
Wildlife Guidelines for Backcountry Tourism/Commercial Recreation in British Columbia



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Introduction

Objective

The guidelines were developed **to ensure that backcountry recreation activities are conducted in a manner that does not compromise the current distribution of wildlife, the sustainability of their populations, or the integrity of their habitats.** These guidelines define results, desired behaviours, indicators, and limits for backcountry activities in relation to wildlife and their habitats.

Guidelines development

A joint government and Commercial Tourism (CT) / Commercial Recreation (CR) sector committee (the Tourism Wildlife Project Team) was tasked with developing a set of guidelines that are results based, informed by science and operational experience, and that meet the legislative and policy needs of government and the sustainability objectives of both government and tourism. The guidelines were developed over an 18 month period in 2004 and 2005, with extensive input from representatives of commercial and public recreation sectors and organizations. These guidelines are **intended for use by commercial tourism operators tenured under the Land Act when conducting activities on Crown land**, including water-based activities. However, it is anticipated that the guidelines will provide useful guidance for **all** backcountry recreational users.

These guidelines replace the first version which was published in 2002 as the *Interim wildlife guidelines for commercial backcountry recreation in British Columbia*.

The development of the current guidelines was framed by a strategy (Wilson and Hamilton 2004 – Appendix 1) that:

- addressed concerns of stakeholders raised after the release of the Interim Guidelines;
- provided a context for the guidelines in relation to other legal and policy tools; and
- stressed a results-based approach based on precautionary defaults and/or the development of “alternative” operational strategies.

Key features of the 2006 guidelines

- Guidelines are organized by categories of recreational activity and season, and secondarily by broad habitat (ecosystem) types. Operators need to consult all sections that apply to their operation (e.g., operators who offer heli-hiking activities should consult both the aerial-based and non-motorized activity sections - including seasonal sections).
- Guidelines for individual species are included only where the species is at risk or of regional interest, is widely distributed, or requires additional guidelines beyond those specified for wildlife and habitats in general.
- Guidelines for different recreational activities are organized into **5 issues categories**:
 - Degradation of soil, air and water quality
 - Integrity of vegetation communities
 - Direct disturbance of wildlife
 - Integrity of fisheries resources
 - Special management (for specific values of concern)
- Concerns are ranked according to the potential risk to wildlife and their habitats, where potential is defined as the probability that the activity will result in either the alteration or destruction of habitat, or the temporary (on a scale of days or longer) or permanent abandonment of habitat, in the absence of guidelines or statutes
- Guidelines are summarized by:
 - **Results** – What the guidelines are attempting to achieve
 - **Desired Behaviours** – Actions by users that are most likely to achieve the specified Results
 - **Indicators** – What should be measured to determine if Results are being achieved
 - **Limits** – Acceptable bounds related to the measured indicator
- **Low risk issues** - Results and Desired Behaviours are identified.
- **High risk issues** - Results, Desired Behaviours, Indicators and Limits are identified.

Safety - Despite any direction provided in the guidelines:

- safety remains the first priority under all circumstances; and
- operators must adhere to all relevant legislation and regulations

Commercial Recreation Policy

Commercial Recreation Policy (www.tsa.gov.bc.ca/resorts_rec/tenure/commercialrecreation/index.htm) requires that wildlife values (among other values) are addressed in management plans that form part of the CR tenure document, which must be adhered to by CR operators. Ministry of Tourism, Sport and the Arts (MTSA) staff (decision makers) are responsible for determining the adequacy/appropriateness of Management Plans including the measures that are incorporated to address wildlife values. Ministry of Environment (MoE) will provide necessary assistance / expertise when deemed necessary.

CR operators need to be aware of wildlife and habitat values within their area of operation and/or those that may be affected by their activities (see *CR Management Plan* template guide at www.tsa.gov.bc.ca/resorts_rec/tenure/commercialrecreation/mpt.htm for more details).

Operators are responsible for understanding the guidelines relevant to their activities. The guidelines will form the foundation for addressing potential wildlife and habitat issues within operators' management plans. Guidelines list the **results** that are to be achieved to address wildlife values, along with the associated **desired behaviours** that are designed to meet those results. The desired behaviours are precautionary "defaults" that operators are to follow, unless **alternative strategies** are proposed.

Alternative Strategies

To achieve the results stated in the guidelines, CR operators may decide to:

1. adhere to **all** desired behaviours listed in the guidelines for the particular activity or activities that they are authorized to undertake or are applying for. If this is the case they would include a statement within their management plan that: “The Wildlife Guidelines, as amended from time to time, will be followed / adhered to when carrying out activities authorized by the Crown land tenure …………….” ;

or

2. propose **alternative strategies** within their management plans to achieve any of the listed results. If this is the case the Management Plan must include a statement to the effect that: “The Wildlife Guidelines (as amended from time to time) will be adhered to when carrying out activities, except where an alternative strategy has been approved.”

Alternative strategies must be included in the Management Plan submitted by the proponent and must include:

- a suite of behaviours designed to achieve the listed result;
- a monitoring and adaptive plan to ensure results are being met; and
- sign-off by a qualified professional; that is a competent professional who is a member of a certifying body which has standards of practice and can hold that member accountable (e.g., Professional Biologists, Professional Foresters, Professional Agrologists and Professional Engineers and Geoscientists).

Note: There **must** be a corresponding alternative strategy for all listed results if the operator decides not to adopt any of the desired behaviours for their activities.

For further information, see ‘Wilson and Hamilton Strategy’ – Appendix 1. For more information on application and approval processes, see the Ministry of Tourism, Sport and the Arts site for Adventure Tourism/Commercial Recreation (www.tsa.gov.bc.ca/resort_rec/tenure/commercialrecreation/index.htm)

The guidelines will be subject to change from time to time based on the results of compliance and effectiveness monitoring, new science and trial results. The guidelines are informed by science and the experience of users; however, there are knowledge gaps and, consequently, opportunities to “learn by doing”. The guidelines allow for the development of innovative practices through management trials and alternative strategies. To ensure that the guidelines remain relevant and up to date, an adaptive management approach will be undertaken by agencies (led by MoE).

Changes from Interim Guidelines

The following is a list of substantive differences between the current draft guidelines and the *Interim wildlife guidelines for commercial backcountry recreation in British Columbia*, published by the Ministry of Water, Land and Air Protection in 2002:

- Guidelines available on the web are presented as a series of hyperlinked web pages to allow users to navigate quickly to relevant information.
- Guideline development was framed by a strategy that:
 - Addressed concerns of stakeholders raised after the release of the *Interim Guidelines*.
 - Provided a context for the guidelines in relation to other legal and policy tools.

- Stressed a results-based approach based on precautionary defaults and the development of operational strategies.
- Guidelines were developed with extensive input from commercial and public recreationists.
- Guidelines have been expanded to include both wildlife and their habitats.
- Rather than a species-by-species approach, guidelines are stratified by categories of recreational activity and secondarily by broad habitat types. Cross-references to individual species have been included, along with background information and references from the *Interim Guidelines*.
- Guidelines for different recreational activities are presented in a consistent format and are stratified into 5 issues categories:
 - Degradation of soil, air and water quality
 - Integrity of vegetation communities
 - Direct disturbance of wildlife
 - Integrity of fisheries resources
 - Special management (addition guidelines for specific values of concern)
- References to facilities development in the Interim Guidelines were removed.
- “Management objectives”, “impact mitigation guidelines” and success indicators” have been replaced with “results”, “desired behaviours”, “indicators” and “limits”.
- Guidelines not directly related to recreation activities or to the responsibilities of commercial recreation operators and public recreationists have been removed.
- Default approach distances have been standardized to:
 - 500 m line-of-sight for aircraft and all wildlife (except 1500 m for Mountain Goats, based on recent scientific work from Alaska).
 - 500 m line-of-sight for motorized ground-based activities in open areas in relation to large mammals.
 - 100 m line-of-sight for non-motorized ground-based activities in open areas in relation to large mammals.
 - 100 m on water (consistent with bear-viewing guidelines).

In all cases the desired behaviour is stay at distances sufficient to prevent changes in the behaviour of animals.

Activity Categories

Guidelines are organized by recreational activity and season, and secondarily by broad habitat (ecosystem) types in which the activities occur (See Table 1 and Table 2). Some activities will occur in sensitive areas or in areas where sensitive species are found. (See Section ***What are the Sensitive Species and Habitats in My Area***)

Table 1. Recreational Activities.

Activity	Description	Habitats
Aerial-based recreation	Includes the portion of any recreation activity that involves the use of helicopters or fixed-wing aircraft	<ul style="list-style-type: none"> • All
Motorized recreation (winter)	Includes all motorized vehicles intended or used for travel on snow	<ul style="list-style-type: none"> • Alpine/Tundra • Forest
Motorized recreation (snow-free)	Includes motorized vehicles intended for use off public roadways during the snow-free season, including “quads”, 4x4 trucks, sport utility vehicles and trail bikes	<ul style="list-style-type: none"> • Alpine/Tundra • Forest • Grasslands • Foreshore
Non-motorized recreation (winter)	Includes skiing, snowshoeing or other mechanized or non-mechanized methods of traveling on snow in the backcountry	<ul style="list-style-type: none"> • Alpine/Tundra • Forest
Non-motorized recreation (snow-free)	Includes hiking, mountain-biking, horse-back riding, camping or other mechanized or non-mechanized recreational activity in the backcountry that occurs during the snow-free season	<ul style="list-style-type: none"> • Alpine/Tundra • Forest • Grasslands • Foreshore
Boating	Includes any activity using a motorized or non-motorized vessel intended for travel on water	<ul style="list-style-type: none"> • Freshwater • Foreshore

Table 2. Habitat (Ecosystem) Types.

Ecosystem Type	Description	Activity	
Grassland	Warm-hot climate areas dominated by grasses and widely spaced trees or no trees.	<ul style="list-style-type: none"> • Motorized (snow-free) • Non-motorized (snow-free) • Aerial-based 	
Alpine/Tundra	Very cold climate areas dominated by dwarf shrubs, herbs mosses and lichens. Includes subalpine forests.	<ul style="list-style-type: none"> • Motorized (winter) • Motorized (snow-free) • Non-motorized (winter) • Non-motorized (snow-free) • Aerial-based 	
Freshwater	Lakes, rivers, streams and wetlands dominated by open water or a mixture of open water and emergent vegetation.	<ul style="list-style-type: none"> • Boating • Aerial-based 	
Foreshore	Coastal foreshore and near-shore areas.	<ul style="list-style-type: none"> • Boating • Non-motorized (snow-free) • Aerial-based 	
Forest	All deciduous- and coniferous-forested ecosystems in the province.	<ul style="list-style-type: none"> • Motorized (winter) • Motorized (snow-free) • Non-motorized recreation (winter) • Non-motorized recreation (snow-free) • Aerial-based 	

Recreational Activities

Aerial-related Recreation > All Habitats > Winter and Snow-free

- The following results, desired behaviours, indicators, and limits apply *in addition* to any relevant policies or regulations; for example, area-based closures and existing statutes.
- Concerns are ranked according to the potential risk to wildlife and their habitats, where potential is defined as the probability that the activity will result in either the alteration or destruction of habitat, or the temporary or permanent abandonment of habitat, in the absence of guidelines or statutes.
- "Aerial-related recreation" is defined as the portion of any recreation activity that involves the use of helicopters or fixed-wing aircraft.
- Guidelines are summarized by:
 - **Results** - What the guidelines are attempting to achieve.
 - **Desired Behaviours** - Actions by users that are most likely to achieve the specified results.
 - **Indicators** - What should be measured to determine if the specified results are being achieved.
 - **Limits** - Acceptable bounds related to the measured indicator.
- Results and Desired Behaviours are identified for low-risk issues.
- Results, Desired Behaviours, Indicators, and Limits are identified for high-risk issues.
- NOTE: These guidelines have been produced as a means of ensuring that environmental values and tourism recreational activities can co-exist on the landscape. Tourism operators may find these guidelines useful and may choose to adopt them. However, if a licensee chooses to use a different strategy, and it is accepted by government, the licensee must undertake an effectiveness monitoring program. The Tenure Management Plan must reflect a commitment to the monitoring program, and opportunities to partner with government may be explored.
- **Safety remains the first priority under all circumstances.**

1. Degradation of Soil, Air and Water Quality

Concern: Fuel spills

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Avoid fuel spills. 	<ul style="list-style-type: none"> • Comply with existing fuel-related regulations. • Avoid fuel spills. • Institute spill response procedures. • Avoid locating fuel caches near watercourses or sensitive sites. 	<ul style="list-style-type: none"> • Number and volume of spills. • Documented responses to spills. • Soil tests near tanks • Compliance with regulations. • Suitable location of caches. 	<ul style="list-style-type: none"> • No non-compliance with regulations. • No unsuitably located fuel caches.

2. Integrity of Vegetation Communities

Concern: Damage to sensitive sites

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Protect habitats of endangered wildlife species and ecosystems. • Protect sensitive ecosystems (grasslands, alpine/tundra, and moist-soil ecosystems such as riparian areas and wetlands). • Protect nesting/calving sites. 	<ul style="list-style-type: none"> • Learn to identify B.C.'s endangered species and ecosystems within the operating area. • Operate in a manner that is consistent with government's approved approach to recovery planning for species at risk. • Follow recommendations of recovery planning for species at risk as they relate to habitats. • Respect guidelines for use of designated sites such as Wildlife Habitat Areas and Wildlife Habitat Features. • Avoid landing in sensitive sites. • Obey all signs and area closures. • Avoid known nesting/calving sites (seasonal closures might be necessary). 	<ul style="list-style-type: none"> • Damage to sensitive sites. • Number of landings in sensitive sites. 	<ul style="list-style-type: none"> • No vegetation damage in sensitive sites caused by aircraft. • No landings in sensitive sites.



3. Direct Disturbance of Wildlife

Concerns: Physiological and behavioural disruption, displacement from preferred habitats; direct mortality, habituation/sensitization

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Minimize physiological and behavioural changes in animals associated with aircraft activity. • Minimize changes in habitat use resulting from aircraft activity. 	<ul style="list-style-type: none"> • Record wildlife encounters, actions taken, and responses of animals. • Obey all area closures. • Do not harass wildlife. • Focus activities in areas and times of the year when wildlife are least likely to be disturbed (seasonal closures might be necessary). • Take immediate action to increase separation distances when animals react to aircraft. • Use consistent flight paths, preferably in the center of valleys, or the valley side opposite key wildlife habitat. If key wildlife habitats are in the center, fly on one side of the valley rather than the center. • Stay at distances sufficient to prevent changes to the behaviour of animals (more than 500 m line-of-sight is the default). 	<ul style="list-style-type: none"> • Proportion of encounters resulting in an alarm response. • Population abundance and distribution trends of wildlife species. 	<ul style="list-style-type: none"> • No increase in rate of alarm responses over time caused by aircraft. • No harassment caused by aircraft. • No abandonment of habitats caused by aircraft.

4. Integrity of Fisheries Resources

Concern: None for this activity

5. Special Management

Concern: Ungulate winter range (See Appendix 1. Species/Ecosystem Notes)

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none">• Minimize physiological or behavioural disruption of ungulates on winter ranges.• Continued occupation of ungulate winter ranges.	<ul style="list-style-type: none">• Minimize activity in and near identified ungulate winter ranges (seasonal closures might be necessary).• Stay at distances sufficient to prevent changes to the behaviour of animals (more than 500 m line-of-sight is <u>the default</u>).	<ul style="list-style-type: none">• Continued occupancy of ungulate winter ranges.	<ul style="list-style-type: none">• No harassment caused by aircraft.• No abandonment of ungulate winter ranges caused by aircraft.



Concern: Mountain Caribou (See Appendix 1. Species/Ecosystem Notes)

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Minimize physiological or behavioural disruption of Mountain Caribou. • Continued occupation of existing range by Mountain Caribou. • Ensure that aircraft activities are not a barrier to Mountain Caribou population or range recovery. 	<ul style="list-style-type: none"> • Record wildlife encounters, actions taken and responses by animals. • No intentional "flight-seeing" of Mountain Caribou. • Ensure a system is in place to proactively identify high-use habitats with a high probability for encountering caribou (see Note A below), and to show how activities shift during the operating season in response to the presence of caribou. • Minimize activity in and near identified high-use areas. • Avoid activity in occupied habitats (see Note B below). • Stay at a sufficient distance from caribou to prevent changes to their behaviour or their use of habitat (more than 500 m line-of-sight is default). • Seasonal closures might be necessary. • Operate in a manner that is consistent with government's approved approach to recovery planning for Mountain Caribou. 	<ul style="list-style-type: none"> • Encounter frequency. • Proportion of encounters resulting in an alarm response. • Population abundance and distribution trends of sub-populations as they relate to the activities. 	<ul style="list-style-type: none"> • No increase in rate of alarm responses over time caused by aircraft. • No harassment of animals caused by aircraft. • No abandonment of habitats caused by aircraft.

Note A. High-use habitats can be determined based on habitat mapping, information from government biologists, or sightings from previous years.

Note B. "Occupied habitats" refers to areas known to be occupied by caribou within at least the last 48 hours. Occupation is determined by the observation of caribou in the target area or by observation of tracks (either caribou or other ungulate) in the target area. The desired behaviour is to shift activity from the occupied area to an area where the likelihood of encountering caribou is low. The aerial activity will not resume in occupied habitats for at least 48 hours and only after a high-level reconnaissance flight can confirm the absence of the animals or their tracks (i.e., the areas are no longer occupied). The high-level reconnaissance flight entails

approaching the target area at an altitude of 500 m or higher, and conducting an observation flight over the target area before gradually descending toward the ground. If at any time caribou or tracks (either caribou or other ungulate) are detected during the reconnaissance flight, the target area is considered occupied and further aerial activities will be suspended for at least the next 48 hours, at which time the procedure may be repeated.

Concern: Mountain Goats/Wild Sheep (See Appendix 1. Species/Ecosystem Notes)

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Minimize physiological or behavioural disruption of Mountain Goats. • Continued occupation of Mountain Goat winter ranges. 	<ul style="list-style-type: none"> • Do not land in identified Mountain Goat winter ranges. • No intentional “flight-seeing” of Mountain Goats/sheep. • Stay at distances sufficient to prevent changes to the behaviour of animals (more than 1500 m line-of-sight is the default). • Avoid occupied habitats where Mountain Goats/sheep have been seen in the current season and/or animals consistently occupy the area and the area is mapped as occupied. • Minimize ¹ use in areas of high probability or potential, where there is documented past use by Mountain Goats or sheep. • No behavioural restrictions ² apply in areas not considered Mountain Goat/sheep habitat, or where potential habitat is mapped ³ with no verification of Mountain Goat/sheep use. 	<ul style="list-style-type: none"> • Continued occupancy of Mountain Goat winter ranges. 	<ul style="list-style-type: none"> • No harassment caused by aircraft. • No abandonment of Mountain Goat winter ranges caused by aircraft.

Notes:

¹ "Minimize" means using one or all of the following operational strategies:

- Distributing aerial activities across the operating area so that these habitat areas receive less use (particularly for landings and take-offs) relative to other areas where the probability of interaction with goats is lower.
- Identifying and maintaining use of regular and predictable patterns and distribution of flights.
- Flying on the opposite side of the valley from where these areas are located.

- Flying at distances from these areas sufficient to prevent changes to behaviour of animals (if they might be in the area but not visible). Normally, this is a minimum 1500 m horizontal separation, unless the flight path is separated from the habitat by geographic barriers. Where aircraft are within this normal separation distance, they should maintain maximum vertical separation from the areas (normally more than 500 m).
- Flying aircraft in a way that reduces noise and ensures that animals are not surprised by sudden encounters.
- Ensuring that monitoring and feed-back systems are in place to show due diligence with respect to meeting the intent of this category.
- Employing the established practices of the BC Helicopter and Snowcat Skiing Operators Association (BCHSSOA) when animals are inadvertently encountered.

Note that management plans and/or company operational strategies will be expected to outline the specific practices being used to achieve this intent, and to ensure/confirm the on-going success of the strategies. In addition, it is recommended that the Ministry of Environment be informed of any reported sightings during an annual information exchange.

² Flights into mapped Mountain Goat/sheep winter ranges that have no verification of animal presence are deemed to include cursory presence/absence assessment. Clients should be advised to inform pilots/guides if they observe Mountain Goats/sheep. If animals are detected, the area's classification becomes "occupied" and the "Desired Behaviours" are modified accordingly.

³ Mapped winter ranges under this category do not need to be included in Tenure Management Plans.

Concern: Calving areas, nesting sites, Grizzly Bear and Wolverine dens

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Minimize physiological or behavioural disruption of wildlife during critical calving/ denning/ nesting periods. • Continued occupation by wildlife of critical calving/ denning/ nesting habitat. 	<ul style="list-style-type: none"> • Avoid flying or landing near known calving/ denning/ nesting habitat; more than 500 m line-of-sight is the default for large mammals and Great Blue Heron rookeries, except 1500 m or more for Mountain Goat natal areas (seasonal closures might be necessary). • No intentional "flight-seeing" of wildlife during calving/ denning/ nesting periods. 	<ul style="list-style-type: none"> • Continued occupancy of calving/ denning/ nesting habitats. 	<ul style="list-style-type: none"> • No harassment caused by aircraft. • Continued occupancy of known calving/ denning/ nesting habitats.



6. Additional Information:

BCHSSOA. 2003. Stewardship of mountain ecosystems: best practices for sustainability - *BC Helicopter and Snowcat Skiing Operators Association* (www.helicatcanada.com).

Motorized > Alpine/Tundra and Forest > Winter

- The following results, desired behaviours, indicators, and limits apply in addition to any relevant policies or regulations; for example, area-based closures and existing statutes.
- Concerns are ranked according to the potential risk to wildlife and their habitats, where “potential” is defined as the probability that the activity will result in either the alteration or destruction of habitat, or the temporary or permanent abandonment of habitat, in the absence of guidelines or statutes.
- Motorized vehicles intended or used for travel on snow include (but are not limited to) snowmobiles, snowcats, and all-terrain vehicles (ATVs).
- Guidelines are summarized by:
 - **Results** - What the guidelines are attempting to achieve.
 - **Desired Behaviours** - Actions by users that are most likely to achieve the specified results.
 - **Indicators** - What should be measured to determine if the specified results are being achieved.
 - **Limits** - Acceptable bounds related to the measured indicator.
- Results and Desired Behaviours are identified for low-risk issues.
- Results, Desired Behaviours, Indicators, and Limits are identified for high-risk issues.
- NOTE: These guidelines have been produced as a means of ensuring that environmental values and tourism recreational activities can co-exist on the landscape. Tourism operators may find these guidelines useful and may choose to adopt them. However, if a licensee chooses to use a different strategy, and it is accepted, the licensee must undertake an effectiveness monitoring program. The Tenure Management Plan must reflect a commitment to the monitoring program, and opportunities to partner with government may be explored.
- **Safety remains the first priority under all circumstances.**

1. Degradation of Soil, Air and Water Quality

Concern: Air pollution

Results	Desired Behaviours
<ul style="list-style-type: none">• Minimize air pollution.	<ul style="list-style-type: none">• Use low-emission engines (e.g., 4-stroke or efficient 2-stroke).• Keep engines well tuned.• Avoid idling.

Concern: Water pollution

Results	Desired Behaviours
<ul style="list-style-type: none"> Avoid water pollution. 	<ul style="list-style-type: none"> Pack out all garbage. Use existing facilities for human waste, pack it out, or bury it in holes 10 to 15 cm deep located at least 100 m from water sources (use group latrines at least 30 cm deep for parties of more than 4 persons).

Concern: Fuel spills

Results	Desired Behaviours
<ul style="list-style-type: none"> Avoid fuel spills. 	<ul style="list-style-type: none"> Observe all refuelling regulations (see www.env.gov.bc.ca/epd/epda/industrial_waste/petrochemicals/pdfs/fuel_handle_guide.pdf). Carry fuel-spill kits for refuelling at remote caches. Cache fuel at least 10 m from the high-water mark of water courses.

2. Integrity of Vegetation Communities

Concern: Soil Compaction

Results	Desired Behaviours
<ul style="list-style-type: none"> Protect vegetative cover and root systems. 	<ul style="list-style-type: none"> Use existing roads and trails in low snow conditions.

Concern: Damage to sensitive sites

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> Protect habitats of endangered wildlife species and ecosystems. Protect sensitive ecosystems (grasslands, alpine/tundra, and moist-soil ecosystems such as riparian areas and wetlands). Protect nesting/calving sites. 	<ul style="list-style-type: none"> Learn to identify endangered species and ecosystems within the operating area. Operate in a manner that is consistent with government's approved approach to recovery planning for species at risk. Use existing roads and wide trails. Obey all signs and area closures. Do not break or trample vegetation in riparian areas. Avoid known nesting/calving sites (seasonal closures might be necessary). Do not damage wildlife trees. 	<ul style="list-style-type: none"> Damage to sensitive sites. Damage to vegetated alpine/tundra and grasslands beyond existing trail network. 	<ul style="list-style-type: none"> No vegetation damage in sensitive sites or vegetated alpine/tundra and grasslands beyond existing trails caused by motorized vehicles.

3. Direct Disturbance of Wildlife

Concerns: Physiological and behavioural disruption, displacement from preferred habitats; direct mortality, habituation/sensitization

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Minimize physiological and behavioural disruption. • Minimize changes in habitat use. 	<ul style="list-style-type: none"> • Record wildlife encounters, actions taken, and responses of animals. • Remain on established trails or in areas of high visibility where no wildlife are present. • Obey all signs and area closures. • Do not harass wildlife. • Do not feed wildlife. • Do not handle wildlife. • Do not allow dogs to be at large and harass wildlife. • Pack out all garbage. • Turn off engine, remain on machine, and yield to wildlife on trails and roads. • Focus activities in areas where wildlife are least likely to be disturbed (seasonal closures might be necessary). • Stay at distances sufficient to prevent changes to the behaviour of animals (at least 500 m in open areas is the default for large mammals). 	<ul style="list-style-type: none"> • Proportion of encounters resulting in an alarm response. • Population abundance and distribution trends of wildlife species. 	<ul style="list-style-type: none"> • No increase in rate of alarm responses over time caused by motorized activities. • No harassment caused by motorized activities. • No abandonment of habitats caused by motorized activities.



4. Integrity of Fisheries Resources

Concern: Damage to fish populations and habitat

Results	Desired Behaviours
<ul style="list-style-type: none"> Protect fish populations and habitat. 	<ul style="list-style-type: none"> Do not move live fish or other aquatic life. Do not harm spawning or rearing habitats by crossing or otherwise disturbing open water areas. Obey all fisheries regulations. Follow desired behaviours related to water quality.

5. Special Management

Concern: Grizzly Bear and Wolverine dens

Results	Desired Behaviours
<ul style="list-style-type: none"> Protect den sites. 	<ul style="list-style-type: none"> Remain at distances sufficient to avoid disturbing Grizzly Bears and Wolverines in known den sites (at least 500 m is the default).

Concern: Ungulate winter range

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> Minimize physiological or behavioural disruption of ungulates on winter ranges. Continued occupation of ungulate winter ranges. 	<ul style="list-style-type: none"> Remain on established roads and trails. In deep snow areas, where snow-plowing creates linear "traps" for Moose, provide lateral escape routes at relatively frequent intervals. Obey all signs and area closures. Do not harass wildlife. Do not feed wildlife. Do not allow dogs to be at large and harass wildlife. Minimize activity in and near identified ungulate winter ranges (seasonal closures might be necessary). Stay at distances sufficient to prevent changes to the behaviour of animals (at least 500 m in open areas is the default). 	<ul style="list-style-type: none"> Continued occupancy of ungulate winter ranges. 	<ul style="list-style-type: none"> No harassment caused by motorized activities. No abandonment of ungulate winter ranges caused by motorized activities.

Concern: Mountain Caribou

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Minimize physiological or behavioural disruption of Mountain Caribou. • Continued occupation of existing range by Mountain Caribou. • Ensure that motorized activities are not a barrier to Mountain Caribou population recovery. 	<ul style="list-style-type: none"> • Record wildlife encounters, actions taken, and responses of animals. • Remain on established roads and trails. • Obey all signs and area closures. • Do not harass wildlife. • Do not feed wildlife. • Do not allow dogs to be at large and harass wildlife. • Minimize activity in and near identified high-use areas (seasonal closures might be necessary). • Stay at distances sufficient to prevent changes to the behaviour of animals (at least 500 m in open areas is the default for large mammals). • Follow recommendations of Recovery Implementation Groups for Mountain Caribou. 	<ul style="list-style-type: none"> • Encounter frequency. • Proportion of encounters resulting in an alarm response. • Population abundance and distribution trends of subpopulations. 	<ul style="list-style-type: none"> • No increase in rate of alarm responses over time caused by motorized activities. • No harassment caused by motorized activities. • No abandonment of current range caused by motorized activities.

Motorized > Alpine/Tundra, Forest, and Grasslands > Snow-free

- The following results, desired behaviours, indicators, and limits apply in addition to any relevant policies or regulations; for example, area-based closures and existing statutes.
- Concerns are ranked according to the potential risk to wildlife and their habitats, where "potential" is defined as the probability that the activity will result in either the alteration or destruction of habitat, or the temporary or permanent abandonment of habitat, in the absence of guidelines or statutes.
- "Motorized vehicles" are those intended for use off public roadways during the snow-free season, including "quads", 4x4 trucks, sport utility vehicles, and trail bikes.
- Guidelines are summarized by:
 - **Results** - What the guidelines are attempting to achieve.
 - **Desired Behaviours** - Actions by users that are most likely to achieve the specified results.
 - **Indicators** - What should be measured to determine if the specified results are being achieved.
 - **Limits** - Acceptable bounds related to the measured indicator.
- Results and Desired Behaviours are identified for low-risk issues.
- Results, Desired Behaviours, Indicators and Limits are identified for high-risk issues.
- NOTE: These guidelines have been produced as a means of ensuring that environmental values and tourism recreational activities can co-exist on the landscape. Tourism operators may find these guidelines useful and may choose to adopt them. However, if the licensee chooses to use a different strategy, and it is accepted by government, the licensee must undertake an effectiveness monitoring program. The Tenure Management Plan must reflect a commitment to the monitoring program, and opportunities to partner with government may be explored.
- **Safety remains the first priority under all circumstances.**



1. Degradation of Soil, Air, and Water Quality

Concern: Air pollution

Results	Desired Behaviours
<ul style="list-style-type: none"> • Minimize air pollution. 	<ul style="list-style-type: none"> • Use low-emission engines (e.g., 4-stroke or efficient 2-stroke). • Keep engines well tuned. • Avoid idling.

Concern: Water pollution

Results	Desired Behaviours
<ul style="list-style-type: none"> Avoid water pollution. 	<ul style="list-style-type: none"> Pack out all garbage. Use existing facilities for human waste, pack it out, or bury it in holes 10 to 15 cm deep located at least 100 m from water sources (use group latrines at least 30 cm deep for parties of more than 4 persons). Use existing bridges and structures to cross streams, or cross at right angles away from spawning areas where the substrate particle size is cobble or larger or bedrock. Minimize use of pesticides and herbicides near waterways.

Concern: Fuel spills

Results	Desired Behaviours
<ul style="list-style-type: none"> Avoid fuel spills. 	<ul style="list-style-type: none"> Observe all refuelling regulations. Carry fuel-spill kits for refuelling at remote caches. Cache fuel at least 10 m from the high-water mark of water courses.

Concern: Soil compaction and erosion

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> Minimize soil compaction off established trails. Minimize erosion associated with trails. 	<ul style="list-style-type: none"> Use existing roads and wide trails. Avoid widening existing trails. Ride single file. Avoid poorly placed trails (e.g., steep grades with soft substrates). Avoid off-trail muddy conditions. Use rock and gravel trails where possible. Avoid traveling on existing trails that show evidence of erosion. Obey all signs and area closures. 	<ul style="list-style-type: none"> Existing path widths. Trail braiding. Evidence of erosion associated with existing trails. 	<ul style="list-style-type: none"> No net increase in trail density caused by motorized vehicles. No net increase in existing trail widths caused by motorized vehicles. No erosion near waterways or in sensitive sites caused by motorized vehicles.

Concern: Bank erosion and siltation

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Protect living and non-living substrates. • Minimize bank erosion. 	<ul style="list-style-type: none"> • Use existing bridges and structures to cross streams, or cross at right angles away from spawning areas where the substrate particle size is cobble or larger including bedrock. • Avoid trails close to waterways. 	<ul style="list-style-type: none"> • Trail use near waterways. • Evidence of siltation near crossings. 	<ul style="list-style-type: none"> • No net increase in trails near waterways or waterway crossings caused by motorized vehicles. • No evidence of persistent siltation near or downstream of crossings caused by motorized vehicles.

2. Integrity of Vegetation Communities

Concern: Invasive species

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Minimize spread of invasive plant species (weeds). 	<ul style="list-style-type: none"> • Use existing trails where possible. • Learn to identify invasive plants (see www.weedsbc.ca). • Inspect clothing, equipment, vehicles, and pets for plant parts before and after activity. • Incinerate or bag and dispose of collected plant parts. • Obey all signs and area closures. • Leave gates as you found them. • Restrict use of areas with invasive plants to times of year when spread is unlikely (i.e., The period from flowering through seed dispersal). • Invasive plants should generally be cut at the ground if pulling is likely to result in dispersal of seed. • Pack-in invasive plant-free feed for pack animals. • Avoid grazing animals in infested areas. 	<ul style="list-style-type: none"> • Extent and frequency of invasive species occurrence within 5 m of existing trails 	<ul style="list-style-type: none"> • No net increase in invasive species stem densities caused by motorized vehicles. • No net increase in spatial extent of current infestations caused by motorized vehicles.

Concern: Soil compaction

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> Protect vegetative cover and root systems. 	<ul style="list-style-type: none"> Use existing roads and wide trails where they exist. Avoid widening existing trails. Avoid off-trail muddy conditions. Use rock and gravel trails where possible. Obey all signs and area closures. Avoid traveling on existing trails that show evidence of erosion. With the exception of invasive plants, do not pick or pull vegetation. Do not bury garbage, pack it out. 	<ul style="list-style-type: none"> Existing path widths. Trail braiding. 	<ul style="list-style-type: none"> No net increase in trail density caused by motorized vehicles. No net increase in existing trail widths caused by motorized vehicles.



Concern: Damage to sensitive sites

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Protect habitats of endangered wildlife species and ecosystems. • Protect sensitive ecosystems (grasslands, alpine/tundra and moist-soil ecosystems such as riparian areas and wetlands). • Protect nesting/calving sites. 	<ul style="list-style-type: none"> • Learn to identify endangered species and ecosystems within the operating area. • Operate in a manner that is consistent with government's approved approach to recovery planning for species at risk. • Use existing roads and wide trails. • Avoid riding when conditions are muddy. • Use rock and gravel trails where possible. • Obey all signs and area closures. • Do not break or trample vegetation in riparian areas. • Avoid known nesting/calving sites (seasonal closures might be necessary). • Do not damage wildlife trees. 	<ul style="list-style-type: none"> • Damage to sensitive sites. • Damage to vegetated alpine/tundra and grasslands beyond existing trail network. 	<ul style="list-style-type: none"> • No vegetation damage in sensitive sites or vegetated alpine/tundra and grasslands beyond existing trails caused by motorized vehicles.

3. Direct Disturbance of Wildlife

Concerns: Physiological and behavioural disruption, displacement from preferred habitats; direct mortality, habituation/sensitization

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Minimize physiological and behavioural disruption. • Minimize changes in habitat use. 	<ul style="list-style-type: none"> • Record wildlife encounters, actions taken and responses of animals. • Remain on established trails. • Obey all signs and area closures. • Do not harass wildlife. • Do not feed wildlife. • Do not handle wildlife. • Do not allow dogs to be at large and harass wildlife. • Pack out all garbage. • Yield to wildlife on trails and roads. • Turn off engine, remain on machine and yield to wildlife on trails and roads. • Focus activities in areas and times of year when wildlife are least likely to be disturbed (seasonal closures might be necessary). • Stay at distances sufficient to prevent changes to the behaviour of animals (at least 500 m in open areas is the default for large mammals). 	<ul style="list-style-type: none"> • Proportion of encounters resulting in an alarm response (movement by animals, usually to safer locations). • Population abundance and distribution trends of wildlife species. 	<ul style="list-style-type: none"> • No increase in rate of alarm responses over time caused by motorized vehicles. • No harassment caused by motorized vehicles. • No abandonment of habitats caused by motorized vehicles.

4. Integrity of Fisheries Resources

Concern: Damage to fish populations and habitats

Results	Desired Behaviours
<ul style="list-style-type: none"> Protect fish populations and habitat. 	<ul style="list-style-type: none"> Do not move live fish or other aquatic life. Do not harm spawning or rearing habitats (see www.env.gov.bc.ca/wld/fishhabitats/learn.html) by crossing or otherwise disturbing streams in these areas. Obey all signs and area closures. Obey all fisheries regulations (see www.env.gov.b.ca/fw/fish/regulations/synopsis.html). Follow desired behaviours related to water quality.

5. Special Management

Concern: Mountain Caribou

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> Minimize physiological or behavioural disruption of Mountain Caribou. Continued occupation of existing range by Mountain Caribou. Ensure that ATV activities are not a barrier to Mountain Caribou population or range recovery. 	<ul style="list-style-type: none"> Record wildlife encounters, actions taken and responses of animals. Remain on established trails. Obey all signs and area closures. Do not harass wildlife. Do not feed wildlife. Control dogs at all times. Minimize activity in and near identified high-use areas (seasonal closures might be necessary). Stay at distances sufficient to prevent changes to the behaviour of animals (at least 500 m in open areas is the default for large mammals). Follow recommendations of recovery planning for Mountain Caribou. 	<ul style="list-style-type: none"> Encounter frequency. Proportion of encounters resulting in an alarm response. Population abundance and distribution trends of subpopulations. 	<ul style="list-style-type: none"> No increase in rate of alarm responses over time caused by motorized vehicles. No purposeful harassment caused by motorized vehicles. No abandonment of habitats caused by motorized vehicles.

Concern: Calving areas, nesting sites

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Minimize physiological or behavioural disruption of wildlife during critical calving/ nesting periods. • Continued occupation by wildlife of critical calving/nesting habitat. 	<ul style="list-style-type: none"> • Remain on established trails. • Obey all signs and area closures. • Do not harass wildlife. • Do not feed wildlife. • Control dogs at all times. • Minimize activity in and near known calving/nesting areas (seasonal closures might be necessary). • Stay at distances sufficient to prevent changes to the behaviour of animals (at least 500 m in open areas is the default for large mammals). 	<ul style="list-style-type: none"> • Continued occupancy of calving/ nesting habitats. 	<ul style="list-style-type: none"> • No purposeful harassment caused by motorized vehicles. • Continued occupancy of known calving/ nesting habitats.

6. Additional Information

Best Management Practices for Recreational Activities on Grasslands in the Thompson and Okanagan Basins (http://www.env.gov.bc.ca/wld/documents/bmp/grasslands_th_ok_bmp.pdf)

Grasslands Conservation Council of British Columbia
(www.bcgrasslands.org/grasslands/understandinggrasslands.htm)

Non-motorized > Alpine/Tundra, Forest and Grasslands > Winter

- The following results, desired behaviours, indicators, and limits apply in addition to any relevant policies or regulations; for example, area-based closures and existing statutes.
- Concerns are ranked according to the potential risk to wildlife and their habitats, where “potential” is defined as the probability that the activity will result in either the alteration or destruction of habitat, or the temporary (on a scale of days or longer) or permanent abandonment of habitat, in the absence of guidelines or statutes.
- “Non-motorized activities” are defined as skiing, snowshoeing, or other non-motorized methods of travelling on snow in the backcountry.
- Guidelines are summarized by:
 - **Results** – What the guidelines are attempting to achieve.
 - **Desired Behaviours** – Actions by users that are most likely to achieve the specified results.
 - **Indicators** – What should be measured to determine if the specified results are being achieved.
 - **Limits** – Acceptable bounds related to the measured indicator.
- Results and Desired Behaviours are identified for low-risk issues.
- Results, Desired Behaviours, Indicators, and Limits are identified for high-risk issues.
- NOTE: These guidelines have been produced as a means of ensuring that environmental values and tourism recreational activities can co-exist on the landscape. Tourism operators may find these guidelines useful and choose to adopt them. However, if a licensee chooses to use a different strategy, and it is accepted by government, the licensee must undertake an effectiveness monitoring program. The Tenure Management Plan must reflect a commitment to the monitoring program, and opportunities to partner with government may be explored.
- **Safety remains the first priority under all circumstances.**

1. Degradation of Soil, Air, and Water Quality

Concern: Water pollution

Results	Desired Behaviours
<ul style="list-style-type: none"> • Avoid water pollution. 	<ul style="list-style-type: none"> • Pack out all garbage. • Use existing facilities for human waste, pack it out, or bury it in deep snow at least 100 m from water sources.

Concern: Soil compaction and erosion

Results	Desired Behaviours
<ul style="list-style-type: none"> • Minimize soil compaction and erosion. 	<ul style="list-style-type: none"> • Avoid travel and camping on shallow snow packs when the ground is not frozen. • Minimize campfires.

2. Integrity of Vegetation Communities

Concern: Damage to sensitive sites

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Protect habitats of endangered wildlife species and ecosystems. • Protect nesting/calving sites. 	<ul style="list-style-type: none"> • Learn to identify endangered species and ecosystems within the operating area. • Operate in a manner that is consistent with government's approved approach to recovery planning for species at risk. • Obey all signs and area closures. • Avoid known nesting/calving sites (seasonal closures might be necessary). • Do not damage wildlife trees. 	<ul style="list-style-type: none"> • Damage to <u>sensitive sites</u>. 	<ul style="list-style-type: none"> • No vegetation damage in sensitive sites or vegetated alpine/tundra and grasslands beyond existing trails caused by non-motorized activities.



3. Direct Disturbance of Wildlife

Concerns: Physiological and behavioural disruption, displacement from preferred habitats; direct mortality, habituation/sensitization

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Minimize physiological and behavioural disruption. • Minimize changes in habitat use resulting from activities. 	<ul style="list-style-type: none"> • Record wildlife encounters, actions taken and responses of animals. • Remain on established trails where they exist. • Obey all signs and area closures. • Do not harass wildlife. • Do not feed wildlife. • Do not handle wildlife. • Do not allow dogs to be at large and harass wildlife. • Pack out all garbage. • Yield to wildlife on trails and roads. • Focus activities in areas and at times of the year when wildlife are least likely to be disturbed (seasonal closures might be necessary). • Remain still or retreat when animals are encountered and react to your presence. • Stay at distances sufficient to prevent changes to the behaviour of animals (at least 100 m in open areas is the default for large mammals). 	<ul style="list-style-type: none"> • Proportion of encounters resulting in an alarm response. • Population abundance and distribution trends of wildlife species. 	<ul style="list-style-type: none"> • No increase in rate of alarm responses over time caused by non-motorized activities. • No harassment caused by non-motorized activities. • No abandonment of habitats caused by non-motorized activities.

4. Integrity of Fisheries Resources

Concern: Damage to fish populations and habitats

Results	Desired Behaviours
<ul style="list-style-type: none"> Protect fish populations and habitats. 	<ul style="list-style-type: none"> Do not move live fish or other aquatic life. Do not harm spawning or rearing habitats by crossing or otherwise disturbing streams in these areas. Obey all signs and area closures. Obey all fisheries regulations. Follow desired behaviours related to water quality.

5. Special Management

Concern: Grizzly Bear and Wolverine dens

Results	Desired Behaviours
<ul style="list-style-type: none"> Protect den sites. 	<ul style="list-style-type: none"> Remain at distances sufficient to avoid disturbing Grizzly Bears and Wolverines in known den sites, at least 100 m is the default (seasonal closures might be necessary).

Concern: Ungulate winter ranges

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> Minimize physiological or behavioural disruption of ungulates on winter ranges. Continued occupation of ungulate winter ranges. 	<ul style="list-style-type: none"> Remain on established trails where they exist. Obey all signs and area closures. Do not harass wildlife. Do not feed wildlife. Do not allow dogs to be at large and harass wildlife. Minimize activity in and near identified ungulate winter ranges (seasonal closures might be necessary). Stay at distances sufficient to prevent changes to the behaviour of animals (at least 100 m in open areas is the default). 	<ul style="list-style-type: none"> Continued occupancy of ungulate winter ranges. 	<ul style="list-style-type: none"> No harassment caused by non-motorized activities. No abandonment of ungulate winter ranges caused by non-motorized activities.

Concern: Mountain Caribou

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Minimize physiological or behavioural disruption of Mountain Caribou. • Continued occupation of existing range by Mountain Caribou. • Ensure that non-motorized activities are not a barrier to Mountain Caribou population recovery. 	<ul style="list-style-type: none"> • Record encounters with caribou, and actions taken, and responses of animals. • Remain on established trails. • Obey all signs and area closures. • Do not harass wildlife. • Do not feed wildlife. • Do not allow dogs to be at large and harass wildlife. • Minimize activity in and near identified high-use areas (seasonal closures might be necessary). • Stay at distances sufficient to prevent changes to the behaviour of animals (at least 100 m in open areas is the default for large mammals). • Follow recommendations of Recovery Implementation Groups for Mountain Caribou. 	<ul style="list-style-type: none"> • Encounter frequency. • Proportion of encounters resulting in an alarm response. • Population abundance and distribution trends of subpopulations. 	<ul style="list-style-type: none"> • No increase in rate of alarm responses over time caused by non-motorized activities. • No harassment caused by non-motorized activities. • No abandonment of current range caused by non-motorized activities.

6. Additional Information

Best Management Practices for Recreational Activities on Grasslands in the Thompson and Okanagan Basins (http://www.env.gov.bc.ca/wld/documents/bmp/grasslands_th_ok_bmp.pdf)

Leave No Trace (<http://www.lnt.org/main.htm>)

Outdoor Recreation Council of BC Safety and Information Brochures (http://www.orcbc.ca/research_pub.htm)

Non-motorized > Alpine/Tundra, Forest, and Grasslands > Snow-free

- The following results, desired behaviours, indicators, and limits apply in addition to any relevant policies or regulations; for example, area-based closures and existing statutes.

- Concerns are ranked according to the potential risk to wildlife and their habitats, where “potential” is defined as the probability that the activity will result in either the alteration or destruction of habitat, or the temporary or permanent abandonment of habitat, in the absence of guidelines or statutes.
- Non-motorized activities are defined as hiking, mountain-biking, horse-back riding, camping, caving, climbing or other non-motorized recreational activities in the backcountry that occurs during the snow-free season.
- Guidelines are summarized by:
 - **Results** – What the guidelines are attempting to achieve.
 - **Desired Behaviours** – Actions by users that are most likely to achieve the specified results.
 - **Indicators** – What should be measured to determine if the specified results are being achieved.
 - **Limits** – Acceptable bounds related to the measured indicator.
- Results and Desired Behaviours are identified for low-risk issues.
- Results, Desired Behaviours, Indicators and Limits are identified for high-risk issues.
- NOTE: These guidelines have been produced as a means of ensuring that environmental values and tourism recreational activities can co-exist on the landscape. Tourism operators may find these guidelines useful and choose to adopt them. However, if a licensee chooses to use a different strategy, and it is accepted by government, the licensee must undertake an effectiveness monitoring program. The Tenure Management Plan must reflect a commitment to the monitoring program, and opportunities to partner with government may be explored.
- **Safety remains the first priority under all circumstances.**

1. Degradation of Soil, Air, and Water Quality

Concern: Water pollution

Results	Desired Behaviours
<ul style="list-style-type: none"> • Avoid water pollution. 	<ul style="list-style-type: none"> • Pack out all garbage. • Use existing facilities for human waste, pack it out, or bury it in holes 10 to 15 cm deep located at least 100 m from water sources (use group latrines minimum 30 cm deep for parties of more than 4 persons). • Use existing bridges and structures to cross streams, or cross at right angles away from spawning areas where the substrate particle size is cobble or larger, including bedrock. • Minimize use of pesticides and herbicides near waterways. • Use biodegradable cleaning products.

Concern: Soil compaction and erosion

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Minimize soil compaction off established trails. • Minimize erosion associated with trails. 	<ul style="list-style-type: none"> • Use existing roads and trails where they exist. • Avoid travelling on existing trails that show evidence of erosion. • Avoid widening existing trails. • Use rock and gravel trails where possible. • Avoid poorly placed trails (e.g., steep grades with soft substrates). • Where no trails exist, travel on rock or other durable surfaces or disperse use and avoid areas where impacts are evident. • Avoid off-trail muddy conditions. • Obey all signs and area closures. • Use designated campsites and/or existing intensive-use sites where they exist, or use rock or durable surfaces for camping. • Minimize campfires and use only established fire rings. 	<ul style="list-style-type: none"> • Existing path widths. • Trail braiding. • Evidence of erosion associated with existing trails. 	<ul style="list-style-type: none"> • No net increase in trail density caused by non-motorized activities. • No net increase in existing trail widths caused by non-motorized activities. • No erosion near waterways or in sensitive sites caused by non-motorized activities.

Concern: Bank erosion and siltation

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Protect living and non-living substrates. • Minimize bank erosion. 	<ul style="list-style-type: none"> • Use existing bridges and structures to cross streams, or cross at right angles away from spawning areas where the substrate is particle size is cobble or larger or bedrock. • Avoid existing trails that parallel streams and those that show evidence of erosion. 	<ul style="list-style-type: none"> • Trail use near waterways. • Evidence of siltation near crossings. 	<ul style="list-style-type: none"> • No net increase in trails near waterways or waterway crossings caused by non-motorized activities. • No evidence of persistent siltation near or downstream of crossings caused by non-motorized activities.



2. Integrity of Vegetation Communities

Concern: Invasive species

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> Minimize spread of invasive plant species (weeds). 	<ul style="list-style-type: none"> Use existing trails where possible. Learn to identify invasive plants. Inspect clothing, equipment, pack animals and pets for plant parts before and after activity. Incinerate or bag and dispose of collected plant parts. Obey all signs and area closures. Leave gates as you found them. Restrict use of areas with invasive plants to times of the year when spread is unlikely (i.e., the period from flowering to seed dispersal). Invasive plants should generally be cut at the ground rather than pulled if pulling is likely to result in dispersal of seed. Pack-in invasive-plant-free feed for pack animals. Avoid grazing animals in infested areas. 	<ul style="list-style-type: none"> Extent and frequency of invasive species occurrence within 5 m of existing trails. 	<ul style="list-style-type: none"> No net increase in invasive species stem densities caused by non-motorized activities. No net increase in spatial extent of current infestations caused by non-motorized activities.

Concern: Soil compaction

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Protect vegetative cover and root systems. 	<ul style="list-style-type: none"> • Use existing roads and wide trails where they exist. • Avoid widening existing trails. • Avoid off-trail muddy conditions • Use rock and gravel trails where possible. • Avoid travelling on existing trails that show evidence of erosion. • Obey all signs and area closures. • Use designated campsites and/or existing intensive-use sites where they exist, or use rock or durable surfaces for camping. • Minimize campfires and use only established fire rings. • With the exception of invasive plants, do not pick or pull vegetation. • Do not bury garbage, pack it out. 	<ul style="list-style-type: none"> • Existing path widths. • Trail braiding. 	<ul style="list-style-type: none"> • No net increase in trail density caused by non-motorized activities. • No net increase in existing trail widths caused by non-motorized activities.

Concern: Damage to sensitive sites

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Protect habitats of endangered wildlife species and ecosystems. • Protect sensitive ecosystems (grasslands, alpine/tundra, and moist-soil ecosystems such as riparian areas and wetlands). • Protect nesting/calving sites. 	<ul style="list-style-type: none"> • Learn to identify endangered species and ecosystems within the operating area. • Operate in a manner that is consistent with government's approved approach to recovery planning for species at risk. • Use existing roads and trails. • Avoid muddy conditions. • Use rock and gravel trails where possible. • Obey all signs and area closures. • Do not break or trample vegetation in riparian areas. • Avoid known nesting/calving sites (seasonal closures might be necessary). • Do not damage wildlife trees. 	<ul style="list-style-type: none"> • Damage to sensitive sites. • Damage to vegetated alpine/tundra and grasslands beyond existing trail network. 	<ul style="list-style-type: none"> • No vegetation damage in sensitive sites or vegetated alpine/tundra and grasslands beyond existing trails caused by non-motorized activities.

3. Direct Disturbance of Wildlife

Concerns: Physiological and behavioural disruption, displacement from preferred habitats; direct mortality, habituation/sensitization

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Minimize physiological and behavioural disruption. • Minimize changes in habitat use resulting from activities. 	<ul style="list-style-type: none"> • Record wildlife encounters, actions taken, and responses of animals. • Remain on established trails where they exist. • Obey all signs and area closures. • Do not harass wildlife. • Do not feed wildlife. • Do not handle wildlife. • Do not allow dogs to be at large and harass wildlife. • Pack out all garbage. • Yield to wildlife on trails and roads. • Focus activities in areas and at times of the year when wildlife are least likely to be disturbed (seasonal closures might be necessary). • Remain still or retreat when animals are encountered and react to your presence. • Stay at distances sufficient to prevent changes to the behaviour of animals (at least 100 m in open areas is the default for large mammals). 	<ul style="list-style-type: none"> • Proportion of encounters resulting in an alarm response (movement by animals, usually to safer locations). • Population abundance and distribution trends of wildlife species. 	<ul style="list-style-type: none"> • No increase in rate of alarm responses over time caused by non-motorized activities. • No harassment caused by non-motorized activities. • No abandonment of habitats caused by non-motorized activities.

4. Integrity of Fisheries Resources

Concern: Damage to fish populations and habitats

Results	Desired Behaviours
<ul style="list-style-type: none">• Protect fish populations and habitat.	<ul style="list-style-type: none">• Do not move live fish or other aquatic life between water bodies.• Do not harm spawning or rearing habitats by crossing or otherwise disturbing streams in these areas.• Obey all signs and area closures.• Obey all fisheries regulations.• Follow desired behaviours related to water quality.

5. Special Management

Concern: None for this activity.

6. Additional Information

Best Management Practices for Recreational Activities on Grasslands in the Thompson and Okanagan Basins

http://www.env.gov.bc.ca/wld/documents/bmp/grasslands_th_ok_bmp.pdf

Grasslands Conservation Council of British Columbia

www.bcgrasslands.org/grasslands/understandinggrasslands.htm

Leave No Trace

www.lnt.org/main.htm

Outdoor Recreation Council of BC Safety and Information Brochures

www.orcbc.ca/research_pub.htm

British Columbia Speleological Society Caving Codes of Conduct

www.cancaver.ca/bcsf/cavethic.htm

Boating > Freshwater and Foreshore > All Seasons

- The following results, desired behaviours, indicators, and limits apply in addition to any relevant policies or regulations; for example, area-based closures and existing statutes.
- Concerns are ranked according to the potential risk to wildlife and their habitats, where “potential” is defined as the probability that the activity will result in either the alteration or destruction of habitat, or the temporary or permanent abandonment of habitat, in the absence of guidelines or statutes.
- “Boating” is considered any activity using a motorized or non-motorized vessel intended for travel on water in freshwater or near-foreshore habitats.
- Marine activities related to wildlife are governed by federal regulations (www-comm/pac.dfo-mpo.gc.ca/pages/consultations/marinemammals/default_e.htm)
- Guidelines are summarized by:
 - Results – What the guidelines are attempting to achieve.
 - **Desired Behaviours** – Actions by users that are most likely to achieve the specified results.
 - **Indicators** – What should be measured to determine if the specified results are being achieved.
 - **Limits** – Acceptable bounds related to the measured indicator.
- Results and Desired Behaviours are identified for low-risk issues.
- Results, Desired Behaviours, Indicators, and Limits are identified for high-risk issues.
- NOTE: These guidelines have been produced as a means of ensuring that environmental values and tourism recreational activities can co-exist on the landscape. Tourism operators may find these guidelines useful and may choose to adopt them. However, if a licensee chooses to use a different strategy, and it is accepted by government, the licensee must undertake an effectiveness monitoring program. The Tenure Management Plan must reflect the commitment to the monitoring program, and opportunities to partner with government may be explored.
- **Safety remains the first priority under all circumstances.**

1. Degradation of Soil, Air, and Water Quality

Concern: Air Pollution

Results	Desired Behaviours
<ul style="list-style-type: none"> • Minimize air pollution. 	<ul style="list-style-type: none"> • Use low-emission engines (e.g., 4-stroke or efficient 2-stroke gasoline, alternative fuels) or electric motors. • Keep engines well tuned. • Avoid idling.

Concern: Water pollution

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> Avoid water pollution. 	<ul style="list-style-type: none"> Use low-emission engines (e.g., 4-stroke or efficient 2-stroke gasoline, alternative fuels) or electric motors. Keep engines well tuned. Observe all refueling regulations. Carry fuel-spill kits for refueling at remote caches. Refill fuel tanks on shore or in port. Cache fuel at least 10 m from the high-water mark of water courses. Obey all bilge-release regulations. Use a bilge sock. Do not release bilge in or near sensitive sites. Pack out all garbage. Use on-board facilities for solid human waste. Use biodegradable cleaning products. 	<ul style="list-style-type: none"> Water quality. Visible garbage along shorelines. Changes to aquatic communities resulting from water quality changes. 	<ul style="list-style-type: none"> No changes over time in water quality indicators caused by boating activities. No garbage along shorelines caused by boating activities. No changes to aquatic communities caused by boating activities.



Concern: Bank erosion and siltation

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Protect living and non-living substrates. • Minimize bank erosion. 	<ul style="list-style-type: none"> • Follow all posted speed limits • Remain in areas with water deep enough to prevent disturbance to substrate material or aquatic vegetation; 1 m is recommended for propeller-driven craft, 0.5 m for jet-boats. • Approach shorelines slowly and choose hardened surfaces for put-out areas. • Reduce wake in areas where bank erosion is evident. • Observe any anchoring restrictions. • Anchor in sand or mud. • Avoid use of anchors with claws, hooks or sharp blades that can rip vegetation. • Motor in the direction of the anchor when hauling it in. 	<ul style="list-style-type: none"> • Water turbidity • Bank erosion. 	<ul style="list-style-type: none"> • No net change in water turbidity caused by boating activities. • No increase in bank erosion caused by boating activities.

2. Integrity of Vegetation Communities

Concern: Invasive species

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Minimize spread of invasive plant species. 	<ul style="list-style-type: none"> • Learn to identify invasive plants. • Inspect hull, propellers, trailers, clothing, equipment, vehicles, and pets for plant parts before and after boating. • Incinerate or bag and dispose of collected plant parts. • Obey all signs and area closures. 	<ul style="list-style-type: none"> • Presence/absence of invasive species in waterways. 	<ul style="list-style-type: none"> • No spread of invasive plants to new waterways caused by boating activities.

Concern: Physical damage to aquatic plant communities

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Protect aquatic vegetation and root systems. 	<ul style="list-style-type: none"> • Obey all signs and area closures. • Do not pick or pull vegetation. • Follow all posted speed limits. • Remain in areas with water deep enough to prevent disturbance to aquatic vegetation. • Approach shorelines slowly and choose put-out areas carefully to minimized disruption to near-shore vegetation. • Observe any anchoring restrictions. • Anchor in sand or mud. • Use the proper anchor for the substrate. • Motor in the direction of the anchor when hauling it in. 	<ul style="list-style-type: none"> • Damage to rooted vegetation. 	<ul style="list-style-type: none"> • No long-term damage to integrity of aquatic vegetation caused by boating activities.

Concern: Damage to sensitive sites

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Protect habitats of endangered wildlife species and ecosystems. • Protect sensitive ecosystems (moist-soil ecosystems such as riparian area shorelines and wetlands). • Protect nesting sites. 	<ul style="list-style-type: none"> • Learn to identify endangered species and ecosystems within the operating area. • Operate in a manner that is consistent with government's approved approach to recovery planning for species at risk. • Obey all signs and area closures. • Do not break shoreline vegetation. • Avoid known nesting sites (seasonal closures might be necessary). 	<ul style="list-style-type: none"> • Damage to sensitive sites. 	<ul style="list-style-type: none"> • No vegetation damage in sensitive sites caused by boating activities.



3. Direct Disturbance of Wildlife

Concerns: Physiological and behavioural disruption, displacement from preferred habitats; direct mortality, habituation/sensitization

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> • Minimize physiological and behavioural disruption. • Minimize changes in habitat use resulting from activities. 	<ul style="list-style-type: none"> • Record wildlife encounters, actions taken, and responses of animals. • Obey all signs and area closures. • Obey all posted speed limits. • Do not harass wildlife. • Do not feed wildlife. • Do not handle wildlife. • Do not allow dogs to be at large and harass wildlife. • Pack out all garbage. • Focus activities in areas and at times of the year when wildlife are least likely to be disturbed (seasonal closures might be necessary). • Learn to identify species at risk, including their behaviour and habitats that are in areas where you operate. • Turn off engines and remain still, or retreat if possible when animals are encountered and react to your presence. • Stay at distances sufficient to prevent changes to the behaviour of animals (at least 100 m in open areas is the default for large mammals). • Avoid landing vessels where wildlife are encountered along shorelines. 	<ul style="list-style-type: none"> • Proportion of encounters resulting in an alarm response (movement by animals, usually to safer locations). • Population abundance and distribution trends of wildlife species. 	<ul style="list-style-type: none"> • No increase in rate of alarm responses over time caused by boating activities. • No harassment caused by boating activities. • No abandonment of habitats caused by boating activities.

4. Integrity of Fisheries Resources

Concern: Damage to fish populations and habitat

Results	Desired Behaviours
<ul style="list-style-type: none"> Protect fish populations and habitat. 	<ul style="list-style-type: none"> Do not move live fish or other aquatic life between water bodies. Do not harm spawning or rearing habitats by boating in these areas. Obey all signs and area closures. Obey all posted speed limits. Obey all fisheries regulations. Follow desired behaviours related to water quality and integrity of vegetation communities.

5. Special Management

Concern: Harlequin Ducks

Results	Desired Behaviours	Indicators	Limits
<ul style="list-style-type: none"> Avoid changes in bird behaviour or abandonment of sites. Ensure that habitat areas remain useable to the animals. 	<ul style="list-style-type: none"> Attempt to avoid narrow river and stream reaches where Harlequin Ducks have been observed or are known to nest (seasonal closures might be necessary during nesting and brood-rearing; mid-May to end of August). Turn off motors, stop paddling, avoid moving and remain quiet while drifting-by Harlequins are encountered. Maintain as much distance as possible between birds and boats. Allow hens and broods to find hiding places before proceeding, if possible. If Harlequins are encountered, go to the other side of the watercourse. Reduce spacing between boats to avoid prolonged disturbance. If you encounter a hen and brood, "eddy out" to give them time to find security cover. Learn to recognize Harlequin Ducks and places where they may be feeding or resting. 	<ul style="list-style-type: none"> Population abundance and distribution trends of Harlequin Ducks on stream reaches. 	<ul style="list-style-type: none"> No population declines or abandonment of stream reaches caused by boating activities.

6. Additional Information

Commercial Bear Viewing Association of British Columbia (<http://www.bearviewing.ca>)

Frequently Asked Questions

1. WHY were the Guidelines developed?

The guidelines were developed to ensure that recreation activities in the backcountry are conducted in a manner that does not compromise the current distribution of wildlife, the sustainability of their populations, or the integrity of their habitats. These guidelines define results, desired behaviours, indicators, and limits for backcountry activities in relation to wildlife and their habitats.

2. HOW were the Guidelines developed?

A joint government and Commercial Tourism (CT) / Commercial Recreation (CR) sector committee (the Tourism Wildlife Project Team) was tasked with developing a set of guidelines that are results based, informed by science and operational experience, and that meet the legislative and policy needs of government and the sustainability objectives of both government and tourism. Guidelines were developed over an 18-month period in 2004 and 2005, with extensive input from representatives of commercial and public recreation sectors and organizations, and endeavour to:

- address concerns of stakeholders raised after the release of the *Interim Guidelines*;
- provide a context for the guidelines in relation to other legal and policy tools;
- stress a results-based approach based on precautionary defaults and the development of “alternative” operational strategies

3. Are there other Guidelines for these activities?

These guidelines replace the first iteration, which was published in 2002 as the *Interim wildlife guidelines for commercial backcountry recreation in British Columbia*.

4. Who is supposed to use the guidelines?

These guidelines are intended for use by commercial tourism operators tenured under the Land Act when conducting activities on Crown land, including water-based activities. However, it is anticipated that the guidelines will provide useful guidance for **all** backcountry recreational users.

5. Will the Guidelines affect existing Management Plans?

No. The guidelines will not affect approved management plans. However, when the Management Plan (MP) or tenure requires a review, replacement or an amendment (i.e. due to changes in an operation) the CR manager will assess whether wildlife values are adequately addressed in the MP and whether modifications to the MP are necessary to ensure consistency with the revised guidelines.

6. How will compliance be determined?

Compliance will be assessed against the “desired behaviours” or the measures provided in any alternate strategy that is used.

While “Indicators” show what should be measured to determine if “results” are being achieved they may not be appropriate for determining an operator’s level of compliance as there may be factors other than the tenure holder’s actions that are affecting the results.

7. What are the repercussions if I don’t follow the Guidelines?

Once relevant portions of the guidelines are translated into specific commitments in management plans, they become contractual (legal) obligations.

If an operator is acting in a way that is inconsistent with the guidelines contained in a MP they will be required to bring their operation into compliance by modifying their practices or possibly amending their management plans. If there is continued non-compliance or there are serious consequences associated with the non-compliance, it may be necessary to carry out enforcement actions (refer to Ministry of Agriculture and Lands Land Use Policy: *“Fostering Compliance and Enforcement of Compliance”* at www.lwbc.bc.ca/01lwbc/policies/procedures/land/compliance_enforcement.pdf).

8. When am I required to adopt the new Guidelines?

The new guidelines should be employed whenever a new tenure is applied for, or whenever an existing one is renewed, or in some cases, modified.

9. What is an *alternative strategy* to the Guidelines?

If you propose to act in a manner that is different from the desired behaviours in the Guidelines, you must provide an alternative strategy which includes:

- a suite of behaviours designed to achieve the same result; and
- a monitoring and adaptive plan to ensure results are being met.

This alternative strategy must be approved by the statutory decision maker that issues the tenure.

See Page 5 of this document for further information on Alternative Strategies.

10. If I choose to propose an alternative behaviour to one stated in the Guidelines, what is the mechanism for approval?

Any alternative strategy must achieve, as a minimum, the same results and would need to be approved by the statutory decision maker responsible for plan approval. For more information on application and approval processes, see the Ministry of Tourism, Sport and the Arts (MTSA) site for *Adventure Tourism / Commercial Recreation* (www.tsa.gov.bc.ca/resorts_rec/tenure/commercialrecreation/index.htm).

11. How/when are we expected to use qualified professionals, particularly in the context of alternative measures to Guidelines?

When you propose an alternative strategy to the Guidelines, you must have it signed by a qualified professional. This is defined as a competent professional who is a member of a certifying body which has standards of practice and can hold that member accountable. For example, this includes Registered Professional Biologists, Registered Forest Professionals, Registered Professional Agrologists and Registered Professional Engineers and Geoscientists.

12. How will CR managers use these?

Ministry of Tourism, Sport and the Arts (MTSA) staff expect that the Guidelines will form the foundation for addressing wildlife and habitat issues in management plans before a tenure is issued. The Guidelines list the results that need to be achieved to address wildlife values in a management plan. They also list desired behaviours that should achieve those results. However, the Guidelines allow for alternative strategies to achieve those results.

13. What if the Guidelines change?

Government has committed to keeping the Guidelines up-to-date. As we learn more about their effectiveness, or practicality of implementation (partly through on-going partnership with operators), the Guidelines will be revised and improved. **Note:** The onus will be on operators to keep up-to-date on changes in the Guidelines as they affect their operation.

14. What happens when the Guidelines are contrary to the safety of my guests?

Safety is always a priority, but operators should not intentionally put themselves in a situation where they have to choose between compliance and safety. The tenure issuing authority should be notified in this event.

15. What about public users?

The Guidelines are designed to apply to those who hold commercial recreation tenures under the Land Act. Because these desired behaviours are thought to be the best way to address wildlife and habitat issues, public groups and individuals will be encouraged to act in a manner that is consistent with them. It is always expected that the public will comply with statutes and regulations (such as the Fisheries, Water, Wildlife and Environmental Management Acts) which are reflected in the Guidelines.

16. What about facility development?

The Guidelines do not cover the development of facilities. While the requirements/standards for those will be

covered in each management plan, there is a wide range of sources of information and standards available for items such as trails.

17. I am an operator who is following the Guidelines, but I have public recreationists in my tenure area who aren't. As a result, the desired results are not being achieved. What are the repercussions for me?

The Guidelines are designed to focus on achieving results in relation to the operator's activities. In a situation like this, the focus will be on ensuring that the operator is following the desired behaviours. The tenure issuing authority should be notified of these concerns. A public information campaign may be needed.

Definitions

Alarm response is defined as an immediate movement by animals in reaction to an external stimulus, usually to safer locations.

Harass includes worry, exhaust, fatigue, annoy, plague, pester, tease or torment, but does not include the lawful hunting, trapping or capturing of wildlife (from the B.C. *Wildlife Act*).

Sensitive sites include habitats of rare and endangered wildlife species, nesting and other breeding sites, rare plant communities and ecosystems that are easily damaged and/or slow to recover from disturbances, including alpine meadows, grasslands and moist-soil ecosystems such as riparian areas and wetlands.

Ungulates are hoofed animals. Wildlife species include deer, elk, moose, caribou, sheep and goats.

Management Plan refers to a CR management plan. It includes draft management plans and final management plans and means a combination of text and maps that are components of a legal agreement between LWBC and the tenure holder. It consists of descriptions of the specific nature of the CR operation, including the boundaries within which the operation may occur, and the conditions, provisions, restrictions and guidelines for use of Crown land for such an operation.

Tenure document - the formal approval to occupy and use Crown land for a specified purpose. (see www.tsa.gov.bc.ca/resorts_rec/tenure/commercialrecreation/index.htm).

Qualified professional - Registered Forest Professional, Registered Professional Biologist, Registered Professional Agrologist

Blue list – list of ecological communities, and indigenous species and subspecies of special concern (formerly vulnerable) in British Columbia.

Red list – list of ecological communities, and indigenous species and subspecies that are extirpated, endangered or threatened in British Columbia. Red listed species and subspecies have, or are candidates for, official Extirpated, Endangered or Threatened Status in BC. Not all Red-listed taxa will necessarily become formally designated. Placing taxa on these lists flags them as being at risk and requiring investigation.

Yellow list – list of ecological communities and indigenous species which are not at risk in British Columbia.

Defaults

Distances are included in desired behaviours as “defaults.” Defaults are distances that, in the absence of other mitigating actions, should be sufficient to prevent alarm responses by animals. These distances are precautionary and are based on professional interpretation of the scientific and management literature. The defaults may change over time as more information becomes available.

The advantage of default distances is that they are easy to follow and require no additional operational planning. The disadvantage is that they are restrictive and might not be appropriate under all circumstances. Defaults might be overly precautionary or, conversely, insufficient to prevent alarm responses of animals. Operators are expected to respect default approach distances unless an operational strategy is in place. An operational strategy can be based on the guidelines matrix, but should also consider site-specific considerations. The strategy should include the following:

- Desired behaviours designed to achieve the same Results (e.g., minimize physiological and behavioural changes in animals);
- A monitoring plan to determine whether the alternative desired behaviours are achieving Results;
- An adaptive management strategy to adjust behaviours according to the outcomes observed by monitoring.

Operators should engage a qualified professional to help them develop the operational strategy.

What are the Sensitive Species and Habitats in My Area?

Several resources are available to help you determine what sensitive species and habitats exist in your operating area:

1. Contact your local Ministry of Environment office (www.env.gov.bc.ca/main/prgs/regions/htm) for specific questions regarding species at risk and other concerns in your area.
2. Check the list and mapped boundaries of approved ungulate winter ranges (www.env.gov.bc.ca/wld/uwr/index.htm).
3. Check the list and mapped boundaries of Wildlife Habitat Areas (www.env.gov.bc.ca/wld/identified/index.html).
4. Browse the interactive map of fisheries resources information (www.fishwizard.com).
5. Browse the interactive map of known sensitive species and plant community occurrences (www.env.gov.bc.ca/atrisk/ims.htm).
6. Obtain a list of animals, plants, and plant communities at risk for your Forest Region/District using the BC Species and Ecosystem Explorer (www.env.gov.bc.ca/atrisk/toolintro/html). Species are classified as either Red-, Blue- or Yellow-listed (see **Definitions**) and some are considered Identified Wildlife (www.env.gov.bc.ca/wld/identified/htm). Links to reports that provide information on their biology are included in query results.
7. Check available Sensitive Ecosystems Inventories (SEI) (www.env.gov.bc.ca/sei) of rare and fragile ecosystems in your area.
8. Check for species-at-risk recovery planning processes (www.env.gov.bc.ca/wld/recoveryplans/rcvry1.htm) that might be occurring in your area.
9. Review relevant land use plans (<http://ilmbwww.gov.bc.ca/ilmb/index.html>) for your area.

Appendix 1. A Strategy to Manage Recreation in Relation to Wildlife and Habitats.

[Wilson, S., and D. Hamilton. 2005. A Strategy to Manage Backcountry Recreation in Relation to Wildlife and Habitats \(PDF 168KB\)](#)