APPENDIX 23-A NON-TRADITIONAL LAND USE BASELINE REPORT



Seabridge Gold Inc.

KSM PROJECT Non-traditional Land Use Baseline Report

SEABRIDGE GOLD





Executive Summary

This land and resource use baseline report describes the non-traditional land and resource uses near the proposed KSM Project. This study is intended to inform the provincial and federal environmental assessment processes for the KSM Project.

Crown-granted or third-party tenures, Crown lands, parks, ecological reserves, protected areas, land and resource management plans, and non-traditional land and resource uses were considered within a local study area (LSA), which focuses on the Project footprint and a regional study area (RSA) encompassing 338,008 ha. The boundaries of the LSA and RSA were informed by other disciplines, such as wildlife and terrestrial ecology.

The KSM Project is located on provincial Crown land and falls within the Cassiar Iskut-Stikine Land and Resource Management Plan (BC ILMB 2000) and the Nass South Sustainable Resource Management Plan (BC MFLNRO 2012). Table 1 summarizes Crown tenures, parks, protected areas, and land and resource uses detailed in this report for the LSA and RSA.

Table 1. Crown Tenures, Parks, Protected Areas, Ecological Reserves, and Land and Resource Uses within Local and Regional Study Areas

Tenure, Park , Protected Area, Land and Resource	
Use	Description
Parks, Ecological Reserves, Protected Areas	There are no parks or protected areas in the LSA. Ningunsaw Provincial Park, Ningunsaw River Ecological Reserve, Border Lake Provincial Park, and Lava Forks Provincial Park are located within or adjacent to the RSA.
Guide Outfitting	Three registered guide outfitting licences partially overlap the RSA. One of the licences overlaps the LSA.
Hunting	The RSA is located within three Wildlife Management Units where various species are hunted. Moose is the most hunted species among resident hunters, ranging between 65 to 84 kills per year within the broader Wildlife Management Unit areas.
Trapping	Seven trapping licences overlap the RSA, three of which also overlap the LSA. Two licence areas are owned by members of the Skii km Lax Ha. Three licence areas within the RSA have no reported trapping activity.
Commercial Recreation	Six commercial recreation licences intersect or lie within the RSA (heli-skiing, river rafting, fishing, lodging, and backcountry expeditions). Five of these licences also intersect the LSA.
Forestry	The RSA falls within the Cassiar Timber Supply Area and Nass Timber Supply Area. Four forestry licences are located within the RSA, two of which are in the LSA and attributed or pending issuance to the Proponent.
Mineral tenures	Forty mineral claims and five placer claims are located within the LSA and RSA.

(continued)

Table 1. Crown Tenures, Parks, Protected Areas, Ecological Reserves, and Land and Resource Uses within Local and Regional Study Areas (completed)

Tenure, Park , Protected Area, Land and Resource	
Use	Description
Water licences	Two water licences are located in the LSA. Eleven water licence applications are pending within the RSA, including three in the LSA.
Recreation	Potential recreational activities in the RSA include hiking, camping, snowmobiling, and riding all-terrain vehicles. These activities are not registered.
Agriculture Land Reserves	None.
Oil and Gas	None.
Transportation and Utilities	Highways and Roads: Highway 37 is on the eastern edge of the RSA. A small number of forest service roads are located within the LSA near Highway 37.
	Airports/airstrips: There are no airstrips within the LSA or RSA.
	Electrical Transmission Lines: Once built, the Northwest Transmission Line will extend along the eastern border of the RSA.
	Telecommunications Sites: None.

Project components, notably the Processing and Tailing Management Area, fall within the northern portion of the Nass Area, as defined in the Nisga'a Final Agreement (NLG, Province of British Columbia, and and Government of Canada 1998), the southern portion of the Tahltan Nation traditional territory, as well as the western portion of wilp Skii km Lax Ha claimed traditional territory (culturally linked to Gitxsan Nation). The traditional territory of Gitanyow First Nation also overlaps with the RSA, although no KSM Project infrastructure is located in the traditional territory. Nisga'a Nation and First Nations communities are all located over 200 km to the south of the RSA, except the Tahltan Nation, who are located over 100 km to the north.

Non-traditional Land Use Baseline Report

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Acronyms

AAC Annual Allowable Cut

AANDC Aboriginal Affairs and Northern Development Canada

AFS Aboriginal Fisheries Strategy

BC British Columbia

BC EAO

British Columbia Environmental Assessment Office

BC ILMB

British Columbia Integrated Land Management Bureau

BC MARR British Columbia Ministry of Aboriginal Relations and Reconciliation

BC MFLNRO British Columbia Ministry of Forests, Lands, and Natural Resource Operations

BC MOE British Columbia Ministry of Environment

BC MOTI

British Columbia Ministry of Transportation and Infrastructure

BC MWLAP

British Columbia Ministry of Water, Land, and Air Protection

CIS LRMP

Cassiar Iskut-Stikine Land and Resource Management Plan

DFO Fisheries and Oceans Canada

DLR Dominion Law Reports

FSC Food, Social and Ceremonial
GFA Gitanyow Fisheries Authority

GOABC Guide Outfitters Association of British Columbia

LFH Last Frontier Heliskiing

LRMP Land and Resource Management Plan

LSA Local Study Area

NAFA
North American Fur Auctions
NFA
Nisga'a Final Agreement
NLG
Nisga'a Lisims Government
NTL
Northwest Transmission Line

NWA Nass Wildlife Area
Project, the KSM Project, the

PTMA Processing and Tailing Management Area

RMZ Resource Management Zone

RSA Regional Study Area

SRMP Sustainable Resource Management Plan

TMF Tailing Management Facility

TSA Timber Supply Area

WMU Wildlife Management Unit

1. Introduction

1.1 Project Proponent

Seabridge Gold Inc. is the proponent for the proposed KSM Project (the Project), a gold, copper, silver, and molybdenum mine.

1.2 Project Location

The Project is located in the coastal mountains of northwestern British Columbia. It is approximately 950 km northwest of Vancouver and 65 km northwest of Stewart, British Columbia (BC), within 30 km of the BC–Alaska border (Figure 1.2-1).

1.3 Project Overview

The Project is located in two geographical areas: the Mine Site and the Processing and Tailing Management Area (PTMA), connected by twin 23-km tunnels, the Mitchell-Treaty Twinned Tunnels (Figure 1.3-1). The Mine Site is located south of the closed Eskay Creek Mine, within the Mitchell, McTagg, and Sulphurets Creek valleys. Sulphurets Creek is a main tributary of the Unuk River, which flows to the Pacific Ocean. The PTMA is located in the upper tributaries of Teigen and Treaty creeks. Both creeks are tributaries of the Bell-Irving River, which flows to the Nass River and into the Pacific Ocean. The PTMA is located about 19 km southwest of Bell II on Highway 37.

The Mine Site will be accessed by a new road, the Coulter Creek access road, which will be built from km 70 on the Eskay Creek Mine road. This road will follow Coulter and Sulphurets creeks to the Mine Site. The PTMA will also be accessed by a new road, the Treaty Creek access road, the first 3-km segment of which is a forest service road off Highway 37. The Treaty Creek access road will parallel Treaty Creek.

Four deposits will be mined at the KSM Project—Kerr, Sulphurets, Mitchell, and Iron Cap—using a combination of open pit and underground mining methods. Waste rock will be stored in engineered rock storage facilities located in the Mitchell and McTagg valleys at the Mine Site. Ore will be crushed and transported through one of the Mitchell-Treaty Twinned Tunnels to the PTMA. This tunnel will also be used to route the electrical power transmission lines. The second tunnel will be used to transport personnel and bulk materials. The Treaty Process Plant will process an average of 130,000 tpd of ore to produce a daily average of 1,200 t of concentrate. Tailing will be pumped to the Tailing Management Facility from the Treaty Process Plant. Copper concentrate will be trucked from the PTMA along highways 37 and 37A to the Port of Stewart, which is approximately 170 km away via road.

The mine operating life is estimated at 51.5 years. Approximately 1,800 people will be employed annually during the operation phase. Project construction will take about five years, and the capital cost of the Project is approximately US\$5.3 billion.

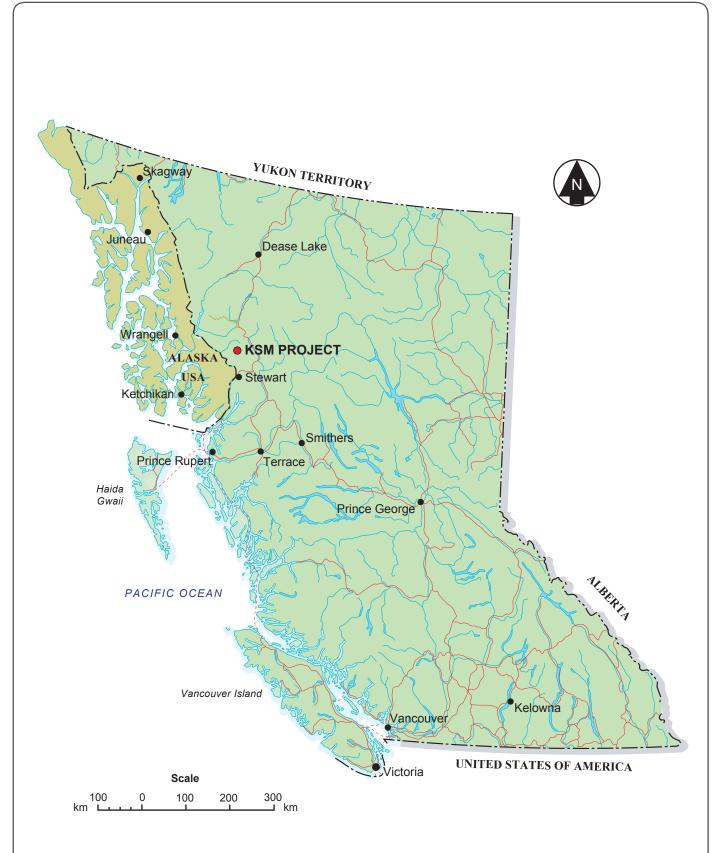


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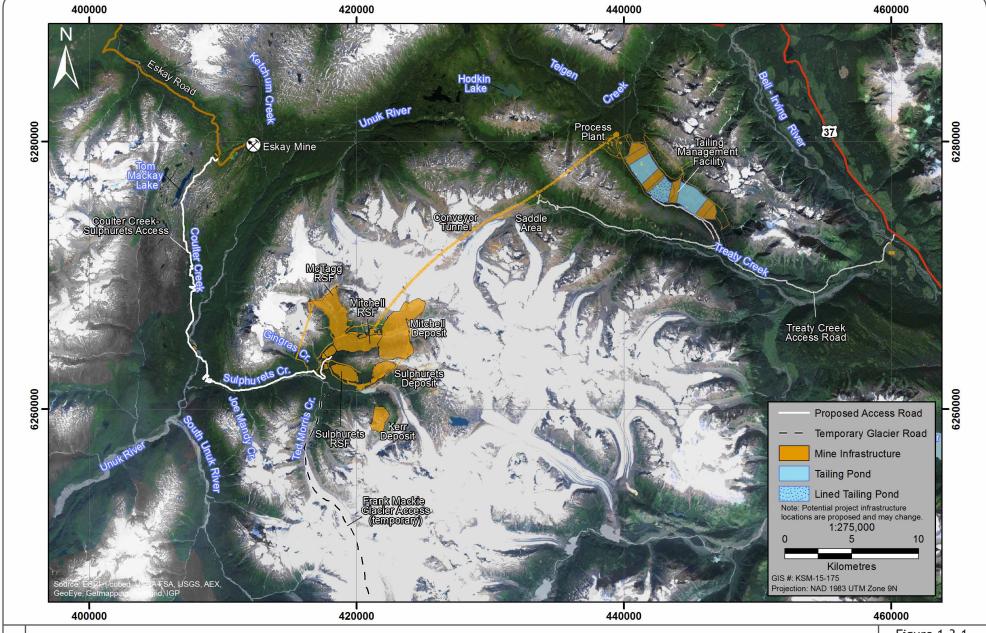


Figure 1.3-1



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2. Objectives

The non-traditional land use baseline report describes the land and resource uses, as well as Crown-granted or third-party tenures, parks, protected areas, land and resource management plans, and within a local study area (LSA) and a regional study area (RSA; see Section 3.1, Local and Regional Study Areas). The report describes the Nass Area, the Nass Wildlife Area, Nisga'a Lands and Nisga'a commercial recreation tenures areas as defined by the Nisga'a Final Agreement (NFA; NLG, Province of British Columbia, and and Government of Canada 1998). It also describes the overlapping land claims asserted by the First Nations.

3. Methods

3.1 Local and Regional Study Areas

Non-traditional land uses were characterized for two study areas: an RSA and an LSA. The LSA is defined as the area that will be directly disturbed by the activities associated with the mining. Specifically, the LSA is defined by a buffer extending at least to the height of land or 1.5 km around the outer limits of the proposed infrastructure and linear developments, whichever comes first (Figure 3.1-1). The LSA provides a representative area that allows the assessment of potential direct impacts associated with the Project and covers approximately 55,187 ha.

The RSA is 338,008 ha in size and follows the same boundary as the RSA used for in the Wildlife Characterization and Terrestrial Ecosystems baseline reports (Figure 3.1-1). Both human land and resource uses and wildlife activities are influenced by terrain. Consequently, naturally occurring barriers (e.g., major mountain ranges and watersheds) define subsets of different human land use and movement (i.e., trapping, hunting, guide outfitting, etc.). The RSA took into account the area that provides habitat for wildlife species that may come into contact with proposed Project infrastructure during the course of a season or a lifetime. The boundaries consider other ecological factors, including distinctive ecosystems, the species with the largest habitat range, and natural landform barriers (such as mountain ranges) beyond which effects diminish considerably.

3.2 Information Sources

Information for the study was gathered using desk-based and field research between May 2008 and December 2012. Land uses were identified by various methods, including the use of the provincial Integrated Land and Resource Registry (BC ILRR), site visits, helicopter fly-overs, and engagement of government agencies, stakeholders, and Aboriginal groups. Efforts were made to contact potentially affected tenure holders to participate in a land and resource use study that included interviewing tenure holders to obtain information related to the use of their tenure.

Two provincial land and resource management plans were reviewed. These plans included the Cassiar Iskut-Stikine Land and Resource Management Plan (CIS LRMP; BC ILMB 2000; CIS LRMP) and the Nass South Sustainable Resource Management Plan (Nass South SRMP; BC MFLNRO 2012c). Harvest data for resident and non-resident hunting and trapping licences was obtained from the Fish and Wildlife Branch, British Columbia Ministry of Environment (BC MOE). Provincial parks and ecological reserves data were obtained from BC Parks.

Information regarding angling use of the Bell-Irving River within the RSA was collected from the BC MOE, Fisheries and Oceans Canada (DFO), and other public research. Table 3.1-1 summarizes the main databases and information sources reviewed.

A full list of references and information sources is provided at the end of this report.

3.3 Data Limitations

The quality and extent of the available secondary data varies by source. Data limitations are described below.

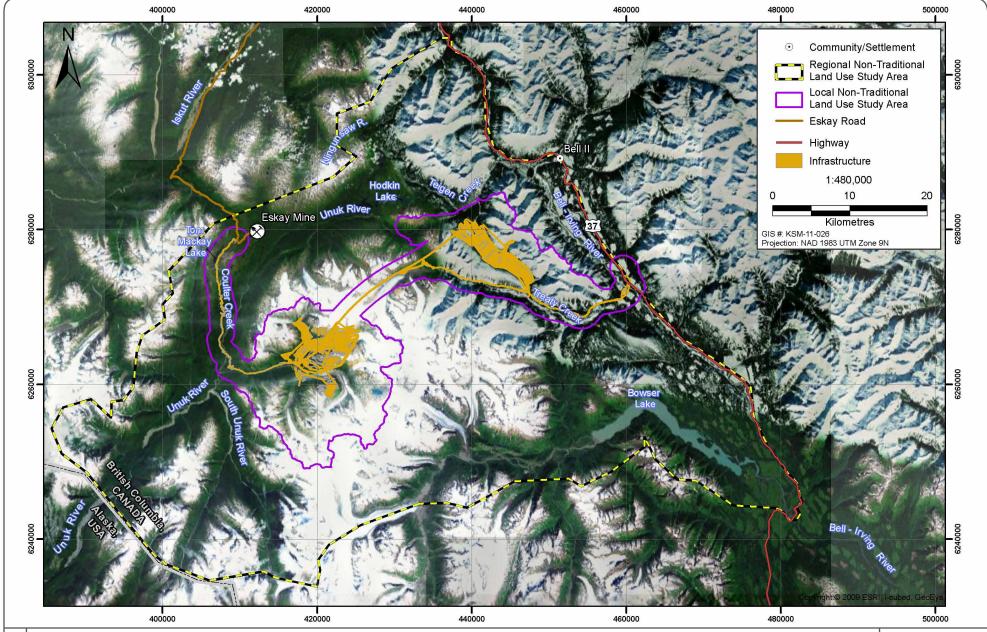


Figure 3.1-1



Table 3.1-1. Example Databases or Reference Material Reviewed

Source	Database or Reference
Province of British Columbia	 Data Distribution Service https://apps.gov.bc.ca/pub/dwds/home.so (accessed June 2012)
British Columbia Integrated Land Management Bureau (BC ILMB)	 Cassiar Iskut - Stikine Land and Resource Management Plan http://ilmbwww.gov.bc.ca/slrp/lrmp/smithers/cassiar/index.html (accessed July 2010) Integrated Land and Resource Registry https://webmaps.gov.bc.ca/imfs/imf.jsp?site=libc_ilrr (accessed June 2012)
BC MOE	 Big game harvest statistics for resident & non-resident hunters from hunter sample and guide declarations 1976-2008 British Columbia Freshwater Angling Guides 2012/2013 http://www.env.gov.bc.ca/fw/fish/guide/docs/angling_guides_list.pdf (accessed June and December 2012) Guide Outfitters in British Columbia 2010-2011 http://www.env.gov.bc.ca/fw/wildlife/hunting/non_resident/docs/guide_outfitters.pdf (accessed May and December 2012) Water licences query http://a100.gov.bc.ca/pub/wtrwhse/water_licences.input (accessed June and
British Columbia Ministry of Forests, Lands, and Natural Resource Operations (BC MFLNRO)	 Nass South Sustainable Resource Management Plan http://ilmbwww.gov.bc.ca/slrp/srmp/south/nass/index.html (accessed November 2012) Nass Timber Supply Area (TSA) http://www.for.gov.bc.ca/hts/tsa/tsa43/index.htm (accessed October 2012) Cassiar Timber Supply Area (TSA) http://www.for.gov.bc.ca/hts/tsa/tsa04/#documents (accessed October 2012)
Fisheries and Oceans Canada (DFO)	Region 6 – Skeena http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/fresh-douce/region6-eng.htm (accessed November 2010)
BC Parks	Recreation – Park Finder http://www.env.gov.bc.ca/bcparks/explore/explore.html (accessed November 2012)
British Columbia Ministry of Transportation and Infrastructure (BC MOTI)	Highway 37 North: Route information http://www.th.gov.bc.ca/popular-topics/driver_info/route-info/hwy37/hwy37.htm (accessed December 2012)
British Columbia Environmental Assessment Office (BC EAO)	Project Information Center (e-PIC) http://www.eao.gov.bc.ca/epic/output/html/deploy/epic_project_list_report.html (accessed December 2012)
Guide Outfitters Association of BC Member List	Guide Outfitters Association of BC - Outfitter Directory http://www.goabc.org (accessed June 2012)
Airports	Air Broker Center - List of Airports in British Columbia http://www.aircraft-charterworld.com/airports/northamerica/britishcolumbia.htm (accessed June 2009)

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3.3.1 BC Parks Visitor Numbers

Data relating to visitor attendance rates and trends in certain northwest BC Parks is limited as BC Parks does not collect visitor numbers for all provincial parks, especially those that are largely inaccessible, and do not have large number of visitors, as is the case for certain parks near the RSA (see Section 4.2). Further, data collection for parks in northwest BC is inconsistent as BC Parks personnel do not visit parks that have low use and are less accessible.

3.3.2 Resident and Non-resident Harvest Data (1976 to 2008)

Registering kills is mandatory for resident and non-resident hunters in the province. Kills are registered with BC MOE for each Wildlife Management Unit (WMU) and are tallied through the Hunter Sample and the Guide Declaration. However, in some cases kill data are incomplete or cannot be assigned to a specific WMU. In these instances, data may be assigned to either a region or to the province as a whole. Additionally, Aboriginal hunting is not captured in the Big Game Harvest Database. As such, available data on resident hunters provide partial information for assessing the overall level of hunting in the KSM Project RSA. As a result, data from WMUs that overlap the RSA may under-represent the actual wildlife harvest.

3.3.3 Trapping Harvest Data (1985 to 2009)

Trapping harvest data depend on individual licence holders registering harvest data. Harvest numbers may be under reported as these figures are not independently verified. Additionally, enforcement of registering harvest data has declined since the 1980s due to the decline of the trapping industry. Within the RSA, three trapline territories do not have any registered harvests.

4. Results and Findings

Tenures within the RSA that may be affected by the Project include guide outfitting, trapping, angling, forestry, commercial recreation, and mineral claims. The following sections describe land and resource management plans and current land uses within the RSA, and identify third-party tenures. A description of the Nass Area, Nass Wildlife Area, Nisga'a Lands and Nisga'a commercial recreation tenures as defined by the NFA (NLG, Province of British Columbia, and and Government of Canada 1998), and First Nations traditional territories near the RSA is provided.

4.1 Regional Land and Resource Management Plans

4.1.1 Overview

The Project falls within the CIS LRMP (BC ILMB 2000) and the Nass South SRMP (BC MFLNRO 2012c). LRMPs are sub-regional, integrated resource plans that establish the framework for land use as well as resource management objectives and strategies, and provide a basis for detailed management planning. Regional plans or LRMPs (sub-regional plans) result in several main products including: broad land/coastal use zones delineated on a map; resource management objectives for land/coastal use zones; broad strategies for integrating resource use; socio-economic analysis; and plan monitoring, implementation and interpretation mechanisms.

SRMPs focus on similar issues and values as regional plans or LRMPs but at a more detailed level. For example, SRMPs are used to identify Old Growth Management Areas, a priority component of biodiversity planning. They also address specific economic development issues such as agriculture or tourism developments and to manage values such as spiritual and cultural resources as identified by First Nations.

4.1.2 Cassiar Iskut-Stikine Land and Resource Management Plan

The CIS LRMP was completed in October 2000 with the support of the Tahltan joint councils, representing the Tahltan and Iskut bands (BC ILMB 2000; BC MFLNRO 2000). It encompasses 5.2 million ha and overlaps the western portion of the LSA, which includes the Mine Site and Coulter Creek access road (Figure 4.1-1). The Plan defines specific land and resource management objectives and includes three management categories:

- General Management Direction (Section 4.1.2.1);
- Area-specific Management (Section 4.1.2.2); and
- Protected Area Management (Section 4.1.2.3).

Table 4.1-1 highlights the CIS LRMP's main goals and objectives.

The CIS LRMP acknowledges the mineral and energy resource potential within the Plan area. There are several past producing mines, including the Eskay Creek Mine (see the KSM Project: 2012 Economic Baseline Report [Appendix 20-A] for further details). Under the Plan, exploration and development of mineral deposits, as well as construction of access roads, are allowable activities, excepting protected areas and providing they occur in concordance with all relevant legislation.

KSM PROJECT

Table 4.1-1. Cassiar Iskut-Stikine LRMP Goals and Objectives, 2000

Goals	Objectives
Healthy Environment	 Sustainable ecosystems Abundant fish and wildlife populations Wild places that are valued for themselves
Healthy and Sustainable Communities	 Opportunities for skill development and job training Jobs for local people Entrepreneurial capacity Adequate healthcare A safe and secure environment A wide range of recreation opportunities Local benefits from resource development and extraction Communication and cooperation between native and non-native communities
Sustainable Development	 A diversified economic base Job opportunities for local people Healthy, sustainable, well-balanced use of resources Development that respects local cultures and lifestyles Development that provides optimal returns to local communities and the province Access to technology and capital Infrastructure to support local economic potential Minimum environmental footprints from all sectors Generate local financial capacity to support ongoing development
Effective Planning and Management of Natural Resources	 Meaningful public participation mechanisms for conflict resolution Good communication between all stakeholders Integration and balance among competing interests Clearly developed procedures for implementation and monitoring Adaptive management techniques Efficient and timely referral and assessment procedures for resource development proposals

Source: BC MFLNRO (2000)

A monitoring report to assess whether the CIS LRMP is meeting its objectives is to be produced biannually by a Plan Implementation and Monitoring Officer in conjunction with the CIS LRMP Monitoring Committee. The first report was developed by the Ministry of Sustainable Resource Management in April 2003 (BC MFLNRO 2003). No additional report has been published since this date.

4.1.2.1 General Management Direction

Objectives and strategies of the General Management Direction apply throughout the CIS LRMP area, outside of protected areas. General Management Direction components, including access, mineral and energy resources, timber and recreation, among others, are detailed in Table 4.1-2.

Table 4.1-2. Cassiar Iskut-Stikine Land and Resource Management Plan General Management Direction, 2000

General Management Direction	Desired Future State
Access Management	 Access managed to respect ecological and cultural heritage values of the area while providing for the full range of user needs.
Biodiversity and Ecosystem Health	 A land base (including air and water) that contains the indigenous diversity of plants, animals, and other living organisms in all their forms and levels of organization throughout the CIS LRMP area. This includes the diversity of genes, species, and ecosystems, as well as the evolutionary and functional processes that link them.
Botanical Forest Products and Medicinal Plants	 A sustainable supply of botanical forest products (mushrooms, berries, and medicinal plants).
Cultural Heritage Resources	 Recognize and respect the heritage and cultural values of archaeological sites, First Nations traditional use sites, and pioneer heritage sites in planning and management of all resource development activities.
Hunting, Trapping, Guide Outfitting, and Fishing	 Viable fish, game, and furbearer populations that continue to support the sustenance, cultural, economic, and recreational needs of First Nations and local residents.
Mineral And Energy Resources	 A world class mining and energy industry based on the area's globally significant mineral and energy resources, supported by well-designed infrastructure.
	 An economically and environmentally sound mining industry that provides long-term benefits to the local community.
	 Certainty of access to support a viable exploration industry.
	 Responsible mineral and energy projects approved in an efficient and timely manner and carried out with high standards of environmental management, including mine reclamation.
Recreation and Tourism	 A world class tourism destination based on the area's globally significant natural features, supported by well-designed tourism and recreation infrastructure.
	A viable local tourism industry.
	 Sustainable recreation and tourism activities sensitive to environmental and cultural values.
	 Resource planning and management compatible with tourism needs.
	 Opportunities for a wide range of recreation activities.
	Certainty of land base for recreation and tourism activities.
Settlement/Agriculture/Range	 Communities that provide the quality of life valued by their residents, including the ability to enjoy traditional and historic lifestyles, diverse opportunities for employment for existing and future generations, and access to and enjoyment of surrounding Crown lands.
	• Opportunities for food production and a viable sustainable agriculture sector on lands with suitable soil/climate combinations for cultivated crops.
	 Opportunities for livestock grazing integrated with management for other resource values such as rare and endangered plant communities and ungulate winter range.
Timber	 A locally viable and sustainable timber industry. A small scale timber industry that is primarily locally based and provides
	 local jobs and benefits. An industry that is based on ecologically sound and sustainable harvesting
Viewal Quality	practices.
Visual Quality	 A scenic landscape that supports world class tourism and recreation potential. Scenic natural viewscapes from communities.

Source: BC MFLNRO (2000)

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4.1.2.2 Area-specific Management: Resource Management Zones

The CIS LRMP established 15 Resource Management Zones (RMZs), representing 31% of the Plan area, according to specific considerations such as resource values, existing land use and access, and environmental concerns (BC ILMB 2000). The purpose of the RMZs is to provide geographically focused, strategic direction for all land and resource development in the planning area. One RMZ, the Unuk River RMZ, covers an area of 10,000 ha and lies within the RSA south of Sulphurets Creek along the Unuk River Valley, a small segment of which overlaps the proposed Coulter Creek access road (Figure 4.1-1).

Management objectives for the Unuk River RMZ are to maintain high value grizzly bear habitat and visual quality from the Unuk River, while allowing for adjacent logging and mineral development. Table 4.1-3 summarizes the management strategies for the Unuk River RMZ.

Table 4.1-3. Unuk River Resource Management Zone Management Strategies, 2000

Management Category	Strategies
Biodiversity	 Maintain linkages of continuous mature old forest cover with Misty Fjords National Monument.
Wildlife	 Identify and maintain contiguous high quality and quantity of grizzly bear habitat.
Aquatic Ecosystems and Riparian Habitat	 Manage all activities along the Unuk River and its tributaries to achieve no net loss of fish habitat.
	 Apply best management practices to wetlands, floodplains, and riparian habitat.
Hunting, Trapping, Guide Outfitting, Fishing	As per the General Management Direction.
Recreation and Tourism	Encourage low-impact recreation and tourism.
	Minimize human-bear interaction.
	Design commercial facilities to minimize environmental impacts.
	 Maintain opportunities for public camping at the confluence of the South Unuk and Unuk rivers.
Visual Quality	Designate views from the Unuk River as a known scenic area.
	 Design logging and road building to minimize natural landscape line, form, colour, and texture.
Access Management	Air or water access is strongly encouraged for mineral exploration.
	 Apply timely hunting and/or access restrictions when there is
	substantiated evidence that grizzly or other wildlife populations are at risk or declining.
	 Develop access management plans for any new two- and four-wheel drive accessible roads, including plans for road use and deactivation, and need for access controls (e.g., gates, removal of temporary bridges).
	 Limit main stem road development so that the road is on one side of a valley at any one location.
	Combine development of infrastructure with existing or planned roads.
	Reclaim mineral exploration trails in a timely manner.

(continued)

Table 4.1-3. Unuk River Resource Management Zone Management Strategies, 2000 (completed)

Management Category	Strategies
Mineral and Energy Resources	As per the General Management Direction.See Access Management.
Timber	 Commercial timber harvesting is prohibited on the active floodplain of the Unuk River.
	 Monitor alteration to habitat suitability and effects and develop preventive, mitigative, or restorative management practices to maintain the quality of grizzly habitat.
	 Consider closing access to forestry operations for extended time periods following first pass harvesting and once silviculture obligations are complete to minimize impacts to grizzly populations.
Research and Inventory Priority	Undertake baseline studies of grizzly bear populations and habitat.

Source: BC MFLNRO (2000)

4.1.2.3 Protected Area Management

Protected area management applies to CIS LRMP land and water resources of high ecological and cultural value. Parks, protected areas and ecological reserves are governed by the *Park Act* (1996d), *Protected Areas of British Columbia Act* (2000), and the *Ecological Reserve Act* (1996a), and associated regulations. The CIS LRMP created 14 protected areas for which resource conservation is emphasized, three of which are located within or adjacent to the RSA (Section 4.2).

4.1.3 Nass South Sustainable Resource Management Plan

The Nass South SRMP was developed in partnership with Nisga'a Nation as represented by Nisga'a Lisims Government (NLG), Gitanyow First Nation, stakeholders, and government agencies (BC MFLNRO 2012c). Approved in June 2012, it covers almost 663,000 ha and provides guidance on permitted land use activity in the Plan area. The south central portion of the RSA falls within the Nass South SRMP (Figure 4.1-1). Despite the overlap with the Nass Area, the provincial government states that "...it has Crown title to the land and resources in the Nass South SRMP [...] subject to provisions of the Nisga'a Final Agreement" (BC MFLNRO 2012c).

The Plan's main function is to address sustainable management issues concerning land, water, and resources in the southern portion of the Nass Timber Supply Area (TSA). The plan also aims to facilitate a wide variety of economic opportunities while conserving high value cultural and environmental resources. Mineral resource activity, timber harvesting, commercial recreation and tourism, guide outfitting, hunting, fishing, trapping, and cultural land uses are all allowable activities.

The BC MFLNRO will implement and monitor the Plan's objectives in cooperation with Gitanyow First Nation, NLG, and relevant stakeholders (BC MFLNRO 2012c).

4.1.3.1 Management Direction

The Nass South SRMP provides management direction in seven areas: water, biodiversity, botanical forest products, wildlife, fisheries, cultural heritage resources, and timber. While future outcomes are detailed, the SRMP does not prescribe how these outcomes are to be achieved. Table 4.1-4 summarizes management objectives for each of these seven areas.

Table 4.1-4. Nass South Sustainable Resource Management Plan Management Direction

	Management Objective
Water	Limit potential for surface soil erosion.
	Manage human activities to maintain the hydrologic stability of watersheds.
	• Maintain the ecological functioning of streams, rivers, wetland complexes, and lakes,
	including those that do not have fish populations.
	 Maintain functional integrity of floodplains and alluvial fans.
	 Restore the water quality and hydrologic integrity of damaged watersheds.
Biodiversity	 Maintain a landscape pattern of patchiness that, over the long term, reflects the natural disturbance pattern.
	Maintain or recruit structural attributes of old forests to support stand-level biodiversity.
	Preserve red-listed plant communities.
	Conserve blue-listed plant communities.
	 Maintain a diversity of coniferous and deciduous species that represent the natural species composition at the landscape and stand level.
	 Maintain a diversity of coniferous and deciduous species that represent the natural species composition at the landscape and stand level.
	 Maintain a range of forest seral stages by Biogeoclimatic Ecosystem Classification variant within each landscape unit that reflects the natural disturbance regime.
	Maintain structural connectivity in the ecosystem.
Botanical Forest Products	Maintain productive pine mushroom sites.
Wildlife	Moose
	 Maintain, enhance, or restore the moose winter range habitats.
	 Through access management, minimize mortality and disturbance to moose within and adjacent to the moose winter ranges.
	Mountain Goat
	Minimize adverse disturbance to goats within mountain goat winter range.
	 Minimize the number of roads within 500 m of mountain goat winter range and 1,000 m of canyon-dwelling mountain goat winter range.
	 Minimize adverse disturbance to mountain goat winter range from helicopter logging activities.
	Grizzly Bear
	Preserve the highest value grizzly bear habitat. Maintain the most live and affective account of private habitat.
	Maintain the quality and effectiveness of grizzly bear foraging habitat. Minimize hypers have conflicted.
	Minimize human-bear conflicts. Minimize language displacement of primals have from industrial access development.
	 Minimize long-term displacement of grizzly bear from industrial access development. Furbearers
	 Minimize impact to known high value fisher and wolverine habitat. Goshawk
	 Maintain nesting and post-fledgling habitat at known goshawk nest areas to support continued use and reproduction in those areas.
	 Maintain foraging habitat around known goshawk nest and post-fledgling areas. General Wildlife
	 Maintain effectiveness of riparian habitats adjacent to wetlands.
Fisheries	Maintain habitat for indigenous fish populations.

(continued)

Table 4.1-4. Nass South Sustainable Resource Management Plan Management Direction (completed)

Resource	Management Objective
Cultural Heritage Resources	 Preserve cultural sites. Preserve cultural heritage resources. Address Gitanyow and Nisga'a interests in access to cultural sites. Identify and record locations of culturally modified trees; minimize impacts to these where appropriate. Maintain a sustainable source of cedar for Gitanyow traditional, cultural, and subsistence use.
Timber	 Dedicate and maintain a productive timber-harvesting land base that promotes an economically sustainable forest industry. Avoid timber harvesting within proposed treaty settlement lands. Manage the forest harvest to represent the timber quality and terrain profile. Maintain the long-term health and site productivity of the timber harvesting land base. Limit conversion of the available productive forest land base for non-timber purposes. Develop long-term plans that respect Gitanyow and Nisga'a interests in the forest resource.

Source: BC MFLNRO (2012c)

The Nass South SRMP further states that existing mineral tenures will be upheld and that new mineral tenures may be staked on all mineral lands as permitted by the *Mineral Tenure Act* (1996b) and any other relevant regulation.

4.1.3.2 Special Resource Management Zones

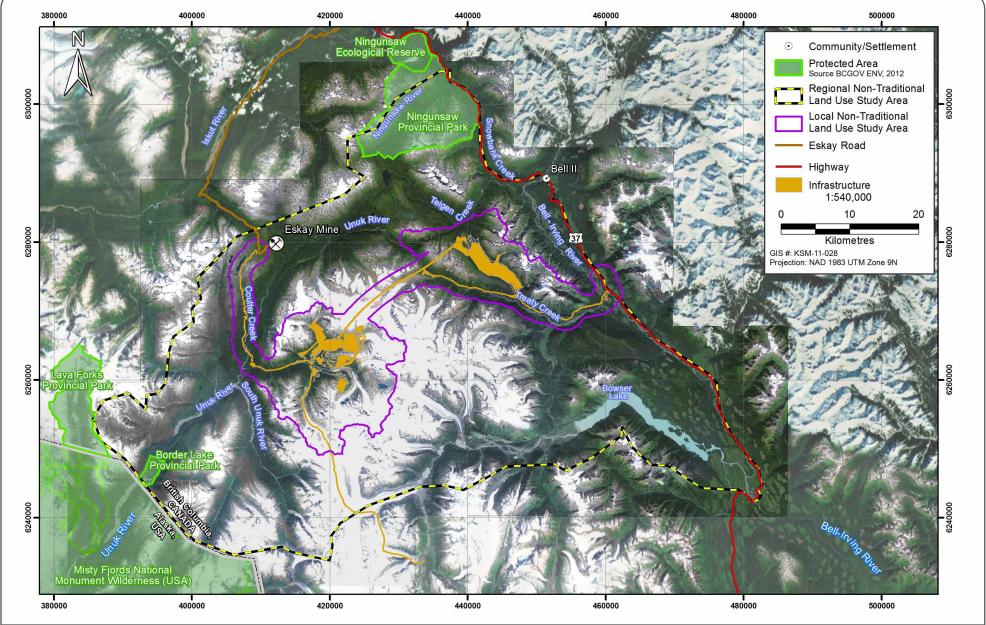
Water management units are included in the Nass South SRMP as a special RMZ, none of which are located within the LSA or RSA. Management objectives are to ensure proper hydrological functioning of stream, lakes, and wetlands within the water management units. The nearest RMZ to the RSA is the Hanna-Tintina area, which is more than 50 km south of the RSA (BC MFLNRO 2012c). It is not included in the RSA as the area is not hydrologically linked to the Project.

4.2 Parks and Protected Areas

4.2.1 Overview

Two provincial parks are located within the RSA; however, there are no parks located within the LSA or near Project infrastructure. Ningunsaw Provincial Park is located roughly 15 km north of the PTMA; and Border Lake Provincial Park is about 25 km southwest of the Mine Site (Figure 4.2-1). Ningunsaw River Ecological Reserve is adjacent to Ningunsaw Provincial Park outside of the RSA. A third park, Lava Forks Provincial Park, lies adjacent to and overlaps slightly with the westernmost section of the RSA.

Table 4.2-1 provides an overview of the size, primary attractions, land uses, and location for each provincial park in relation to the Project. Activities such as mining, logging, hydro dams, and oil and gas development are precluded. Aboriginal people can exercise their rights in parks and protected areas (BC ILMB 2000). Information specific to each park is provided in subsequent sections.



SEABRIDGE GOLD KSM PROJECT

Figure 4.2-1

Parks and Protected Areas In and Adjacent to the Non-Traditional Land Use Study Areas

Figure 4.2-1



Table 4.2-1. Parks and Ecological Reserves in and adjacent to the Regional Study Area

Name	Total Area (ha)	Primary Attraction(s)	Land Use(s)	Location in Relation to the Project
Ningunsaw Provincial Park	15,708	 Elevational sequence of biogeoclimatic zones in a transitional climate Historic telegraph line (1899-1940s) 	 Backcountry skiing Heli-skiing No vehicular access Hunting, fishing, and backcountry camping 	Approximately 15 km north of the PTMA
Ningunsaw River Ecological Reserve	2,372	Elevational sequence of biogeoclimatic zones in a transitional climate	No vehicular access	Approximately 25 km north of the PTMA
Border Lake Provincial Park	800	 Highly productive wetlands complex Rare plant species (e.g., yellow marsh-marigold) Important salmon spawning area 	RaftingCanoeingFishingBackcountry camping	Approximately 25 km southwest of the Mine Site
Lava Forks Provincial Park	7,000	Most recent volcanic eruption in 1904Lava-dammed lakes	FishingBackcountry camping	Approximately 30 km west of the Mine Site

Source: (BC MOE 2011, 2012c)

Information on visitation rates is currently not available due to the remote location of these parks, limited staffing capacity, and lack of traffic counters or other means of maintaining visitor statistics (J. Kittmer, pers. comm.).

4.2.2 Ningunsaw Provincial Park and Ecological Reserve

Ningunsaw Provincial Park is located directly west of Highway 37, approximately 12 km southeast of Bob Quinn Lake in the northernmost section of the RSA. Ningunsaw River Ecological Reserve lies farther north, adjacent to Ningunsaw Provincial Park and outside of the RSA. Together the park and reserve encompass slightly over 18,000 ha (15,708 ha of park and 2,372 ha of reserve), and contain remnants of the historic telegraph trail (1899 to the 1940s; BC MOE 2012b, 2012c). The park contains low-lying forested slopes, riparian zones, and lake-headed rivers.

The Ningunsaw River Ecological Reserve was created in 1975, whereas the park was established in 2001 based on recommendations in the CIS LRMP (BC MOE 2011). The *Management Direction Statement* (BC MOE 2003) states that the purpose of both the park and reserve is to "preserve an elevational sequence of biogeoclimatic zones in a transitional climate." The combined areas are expected to help protect year-round grizzly bear and summer moose habitat. The park also supports low levels of recreational use (BC MOE 2003). Table 4.2-2 outlines the acceptable and prohibited land uses within the park.

Table 4.2-2. Ningunsaw Provincial Park and Ecological Reserve Land Use Summary

Activities	Ecological Reserve	Park	
Land Access	No vehicle access	No vehicle access	
Air Access	Prohibited	Helicopter and other aircraft are allowed	
Watercraft	Prohibited	There are no opportunities for canoeing or kayaking	
Horseback	Prohibited	Horseback riding is not possible in the park	
Camping	Prohibited	Backcountry and wilderness camping is allowed	
Fishing	Prohibited	Fishing is an acceptable land use	
Hunting	Prohibited	Hunting is allowed in the park	
Skiing	Prohibited	Heli-skiing and backcountry skiing are allowed in certain areas	

Source: BC Parks (2012b, 2012c)

4.2.3 Border Lake Provincial Park

Border Lake Provincial Park is in the Unuk River Valley, along the Alaskan border, approximately 70 km southwest of Bell II. It covers an area just over 800 ha and protects wetland environment surrounded by three small lakes in the Unuk River Valley. The Unuk River flows through the park.

The park was established as a Class A¹ Provincial Park in 2001 following recommendations from the CIS LRMP. The *Management Direction Statement* (BC MWLAP 2003) indicates the park plays a conservation role, protecting the habitat of fish and grizzly bear and wetland plant communities. It also offers remote and scenic river recreation opportunities. Table 4.2-3 details accepted and restricted land uses within the park.

Table 4.2-3. Border Lake Provincial Park Land Use Summary

Activities	Description		
Land Access	No vehicle access		
Air Access	 Border Lake is too small to land float planes, but air transport can be taken to the upper reaches of the Unuk River, from which point the park can be accessed by raft 		
Watercraft	Opportunities for canoeing or kayaking exist		
Horseback	Horseback riding is not allowed		
Camping	 Backcountry camping is allowed, but no facilities are provided 		
Fishing	Fishing opportunities exist		
Hunting	 Hunting, guide outfitting, and trapping are all allowed 		

Source: (BC MOE 2011)

¹ Class A parks are Crown land designated under the *Park Act* (1996d) or by the *Protected Areas of British Columbia Act* (2000) whose management and development is constrained by the *Park Act* (1996d).

4.2.4 Lava Forks Provincial Park

Lava Forks Provincial Park overlaps with a small portion of the RSA's western edge and lies between the Unuk River and the Craig River Valley, and adjoins the Alaskan border. The park stretches over 7,000 ha and comprises a lava-filled valley contrasted against ice-capped peaks. It is the site of Canada's most recent volcanic eruption, which occurred in 1904.

The park was established as a Class A Provincial Park in 2001 as per recommendations from the CIS LRMP. The park was created to "conserve Canada's most recent lava flow in a spectacular mountain setting" (BC MWLAP 2003), including protecting volcanic landform structures and primary plant succession that has emerged. It also offers remote wilderness recreation opportunities. The description of possible land uses within the park is summarized in Table 4.2-4.

Table 4.2-4. Lava Forks Provincial Park Land Use Summary

Activities	Description	
Land Access	No vehicle access	
Air Access	Helicopter access allowed subject to approval	
Watercraft	Opportunities do not exist	
Horseback	Horseback riding is not allowed	
Camping	 Backcountry camping is allowed, but no facilities are provided 	
Fishing	Fishing opportunities exist	
Hunting	Hunting, guide outfitting, and trapping are all allowed	

4.3 Nisga'a Nation

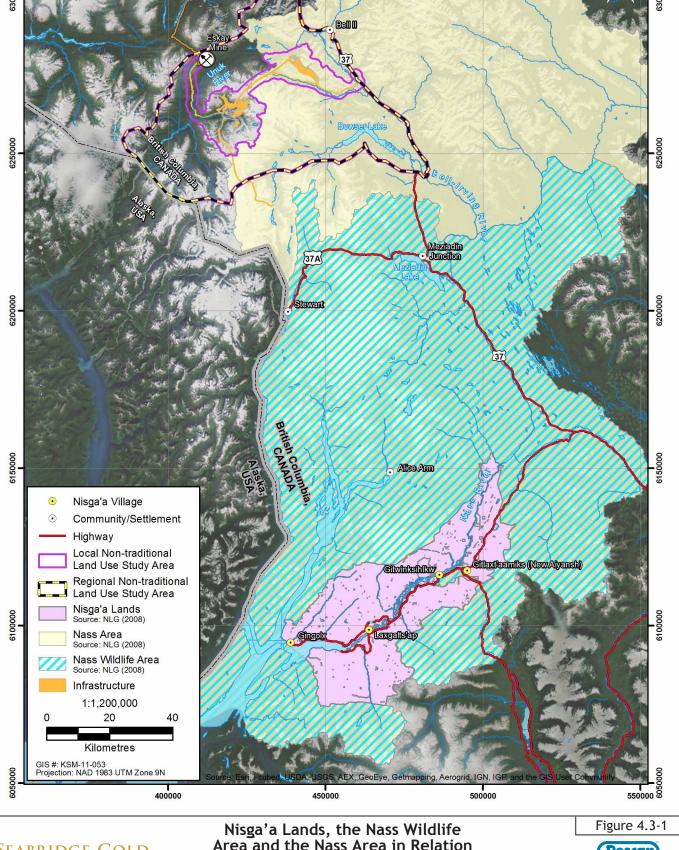
Nisga'a Nation signed the NFA with the Province of BC and Canada in 1998. The agreement came into effect on May 11, 2000. The NFA establishes the Nass Area, Nass Wildlife Area (NWA), and Nisga'a Lands (NLG, Province of British Columbia, and and Government of Canada 1998). The Nass Area is 26,838 km², the NWA is 16,101 km², and Nisga'a Lands is 1,992 km². The eastern half of the RSA and LSA falls within northern sections of the Nass Area. The NWA is located outside of the RSA, approximately 8 km to the south (see Figure 4.1-1). The four Nisga'a villages, Gitlaxt'aamiks (New Aiyansh), Gitwinksihlkw, Laxgalts'ap, and Gingolx, are located on Nisga'a Lands over 230 km to the south of Bell II. Figure 4.3-1 shows these areas in relation to the LSA and RSA.

Nisga'a Lisims Government has the authority to make laws in relation to Nisga'a Lands, and other matters, including Nisga'a fish and wildlife harvesting outside of Nisga'a Lands.

4.3.1 Nisga'a Land Use Planning

Nisga'a land use planning applies to Nisga'a Lands and as such does not relate to the LSA or RSA. Nisga'a land use planning is monitored by NLG, which has authority over Nisga'a Lands. NLG was involved in the development of the Nass South SRMP (see Section 4.1).

PROJECT # 868-016-33 GIS No. KSM-11-053 January 3, 2013 450000 500000 400000 550000 37A Allee Arm Nisga'a Village Community/Settlement Highway Local Non-traditional Land Use Study Area Cilexiteemiks (New Alyensh) Regional Non-traditional Land Use Study Area Nisga'a Lands Source: NLG (2008) Nass Area Source: NLG (2008)



SEABRIDGE GOLD **KSM PROJECT** Nisga'a Lands, the Nass Wildlife Area and the Nass Area in Relation to the Land Use Study Area



Land use planning seeks to ensure resource sharing that is sustainable, protected against ecological damage, and fairly accessed by Nisga'a citizens. There are three designated land use zones within Nisga'a Lands that address jurisdiction and tenure issues. These zones include special management zones (i.e., ecologically sensitive areas); land use zones (including recreation, agricultural, heritage, and wildlife areas); and forest resource zones (including ecologically sensitive timber areas; DLR 2002).

4.3.2 Nisga'a Commercial Recreation Tenures

The NFA established a 27-year Commercial Recreation Tenure in the Nass Area for Nisga'a Nation. NLG, in consultation with Ecotrust Canada, has developed a management plan for this tenure (NLG 2005). This tenure does not overlap with either the LSA or the RSA.

4.3.3 Fishery Management

The NFA provides Nisga'a citizens with the right to fish throughout the Nass Area, including areas of overlap with the eastern half of the RSA. Fish harvesting rights are further defined by the Nisga'a Nation Harvest Agreement, which indicates the total allowable catch for Nass salmon species, as well as other aquatic resources, including plants, in the Nass Area (NLG, Province of BC, and Government of Canada 2000).

Fisheries resources in the Nass Area are co-managed by a Joint Fisheries Management Committee composed of NLG, the Province of BC and the Government of Canada. The committee was created following the drafting of the Nass South SRMP to facilitate cooperation between NLG and federal and provincial bodies in the coordination of fisheries management strategies (BC MFLNRO 2012c). The primary task of the Joint Fisheries Management Committee is to ensure that fisheries provisions of the NFA are maintained, including the monitoring of annual salmon harvests and conducting stock assessments. They also work to manage Nass winter and summer steelhead as well as various trout populations (NLG 2009). Furthermore, the Lisims Fisheries Conservation Trust manages conservation efforts within Nisga'a fisheries and ensures the sustainability of the watershed and habitat (Nisga'a Fisheries Program 2009). The commercial exploitation of salmon resources is also allowed under the NFA and the sale of fish provides an important economic benefit to Nisga'a communities (AANDC 2004).

4.4 First Nations

Portions of the LSA and RSA fall within the claimed traditional territories of Tahltan Nation and Skii km Lax Ha, who, as specified by the Project's Section 11 Order issued by the BC Environmental Assessment Office, are a wilp of the Gitxsan. A small portion of the RSA to the southeast also falls within Gitanyow First Nation wilp Wii'litsxw traditional territory, which is the Gitanyow wilp located closest to the Project area.

The following sections focus on the First Nations claimed traditional territories in relation to the Project LSA and RSA, as well as any specific First Nations' Land Use Planning and resource management policies. Information pertaining to traditional knowledge and traditional land use for each Aboriginal group is discussed in the *Tahltan Nation Traditional Knowledge and Use Desk-based Research Report* (Appendix 30-A), *Skii km Lax Ha Traditional Knowledge and Use*

Desk-based Research Report (Appendix 30-B), Gitanyow First Nation Traditional Knowledge and Use Desk-based Research Report (Appendix 30-C), and Gitxsan Nation Traditional Knowledge and Use Desk-based Research Report (Appendix 30-D).

4.4.1 Tahltan Nation

4.4.1.1 Territory

The claimed territory of Tahltan Nation covers approximately 93,500 km² in northwest BC and includes the Stikine River basin, the Stikine tributaries (including the Iskut River), and the northern sources of the Nass and Skeena rivers (Tahltan First Nation and IISD 2004). The land and resource use LSA and RSA in relation to Tahltan Nation traditional territory is indicated in Figure 4.4-1. The Project's PTMA as well as the Coulter Creek access road fall within the Tahltan territory. The broader RSA overlaps approximately 1.2% of total Tahltan Nation traditional territory. The closest Tahltan community to the KSM Project is the Iskut First Nation, approximately 110 km north of Bob Quinn Lake along Highway 37.

4.4.1.2 Tahltan Land Use Planning

Land use planning within the Tahltan territory is motivated by concerns within the community regarding numerous proposed resource development projects within this area. A 21-member Land Stewardship Committee currently oversees the planning process, with areas of specific goals focusing on the Klappan, Dease, Liard, and Sheslay areas. Issues identified by the Tahltan community include the scale and pace of development within their traditional territory as well as to what extent Tahltan can protect culturally significant areas such as Klappan and Shesley (Rescan 2009a). The RSA is not currently included within the Tahltan planning process.

The Tahltan are in the process of what is (tentatively) known as the Tahltan Nation Plan, a document that will lay out their vision for land management within their traditional territory, as well as government structure, economic development, social support, and cultural "grounding" (Tahltan Central Council 2011a). As of the date of this report, this document had yet to be publicly issued.

A Shared Decision Making Agreement between the Government of BC and the Tahltan is moving into its final stages as of late 2011. Once complete, this agreement will define the land and resource management relationship for Tahltan territory and how the Tahltan and provincial governments will work together (Tahltan Central Council 2011b; BC MARR n.d.).

4.4.2 Skii km Lax Ha and Gitxsan Nation

4.4.2.1 Territory

Figure 4.4-2 indicates the LSA and RSA in relation to areas claimed by wilp Skii km Lax Ha and Gitxsan Nation respectively. Gitxsan traditional territory within the RSA includes areas attributed to Skii km Lax Ha. The RSA overlaps with approximately 2.3% of the total Gitxsan Nation traditional territory. Most Gitxsan and Skii km Lax Ha members reside in the Hazelton area, approximately 300 km southeast of Bell II.

Non-Traditional Land Use Study Areas and Tahltan Nation Traditional Territory



PROJECT # 868-016-33 GIS No. KSM-11-038 January 3, 2013 450000 400000 500000 Meziadin Junction Stewart Community/Settlement Gitxsan Nation TraditionalTerritory Source: GeoBC 2005, Gitxsan Treaty Society 2011 Wilp Skii km Lax Ha Territory Source: GeoBC 2005, Gitxsan Treaty Society 2011 Skii km Lax Ha Traditional Territory Source: ILMB and Skii km 6150000 Lax Ha 2008 Regional Non-Traditional Land Use Study Area Local Non-Traditional Land Use Study Area Infrastructure Highway Eskay Creek Mine Road 1:1,000,000 **Citwinksfalkw** Gitlaxt'aamiks 15 Kilometres ection: NAD 1983 UTM Zone 9N Disclaimer: The lines on this map represent Laxgalts'ap the approximate boundaries of traditional territories as described by the Gitxsan lation and Skii km Lax Ha.

SEABRIDGE GOLD KSM PROJECT 400000

Non-Traditional Land Use Study Areas and Skii km Lax Ha and Gitxsan Nation Traditional Territory

450000

Figure 4.4-2

500000



4.4.2.2 Gitxsan Watershed Management

Gitxsan society is organized into between 45 and 65 huwilp representing four clans and using traditional territory that encompasses a 33,000 km² area in northwestern BC (Gitxsan Nation n.d.). Gitxsan claimed traditional territory is divided and used by each wilp and includes nine watersheds, one of which is the Nass (Gwaans 2007; Gitxsan Chiefs' Office 2010). Gitxsan land and resource use planning is managed individually by each wilp within their respective traditional territory (Gitxsan Chiefs' Office 2010). Seven huwilp are also involved in sustainable watershed planning with the goal to develop plans for each watershed that respect Gitxsan Aboriginal title.

This management includes the development of Sustainable Development Plans within each wilp to ensure that fish, wildlife, and watershed resources are responsibly managed (Gwaans 2007). Currently the Gitxsan Watershed Authorities manages fisheries found in Gitxsan traditional territory and serve to conduct research and manage fish resources.

4.4.2.3 Fisheries Management

The Gitxsan have had a Comprehensive Fisheries Agreement with DFO since the early 1990s (J. Steward, pers. comm.). The Agreement provides for the involvement of the Gitxsan in the management, protection, and enhancement of fisheries resources and fish habitat in the area (DFO 2011). The Agreement also outlines the provisions and process for a Food, Social, and Ceremonial (FSC) fishery² each season, and is supported by the Aboriginal Fisheries Strategy³ of DFO.

Since 2007, the Gitxsan have also been provided a commercial fish allocation through a demonstration fishery (J. Steward, pers. comm.) approved by DFO under an Aboriginal Communal Sockeye Salmon Fishing Licence. Neither the demonstration fishery nor the Comprehensive Fisheries Agreement relates to areas included in the LSA or RSA.

4.4.3 Gitanyow First Nation

4.4.3.1 Territory

The Gitanyow huwilp comprises eight houses, of which the traditional territory of wilp Wii'litsxw overlaps to a small degree with the RSA (Figure 4.4-3). The RSA overlaps with approximately 0.2% of total Gitanyow First Nation traditional territory. Interviews with wilp Wii'litsxw did not reveal any current land-based activities within the RSA (T. Martin, pers. comm.). Gitanyow reserve 1 is located approximately 220 km southeast of Bell II.

² As opposed to a commercial fishery, in which fish can be sold, bartered, or traded.

³ The AFS, in response to the 1990 Supreme Court of Canada ruling on the *Sparrow* case (that confirmed Aboriginal groups had the right to fish for food, social, and ceremonial purposes), was created to provide stable fishery management in areas of Canada where land claims settlements have not already put a fisheries management regime in place. The objectives of the AFS are to provide a framework for the management of Aboriginal FSC fisheries, provide Aboriginal groups with the opportunity to participate in the management of fisheries, and to contribute to Aboriginal economic self-sufficiency, among others.

PROJECT # 868-016-33 GIS No. KSM-11-41 December 31, 2012 520000 440000 480000 560000 **Wii'litsxw** Meziadin Junction Lak-an-jok Stewart **Gwass Hlaam** Haizimsque 37 Gamlaxyeltxw Luuxhon Gwinuu **Natakhayetsxw Citanyow** Gwass Hlaam **Citwinksihikw** Gitlaxt'aamiks Community/Settlement Regional Non-Traditional Land Use Study Area Former Village Local Non-Traditional Highway Land Use Study Area Infrastructure 1:950,000 Gitanyow First Nation Traditional Territory Source: BC MFLNRO 2012 Laxgalts'ap 20 GIS #: KSM-11-041 Kilometres Projection: NAD 1983 UTM Zone 9N 560000 8 440000 480000 520000 Figure 4.4-3

SEABRIDGE GOLD KSM PROJECT Non-Traditional Land Use Study Areas and Gitanyow First Nation Traditional Territory

Figure 4.4-3

4.4.3.2 Fishery Management and Land Use Planning

A Comprehensive Fisheries Agreement between the Gitanyow and DFO was signed on May 21, 1999 (DFO 2010). It provides for Gitanyow involvement in the management, protection, and enhancement of fisheries resources and fish habitat in the area (GFA 2012a). The Agreement also outlines the provisions and process for a FSC fishery⁴ each season and is supported by the Aboriginal Fisheries Strategy ⁵ of DFO.

Additionally, in 2009 an agreement was reached between Gitanyow First Nation and DFO to secure an economic allocation of salmon on the Nass River in their traditional territory. That same year, a fishing plan was developed and a small demonstration fishery was approved by DFO under an Aboriginal Communal Sockeye Salmon Fishing Licence (GFA 2012a).

Commercial allocations of salmon have been obtained by the Gitanyow since 2009, and in 2012 have included the obtaining of voluntarily retired offshore commercial fishing licences to use in the Meziadin River.

The Gitanyow Fisheries Authority (GFA) is run by the Gitanyow Hereditary Chiefs' Office as a non-profit society that administers and implements the FSC fishery as stipulated under the Agreement (GFA 2012b), as well as the economic fishery allocation. The GFA also manages fisheries resources by providing technical expertise pertaining to fish populations and restoration through the Kitwanga River Salmon Enumeration Facility. The GFA conducts stock assessment in the Nass River watershed (GFA 2012a). It also provides technical environmental support for land use planning processes (GFA 2012b).

Finally, the Gitanyow were involved in developing the Nass South SRMP. The Gitanyow huwilp are also developing land use plans specific to each house territory, including interests related to fisheries; however, these have not been made available (see The Constitution of the Gitanyow Huwilp [2007]).

4.5 Hunting

4.5.1 Overview

There are two defined hunter categories in BC: resident and non-resident. Each category is discussed separately as different sets of laws and regulations apply to each.

Resident hunters are either citizens or permanent residents of Canada who meet the requirements to be considered a resident of BC (BC MFLNRO 2012a). Resident hunters must obtain a Hunter Number Card before acquiring a hunting and species licence, the cost of which may range from \$8 to \$80 depending on standards set by the BC MOE (BC MOE 2012a).

⁴ As opposed to a commercial fishery, in which fish can be sold, bartered or traded.

⁵ The AFS, in response to the 1990 Supreme Court of Canada ruling on the *Sparrow* case (that confirmed Aboriginal groups had the right to fish for food, social and ceremonial purposes), was created to provide stable fishery management in areas of Canada where land claims settlements have not already put a fisheries management regime in place. The objectives of the AFS are to provide a framework for the management of Aboriginal FSC fisheries, provide Aboriginal groups with the opportunity to participate in the management of fisheries, and to contribute to Aboriginal economic self-sufficiency, among others.

Provincial laws require non-resident hunters who wish to pursue big-game⁶ hunting activities to be accompanied by a licensed guide outfitter. Guide outfitters, in turn, are registered within a specified tenure area (BC MFLNRO 2012a). Guide outfitting licences are based on the provincial system of WMUs.

4.5.2 Harvest Data

Harvest data are available for provincially managed WMUs. Figure 4.5-1 shows that approximately half of the RSA is within WMU 6-16 (North Coast) and the other half within WMU 6-21 (Stikine; Table 4.5-1). Additionally, the eastern border of the RSA slightly crosses into Upper Skeena WMU 6-17. Table 4.5-1 highlights the degree to which the RSA and LSA overlap with the total WMU area.

Table 4.5-1. Wildlife Management Units and Regional Study Area Calculations

WMU	Total WMU Area	Proportion of WMU in RSA boundary (%)
6-16 (North Coast)	657,172 ha	173,872 ha (26.5%)
6-17 (Upper Skeena)	1,036,409 ha	6,921 ha (0.7%)
6-21 (Stikine)	1,710,564 ha	157,288 ha (9.2%)

Source: Government of British Columbia (2012a).

Harvest data, while available for both resident and non-resident hunters, are not available for Aboriginal hunters. This fact limits the ability to estimate the level of hunting among Aboriginal groups, as well as the total hunting level.

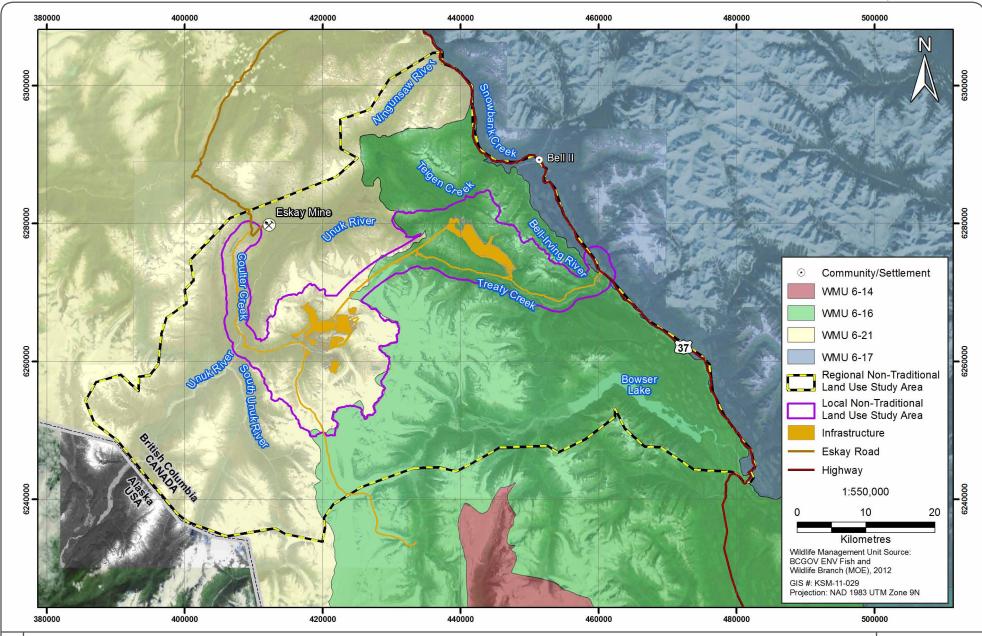
Harvest data within the three WMUs are available from 1976 through 2008; the data describe the type and frequency of animal harvests per year by resident and non-resident hunters (Appendix 1; BC MOE 2012d). Data relate to the whole WMU area and are not specifically focused to where the WMU and LSA overlap. In WMU 6-16, resident hunting of all animals except moose has been slowly trending downward since 1976. In WMU 6-17 grizzly bear is the only species showing an increased resident harvest in recent years; resident hunting of all other species has slowly trended downward. In WMU 6-21, there has seen a sharp increase in resident harvesting of moose in recent years, and hunting of grizzly bear has slowly increased. All other hunting has either remained consistent or slowly declined (see Appendix 1).

Historically, all WMUs that overlap the RSA were consistently used by resident hunters between 1976 and 2008, with WMU 6-16 being the most active recording nearly 200 hunters in 1993 (BC MOE 2012d). Resident hunters in these areas historically focused on moose, but have also harvested black bear, wolf, goat, sheep, and grizzly bear.

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⁶ Deer, mountain sheep, mountain goat, moose, caribou, elk, cougar, wolf, grizzly bear, black bear, lynx, bobcat, and wolverine.

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Wildlife Management Units in the Non-Traditional Land Use Study Areas





Non-resident hunting peaked in WMU 6-16 and WMU 6-17 during the 1980s. Following a decline between 1991 and 1995, these areas showed a steady increase in non-resident hunting starting in 2002. Non-resident hunting of goat, black bear, and grizzly bear in WMU 6-21 has been trending downward since 1976, while sheep and wolf hunting has increased, and moose hunting has increased sharply. In 2008, moose and goat were the most commonly harvested species by non-residents in WMU 6-21 (BC MOE 2012d).

4.5.3 Guide Outfitting (Non-resident Hunting)

4.5.3.1 Overview

Guide outfitting is a commercial land use that allows non-residents to participate in recreational hunting. BC non-residents who wish to pursue big-game⁷ hunting activities in the province are required to be accompanied by a licensed guide outfitter.

Guide outfitters are registered to guide within a specified territory, which is based on the provincial system of WMUs. Guide outfitter licences do not confer property rights on the owner, and guiding rights are only recognized for the person named on the licence. Outfitters set their guiding fees independently and licensed assistant guides may also be employed.

Three guide outfitting licences overlap the RSA (Figure 4.5-2). The Project's infrastructure and RSA is primarily located within guide outfitting licence 601066. To the west, the RSA and a small portion of the Eskay Creek Mine road overlaps the guide outfitting licence held by Northwest Ranching and Outfitting. To the south, the RSA overlaps the tenure held by Coast Mountain Outfitters. There is no overlap with the LSA, though much of the proposed Temporary Frank Mackie Glacier access route would traverse this latter tenure. The following sections highlight how these tenure holders use the land. Table 4.5-2 summarizes the pertinent details of the potentially affected guide outfitting tenures.

Figure 4.5-2 also provides locations for abandoned and dilapidated hunting (and potentially trapping) cabins in the LSA and RSA. These cabins were identified during archaeological and heritage field surveys and are discussed in further detail in the Archaeological and Heritage Permit reports (McKnight et al. 2012; Seip et al. 2012).

4.5.3.2 Licence #601066

Twenty-three percent of the guide outfitting area registered to licence number 601066 (purchased in early 2012 from Misty Mountain Outfitters, former licence number 601001; Table 4.5-2) lies within the RSA. As of August 2012, the current licence holder had not yet visited his tenure area (G. Brown, pers. comm.). Guide outfitting activities are currently delegated to McCowan's Sporting Adventures (G. Brown, pers. comm.; McCowan's Sporting Adventures 2012). The area overlaps with WMUs 16, 17, and 21 and is used for hunting stone sheep, grizzly bear, black bear, mountain goat, moose, and wolf (BC MOE 2010).

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⁷ Deer, mountain sheep, mountain goat, moose, caribou, elk, cougar, wolf, grizzly bear, black bear, lynx, bobcat, and wolverine.

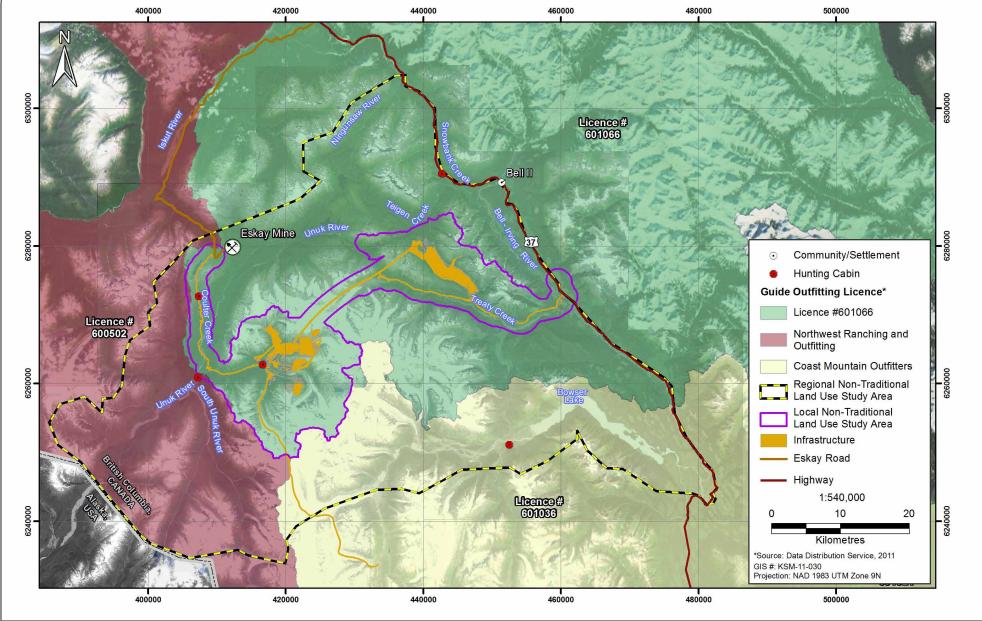


Figure 4.5-2 SEABRIDGE GOLD

KSM PROJECT

Guide Outfitting Licence Areas in the Non-Traditional Land Use Study Areas

Figure 4.5-2



Table 4.5-2. Guide Outfitting Licences in the Regional Study Area

Licence #	Company	Species	% of licence in RSA	Location of Licence in Relation to the Project
601066	n/a	Grizzly, black bear, mountain sheep, mountain goat, moose, wolf, caribou, deer*	23.1%	Licence area overlaps the proposed Project footprint and access roads
600502	Northwest Ranching and Outfitting	Mountain sheep, mountain goat, grizzly, black bear, moose, wolf	10.2%	Licence area overlaps small portion of Eskay Creek Mine road
601036	Coast Mountain Outfitters/ Milligan Outfitting Ltd.	Mountain goat, grizzly, black bear	2.8%	Licence area south of Project infrastructure and overlaps with Temporary Frank Mackie Glacier access route

Source: Government of British Columbia (2012a), GOABC (2012), Grand Slam Outfitters & Advertisers (2012), Milligan Outfitting Ltd. (2012) n/a = Not Available

An interview was completed with the former licence holder in 2009 to understand how the licence area was used and accessed. The information included below may not necessarily apply to current activities.

In 2009, hunting occurred across all of the 7,770 km² licence, although it was sometimes concentrated in specific areas within the territory, which are characterized by prime wildlife habitat. The Teigen Creek area was noted to "be an area of pristine wilderness that acts as a wildlife corridor to the Unuk River for grizzly bears". Bears were often observed in the area during the coho and steelhead runs during the autumn (D. Drinnan, pers. comm.).

Depending on the area, the licence was formerly accessed by aircraft on wheels or floats or by jet boat. Floatplanes departed from Tatogga Lake, while aircraft with wheels departed from Burrage Creek Strip or Bob Quinn airstrip. Jet boat access was gained from Bell II crossing or Treaty Creek crossing. Misty Mountain Outfitters did not have a cabin in the guide outfitting area but had a lodge outside of the RSA on Tumeka Lake (D. Drinnan, pers. comm.).

As of 2009, the guide outfitting licence for Misty Mountain Outfitters had been operational for 11 years, with one or two trips taken per year, on average. Trips were typically made between spring and early summer for grizzly bear hunting and between August and September for goat hunting. Most clients were from Canada and the US, with approximately 70% of clients estimated to be repeat customers (D. Drinnan, pers. comm.).

4.5.3.3 Northwest Ranching and Outfitting

The guide outfitting licence for Northwest Ranching and Outfitting (licence number 600502) overlaps the western section of the RSA, including sections of the Unuk and South Unuk River watersheds and sections of the Eskay Creek Mine road. Approximately 10% of the guide outfitting

^{*} This data was current as of 2011

area attributed to Northwest Ranching and Outfitting is located within the RSA (Table 4.5-2). The licence holder has operated in the area for 25 years (H. Gutfrucht, pers. comm.).

In an interview in 2009 it was noted that, on average, six trips were made into this tenure per year, typically with two American or European clients. Trips were usually conducted between August and October and were composed of both repeat and new clients. However, trips did not occur near the Unuk River area and almost exclusively occurred farther north within the licence area outside of the RSA.

In 2009, Northwest Ranching and Outfitting earned approximately \$35,000 per hunt and employed two seasonal workers. The company had plans to expand the business in the northern section of the tenure, outside of the RSA, by focusing on sheep (H. Gutfrucht, pers. comm.).

This licence area was accessed by floatplane embarking out of Telegraph Creek. No supporting infrastructure, such as cabins or camps, was used within the area. Because it is difficult to access, resident hunting within the area was noted to be uncommon (H. Gutfrucht, pers. comm.).

4.5.3.4 Coast Mountain Outfitters

The southern portion of the RSA overlaps almost 3% of the guide outfitting licence registered to Coast Mountain Outfitters (licence number 601036; Table 4.5-2). No permanent project infrastructure is located within the licence area; however, the Temporary Frank Mackie Glacier Access route would traverse this area.

A 2009 interview revealed that Coast Mountain Outfitters had been operating within this guide outfitting licence area since 1984. A second-generation family business, it has remained active for the last 25 years. On average, Coast Mountain Outfitters hosted 70 to 90 trips per year between the last week of April and the last week of February. Approximately two of these trips occurred within the RSA and generally took place in late May or early June (R. Milligan, pers. comm.).

The licence has been primarily accessed by foot from a cabin at Bowser Lake, which can be reached via jet boat from the Bell II bridge on Highway 37. Alternatively, ATV access is available via a logging road near Bowser River to an old logging yard. From here, a jet boat provides further access into the territory. Occasionally the owner will fly in from Stewart to some sections of his licence area (R. Milligan, pers. comm.).

In 2009, Coast Mountain Outfitters took one to two clients out per trip, almost all of whom were from the United States. Clients were offered angling services at various locations including Meziadin Lake, where they could stay at a cabin. There is a cabin at Bowser Lake and one abandoned cabin along Bowser River at the mouth of Todd Creek (R. Milligan, pers. comm.).

Coast Mountain Outfitters employed the owner, three full-time employees, and six part-time employees in 2009. Full-time employees earned approximately \$30,000 to \$40,000 per year, while part-time employees typically earned \$15,000 to \$25,000 in a season (R. Milligan, pers. comm.).

The most popular species hunted include grizzly bear and mountain goat. Grizzly bear were mostly found around Bowser Lake and Mt. Anderson on the north side of the lake as well as near Bowser River. These were prime bear denning areas. Mountain goats were targeted on the slopes to the

north of Bowser Lake. From information recorded in 2009, the guide outfitting operation accounted for seven to ten grizzly bear kills, 20 to 30 goat kills, and 40 black bear kills on average per season (R. Milligan, pers. comm.). The owner noted a decline in the grizzly bear population near Bowser Lake since the 1980s, which he attributed to increased access to the area resulting from a bridge built over the lower river (R. Milligan, pers. comm.).

The owner had no plans to expand his business in 2009, given it was profitable and sustainable, mostly because he had a high quota and a particularly large tenure area, giving him an advantage over smaller operations. He valued guide outfitting for reasons beyond the economic returns he generated, with aspirations his children would carry on the business in the future (R. Milligan, pers. comm.).

4.5.4 Resident Hunters

4.5.4.1 Overview

Resident hunters, although not restricted to specific territories like guide outfitters, must follow regulations regarding hunting seasons and conservation targets. Data capturing the approximate levels of resident hunter harvest are available for all three WMUs, but determining how these numbers relate to the Project RSA is difficult.

4.5.4.2 Harvest Data

Resident hunters in WMUs 6-16, 6-17, and 6-21 focus primarily on hunting moose and black bear. Other species hunted include mule deer, caribou, goat, sheep, grizzly bear, and wolf. Since 1976, moose hunting has decreased in WMU 6-17, while it has increased in 6-16 and 6-21 (BC MOE 2012d). The harvesting of black bear and wolf peaked in the late 1980s in WMU 6-16, whereas numbers have decreased in WMU 6-17 and remained relatively consistent for these species in 6-21 (Appendix 1). In the years between 1996 and 2008, these management units ranged between an average of 66 and 84 moose hunters, whereas all other species combined ranged between 51 hunters in WMU 17 and 82 hunters for WMU 21 (see Table 4.5-3 for further information on average number of hunters and kills in each WMU).

Table 4.5-3. Resident Hunters, 1976 to 2008

	Average Number of Hunters (Average Number of Kills)					
	Moose Sheep Goat Black Bear Grizzly Bear Wol					
WMU 6-16	84(21)	No data	9(2)	23(14)	10(4)	13(4)
WMU 6-17	65(14)	2(0)	6(2)	16(7)	9(3)	17(17)
WMU 6-21	84(27)	22(5)	22(10)	11(4)	14(4)	13(2)

Source: (BC MOE 2012d)

4.5.4.3 Aboriginal Hunters

Specific data on hunting activities and species harvested were not available as Aboriginal hunters are not required to apply for wildlife tags or to record their harvests with the Fish and Wildlife Branch. The locations of two Skii km Lax Ha hunting or trapping cabins along Bell-Irving River at Skowill Creek and Spruce Creek are identified on Figure 4.6-1 (Rescan 2009b).

4.6 Trapping

4.6.1 Overview

The Project's RSA overlaps seven trapping licences. Interviews were completed with three trapline holders. Table 4.6-1 summarizes the trapline number, proportion of RSA overlap with the trapline area, and the trapline area location relative to the RSA. Figure 4.6-1 depicts the trapline boundaries near the Project as well as identified trapline cabins within the RSA.

Table 4.6-1. Trapping Licences

Tranlina No	Percentage of Trapline Area in RSA	Transing Area Logation relative to the DSA
Trapline No.	ROA	Trapline Area Location relative to the RSA
621T003	96.4%	 Mine Site infrastructure overlaps this licence area.
617T015	32.3%	 Encompasses northern portion of PTMA.
616T011	46.6%	 Encompasses southern portion of PTMA, a portion of the Mitchell-Treaty Twinned Tunnels, as well as the Treaty Creek access road.
616T012	35.5%	• Includes Todd Creek and Bowser River, both of which drain into Bowser Lake. Located to south of proposed infrastructure.
621T001	67.7%	 Located approximately 10 km to southwest of Mine Site.
621T004	18.2%	 Located approximately 15 km north of PTMA.
621T005	0.6%	Minor overlap located approximately 22 km north of Mine Site.

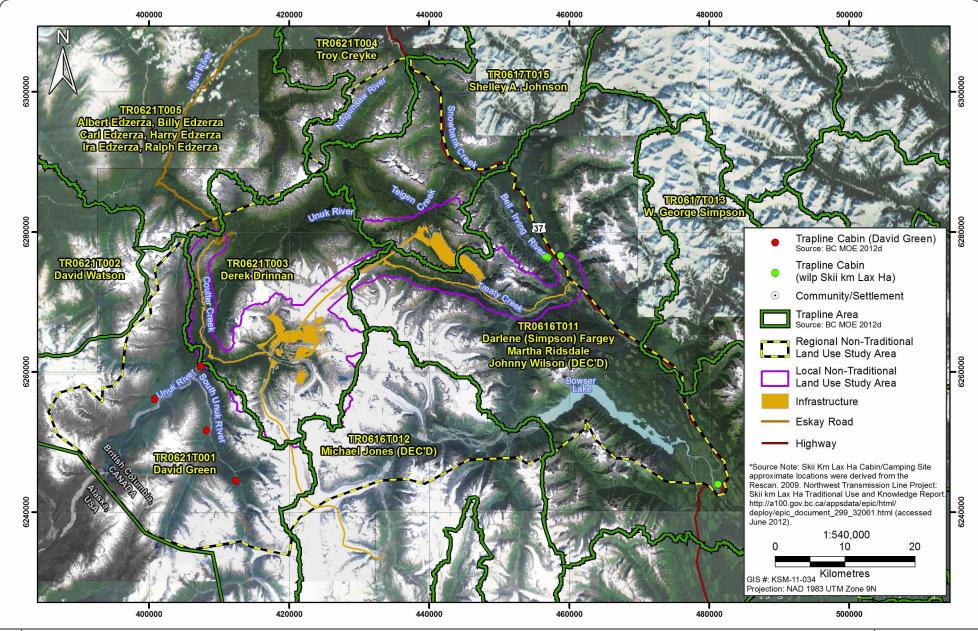
Source: BC MOE (2012e)

Traplines 617T015 and 616T011 belong to Skii km Lax Ha members. In 2009 trapline 616T013, which intersects slightly with the eastern edge of the RSA, was amalgamated with 616T011. The current area of 616T011 now encompasses the area of both of these traplines (M. Williams, pers. comm.).

4.6.2 Harvest Data

Trapline harvest data and the owner index from 1985 to 2009 were obtained from the BC MOE Fish and Wildlife Branch (B. Jex, pers. comm.). There are no harvest data available for three traplines that overlap the RSA (see Section 3.3.3, Data Limitations).

Species commonly harvested on traplines include marten, squirrel, beaver, lynx, weasel, mink, and wolverine (Rescan 2009b). The average price per pelt fluctuates with market demand and the annual average price typically affects the level of trapline use in a given year. Overall prices have risen steadily since the early 2000s, though they fell following 2008 (B. Monroe, pers. comm.). Average pelt prices fetched at North American Fur Auctions sales in 2012 for these species ranged between less than \$1 (squirrel) to over \$300 (wolverine; Table 4.6-2).



SEABRIDGE GOLD KSM PROJECT Trapline Licenses and Cabins in the Non-Traditional Land Use Study Areas

Figure 4.6-1



Table 4.6-2. Average Price per Pelt, North American Fur Auctions, 2012

Species	Average Market Price per Pelt (CAD\$) in 2012
Marten	\$84.52
Squirrel	\$0.63
Beaver	\$31.18
Lynx	\$191.05
Weasel	n/a
Mink	\$23.00
Wolverine	\$317.75

Source: NAFA (2012) n/a = not available

According to the number of individual harvests reported to BC MOE since 1985, the traplines with the highest level of activity are 616 T011 (2,145 individuals), 617T015 (1,431 individuals), and 621 T001 (1,676 individuals; Table 4.6-3). Data available for trapline 616 T011 relates to its period of use before the amalgamation with 616 T013. No historic use data are available for former 616 T013 trapline. Based on the number of pelts reported per year and each year's average pelt price of each species, revenues for active traplines in the RSA ranged from \$11,800 to over \$82,000 for all years between 1985 and 2009 (BC MOE 2012e).

Table 4.6-3. Summary of Trapline Activity and Use, 1985 to 2009

Trapline	Most Recent Use (to 2009)	Total Individuals Trapped for all Years* (1985 to 2009)	Level of Activity** (1985 to 2009)
621T003	2006	271	Low
617T015	2004	1,431	High
616T011	2009	2,145	High
616T012	1989	No data	Low
621T001	2009	1,676	High
621T004	2004	No data	Low
621T005	1999	No data	Low

Source: BC MOE (2012e)

4.6.3 Trapline Holder Interviews

Three trapline holders were interviewed regarding their use of the area in 2009: 616T001, 621T004, and 621T003.

^{*} Sum of all reported harvests for each year trapped

^{**} Low = 0 to 500 total individuals trapped Medium = 501 to 1,000 total individuals trapped High = 1,001 to 5,000 total individuals trapped

Trapline holder 616 T001 has owned his trapline for approximately 35 years. He primarily used the South Unuk River area down to Border Lake, accessing the tenure by helicopter, and had four cabins that he uses while spending approximately three months a year in the area (see Figure 4.6-1). He usually travelled through the tenure by foot, cutting trails and collecting marten furs. He had averaged 70 pelts a year, with catches as high as 120 and as low as 40 depending on the year (D. Green, pers. comm.).

Trapline territory 621T003 is roughly in the centre of the RSA, and as of 2009, it had been held by the current holder for approximately seven years. Two trips a year were made after the snow melt, gaining access along the Eskay Creek Mine road, which was the area where most trapping activity took place. Marten was the primary species trapped. According to the trapline holder the quality of his trapping experience was deemed important and viewed to be as important as the economic benefits (D. Drinnan, pers. comm.).

In 2009, marten was the primary species caught for trapline 621 T004. The territory was noted to be generally good for finding game, except in areas of higher terrain. Aside from the economic benefits of trapping, the trapline holder enjoyed the culture of working the trapline (T. Creyke, pers. comm.).

4.7 Commercial Recreation Licences

4.7.1 Overview

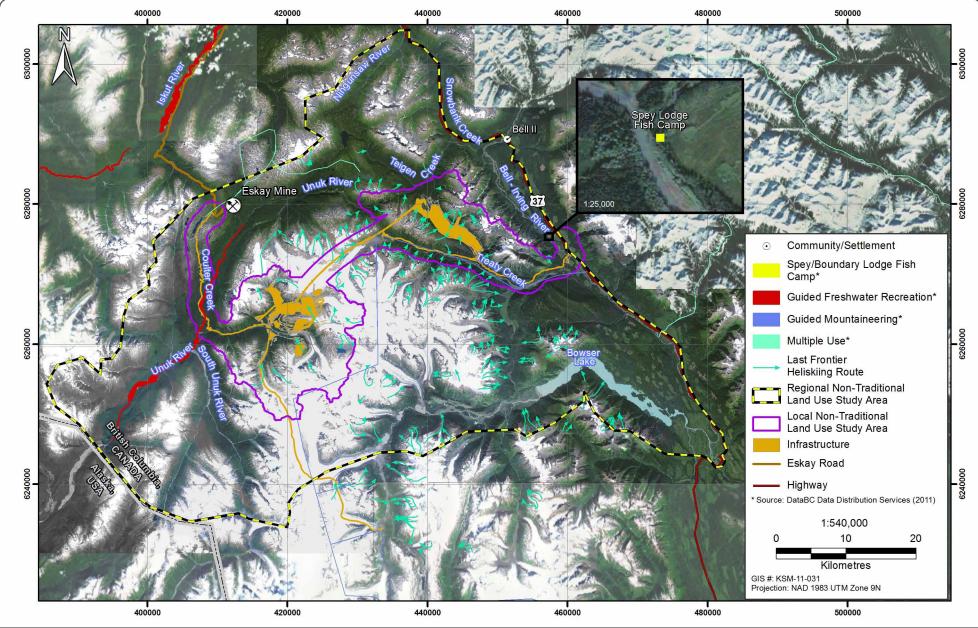
There are six commercial recreation licences that intersect or lie within the RSA as at December 2012. The locations of these tenures are shown on Figure 4.7-1. Table 4.7-1 summarizes the company name and type of commercial recreation licence. Interviews were completed with five licence holders.

Table 4.7-1. Summary of Commercial Recreation Licence Holders

Company Name	Type Of Commercial Recreation Licence
Gary Brown	Multiple Use Commercial Recreation
Last Frontier Heliskiing	Heli-ski
Rivers West Enterprises Ltd.	Multiple Use Commercial Recreation
Walter Faetz (Spey Lodge)	Fishing Camps
Bear Enterprises	Guided Mountaineering
The Explorers League: World and Wilderness Rafting Expeditions Ltd.	Guided Freshwater Recreation

Source: Government of British Columbia (2012b)

The multiple use commercial recreation licence held by Gary Brown overlaps with his guide outfitting licence area (see Section 4.5.3). Although the guide outfitting licence was acquired in 2012, this commercial licence has been held since 1999 and remains valid until 2014 (Government of British Columbia 2012b). As of August 2012, the current licence holder had not yet visited his tenure area (G. Brown, pers. comm.).



SEABRIDGE GOLD KSM PROJECT Commercial Recreation Licences in the Non-Traditional Land Use Study Areas

Figure 4.7-1



4.7.2 Heli-skiing

Last Frontier Heliskiing (LFH) has been operating for 16 years with a five-month season beginning in mid-December and running to the end of April. The current licence has been held since 2007 and is valid for a 12-year period (Government of British Columbia 2012b). LFH has two lodges to accommodate clients, one at Bell 2 and one in Stewart. Heli-ski services are offered in the winter, and both lodges operate as hotels in the off-season. The licence area extends from the lodge at Stewart to the Bell 2 Lodge and encompasses approximately 9,500 km² of prime heli-skiing area. The licence area is characterized by mountains, lakes, glaciers, valley floors, rivers, and creeks. Bell 2 also includes a gas station and coffee shop (F. Fux, pers. comm., 2010).

During the ski season LFH usually operates two or three locally contracted helicopters to make trips between the lodge and the mountain tops multiple times throughout the day. Each helicopter can accommodate three groups of five and is typically full throughout the season. The Director of Operations says LFH has been successful, in part, due to the location, which is remote and surrounded by pristine wilderness. The availability of "fresh powder" even when it has not snowed in weeks provides the client with an experience that is difficult to obtain in more southerly locations (F. Fux, pers. comm., 2012).

Overall, business has been steady over the past decade, with only a slight decrease in client number in 2008. Prices for a seven-day package range from \$7,680 at the beginning and end of the season to \$10,580 at the height of the season. LFH draws clients internationally with about 70% of its clients from Europe, 20% from the US, and 10% from elsewhere. Approximately 50 to 60% of its clients are repeat customers. The total number of occupied lodge nights is estimated at 10,000 to 12,000 per year (F. Fux, pers. comm., 2012).

The high use areas, identified in interviews in 2008, were those closest to Bell 2 Lodge, including the runs to the northeast and southwest of the lodge (M. Brackenhofer, pers. comm.). The LFH tenure contained over 400 runs, some of which were added and/or modified each year. During low visibility weather, which averaged one day per week, the runs closest to the lodge were used almost exclusively. Within the RSA, the Snowslide Range (adjacent to the proposed PTMA) made up half of the daily total of about 12 to 18 runs. The proposed mine pit locations directly overlap two runs (Oh Be Gosh and Mitchell Creek) and the Process Plant is near two runs (Lakeside and Empress). The proposed PTMA intersects approximately 11 runs.

4.7.3 Lodging

Rivers West Enterprises Ltd., based in Vernon, runs and operates Bell 2 Lodge (go2 Tourism 2012). The licence applies to the lodge and accommodation only. The current licence has been held since 2004 and will remain valid through to 2014 (Government of British Columbia 2012b).

4.7.4 Fishing Camps

4.7.4.1 Spey/Boundary Lodge

Spey Lodge provides fly-fishing expeditions and lodging at two locations: Spey Lodge, located outside of the RSA on the banks of the Skeena River east of the Skeena and Copper rivers confluence, and Boundary Lodge located within the LSA on the Bell-Irving River, south of

Bell II and west of Highway 37 (W. Faetz, pers. comm.). According to a 2012 interview, the commercial recreation licence was obtained in 2004 and lodges were constructed in 2005. The licence remains valid through to 2014 (Government of British Columbia 2012b).

Spey/Boundary Lodge has been sold out for the last four seasons and brings in clients from Europe and Japan. The owner estimated that about 75% of the business is repeat customers. The cost for a six-night package is \$4,400 and a seven-night package is \$5,200 (Spey Lodge 2012).

Spey Lodge employs five staff and operates from March to November, serving approximately 120 clients per year who stay for minimum of five days and a maximum of 14 days; the average stay is about eight days. A group usually consists of six people, who participate in catch-and-release fly-fishing at both locations using boats, two-hand rods, or a flat rod. The lodge provides transportation to and from each location, both of which are accessible by road. Steelhead and salmon are the most popular and most common species of fish caught. There are three boat launches associated with the business at Bell I, Glacier Creek, and Bell II. When discussing the popularity of Spey Lodge, the owner felt customers returned just as much for the outdoors experience as for the fly-fishing (W. Faetz, pers. comm.).

4.7.4.2 Other Angling Activities

A 2010 interview revealed that angling activities had been operating out of the Bell 2 Lodge for 10 years. Angling trips are no longer organized by the lodge or River West Enterprises, though they remain available for purchase through the lodge by independent operators (Bell 2 Lodge, pers. comm.). Angling trips in 2010 were led over eight weeks in the fall, starting in September. Approximately 64 clients went angling during the season.

Most activity focussed on steelhead fishing along the Bell-Irving River, including its tributaries, such as Teigen Creek. They used a tent camp along the Bell-Irving River approximately 15 km south of Bell 2 Lodge just above Treaty Creek for overnight trips. Interviews with independent angling agencies were not completed.

4.7.5 Guided Backcountry Expeditions

Bear Enterprises (now Bear Mountaineering and the Burnie Glacier Chalet) is based out of Smithers and had been operating in the RSA since 1995. The current licence has been held since 2004 and remains valid until 2014 (Government of British Columbia 2012b).

In an interview, the owner stated that the company offered guided backcountry expeditions and took clients between Bell II and Hyder, Alaska, along routes that included parts of the Knipple Glacier, Teigen Creek, and Hodkin Lake, depending on the chosen route. Bear Enterprises typically used this licence area for one expedition in the late winter once every five years. Typically groups of two to six were taken per trip, mostly composed of Canadian and US clients who were drawn to the area by its topography, climate, high quality visual landscapes, accessible terrain for less experienced travellers, as well as an interest in regional history (C. Dietzfelbinger, pers. comm.).

Access to the licence area in 2010 was typically gained by Highway 37, though occasionally a helicopter was chartered for a short trip from Bell II. The owner hoped to expand Bear

Enterprises' services in the area to include more infrastructure offered at Bell 2 Lodge (C. Dietzfelbinger, pers. comm.).

4.7.6 River Rafting

The Explorers League, according to an interview with the owner in 2010, offered guided freshwater rafting tours along their licence area, travelling down the Unuk River from near its confluence with Storie Creek into Alaska. They had operated in the area for approximately 10 years, and their current licence remains valid through to 2014 (Government of British Columbia 2012b).

The company typically offered one seven-day trip a year during June, accommodating up to 20 individuals made up of Canadian, US, and some international clients. The most recent trip occurred from June 10 to 16, 2012, at a cost of \$5,000 per participant (Explorers League 2008). The trip down Unuk River involved hiking, camping, and wildlife viewing, with access via the existing Eskay Creek Mine road. A strong draw for clients was the remote wilderness encountered along the licence area, including a variety of wildlife found in the area (P. Thomson, pers. comm.).

The company's hiring practices focus on benefiting local economies, and this licence area provides economic opportunities for local First Nations, as well as access to remote traditional landscapes in the area. According to the owner, an important part of the business is the social and communal culture experienced while on a rafting trip, which provides opportunities for clients and tour guides to share the experience of exploration (P. Thomson, pers. comm.).

4.8 Angling

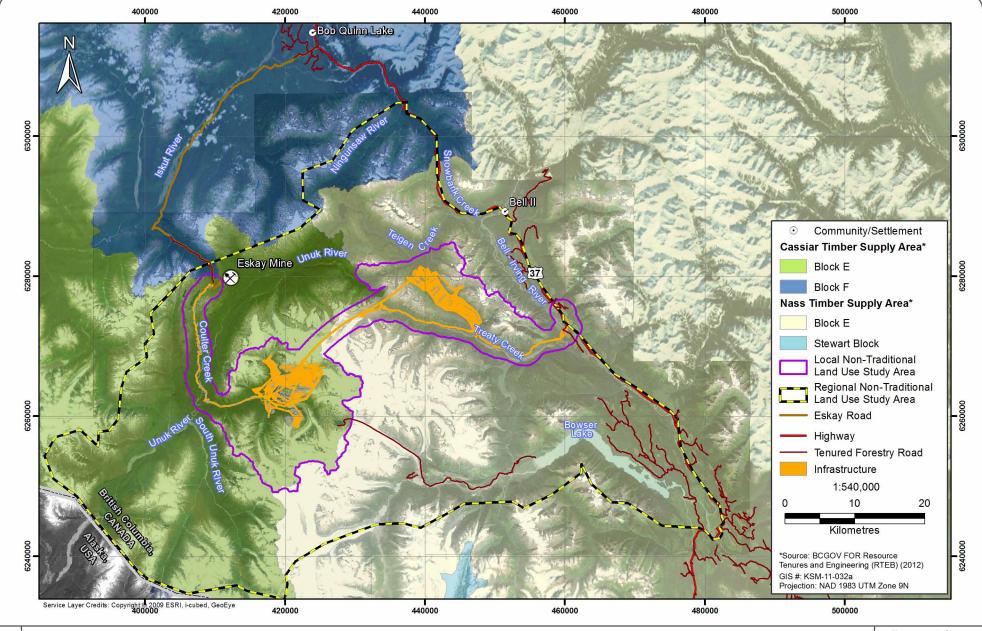
Angling activities are pursued through a commercial recreation licence and are discussed in Section 4.7.

4.9 Forestry

The proposed Project overlaps two forest districts (Skeena Stikine and Kalum), as well as two TSAs including Cassiar and Nass. The Cassiar TSA includes the height of land between the Iskut and Unuk River drainages and the Teigen and Ningunsaw drainages. The Nass TSA is linked to the area covered under the Nass South SRMP (BC MFLNRO 2012c). Figure 4.9-1 depicts the TSAs and related cutblocks.

The Cassiar TSA is administered by the Skeena Stikine Forest District. It is the largest TSA in BC, covering approximately 13.2 million ha or one-sixth of the province. The RSA overlaps about 0.6% of the Cassiar TSA. About 25% of the Cassiar TSA (approximately 3.7 million ha) is considered productive forest area managed by the Crown. An additional 8.5 million ha is considered non-productive or non-forested. The latest supply analysis conducted in 2001 states that approximately 5.4% of productive Crown forest, or 1.3% of the total TSA, is considered available for timber harvesting. The current Annual Allowable Cut (AAC) for the Cassiar TSA is 305,000 m³. For the 2001 to 2006 period, the last date range for which data are available, approximately 1.46 million m³ of undercut volume was reported; in other words, five years of harvesting only totalled about 61,000 m³, or 20% of the current AAC (BC MFLNRO 2012b).

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Figure 4.9-1

Forest Timber Supply Areas in the Non-Traditional Land Use Study Areas

Figure 4.9-1



The Nass TSA covers 1.67 million ha and is administered by the Kalum Forest District. The RSA overlaps approximately 5.4% of the Nass TSA. Crown-owned productive forest land managed by the Crown equals 39% of the total TSA area. About 189,000 ha are considered available for timber production and harvesting. Approximately 59% of the total land base is considered non-productive or non-forested. The current AAC for this TSA is 865,000 m³, a 24% reduction from the previous AAC. A 2007 Chief Forester Order states that current harvesting levels only represent 25% of the AAC (BC MFLNRO 2012d).

The RSA has not experienced significant logging activity. Most of the timber harvest to date has occurred in the eastern part of the RSA with the closest logging activity along Highway 37 approximately 8 km east of the proposed PTMA. As at December 2012, there are four forest licences within the Project's RSA and three located outside of the RSA boundary (Figure 4.9-2). A limited number of forestry roads are also located within the RSA. Table 4.9-1 provides a summary of the licensee, licence number, TSA, and licence area location with respect to Project infrastructure.

Table 4.9-1. Summary of Forest Licence Holders in Regional Study Area

Licensee	Licence Number	TSA	Licence Area Location
BC Hydro and Power Authority	L48982	Cassiar and Nass	Adjacent to Highway 37
District Manager Skeena-Stikine	L48499	Cassiar	Mine Site
Seabridge Gold Inc.	L48517	Nass	PTMA
Pretium Resources Inc.	L48433	Nass	Southwest of the PTMA

Source: Government of British Columbia (2012b)

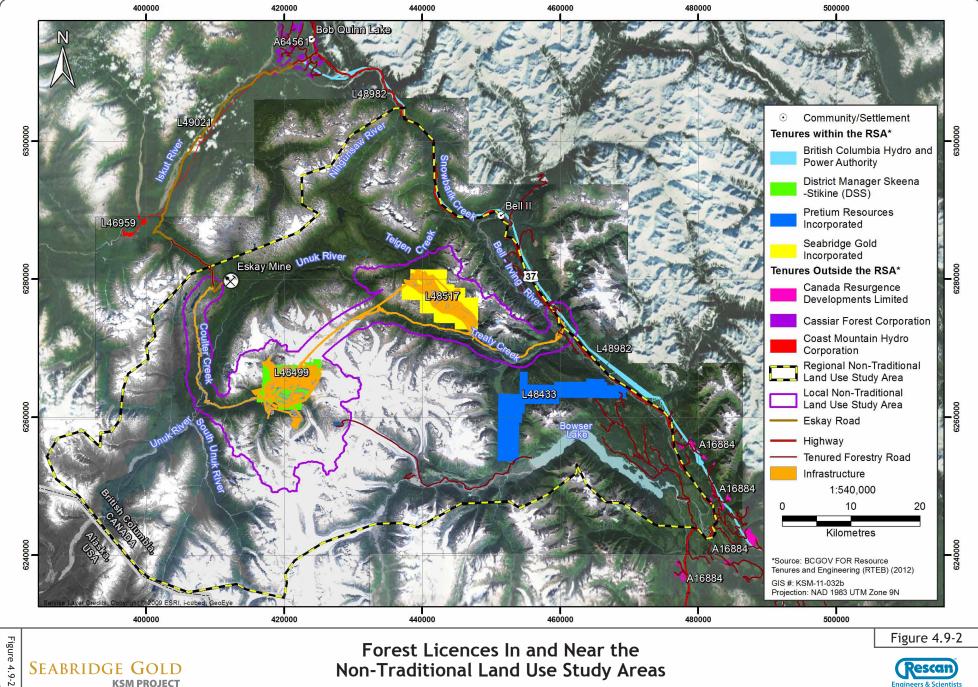
The licence number held by BC Hydro and Power Authority is linked to the ongoing construction of the Northwest Transmission Line (NTL; see Section 4.15 for a description of this project). The licence held by the District Manager Skeena-Stikine is located within the LSA at the Mine Site. This licence is tied to a *Mines Act* (1996c) permit and has been approved for the Proponent, though it remains temporarily attributed to the District Manager Skeena-Stikine pending issuance (W. Foster, pers. comm.). The Proponent holds a forest licence that overlaps with its proposed PTMA, and Pretium Resources Inc. holds a licence to the southwest of the LSA and any Project infrastructure.

4.10 Mining and Mineral Exploration

4.10.1 Overview

Northern BC has experienced an increase in exploration and mining activities in recent years due to high global demand for commodities and robust commodity prices. Until 2008, the Eskay Creek Mine operated near the proposed KSM Project. Several other mineral properties to the north of the RSA are either permitted or at advanced stages of exploration and have entered the BC environmental assessment process (Rescan 2012).

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Forest Licences In and Near the Non-Traditional Land Use Study Areas Figure 4.9-2



4.10.2 Mineral Claims

A mineral claim is a claim for a metal ore or natural substance found in the place or position in which it was originally formed, thereby requiring extraction via mining (BC MEMPR 2012). There are 40 mineral claims adjacent to and within the RSA, held by individuals and corporations, and includes claims held by Seabridge (Government of British Columbia 2012a). The 14 largest mineral claims in the area and their location relative to the RSA and LSA are noted in Table 4.10-1.

Table 4.10-1. Mineral Claims in Relation to LSA and RSA

Mineral Claim Holder	Located in the LSA	Located in the RSA
Pretium Exploration Inc.	Y (Mine Site and PTMA)	Υ
Seabridge Gold Inc.	Υ	Υ
Teuton Resources Corp.	Y (Mitchell-Treaty Twinned Tunnels)	Υ
St. Andrew Goldfields Ltd.	Y (Mine Site)	Υ
Eskay Mining Corp.	Y (Coulter Creek access road)	Υ
Estate of Rodney Victor Kirkham	N	Υ
Geofine Exploration Consultants Ltd.	Y (Treaty Creek access road)	Υ
John Chrisostom Bot	N	Υ
Matthew John Mason	N	Υ
Joel Gillham	N	Υ
Barrick Gold Inc.	Y (Coulter Creek access road)	Υ
Cache Minerals Inc.	N	Υ
Kelly Brent Funk	Y (Treaty Creek access road)	Υ
North Bay Resources Inc.	N	Υ

Source: Government of BC (2012a)

Figure 4.10-1 depicts the location of the aforementioned mineral claim holders as at December 2012. There 26 smaller claims areas are under 2,000 ha, none of which overlap with the LSA. These have been aggregated on the figure for improved readability.

4.10.3 Placer Claims

Placer claims apply to metal or natural substances that can be mined but are found in loose earth, rock, gravel, and sand (BC MEMPR 2012). As at December 2012 there are five placer claims located primarily within the LSA (Government of British Columbia 2012a). In addition to Seabridge Gold Inc., placer claims are owned by (see Figure 4.10-2): Lyncorp Mining Services Ltd., Lawrence Edward Brulotte, Pretium Exploration Inc., and Allan Robert Schindel.

4.11 Water Licences

All water in BC is owned by the Crown on behalf of residents of the province. Authority to divert and use surface water is obtained by a licence or approval in accordance with the statutory requirements of the province's *Water Act* (1996e) and the *Water Protection Act* (1996f). Licences are awarded and managed by the Water Protection and Sustainability Branch of the BC MOE (BC MOE 2012g).

PROJECT # 0868-016-33 GIS No. KSM-11-047 December 19, 2012 400000 420000 440000 460000 480000 500000 Community/Settlement Eskay Road Highway Infrastructure Local Non-Traditional Land Use Study Area Regional Non-Traditional 🤳 Land Use Study Area Mineral Tenure Holder Name* by Total Area with Study Area Seabridge Gold Inc. Pretium Exploration Inc. Teuton Resources Corp. St. Andrew Goldfields Ltd. Eskay Mining Corp. Kirkham, Estate of Rodney Victor Geofine Exploration Consultants Ltd. Bot, John Chrisostom Mason, Matthew John Gillham, Joel Barrick Gold Inc. Cache Minerals Inc.

Funk, Kelly Brent North Bay Resources Inc. <2,000 ha within the Study Area 1:540.000 Kilometres *Current as of December 5, 2012 Source: BCGOV MEM Mineral Titles and Policy Branch GIS #: KSM-11-047 Projection: NAD 1983 UTM Zone 9N 480000 500000 400000 420000 440000 460000 Figure 4.10-1 Mineral Claims in the Non-Traditional Land Use

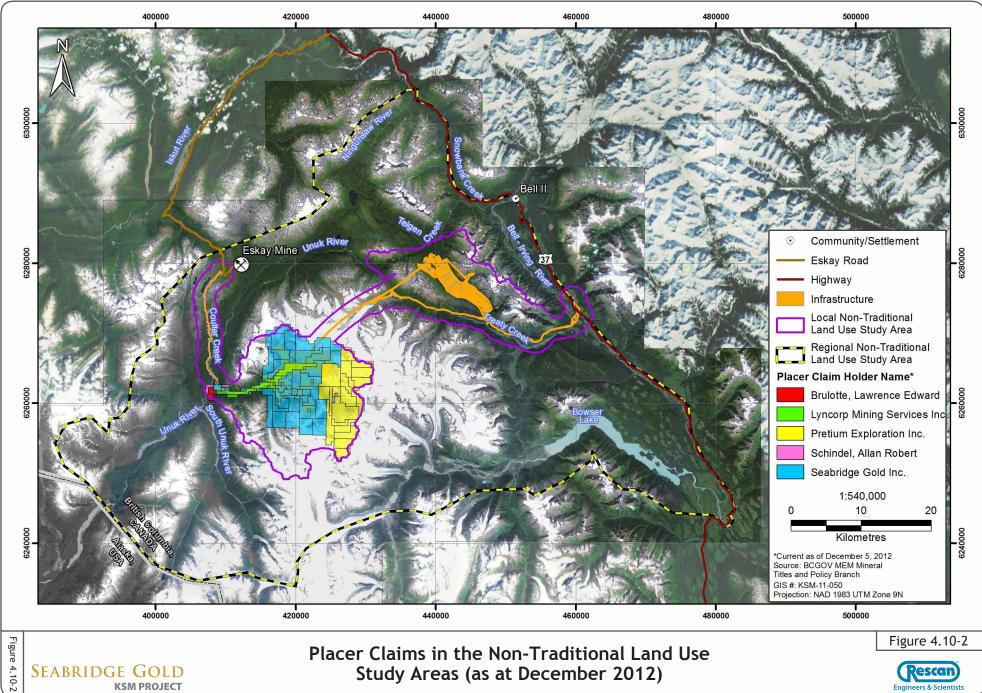
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Figure 4.10-1

Study Areas (as at December 2012)



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Placer Claims in the Non-Traditional Land Use Study Areas (as at December 2012)

Figure 4.10-2



There are two water licences (C107796 and C114327) within the LSA approximately 10 km north of the Mine Site. Both licences are held by Barrick Gold Inc. These water licences are held for purposes of camp and mining equipment use at the Eskay Creek Mine as well as overburden disposal. The licence allows for water withdrawal from Eskay and Carberry creeks and Tom Mackay Lake (Table 4.11-1).

Table 4.11-1. Water Licence and Water Licence Applications in Regional Study Area

Licence Number	Licensee	Stream	Use	Licence Status
C107796	Barrick Gold Inc.	Eskay Creek/Carberry Creek	Camp Use, Mining Equipment	Current
C114327	Barrick Gold Inc.	Tom Mackay Lake	Overburden Disposal	Current
Z123211	6167047 Canada Limited	ZZ Creek (PD81131)	Power Generation	Active Application
Z123537	6167047 Canada Limited	Sulphurets Creek	Power Generation	Active Application
6001374	Northern Hydro Limited	Tim Williams Creek	Power Generation	Active Application
6001372	Northern Hydro Limited	Unnamed Creek	Power Generation	Active Application
6001373	Northern Hydro Limited	Scott Creek	Power Generation	Active Application
6001355	Northern Hydro Limited	Todedada Creek	Power Generation	Active Application
6001376	Northern Hydro Limited	Wildfire Creek	Power Generation	Active Application
6001356	Northern Hydro Limited	Treaty Creek	Power Generation	Active Application
6001375	Northern Hydro Limited	Unnamed Creek	Power Generation	Active Application
6001354	Northern Hydro Limited	Unnamed Stream	Power Generation	Active Application
6001379	Pretium Resources Inc.	Brucejack Lake	Work Camps	Active Application

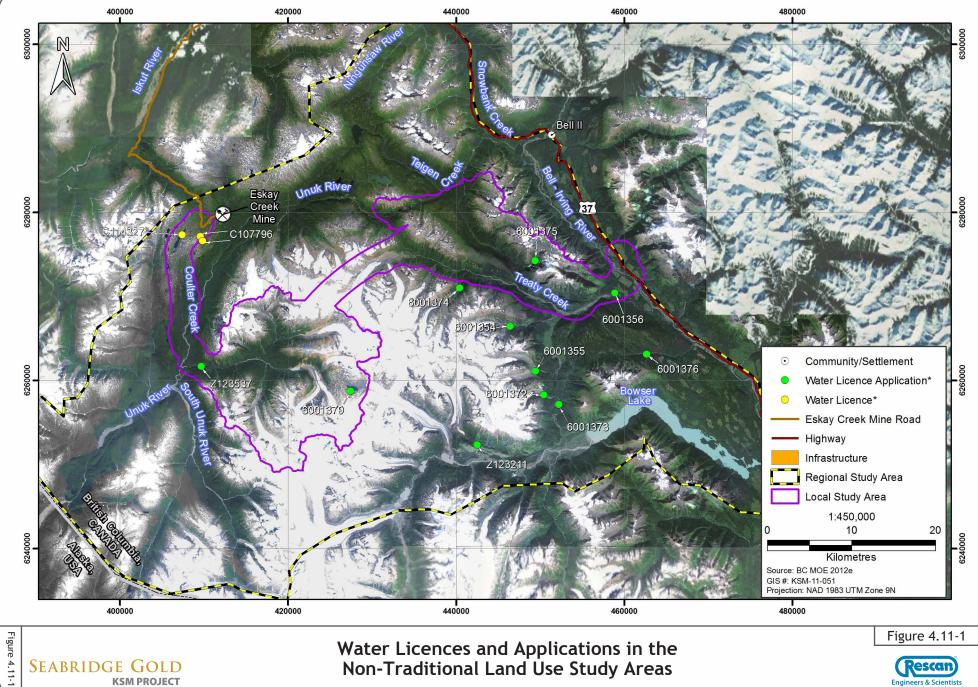
Source: BC MOE (2012f)

There are 11 applications for water licences within the RSA. Northern Hydro Limited has submitted eight applications, each for potential power generation developments, two of which fall within the LSA: one on Treaty Creek (6001356) and another on an unnamed creek to the east of the PTMA (6001375; Figure 4.11-1). Water licence application Z123537, held by 6167047 Canada Limited, is also located in the LSA immediately south of the proposed Coulter Creek access road. The company has a second application (Z123211) outside of the LSA, located to the west of Bowser Lake. Finally, Pretium Resources Inc. has also submitted a water licence application (6001379) within the LSA on Brucejack Lake to the east of the KSM Project Mine Site area.

4.12 Recreational Use

The RSA is in an area that provides a number of recreational opportunities. However, there are no formal hiking trails, snowmobile routes, or other recreational sites within the RSA. Any non-commercial recreational activities that may take place occur on an informal and non-registered basis.

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SEABRIDGE GOLD **KSM PROJECT**

Water Licences and Applications in the Non-Traditional Land Use Study Areas





4.13 Agriculture

There are no known agricultural activities or Agricultural Land Reserves within the RSA or LSA.

4.14 Oil and Gas

There are no oil and gas tenures in the RSA or LSA.

4.15 Transportation and Utilities

There are no paved roads, airstrips, utilities, or communications infrastructure within the RSA other than Highway 37. The nearest air strip is located at Bob Quinn Lake to the north of the RSA. Additional information on regional airstrips and flight service information are detailed in the KSM Project: 2012 Economic Baseline Report (Appendix 20-A).

Highway 37 (the Stewart-Cassiar Highway) runs along the eastern edge of the RSA. The route is part of the proposed haul route for concentrate from the PTMA to ports in Stewart and Prince Rupert (via highways 37A and 16 respectively). The highway runs north to south through northwestern BC for a total distance of 724 km, and is one of only two overland routes to Alaska. It connects a number of small, rural settlements in northwestern BC. The highway is almost entirely paved or sealed and has a speed limit of 80 to 90 km/hour. Conditions are suitable for a range of personal, recreational, and industrial vehicles, although motorists are cautioned that logging and other large trucks use the road 24 hours a day (BC MOTI 2012).

A small number of forestry roads are located within the RSA and can potentially be accessed via Highway 37 (Figure 4.15-1). One road appears to intersect with the proposed Treaty Creek access road, and the forestry roads are located some distance from Project infrastructure. It is likely that these roads are used by local First Nations and/or commercial fishing tenure holders to access fishing locations, trapline cabins, or boat launches (see Section 4.7). Figure 4.5-2 identifies a cabin location that could potentially be accessed using these forestry roads. The Eskay Creek Mine road falls within a small portion of the RSA to the northwest.

BC Hydro's NTL project is under construction with completion anticipated in 2014. The NTL involves the construction of a 335 km, 287 kV transmission line connecting the Skeena Substation, near Terrace, to a new substation near Bob Quinn Lake (BC Hydro 2012). The fully constructed NTL will run along the eastern border of the RSA and near Highway 37 (Figure 4.15-1). The Forrest Kerr run-of-river hydro facility, currently under construction along Forrest Kerr Creek and Iskut River, will be located adjacent to the RSA, northwest of the Eskay Creek Mine site.

SEABRIDGE GOLD KSM PROJECT

400000

Transportation and Utilities in the Non-Traditional Land Use Study Areas

460000

480000

440000

420000



500000



5. Conclusions

Through desk-based research this study has provided information on Crown tenures or third-party interests, land and resource uses, land and resource management plans, parks, protected areas, ecological reserves within the LSA and RSA. First Nation and Nisga'a Nation territories and land use planning was also described. Telephone and face-to-face interviews were conducted with the majority of identified stakeholders in order to determine the extent of their land and resource use.

Two land and resource management plan areas overlap the RSA: the Cassiar Iskut-Stikine LRMP overlaps part of the western RSA and the Nass South SRMP overlaps sections of the eastern half of the RSA. Mining activities are permitted in both the Cassiar Iskut-Stikine LRMP and the Nass South SRMP. There are three provincial parks—Ningunsaw, Border Lake, and Lava Forks—within or adjacent to the RSA. There is one ecological reserve—Ningunsaw River Ecological Reserve—outside of the RSA but adjacent to Ningunsaw Provincial Park. There are no parks or protected areas in the LSA.

Project components, notably the PTMA, fall within the northern portion of the Nass Area, as defined in the NFA, the southern portion of Tahltan Nation traditional territory, as well as the western portion of Skii km Lax Ha traditional territory (culturally linked to Gitxsan Nation). The traditional territory of Gitanyow First Nation also overlaps with the RSA, although no Project infrastructure is located in the traditional territory.

Where Aboriginal site-specific land and resource use data were available, no overlap was identified with proposed Project infrastructure. Information pertaining to traditional knowledge and traditional land use for each Aboriginal group is discussed, in the *Tahltan Nation Traditional Knowledge and Use Desk-based Research Report* (Appendix 30-A), *Skii km Lax Ha Traditional Knowledge and Use Desk-based Research Report* (Appendix 30-B), *Gitanyow First Nation Traditional Knowledge and Use Desk-based Research Report* (Appendix 30-C), and *Gitxsan Nation Traditional Knowledge and Use Desk-based Research Report* (Appendix 30-D). No First Nation or Nisga'a Nation communities are located near the RSA.

Few people access the area for recreational or commercial purposes, though those that do are motivated to do so by its pristine and isolated qualities. Access to the area is limited due to the lack of infrastructure in the region and difficult terrain. Access to the area is via Highway 37, the Eskay Creek Mine road and a small number of forest service roads.

Other stakeholders with interests or licence areas in the RSA include resident hunters, three guide outfitters, and seven trapline owners. Project infrastructure overlaps one guide outfitter (licence number 601066) as well as traplines 0621T003, 0616 T011 and 0617T015. Six local commercial tenure holders were identified, representing interests in angling, guided mountaineering, heli-skiing, and river rafting in various locations within the RSA, with limited overlap with Project infrastructure. Licence holders access their respective licence areas on a seasonal and short-term basis. Heli-skiing operations overlap with some of the Project infrastructure, although their commercial licence also applies to a large area of northwestern BC.

There are four forest licences within the RSA, one of which belongs to the Proponent, with another pending issuance to the Proponent. The RSA overlaps a small portion of the Nass TSA and Cassiar TSA, both of which have been harvested at levels far below their AAC.

Additionally, over 40 mineral and placer claims, as well as two water licences and 11 water licence applications, were identified within the RSA. Within the LSA, there are two water licences associated with the closed Eskay Creek Mine and two of the eleven water licence applications are located near the PTMA and proposed Treaty Creek access road.

There are a number of infrastructure and utilities based projects in development either adjacent to or outside of the RSA. Projects under construction are being developed to help support development of northwest BC, including the mining sector. A limited number of forest roads are also located within the RSA, primarily away from Project infrastructure.

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APPENDIX 1 - RESIDENT AND NON-RESIDENT HUNTING IN THE LSA SINCE 1975



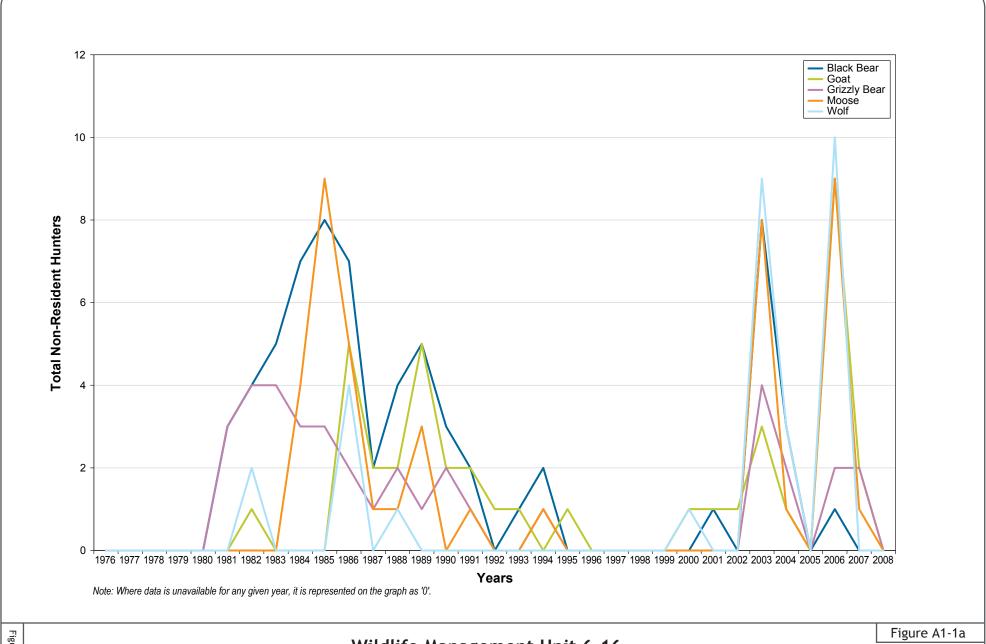


Figure A1-1a SEABRIDGE GOLD

KSM PROJECT

Wildlife Management Unit 6-16, Total Non-Resident Hunters



PROJECT # 0868-016-33 ILLUSTRATION # a37139w June 4, 2012

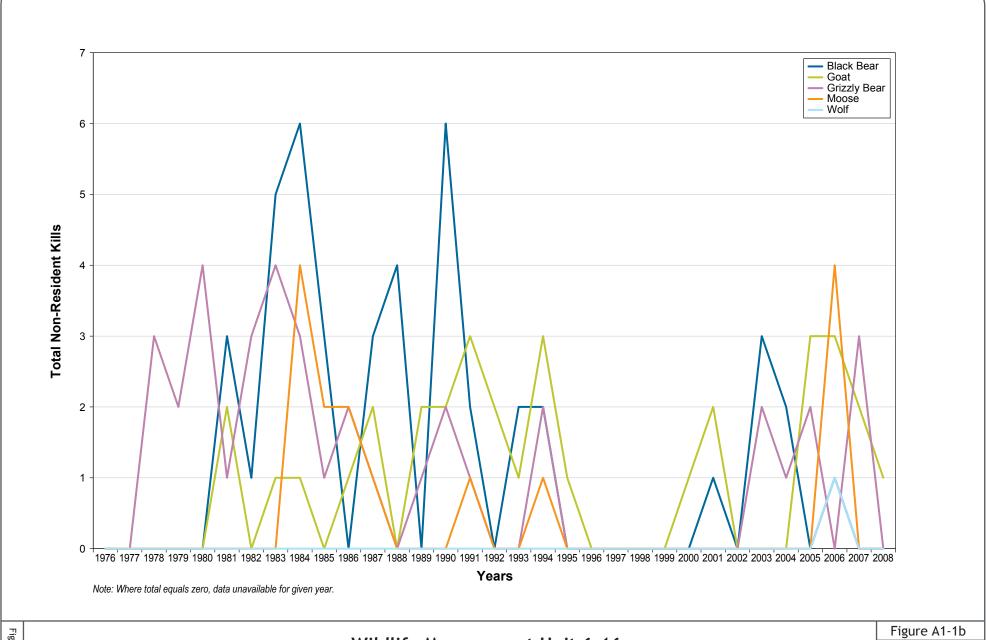


Figure A1-1b SEABRIDGE GOLD

KSM PROJECT

Wildlife Management Unit 6-16, Total Non-Resident Kills

PROJECT # 0868-016-33 June 4, 2012 ILLUSTRATION # a37146w

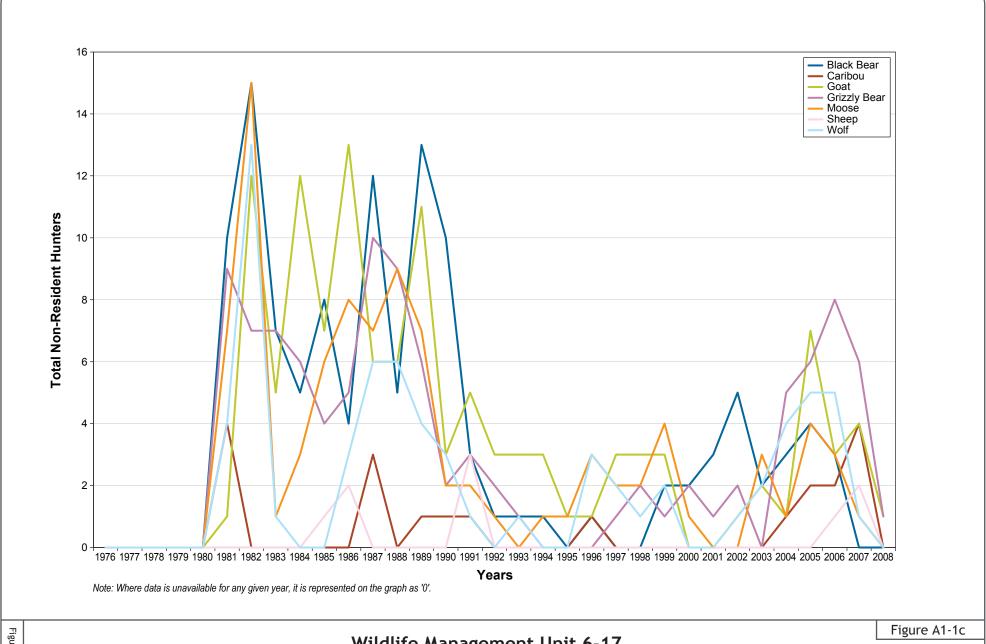


Figure A1-1c SEABRIDGE GOLD

KSM PROJECT

Wildlife Management Unit 6-17, Total Non-Resident Hunters



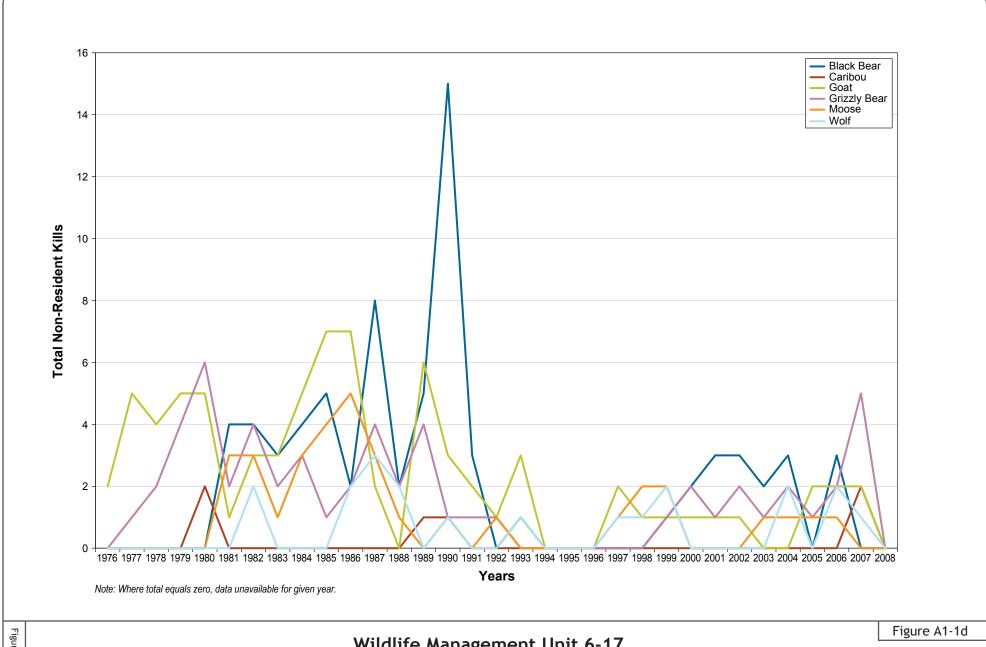


Figure A1-1d

SEABRIDGE GOLD KSM PROJECT Wildlife Management Unit 6-17, Total Non-Resident Kills



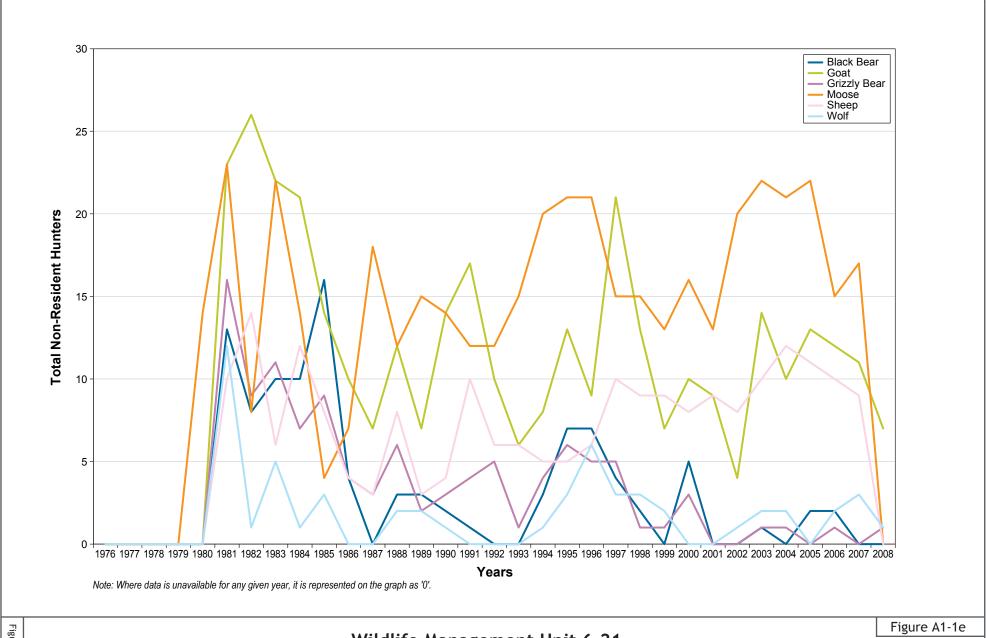


Figure A1-1e

SEABRIDGE GOLD KSM PROJECT Wildlife Management Unit 6-21, Total Non-Resident Hunters



PROJECT # 0868-016-33 June 4, 2012 ILLUSTRATION # a37141w

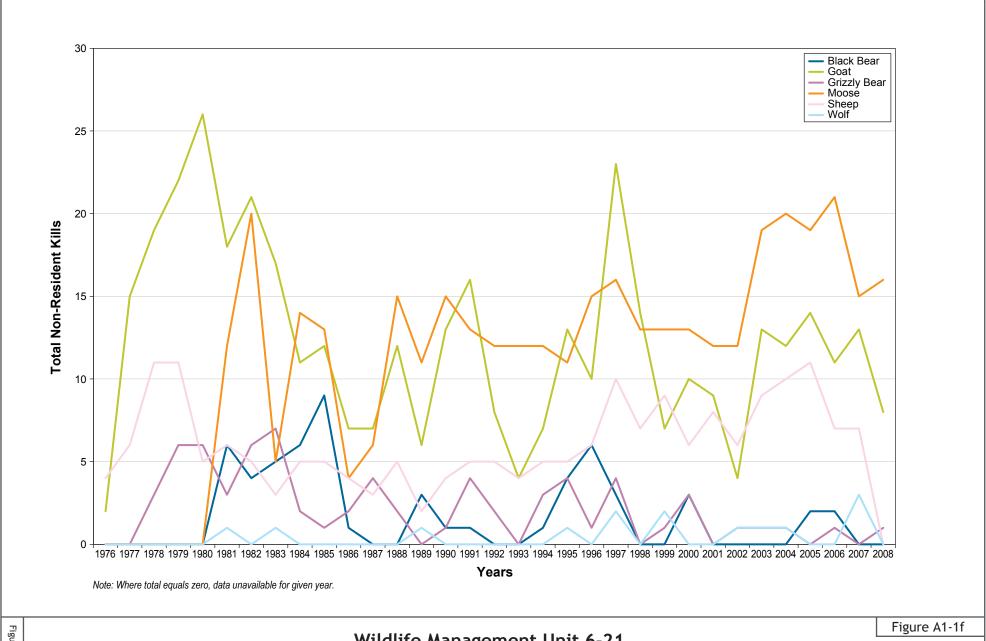


Figure A1-1f SEABRIDGE GOLD

KSM PROJECT

Wildlife Management Unit 6-21, Total Non-Resident Kills



PROJECT # 0868-016-33 June 4, 2012 ILLUSTRATION # a37148w

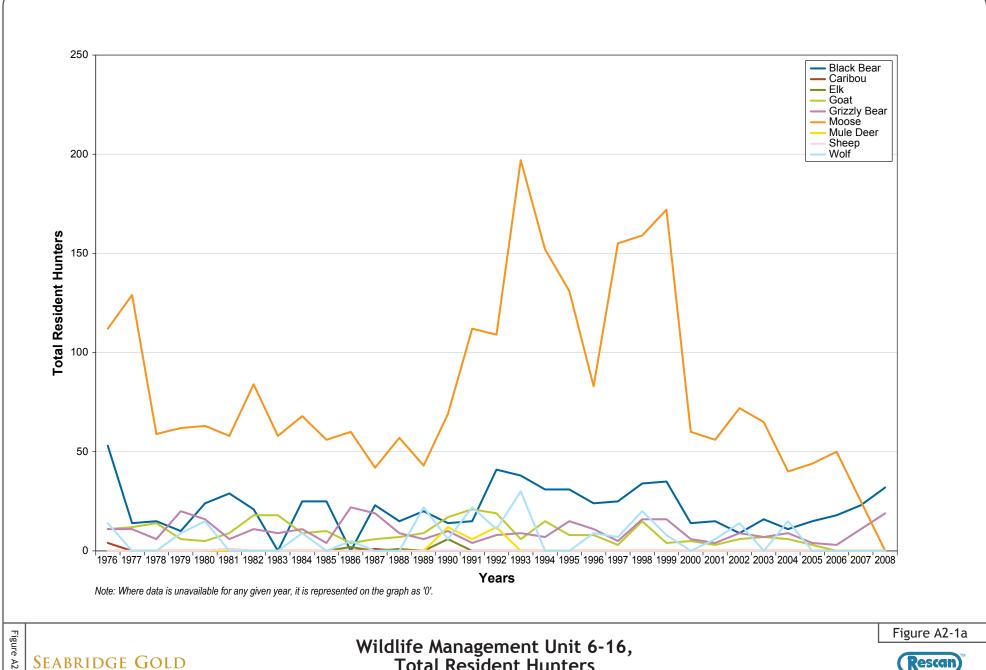


Figure A2-1a

KSM PROJECT

Wildlife Management Unit 6-16, Total Resident Hunters



PROJECT # 0868-016-33 June 4, 2012 ILLUSTRATION # a37142w

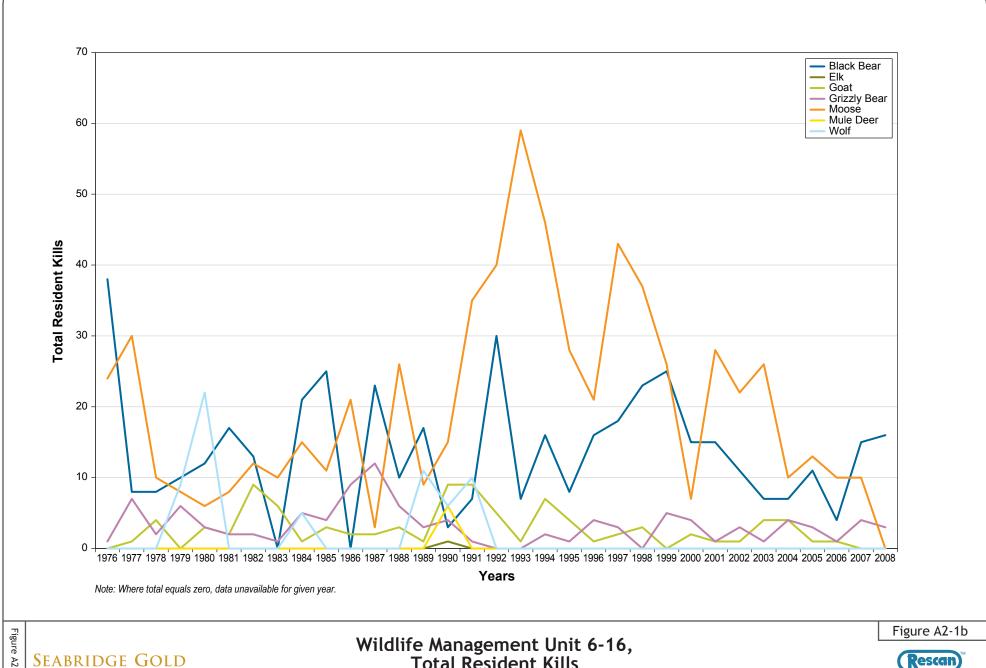


Figure A2-1b

KSM PROJECT

Wildlife Management Unit 6-16, Total Resident Kills



PROJECT # 0868-016-33 June 4, 2012 ILLUSTRATION # a37149w

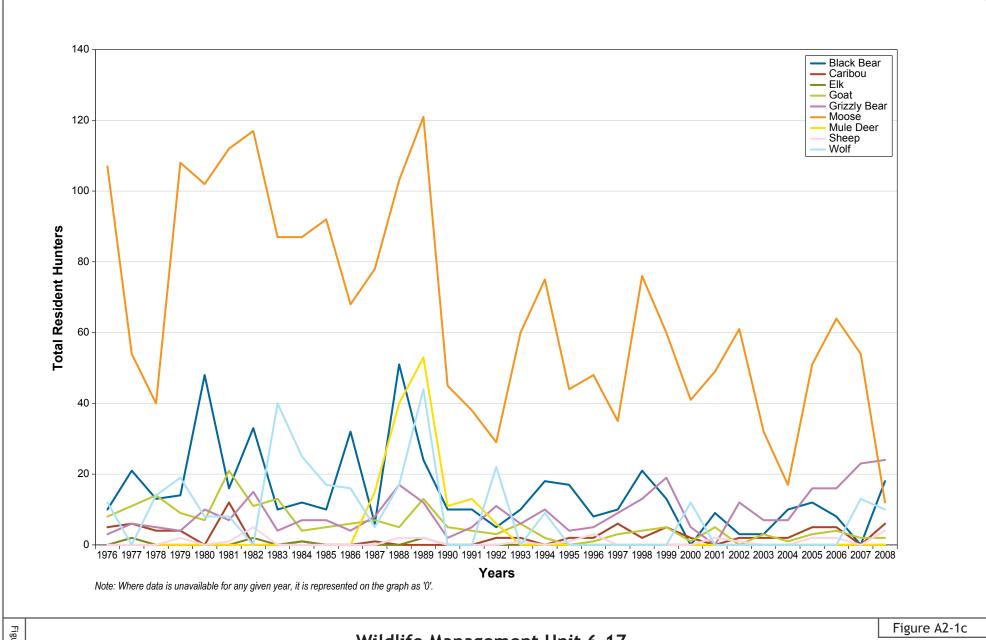


Figure A2-1c

SEABRIDGE GOLD

KSM PROJECT

Wildlife Management Unit 6-17, Total Resident Hunters



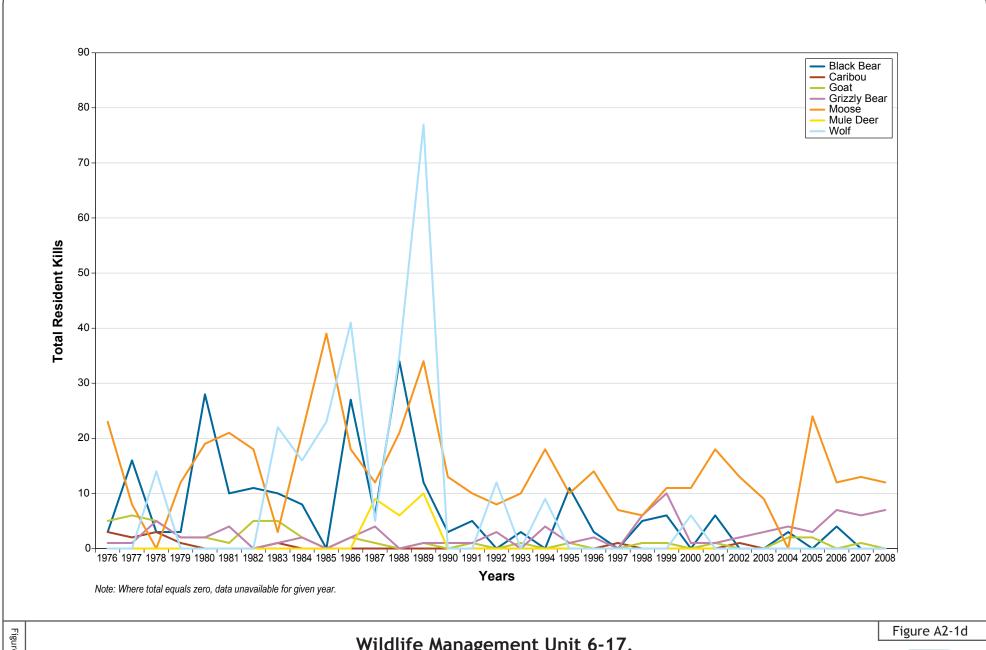


Figure A2-1d

SEABRIDGE GOLD KSM PROJECT Wildlife Management Unit 6-17, Total Resident Kills



PROJECT # 0868-016-33 ILLUSTRATION # a37150w June 4, 2012

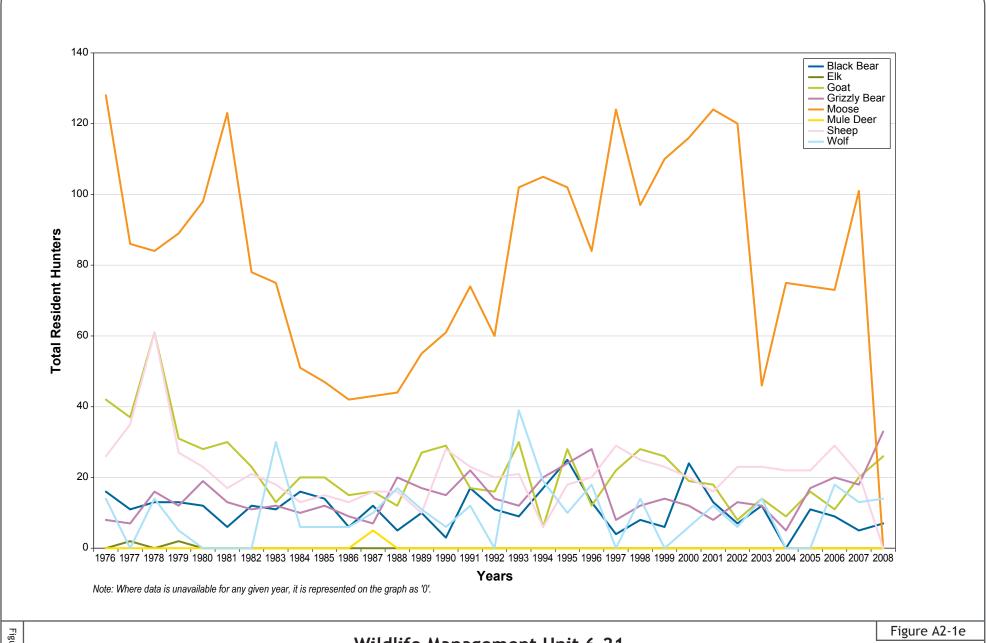


Figure A2-1e SEABRIDGE GOLD

KSM PROJECT

Wildlife Management Unit 6-21, Total Resident Hunters



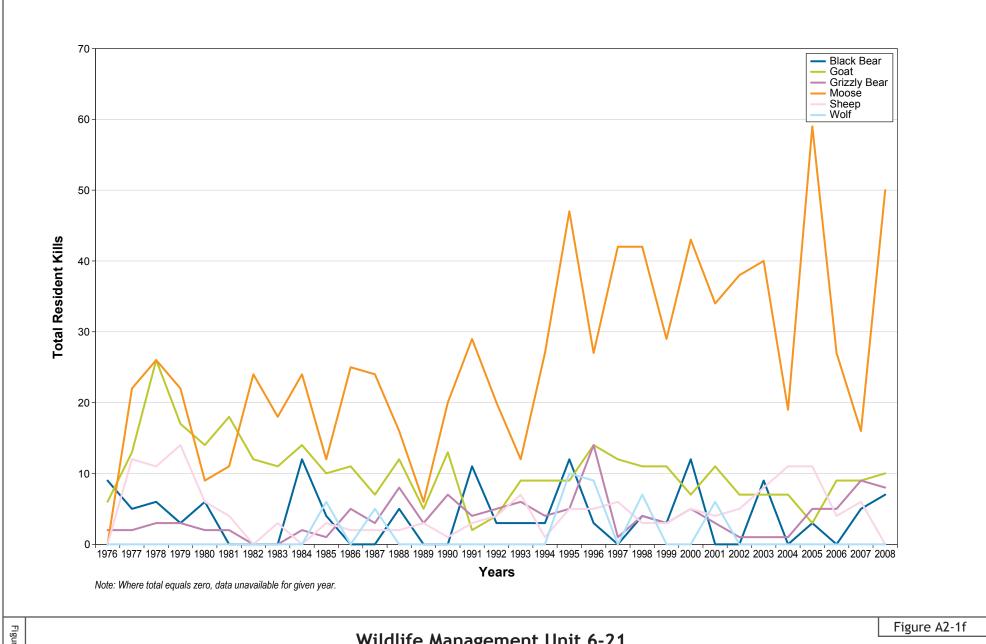


Figure A2-1f

SEABRIDGE GOLD KSM PROJECT Wildlife Management Unit 6-21, Total Resident Kills

