitting juice on the ground and will contain it in a vessel indoors to be incinerated with other garbage. Butts of smoking products will not be extinguished on the ground but only in fireproof containers and then stored in vessels indoors to be incinerated with other garbage as well.
- 3.3.21. All personal washing (including body, teeth, hair, etc) will be done in the washhouse only. Soaps, shampoos and toothpaste will be disposed of into the grey water system and never outdoors. No one will bathe, wash or clean clothing outdoors and will ensure no grey water is disposed of in or near the river or any back channel.
- 3.3.22. Store any odorous personal effects, such as toothpaste, soap, deodorant, shampoo, in airtight containers in the main cabin during operating season.
- 3.3.23. Fuel containers will be restricted to leak-proof containers and sizes that can easily be stored in the cache to avoid odours, contamination, and accessibility to bears and other wildlife, which may be attracted to fuel containers.
- 3.3.24. Any spilled fuel or oil will be cleaned up immediately by digging up all contaminated earth and incinerating it or by washing structures with hot water and biodegradable soap. Soil dug up near camp will be replaced with similar soil taken from a distance away. The Operator will maintain a stock of absorbent pads to be used in the event of a small spill.
- 3.3.25. Barbeque and outdoor cooking is not permitted.

3.4. Cabins

- 3.4.1. The main cabin will be the structure used for cooking, eating, and socializing.
- 3.4.2. No one will be allowed to keep food in the sleeping cabins.
- 3.4.3. The floors of the cabins will be swept frequently and, if practical, mopped weekly or more frequently if necessary.

- 3.4.4. All dishes, glasses, cutlery and other containers or utensils used for the storage, preparation or serving of food or drink will be cleaned thoroughly in the following order before being stored or used:
 - 3.4.4.1. washing in a warm detergent solution that is capable of removing grease and food particles (maintained at a temperature of at least 38° C and not more than 60° C), then
 - 3.4.4.2. rinsing in clear water, then
 - 3.4.4.3. immersion in boiling water, then
 - 3.4.4.4. allowing the same to drain.
 - 3.4.4.5. use of mild solution of bleach for sterilizing dishes, cleaning stoves and countertops, and mopping floors where deemed necessary. However, disposal of chlorine in the environment is a hazard so minimal use is advised.
- 3.4.5. Set up and turn on the electric fence around the main cabin and sleeping cabins when camp is vacant for any longer than a day.
- 3.4.6. No pets are allowed in camp other than a trained bear dog under the supervision of an authorized Guide.
- 3.5. Woodstoves & Propane Appliances
 - 3.5.1. Wood for heating and cooking will be used sparingly.
 - 3.5.2. Unless visitors are adequately instructed, staff should be the primary people managing the wood stoves.
 - 3.5.3. Only authorized staff are permitted to cut fire wood.
 - 3.5.4. Inspect wood stoves and chimneys during each visit. Clean wood stoves and chimneys the first time camp is opened and then as necessary through the rest of the operational season.
 - 3.5.5. Check wood stove pipes and safety flashings regularly.
 - 3.5.6. Do not over stack any stove and do not store wood close to a stove.
 - 3.5.7. Yukon Parks staff will work with wildlife viewing contractor to determine and mark any trees for safety and enhanced viewing.
 - 3.5.8. As much as possible, firewood will be supplied from logs and bushes cut for clearing and maintaining the site and trails, and from driftwood supplies. Only designated trees selected and marked by Yukon Parks staff may be used for fire wood and in doing so, care will be taken to maintain:
 - 3.5.8.1. snags that provide habitat for birds of prey and cavity-nesting birds;

- 3.5.8.2. significant amounts of deadfall which provide habitat to some animal species, nutrients to the soil and are an essential component of the ecosystem;
- 3.5.8.3. bear rubbing or culturally altered trees; and,
- 3.5.8.4. significant riparian white spruce or balsam poplar.
- 3.5.9. An adequate supply of firewood will be cut and stacked before or after the wildlife viewing season - firewood will not be cut during the wildlife viewing season unless wood is required in an emergency.
- 3.5.10. A propane stove is provided in the main cabin for cooking.
- 3.5.11. Fuel containers will be stored to prevent attracting wildlife (see 3.3 above)
- 3.5.12. Inspect all propane appliances, lines, bottles, and connections for damage or leaks periodically during the stay in camp.
- 3.5.13. Ensure adequate spare parts for the propane system are on hand and ensure the appropriate tools for changing parts and tanks are available. Consult the tool checklist once it has been completed and ensure missing tools are listed in the log book and replaced.
- 3.5.14. Clean propane appliances regularly and ensure they are very clean before camp is vacated for any length of time.
- 3.5.15. Turn off all propane bottles and disconnect the lines before you leave. Put usable propane bottles inside the main cabin or cache and fly out any empty bottles for refilling.
- 3.6. Outhouses & Storage Cache
 - 3.6.1. Food and fuel stored in the cache will be in suitable containers to keep it inaccessible to wildlife, such as red squirrels, porcupines, common ravens, gray jays and bears.
 - 3.6.2. Do not leave toilet paper in the outhouse unless it is in a hard sided metal or plastic container.
 - 3.6.3. Regularly check the outhouse pit level and outhouse cleanliness. A regular sprinkling of chlorinated lime in the pit will help reduce odours.
- 3.7. Equipment - Operations and Maintenance
 - 3.7.1. Consult the owner's manuals for detailed operation, maintenance, and adjustment instructions.
 - 3.7.2. Use appropriate safety equipment when operating any machinery or power tools. In particular, safety glasses and ear protection should be worn whenever power tools or a chainsaw are used. In addition, chaps and steel-toed boots should be worn when operating a chainsaw.

- 3.7.3. Keep all tools in good repair and fix or replace broken tools. A checklist of tools regularly on site will be provided once the camp is fully operational. Consult this checklist and ensure missing tools are replaced.
- 3.7.4. Regularly inspect tool, fire fighting equipment and radio communications equipment and maintain or repair as necessary.
- 3.7.5. Generator
 - 3.7.5.1. When returning the generator to service at the beginning of the operating season:
 - 3.7.5.1.1. Wipe off any oil on exposed engine parts.
 - 3.7.5.1.2. Remove the plug from the exhaust outlet.
 - 3.7.5.1.3. Remove the spark plugs and turn the engine over by hand.
 - 3.7.5.1.4. Replace the spark plugs with new ones.
 - 3.7.5.1.5. Turn on the fuel and start the engine without any load.
 - 3.7.5.1.6. Apply 50% load after the generator runs smoothly.
 - 3.7.5.1.7. Allow the generator to warm up before applying a full load.
 - 3.7.5.2. During the operational season:
 - 3.7.5.2.1. Be careful while refuelling and clean up any spilled fuel immediately.
 - 3.7.5.2.2. Check daily for loose parts and fuel leaks, such as on fuel lines, at the carburetor, and at fuel pump connections.
 - 3.7.5.2.3. Check the crankcase oil daily. Never operate the engine with a low oil level, but also do not overfill with oil.
 - 3.7.5.2.4. Check the exhaust system daily for leaks; cracks may occur in the exhaust pipe due to vibration.
 - 3.7.5.2.5. Maintain clearance around the generator to ensure adequate airflow and avoid over heating.
 - 3.7.5.2.6. Clean and lubricate the governor linkage every 50 hours; check for binding or excessive slackness.
 - 3.7.5.2.7. Change the oil and oil filter every 100 hours of operation.
 - 3.7.5.2.8. Clean the air filter every 100 hours and replace it once each season.
 - 3.7.5.2.9. Clean the cooling fins as necessary.

3.7.5.3. Before closing the camp for the winter following the wildlife viewing season:

3.7.5.3.1. Run the generator until it is warm.

3.7.5.3.2. Turn off the fuel supply then operate the choke manually as the engine stops to drain the carburetor.

3.7.5.3.3. Change the oil if it was not done recently.

3.7.5.3.4. Remove the spark plugs and pour 1 ounce of rust inhibitor oil into each cylinder.

3.7.5.3.5. Turn the engine over by hand and replace the plugs.

3.7.5.3.6. Plug the exhaust outlet to block moisture from entering.

3.7.5.3.7. Clean and oil exposed engine parts.

3.7.5.3.8. Wipe the generator brushes, slip rings, and housing.

3.7.5.3.9. Store the generator in the main cabin or high cache.

3.7.6. Chainsaws

3.7.6.1. Wear safety equipment when operating a chainsaw to protect, eyes, head, hearing, hands, legs, and feet.

3.7.6.2. Be careful while refuelling and clean up any spilled fuel or oil immediately. Do not refuel a running or hot saw.

3.7.6.2.1. Mix oil in accordance with the oil manufacture's specifications. Only use oils that are intended for air cooled engines, preferably oils specifically designed for chainsaws.

3.7.6.3. Inspect the chainsaw before starting it. Do not use a saw with damaged, loose or missing parts.

3.7.6.4. Ensure that the guide bar is tight and the chain fits snugly without binding. A loose chain will increase wear on drive sprockets, drive links and the bar and endanger the operator if it climbs out of the track. Too tight a chain also will increase wear on components. When adjusting chain tension wear gloves to avoid cuts and:

3.7.6.4.1. Loosen bar nuts.

3.7.6.4.2. Rest the tip of the bar on a small piece of wood to hold it up.

3.7.6.4.3. Tighten the chain by turning the adjustment screws until the chain is snug against the bar but able to be turned freely.

- 3.7.6.4.4. Tighten the bar nuts while pulling the bar upwards or supporting it firmly from below for correct tension.
 - 3.7.6.4.5. Ensure the chain rotates smoothly after tensioning.
 - 3.7.6.4.6. Check the chain tension frequently and adjust it as required.
 - 3.7.6.5. Sharpen the chain regularly and ensure proper sharpening tools are available and well maintained.
 - 3.7.6.6. Do not start a chainsaw unless it is at least 3 meters from properly stored fuel.
 - 3.7.6.7. Hold the chainsaw firmly on the ground while starting it. Point the chain away from your body and nearby obstructions. Use a quick, sharp motion on the starter cord.
 - 3.7.6.8. Do not drop start a chainsaw while holding it in one hand. This leaves only one hand to control a running saw and can result in leg cuts.
 - 3.7.6.9. Do not make adjustments to chain or guide bar when the motor is idling.
 - 3.7.6.10. Warm up the chainsaw prior to cutting. The saw should idle without the chain turning so if the chain continues to turn after the throttle switch is released, stop the motor and adjust the idle as shown in the owner's manual.
 - 3.7.6.11. Clean out the chain-oil portal when maintaining the guide bar. Sawdust can block delivery of oil to the cutting chain.
 - 3.7.6.12. Store the chainsaw in the high cache when it is not being used.
 - 3.7.6.13. Before closing the camp for the winter, pour excess fuel from the chainsaw back into a fuel storage container and run the chainsaw until it runs out of fuel.
- 3.8.1. Closing Camp
- 3.8.1.1. Thoroughly clean the cooking and eating areas and all dishes according to the directions in 3.4 above.
 - 3.8.1.2. Inspect the entire camp, inside and outside the cabins, for possible attractants and clean them up as necessary.
 - 3.8.1.3. Take all perishable food with you when you leave.
 - 3.8.1.4. Take all non-burnable garbage, food waste, and refuse when you leave for proper disposal in the nearest facility.

- 3.8.1.5. Leave firewood and kindling cut and stacked for the next group.
- 3.8.1.6. Leave the main cabin wood stove readily laid and matches handy for the next group or in case of emergency use of the cabin.
- 3.8.1.7. Make sure all batteries, including the electric fence cells and HF radio batteries are fully charged.
- 3.8.1.8. Attend to propane appliances as in section 3.4 above.
- 3.8.1.9. Close all windows and doors and lock the main cabin door.
- 3.8.1.10. Place prepared shutters in all windows of the cabins to eliminate the potential for bears to break in if the electric fence should fail.
- 3.8.1.11. Put up the electric fences and check all connections and lines. Make sure the fences are working properly before leaving.
- 3.8.1.12. Treat grey-water pit with lime or ash.
- 3.8.1.13. Provide an inventory of supplies left on site, such as fuel, propane, etc. and list of supplies required from the log entries and inventory, to report to Yukon Parks.

4. Yukon Parks Camp Facility Photos

Photos showing construction of main ranger/cook/wash cabin and sleeping cabins joined by decking, food cache and outhouse.



APPENDIX 11: DRINKING WATER TREATMENT

*From Health Canada, Government of Canada web
(www.hc-sc.gc.ca/ewh-semt/water-eau/drink-potab/water_outdoors-eau_plein_air_e.html)*

Drinking Water in the Great Canadian Outdoors

1. Is the water safe to drink?

Waters in the great Canadian outdoors are generally of excellent quality, but to ensure an enjoyable experience, be prepared to boil or disinfect all drinking water. Filtration prior to disinfection will provide additional protection.

No surface water can be considered safe for human consumption without treatment. Even the cleanest looking spring water could be polluted. Untreated water may be contaminated with bacteria, viruses and protozoa.

2. How do I choose my drinking water source?

Choose your water source carefully to reduce the risk of exposure to disease-causing organisms and to increase the effectiveness of your water treatment. On short trips, use water from home or another safe source.

Generally, the chances of finding safe drinking water in the mountains increase as you gain altitude. Intense sunlight at high altitudes kills undesirable bacteria and viruses but harmful cysts are unaffected.

Runoff water from streams below glaciers is often cloudy with silt and should be filtered.

Well water, fast-moving rivers and the deepest parts of lakes are the best locations to obtain water. Avoid stagnant water, shoreline water, and water close to human habitations and campsites.

During the winter, it is best to use an open water source or obtain water through a hole in the ice. Check the safety of the ice first! Melting ice and snow consumes fuel and takes extra time. Eating snow or ice directly can lead to chilling and hypothermia and could also cause stomach cramps and headaches. Beware of coloured snow - it indicates the presence of algae that could cause diarrhea if ingested. Even in winter, all water should be purified.

3. How can I purify my water?

Each method of water treatment has its advantages and disadvantages. Choose a treatment method that suits your camping style and follow the directions carefully. Use only treated or boiled water for drinking, brushing teeth, or washing fruits and vegetables that will be eaten raw.

3.1. Boiling

Heat is the oldest, safest and most effective method of purifying water. Bring the water to a boil for at least one minute (adding one more minute for each 300 m (1000 ft.) above sea level. If the water is cloudy, filter it before boiling. Boiling will give your water a flat taste that can be remedied by pouring the water quickly back and forth from one clean container to another, by letting the water cool, or by adding a pinch of salt per litre of water.

3.2. Chemical Purification

When boiling is not practical because of time and lack of a heat source, disinfection with chlorine or iodine compounds may be effective. Use two water containers: one for treating water and the other for carrying purified water. After disinfection, shake the container vigorously. Wait five minutes. Shake it again with the lid loose so some water leaks out to cleanse the mouth of the container.

Disinfection alone may not kill some protozoa. Pass the water first through a filter with a pore size of 0.5 micron (absolute) or less to remove protozoa then disinfect it to kill viruses and bacteria.

Disinfection will give the water a peculiar taste. If you find it unpleasant, try using flavoured drink crystals or concentrated citrus juice to mask the taste of the disinfectant. Add drink powders or juice only after the treatment time has elapsed.

Table 1: Summary of Water Purification Methods

E = effective M = may be effective (see text) N = not effective

	<i>Boiling</i>	<i>Chlorine</i>	<i>Iodine</i>	<i>Filters</i>
Bacteria	E	E	E	M
Viruses	E	E	E	N
Protozoa	E	M	M	M
Chemicals	M	N	N	N

3.3. Chlorine

Under most conditions, chlorine is a suitable disinfectant for raw water. However, it may not be as effective under certain conditions such as water that is extremely cold, alkaline or full of organic matter.

Chlorine loses its effectiveness with age, exposure to air and extreme heat. If the odour of chlorine (swimming pool smell) is not noticeable in the water, increase the dosage. Chlorine and iodine are effective against most protozoa, with exception of *Cryptosporidium*.

3.4. Chlorine bleach

Household bleach (4 or 5% sodium hypochlorite) is effective. Carry the bleach in a small bottle sealed inside a plastic bag to guard against leaks. For maximum effectiveness, use a new vial of bleach every few months.

Add two drops (0.1 mL) of household bleach to 1L of water, shake with the cap loose, and allow the mixture to stand for 30 minutes. Double the amount of bleach and the time if the water is cold, cloudy or odourous.

3.5. Chlorine tablets

Chlorine tablets are inexpensive and readily available in stores. After adding the chlorine tablets, let the water stand for 30 minutes before use. Consider dosages listed on the instruction sheet as the minimum recommended. For maximum effectiveness, store the tablets as directed and replace them every few months.

3.6. Iodine

With the proper iodine concentration and a 30-minute contact time in moderately turbid water that is maintained at 20⁰ C or higher, all harmful bacteria and most viruses will be destroyed. In cold or cloudy water (5 to 15°C), the contact time should be increased up to several hours before drinking. In very cold, cloudy water, iodine will be more effective if you warm the water first.

Follow these contact times with all the methods listed below.

Because of potential health concerns (thyroid problems or iodine sensitivity), iodine use is recommended for no more than three weeks per season. Caution must be exercised with the use of crystalline iodine, which is readily available at outdoor equipment shops.

Both the iodine crystals and the iodine solution are toxic and should be kept out of the reach of children. Children and pregnant women are particularly sensitive to iodine so they should avoid it.

3.7. Tincture of iodine

Six drops (0.3 ml) of 2% tincture of iodine, the kind commonly sold at pharmacies, will purify 1 L of clear untreated water. Let stand for at least 30 minutes before drinking. For cloudy or cold water add 10 drops iodine per litre of water and increase the contact time up to several hours before drinking.

3.8. Iodine tablets

One iodine tablet will purify 1L of water. Let stand for at least 15 minutes before drinking. For cold or cloudy water use two tablets per litre of water and let stand for 20 minutes. A bottle of tablets should be discarded every few months after being opened.

3.9. Iodine crystals

To use this method, place 4 to 8 g of iodine crystals in a 35 mL glass bottle with a leak-proof cap. Add 30 mL of water and shake for one minute to produce a saturated solution. Allow the remaining crystals to settle. From the saturated iodine solution, use 15 ml/L of untreated water and let stand for 15-20 minutes.

For cloudy or cold water add 20 ml/L of water and let stand for 20 minutes. Because the iodine crystals are toxic, **do not** allow the solid crystal iodine remaining in the bottom of the bottle to be transferred to your drinking container.

The crystals remaining in the bottle can be re-used. Top up the 35mL bottle with water, shake and use it again as described earlier. As long as crystals are still visible at the bottom of the bottle, there will be enough iodine to act as a disinfectant. Keep the bottle warm, at body temperature, to ensure optimum effectiveness of the iodine.

3.10. Filtration

Water filters for use in the wilderness are available but be wary when making your choice. Avoid filters that allow particles larger than 0.5 microns to pass. Filters with a pore size of 0.1 to 0.3 micron can remove protozoa and bacteria, but may not remove viruses. Filtration alone is insufficient to purify water; hence it should be combined with disinfection to remove viruses. Follow the operating and maintenance instructions carefully.

Filter units that effectively remove suspended materials and associated contaminants employ a hand pump and special filter. The pump forces water through the filter leaving an array of debris trapped behind. One litre of water can be produced in about 90 seconds.

One type of purifier has a replaceable glass fibre filter that should be changed frequently if it is used in heavily contaminated water. Another type has a ceramic cartridge that is cleaned with a brush. If the ceramic filter cracks, the unit should not be used until the ceramic filter is replaced.

4. What should I do if I feel sick?

Some water-borne diseases are difficult to diagnose. If you are not feeling well and have recently drunk water from a source in the wild, inform your doctor that you may have consumed untreated water.

5. How can I minimize my impact on the environment?

With more people using the back country every year, it is everyone's responsibility to minimize their impact on the environment and to help preserve the quality of waters in the outdoors. Many parks and protected areas have regulations regarding wilderness practices.

6. Need more information?

For more information, contact [Health Canada](#)