

Notice of Work Permit Conditions and Operational Guidance for Mineral Exploration Activity in Mountain Caribou Habitat

Purpose/Scope

This document and the development of Notice of Work permit conditions and operational guidance associated with mineral exploration activities is prepared in support of the implementation of Government Actions Regulation Orders (wildlife habitat areas and ungulate winter ranges) for the Mountain Caribou Recovery Plan in British Columbia.

This document is specific to wildlife habitat areas (WHAs): 5-088 to 5-117 (Quesnel Highlands), 8-226 to 8-229 and 8-230 (Okanagan Shuswap), and ungulate winter ranges (UWRs): U-3-004 (Wells Gray Thompson), 3-005 (Revelstoke Shuswap), U-4-010 (Kinbasket), U-4-012 (Southwest Kootenay) U-4-013 (Southeast Kootenay), U-4-014 (Central Kootenay), U-7-003 (Hart Ranges Upper Fraser), U-8-004 (Okanagan Shuswap), U-8-012 (South Monashee).

Identified mountain caribou habitat referenced in this document refers to the no timber harvest zones of the legally designated wildlife habitat areas and ungulate winter ranges established for mountain caribou (Fig. 1). For more detailed maps please see Appendix A.

Although mineral exploration activities are not considered a major factor in disturbance to mountain caribou, the Province of British Columbia is dedicated to fostering environmentally responsible exploration and mining. These permit conditions and operational guidance will be applied to all mineral exploration activities requiring a Notice of Work permit that are undertaken in identified mountain caribou habitat as set out above. In addition, in those areas designated as modified timber harvest in WHAs 5-092 to 5-117 and UWR U-7-003, permit condition #5 applies. Other conditions become operational guidance and should be considered (Fig. 1).

The information in this document provides direction to tenure holders, proponents and statutory decision makers involved in mineral exploration activities in identified mountain caribou habitat. It is intended to cover those activities that are considered by government to be an acceptable risk to caribou and that should be allowed to proceed without requiring an exemption from the Ministry of Environment. Activities exceeding levels outlined in the permit conditions of this document and in the Government Actions Regulation Orders will require an exemption.

The permit conditions and operational guidance in this document will be used by Inspectors from the Ministry of Energy, Mines and Petroleum Resources when they are considering Notice of Work permit applications in identified mountain caribou habitat and will be attached as conditions to approved work permits (Fig. 2).

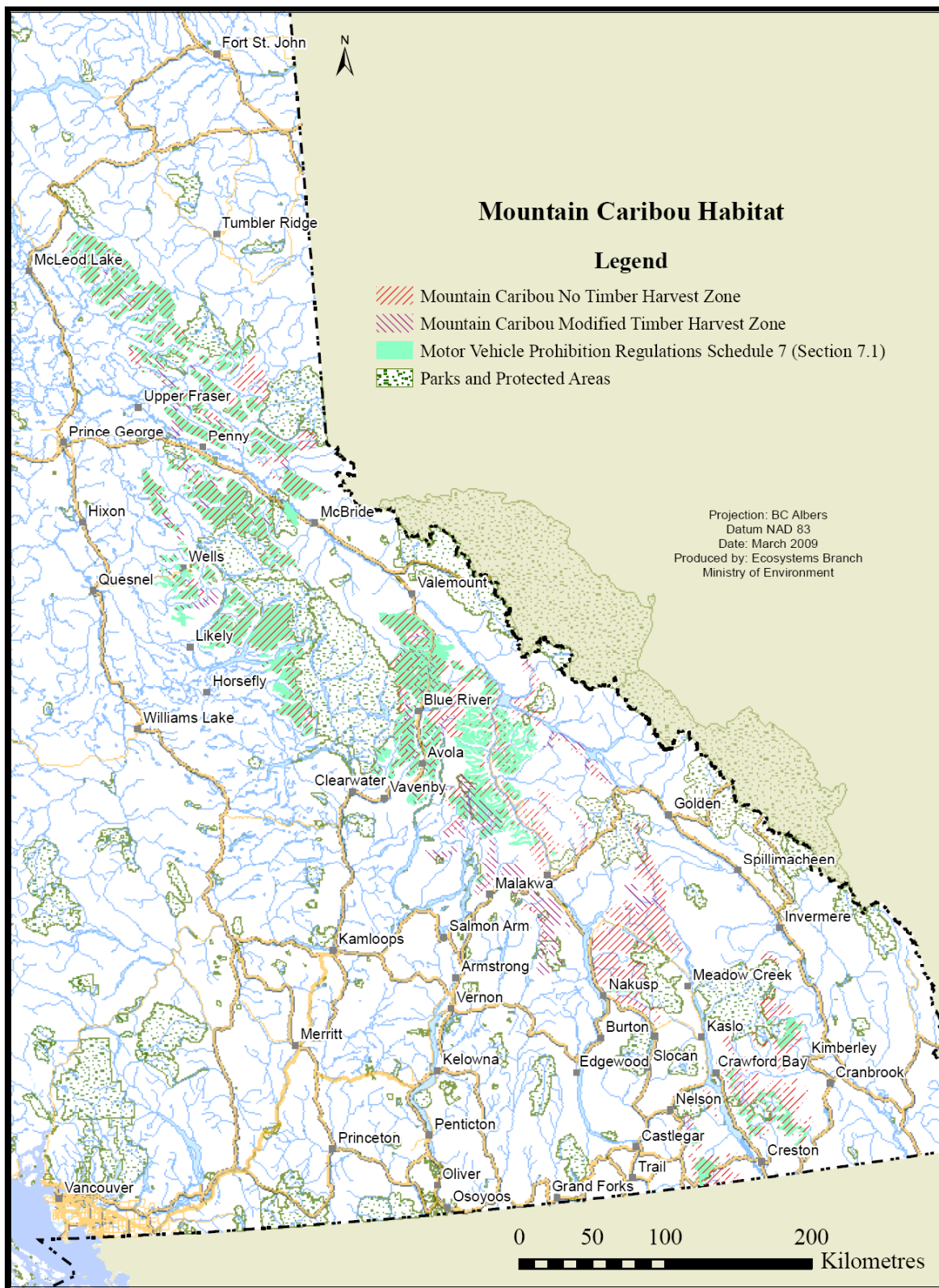
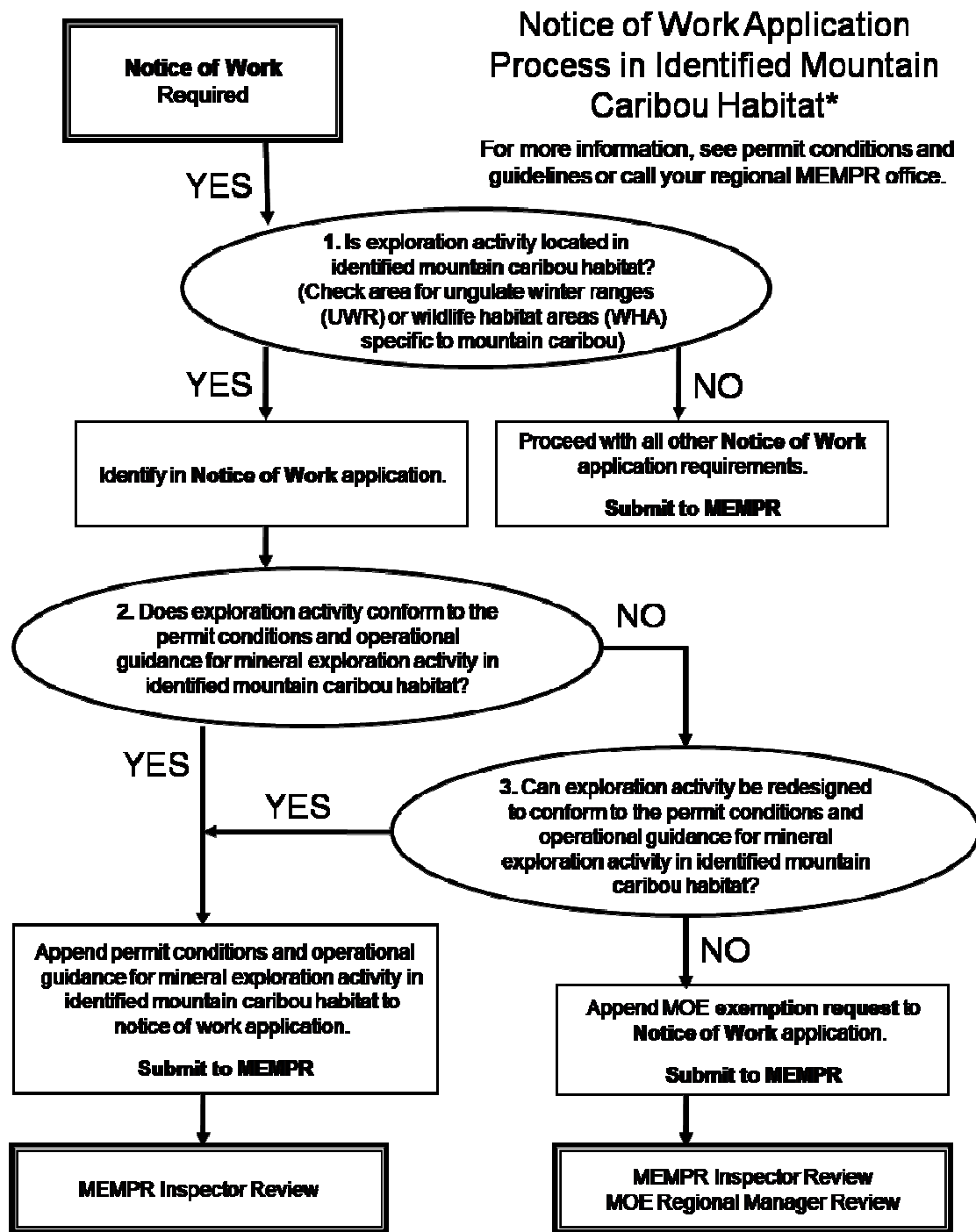


Figure 1. Mountain Caribou habitat showing: the No Timber Harvest Zones and the Modified Timber Harvest Zones. For more detailed maps please see Appendix A.



*For an overview of the complete permitting process, please see the Mine Approval Process in BC:
<http://www.empr.gov.bc.ca/MACR/Investors/Pages/English.aspx>

Figure 2. Flowchart showing the notice of work application process for exploration activities planned in identified mountain caribou habitat.

Guiding Principles

The development of permit conditions and operational guidance associated with mineral exploration activities in identified mountain caribou habitat are science-informed and:

1. Are intended to support mountain caribou recovery;
2. Are specific to mineral exploration; and
3. Are intended to ensure continued safe mineral exploration and development of mines.

Disclaimer

Notwithstanding the provision of these permit conditions and operational guidance, it is the duty of every mine owner, manager and supervisor to comply with all applicable sections of the Mines Act, parts of the Health, Safety and Reclamation Code (the Code), and other relevant legislation and to ensure every facility required for compliance is provided.

Application of these Notice of Work permit conditions and operational guidance should complement good planning and the acceptable execution of the work program, subsequent closure and reclamation of an exploration project.

This document is part of an adaptive management process and may be subject to revisions based on new science, changing conditions, and practical experience gained by explorationists during the application of permit conditions.

Should anything contained in this document appear to be in variance with the Mines Act and the Code, provisions of the Mines Act and the Code will prevail.

Objectives:

1. Minimize impact to identified mountain caribou habitat;
2. Minimize predator and human access to identified mountain caribou habitat; and
3. Minimize disturbance and displacement of mountain caribou from occupied habitat.

Alternative to Notice of Work Permit Conditions – Exemption Request to MOE

Should these permit conditions not be considered practicable or if the proponent believes that the intent will be met through an alternative approach the proponent may seek an exemption. The Ministry of Energy, Mines and Petroleum Resources will be the single window for all exemption applications. Exemptions from general wildlife measures will be administered by the Ministry of Environment Regional Manager. An exemption application form can be obtained from the Ministry of Environment website:

<http://www.env.gov.bc.ca/wld/frpa/index.html>.

An exemption will be considered:

1. Using the mineral exploration guiding principles outlined in this document;
2. With recognition that advanced mineral exploration is a precursor to the regional mine development review and environmental assessment processes; and
3. Where the requirements of the general wildlife measures are not considered practicable given the circumstances or where the intent of the general wildlife measures will be met through an alternative approach.

Applications for exemptions should clearly identify why it is not practicable to meet the permit requirements and what mitigations measures are going to be implemented to minimize impacts to mountain caribou. Where mineral exploration development activities are significant in scale and or impact, the proponent may elect to prepare a written monitoring and mitigation plan for mountain caribou to be submitted as part of the Notice of Work application.

To assist government in adjudicating the Notice of Work permit application, proposals may include a technical rationale developed by an appropriately qualified professional biologist(s) assessing the risk to mountain caribou populations and habitat associated with the proposed activities.

For further information about the exemption process, contact the appropriate Inspector with the Ministry of Energy, Mines and Petroleum Resources.

Notice of Work Permit Conditions:

In identified mountain caribou habitat, and unless authorized by an exemption (with the exception of conditions #9 and #10):

- (1) Exploration activities shall not occur within the peak calving period of May 15th – June 15th.
- (2) Exploration activities shall use existing clearings, trails and roads unless it is not practicable to do so.
- (3) New trails and roads shall not be built in areas identified on the attached map (Appendix B).
- (4) Any necessary tree harvesting shall avoid mature stands (≥ 80 years old) and shall avoid removal of lichen-bearing trees, unless it is not practicable to do so.
- (5) In no case shall an individual forest opening (defined as the total tree harvested area created for the purposes of mineral exploration and mining activity) be greater than 1ha. This does not include forest openings for the purposes of building trails and roads.
- (6) The total of individual forest openings (defined as the total tree harvested area created for the purposes of mineral exploration and mining activity), including those created for the purposes of building trails and roads shall not exceed:
 1. 10 per cent of the mineral cell, **OR**

2. 10 per cent of any defined aggregate of mineral cells up to a maximum of 25 mineral cells.

Note: A mineral cell is defined as the Mineral Titles Online claim acquisition unit and is 16 to 21ha, depending on latitude.

- (7) New trails and roads shall not have a running width greater than 6 m except for the purposes of safety or culvert placement.
- (8) Actions shall be taken on newly constructed or reconstructed trails and roads to restrict access. This will be site-specific and could include, but is not limited to:
 - Use of signage and gates on active trails and open roads where practicable;
 - Use of signage and safe (defined as large and clearly visible), impassable barricades across seasonal or permanently deactivated road surface widths.

Note: For signage templates please see Appendix C.
- (9) If caribou are encountered during exploration activities, avoidance actions shall be taken (using safety precautions) at all times to avoid disturbance and displacement of caribou.
- (10) When flying helicopters or fixed-wing aircraft, a minimum of a 500 m line of sight from caribou shall be maintained at all times.

Operational Guidance:

Factors that influence mountain caribou recovery include habitat changes and the disturbance and displacement of caribou. The following sections provide guidance to augment the permit conditions as set out above.

When operating in mountain caribou habitat, proponents are encouraged to develop a knowledge base for the area-of-interest, including a high level understanding of caribou distribution, caribou habitat value and the spatial relation of these values to the area in which exploration activities are planned.

This should be proportional to the scale of development and should consider gathering information regarding no timber harvest zones, important seasonal ranges, fragmented habitats and high-access areas and habitat linkages between seasonal habitats.

Consultation with a MOE regional biologist or a qualified registered professional (QRP) who is familiar with mountain caribou is encouraged.

A. Habitat Changes

i. Forest Openings

Objective:

1. Minimize impact to identified mountain caribou habitat.

Key Issues of Concern:

- Loss and fragmentation of identified mountain caribou habitat;
- Creation of habitat suitable for other ungulates in caribou areas.

Guidance:

- Forest openings should be located in areas where access and activities will result in the least loss and fragmentation to identified mountain caribou habitat;
- Felling of trees and clearing of vegetation should be limited to the minimum area required to accommodate the planned activity, considering user safety and operational requirements;
- Individual forest openings should not be placed within 100 m of an existing forest opening unless there is no other practicable option. It should be noted that reclamation of mountain caribou habitat takes at least 80-100 years in forested areas;
- Where practicable, reclamation should:
 - Re-establish native vegetation that was present prior to mechanical disturbance where seed is commercially available; OR
 - Establish vegetation that discourages vigorous shrub cover.

ii. New Access Construction

Objective:

2. Minimize predator and human access to identified mountain caribou habitat.

Key Issues of Concern:

- Creating travel corridors for predators;
- Enabling new public access to caribou habitat; in particular winter recreation vehicles.

Guidance:

- Access planning should:
 - Strive to create the minimum permanent trail length practicable through the use of existing main access roads and secondary tote roads;
 - Consider the use of dead-end spur trails and single point access;
 - Aim to create the narrowest access practicable, consistent with safety and traffic needs;
 - Reduce sight-lines through the use of doglegs.
- Signage:
 - Signs should be placed at the junction of a public road or highway and a mineral exploration road or trail warning the public and potential users that no access is permitted.
 - Signs warning potential road or trail users must be posted during deactivation. An example of warning signs may be found in Appendix B.
 - Contact information is recommended on all signage.
- Gates and Barricades:
 - For safety reasons gates must be visible and properly mounted and should not be wires or chains between two posts.
 - Placement of the gate or barricade is key to the effectiveness. Consideration should be given to access point and location along road.

- Large stackable concrete blocks or berms of soil are recommended.
Trenches are not recommended for safety reasons around visibility.

B. Disturbance and Displacement of Caribou

Objective:

3. Minimize disturbance and displacement of mountain caribou from occupied habitat.

Key Issues of Concern:

- Disturbance of caribou during the calving season;
- Disturbance and displacement of caribou and calves.

Guidance:

- In aircraft, use consistent flight paths, preferable in the centre of the valley;
- Use caribou tracks to indicate potential use by caribou in an area;
- If mountain caribou are encountered when operating machinery, do not approach them and minimize disturbance to the animals;
- Caribou shall have the right-of-way on all roads and trails;
- Do not feed, harass or approach any caribou.

Glossary:

Identified mountain caribou habitat: the no timber harvest zones of the legally designated wildlife habitat areas and ungulate winter ranges established for mountain caribou.

Mineral cell: defined as the Mineral Titles Online claim acquisition unit and is 16 to 21ha in size depending on latitude.

Motor Vehicle Prohibition Regulations Section 7.1: Snowmobile closed areas do not apply to a person who uses or operates a snowmobile for a commercial purpose other than hunting or commercial back country recreation in the areas described in Schedule 7 of the regulation.

Individual forest opening: defined as the total tree harvested area created for the purposes of mineral exploration and mining activity.

Open road: A road that is accessible and in a condition that would allow general motorized use. Legislative restrictions on season or type of use may apply.

Reconstructed road: A pre-existing inactive or de-activated road or trail that has been modified or reconstructed in a manner that would accommodate motorized use.

Tree harvesting: Tree cutting for the purposes of mineral exploration and mining activity that requires a work permit.

Ungulate: hoofed mammals such as deer, elk moose and caribou.

Additional Resources:

Field guide and user handbook for arboreal lichen identification (including photos) can be found on the Ministry of Forests and Range website at:

User's Guide: <http://www.for.gov.bc.ca/hfd/pubs/Docs/Lmh/Lmh43.htm>

Field Guide: <http://www.for.gov.bc.ca/hfd/pubs/Docs/Fgi/Fgi07.htm>

The MX Code is available on the Ministry of Energy, Mines and Petroleum Resources' website at: <http://www.empr.gov.bc.ca/Mining/Pages/default.aspx>

The Health, Safety and Reclamation Code is available on the Energy, Mines and Petroleum Resources' website at: <http://www.empr.gov.bc.ca/Mining/Pages/default.aspx>

The Handbook for Mineral and Coal Exploration in British Columbia is available on the Ministry of Energy, Mines and Petroleum Resources' website at:
<http://www.empr.gov.bc.ca/Mining/Exploration/Pages/Handbook.aspx>

The Mountain Caribou Recovery Plan and associated documentation is available on the Species at Risk Coordination Office website at:
<http://www.env.gov.bc.ca/sarco/mc/index.html>

General Wildlife Measures for the following wildlife habitat areas (WHAs): 5-088 to 5-117 (Quesnel Highlands), 8-226 to 8-229 and 8-230 (Okanagan Shuswap), and ungulate winter ranges (UWRs): U-3-004 (Wells Gray Thompson), 3-005 (Revelstoke Shuswap), U-4-010 (Kinbasket), U-4-012 (Southwest Kootenay) U-4-013 (Southeast Kootenay), U-4-014 (Central Kootenay), U-7-003 (Hart Ranges Upper Fraser), U-8-004 (Okanagan Shuswap), U-8-012 (South Monashee) can be found on the Ministry of Environment website at:

WHA: http://www.env.gov.bc.ca/cgi-bin/apps/faw/wharesult.cgi?search=show_approved

UWR: http://www.env.gov.bc.ca/wld/frpa/uwr/approved_uwr.html

Appendix A: Mountain Caribou Habitat Maps

List of available maps on the website <http://empr.gov.bc.ca/Mining/Permitting-Reclamation/ApplicationForms>:

Provincial Area:	UWRs_WHAs_MC_Habitat_Dsize.jpg
Quesnel Highlands:	amended_5_088_to_5_117.jpg
Okanagan Shuswap:	whas_8_226_to_8_230.jpg
Wells Gray Thompson:	uwr_3_004.jpg
Revelstoke Shuswap:	uwr_3_005.jpg
Kinbasket:	uwr_4_010.jpg
Southwest Kootenay:	uwr_4_012.jpg
Southeast Kootenay:	uwr_4_013.jpg
Central Kootenay:	uwr_4_014.jpg
Hart Ranges Upper Fraser:	uwr_7_003.jpg
Okanagan Shuswap:	uwr_8_004.jpg
South Monashee:	uwr_8_012.jpg

Appendix B: Areas Requiring an Exemption for New Trail and Road Building

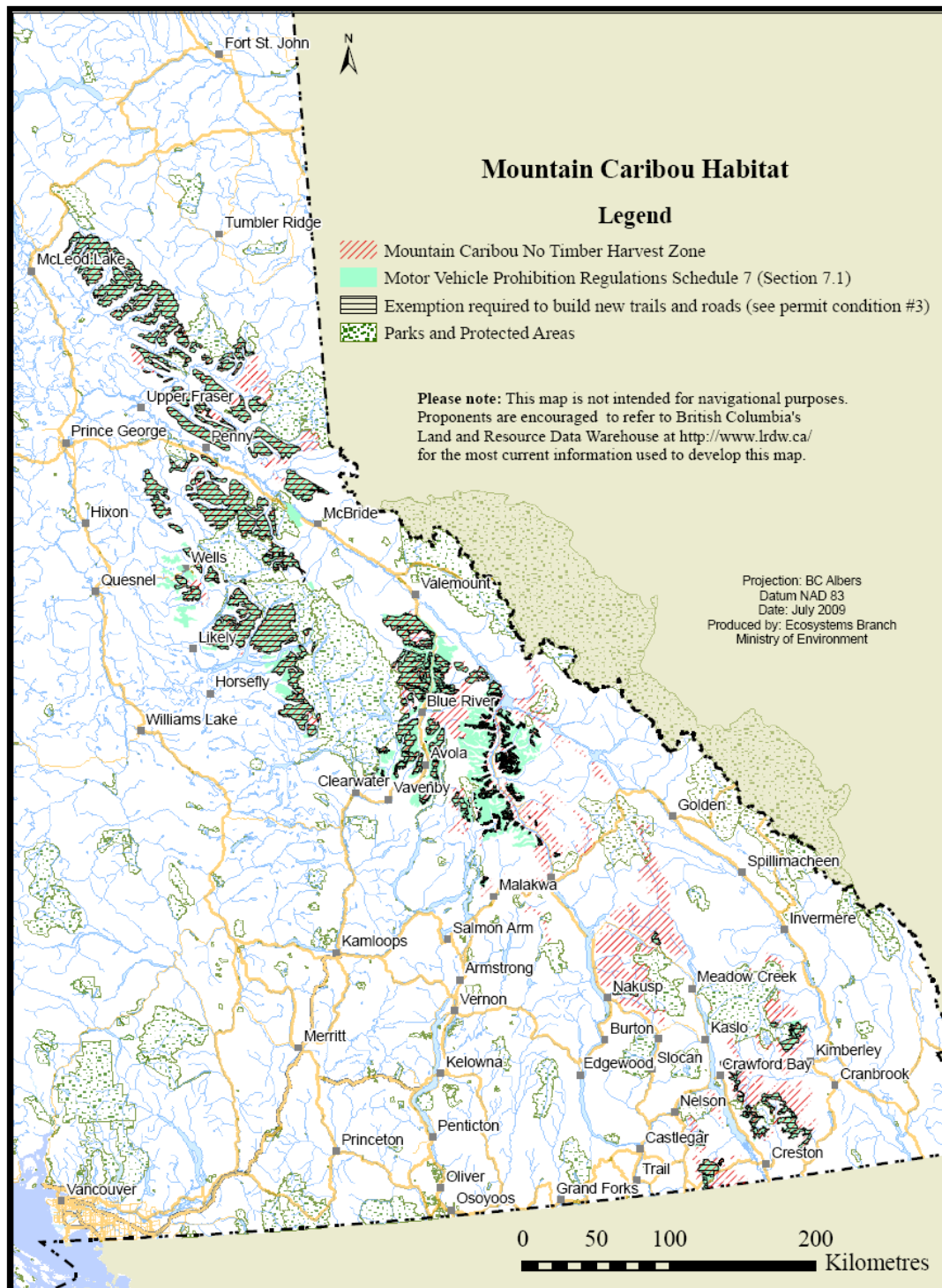


Figure 3. Map showing the areas requiring an exemption from MOE for new trail and road building (see permit condition #3). Permit condition #3 applies to those areas where the “No timber harvest” polygon and the “Motor Vehicle Prohibition Regulations Schedule 7 (Section 7.1)” overlap. See Fig. 4 for more detail.

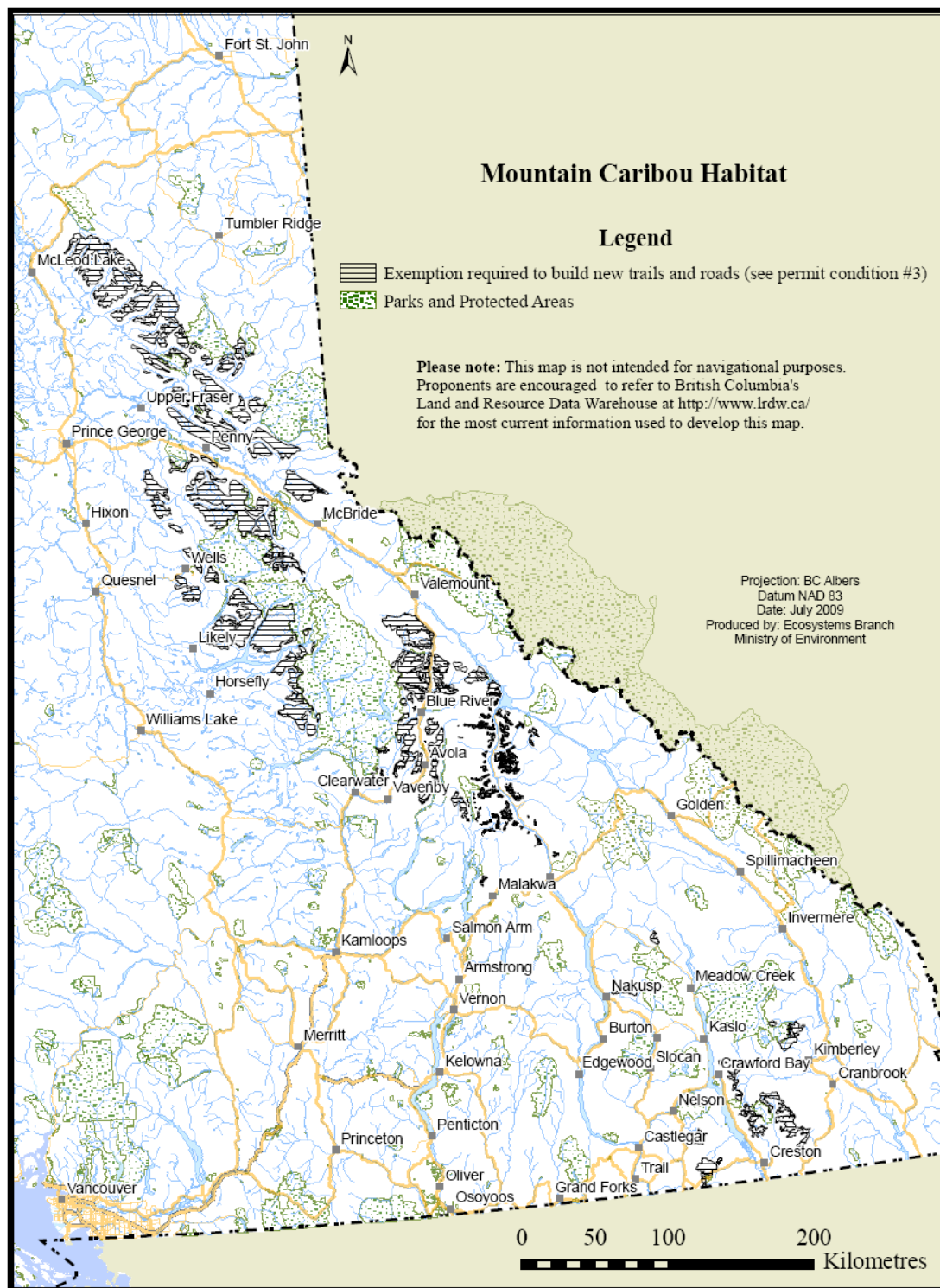


Figure 4. Map showing only those areas that permit condition #3 applies. Shapefiles for import into maps are available at: <http://empr.gov.bc.ca/Mining/Permitting-Reclamation/ApplicationForms>.

Appendix C: Signage Templates

Templates available on the website <http://empr.gov.bc.ca/Mining/Permitting-Reclamation/ApplicationForms>:

