
APPENDIX 13.0-A
**Kitsault Project Nisga'a Rights, Interests,
and Values Report – Baseline Appendix**

TABLE OF CONTENTS

ACRONYMS, ABBREVIATIONS AND DEFINITIONS I

EXECUTIVE SUMMARY II

1.0 INTRODUCTION 1

 1.1 Overview 1

 1.2 Regulatory Requirements 3

 1.3 Objectives 4

2.0 METHODOLOGY 4

 2.1 Methods 4

 2.2 Study Area 5

 2.3 Limitations 5

3.0 RESEARCH RESULTS AND FINDINGS 6

 3.1 Overview 6

 3.2 Nisga'a Final Agreement 6

 3.2.1 Lands 6

 3.2.2 Forest Resources 8

 3.2.3 Access, Roads and Rights of Way 9

 3.2.4 Fisheries 10

 3.2.4.1 Overview 10

 3.2.4.2 Salmon Species 10

 3.2.4.3 Steelhead 11

 3.2.4.4 Non-Salmon Species 11

 3.2.4.5 Intertidal Bivalves 12

 3.2.4.6 Angling Guide Rivers 12

 3.2.4.7 Nisga'a Fisheries Management 12

 3.2.4.8 Lisims Fisheries Conservation Trust 13

 3.2.5 Wildlife and Migratory Birds 14

 3.2.6 Cultural Artefacts and Heritage 16

 3.3 Seasonal Round and Resource Importance 17

 3.4 Contemporary Land Use 18

 3.4.1 Hunting 18

 3.4.2 Fishing 20

 3.4.3 Timber and Non-Timber Forest Products 24

 3.4.4 Timber Products 24

 3.4.5 Non-Timber Forest Products 25

 3.4.6 Recreation 27

 3.4.7 Heritage 27

 3.4.8 Fee Simple Lands 28

 3.5 Contemporary Marine Use 28

 3.6 Tourism 29

 3.7 Land and Resource Use Planning 30

 3.7.1 Overview 30

 3.7.2 Fish 30

 3.7.3 Wildlife 30

 3.7.4 Heritage 31

 3.7.5 Recreation 31

 3.7.6 Timber and Non-timber Forest Products 32

 3.7.7 Water 34

 3.8 Summary 34

REFERENCES.....35

List of Figures

Figure 1.1-1: Nisga'a Rights and Interests Relative to the Proposed Kitsault Project2
 Figure 3.4-1: Map of Compulsory Inspection of Moose 19
 Figure 3.4-2: Summary of Timber and Botanical Forest Products Harvest and Revenue
 (2000-2008).....26

List of Tables

Table 1.1-1: Summary of Nisga'a Rights and Interests Related to the Kitsault Mine Site
 and Access Road ii
 Table 3.2-1: Volumes for Nisga'a Water Reservation 8
 Table 3.2-2: Summary of Nisga'a Salmon Entitlement per Species for the Nass Area 11
 Table 3.2-3: Summary of Nisga'a Steelhead Allocation..... 11
 Table 3.2-4: Summary of Lisims Fisheries Conservation Trust Net Assets and Disbursements
 (2000-2008)..... 14
 Table 3.2-5: Nisga'a Wildlife Allocations of Designated Species 15
 Table 3.3-1: Summary of Nisga'a Seasonal Round 17
 Table 3.4-1: Summary of Population, Nisga'a Allocations, and Harvest of Designated
 Species 20
 Table 3.4-2: Nisga'a Entitlements and Nisga'a Harvest of Salmon and Steelhead Species
 (2000-2010)..... 22
 Table 3.4-3: The Number of Sales Permits and Associated Openings..... 24
 Table 3.7-1: Summary of Objectives and Policies related to Nisga'a Forest and Agricultural
 Resources 32

ACRONYMS, ABBREVIATIONS AND DEFINITIONS

Abbreviation	Definition
BC EAA	BC Environmental Assessment Act
BC EAO	BC Environmental Assessment Office
CEAA	Canadian Environmental Assessment Agency
CFIA	Canadian Food Inspection Agency
DFO	Department of Fisheries and Ocean
EA	Environmental Assessment
ESCIA	Environmental, Social, and Cultural Impact Assessment
JFMC	Joint Fisheries Management Committee
MoE	Ministry of Environment
MNRO	Ministry of Natural Resource Operations
MSC	Marine Stewardship Council
NCG	Nisga'a Commercial Group
NFA	Nisga'a Final Agreement
NGO	Non-government Organization
NLG	Nisga'a Lisims Government
NLUP	Nisga'a Land Use Plan
NTFP	Non-timber Forest Product
NTL	Northwest Transmission Line
NWA	Nass Wildlife Area
Project	Proposed Kitsault Project
PSP	Paralytic Shellfish Poisoning
SMA	Special Management Area
TAH	Total Annual Harvest
TFL	Tree Farm License
VC	Valued Component
WMU	Wildlife Management Unit

EXECUTIVE SUMMARY

Avanti Mining Corporation is proposing a molybdenum mine located at the north end of Alice Arm, approximately 25 km northwest of Nisga'a Lands within the Nass Wildlife Area (NWA) and Nass Area as defined in the Nisga'a Final Agreement. This report contains the results of desk-based research of publicly available sources on Nisga'a land- and marine-based rights, title, interests, and values related to the proposed Kitsault Project. The focus of the report is on relevant portions of the Nisga'a Final Agreement (NFA), various Nisga'a Lisims Government (NLG) publications, and the Nisga'a Land Use Plan (2002). Additional information and understanding is expected to result from the collaboration between Avanti's social science practitioners and the Nisga'a Nation (in particular NLG) in an effort to fulfill the Environmental, Social, and Cultural Impact Assessment (ESCIA) Guidelines provided by NLG. This report provides an initial basis for an assessment of project-related effects on Nisga'a rights, interests, and values. It also provides a preliminary introduction and context for the discipline leads (i.e., wildlife, fish, vegetation, health, and heritage) for the development of their effects assessment. Table 1.1-1 provides a summary of the Nisga'a rights and interests identified in the proximity of the Kitsault mine site and access road from the desk-based research.

Table 1.1-1: Summary of Nisga'a Rights and Interests Related to the Kitsault Mine Site and Access Road

Location	Description of Right or Interest
Kitsault Mine Site (overlaps with Nass Wildlife Area and Nass Area)	Nisga'a fee simple land called <i>Gits'oohl</i> (former Gitzault Indian Reserve 24) is located approximately 5 km northwest of the proposed mine site. The level and season of use and access are not known at the time of writing. NLG report dilapidated structures and concerns about vandalism related to this property.
	Nisga'a Nation has rights to a commercial recreation tenure (until 2027), which is located approximately 5 km northwest of the mine site. The level and season of use and access are not known at the time of writing.
	Nisga'a Nation has water rights to Kwinatahl River (10% of flow volume). The Kwinatahl River flows to Alice Arm within approximately 2.5 km southeast of the mine site. The Nisga'a water reservation is for domestic, commercial, and industrial purposes. The details of when and how the Nisga'a Nation use this right is not known at the time of writing.
	Nisga'a have rights to harvest wildlife in the NWA, in particular allocations for grizzly bears, moose, and goats. The locations, level, season, and methods of wildlife harvest are not known at the time of writing.
	Nisga'a have trapping rights to four traplines within the Kitsault area (none overlap directly with the mine site or access road).
	Nisga'a have the right to harvest migratory birds in the Nass Area. The scale, location, season, and method of Nisga'a migratory bird harvest is not known at the time of writing.

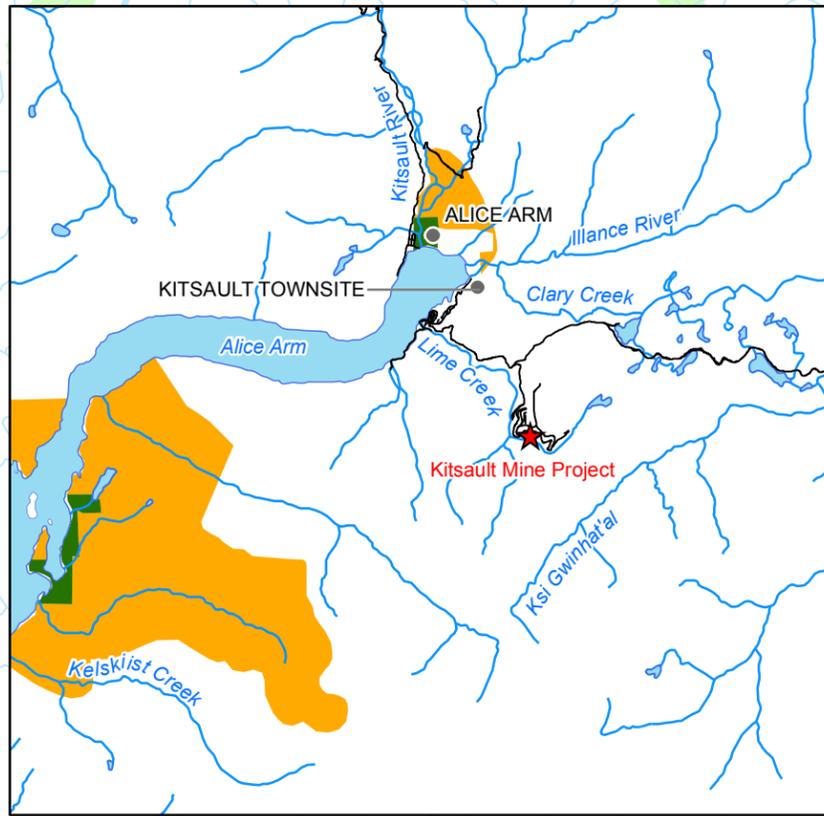
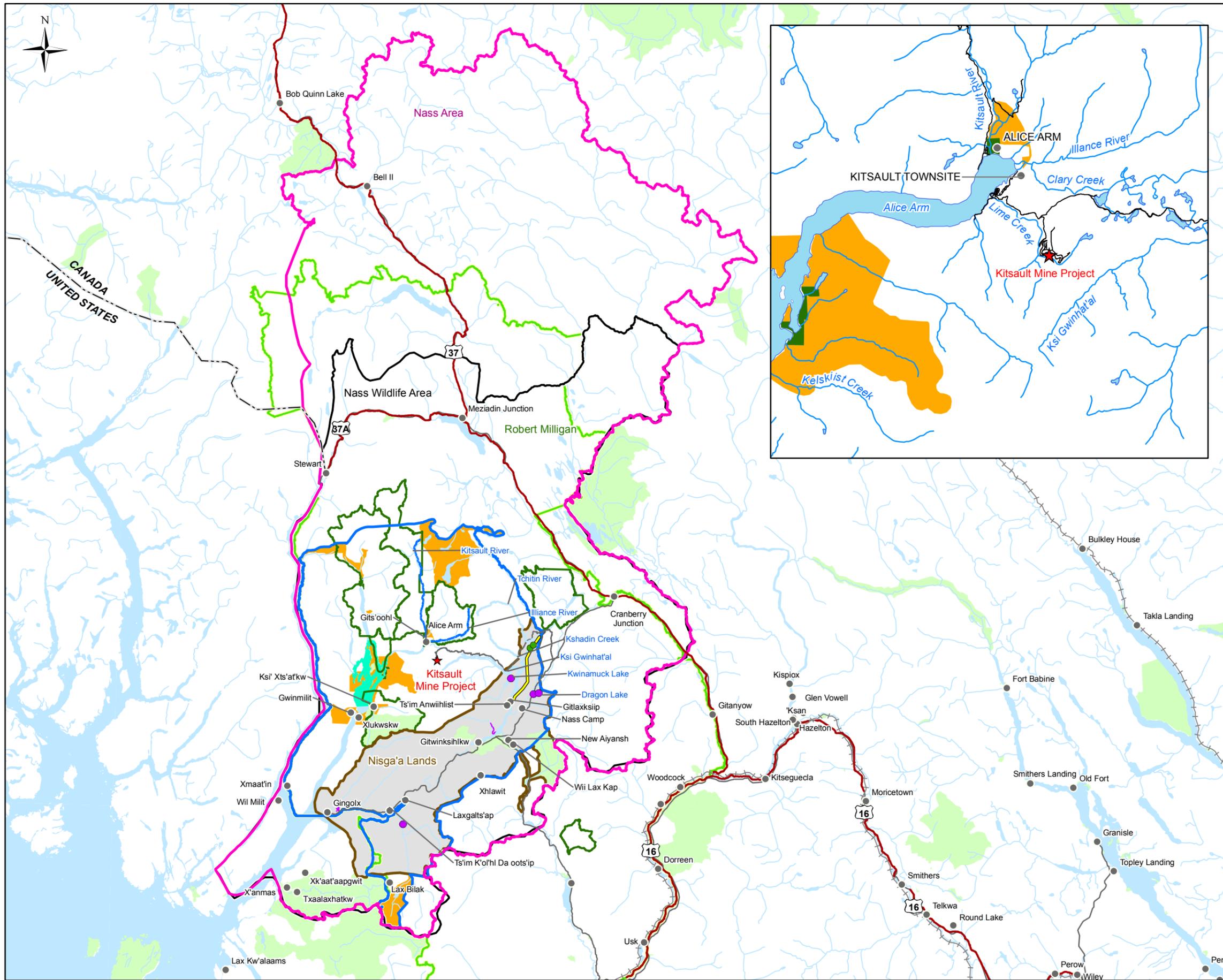
Location	Description of Right or Interest
	Nisga'a have the right to harvest salmon, steelhead, aquatic plants, oolichan, and intertidal bivalves within in the Nass Area. Much of Nisga'a salmon harvest occurs along the Nass River and estuary. Nisga'a oolichan and intertidal bivalves harvest are designated near Red Bluff and northern portion of Observatory Inlet to southern part of Alice Arm, respectively. Sockeye and pink salmon have the highest harvest among Nisga'a citizens.
Kitsault Access Road (overlaps with Nisga'a Lands)	Nisga'a citizens harvest and consume a variety of plants, berries, and mushrooms as part of their diet within Nisga'a Lands.
	The Nisga'a Nation owns timber resources on Nisga'a Lands.
	Nisga'a Nation has rights to regulate and manage pine mushroom harvest on Nisga'a Lands.
	The Nisga'a Land Use Plan (NLG 2002) has designated agriculture, botanical, and silvicultural zones.
	There are numerous recreational opportunities throughout Nisga'a Lands, including Kwinamuck Lake located 2.5 km south of the Kitsault access road, Dragon Lake, Gathering Strength canoe journey, recreation centres in Nisga'a Villages, Gitwinksihlkw playing field, and proposed Red Bluff oolichan camp are additional examples of recreation further away from the proposed Project.
	The NFA defines Crown rights to secondary roads on Nisga'a Lands, including the proposed Kitsault access road (i.e., Special Use Permit 9228).
	The Crown cannot limit Nisga'a citizen's ability to access areas outside of Nisga'a Lands to fulfill treaty rights without providing an alternative route.
	Nisga'a Nation is near completion of the Nisga'a Museum for storing and displaying Nisga'a artefacts repatriated from the BC Royal Museum and Museum of Civilization and future archaeological discoveries on and off Nisga'a Lands.
	According to the NFA, custodial agreements negotiated between the province and NLG govern future discovery and repatriation of Nisga'a artifacts.
	Sites of heritage interest to the Nisga'a Nation include old village sites, trails, grave sites, house sites, oral history landmarks and culturally modified trees (CMTs).
	The access road overlaps with the Grease Trail at the Nass River.
Nisga'a Nation has water rights to Kwinatahl River, which flows parallel to the access road for approximately 15 km. The details of when and how the Nisga'a Nation use this right is not known at the time of writing.	
Nisga'a Nation also has treaty rights to a percentage of the water in Kshadin and Tchitin Rivers (approximately 5 km and 15 km north of the access road). The Nisga'a water reservation is for domestic, commercial, and industrial purposes.	
Alice Arm	Nisga'a Nation has rights to harvest intertidal bivalves (including cockle, littleneck clam, butter clam, mussels, and manila clam). There is a Nisga'a exclusive harvest area in the northern part of Observatory Inlet extending to the southern portion of Alice Arm as per Appendix I of the NFA. The area is located 15 km southwest of the Kitsault Project. According to the annual fishing plans the harvest is designated between October 1 and March 31. There are several practices that the Nisga'a harvesters are required to abide by Nisga'a law.

Location	Description of Right or Interest
	Nisga'a allocations for dungeness, tanner, and king crabs, halibut, prawns / shrimp, herring, and aquatics plants may be negotiated with the province and Canada at a future date.

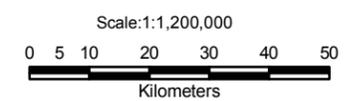
1.0 INTRODUCTION

1.1 Overview

Avanti Mining Inc. is proposing to redevelop the Kitsault mine, an open pit molybdenum mine located approximately 30 km northwest of New Aiyansh and 85 km northwest Terrace. The mine was previously in production from 1968 to 1972 and 1981 to 1982. The Project is on Crown Land within Nass Wildlife Area (NWA) and Nass Area as defined by the Nisga'a Final Agreement (NFA). The Kitsault Mine Project (Project) proposes to extract molybdenum at rate of 40,000 to 50,000 tonnes per day. The Kitsault access road utilises an existing Alice Arm Forest Service Road, which begins at the Nass Forest Service Road approximately 18 km northeast of Nass Camp. The access road overlaps with about 10 km of the northern extent of the Nisga'a Lands after the Nass Bridge parallel to the Nass River. Figure 1.1-1 depicts the location of the Kitsault Project, including access road, in relation to the various Nisga'a rights and interests. This report provides detailed information about Nisga'a land and marine resource rights, use, interests, and values as available from desk-based research with a particular focus on the rights and title defined in the Nisga'a Final Agreement (NFA) relevant to the proposed Kitsault Project.



- Legend**
- Populated Place
 - Nisga'a Archaeology Site
 - Nisga'a Recreation Site
 - International Border
 - Road
 - Grease Trail
 - Nisga'a Angling Guide Rivers
 - Highway
 - ++ Rail
 - Stream
 - Nisga'a Lands
 - Nass Area
 - Nisga'a Guide Outfitting Area
 - Government Guide Outfitting Area
 - Nisga'a Traplines
 - Nass Wildlife Area
 - Nisga'a Fee Simple Lands
 - Nisga'a Commercial Recreation Tenure
 - Parks, Protected Areas and Convergencies
 - Nisga'a Intertidal Bivalve Area
 - Nisga'a and Public Pine Mushroom Harvesting Area



Reference
 Base Data
 Geobase 1:20,000 (TRIM)
 Land and Resource Data Warehouse 1:20,000 (TRIM)
 Atlas of Canada scale 1:1,000,000.

CLIENT: Avanti Kitsault Mine Ltd.		
PROJECT: Kitsault Mine Project		
Nisga'a Lands, Areas, Rights and Interests		
DATE: May 2011	ANALYST: MY	Figure 1.1-1
JOB No: VE51988	QA/QC: MY	PDF FILE: 17-50-020_map_overview.pdf
GIS FILE: 17-50-020.mxd		
PROJECTION: UTM Zone 9	DATUM: NAD83	

Y:\GIS\Projects\VE51988_Kitsault\Maping\17_non-traditional-res\Baseline\17-50-020.mxd

1.2 Regulatory Requirements

Nisga'a, provincial, and federal legislation require the consideration and incorporation of information on potentially affected Aboriginal groups within the environmental assessment process. The Nisga'a Nation has law-making authority and jurisdiction over Nisga'a Lands with the option of requiring an environmental assessment for impacts to its lands and treaty rights, including areas outside of Nisga'a Lands. The NFA stipulates the preparation of an economic, social and cultural impact assessment (ESCIA), which has been further defined in the *Economic Social and Cultural Impact Assessment Guidelines* (Guidelines) issued by the Nisga'a Lisims Government (NLG) in November 2010 (NLG 2010a). In particular, the NFA (Chapter 10, Section 8) requires that a Nisga'a environmental assessment will:

- e. *assess whether the project can reasonably be expected to have adverse environmental effects on residents of Nisga'a Lands, Nisga'a Lands, or Nisga'a interests set out in this Agreement and, where appropriate, make recommendations to prevent or mitigate those effects;*
- f. *assess the effects of the project on the existing and future economic, social and cultural well-being of Nisga'a citizens who may be affected by the project;*
- g. *set out time periods within which the assessor must make its recommendation in respect of whether or not the project should proceed;*
- h. *provide for recommendations, based on the assessment, to the Party or Parties with decision-making authority over the project, in respect of whether the project should proceed;*
- i. *take into account any agreements between the project proponent and the Nisga'a Nation or a Nisga'a Village concerning the effects of the project; and*
- j. *be conducted and completed by a Party before that Party issues final approval (INAC 2000).*

The provincial government highly encourages the collection and integration of Aboriginal group information into the effects assessment of resource development. The BC *Environmental Assessment Act* (BC EAA) and the BC EAO's *Supplemental to Environmental Assessment Office 2009 User Guide: Application Information Requirements and Treaty Nations* outline provincial expectations and steps suggested for inclusion of Aboriginal treaty rights, interests, and values.

[A] proponent is assigned certain responsibilities for engaging with treaty First Nations in order to assist the Province to comply with its treaty obligations. This includes responsibility to gather information about how a First Nation's treaty rights, land, citizens and interests may be impacted by the proposed project, and about possible ways in which those impacts can be avoided or mitigated (BC EAO 2010a).

Section 11 Order, issued on November, 24 2010, and Section 13 (amendment to Section 11 Order), issued on March 28, 2011, specify the following requirements during the Pre-Application and Post-Application Review phases:

Proponent must consult with the Nisga'a Nation in a manner that enables British Columbia to comply with applicable provisions of the Nisga'a Final Agreement, and particularly, Chapter 10 (Environmental Assessment and Protection) of the Nisga'a Final Agreement (BC EAO 2011).

The *Canadian Environmental Assessment Act* (CEAA) also strongly recommends the inclusion of information on Aboriginal rights, title, use, activity, value, and interests related to the area of proposed development. The Canadian Environmental Assessment Agency (CEAA) provides guidelines for considering and incorporating Aboriginal knowledge and information into the environmental assessment process.

ATK [Aboriginal traditional knowledge] is held by the Aboriginal people who live in the area of a proposed project, and who have a long relationship with the lands and resources likely to be affected. As such, the input of ATK into the EA process can assist in an EA in many ways. For instance, ATK can:

- *provide relevant biophysical information, including historical information...;*
- *help identify potential environmental effects;*
- *lead to improved project design;*
- *strengthen mitigation measures;*
- *contribute to the building of enhanced long-term relationships between proponents, Aboriginal groups, and/or responsible authorities;*
- *lead to better decisions; and*
- *contribute to the building of EA and ATK capacity within Aboriginal communities and build an awareness of, and appreciation for, ATK in non-Aboriginal communities (CEAA 2010).*

1.3 Objectives

The objectives of this report are to summarise land- and marine-based Nisga'a rights, values, and interests relevant to the proposed Kitsault Project to form the basis of an effects assessment of the Project on the Nisga'a Nation. This report will also provide important information and context to frame and support discipline lead's assessment of potential effects, selection of Valued Components (VCs), development of mitigation measures, and determination of significance ratings. Additional, pending site-specific information will add to understanding of existing conditions and to assessing potential effects of the proposed Project.

2.0 **METHODOLOGY**

2.1 Methods

This report is a compilation of desk-based research from a variety of primary and secondary sources. They were reviewed with a focus on Nisga'a land and marine rights, interests, and values that may interact or overlap with the Kitsault Project footprint, including the mine site and access road. The main sources reviewed in detail for this report include:

- Nisga'a Final Agreement (NFA);
- Kitsault consultation activities (i.e., open houses and working group meetings);
- Nisga'a Lisims Government's website, reports and publications;
- Nisga'a Knowledge Network; and
- Nisga'a responses to the Northwest Transmission Line Project (NTL).

The report contains publicly available information of contemporary Nisga'a use and activity from desk-based research. The results of the research provide limited site-specific information about the locations, seasons, level and type of Nisga'a use and access considerations related to the proposed Kitsault Project. This report contains broad information about important matters to the Nisga'a Nation related to the mine site and access road. In November 2010, the Nisga'a Nation provided *Environmental, Social, and Cultural Effects Assessment* (ESCIA) guidelines as requirements to fulfill Chapter 10 of the NFA (NLG 2010a). Ongoing efforts by social science practitioners to fulfill the ESCIA guidelines in collaboration with the Nisga'a Nation may yield more specific and detailed information for future consideration and integration.

2.2 Study Area

Nisga'a treaty rights, resource use, and activity within 15 km of the project infrastructure, including mine site and access road, are summarised in this report. For particular Nisga'a values, the study area also includes the four Nisga'a Villages, including New Aiyansh, Gitwinksilkw, Laxgalts'ap, and Gingolx. Also, some quantitative data is only available for larger NFA-defined areas, including the NWA and the Nass Area, without differentiation of the data for relevant subareas, including the area in and around the Kitsault Project. Disaggregated data may be available in regular reports, data, or records maintained by the Nisga'a Nation. For the purposes of providing an indication of scale and scope, the aggregated data over the larger area is summarised in this report, where available, as a placeholder for the pending specific and disaggregated data and information.

2.3 Limitations

The report contains desk-based research results, which may not provide a comprehensive picture of Nisga'a use and activities in the area in and around the Kitsault Project, especially details related to location, season, frequency, intensity, methods, access considerations, and type of use. Attempts to collect additional information from the Nisga'a Nation are currently underway and information on site-specific Nisga'a interests and fulfilment of treaty rights is pending. Furthermore, this information provides a snapshot of ever dynamic and evolving Nisga'a activities and culture. Also, there was no prior input or review of this report by the Nisga'a Nation, as such, the results should be used with caution as they require Nisga'a confirmation and verification.

3.0 RESEARCH RESULTS AND FINDINGS

3.1 Overview

Since time immemorial, the area in and around the Nass River has been home to the Nisga'a people, who have and continue to occupy, harvest resources, and practice their culture and customs living closely connected to the land. The seasons determined the timing of Nisga'a traditional activities, including fishing, trapping, and harvesting and using a range of marine and terrestrial species. Salmon and oolichan play a central role in Nisga'a history, economy, sustenance, and relations with neighbouring Aboriginal groups. More recently Nisga'a activities include tourism, recreation, and hydroelectric developments. Trade with adjacent Aboriginal groups as well as Euro-Canadian contact and post-contact played an important part in Nisga'a development and history. Since the 19th century, imposed federal and provincial legislation and policies suppressed the Nisga'a rights, customs, culture, and matrilineal system.

The Nisga'a Final Agreement (NFA) is the first modern-day treaty signed in BC in the late 1990s, becoming effective in 2000. The NFA is a tripartite agreement between the Nisga'a Nation, British Columbia, and Canada that is constitutionally binding and describes Nisga'a Nation rights to self-government over Nisga'a Lands. The NFA defines Nisga'a title over Nisga'a Lands, rights to natural resources in the NWA and the Nass Area. Nisga'a Lisims Government (NLG) and the Nisga'a Village governments provide Nisga'a governance and administration of services, policies, initiatives, and programs relevant to the interests, needs, and values of Nisga'a citizens. According to the NFA, the NLG has authority to make laws related to operation and management of the Nisga'a Nation and its citizens with a jurisdiction over Nisga'a Lands held in fee simple. NLG has developed and enacted several Nisga'a laws, policies, and objectives related to property, forestry, fisheries, wildlife, and lands. NLG also participates in the co-management of fishery and wildlife resources in collaboration and coordination with the province and federal governments under the auspices of the Nass Wildlife Committee and the Joint Fisheries Management Committee.

The Kitsault Project mine site is located approximately 25 km west of Nisga'a Lands within the Nass Wildlife Area and Nass Area. The NFA defines Nisga'a rights and title in and around the Nisga'a Lands. The Kitsault access road overlaps with the northern extent of the Nisga'a Lands for about 10 km.

This section is organised into six subsections, including an overview of Nisga'a rights and title as defined and expressed in the Nisga'a Final Agreement (INAC 2000), Nisga'a seasonal round and resource importance, existing conditions related to Nisga'a contemporary land and marine use, tourism, and land and resource use planning based on *A Land Use Plan for the Nisga'a Nation* (NLG 2002).

3.2 Nisga'a Final Agreement

3.2.1 Lands

The proposed Kitsault Project is within the Nass Area and the Nass Wildlife Area (NWA) as defined by the Nisga'a Final Agreement (NFA). The mine site falls outside of Nisga'a Lands

owned by the Nisga'a Nation in fee simple under the terms of the NFA. Nisga'a Lands are approximately 25 km to the east of the Kitsault mine site. The Kitsault access road overlaps with approximately 10 km of Nisga'a Lands after the Nass Bridge toward Alice Arm parallel to the Nass River on the west side. Nisga'a Nation owns surface and subsurface rights on Nisga'a Lands; however, does not have rights to submerged lands, which are owned by the Crown. There are pre-existing non-Nisga'a interests within Nisga'a Lands which are granted certificates of possession under the NFA. Nisga'a Lands are subdivided into Nisga'a Private Lands, Nisga'a Public Lands, and Nisga'a Village Lands. Nisga'a Private Lands are defined as those areas of Nisga'a Lands that have been designated for exclusive use, excluding public access and protecting environmental, cultural, and resource development interests.

The proposed Kitsault Project is 5 km southeast of Nisga'a Category A Lands, namely *Gits'oohl* (former Gitzault IR No. 24). Adjacent to these lands held in fee simple by the Nisga'a Nation, there is Nisga'a commercial recreation tenure with use and activity described in the *Nisga'a Commercial Recreation Tenure Management Plan* (1998). According to the NFA, the tenure term lasts until 2027. The province has committed to avoiding issuing any other competing commercial tenures in the same area. There are no parks and protected areas that overlap with or are within close proximity to the proposed mine site location. The closest park is approximately 25 km south of the Project (i.e., Gingietl Creek Ecological Reserve).

Under the NFA, the Nisga'a Nation is entitled to a water reservation for domestic, industrial, and agricultural purposes, as well as a Nisga'a Hydro Power Reservation for a 20-year term until 2020. Under the Hydro Power Reservation, the Nisga'a Nation may investigate the hydroelectric potential of all unrecorded waters of all streams, other than the Nass River, that are wholly or partially within Nisga'a Lands (INAC 2000).

The NFA defines an annual Nisga'a water reservation of 300,000 decametres from the Nass River and other streams that are completely or partly within Nisga'a Lands (INAC 2000). Nisga'a citizens apply to the province for water licenses, which, if consented by the Nisga'a Nation, count toward the Nisga'a water reservation. The NFA defines percentages of total stream volume that may be used toward the Nisga'a water reservation (Table 3.2-1). Three of the streams listed in Table 3.2-1 are proximate to the Kitsault mine site and access road, including Kwinatahl, Ksahdin, and Tchitin rivers. Streams not listed in Table 3.2-1, the percentage of total volume for the Nisga'a reservation is 50% (INAC 2000). The NFA stipulates that the province will not charge Nisga'a citizens for water licenses and will consult with the Nisga'a Nation on all water licenses within Nisga'a Lands. Water license holders have access rights across Crown and Nisga'a Lands to use their license.

Table 3.2-1: Volumes for Nisga'a Water Reservation

Stream Name	Percentage of Available Flow
Scowban Creek	50%
Ishkheenickh River	26%
Ksemamaith Creek	29%
Kshadin Creek	10%
Tseax River	10%
Kwinatahl River	10%
Tchitin River	10%
Ksedin Creek	12%

Source: Schedule C of Chapter 4 in the NFA

3.2.2 Forest Resources

The Nisga'a Nation "owns all forest resources on Nisga'a Lands," including timber and non-timber products (INAC 2000). The Nisga'a Final Agreement (NFA) defines responsibilities of the Nisga'a Nation in terms of forest resources on Nisga'a Lands and in the Nass Area (Chapter 5 of the NFA). Timber resources went through a 5-year transition period which expired in 2005. Transitional licensees on Nisga'a Lands are subject to the laws of British Columbia. The NFA specifies annual harvest volumes on Nisga'a Lands after the 5-year transition period up to 9 years after the NFA effective date (until 2009). From 2010 onward, the province and Nisga'a Nation negotiate the harvest rate of timber resources on Nisga'a Lands. Other forestry and timber management activities are subject to relevant legislation enacted by NLG.

Under the NFA, Canada and British Columbia are obligated to inform the Nisga'a Nation of forest development plans applicable to the Nass Area (INAC 2000). The province is required to notify Nisga'a Nation if there is an adjacent issue jeopardising forest health on Crown lands. The cost and responsibility of fire suppression on Nisga'a Public Lands was on the province during the transition period (until 2005) and is now the responsibility of the Nisga'a Nation.

According to the NFA, Nisga'a forest management practices and standards must meet or exceed provincial standards and include regulation on: "riparian management; cut block design and distribution; road construction, maintenance, and deactivation; reforestation; soil conservation; biodiversity; hazard abatement (fire preparedness and initial fire suppression); silvicultural systems and logging methods; and forest health" (INAC 2000).

The NFA also provides for the possibility of NLG applying for and acquiring a Tree Farm License (TFL) with the requirement that the TFL overlap with a part of Schedule A Lands held in fee simple by the Nisga'a Nation. Currently, TFL 1 (owned and operated by Coast Tsimshian Ltd.) intersects the northern part of Nisga'a Lands (near the Kitsault access road and 25 km east of the mine site).

The NFA also describes criteria for the 5-year forest transition period planning for Nisga'a Lands. Appendix H of the NFA delineates several polygons (which overlap with the Kitsault access road), including a pine mushroom polygon, that need to be considered in forest management and planning exercises. In particular, the objectives of the polygons impose the following constraints on forestry activities:

- Timber harvesting, including that associated with roads, will retain a minimum of 80% of the forest cover at an age of at least 120 years, and
- Silvicultural systems, other than for areas to be occupied by roads, will be a selection system and provide for retention of a minimum of 70% of the total basal area of the cutblock (INAC 2000).

3.2.3 Access, Roads and Rights of Way

The Chapter 6 of the Nisga'a Final Agreement (NFA) provides parameters around access to Nisga'a Lands by the public, government of Canada, and the province. The NFA allows for non-Nisga'a citizens access to Nisga'a Public Lands on a temporary basis for non-commercial and recreational purposes, including harvest of wildlife and fish as established within annual management plans and conforming to provincial, federal, and Nisga'a laws. NFA stipulates the Nisga'a right to regulate and restrict public access to Nisga'a Village Lands and Nisga'a Private Lands. Access to Nisga'a and Crown Lands is permissible for provincial and Nisga'a representatives, respectively, to fulfill legislative and treaty obligations and during emergencies contingent on reasonable notice before or immediately following entry. Nisga'a citizens are also provided access rights to areas outside Nisga'a Lands to exercise their treaty rights, including hunting, fishing, and trapping within the NWA and Nass Area. If access is restricted, alternative access should be provided to support Nisga'a citizens' resources use.

According to the NFA (Chapter 7), the Crown owns highway and secondary road corridors, including the Nisga'a Highway (with a width of 30 m), Nass Forest Service Road, and Alice Arm Road (Special Use Permit 9228). The NFA allows for the province to hold a total of 800 ha of rights of way on Nisga'a Lands, including roads and transmission lines right of ways. NFA notes the possibility of completing the Nisga'a Highway from Nass Camp to Highway 37, which may be part of provincial long-term planning and financing.

According to the NFA, the Nisga'a Nation has issued grants the province for use and maintenance of secondary roads, including those listed in Appendix C-1, Part 3, which entails the Kitsault access road. The Nisga'a road grant allows the Crown to "full, free and uninterrupted right, liberty and right of way, in perpetuity, for the purpose of using, constructing, re-constructing, repairing, improving, upgrading, and maintaining" (INAC 2000) for public, industrial, resource use, and utility uses within a width of 20 m. One of the secondary roads listed in the NFA appendix is Special Use Permit 9228, which is described as the road from Khsadin Creek to Alice Arm. This secondary road straddles the Nisga'a Lands boundary.

Prior notification and approval from the NLG is required for Crown access to areas outside of the Nisga'a Highway and secondary road corridors on Nisga'a Lands for purposes of drainage construction, slope maintenance, and danger tree removal. The NFA stipulates consultation with the Nisga'a Nation for traffic regulations on Nisga'a Highway and secondary roads. The Crown has the right to install intersections, signage, lanes, and ramps on the Nisga'a Highway and secondary provincial roads.

3.2.4 Fisheries

3.2.4.1 Overview

The NFA defines Nisga'a rights to harvest fish (i.e., salmon, steelhead, non-salmon species), aquatic plants, and intertidal bivalves in the Nass Area. The Nass Area covers the entire Nass watershed, including Observatory Inlet and waterbodies that flow into it. The NFA also describes responsibilities of the Nisga'a Nation and Nisga'a Lisims Government (NLG) with respect to managing, harvesting, and enhancing Nass watershed fish and aquatic resources. The NFA defines fish as (INAC 2000):

- fish, including anadromous fish;
- shellfish, crustaceans, and marine animals;
- the parts of fish, shellfish, crustaceans, and marine animals;
- the eggs, sperm, spawn, larvae, spat, juvenile stages and adult stages of fish, shellfish, crustaceans and marine animals; and
- but not "wildlife fish".

Aquatics plants are defined as "marine and freshwater plants, including kelp, marine flowering plants, benthic and detached algae, brown algae, red algae, green algae, and phytoplankton" (INAC 2000).

Nisga'a have the collectively held right to harvest fish and aquatic plants for domestic purposes within the Nisga'a allocation and subject to conservation and safety measures throughout the Nass Area. The Nisga'a Nation has a salmon and steelhead entitlement based on a percentage of the annual allowable harvest. According to the NFA, the province and Canada may not charge Nisga'a citizens for licenses or fees and royalties to fish except in the use of firearms and fish sales. The NFA affords Nisga'a citizens the right to barter or trade fish resources with each other or with other Aboriginal groups (INAC 2000).

3.2.4.2 Salmon Species

The Minister is responsible for Nass salmon management and escapement determination, in Schedule A of Chapter 8 of the NFA (Table 3.2-2) defines the Nisga'a entitlement based on a percentage of the escapement (i.e., salmon return to Canada). The range of Nisga'a fish allocations based on low and high salmon returns for each species are: 16,800 to 63,000 for sockeye, 1,800 to 6,600 for pink, 2,730 to 12,600 for Chinook, 3,200 to 19,200 for Coho, and 2,400 to 12,000 for Chum salmon.

Table 3.2-2: Summary of Nisga'a Salmon Entitlement per Species for the Nass Area

Species	Sockeye	Pink	Chinook	Coho	Chum
Nisga'a have (%) of return to Canada	10.5%	0.6%	21.0%	8.0%	8.0%
Return to Canada: Small	160,00	300,00	13,000	40,000	30,000
Return to Canada: Large	600,00	1,100,000	60,00	740,000	150,000
Nisga'a fish allocations: Threshold (at small return)	16,800	1,800	2,730	3,200	2,400
Nisga'a fish allocations: Maximum (at large return)	63,000	6,600	12,600	19,200	12,000

Source: INAC 2000

3.2.4.3 Steelhead

Nisga'a Nation has the right to harvest summer- and winter-run steelhead subject to conservation considerations. The NFA provides for a review of studies conducted on Nass steelhead to determine Nisga'a harvest of steelhead for domestic purposes. Where conservation concerns exist as a result of the research review, Nisga'a have the right harvest steelhead according to Schedule D of Chapter 8 of the NFA up to a maximum 1,000 steelhead (Table 3.2-3).

Table 3.2-3: Summary of Nisga'a Steelhead Allocation

Adjusted total allowable catch	95% of return to Canada – annual escapement goal
Nisga'a allocation	5% of total returns
	25% of adjusted allowable catch
Maximum	1,000

Source: INAC 2000

3.2.4.4 Non-Salmon Species

The NFA also defines Nisga'a citizens' rights to harvest non-salmon species and aquatic plants. The Nisga'a fish allocation non-salmon species or aquatic plant will be 125% of the basic Nisga'a fish entitlement of the species. The basic Nisga'a fish entitlements to non-salmon species and aquatic plants accounts for: historic and contemporary Nisga'a domestic harvest, conservation requirements, harvest by other interested groups and parties, status of the species, changes in Nisga'a fishing effort, and other relevant factors raised by any party (INAC 2000). The Joint Fisheries Management Committee will consider and provide input on the basic Nisga'a entitlement of non-salmon species and any studies and/or research necessary to support entitlement determination. After the signing of the NFA, Canada, the province, and NLG negotiate the basic Nisga'a entitlement for non-salmon species and aquatic plants, including:

- dungeness, tanner, and king crab;
- halibut;
- prawns and shrimp;
- herring; and
- aquatic plants used in the herring roe-on-kelp fishery.

3.2.4.5 Intertidal Bivalves

The NFA affords Nisga'a citizens the right to harvest intertidal bivalves, including cockle, littleneck clam, butter clam, mussels, and manila clam for food, social, and ceremonial purposes (INAC 2000). Appendix I of the NFA defines the Nisga'a-exclusive bivalve harvest area in the northern portion of Observatory Inlet extending into the southern part of Alice Arm, which is located 15 km southwest of the Kitsault Project. Harvest of intertidal bivalves is subject to conservation measures and legislation regarding public health and safety. Nisga'a allocation of intertidal bivalves is based on a portion of the total annual harvest and has the same priority as commercial and recreational interests in the area (INAC 2000).

3.2.4.6 Angling Guide Rivers

Schedule D of Chapter 9 of the NFA designates rivers for Nisga'a guide angling activities. Two of the 15 designated rivers are proximate to the Kitsault mine site, including:

- Illiance River
- Kitsault River

3.2.4.7 Nisga'a Fisheries Management

The Joint Fisheries Management Committee (JFMC) consists of six members, including two members of each of the tripartite treaty partners (i.e., NLG, Canada, and the province). The committee reaches its recommendations and decisions by consensus. The NFA defines the JFMC's responsibilities as follows:

- Sharing information and plans for existing and proposed fisheries that could affect or be affected by Nisga'a fisheries;
- Arranging for collection and exchange of data required to carry out the provisions of this Chapter;
- Providing advice concerning escapement goals;
- Making recommendations to the Minister and Nisga'a Lisims Government in respect of other conservation requirements and the management of fish and aquatic plants;
- Providing advice to the Parties in respect of the determination of the basic Nisga'a fish entitlements to non-salmon species and aquatic plants;
- Making recommendations to the Minister and Nisga'a Lisims Government in respect of Nisga'a overages and underages, in accordance with Schedule B;

- Making recommendations to the Minister and Nisga'a Lisims Government in respect of Nisga'a annual fishing plans;
- Making recommendations to the Minister and Nisga'a Lisims Government in respect of studies for enhancement and enhancement initiatives;
- Making recommendations and providing advice to the Minister in respect of surpluses;
- Making recommendations to the trustees of the Lisims Fisheries Conservation Trust in respect of projects, programs, and activities to be funded with expenditures from that Trust;
- Communicating with other management or advisory bodies in respect of matters of mutual interest;
- Providing advice on the coordination of the Nisga'a annual fishing plans and proposed decisions of Nisga'a Lisims Government in respect of methods, timing, and locations of harvests;
- Providing advice in respect of any proposed in-season adjustments to the Nisga'a annual fishing plans; and
- Carrying out other responsibilities agreed to by the Parties (INAC 2000).

NLG is responsible for developing and submitting the Nisga'a annual fishing plans to the JFMC. The plans contain information about methods, timing, and locations of harvest, monitoring efforts, enforcement methods, process for reporting and accounting for Nisga'a harvest and sales, and stock assessment and enhancement measures. JFMC considers the Nisga'a annual fishing plans and may make adjustments and recommendations to the Minister. The decision to approve or adjust and then approve the plan lies with the Minister, who considers harvest of fisheries resources in the interest of all Canadians.

NLG is responsible for documenting and managing Nisga'a fish harvest. NLG has law-making authority over the many dimensions of the fish harvest, including distribution of Nisga'a entitlement among Nisga'a citizens and non-Nisga'a, regulation of trade and barter, designation and documentation, and sale of Nass fish resources. The NFA defines the Nisga'a Nation's right to sell Nass salmon through the NLG. The NFA provides for Nisga'a rights to implement enhancement measures to increase Nass salmon and steelhead. The Nisga'a harvest of surplus salmon or steelhead created by enhancement measures is decided by the Minister with recommendations from the Joint Fisheries Management Committee, which is proportionate to the level of contribution of the Nisga'a Nation to enhancement costs.

3.2.4.8 Lisims Fisheries Conservation Trust

The Lisims Fisheries Conservation Trust was established by the NFA in 2000 with contributions from Canada and Nisga'a Nation (i.e., \$10 million and \$3 million, respectively). The trust has equal number of trustees from both governments with an additional trustee

selected on a mutually agreeable basis. The trust has the following objectives as outlined in the NFA:

- Promote conservation and protection of Nass Area fish species;
- Facilitate sustainable management of fisheries for Nass Area species and stocks; and
- Promote and support Nisga'a participation in the stewardship of Nass Area fisheries for the benefit of all Canadians (INAC 2000).

In order to fulfill the trust's objectives, trustees review and approve funding for projects and programs that aim to conserve, evaluate, estimate, assess, and monitor Nisga'a fisheries. The selection criteria are "monitoring Nass salmon escapement, monitoring harvest, determining limitations of Nass salmon and non-salmon production" (INAC 2000). The Lisims Fisheries Conservation Trust accepts contribution, gifts, and donations to further its objectives, purposes, and initiatives. Since 2000, the trust's net asset value has varied with a range of disbursements as noted in Table 3.2-4.

Table 3.2-4: Summary of Lisims Fisheries Conservation Trust Net Assets and Disbursements (2000-2008)

	Net asset value	Disbursement
June 22/00	\$13,459,847	\$ 0
Dec 31/00	\$13,726,993	\$ 0
Dec 31/01	\$13,722,641	\$ 0
Dec 31/02	\$12,302,969	\$ 0
Dec 31/03	\$12,211,358	\$ 0
Dec 31/04	\$13,371,869	\$313,000
Dec 31/05	\$14,857,367	\$600,000
Dec 31/06	\$15,586,894	\$600,000
Dec 31/07	\$15,646,909	\$550,000
Dec 31/08	\$12,234,637	\$ 0

Source: NLG 2009a

3.2.5 Wildlife and Migratory Birds

Nisga'a citizens have the right to harvest wildlife in the Nass Wildlife Area, an area (16,101 km²) surrounding Nisga'a Lands, which overlaps with the Kitsault mine site and access road. The Nisga'a right to harvest is subject to provincial and federal laws. The NFA also affords Nisga'a citizens the right to harvest migratory birds in the Nass Area subject to conservation measures and public health or safety. Harvest must be consistent with the communal nature of the Nisga'a domestic harvest and Nisga'a traditional harvest seasons. It may not interfere with other authorised uses of Crown land (INAC 2000).

The NFA defines Nisga'a allocations of initially designated species, including grizzly bears, mountain goats, and moose. Nisga'a harvest rights are for domestic purposes with the right to trade or barter wildlife and wildlife parts with other Aboriginal groups and/or other Nisga'a citizens. According to the NFA, the province may not charge Nisga'a hunters for licenses, except related to firearms licenses. NLG has law-making authority related to licensing, methods, timing and location of harvest and enforcement of the annual management plan among Nisga'a hunters. NLG is also responsible for developing and providing hunting training courses on safety and conservation issues among Nisga'a hunters. NLG is required to develop and submit an annual management plan to the Nass Wildlife Committee.

Fifteen years following the effective date of the NFA, NLG, BC, and Canada will review designated species and may amend the list. Any treaty party can request amendment of the species as soon as five years after the effective date.

Wildlife resources and the Nisga'a right to harvest in the NWA and the Nass Area are co-managed between the NLG, the province, and federal government through the Nass Wildlife Committee, consisting of four members from the NLG, four members from the province, and one member from Canada. The committee determines the annual Nisga'a harvest based on annual allowable harvest and approves the Nass Wildlife Management Plan using consensus-based decision making (wherever possible). The committee also makes recommendations to the Minister about Nisga'a allocations of designated species. The Nisga'a hunting right has the same priority as recreational and commercial harvesting interests. Table 3.2-5 summarises the Nisga'a allocation percentages of the allowable harvest per designated species.

Table 3.2-5: Nisga'a Wildlife Allocations of Designated Species

Designated Species	Total Allowable Harvest (TAH)	Nisga'a Wildlife Allocation
Moose	First 50 moose	80%
	Next 50 moose	32%
	Remaining	56%
	Maximum	170 moose
Mountain Goat	Any number	25% of TAH
Grizzly Bear	1-6 grizzly bears	40% of TAH
	7-8 grizzly bears	50% of TAH
	9-10 grizzly bears	40% of TAH
	10>	40% of first 10 + 30% of remaining

Source: INAC 2000

The NFA recognises Nisga'a traplines outside of Nisga'a Lands and affords them the right to trap in accordance with provincial and federal laws. Four of the secondary traplines, which are proximate to the mine site and access road but do not overlap with them, belong to the Nisga'a Nation (Schedule C of Chapter 9), including: TR614T 090, TR614T 092, TR614T

094, and TR614T 096. There is no trapline harvest data available for Nisga'a traplines adjacent to the Kitsault mine site in the province's *Furbearer Harvest Database* (1987-2009), except TR0614T094, which last reported fur sales in 1992 (Rescan 2010).

The NFA ensures that the Nisga'a Nation will obtain the guide outfitting tenure area delineated in Appendix K, which overlaps with the Kitsault mine site and access road. The Nisga'a-designated guiding area is presently a portion of Robert Milligan's guide outfitting area. NFA ensures the following right: "If a guide outfitter's certificate registered to a person other than the Nisga'a Nation ceases to apply to an area wholly or partially on Nisga'a Lands by reason of abandonment or operation of law, British Columbia will issue to the Nisga'a Nation a guide outfitter's license and a guide outfitter's certificate for the area set out in Appendix K" (INAC 2000). Nisga'a future guiding activity within this tenure area is subject to provincial and federal laws. The NFA also ensures that the province will only issue a new guide outfitter certificate on Nisga'a Lands with prior Nisga'a consent. The province will also consult with the Nisga'a Nation on any transfer or changes to guide outfitter certificate within the NWA.

According to the NFA, the federal government will consult the Nisga'a Nation with respect to the management and harvest of migratory birds in the Nass Area by Aboriginal people, and the development of Canada's positions on international agreements relevant to migratory birds and their habitat in the Nass Area (INAC 2000).

3.2.6 Cultural Artefacts and Heritage

Chapter 17 of the NFA describes Nisga'a rights and responsibilities related to heritage resources. The NFA identifies Nisga'a ownership of several hundred artefacts in storage at the BC Royal Museum and the Museum of Civilization targeted for repatriation to Nisga'a Lands. Repatriation is contingent of establishment of a suitable facility to house the Nisga'a artefacts for viewing, education, and research purposes. The NFA describes the ownership of future discoveries of heritage resources located within and outside of Nisga'a Lands and Category A Lands, including the transfer to the BC Royal Museum or the Museum of Civilization. The province and Canada agree to lend or transfer the artefact to the Nisga'a Nation (INAC 2000).

NLG and the province may negotiate agreements on various heritage matters, including determining the conditions under which NLG lends Nisga'a artefacts for temporary display, developing replicas of Nisga'a artefacts, providing training on technical issues relating to Nisga'a artefacts, providing public education on the Nisga'a Nation at the BC Royal Museum, and on any other issues as they may arise (INAC 2000).

Appendix H of the NFA also defines important archaeological and cultural areas (Schedule 1) and prescribes constraints on timber harvesting activities in these areas during the forest transitional period (INAC 2000). For the archaeological polygon, located approximately 2 km east of the Kitsault access road, there is no timber harvesting permitted. The Grease Trail (which intersects the Kitsault access road) is protected from timber harvest within a 100 m buffer on either side of the centre line of the trail (Appendix H, Schedule 1).

3.3 Seasonal Round and Resource Importance

Nisga'a people have and continue to harvest a variety of wildlife, birds, fish, plants, berries, mushrooms, and trees for nutritional, medicinal, construction, economic, and ceremonial purposes. Nisga'a citizens harvest is based on seasonal availability of flora and fauna species. Table 3.3-1 provides a list of culturally important species according to the season in which they were or are harvested.

Table 3.3-1: Summary of Nisga'a Seasonal Round

	Mammals	Birds	Fish and Aquatics	Plants
Winter	Rabbit	Grouse	Oolichan	N/A
	Beaver			
	Porcupine			
	Marmot			
	Groundhog			
	Fisher			
	Marten			
	Mink			
	Weasel			
Spring	Moose	Grouse	Herring	Seaweed
	Bear	Herring Gull	Oolichan	Labrador Tea
	Beaver	Duck	Steelhead	Fern
	Seal	Geese	Halibut	Cow parship
	Sea Lion		Spring salmon	Fireweed
			Cockle	Crowberries
			Clam	T'ipyees
			Giant Pacific Chiton	
			Abalone	
Summer	Moose	Duck	Ling cod	Salmonberry
	Bear	Grouse	Snapper	Strawberry
	Deer	Geese	Sablefish	Soapberry
	Mountain goat (wool)		Sockeye, Coho, pink, and chum salmon	Raspberry
				Elderberry
				Gooseberry
				Thimbleberry
				Huckleberry
				Blueberry
				Hawthorn berry
				Saskatoon berry

	Mammals	Birds	Fish and Aquatics	Plants
				Hemlock (inner bark)
				Red and yellow cedar
				Birch
				Riceroot
				Skunk cabbage
				Wild celery
				Bulrush
				Nettle
				Fern
				Seaweed
Fall	Moose	Duck	Shellfish	Labrador Tea
	Bear	Geese	Ling cod	Crabapples
	Mountain goat		Snapper	Fireweed
	Deer		Sablefish	Rosehip
	Lynx		Sockeye, Coho, pink, and chum salmon	Salal berry
	Beaver			Bearberry
	Porcupine			Squashberry
	Rabbit			Cranberry

Source: School District No. 92, 1996

3.4 Contemporary Land Use

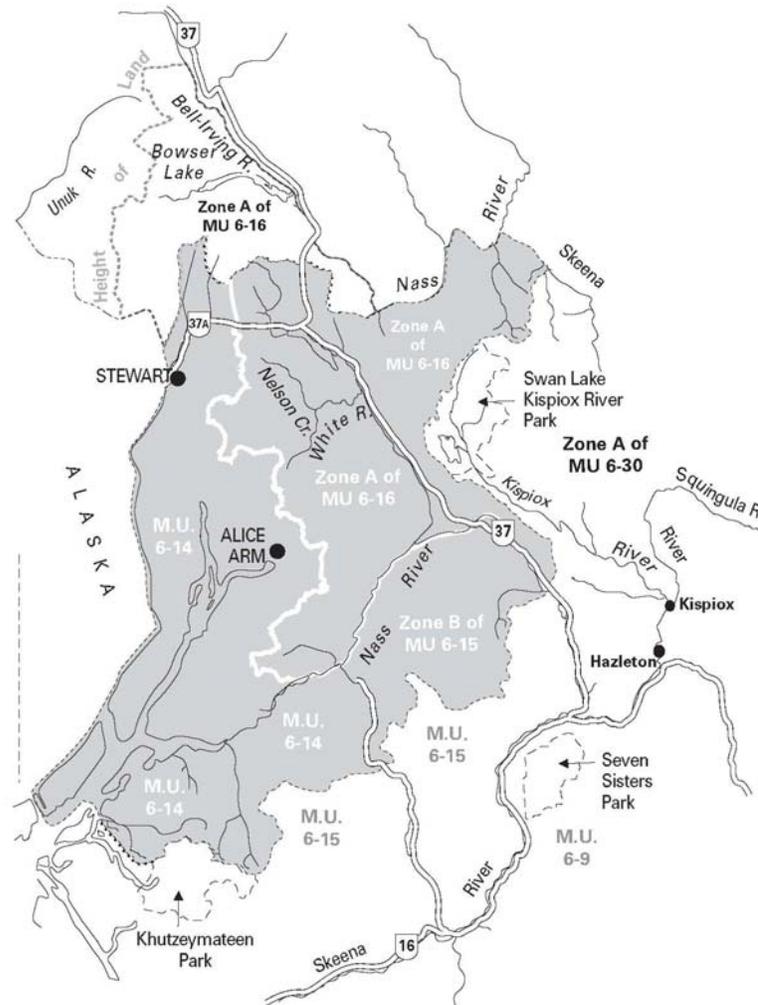
Nisga'a citizens practice land- and marine-based activities throughout the Nass Wildlife Area (NWA) and Nass Area, including hunting, fishing, harvesting timber and non-timber forest products, recreating, protecting heritage resources, and managing fee simple lands outside Nisga'a Lands. The following provides a summary of the existing desk-based information on these uses and activities. Wherever possible from publicly available sources, site-specific information relevant to the Kitsault mine site and access road is provided.

3.4.1 Hunting

“The Nisga'a Nation is blessed with a rare natural bounty. Located on the edge of the Pacific, the Nass Valley enjoys a privileged position on the migratory routes of many birds and fish, and is the year-round home of many mammals. Up from the banks of the Nass River, deer, moose, black bear, grizzly bear, beaver, wolf, and mountain goat are all found in abundance and have helped sustain the Nisga'a people for thousands of years” (NLG 2001).

Designated species were surveyed prior to the effective date of the NFA in 2000 with the following population totals including: 1,500 moose, 1,000 to 1,200 grizzly bears, and 4,000 goats with the following Nisga'a allocations: 120 moose, 2 grizzly bears, and 65 mountain goats (NLG 2001).

NLG is concerned about the current depressed state of the moose population in the NWA, which, according to surveys, has declined by 50% from 1,600 to 800 (NLG 2010b). NLG and the province introduced conservative moose harvest allocations for Nisga'a citizens and resident/non-resident hunters to address the decline in moose. NLG introduced a 5-year moose conservation plan to support the reestablishment of the population and mitigation for commercial development effects (NLG 2008 and NLG 2010b). As such, Ministry of Natural Resource Operations (MNRO) requires compulsory moose inspections in the Nass Wildlife Area (Figure 3.4-1), including the Wildlife Management Unit (WMU) 6-14, which overlaps with the Kitsault Project (MNRO 2010).



Source: MNRO 2010

Figure 3.4-1: Map of Compulsory Inspection of Moose

Desk-based research results did not indicate the location and timing of Nisga'a harvest of treaty-designated species within the NWA. Additional data collected as part of the ESCIA guideline program in collaboration with the Nisga'a Nation may provide more detail. During one of the open houses in the Nisga'a Villages, Nisga'a citizens noted a Nisga'a hunting and fishing cabins proximate to the proposed Project, which may support possible Nisga'a hunting and fishing excursions.

NLG issues hunting licenses permitting Nisga'a citizens to harvest wildlife in the NWA. The process of distributing Nisga'a allocations among Nisga'a citizens is based on a lottery system through the Nisga'a Fisheries and Wildlife department (NLG 2009b). Desk-based information on Nisga'a allocations and actual harvest is limited. Table 3.4-1 summarises the designated species population, Nisga'a allocation, and harvest data, where available, from 2000 to 2010.

Table 3.4-1: Summary of Population, Nisga'a Allocations, and Harvest of Designated Species

Designated Species	Year	Population	Nisga'a Allocation	Nisga'a Harvest
Moose	2000	1,500	120	N/A
	2001	1,600	70	N/A
	2000	N/A	N/A	111
	2002	1,400	126	N/A
	2007	800	N/A	N/A
	2010	N/A	46 bulls, no cows	N/A
Grizzly Bear	2000	1,000-1,200	2	0
	2001	N/A	2	0
	2002	N/A	0	0
Mountain Goat	2000	4,000	65	6
	2001	N/A	34	N/A

Source: BC MARR 2001; NLG 2011; NLG 2003; NLG 2008; MoE 2008; NLG 2010b; and NLG 2009b.

The Nass Wildlife Management Plan is developed annually to regulate and manage Nisga'a harvest of the three designated species, including mountain goats, grizzly bears, and moose. Four part-time monitors, stationed in each of the four Nisga'a villages, monitor the compliance with the Nass Wildlife Management Plan. Although Nisga'a citizens are required to pay NLG harvest licensing fees, compliance is high given the recognition that the Nisga'a Nation is responsible for sustainable management of resources on behalf of its citizens (NLG 2001).

3.4.2 Fishing

The Nisga'a Nation places high value on fish resources for cultural, economic, ecological, and social reasons. "Nass Area is still in pristine condition with our fish and wildlife habitats

in good order and we will continue to work with other government departments to keep them intact" (NLG 2010b). The Nass River is one of the healthiest systems globally with a number of fish resources of importance to the Nisga'a Nation, including five salmon species, oolichan, and steelhead. The NLG and DFO coordinate management of these resources to ensure sustainable fishing industry. The Joint Fisheries Management Committee, consisting of members from Canada, the province, and NLG, determines and oversees Nisga'a annual fisheries activities. Also, "Nisga'a fisheries utilises fish wheels and other technologies on the Nass River for salmon monitoring, tagging, and data collection, and conducts stock assessments on a variety of species throughout the Nass Area" (NLG 2009a).

Compared to other river systems, including the Skeena and Fraser rivers which instated closures and restrictions, the Nass River continues to have a strong annual sockeye return, which supports uninterrupted Nisga'a and commercial sockeye fisheries. Coho and Chinook stocks in the Nass Area also remain healthy (NLG 2010b). An estimated \$6 million in revenue in Nisga'a fisheries has been generated since 2000 (NLG 2009a). In order to maintain healthy fish stocks to support a sustainable economy around fish resources, the NLG developed and operates a sophisticated and elaborate fisheries program organised into four parts, including: fisheries management, stock assessment, habitat assessment, and enhancement. The goals of the program are to:

- determine the status of Nass stocks;
- provide information required for better management;
- determine run size, timing and harvest rates;
- determine factors limiting production; and
- provide training and employment for Nisga'a people (NLG 2011b).

Based on the Nisga'a entitlements outlined in Chapter 8 of the NFA, Table 3.4-2 summarises the annual Nisga'a allocation and the actual Nisga'a harvest per salmon species and steelhead since 2000 in the Nass Area. Of the salmon species for which Nisga'a have allocations, only the Coho salmon is present at the Kitsault mine site. Comparisons between Coho entitlement and harvest numbers indicate that in the 11 years since the treaty (2000-2010), Nisga'a citizens' harvest levels have been close to the allocation numbers for five years, and under the entitlement for the other 5 years. One year the Nisga'a Nation overharvested.

Table 3.4-2: Nisga'a Entitlements and Nisga'a Harvest of Salmon and Steelhead Species (2000-2010)

	Nisga'a Entitlement					Nisga'a Harvest					
	Sockeye	Pink	Chinook	Coho	Chum	Sockeye	Pink	Chinook	Coho	Chum	Steel-head
2000	93,855	28,033	7,031	9,072	3,326	93,179	6,086	9,326	1,950	1,067	495
2001	62,524	143,952	10,421	14,877	4,068	77,183	79,378	11,764	14,706	1,617	403
2002	195,288	53,031	6,489	19,200	3,533	140,66	2,043	5,431	9,016	132	557
2003	162,364	173,146	9,404	14,114	12,000	140,861	18,949	6,709	14,882	318	445
2004	118,015	122,098	7,057	11,659	8,026	145,241	10,528	5,548	20,336	1,030	512
2005	89,624	225,029	6,086	17,231	4,468	113,345	4,519	6,015	14,969	698	244
2006	111,590	5,683	9,214	8,296	8,604	88,021	3,752	7,250	8,425	1,110	253
2007	56,244	129,530	8,645	11,822	0	53,863	6,159	6,714	9,515	932	117
2008	47,799	0	6,919	10,635	0	45,648	4,372	4,402	3,449	506	173
2009	65,255	115,364	8,171	19,200	7,654	69,446	24,572	5,435	13,795	139	253
2010	54,500	900	5,900	15,200	4,900	67,702	2,421	4,438	10,098	103	674

Source: NLG 2010c

While the Nass sockeye, Chinook, and Coho populations are healthy, Nass Area chum salmon are of special concern for the Nisga'a Nation given their decline in recent years. A recovery plan is being developed between the DFO and NLG to address the depressed Chum stocks. "The low abundance of chum salmon returning to the Nass Area remains a concern and NFW (Nisga'a Fisheries and Wildlife) has worked hard to convince DFO to eliminate commercial harvests of Nass Area chum salmon so that the stocks can rebuild. [NFW] is currently working with DFO to develop a full rebuilding strategy for Nass Area chum salmon" (NLG 2010b). One of the MSC (Marine Stewardship Council) conditions for maintaining the certification of the Nass River requires implementation of a Chum salmon recovery plan (NLG 2010b).

NFW has received funding in 2009 for 5 years to improve its estimation efforts of the Chinook populations at important Chinook spawning locations, including Meziadin, Kwinageese, and Damdochax Rivers (NLG 2010b). Coho are also widely distributed throughout the Nass River watershed. DFO officers visually enumerated 37 Coho spawning streams. The result of their survey indicated 9 populations that supported more than 250 spawners from 1990 to 1999 (Bocking and Peacock 2004). Two of the nine identified Coho spawning streams are proximate to the Kitsault access road, namely the Cranberry and Tchitin Rivers (Sierra Club 2006). The NLG notes the "critical importance of ... Cranberry / Kiteen Chinook, Tseax Chinook, and the many Coho bearing streams in supporting salmon entitlements for Nisga'a under the Nisga'a Final Agreement" (NLG 2010d).

The Marine Stewardship Council (MSC) rated the Nass River with one of the highest scores (i.e., 92 out of 100) based on three criteria: conditions of stocks, environmental effects, and management. MSC assessed Nass fishery stocks to be at a healthy level with "fish making it to the spawning grounds at or above target levels for 16 of the last 18 years" (NLG 2010d). The report specifically noted that "the Nass system is relatively unique in BC sockeye salmon fisheries as there are no data to suggest significant depletion of any of the sockeye salmon stocks." The certification opens up new markets for Nisga'a wild salmon (NLG 2010b).

Nisga'a Nation's commercial fish rights are implemented in a partnership between the Canadian Fish Company and Nisga'a Fisheries Ltd. Together they compensate Nisga'a fishermen "for their harvest, market their fish, operate three landing sites on the Nass River, and are responsible for grading, counting, and weighing salmon for payment" (NLG 2009a). They also provide Nisga'a fishermen with necessary materials (i.e., flaked ice) and transportation of fish to the Nisga'a Fresh Fish Plant in New Aiyansh (NLG 2009a). In 2009, there was an anticipated low salmon return, resulting in a diminished Nisga'a commercial fishery. Table 3.4-3 provides available information on the number of sales permits NLG issued to Nisga'a citizens and Elders (over 60 years) including the openings for which the permits were valid.

Table 3.4-3: The Number of Sales Permits and Associated Openings

Fishing Season	Individual Sales Permits Issued	Elder Sales Permit (free over 60 years)	Openings
2006-2007	270	60	9 sockeye and 2 Coho
2007-2008	222	49	6 sockeye and 2 Coho
2008-2009	52	16	4 marine sockeye (no in-stream)

Source: NLG 2008 and NLG 2009a

Furthermore, NLG recently developed the Nass Area Strategy with the purpose of “respond[ing] to proposed development in the Nass Area. The strategy’s objective is to ensure developments in the Nass Area will proceed only when all Nisga’a Treaty rights under the Nisga’a Final Agreement have been complied with, including those Treaty rights dealing with economic, social, cultural and environmental interests” (NLG 2010b). NLG intends for the Nass Area Strategy ensure enforcement and fulfillment of Nisga’a environmental rights as defined in the NFA and “that [Nisga’a] traditional uses of the land, [Nisga’a] harvesting practices, [Nisga’a] land ownership and [Nisga’a] land use plans are respected and adhered to” (NLG 2010b).

The 2011-2012 Nisga’a annual fishing plan (NLG 2011b) indicates the location of Nisga’a harvest of oolichan to occur between Fishery Bay (near the Village of Laxgalts’ap) and Red Bluff along the Nass River. The designated oolichan harvesting area is approximately 60 km south of the Kitsault Project. Harvest is allowed by traditional methods only and considers First Nation upstream oolichan harvests. The period of Nisga’a oolichan harvest occurs between February 15 and April 30.

3.4.3 Timber and Non-Timber Forest Products

There are numerous tree species in Nisga’a forests, including “an abundance of cedar, hemlock, Sitka spruce, lodgepole pine, balsam, and cottonwood. From these forests, the Nisga’a people have always harvested bark for baskets and hats, and wood for fire, dwellings, canoes, and the poles that grace their villages” (NLG 2001). NLG manages Nisga’a forests to protect this natural inheritance and to provide employment for Nisga’a people. Ecological sustainability and preservation is one of the main considerations in the developing and approving operations on Nisga’a Lands, and the *Nisga’a Forest Act* sets high standards maintaining biodiversity. NLG also manages all land and forest resources on Nisga’a Lands, including non-timber resources. Pine mushrooms, a popular delicacy in Asia, are a valuable resource found in Nisga’a forests and are harvested seasonally (NLG 2009a).

3.4.4 Timber Products

Lisims Forest Resources manages the marketing and sale of Nisga’a forest resources. It is expanding and diversifying the market for Nisga’a forest resources, including hemlock,

balsam fir, cedar, spruce, deciduous trees, and non-timber forest products (NTFP) such as pine mushrooms, on behalf of the Nisga'a Nation. In addition to domestic clients, Lisims Forest Resources sells Nisga'a wood to China, Japan, and Korea, and is actively seeking partners to develop value-added wood products. For example, "[i]n Lax-galts'ap, [Nisga'a nation] ha[s] two new businesses under our forest company, a log home building program and a red cedar shake mill, which are both value-added ventures" (NLG 2009a).

NLG's Lands and Resources Directorate is developing plans for compliance, enforcement, a "post-forestry" transition period. In particular, the Nisga'a Nation is trying to respond to the forest industry's decline due to high energy costs resulting in limited Nisga'a forestry activity. Despite the decline, Nisga'a logging has continued due to strong cedar markets and saw log exports. "The Annual Allowable Cut [AAC] on Nisga'a Lands is 130,000 cubic metres. NLG collects a silviculture levy to ensure reforestation of cut-blocks is funded over the long term. The current fund is approximately \$1 million" (NLG 2009a).

The Nisga'a Nation has encountered forest-related challenges, including climate-based epidemics such as pine beetle and needle blight, in southern portions of Nisga'a Lands. According to aerial and ground surveys, NLG located trees that have been affected by mountain pine beetle originating from Terrace. NLG and the province jointly agreed on a plan to treat pine beetle-infected trees north of Kitsumkalum Lake (approximately 70 km southeast of the Kitsault Project). One of Nisga'a cut blocks was infected with *Dothistroma* (needle blight), and the cut-block was replanted to mitigate the problem (NLG 2009a).

The Nisga'a Nation is also involved in successful replanting efforts of cut blocks harvested in 2000. Nine years since the cut block's harvest, NLG surveys indicate stocks of multiple, healthy species, including cedar, which meet free-growing requirements and demonstrate the effectiveness of Nisga'a forestry legislation and initiatives (NLG 2010b).

3.4.5 Non-Timber Forest Products

Nisga'a pine mushroom harvest has been an important economic contributor since the 1980s (NLG 2005). Before the NFA, pine mushroom harvest was unregulated and unsustainable with severe competition between Nisga'a harvesters, transient pickers, and timber interests in the Nass Valley (Collier and Hobby 2010). Since 2000, NLG's Department of Forest Resources manages and regulates harvest of botanical forest products, including pine mushroom and 10 other mushroom species and fiddleheads, within Nisga'a Lands.

NLG requires all Nisga'a and non-Nisga'a harvesters and buyers to obtain a permit for area-based harvest, which are inspected by Nisga'a enforcement officers. The cost for permits varies between Nisga'a citizens and other Aboriginal groups paying \$25 a license and non-Nisga'a paying \$75 a license. Pine mushroom buyers pay a fee of \$250 plus an amount per pound of pine mushroom and other botanical forest products (NLG 2005). The permit and fee regulations allow NLG to manage the number of harvesters and buyers operating in the Nass Valley, and reflects Nisga'a stewardship values and interests. NLG also collaborates

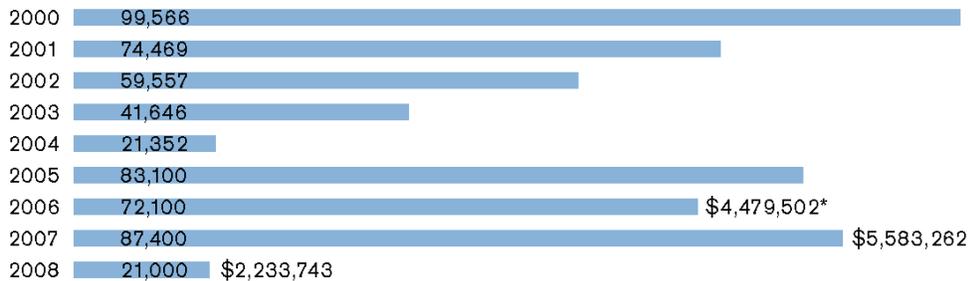
with Misty Mountain Industries in Richmond to encourage increased Nisga'a pine mushroom sales (NLG 2005).

Since 2000, there have been fewer transient harvesters in the Nass Valley (Collier and Hobby 2010). While NLG has developed and implemented a sophisticated regulation and management regime, NLG faces enforcement challenges. In the 2006 to 2007 harvesting season, there was a reported 60% compliance based on interviews conducted by Collier and Hobby (2010). In general, the further away harvest occurred from Nisga'a core lands, the less compliance was observed (Collier and Hobby 2010).

Revenues generated from pine mushroom harvest have varied over the years (Figure 3.4-1). The reasons for lower revenues are mixed including shorter season, less purchase of mushrooms, decreased mushroom prices, and flooded mushroom markets.

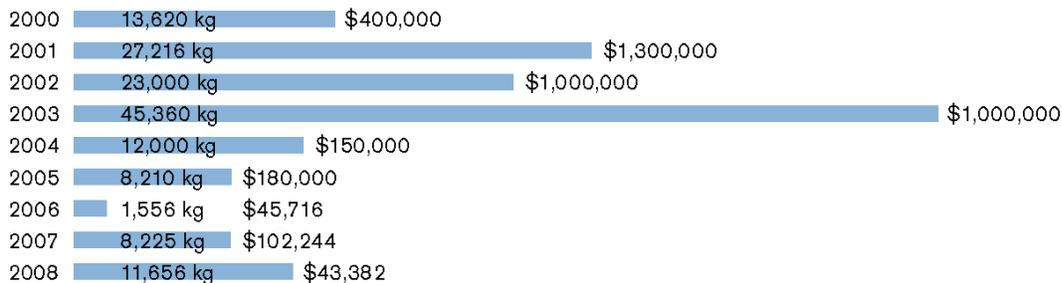
Pine mushrooms are harvested in many areas throughout Nisga'a Lands. Locations of specific harvesting areas are generally not disclosed as they are closely guarded by harvesters. There is a general pine mushroom harvest in and around Kwinamuck Lake (NLG 2003). This area is designated as Area B (Nisga'a citizens only harvest) in the *Nisga'a Botanical Forest Products Harvest Area Map* (NLG 2004a). The Kitsault access road intersects approximately 10 km of pine mushroom harvest Area A, which is open to the general public.

Cubic Metres of Timber Harvested Since 2000



*Dollar value of timber sales reported beginning in 2006.

Botanical Forest Products Harvested Since 2000 (mushrooms)



Source: NLG 2009a

Figure 3.4-2: Summary of Timber and Botanical Forest Products Harvest and Revenue (2000-2008)

3.4.6 Recreation

There are numerous recreational opportunities and activities throughout Nisga'a Lands, some of which are proximate to the Kitsault access road. Currently, two recreation centres are in various stages of development in the Nisga'a Villages of Laxgalts'ap and New Aiyansh. There are also several proposals for culturally and socially important spaces and infrastructure, including a playing field near Gitwinksihlkw and an oolichan camp near Red Bluff. The former has received approval from the NLG Executive, while the latter's approval is still pending (NLG 2010b). There are several popular recreation sites throughout Nisga'a Lands, including Kwinamuck and Dragon lakes with day use and overnight camping.

There are also other activities that occur in the Nass Valley, including the annual Gathering Strength Canoe journey, involving Nisga'a citizens and Aboriginal groups from the north coast. The journey is a week-long trip from Kitkatla to Laxgalts'ap involving canoes from each of the participating Aboriginal groups (NNKN 2010a). The group of canoes visits seven communities along the journey, including Port Edward, Prince Rupert, Metlakatla, Lax Kw'alaams, Kyutzemeteen, Gingolx, and Laxgalts'ap. Last year, the Nisga'a Nation had five canoes participating in the journey for a total of 70 seats (NNKN 2010a). Traditional foods, dance, art, and entertainment are provided at each of the communities. This event also provides an important opportunity for intergenerational dialogue and transfer of knowledge about canoe technology and transportation. "The youth had a chance to explore their abilities, see their traditional territories, visit different communities, experience the generosity and hospitality of the people they met, witness the effect of the activity they were engaged in to the people and communities they visited, and formed long lasting relationships with all involved on the journey" (NLG 2010b).

3.4.7 Heritage

The Nisga'a Nation implemented and manages programs and initiatives supporting the revival and strengthening of Nisga'a culture. Currently, the construction of a 10,000 square foot museum with a Class A climate-controlled gallery space is underway in the Nisga'a Village of Lax-galts'ap. The museum provides storage for Nisga'a artefacts, records, and archives. The establishment of the museum is important to the process of repatriation of nearly 300 Nisga'a artefacts identified in the NFA currently held by the province at the BC Royal Museum (180 Nisga'a artefacts) and by and Canada at the Museum of Civilization (100 Nisga'a artefacts). The museum will also serve as "a permanent place for Nisga'a people and visitors to experience the rich life and legacy of Nisga'a culture" (NLG 2009a) and "a place for sharing traditions and ideas, and a venue for showcasing a rich and resurgent culture" (NLG 2011c).

The Nisga'a Foundation provides the means for construction and maintenance of the museum. Construction started in 2008 and is expected to be completed by early 2011 (NLG 2010c). NLG is currently in the process of repatriating Nisga'a artefacts and setting up operations, including the hiring a Museum Director "to manage administration, coordination of artefact repatriation, fundraising and the development of an operational and marketing plan consistent with other museums" (NLG 2010d).

3.4.8 Fee Simple Lands

NLG conducts annual inspections of its fee simple lands (including the Gits'oohl property), which are currently undeveloped. The inspection entails identifying signs of trespassing and, if there are existing buildings, determining their structural safety. In 2010, NLG reported that the Gits'oohl property has been consistently trespassed, which NLG would like to address with mitigation and prevention measures contingent on available budget (NLG 2010b). Within the Gits'oohl property there are old and dilapidated structures. NLG has identified them as a risk in terms of collapse and, as such, would like to remove them.

3.5 Contemporary Marine Use

Desk-based information does not indicate the specific locations, seasons, frequency, and intensity of Nisga'a harvest of marine species along Alice Arm. NLG publications indicate harvest activity for Dungeness crab in the Nass estuary (NLG 2004b), approximately 60 km southwest of the proposed Kitsault Project. Also, exclusive Nisga'a shellfish harvest area is in the northern portion of Observatory Inlet extending to the southern part of Alice Arm. The 2010-2011 Nisga'a annual fishing plan determines the intertidal bivalve harvest period to occur from October 1, 2010 to March 31, 2011 (NLG 2010e). The plan also specifies minimum length requirements for harvest of certain intertidal bivalve species as well as crabs, including:

- 38 mm in the case of littleneck clams;
- 63 mm in the case of butter clams;
- 38 mm in the case of cockles;
- 165 mm in the case of a dungeness crab;
- 115 mm in the case of a red rock crab; and
- 178 mm in the case of a king crab (NLG 2010e).

Nisga'a harvesters are required to report their marine harvest in the Nass Area within 7 days of the catch. Nisga'a harvesters are also requested to follow several best management practices including:

- Refrain from harvesting clams on beaches where high numbers of under-sized bivalves are found;
- Rebury all undersized clams;
- Avoid leaving holes in the beach from digging activities;
- Refrain from harvest or retention of female crabs (for conservation reasons), unless the crab is infected by parasite *Briarosaccus colossus*; and
- Particular types and uses of crab traps (NLG 2010e).

Annual Paralytic Shellfish Poisoning (PSP) testing occurs prior to the Nisga'a bivalve harvest according to the Canadian Shellfish Sanitation Program standards. Environment Canada conducts water quality surveys every three years and sanitary sampling periodically

throughout the season, including blue mussels (*Mytilus edulis*) on a biweekly basis. Nisga'a Fisheries Program also does its own water quality sampling. Opening of beaches to harvesting activities within the Nass Area is contingent on positive test results and clearance is given by Canadian Food Inspection Agency (CFIA). DFO issues a fishery notice declaring the beginning of Nisga'a fisheries (NLG 2010e).

NLG has identified concerns regarding a declining abalone population. Community-level action plans have been developed for the restoration and preservation of the abalone population within the Nass Area, supported by Prince Rupert, the four Nisga'a Villages, the DFO, Non-government organisations (NGOs), and Environment Canada. Nisga'a Youth Coast Watch, led by 24 Nisga'a youth from the Nisga'a Villages and Urban Locals, has identified abalone as a species needing their attention and protection, "in addition to oolichan, chum salmon, and glass sponge reef" (NLG 2010b). Illegal harvest of abalone along the Portland Canal is being reported to communities by marine patrols.

3.6 Tourism

There are tourist opportunities throughout the Nass Valley provided by tour and adventure operators, including the Nisga'a Commercial Group (NCG) Tourism, Hayatsgum Gibuu Tours, True North Adventures, *Wilp* Syoon fishing lodge, and Nisga'a Salmon Lodge (NLG 2004). The Nisga'a Nation is also actively developing its treaty-defined commercial recreation tenures. Nisga'a have rights to angling guiding tenures along the Illiance and Kitsault rivers, and Kinskuch and Tchitin Rivers (in the Nass River watershed) are proximate to the Kitsault access road. NCG collects data at the visit centre on the number of tourists who visit the Nass Valley. The number increased from 2008 to 2009 with 858 and 1,730 tourists, respectively (NNKN 2009).

The NCG offers three main tours, including the Mushroom Botanical Lava Bed Cone, and Fish Wheel tours. There is also a self-guided auto tour of the Lava Bed Provincial Park with 12 stops for visitors. The NCG is also involved in a number of planning initiatives for:

- An expedition along the Nass River.
- Trails for snowmobile expeditions.
- Three backcountry lodges and 36 km of trails (for biking, hiking, boating, snowshoeing, and skiing) at an estimated cost of \$1.54 million (NNKN 2011c).
- The location of the lodges is planned for the Cambria Icefields near Stewart (Georgia Straight 2009).

Hayatsgum Gibuu Tours offers guided daily tours of the lava bend cone, and True North Adventures provides custom-designed vacations in the Nass Valley.

Wilp Sy'oon fishing lodge (100 km southwest of the Kitsault Project) offers world-class fishing to international clients from the United States and Europe. Clients fish for Chinook, Coho, and halibut on a fleet of Boston Whalers. The lodge is built on floats allowing mobility to various locations along the mouth of the Nass River (Gosnell 2000). Clients arrive in

Prince Rupert and transported to Pearce Island where the lodge is stationed most of the time (Van Gytenbeek 2001). The lodge was established in 1996 and operates from May to September (NNKN 2002). The cost of a five-day package is around \$2,500 to \$3,500.

3.7 Land and Resource Use Planning

3.7.1 Overview

The Nisga'a Nation developed a land use plan after the signing of the NFA to further define and expand on the rights and values expressed in the treaty. Based on consultation with Nisga'a citizens and compilation of data collected during the negotiation of the NFA, the plan provides zoning considerations, restrictions, and responsibilities, according to resource-specific objectives and policies. While the plan does not pertain to the Kitsault mine site, it applies to the 10 km overlap with the Kitsault access road. The plan covers issues, such as Special Management Areas (SMAs), forestry, agriculture, wildlife, fish, recreation, community watersheds, and heritage. This section provides a summary of the Nisga'a objectives and policies with respect to each of these resources important to the Nisga'a Nation.

3.7.2 Fish

The Nisga'a Land Use Plan (NLG 2002) considers riparian areas important to fish habitat and intends to develop policies to protect and assess the effects of land uses and development activities on fishery values. The Nisga'a Nation will make provisions for critical fish habitat areas "that may require special protection, specifically with respect to protection of riparian areas and restriction of access" (NLG 2002). The Nisga'a Land Use Plan did not designate these areas in 2002, but may do so in the future, including "specific stream reaches, bottom lands or other areas can be designated as critical fish habitat and appropriate policy [will be] developed" (NLG 2002).

3.7.3 Wildlife

The Nisga'a Land Use Plan (NLUP) acknowledges both the ecological, cultural, and economic value of wildlife resources (NLG 2002). The NFA defines rights and responsibilities of the Nisga'a Nation with regard to wildlife and migratory birds (Chapter 9) and NLG developed legislation contained in the *Nisga'a Fisheries and Wildlife Act*. NLG and the province co-manage wildlife resources in the NWA in order to ensure their sustainability and viability, especially with regard to treaty-designated species including grizzly bears, moose, and goats. Specific areas within the NWA are of concern and require special consideration and management (Map C). The Kitsault access road overlaps with the wildlife zone delineated in the NLUP, which provides objectives and policies that apply to these zones as well as all riparian areas (defined in Section 27 of the *Nisga'a Forest Act*):

- Land use and decisions will consider cumulative effects on wildlife habitat across all of Nisga'a Lands.
- Land use decisions in the wildlife habitat zone will be supported by a wildlife habitat assessment that includes an assessment of habitat outside of Nisga'a Lands.

- Industrial and commercial activities within wildlife habitat zones must not degrade wildlife habitat.
- No commercial or industrial use will be permitted in zones designated as critical for wildlife habitat.
- Access to hunting and trapping areas will not be unduly restricted by forest management practices
- No hunting will be permitted within zones designated as critical for wildlife habitat. (NLG 2002)

3.7.4 Heritage

According to the Nisga'a Land Use Plan (NLG 2002), heritage preservation is a priority for the Nisga'a Nation. The plan acknowledges that "it is possible for sites and features be protected under the provincial *Heritage Conservation Act*" until such time as the Nisga'a Nation has its own procedures and policies (NLG 2002). The plan identifies sites that may be of heritage interest to the Nisga'a Nation, including "old village sites, trails, grave sites, house sites, oral history landmarks and culturally modified trees" (NLG 2002). Natural landscape features may also have special significance to the Nisga'a Nation and are included in the heritage preservation zone. The proposed Kitsault access road intersects with the Nisga'a heritage area zones (along the Nass River). The objective of the heritage preservation zones is to "protect heritage sites and cultural landscape features" (NLG 2002).

From this objective, several heritage preservation policies arise, including:

- Land use decisions in all zones will ensure that heritage sites and landscape features of importance to the Nisga'a Nation are protected.
- A heritage conservation zone will be applied to heritage sites and landscape features that require special protection.
- A management plan will be developed for any site zoned for heritage conservation (NLG 2002).

3.7.5 Recreation

According to the Nisga'a Land Use Plan (NLG 2002), there is one recreational site approximately 2.5 km south of the Kitsault access road along the northeastern shore of Kwinamuck Lake and approximately 23 km southeast of the Kitsault Project site. The objective outlined in the land use plan (NLG 2002) is "to encourage recreational activities and facilities that protect the integrity of natural amenities" (NLG 2002).

The plan's recreational policies are as follows:

- Recreational activities will be permitted in any zone, as long as the activities are compatible with the primary activity of that zone.
- The development of recreational facilities may be permitted in any zone, as long as the facilities do not conflict with the primary activity of that zone.

- Hiking trails are a permitted use in any zone.
- Access management decisions will consider recreational values.
- Zoning of recreational areas will be considered where recreation is the primary activity.
- Land use decisions will consider views from areas zoned as recreational. (NLG 2002)

The NFA allows recreational access by the public to Nisga'a Public Lands, and development of recreational facilities for tourists and residents is a topic of interest to many Nisga'a citizens. Currently, much of the recreation use is centered on Lava Bed Memorial Park, Lava Lake and the Nass River, none of which are included within this planning area. In addition, many of the Village Governments have plans for recreational facilities on their Village Lands (NLG 2002).

The plan identifies recreational areas on Nisga'a Lands, including Dragon Lake and a number of popular sport fishing locations. Hiking trails and access to alpine areas are also important recreational attributes of Nisga'a Lands. At some time in the future, a decision may be made to develop tourist facilities in association with established recreation areas and facilities. When these facilities are developed on Nisga'a Lands, a commercial tourism designation will be created for inclusion in the land use plan.

3.7.6 Timber and Non-timber Forest Products

The Nisga'a Nation values forest resources, including timber and non-timber forest products and agriculture, which are important for cultural and economic reasons. As such, Nisga'a Nation has interests in maintaining healthy and diverse forests and land, including clean water and wildlife and fish habitat. Nisga'a people also have and continue to participate in agricultural activities, including gardening. Nisga'a Nation has developed zones for future and current agricultural use by utilising provincial ratings on soil productivity (i.e., class 4 or better) to delineate zones appropriate for agricultural development. In order to support these values and interests, Nisga'a Nation has introduced policies and objectives summarised in Table 3.7-1 for each of the forest and agricultural resource zones).

According to the plan maps, the Kitsault access road overlaps with silvicultural, botanical forest resource, and the agricultural polygons. However, the Kitsault access road does not overlap with any ecologically sensitive area zones. "Some areas of critical ecological sensitivity are not considered suitable for any resource use. Areas identified as being environmentally sensitive include intact watersheds and the Nass bottomlands" (NLG 2002).

Table 3.7-1: Summary of Objectives and Policies related to Nisga'a Forest and Agricultural Resources

Forest Resource	Type	Description
Forest Resource	Objectives	Maintenance or enhancement of natural biodiversity across Nisga'a Lands

Forest Resource	Type	Description
Zones – General		Long term sustainability of all forest resources
		Respect for the principles of integrated forest management and forest resource use.
	Policies	Planning and management of all forest uses will be consistent with the principles of certification to achieve sustainable forest resource management.
		Commercial or industrial activity will be permitted in forest zones as long as the activity is consistent with the other permitted activities in the zone.
		Development and maintenance of road access to forest management areas will be appropriate to the permitted activities in the zone.
		Residential use may be permitted in forest zones only if it is incidental to forest management activity, and only if a tenure is obtained through the Directorate of Lands and Resources.
		Forest management policies and practices will respect the need for maintenance of fish habitat.
		No pesticides or herbicides will be used for any aspect of forest management
Botanical Zone	Policies	Forest Management decisions will consider cumulative effects on the appropriate habitat for botanical forest products across all of Nisga'a Lands.
		Access to harvesting areas for botanical forest products will not be unduly restricted by forest management practices.
		Land use decisions within the Botanical Forest Products zone will be supported by an assessment of botanical forest products habitat.
		No incompatible use will be permitted in areas identified through the assessment process as productive pine mushroom habitat.
Silviculture Zone	Objectives	Growing successive crops for purposes of commercial harvest on 16% of Nisga'a Lands.
		Other activities are secondary to silviculture in this zone.
Agriculture Zone	Objective	To encourage agricultural production on lands with capability for agriculture.
	Policies	Agriculturally zoned lands will not be permitted to be used or developed in such a way that the potential for agriculture is permanently damaged.
		Residential use may be allowed if the residence is incidental to the agricultural use, and only if a tenure is obtained from the Lands and Resources Directorate.
		Agricultural activities will respect the need for maintenance of fish habitat.

Source: NLG 2002

3.7.7 Water

As identified in the Nisga'a Land Use Plan (2002), the proposed Kitsault Project does not overlap with any Nisga'a community watersheds. However, it is important to recognise the value of water to Nisga'a Nation: "Communities within Nisga'a Lands are primarily dependent upon surface water for their supplies of potable water. It is essential that the watersheds that supply this valuable resource remain in a healthy condition" (NLG 2002).

3.8 Summary

According to the NFA, NLUP, and NLG reporting, the Nisga'a Nation and its citizens hold several important treaty rights, interests, and values within Nisga'a Lands and areas overlapping with or proximate to the Kitsault mine site and access road. This report provided a summary of desk-based, publicly available information on these rights and interests as a starting point, which will be further expanded with site-specific and detailed information as collected as part of the ESCIA endeavours in collaboration between social science practitioners and the Nisga'a Nation. The main results of the research are (in order of closest to most distant Nisga'a rights and interests): Gits'oohl fee simple property, commercial recreational tenure, two angling guide rivers (i.e., Kitsault and Illiance rivers), traplines (i.e., TR0614T090 and TR614T094), rivers with specific Nisga'a water allocations (i.e., Kwinatahl River and Khsadin Creek), intertidal bivalve harvest area, recreational site at Kwinamuck Lake, Grease Trail, guide outfitting, and pine mushroom harvesting area.

The fee simple property is undeveloped, regularly trespassed, and contains a dilapidated structures that NLG plans to remove. The Nisga'a Nation holds 27-year tenure license for a commercial recreation area north of Gits'oohl, about which there is no desk-based information available on plans for development and use. North of the Kitsault mine site, Nisga'a Nation have rights to exclusive angling guide licenses for the Kitsault and Illiance River. None of the Nisga'a traplines designated in the NFA overlap with the mine site or the access road; however, traplines TR0614T90 and TR0614T094 are located 5 km north of the mine site. Nisga'a citizens also may apply up to 10% of flow of the Khsadin Creek and Kwinatahl River, which overlap or run parallel to the access road, toward the Nisga'a water allocation. There is an exclusive intertidal bivalve harvest area for Nisga'a citizens 25 km southwest of the Kitsault Project, which is used from March to October. The recreation site at Kwinamuck Lake is located within an area of exclusive Nisga'a harvest. The historic Grease Trail, which runs parallel to the Nass River, connected the interior Aboriginal groups (e.g., Gitxsan and Gitanyow) with coastal groups and supported the trade of oolichan, berries, and seafood. According to the NFA, a subset of Robert Milligan's guide outfitting tenure will be transferred to the Nisga'a Nation upon sale of the tenure. The resources within Nisga'a Lands and areas of greatest concern given their depressed populations are moose, chum salmon, and abalone.

REFERENCES

- Bocking, R.C. and Peacock, D. 2004. *Habitat-based production goals for coho salmon in Fisheries and Ocean Statistical Area 3*. Produced by LGL Limited for the Department of Ocean and Fisheries.
- British Columbia Environmental Assessment Office (EAO). 2010a. *Proponent's Guide for Providing Treaty Nation Consultation Information*. Accessed February 2011: http://www.eao.gov.bc.ca/pdf/Guide_%20Proponents_Treaty_Nations.pdf.
- British Columbia Environmental Assessment Office (EAO). 2010b. *Kitsault Project Section 11 Order*. Submitted to Avanti Mining Corporation, 24 November 2010.
- British Columbia Environmental Assessment Office (EAO). 2011. *Kitsault Project Section 13 Order*. Submitted to Avanti Mining Corporation, 28 March 2011.
- BC Ministry of Aboriginal Relations and Reconciliation (MARR). 2001. *Nisga'a Final Agreement Implementation Report*. Accessed February 2011: http://www.gov.bc.ca/arr/firstnation/nisgaa/implement/down/nisga_implementation_rpt.pdf.
- Canadian Environmental Assessment Agency (CEAA). 2010. *Considering Aboriginal traditional knowledge in environmental assessments conducted under the Canadian Environmental Assessment Act -- Interim Principles*. Accessed April 2011: <http://www.ceaa.gc.ca/default.asp?lang=En&n=4A795E76-1>.
- Collier and Hobby. 2010. Accessed March 2011: <http://journals.sfu.ca/forrex/index.php/jem/article/viewFile/60/20>.
- Georgia Straight. 2009. *Nisga'a lands woos Nass Valley tourists with parks, arts*. Accessed March 2011: <http://www.straight.com/article-238555/nisgaa-land-woos-tourists-parks-art>.
- Gosnell, J. 2000. *The Nisga'a Treaty Good economic news for the pacific northwest*. Accessed March 2011: <http://www.kermode.net/nisgaa/speeches/speeches.gosnell.html>.
- Indian and Northern Affairs (INAC). 2000. *Nisga'a Final Agreement*. Accessed February 2011: <http://www.ainc-inac.gc.ca/al/ldc/ccl/fagr/nsga/nfa/nfa-eng.asp>.
- Ministry of Natural Resources Operations (MNRO). 2010. *Hunting and Trapping Synopsis (2010-2012)*. Accessed March 2011: <http://www.env.gov.bc.ca/fw/wildlife/hunting/regulations/1012/docs/region6.pdf>.
- Nisga'a Lisims Government (NLG). 2001. *Nisga'a Final Agreement 2001 Annual Report*. Accessed February 2011: <http://www.nisgaalisims.ca/files/nlg/u3/nfaap-eng.pdf>.
- Nisga'a Lisims Government (NLG). 2002. *Land Use Plan for Nisga'a Lands*. Accessed February 2011: <http://www.nisgaalisims.ca/files/nlg/Land%20Use%20Plan%20Dec%202002.pdf>.

- Nisga'a Lisims Government (NLG). 2003. *Hak'ak'a'a*. Accessed March 2011:
<http://www.nnkn.ca/files/june03.pdf>.
- Nisga'a Lisims Government (NLG). 2004a. *Nisga'a Botanical Forest Products Harvest Area Map, 2004*. Nisga'a Lisims Government, Directorate of Lands and Resources (New Aiyansh).
<http://www.matsiman.com/canadainfo/NISGA'ALISIMS/Mushmap%202004.pdf>.
- Nisga'a Lisims Government (NLG). 2004b. *Nisga'a Final Agreement 2003-2004 Annual Report*. Accessed March 2011:
<http://www.nisgaalisims.ca/files/nlg/u1/NLG2004AR.pdf>.
- Nisga'a Lisims Government (NLG). 2005. *Nisga'a Final Agreement 2004-2005 Annual Report*. Accessed March 2011:
http://www.gov.bc.ca/arr/firstnation/nisgaa/implement/down/annual_report2004_2005.pdf.
- Nisga'a Lisims Government (NLG). 2008. *Nisga'a Final Agreement: Implementation Report 2006-07 and 2007-08*. Accessed March 2011:
http://www.nisgaalisims.ca/files/nlg/u3/nisgaa_fa_implementation_report_2006-08.pdf.
- Nisga'a Lisims Government (NLG). 2009a. *Nisga'a Final Agreement: Implementation Report 2008-2009*. Accessed March 2011:
<http://www.nisgaalisims.ca/files/nlg/u3/NLG-AR08-09SinglePages.pdf>.
- Nisga'a Lisims Government (NLG). 2009b. *Notice to Moose Hunters*. Accessed March 2011: <http://nnkn.ca/nisgaamuseum.net/teams/node?page=87>.
- Nisga'a Lisims Government (NLG). 2010a. *Environmental, Social, and Cultural Impact Assessment Guidelines*. Provided by NLG for Avanti Mining Corporation, November 2010.
- Nisga'a Lisims Government (NLG). 2010b. *Special Assembly September 2010*. Accessed February 2011: <http://nnkn.ca/files/2010%20Special%20Assembly.pdf>.
- Nisga'a Lisims Government (NLG). 2010c. *2010 NASS RIVER SALMON STOCK ASSESSMENT UPDATE*. Accessed March 2011:
ftp://ftp.lgl.com/Nass%20Stock%20Assessment%20Updates/2010_NASS_SALMON_STOCK_ASSESSMENT_FINAL_UPDATE_SUN_28NOV10.pdf.
- Nisga'a Lisims Government (NLG). 2010d. *Nisga'a Responses to Northwest Transmission Line Project (January 29, 2010)*. Accessed March 2011: xx.
- Nisga'a Lisims Government (NLG). 2010e. *Nisga'a Annual Fishing Plan 2010-2011*. Accessed February 2011: ftp://ftp.lgl.com/pub/For%20Will/NAFP/Draft_NAFP2009-10_16Jan09.doc.
- Nisga'a Lisims Government (NLG). 2011a. *Nisga'a Fisheries and Wildlife Department*. Accessed March 2011: <http://www.nisgaalisims.ca/fisheries-and-wildlife>.

- Nisga'a Lisims Government (NLG). 2011b. *Nisga'a Annual Fishing Plan*. Accessed March 2011: <http://nnkn.ca/files/2011-2012%20Nisga'a%20Annual%20Fishing%20Plan.PDF>.
- Nisga'a Lisims Government (NLG). 2011c. *Nisga'a Museum*. Accessed March 2011: <http://www.nisgaalisims.ca/node/55>.
- Nisga'a Lisims Government (NLG). 2011d. *Nisga'a Museum*. Accessed March 2011: <http://www.nisgaalisims.ca/nisgaa-musem>.
- Nisga'a Nation Knowledge Network (NNKN). 2002. Accessed March 2011: <http://www.nnkn.ca/files/may02.pdf>.
- Nisga'a Nation Knowledge Network (NNKN). 2009. Accessed March 2011: <http://nnkn.ca/node/91>.
- Nisga'a Nation Knowledge Network (NNKN). 2010a. *Canoe Journey 2010 Map*. Accessed March 2011: <http://nnkn.ca/files/2010.pdf>.
- Nisga'a Nation Knowledge Network (NNKN). 2010b. *Gathering Strength Canoe Itinerary*. March 2011: <http://nnkn.ca/content/gathering-strength-2010>.
- Rescan Environmental Services, Inc. (Rescan). 2010. *Kitsault Project Land and Resource Use Baseline Report*. Prepared for Avanti Mining Corporation, June 2010.
- Sierra Club. 2006. *Nass River Salmon Fishery Report Card*. Accessed February 2011: <http://www.sierraclub.ca/national/postings/scc-nass-salmon-report-card.pdf>.
- Van Gytenbeek, R.P. 2001. *Breathtaking scenery and myriad fishing options await British Columbia*. Wilp Syoon Journal. Accessed March 2011: <http://www.flyfishinsalt.com/travel/international/wilp-syoon-journal-32543.html>.

Useful Nisga'a Map Resource Links

- 1. Nisga'a Nation Areas of Ownership and Interest**
http://archive.ilmb.gov.bc.ca/slrp/lrmp/nanaimo/ncoast/docs/sectorstatements/NC_LRMP_sector_statement_Nisgaa_Lisims_Govt_Map.pdf
- 2. Nisga'a Land Use Plan Maps (A, B, and C)**
www.nisgaalisims.ca/files/nlg/Map%20A.pdf
www.nisgaalisims.ca/files/nlg/Map%20B.pdf
www.nisgaalisims.ca/files/nlg/Map%20C.pdf
- 3. Pine Mushroom Harvesting Areas (2004)**
www.matsiman.com/canadainfo/NISGA'ALISIMS/Mushmap%202004.pdf
- 4. Nisga'a Final Agreement Appendices A-K (bottom of the page)**
http://www.leg.bc.ca/36th3rd/1st_read/gov51-1/gov51-1c.htm
- 5. Nisga'a Place Names Map**
http://archive.ilmb.gov.bc.ca/bcnames/lower/lower_map_lg.jpg
- 6. Nass Area Overview**
http://www.nativemaps.org/files/images/Referrals/case_studies/Nisgaa%20map.jpg