

Ungulate Winter Range Multispecies package for the Mackenzie and Fort St. James Resource Districts

Why establish ungulate winter ranges (UWRs)?

The Ministry of Forests, Lands and Natural Resource Operations is proposing to establish Ungulate Winter Ranges (UWRs) for a number of species within the Mackenzie and Fort St. James Resource Districts.

An Ungulate Winter Range is an area that contains habitat that is necessary to meet the winter requirements of an ungulate species; in this case northern caribou, mountain goat and Stone's sheep (a subspecies of thimhorn sheep). These areas were identified based on extensive field inventories and our current understanding of the winter habitat needs of these species in the Mackenzie and Fort St. James Resource Districts.

Sections 9 and 12 of the *Government Actions Regulation of the Forest and Range Practices Act* outline the regulatory authority for establishing UWRs.

The Ministry of Forests, Lands and Natural Resource Operations may legislate "General Wildlife Measures" (management rules) to allow the UWR areas to be managed to maintain the winter habitat conditions needed by these animals.



Northern caribou – U-7-025, U-7-026

Northern caribou found in the Mackenzie and Fort St. James Resource Districts are an eco-type of woodland caribou that generally utilize low elevation forests with abundant ground lichens, and/or higher elevation windswept alpine areas and subalpine forests to survive the winter. These caribou require large areas of relatively undisturbed habitat to enable them to reduce predation by "spacing away" from moose and wolves (Bergerud and Elliot 1986). This UWR proposal identifies high-elevation winter range habitat for the Wolverine, Chase, Finlay, Frog and Gataga herds. Implementation of legal management tools is a critical component to recovery management of northern caribou.

What activities would be allowed in an Ungulate Winter Range?

General Wildlife Measures will be designated that will specify what activities are permitted within the Ungulate Winter Ranges.

No "Primary Forest Activities" such as timber harvesting or road building would be permitted within the Ungulate Winter Range areas.

General Wildlife Measures identified for the protection of ungulates within these proposed UWRs do apply to mineral exploration activities if timber cutting or road-building off mineral tenure is required. Exemptions may be applied for. Oil and gas activities that may occur within these Ungulate Winter Ranges are managed separately under the Oil and Gas Activities Act.

These General Wildlife Measures will restrict logging, but they should not affect First Nation traditional activities such as hunting, trapping, or berry or plant collecting.

These northern caribou are Blue-listed provincially and federally listed as Threatened/Special Concern. A recovery management action plan has been developed for these herds (McNay *et al.* 2008). This species was recognised as a priority for conservation and management within both the Mackenzie and Fort St. James Land and Resource Management Plans. High Elevation UWR habitats (HEWR) for northern caribou are proposed as U-7-025 in the Mackenzie Resource District or U-7-026 in the Fort St. James Resource District.

This UWR proposal is the product of a number of years of work and collaboration by Ministry of Environment, Ministry of Forests, Canfor, local First Nations and Wildlife Infometrics to identify high elevation habitat critical to the winter needs of these herds. The initial model Run 1 was completed in 2008, then refined and rerun in 2009 to further reduce impacts to timber supply; a 34% reduction. Timber Harvest Landbase (THLB) areas with already-approved Old Growth Management Areas or previously-approved UWRs or Wildlife Habitat Areas were removed from the timber supply assessment of U-7-025 to avoid double-counting of these impacts. Some proposed winter range overlap occurs between caribou, mountain goat and Stone's sheep.

Proposed General Wildlife Measures (GWMs) for this northern caribou UWR proposal include no forest harvesting or road-building. However, exemptions may be applied for. These General Wildlife Measures are outlined in the U-7-025 and U-7-026 draft Orders located at:
<http://www.for.gov.bc.ca/ftp/RNI/external/!publish/GAR/UWR>

What are the timber supply impacts?

U-7-025	Area (Ha)	THLB (Ha)	Impacted THLB (Ha)
Core HEWR	746,086	55,698	55,698
Specified Area	497,150	264,155	0
TOTAL	1,243,236	319,853	55,698*
*59,731 ha modelled net down in 2012 Timber Supply Review			
U-7-026	Area (Ha)	THLB (Ha)	Impacted THLB (Ha)
Core HEWR	39,828	15,975	15,975
Specified Area	97,456	73,573	0
TOTAL	137,284	89,549	15,975

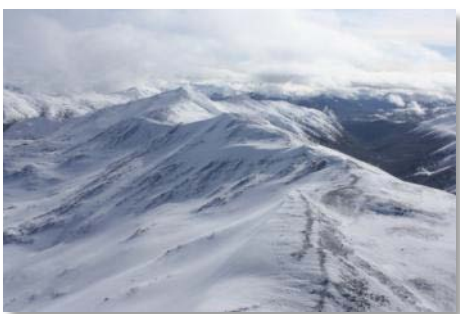
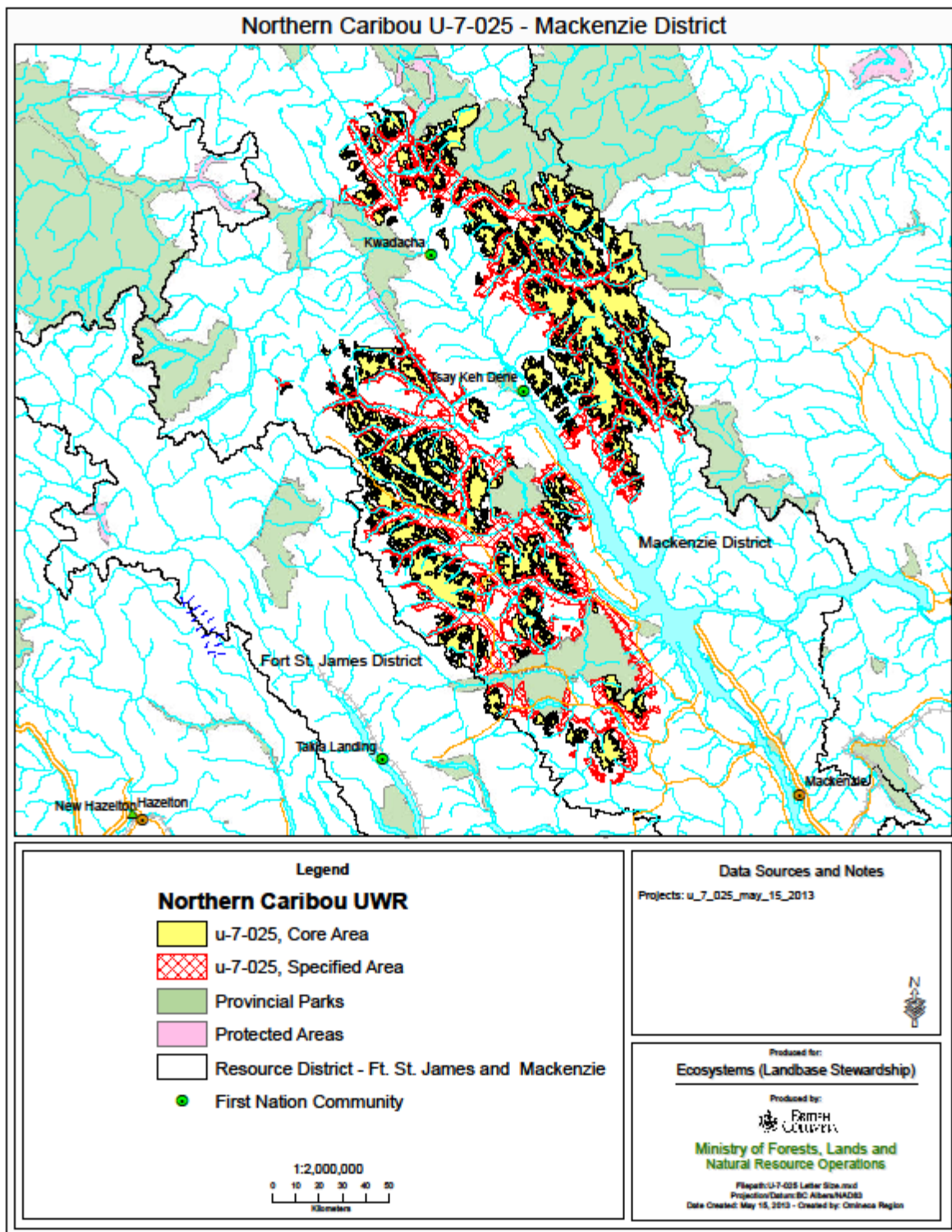
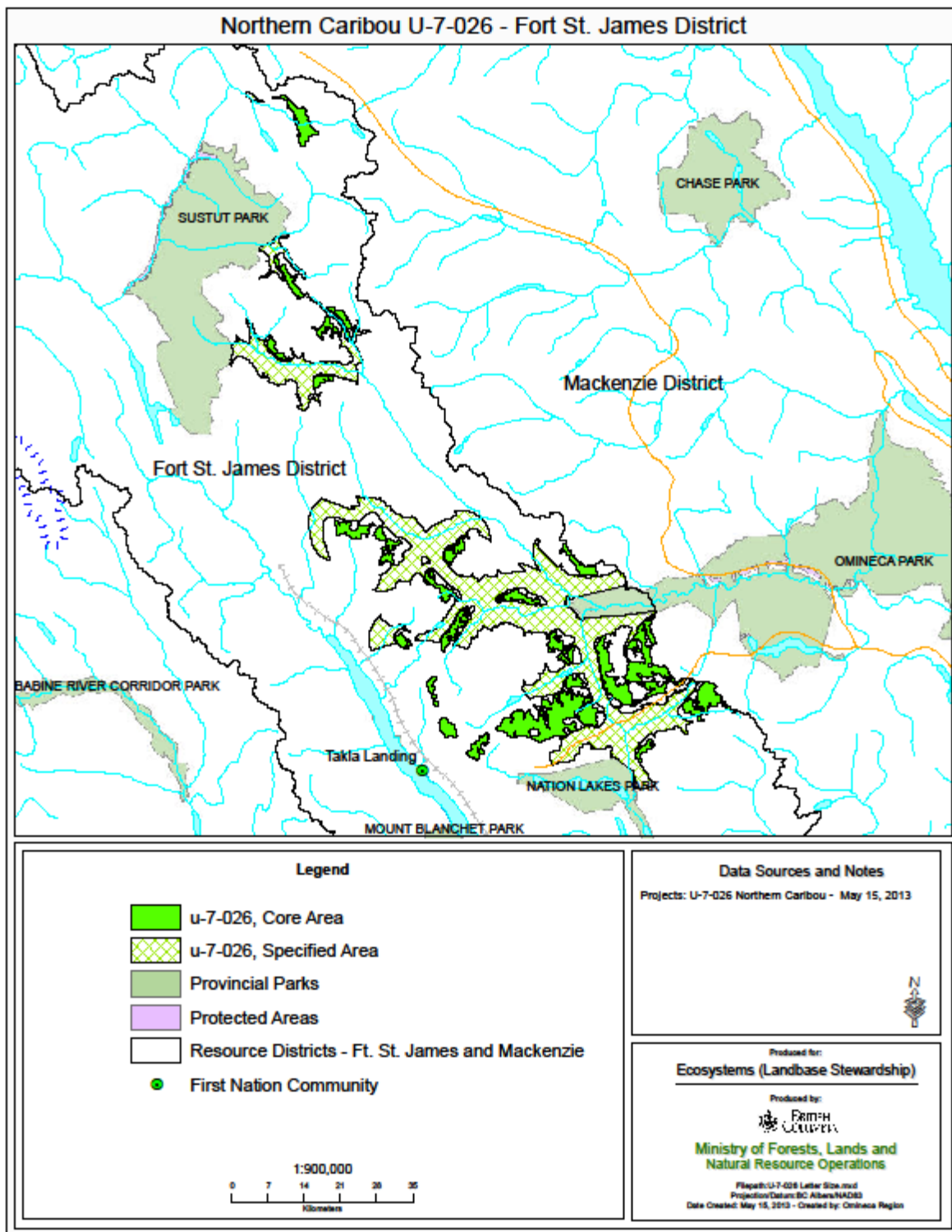


Photo: Wildlife Infometrics

Specified Area for northern caribou

Predation risk from wolves is a major factor influencing recovery management of northern caribou in BC (McNay *et al.* 2008). As an additional measure to help address predation risk, a Specified Area is proposed adjacent to the HEWR polygons; consistent with recovery management action plan recommendations. The goal of this Specified Area will be to limit roads and trails immediately adjacent (within 100m) to the HEWR areas, and to limit the production of preferred moose browse in specific winter moose habitats near the HEWR. It is not the intent to apply this Specified Area designation near three First Nations communities (Takla Landing, Kwadacha and Tsay Keh Dene). It is hoped that the use of this Specified Area designation will help to address predation risk from wolves travelling on roads and/or hunting moose attracted to new browse, without resulting in additional THLB impact.





Stone's sheep – U-7-028

Stone's sheep is a subspecies of thimhorn sheep, with half the world's population found in northern BC. The Russel Range supports a significant Stone's sheep population of up to 550 animals. The Finlay-Russel Protected Area was established in 2000, but a large area of Stone's sheep and mountain goat habitat was not included. Stone's sheep winter ranges are treeless, with little or no snow cover and close to escape terrain. Key winter ranges are rare on the landscape, as these animals do not cope well with snow. This winter range proposal encompasses the critical Stone's sheep winter range area within the Mackenzie Resource District, outside of the Finlay-Russel Protected Area (Glen Watts, *pers. comm.*, Corbould 2001).



Photo: Adrian Batho

The General Wildlife Measures (GWMs) for this Stone's sheep UWR proposal include no forest harvesting or road-building within the core winter range units, as well as prohibiting domestic sheep, goats, llamas or alpacas within existing or new Range Use permits, due to potential disease risks.

Specified Area for Stone's sheep

Since Stone's sheep have not been exposed to many diseases or pathogens carried by domestic sheep, they are at high risk of disease transmission, with potentially catastrophic results (such as major die-offs). It is critical that no contact occurs between Stone's sheep and domestic sheep and goats (Wild Sheep Working Group 2012; Bill Jex, Helen Schwantje, *pers. comm.*). A 30 km Specified Area in which no use of domestic sheep or goats for vegetation management is proposed adjacent to U-7-028 core UWR areas, as well as other proposed northern caribou and mountain goat UWR areas which overlap with the known range of Stone's sheep.

The use of livestock (eg. horse) salt or mineral supplements is not restricted within U-7-028, but these supplements must not have not been in previous contact with domestic sheep, goats, llamas or alpacas. This is to reduce the risk of transmission of the parapoxvirus, Contagious Ecthyma (also known as soremouth or orf). The virus can survive for years in the environment and is highly contagious to wild sheep and goats (Helen Schwantje, *pers. comm.*).

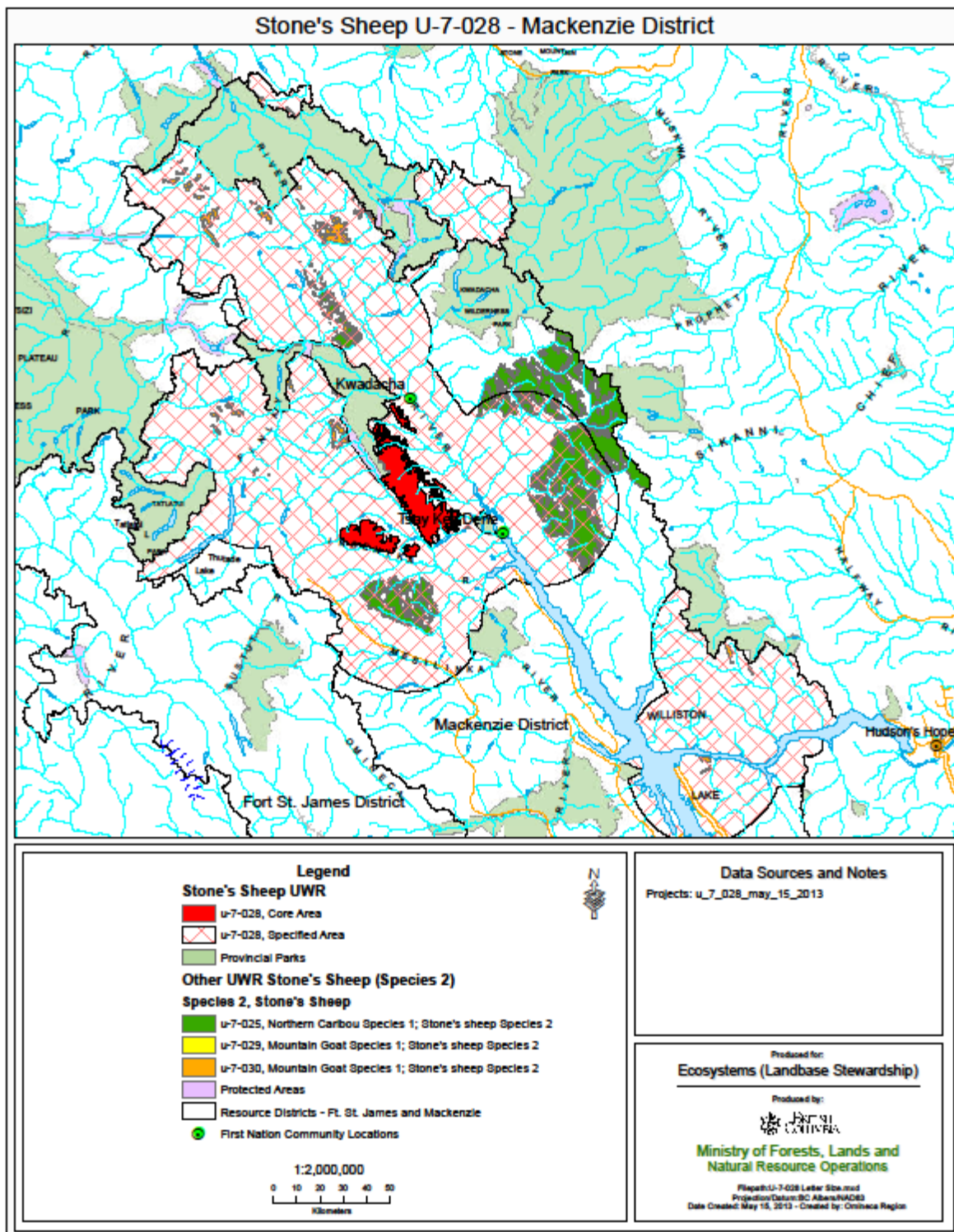
Stone's sheep, like mountain goats, are sensitive to disturbance (Festa-Bianchet and Côté 2008, Walker *et al.* 2007). Since key winter ranges are rare on the landscape, specified area General Wildlife Measures are proposed adjacent to Stone's sheep winter range units that will prescribe measures related to timing of operations, access management and forestry-related helicopter disturbance.



These GWMs are outlined in the U-7-028 draft Order located at: (<http://www.for.gov.bc.ca/ftp/RNI/external/!publish/GAR/UWR>).

What are the Timber Supply Impacts?

U-7-028	Area (Ha)	Impacted THLB (Ha)
Core HEWR	87,186	2,120
Specified Area	3,095,562	0
TOTAL	3,182,748	2,120



Mountain Goat – U-7-029, U-7-030

BC supports about half of the world's population of mountain goats; as such, they are a high priority for conservation management (Mountain Goat Management Team 2010). Proposal U-7-029 identifies UWR habitat for mountain goats in the Ospika, Osilinka and Akie-Pesika Landscape Units, where very detailed modelling and habitat information exists. Winter range habitat is identified by access to nearby good escape terrain, food availability, and winter sun exposure (McNay *et al.* 2006). A small amount of mountain goat habitat in a canyon was also identified. A number of known high-value mineral licks and trails were incorporated within U-7-029 to capture important winter habitat and improve the functionality of the UWR. Mountain goat use of these licks is known to occur within the winter period of Nov 1st to April 30th (Corbould *et al.* 2010). Proposal U-7-030 identifies mountain goat UWR habitat throughout the remainder of the Mackenzie Resource District (Wright *et al.* 2012). No high value mineral licks or trails were identified as part of U-7-030.

Timber Harvest Landbase (THLB) associated with already-approved Old Growth Management Areas or previously-approved UWRs or Wildlife Habitat Areas were removed from the timber harvest assessment of U-7-030 in order to avoid double-counting of these impacts.

What are the Timber Supply Impacts?

UWR	Area (Ha)	Impacted THLB (Ha)
U-7-029	49,418	2,739
U-7-030	262,217	2,893

Specified Area for Mountain Goat



Mountain goats are particularly sensitive to industrial disturbance (Festa-Bianchet and Côté 2008, Mountain Goat Management Team 2010, Cadsand, 2012). Specified area General Wildlife Measures are proposed adjacent to mountain goat winter range units that will prescribe measures related to timing of operations, access management and forestry-related helicopter disturbance. This is consistent with the provincial mountain goat management plan, four already-approved mountain goat UWRs within the Skeena Region, and the Omineca Region Best Management Practises for helicopter operations and wildlife (2013).

These GWMs are outlined in the U-7-029 and U-7-030 draft Orders located at: (<http://www.for.gov.bc.ca/ftp/RNI/external/!publish/GAR/UWR>).

The Landbase Stewardship section of the Ministry of Forests, Lands and Natural Resource Operations is seeking feedback on these UWR proposals within the Mackenzie and Fort St. James Resource Districts. We welcome your comments on this proposal.

A digital copy of the following documents and information is posted here:

- <http://www.for.gov.bc.ca/ftp/RNI/external/!publish/GAR/UWR>
- The draft General Wildlife Measures order for each UWR proposal
- Proposed maps in digital and pdf formats
- Supporting background research documents

Hard copy information is available on request. Please contact:

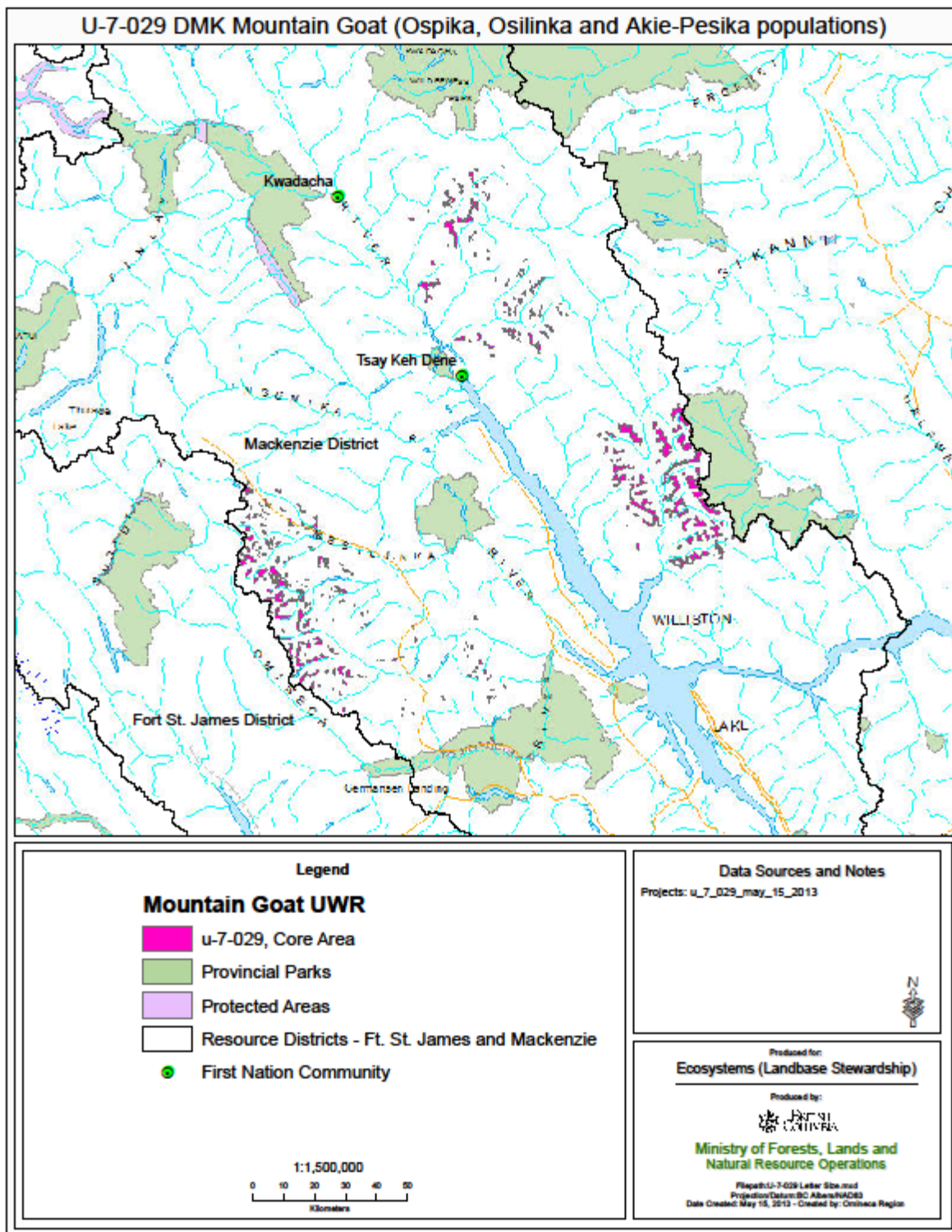
Joanne Vinnedge, R.P.Bio.

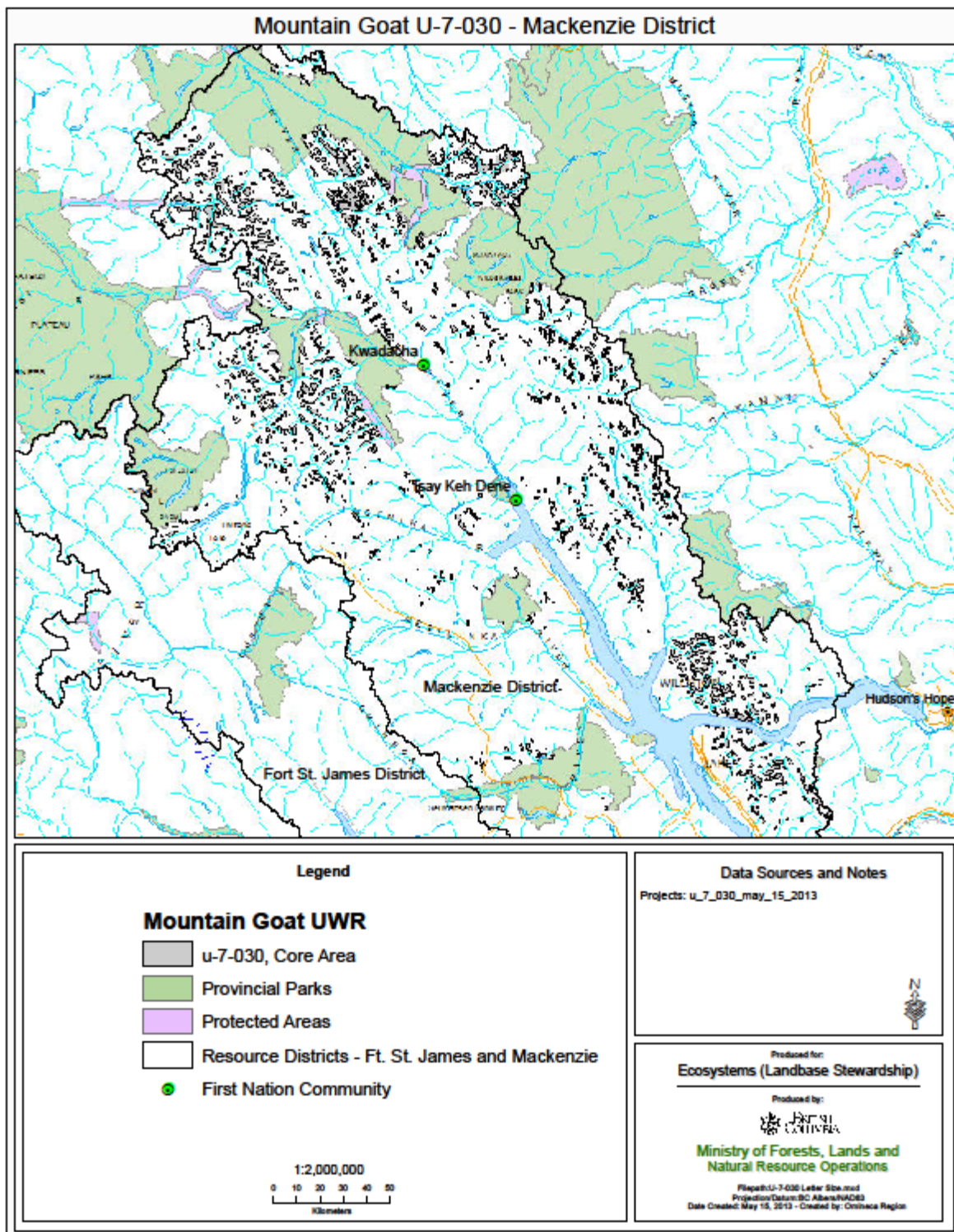
Ecosystem Biologist

Ministry of Forests, Lands and Natural Resource Operations

Omineca Region Joanne.vinnedge@gov.bc.ca 250-996-5262

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References and links for more information:

Additional information on northern caribou management initiatives can be found at:

<http://www.centralbccaribou.ca/crg/9/northcentral+bc>

Cadsand, B.A. 2012. Responses of mountain goats to heliskiing activity: movements and resource selection. MSc thesis. UNBC, Sept 2012.

Corbould, F.B. 2001. Abundance and distribution of Stone's sheep and mountain goats on the Russel Range, March 1993. PFWWCP Report No. 243. Accessed Jan 8, 2013.

http://www.bchydro.com/pwcp/pdfs/reports/pwfwcp_report_no_243.pdf

Corbould, F.B., J.B. Ayotte, M.D. Wood and G.W. Blackburn. 2010. Experimental evaluation of logging impacts on mineral-lick use by mountain goats, north-central British Columbia. PFWWCP Report No. 343.

http://www.bchydro.com/pwcp/pdfs/reports/pwfwcp_report_no_343.pdf

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

Hengeveld, P.E., M.D. Wood, R. Ellis and R. Lennox. 2003. Mountain goat habitat supply modeling in the Mackenzie Timber Supply Area, North-central British Columbia. Version 1.0-December 2003. PFWWCP Report No. 271. Accessed Jan 10, 2013. http://www.bchydro.com/pwcp/pdfs/reports/pwfwcp_report_no_271.pdf

Johnson, C.J., K.L. Parker, D.C. Heard, and D.R. Seip. 2004. Movements, foraging habits, and habitat-use strategies of northern woodland caribou: Implications for forest practices in British Columbia. *BC Journal of Ecosystems and Management* 5(1): 22-35. Accessed Apr 30, 2013. <http://www.forrex.org/jem/2004/vol5/no1/art4.pdf>

McNay, R.S., R.M. McKinley and L. Giguere. 2006. Identification of mountain goat winter range in the Fort St. James Forest District. Wildlife Infometrics Report No. 194. Wildlife Infometrics Inc., Mackenzie, British Columbia, Canada.

McNay, R.S., D. Herd, R. Sulyma, and R. Ellis. 2008. A recovery action plan for northern caribou herds in north-central British Columbia. Forrex Series 22. <http://www.forrex.org/publications/forrexseries/series.asp>

McNay, R.S., V. Brumovsky, R. Sulyma, and L. Giguere. 2009. Delineating high-elevation Ungulate Winter Range for woodland caribou in north-central British Columbia. Wildlife Infometrics Report No. 299. Wildlife Infometrics Inc., Mackenzie, British Columbia, Canada.

Ministry of Forests, Lands and Natural Resource Operations. 2013. Draft – Best management practises for helicopter operation and wildlife in the Omineca Region. Landbase Stewardship BMP Series. Feb. 6, 2013.

Mountain Goat Management Team. 2010. Management Plan for the Mountain Goat (*Oreamnos americanus*) in British Columbia. Prepared for the BC Ministry of Environment. Victoria BC. 87pp.

http://www.env.gov.bc.ca/wld/documents/recovery/management_plans/MtGoat_MP_Final_28May2010.pdf

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.

Watts, Glen. 2012. Identification of critical Stone's sheep winter range habitat, Mackenzie Resource District. Personal communication.

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

Wright, C., V. Brumovsky and R.K. McCann. 2012. Delineating Ungulate Winter Range for mountain goats in north-central British Columbia. Report No. 385. Wildlife Infometrics Inc., Mackenzie, British Columbia.