



UNGULATE WINTER RANGE SUMMARY

*For Stone's sheep (*Ovis dalli stonei*) UWR in the Mackenzie Forest District¹ (UWR U-7-028)*

This Ungulate Winter Range (UWR) has been approved under the *Forest and Range Practices Act (FRPA)* and the *Oil and Gas Activities Act (OGAA)*, and is consistent with existing policies and directives for the establishment of UWRs. U-7-028 is consistent with direction provided within the *Mackenzie Land and Resource Management Plan (LRMP)*, which notes an objective to 'Maintain habitat needs of all naturally-occurring wildlife species across the Plan area' with a specific strategy to identify and manage high value Stone's sheep habitat in specific Resource Management Zones where they occur.

1. Biological Justification / Supporting Rationale

Stone's sheep is a subspecies of thinhorn sheep (*Ovis dalli stonei*) found mainly in the northern mountainous portions of the Mackenzie Natural Resource District. British Columbia is now known to support most of the world's Stone's sheep population.² Stone's sheep are designated as a category of ungulate species that may be impacted by forest and range practices and managed through the development of UWR(s) to address their winter survival needs. While the provincial management goal is to maintain viable, healthy and productive populations of Stone's sheep throughout their native range, it is also recognised that Stone's sheep are particularly sensitive,^{3,4} and management efforts should focus on habitat, disturbance, and access. This UWR supports that goal.

As it is generally acknowledged that thinhorn sheep in Alaska and northwestern Canada have likely seen little exposure to disease organisms carried by domestic sheep and goats (compared to other wild sheep in southern Canada and the US), it is essential that no association occurs between thinhorn sheep and domestic sheep and goats.^{5,6,7,8} The risk of overlap and disease transmission during vegetation

¹ Note that while the 'Mackenzie Natural Resource District' name is in common usage, the 'Mackenzie Forest District' is currently the correct legal term. Depending on context, both district names may appear in this document.

² Bill Jex, FLNRO wildlife biologist, personal communication

³ Festa-Bianchet, M. And S.D. Cote. 2008. Mountain goats: ecology, behaviour and conservation of an alpine ungulate. Island Press, Washington D.C.

⁴ Walker, A.B.D., K.L. Parker and M.P. Gillingham. 2007. Habitat selection by female Stone's sheep in relation to vegetation, topography and risk of predation. *Ecoscience* **14**:55-70.

⁵ Demarchi, R.A. and C.L. Hartwig. 2004. Status of thinhorn sheep in British Columbia. BC Ministry of Water, Land and Air Protection. Wildlife Bulletin B-119.

⁶ Wild Sheep Working Group. 2012. Recommendations for domestic sheep and goat management in wild sheep habitat. Western Association of Fish and Wildlife Agencies.

⁷ Bill Jex, FLNRO wildlife biologist, personal communication

⁸ Helen Schwantje, FLNRO Provincial wildlife veterinarian, personal communication

management practices using domestic sheep or goats is only likely to occur during the summer period. During this time, Stone's sheep may travel beyond winter range areas to summer range habitat. To address this risk and maintain a safe distance between Stone's sheep and domestic sheep and goats, a 30 kilometer buffer around Stone's sheep core UWR units was developed, as well as other mountain goat or northern caribou UWR units where Stone's sheep occur as a secondary species.

Stone's sheep are also susceptible to the risk of transmission of the parapoxvirus, Contagious Ecthyma (also known as soremouth or orf), which may be transferred via contaminated attractants such as salt blocks that have come into contact with domestic sheep or goats. The virus can survive for years in the environment and is highly contagious to wild sheep and goats.⁹ This UWR includes a specific measure to address this risk.

a) Conservation Status / Priority

- **Provincial / Federal Conservation Status:** BC list –Yellow / COSEWIC ranking – Not ranked
- **Conservation Framework Highest Score / Goal:** Priority 2 for Goal 2: Prevent species and ecosystems from becoming at risk

b) Expected Conservation Achievements /Outcome

Current management for Stone's sheep within the Mackenzie Natural Resource District includes two UWRs (U-7-006 and U-9-004). Prior to the approval of U-7-028, there was no legal measure in place to address disease risk from domestic sheep, goats, llamas or alpacas.

U-7-028 will protect and manage 87,186 hectares of core high elevation winter habitat and will address disease risk to Stone's sheep within an additional 3,487,166 hectares of specified area management buffer. This is consistent with management direction provided by provincial wildlife biologists and the provincial wildlife veterinarian, as well as the Wild Sheep Working Group of the Western Association of Fish and Wildlife Agencies where the risk of disease transmission from domestic sheep, goat, llamas and alpacas is recognized by wildlife veterinarians and biologists as a significant risk to wild sheep populations in British Columbia and the western USA. As British Columbia supports most of the world's Stone's sheep and this Stone's sheep population is naïve and never previously exposed to these introduced diseases, this specified area management buffer is particularly important.

The timing and limitation on permanent access structures within 500 metres of the core UWR units is intended to help address the sensitivities of this species to human-induced disturbance, and is consistent with the recommendations in Dimarchi and Hartwig¹⁰ and the *Compendium of Wildlife Guidelines for Industrial Operation Projects in the North Area, British Columbia*.¹¹

2. Description of UWR Proposal

⁹ Helen Schwantje, FLNRO Provincial wildlife veterinarian, personal communication

¹⁰ Dimarchi, R.A. and C.L. Hartwig. 2004. Status of thinhorn sheep in British Columbia. BC Ministry of Water, Land and Air Protection. Wildlife Bulletin B-119.

¹¹ Ministry of Forests, Lands and Natural Resource Operations. 2014. A Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia. Interim Guidance.
<http://a100.gov.bc.ca/pub/eirs/finishDownloadDocument.do?subdocumentId=9921>

U-7-028 delineates steep, high elevation winter Stone's sheep habitat associated with windswept alpine tundra and steep snow-free habitats. Core UWR units are found west of the Finlay River and south of Finlay-Russel Park, in a rain shadow area supporting lower snowpacks.¹² Winter habitat was identified through several inventories and projects, First Nation consultation, best professional advice and herd-specific monitoring. This UWR is important for providing Stone's sheep access to critical low snow winter habitats while mitigating disturbance risk. Winter range overlap occurs between Stone's sheep, caribou, and mountain goat within U-7-028 core UWR units.¹³

Specified area habitat was delineated by buffering the known range of Stone's sheep with a disease risk buffer as identified by provincial government wildlife biologists and the provincial wildlife veterinarian. Disease risk management through a General Wildlife Measure (GWM) within the specified area units will address a significant management risk to this species in the Mackenzie Natural Resource District. Additional GWMs were included to address the sensitivity of Stone's sheep to human disturbance through the implementation of access and timing restrictions within 500 metres of the core UWR units.

While the use of livestock (eg. horse) attractants is not restricted within U-7-028, an additional GWM was developed to ensure that attractants such as salt blocks have not come into contact with domestic sheep, goats or domestic camelids (llamas or alpacas). This is to reduce the risk of transmission of the highly contagious parapoxvirus.

A map of the ungulate winter range, designated under either *FRPA* or *OGAA*, is included in Appendix 1.

3. General Wildlife Measures

The following General Wildlife Measures (GWMs) were approved May 24, 2016.

In the event of any discrepancy between this summary report and the legal order (including any subsequent amendments), the legal order applies. It may be accessed at http://www.env.gov.bc.ca/wld/frpa/ubr/approved_ubr.html

Schedule 1 – General Wildlife Measures

Definitions:

In this schedule:

- a) Words and expressions not defined in this Order have the meaning to them in the *Forest and Range Practices Act* and regulations made thereunder, unless context indicates otherwise,
- b) "primary forest activity" is defined as in the *Forest Planning and Practices Regulation*,
- c) "decommission" refers to either partial or complete treatment of roads and trails with the intent to prevent, as much as possible, motor vehicle access while taking into account site-

¹² Glen Watts, wildlife biologist, personal communication.

¹³ Courbould, F.B. 2001. Abundance and distribution of Stone's sheep and mountain goats on the Russel Range, March 1993. PFWFPC Report No. 243.

specific operating constraints; where practicable this activity will include right-of-way revegetation activities to manage long-term access,

- d) "mineral exploration activity" means an activity involving the cutting of trees or construction and/or maintenance of roads and trails related to the exploration and development of a mineral or placer tenure under the *Mineral Tenures Act* and which requires a Notice of Work permit under the *Mines Act*,
- e) "mineral cell" means a Mineral Titles Online claim acquisition unit and is 16 to 21 hectares, depending on latitude,
- f) "Stone's sheep core winter range" are those winter range units established by way of this Order, and
- g) "Stone's sheep specified area" are those specified area Units SA1, SA2, SA3 and SA4 established by way of this Order.

Harvesting:

1. Primary forest activities must not result in the removal of forest cover within a Stone's sheep core winter range, except as provided in GWM 2 or GWM 3.
2. GWM 1 does not apply where:
 - a) guyline anchors and tailholds are required to facilitate timber harvesting adjacent to the Stone's sheep core winter range; or,
 - b) trees felled for the purposes in (a) that fall within the designated Stone's sheep core winter range are retained on-site.
3. GWM 1 does not apply for the purposes of mineral exploration activities if:
 - a) exploration activities occur outside of the critical late winter and lambing period of January 15th – July 15th;
 - b) exploration activities use existing clearings, trails and roads unless it is not practicable to do so;
 - c) any necessary tree harvesting avoids mature stands (≥ 80 years old) and avoids the removal of lichen-bearing trees, unless it is not practicable to do so;
 - d) an individual forest opening (defined as the total tree harvested area created for the purposes of mineral exploration and mining activity) is not greater than 1 ha, not including forest openings for the purposes of building trails and roads;
 - e) the total of individual forest openings (defined as the total tree harvested area created for the purposes of mineral exploration activity), including those created for the purposes of building trail and roads does not exceed:
 - i. 10 percent of the mineral cell, OR
 - ii. 10 percent of any defined aggregate of mineral cells up to a maximum of 25 mineral cells;
 - f) new trails and roads do not have a running width greater than 3.5 metres except for the purposes of safety or culvert placement; and
 - g) actions are 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:
 - i. use of signage and gates on active trails and open roads where practicable,
 - ii. use of signage and safe (defined as large and clearly visible), impassable barricades across seasonal or permanently deactivated road surface widths.

4. All helicopter logging activities conducted within 2000 metres line-of-sight of a Stone's sheep core winter range must take place during the period starting July 15 and ending October 31.
5. Within 500 metres of Stone's sheep core winter range, primary forest activities must take place during the period starting July 15 and ending October 31.
6. GWM 5 does not apply if:
 - a) it is determined by a qualified professional knowledgeable in Stone's sheep ecology that the Stone's sheep core winter range units and the adjacent 500 metres referred to in GWM 5 is unoccupied by Stone's sheep; and
 - b) all primary forest activities cease if the presence of Stone's sheep are indicated within the Stone's sheep core winter range unit referred to in a) or within 500 metres of the Stone's sheep core winter range; and
 - c) any indication of Stone's sheep occupation during primary forest activities is reported to the Ministry of Forests, Lands and Natural Resource Operations, Director of Resource Management, (Omineca Region) within 72 hours of the work stoppage; and
 - d) continuous ground monitoring of the Stone's sheep core winter range unit referred to in a) and the adjacent 500 metres occurs during primary forest activities by the license holder or their appointed contractors to document winter range occupation or non-detection of Stone's sheep, and
 - e) the planned timing of works within the 500 metre specified area referred to in GWM 5 are provided to the Director of Resource Management (Omineca Region), two weeks prior to the commencement of primary forest activities associated with the works, and
 - f) all monitoring reports are submitted to Ministry of Forests, Lands and Natural Resource Operations, Director of Resource Management (Omineca Region) within three months of harvest completion date.
7. All roads or access structures within 500 metres of Stone's sheep core winter range must be decommissioned within three years following harvest completion date.

Range:

8. Within Stone's sheep core winter range or Stone's sheep specified area Units SA1, SA2, SA3 or SA4;
 - a) salt or mineral supplement blocks placed for the purposes of improving or maintaining domestic cattle and/or horse nutrition must be in an unused condition and must not have been predisposed to contact with domestic sheep, goats, llamas or alpacas,
 - b) no use of domestic sheep or goats for vegetation management, and
 - c) no use of domestic sheep, goats, llamas or alpacas within existing or new Range tenures.

These GWMs are consistent with other previously-approved UWR Orders for Stone's sheep as well as recent North Area wildlife guidelines for industrial development,¹⁴ with the exception of GWMs 7 and 8. Both GWMs apply to the specified area units SA1, SA2, SA3 and SA4, and are new.

¹⁴ Ministry of Forests, Lands and Natural Resource Operations. 2014. A Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia. Interim Guidance.
<http://a100.gov.bc.ca/pub/eirs/finishDownloadDocument.do?subdocumentId=9921>

4. Natural Resource Impacts

a) Forestry:

The UWR units established by this Order include 3,574,352 hectares in the Mackenzie Timber Supply Area (TSA), encompassing 87,186 hectares of core high elevation UWR and 3,487,166 hectares of specified area. This includes 2,120 ha of Timber Harvesting Landbase (THLB) within the core high elevation UWR units which are affected by restrictions to primary forest harvesting activities.

This UWR has been approved as a Type 2 plan, consistent with Land Use Planning direction (compared with a Type 1 plan based on Environmental Sensitive Area net downs or a Type 3 plan based on no previously-established timber supply net down). There is no pre-defined Type 2 amount in the Mackenzie Forest District, nor did the Mackenzie LRMP include any legal objectives or THLB amounts for protection of Stone's sheep. U-7-028 reflects the spirit and intent of the Mackenzie LRMP, consistent with a Type 2 proposal. TSR 2 amounts were originally provided for policy purposes and it was never assumed that the associated THLB numbers would provide an absolute cap on further UWR designations.¹⁵

The timber supply impact assessment was based on the spatial overlap of the UWR units with the THLB and associated management direction in the General Wildlife Measures. It is policy that the THLB amounts and resultant impacts of the UWR is calculated using numbers determined through Timber Supply Review #2 (TSR 2) for the Mackenzie TSA. The timber supply numbers are consistent with this policy direction.

The Mackenzie Timber Supply Review was undertaken in 2013-2014, with an Allowable Annual Cut decision made November 2014. Minimum harvest stand volume was set at 151m³/ha for conventional harvest operations. Stands on slopes greater than 46% were considered inoperable if volumes did not exceed 250m³/ha.¹⁶ Further analysis in support of this UWR decision was undertaken by Forest Analysis and Inventory Branch during that time. The core UWR overlap of 2,120 hectares of THLB includes predominantly high elevation forest, much of which is comprised of balsam-leading stands. THLB impacts associated with this UWR proposal are minor, in that the average volume per hectare above 1200 metres in elevation in the Mackenzie TSA is 83m³/ha¹⁷ (and not contributing to the allowable annual cut), with the core high elevation UWR units all above 1200 metres in elevation. Fifty-two percent of those stands are balsam-leading. These high elevation stands are also expected to contribute significantly to legal aspatial old forest requirements. Additionally, habitat co-location occurs with both northern caribou and mountain goat within these high value Stone's sheep UWR units.

WL 1573 lies within specified area unit SA3, and would be restricted in the use of domestic sheep and goats for vegetation management by GWM 8. This is an appropriate measure to include within the woodlot. No significant impacts to the woodlot are anticipated.

b) Range:

GWM 8 restricts the use of domestic sheep, goats, llamas and alpacas within the UWR and restricts the use of mineral supplements such as salt blocks that may have been exposed to a domestic sheep, goat, llama or alpaca. This GWM is necessary to address disease risk to Stone's sheep.

¹⁵ Hal MacLean, Forest Analysis and Inventory Branch, personal communication

¹⁶ Barry Snowdon, senior analyst, Forest Analysis and Inventory Branch. Personal communication.

¹⁷ Barry Snowdon, senior analyst, Forest Analysis and Inventory Branch. Personal communication.

c) Mineral Interests:

Mineral tenure holders requiring an Occupant License to Cut, Free Use Permit greater than 50m³, or Special Use Permit must be consistent with *Forest and Range Practices Act* Ungulate Winter Range GWMs. U-7-028 was amended following a meeting with Ministry of Energy and Mines staff with the addition of GWM 3 to include specific exemptions to some mineral exploration activity under certain conditions (designed to minimize impacts to Stone's sheep populations and habitat). GWM 5 outlines timing windows immediately adjacent to the core UWR units, and GWM 6 provides exemptions to this timing based on specific conditions. With the inclusion of GWM 3 and GWM 6, this Order is now consistent with respect to mineral tenure exemptions provided within other UWRs, exploration road widths are consistent with guidance found within the *Handbook for Coal and Mineral Exploration in BC*,¹⁸ and the timing window of operations is consistent with the *Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia*.¹⁹ With the inclusion of GWM 3 and GWM 6, there are no unresolved concerns identified by any mineral tenure holders. Effective implementation of the UWRs would benefit from the development of a specific mineral tenure guidance document.

d) Oil and Gas:

There are no agreement holders under the *Petroleum and Natural Gas Act*. There are no unresolved concerns identified by the organizations representing oil and gas industrial sectors. The UWR core units intersect with no proposed pipeline routes. Only the core unit boundaries are applicable to Oil and Gas Activities and there are no associated general wildlife measures for activities under the *Oil and Gas Activities Act* (OGAA).

Although the Oil and Gas Commission (OGC) may permit activities within these designations, they must meet the test of causing no material adverse impact to Stone's sheep within the boundaries. The OGC may therefore put specific conditions on those permitted activities to achieve Government's Environmental Objectives under *OGAA*

e) Lands:

There are no *Lands Act* impacts.

f) Recreation:

There are no unresolved recreation impacts.

5. Review and Comment / Consultation Summary

Due Diligence has been met regarding review and comment/consultation obligations for these two UWR proposals under the:

Forest and Range Practices Act (FRPA), and the

¹⁸ Ministry of Energy, Mines and Petroleum Resources. 2009. Handbook for Coal and Mineral Exploration in BC. www2.gov.bc.ca/assets/gov/business/natural-resource-industries/mineral-exploration-and-mining/handbookfor_mineralexploration0809.pdf

¹⁹ Ministry of Forests, Lands and Natural Resource Operations. 2014. A Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia. Interim Guidance. <http://a100.gov.bc.ca/pub/eirs/finishDownloadDocument.do?subdocumentId=9921>

Oil and Gas Activities Act (OGAA).

a) Forest Act Agreement holders:

Upon initiation of the review and comment period, in addition to phone calls and email communication, face-to-face meetings were held with eight forest licensees in Prince George, Mackenzie and Fort St. James. Subsequent questions and feedback was summarized in a document which was then provided to all forest licensees. No comments were received from either the First Nation woodlot holder or one First Nations forest licensee. Two extensions to the timeline for review and comment were given to all affected tenure holders. Forest license agreement holders had at least 5.5 months for review and comment. An additional meeting was held in Fort St. James with one forest licensee and senior Landbase Stewardship staff. Additional clarification and analysis information was provided by the timber supply analyst, as the Mackenzie Timber Supply Review was underway at the same time. This additional analysis work was shared with forest licensees.

Of the three *Forest Act* agreement holders who provided comments specific to this Order, one forest licensee indicated this proposal would cause an undue constraint on their ability to exercise their rights under their *Forest Act* agreement, as they felt the timber supply impact estimates were underestimated, constraining, and warranted further work. This concern included isolation of timber and the need for a potentially onerous exemption process. Another forest licensee indicated that approval of U-7-028 could potentially affect their rights through a loss of access to high elevation forest, although they acknowledged this concern was more applicable to the northern caribou Order (U-7-025, also undergoing review and comment at the same time) than this particular Order.

Further timber supply analysis work was undertaken in conjunction with the Mackenzie Timber Supply Review. It was determined that the average stand volume above 1200 metres in elevation in the Mackenzie TSA is $83\text{m}^3/\text{ha}^{20}$, and the core high elevation UWR units are all above 1200 metres in elevation. The timber supply assessment was redone by the Forest Analysis and Inventory Branch and original timber supply impact numbers were reconfirmed as correct. Exemptions for forest development activities may be applied for to access potentially isolated timber, and mitigative measures developed. Given average high elevation stand volumes, the need for exemptions is not expected to be onerous.

Additional communication through letters, emails, phone calls and meetings was undertaken to address concerns, and GWMs were amended as appropriate. GWM 5 speaks to timing of primary forest activities within 500 metres of core winter range units, and GWM 6 was developed to specify exemption conditions for GWM 5 if it is determined by a qualified professional knowledgeable in Stone's sheep ecology that the specified area referred to in GWM 5 is not occupied by Stone's sheep. GWM 7 was amended to reflect a more accurate definition of the completion of harvest activities, provide consistency with respect to the distance from the core UWR unit, and to enable an extra year for forest licensees to complete initial silviculture activities and decommission roads and access structures. This was acceptable to the two forest licensees who had expressed concern regarding this GWM. Further exempting permanent access structures within 500 metres of the UWR is not consistent with the concept of the specified area need to address a specific risk to Stone's sheep. Forest licensees proposing new permanent access structures within the 500 metre specified area may apply for an exemption for which proactive, specific access mitigation measures can be developed.

Existing mainline roads are exempt. However, a *Compendium of Wildlife Guidelines for Industrial Operation Projects in the North Area, British Columbia* is available and represents best management

²⁰ Barry Snowdon, senior analyst, Forest Analysis and Inventory Branch. Personal communication.

practices for activities within and adjacent to sensitive ungulate populations.²¹ As part of best practice, assessment of the risk to Stone's sheep associated with the management of roads is recommended.

A forest licensee felt that restricting timing of operations within the 500 metre specified area may restrict road use and maintenance to access timber beyond. If road use and maintenance needs to occur outside timing windows associated with new road development within 500 metres of the core UWR then specific exemptions could be applied for and mitigative measures developed. Given the stand volume limitations at these higher elevations, exemption requests at these elevations are likely to occur but should not be common. The measure is designed to address the specific sensitivity of Stone's sheep to disturbance, and exempting permanent access structures would not be consistent with this management goal.

All forest licensee issues have been substantively mitigated.

b) Range Act agreement holders:

GWM 8 restricts range use activities within U-7-028 by restricting the use of domestic sheep, goats, llamas and alpacas for vegetation management within the UWR, and restricts the use of mineral supplements such as salt blocks that may have been exposed to a domestic sheep, goat, llama or alpaca. This GWM is necessary to address disease risk to Stone's sheep. Of the 15 *Range Act* agreement holders, four responded and none indicated any undue constraint to exercise their rights with the establishment of the UWR through this Order. Three were supportive of the measures, and one First Nations tenure holder took the information to share at a national guide outfitters convention.

c) Oil and Gas Activities Act:

There are no agreement holders under the *Petroleum and Natural Gas Act*. A request for review and comment was sent to four organizations representing oil and gas industrial sectors, and well as the Oil and Gas Commission. A second request was forwarded to the organizations representing oil and gas industrial sectors, and responses were received from two. There are no unresolved concerns identified by the organizations representing oil and gas industrial sectors or the Oil and Gas Commission.

d) Mineral tenure holders:

Mineral tenure holders requiring an Occupant License to Cut, Free Use Permit greater than 50m³, or Special Use Permit must be consistent with *Forest and Range Practices Act* Ungulate Winter Range GWMs. Fifty-nine mineral tenure holders were contacted and communication undertaken through email and phone calls with 15 respondents, including the Association for Mineral Exploration BC (AME BC). Three mineral tenure holders expressed concern about the possible restrictions on exploration activities within their tenure, as well as concerns with respect to possible restrictions within the specified area. Eleven tenure holders either wanted to know which UWR proposal overlapped their tenure, or what the UWR designation would mean to their operations. Clarification was provided. AME BC requested to be included as a stakeholder and information was provided to them. Further discussion occurred between the AME BC representative and Ministry of Energy and Mines (MEM) senior staff. FLNRO staff assisted with the response. One mineral tenure holder opposed the UWR proposal.

MEM staff expressed concern about the extent of potential restrictions on mineral exploration activities within the UWRs. A meeting was held in Prince George with MEM staff, and the Order was amended

²¹ Ministry of Forests, Lands and Natural Resource Operations. 2014. A Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia. Interim Guidance.
<http://a100.gov.bc.ca/pub/eirs/finishDownloadDocument.do?subdocumentId=9921>

with the addition of GWM 3 to include specific exemptions to some mineral exploration activity under certain conditions (designed to minimize impacts to Stone's sheep populations and habitat). This Order is now consistent with respect to mineral tenure exemptions provided within other UWRs in the Omineca, Thompson Okanagan and Cariboo Regions, the *Handbook for Mineral and Coal Exploration in British Columbia*, and *A Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia*.²²

e) Lands Act:

The Lands officer did not express any specific objections to this UWR.

f) First Nations:

- **Tsay Keh Dene:**

Extensive discussions with Tsay Keh Dene were held with respect to this and other UWR proposals within their traditional territory. Face-to-face meetings were held in Fort St. James, Prince George, and Tsay Keh Dene. FLNRO staff went to Tsay Keh Dene and participated in a two-day open house for community members, where information was shared and comments recorded. Specific information was provided with respect to the range of Stone's sheep, and Stone's sheep were added as a secondary species to three northern caribou U-7-025 core UWR units. The specified area unit SA3 was amended accordingly to reflect this addition to the range of Stone's sheep and subsequent management of disease risk. Tsay Keh Dene Outfitters took the Stone's sheep UWR information to an annual guide outfitters convention to provide information specific to the disease risk and GWM 8. This UWR is supported by Tsay Keh Dene.

- **Takla Lake First Nation:**

Consultation efforts consisted of phone calls, emails, and a face-to-face meeting in Prince George. The UWR proposal was presented to the Chief, who expressed interest, including the desire for MFLNRO attendance at an open house in Takla Landing. While this open house did not occur, further communication with Takla Lake First Nation natural resource staff did occur, and a letter of support from Chief and Council was provided.

- **Kaska Dena Council:**

FLNRO staff presented this and other UWR proposals at Kaska Dena meeting, and the FLNRO First Nations advisor continued discussion at another meeting in Kwadacha. While Kaska Dena Council indicated they would not be providing comments, they did indicate the project was OK to proceed.

- **McLeod Lake Indian Band:**

The Mackenzie First Nations relations advisor engaged with the McLeod Lake Indian Band and while discussions were initiated, no subsequent follow-up meeting occurred and no response was received. Additional engagement was undertaken by FLNRO staff through two meetings in February and March 2016 to further discuss and review the proposed UWR. Interest and verbal support from Chief and Council was received, particularly with respect to Stone's sheep (and mountain goat) disease risk management within their territory.

²² Ministry of Forests, Lands and Natural Resource Operations. 2014. *A Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia*. Interim Guidance.
<http://a100.gov.bc.ca/pub/eirs/finishDownloadDocument.do?subdocumentId=9921>

- **Halfway River, West Moberly and Salteau First Nations:**

The Mackenzie First Nations relations advisor engaged with all other First Nations with traditional territory overlapping the UWR proposal (Halfway River, West Moberly, Saulteau) and no response was received.

- **Tahltan and Gitxsan First Nations:**

While there is limited overlap with the traditional territories of these two First Nations, the decision was made not to consult. This was chosen due to the nature of this proposed UWR, the location of the UWR units in relation to Gitxsan and Tahltan traditional territories, and fact that this UWR proposal is likely to enhance and protect ungulate habitat; further enabling First Nations to exercise their constitutional rights to hunt.

It is noted that the BC Assembly of First Nations passed a resolution (3/2005) supporting the exclusion of all domestic sheep and goats from all areas within and surrounding their territories that may represent current, known, traditional or potential future wild sheep and mountain goat habitats. U-7-028 is consistent with this resolution.

g) Muskwa-Kechika Management Board:

Communication was initiated between MFLNRO and the Muskwa-Kechika Management Board, as portions of U-7-028 lie within the Muskwa-Kechika Management Area. While the Board did not participate in a detailed review of the proposal, they did indicate they support (in principle) the establishment of Ungulate Winter Ranges within the Muskwa-Kechika Management Area for the long term sustainability of wildlife populations. They also stressed the need for the Province to take adequate time for consultation with First Nations that are affected by the UWR proposal, along with support for the opportunity for stakeholder and industry engagement on these proposals before a decision is reached. Finally, they requested inclusion of the decision in the annual report by the Province to the Advisory Board.

h) Recreation:

U-7-028 may impact potential backcountry recreation tenure applications that may wish to operate llama or alpaca tours within Stone's sheep UWR (including the Stone's sheep specified area units SA1-SA4). Concern was expressed by the Omineca Region FLNRO adventure tourism manager about the Stone's sheep specified area limiting economic diversification by restricting backcountry recreation opportunities using llamas or alpacas. However, the economic, environmental and social loss associated with the accidental introduction of disease to these Stone's sheep populations would be significant. Horses are not restricted, as they pose no disease risk to Stone's sheep.

With respect to all affected tenure holders, a second request for review and comment was forwarded to those who did not respond to the initial referral. Table 1 identifies those stakeholders contacted, with a summary statement of their positions.

Table 1. Stakeholders contacted, a summary statement, and identification of outstanding concerns.

Stakeholder	Summary Statement
Directly Affected Forest Act Agreement Holders:	

Canadian Forest Products Ltd (Canfor)	No outstanding concerns ²³
Conifex Inc.	No outstanding concerns
Three Feathers Ltd. Partnership	No outstanding concerns
Kwadacha Natural Resource Agency Ltd.	No response ²⁴
Mackenzie Fibre Ltd.	No outstanding concerns
BC Timber Sales	No outstanding concerns
Tsay Keh A62375	No outstanding concerns
Woodlot 1573	No response
Not Directly Affected Forest Act Agreement Holders:	
Muskwa-Kechika Management Board	No comment ²⁵
Affected Range Act Agreement Holders:	
Wicked River Outfitters	No response
Bear Paw Guide and Outfitters	No response
Besa River Outfitters	No comments received ²⁶
Tsay Keh Dene Outfitters	Supports the UWR
Folding Mountain Outfitters	No response
Gundahoo River Outfitters	No response
Finlay River Outfitters	Supports the UWR
Pelly Lake Wilderness Outfitters	No response
Prophet Muskwa Enterprises Ltd.	Supports the UWR
Richard Solomanson	No response
Moose Valley Outfitters	No response
Scoop Lake Outfitters (1997) Ltd.	No response

²³ No outstanding concerns - Concerns raised by the stakeholder were resolved through consultation.

²⁴ No response - No direct communication with/from the stakeholder (e.g., return call/email/fax). This includes leaving a message with someone other than the contact person.

²⁵ No comment - Contact person explicitly stated that they will not provide comments.

²⁶ No comments received - Contact made by phone or in person. Or email/voicemail/fax from stakeholder acknowledging receipt of consultation package and/or follow-up calls, but no comments specific to the UWR proposal were received.

Sikanni River Outfitting (1998) Inc.	No response
Tuchodi River Outfitters Ltd.	No response
Directly affected <i>Petroleum and Natural Gas Act</i> Agreement Holders	
None	N/A
Not directly affected stakeholders under the <i>Petroleum and Natural Gas Act</i>	
Canadian Association of Geophysical Contractors	No comment
Canadian Association of Petroleum Producers	No response
Canadian Energy Pipeline Association	No response
Explorers and Producers Association of Canada	No comment, but wanted to ensure we had sent the referral to CAPP
Lisa Helmer, BC Oil and Gas Commission	No concerns ²⁷ - Commission has reviewed Orders and maps and is satisfied the units will fit within the existing regulatory framework under <i>OGAA</i> .
Affected IPPs, Mineral Interests, & Other Occupiers of Land:	
Mineral Interests (59 contacted)	
John Chrisostom Bot	No comments received
John Bernard Kreft	No response
Rara Terra Capital Corp.	No response
American Manganese Inc.	No response
Speebo Inc.	No response
Robert A. Lane	No response
CJL Enterprises Inc.	No response
Brian William Scott	No comments received

²⁷ No concerns - Contact person stated that they have no concerns

Dorian Leslie	No response
Serengeti Resources Inc.	No response
Hard Creek Nickel Corporation	No response
Rimfire Minerals Corporation	No concerns (Kiska Metals)
Mardell Martindale	No response
Commander Resources Ltd.	No response
John Robert Grabavac	No outstanding concerns
Canada Zinc Metals Corp.	No outstanding concerns
Lorraine Copper Corp.	No response
Howard Peter Yearwood	No response
North American Stone Inc.	No outstanding concerns
Ecstall Mining Corporation	No outstanding concerns
Teck Resources Ltd.	No comments received
Christopher O. Nass	No comments received
Canasil Resource Inc.	No response
International Samuel Exploration Corp.	No response
Arthur Derry Halleran	No response
Ursula Grace Mowat	No outstanding concerns
Timothy Arthur Johnson	No response
Peter Michael Burjoski	No response
West Cirque Resources Ltd.	No comments received
Ralph Raymond Keefe	No response. Delivery failed, no other contact info.
Kelly Brent Funk	No response
Aurico Gold Inc.	No response
Bolero Resources Corp. (Canada Carbon Inc.)	No response
Cazador Resource Inc.	Opposes the UWR proposal ²⁸ Engagement with Association for Mineral Exploration BC (AME BC) undertaken as follow-up to concerns.

²⁸ Contact person stated that they oppose the proposal.

Logan Miller-Tait	No response
Cirque Operating Corp.	No response
Megastar Development Corp.	No response
Donald Keith Bragg	No response
Rudolph Mateo Durfeld	No response
Peter Edward Fox	No response
Gold Fields Canada Exploration Holdings Inc.	No response
Charles Edward Nunley	No response
Asiabasemetals Inc.	No response
Jeffery David Rowe	No response
James Hitchie	No response
John Charles Stojan	No response
David Pugh	No response
Charles James Greig	No response
Teck Mining Worldwide Holdings Ltd.	No comments received
Steven Jeffery Scott	No response
Robert Gordon Dyck	No response
Selkirk Metals Corp.	No response
Spanish Mountain Gold Ltd.	No response
Quinn Patrick Harper	No response
Cole Alexander Godfrey	No response. Delivery failed, no other contact info.
Redton Resources Inc.	No concerns
Lorne Brian Warren	No response
Gary Clarence Lee	No response
Patricia Lynn Grexton	No response
AME BC	No outstanding concerns
First Nations:	
Takla Lake First Nation	Supports the UWR

Nak'azdli First Nation	No comments received
Kaska Dena Council	No comments received
Tsay Keh Dene First Nation	Supports the UWR
McLeod Lake Indian Band	Supports the UWR
West Moberly First Nations	No comments received
Halfway River First Nation	No response
Saulteau First Nations	No response
Gitxsan First Nation	No response
Tahltan First Nation	No response
Others:	
Ministry of Energy and Mines	No outstanding concerns
Ryan Hall, FLNRO Lands Officer	Supports the UWR
Tom Peterson, Recreation Officer	No response
Jim Ladds, Regional Manager, Recreation	No concerns
Heather MacRae, FLNRO, Adventure Tourism Manager	No outstanding concerns
Cindy Haddow, Provincial Range Specialist	Supports the UWR
Bill Jex, Wildlife Biologist, Skeena Region	Supports the UWR
Helen Schwantje, Provincial Wildlife Veterinarian	Supports the UWR
Scott McNay, Wildlife Ecologist, Wildlife Infometrics	No comments received
Dale Seip, MOE Wildlife Ecologist	No comment received
Dan Buillion, Peace Williston Fish and Wildlife Compensation Program	No response

6. Section 7 Notices


Stone's sheep was not included in the Notice given under Section 7(2) of the *Forest Planning and Practices Regulation* (FPPR) and Section 9(3) of the *Woodlot License Planning and Practices Regulation* (WLPPR) for the Mackenzie Natural Resource District.

7. Acknowledgements

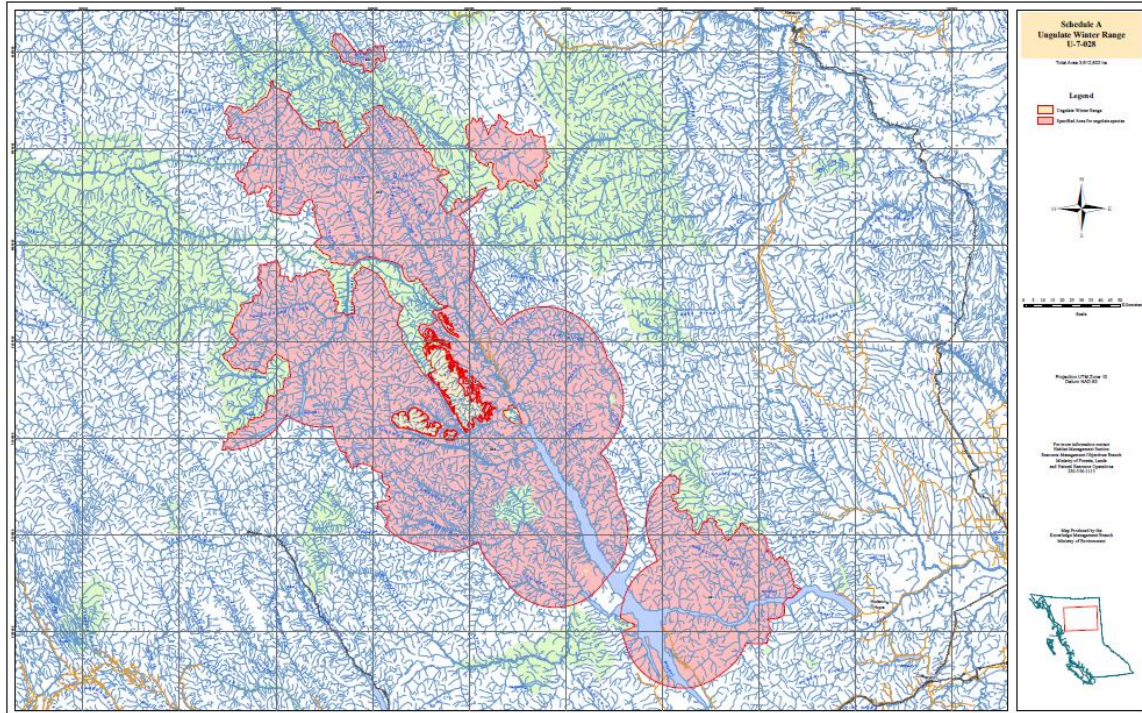
The development of U-7-028 was initiated and supported by Leslie McKinley, Bill Arthur and Glen Watts. Special thanks to Helen Schwantje and Bill Jex for disease management information and support. Thanks also to Luke Gleeson, Barry Snowdon, Duncan McColl, Jen Psyllakis, Steve Gordon, Kevin Hoekstra, Darius Low, Neal Gooding, Louise Bett, Steve Rooke, Stacy Perkins, Karen Tabe, Dave Radies, Norm Bilodeau and Brady Nelles for their support and involvement along the way. Thank you to the numerous stakeholders who provided review and input into the development of this UWR. Finally, special thanks to James Jacklin for expert input and editorial skills.

8. FLNRO Professional Biologist Endorsement

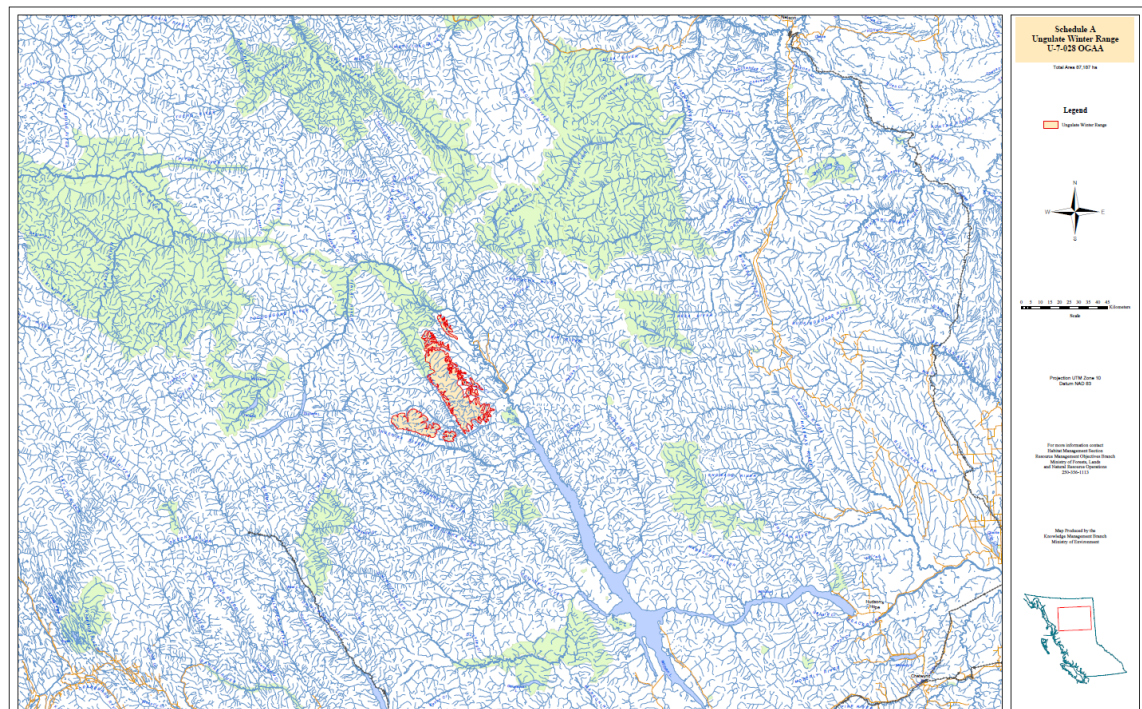
UWR U-7-028 meets the tests under the Government Actions Regulation under *FRPA* and the Environmental Protection and Management Regulation under *OGAA* and the designations are necessary to protect and conserve and meet the winter habitat requirements for Stone's sheep in the Mackenzie Natural Resource District.

Name	Initials	Date
Joanne M. Vinnedge, MSc., RPBio Ecosystem Biologist, RPBio # 332		July 25, 2016

Appendix 1 – Map of Stone's sheep UWR U-7-028



Ungulate Winter Range U-7-028 under the *Forest and Range Practices Act*. Mackenzie Natural Resource District.



Ungulate Winter Range U-7-028 under the *Oil and Gas Activities Act*. Mackenzie Natural Resource District.