Wóoshtin wudidaa
Atlin Taku
Land Use Plan

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Taku River Tlingit First Nation

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Atlin Taku Land Use Plan

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Contact information:

For more information on the Atlin Taku Land Use Plan, please contact:

Taku River Tlingit First Nation
Land and Resources Department
Box 132
Atlin, BC
V0W 1A0

250-651-7900

www.trtfn.yikesite.com

Province of British Columbia
3726 Alfred Ave
Smithers, BC
V0J 2N0

250-847-7260

www.ilmb.gov.bc.ca/slrp/lrmp/smithers/atlin_taku/index.html

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Gunalcheesh / Thanks with respect.

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List of Acronyms

AAC	Allowable Annual Cut
ASRMZ	Area Specific Resource Management Zone
TSA	Timber Supply Area
CFHZ	Commercial Forest Harvest Zone
CFWMP	Collaborative Fish and Wildlife Management Plan
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CTFN	Carcross-Tagish First Nation
GMD	General Management Direction
G2G	Government to Government
JLF	Joint Land Forum
LUP	Land Use Plan
MOU	Memorandum of Understanding
NCFHZ	No Commercial Forest Harvest Zone
RMZ	Resource Management Zone
TLUI	Tlingit Traditional Land Use Impact
TRTFN	Taku River Tlingit First Nation
TTC	Teslin Tlingit Council
TWG	Technical Working Group

Wóoshtin wudidaa / Atlin Taku Land Use Plan

1. INTRODUCTION

This document is a strategic land use plan for the Atlin Taku developed through a collaborative, government-to-government process involving the Province of British Columbia (BC) and the Taku River Tlingit First Nation (TRTFN).

1.1 Context & Intent

One of the principal drivers for joint planning in the Atlin Taku is the *New Relationship* (2005)[1], which sets out a vision and principles for a government-to-government relationship between the Province of British Columbia and First Nations. The New Relationship is part of an evolving process towards recognition and reconciliation of Crown and Aboriginal rights and titles in British Columbia. The New Relationship confirms the commitment of the Province and First Nations to work together in a spirit of mutual recognition and respect.

Consistent with the spirit and intent of the *New Relationship*, the Province of British Columbia and the Taku River Tlingit First Nation established together the *Framework Agreement for Shared Decision-Making Respecting Land Use and Wildlife Management*[2] (the 'Framework Agreement') in March 2008. This agreement set the stage for government-to-government discussions related to land use planning, collaborative wildlife management planning, and the establishment of shared decision-making arrangements.

The Atlin Taku Land Use Plan was undertaken to contribute in part to the achievement of several of the jointly agreed to outcomes specified in the Framework Agreement (s.2.3) which include:

- reduction in conflicts between the British Columbia and the TRTFN over land use and wildlife management matters;
- increased clarity on the processes, policies, and structures, including shared decision-making processes, that will be used between the parties to achieve sustainable environmental management of lands, waters and resources;
- operational decision-making processes that are more effective, and more efficient than those currently in use for addressing interests of BC and the TRTFN;
- mechanisms in place that protect healthy, fully functioning ecosystems which sustain the land, waters and resources on which the Tlingit rely for their Aboriginal rights and the continuation of Tlingit *khustìyxh*, or way of life;
- conservation of areas that are culturally significant to the Tlingits;
- increase in the diversification of sustainable economic activity in the planning area, including but not limited to improved employment opportunities and economic benefits for the Tlingits, Atlin residents, other communities and for the citizens of British Columbia;
- strategies in place that can provide for both parties the capacity and resources needed to implement jointly developed plans and apply shared decision-making;
- maintenance of healthy populations of wildlife species within the planning area; and
- maintenance of hunted wildlife populations that are robust enough to meet conservation requirements, First Nations food, social and ceremonial requirements, and also provide opportunities for resident and non-resident hunters.

TRTFN and BC intend that this Land Use Plan, along with other agreements negotiated between the Parties under the *Framework Agreement*, will represent a step towards the implementation of

[1] The *New Relationship* document can be found online at http://www.gov.bc.ca/themes/new_relationship.html
[2] The *Framework Agreement* can be found online at: www.ilmb.gov.bc.ca/slrp/lrmp/smithers/atlin_taku/docs/final_framework_agreement_20080317.pdf

the *New Relationship*[3] and tangible interim progress toward a longer term reconciliation of their interests, including the establishment of a shared decision-making process between them respecting land use and wildlife matters.

1.1.1 Hà Tlátgi Hà Khustìyxh Sìti: Our Land Is Our Future

In 2003 the TRTFN completed *Hà Tlátgi Hà Khustìyxh Sìti: Our Land Is Our Future: Vision and Management Direction for Land and Resources*, which described the Taku River Tlingit's deep connection to the land and articulated a Tlingit vision for the future of their territory. This document was complemented by the *Tlatsini* map, released in 2009, which identified areas of special importance to the Tlingit for the conservation of biodiversity and for sustaining Tlingit *khustìyxh* ('way of life'). The work of the Tlingit to develop these documents, including inventory, analysis, and community visioning, contributed a wealth of knowledge and capacity and was one of the pillars that supported subsequent government-to-government collaborative work to develop a joint land use plan for the Atlin Taku.

1.2 Scope of the Atlin Taku Land Use Plan

Under the *Framework Agreement*, BC and the TRTFN agreed to develop jointly the following land use recommendations in the Atlin Taku Land Use Plan:

- a framework for culturally and ecologically sustainable management grounded in ecosystem-based management practices including principles, goals, and objectives for critical habitat and ecosystem management; and
- designated resource management zones, defining the scope of acceptable activities, including:
  - areas for protection from major industrial development due to their cultural, ecological, wildlife, or fisheries values; and,
  - areas available for ecologically sustainable and culturally appropriate development.

The Atlin Taku Land Use Plan will contribute to fulfilling these commitments by providing resource management direction and zoning for the principal resource values and land use activities that are expected to occur within the Plan Area, including: Access, Aquatic and Riparian Habitats, Terrestrial Biodiversity and Wildlife Habitat, Culture and Heritage, Forestry, Mineral Exploration and Mining, and Recreation and Tourism. Additional resource management direction specific to other potential development activities such as energy, oil and gas development, and agriculture may be developed at a later time as required.

This Land Use Plan is an instrument of policy that provides resource management direction for operational land and resource-based activities within the Plan Area, which includes those portions of the Taku, Yukon and Whiting watersheds within British Columbia as shown on Map 1. The Land Use Plan will also guide planning processes at the more detailed scale e.g., as required for operational activities.

The approved Land Use Plan will be implemented within the legislative and policy frameworks of the day. Some components of this plan will be implemented as legal designations or objectives. The remainder of the plan provides policy guidance to be considered by decision makers along with other applicable legislation and policy. It also provides guidance for a variety of land users and development proponents who seek to operate in the Plan Area.

Other deliverables identified under the *Framework Agreement* may be completed through other joint processes or through mechanisms set out in separate agreements, including the following:

- the development of structures and processes for shared decision-making between the TRTFN and BC, which are contained in a separate Government-to-Government (G2G) *Land and Resource Management and Shared Decision Making Agreement* (see section 2.2);

[3] The *New Relationship* document can be found online at http://www.gov.bc.ca/themes/new_relationship.html. See also Section 2.1

- collaborative fish and wildlife management and planning;
- local access planning for the Atlin area; and
- a strategic review of deregulated streams in the Plan Area and a recommended approach to developing best practices, restoration plans and/or other measures that address the concerns of Tlingits and others regarding water quality and fish habitat.

The Atlin Taku Land Use Plan does not address the following:

- negotiations associated with Aboriginal rights and title. These negotiations occur through separate tripartite processes involving BC, First Nations and the Government of Canada. The Land Use Plan does not limit treaty negotiations and settlements and any outcomes of treaty negotiations will take precedence over the Land Use Plan;
- any government-to-government engagement that may be required for Environmental Assessment;
- resources and resource use activities on private lands;
- allocation of fish and wildlife resources; or
- resource revenue sharing.

2. A GOVERNMENT-TO-GOVERNMENT APPROACH TO LAND USE PLANNING AND MANAGEMENT

2.1 Joint Land Forum and Technical Working Group

As specified in the 2008 *Framework Agreement*, BC and the TRTFN established a Joint Land Forum (JLF), a government-to-government body to provide oversight for implementation of the agreement, including development of a strategic land use plan for the Atlin Taku area. The Joint Land Forum, comprised of three representatives appointed by BC and three representatives appointed by the TRTFN, was mandated to develop recommendations to promote the sustainable management of lands, waters and resources in the Plan Area.

A Technical Working Group (TWG) with representation from BC and the TRTFN was subsequently appointed by the Joint Land Forum to undertake detailed work as land use planning products were developed. Tasks included information gathering, consulting with stakeholders, providing technical analysis, and preparing and revising draft products in light of community and stakeholder input and Joint Land Forum direction.

2.2 Shared Decision-Making in Plan Development & Implementation

Consistent with the vision outlined in the New Relationship, BC and the TRTFN approached the development and implementation of this land use plan for the Atlin Taku through a collaborative and respectful government-to-government process. This approach included the use of 'shared decision-making', which was defined in the *Framework Agreement* as follows:

"…the process that the Tlingit and British Columbia agree that they will use to engage collaboratively on the development and implementation of particular plans…with the goal of seeking an outcome that accommodates rather than compromises the interest of both Parties. It is understood that shared decision-making will normally supplement or modify an existing decision-making process as the parties may agree, but will not fetter or delegate statutory authority or discretion under provincial laws or the TRTFN Constitution."

TRTFN-BC Framework Agreement 2008

Concurrent with the preparation of this Land Use Plan, BC and the TRTFN jointly developed a Government-to-Government *Land and Resource Management and Shared Decision Making Agreement* that outlines their mutual commitments regarding the establishment of shared decision-making arrangements for land and resource management in the Atlin Taku. These include:

- the establishment of a standing Government-to-Government Forum that will guide and monitor implementation of the Land Use Plan and other joint initiatives related to land and resource matters in the Atlin Taku;
- clearly defined processes for timely and effective engagement on land and resource matters; and
- a dispute resolution process.

2.3 Engagement with Other First Nations

BC and the TRTFN recognize that other First Nations have an interest in the Plan Area, and further, BC recognizes that other First Nations claim aboriginal rights and title within the Plan Area (Map 2). No part of this plan is intended to prejudice the Aboriginal rights, including title, or other interests of any other First Nation. Under the *Framework Agreement*, BC and the TRTFN agreed to jointly, or individually, undertake discussions regarding land use with First Nations who have interests in portions of the Plan Area. These discussions, when they occurred, informed the

development of this Land Use Plan and such discussions will continue during plan implementation.

2.3.1 Carcross-Tagish First Nation

A portion of the territory of the Carcross-Tagish First Nation (CTFN) is included in the northwestern part of the Plan Area. The traditional territory of this First Nation is transboundary between BC and the Yukon. The CTFN has been engaged in the planning process and has indicated its support for the Land Use Plan through an Executive Council Resolution.

2.3.2 Tahltan Nation

The Parties recognize that the Tahltan Nation has interests in the Planning Area and further, BC recognizes that the Tahltan assert claim to an area that covers roughly the lower one-third of the southern portion of the Plan Area. Although the Province has attempted to engage and seek input from the Tahltan on a Government to Government level, the Tahltan have not engaged in the planning process or provided contributions. Throughout the planning process, the Province has kept the Tahltan informed and consulted on draft land use planning products.

2.3.3 Teslin Tlingit Council

A portion of the territory of the Teslin Tlingit Council (TTC) is included in the northeast part of the Plan Area. The traditional territory of this First Nation is transboundary between BC and the Yukon. The TTC has been consulted throughout the process consistent with a 2006 Letter of Understanding between the Dakha Nations. The TTC formally withdrew its participation from the Framework Agreement in February 2010. Since that time, the Province has continued to consult on draft land use planning products.

2.4 Engagement with Yukon and Alaska

Both the governments of the Yukon Territory and the State of Alaska have been engaged by BC on cross-border issues associated with Land Use Plan development.

2.5 Participation by Taku River Tlingit Community

The TRTFN undertook extensive consultations with its own members throughout the land use planning process. Building on the detailed discussions that led to the development and approval of *Hà Tlátgi Hà Khustìyxh Sìti: Taku River Tlingit Vision and Management Direction Document for Land and Resources*, the TRTFN used a series of Leaders' meetings, community meetings, joint clan meetings, family meetings and newsletters to keep the community informed and to provide ongoing opportunities for Tlingit community guidance to this process.

2.6 Engagement with the Local Community and Stakeholders

The 2008 *Framework Agreement* directed the Joint Land Forum to involve the local community of Atlin and stakeholders in the planning process and provide them with an opportunity for review and comment on draft plan products. Accordingly, the JLF undertook an extensive process to engage with members of the Atlin community and stakeholders. Interests represented include: resident hunters and fishers, commercial fishery operations, guide outfitters, trappers, the mineral exploration and development sector, and conservation organizations. The engagement strategy was developed by an independent facilitator to ensure consistency with best practices for public

involvement. The strategy was reviewed by members of the community and stakeholders, and jointly approved by BC and the TRTFN prior to its implementation.[4]

The community of Atlin nominated three residents to form a Land Use Planning subcommittee to represent Atlin in land use planning discussions with BC and the TRTFN. One of these community representatives was subsequently appointed by the Minister of Agriculture and Lands to serve as one of BC's three representatives on the JLF.

Open houses and technical multi-party workshops were convened in Atlin between June 2008 and June 2010. These events provided opportunities for detailed review and discussion of draft planning products. Outcomes of these workshops were used as input into the development and refinement of the Land Use Plan.

Local community representatives and stakeholders also provided input on areas of special interest through a community mapping process. Areas were identified based on their importance for recreation, hunting and gathering of food and other resources, as well as areas of cultural or historical significance. This information was used as a data layer and input to the planning process.

Other tools and strategies for community and stakeholder involvement included:

- individual meetings between JLF/TWG representatives and community or stakeholder individuals and groups;
- regular communications through newsletters and website updates; and
- technical information and key draft Land Use Plan products (e.g. maps, documents) accessible to local residents through the Government Agent's office in Atlin.

Information and updates on the land use planning process were made available to the broader public on the joint BC-TRTFN website at: http://www.ilmb.gov.bc.ca/slrp/lrmp/smithers/atlin_taku.

In addition, BC government agencies were updated on plan progress and input was sought on issues and products as they evolved.

[4] Details of the engagement strategy are outlined in: *Community and Stakeholder Involvement in Planning in the Atlin Taku Region, Recommendations to the Joint Land Forum*, prepared by Erlandson Consulting Inc., March 17, 2008 at http://archive.ilmb.gov.bc.ca/slrp/lrmp/smithers/atlin_taku/community_stakeholder_strategy.html

Box A: Tlingit Perspectives on Lands and Resources

We, the Taku River Tlingit, are moving forward as responsible stewards of the lands and waters within our territory. Our territory covers approximately 40,000 km^2 and includes areas of what is now known as British Columbia, Alaska and Yukon. Our territory contains high mountains, expansive forests rich with wildlife and salmon-filled wild rivers. As responsible stewards, we are embarking on a course necessary to ensure the preservation of our lands and the conservation of its wildlife and fisheries. This will assist us in ensuring the preservation of what is Tlingit.

Our ancestors named the Taku River and still today we identity ourselves with this life-sustaining river as the Taku Quan, or people of the *T'akhu*. There is archeological evidence showing our people lived in the Taku watershed for at least the past 6,000 years, and our elders tell stories of our people and ancestors in our landscapes when mountains were being formed. Throughout all this time, our way of life, or *khustiyxh* has become intertwined with our lands and waters, so that we are now inseparable from these very same lands and waters. Just as some people may identify themselves with a place they call home, we identify ourselves through our ties to specific places throughout the territory. This is the place we call home. This is our true homeland. Other people may come and go, but we have always been here and we will continue our lives here forever. We are part of the land, part of the water and part of the air in our territory—and without healthy water, land and air, we will no longer be who we are today.

To the Tlingit, the land and the forces of nature that shape the land are real, alive and interconnected with human life and must be respected. From past to present, we draw the deepest sense of spirituality through various landscapes, waterways and animals, and we adhere to rules of conduct that have guided the motivations and actions of our people as we live respectfully within the natural environment.

At the outset of the 21st century, we are making rapid progress in rebuilding our community, and recovering our wellness and strengthening our connections to the places that we love. We are building on the strength of our ancestors and look forward to maintaining and extending our relationship to the land and its natural wealth, and to reoccupying areas and rejuvenating cultural practices. These steps are part of our efforts to fulfill our collective responsibility to look after the future generations who choose to make the TRTFN Territory their home.

Our approach to land use planning is grounded in our culture and knowing who we are and where we come from. Our approach requires thinking about the future in a comprehensive way so that our children and children's children can flourish in this territory as Tlingit. Our approach requires strength and continuity in our relationship with the land, and a set of rules guiding all land use activities that respect our aboriginal rights and *khustiyxh*. We believe that decisions on major resource development activities should be informed by both knowledge of the past and also by a long-term, comprehensive vision of the future.

Our community spent many years preparing our 2003 document, *Hà T_átgi Hà Khustìyxh Sìti: Our Land Is Our Future: Vision and Management Direction for Land and Resources*. That document articulated a Tlingit vision for the future of our Territory, describing how we would like to see our land and resources used, managed and protected for the benefit of present and future generations. Our vision document also committed our First Nation to initiating and supporting capacity building in all resource management and economic development sectors in our Territory. Our vision document also called upon all that choose to make our territory their home, or who are involved in resource development, to respect the land, and to honour Tlingit rights and aboriginal title.

In 2008, the TRTFN and British Columbia embarked on a joint planning process, with a commitment to finding mutually agreeable solutions to land use issues. Under the terms set out in the *Framework Agreement,* we have participated in a detailed, collaborative planning process that includes extensive input from the local community and other stakeholders, so that all who choose to make our territory their home understand and can contribute to a shared vision for the future.

3. PROFILE OF THE PLAN AREA

3.1 Plan Area

The Atlin Taku Plan Area is a remote and largely unroaded area in the northwest corner of British Columbia. The Plan Area includes those portions of the Taku, Whiting and Yukon watersheds within the province of BC. The western boundary of the Plan Area abuts the Alaska Panhandle, and the northern boundary follows the border with the Yukon Territory. The total size of the land use planning area is approximately 3.04 million hectares or 30,409 km^2 (see Map 1).

3.2 Physical Environment

The Atlin Taku planning area is geographically complex, comprised of mountainous terrain with broad river floodplains, massive glacial fields and large plateaus. The northern half of the Plan Area comprises the southern part of the Yukon watershed, which includes Atlin, Tagish and Gladys lakes. The southern half of the Plan Area contains the entire Canadian portion (over 90%) of the Taku and Whiting watersheds. Major rivers in the Taku watershed include the Taku, Nakina, Inklin, Sutlahine, Nahlin and Sheslay Rivers.

The western region of the Plan Area is influenced by its proximity to the coast with ocean-moderated temperatures and heavy precipitation. In the interior region, the climate is continental and under an arctic influence; winters are long and cold with limited snow accumulation, while summers are brief and warm. As one moves from the coast to the interior, there is a transition between climatic and physiographic regimes, as reflected in distinct ecosystems.

Background information on resource values and conditions in the Plan Area is available from a selection of background reports and studies including those listed in Appendix A.

3.3 Territory of the Taku River Tlingit First Nation

The Atlin Taku Plan Area is the ancestral home of the Tlingits, who have a long history of occupation across the territory. Detailed information on Tlingit land use and occupancy has been compiled by the TRTFN Land and Resources Department and confirms the extensive patterns of Tlingit use.[5,6]

A brief summary of Tlingit land use is also provided in *Hà Tlátgi Hà Khustìyxh Sìti: Our Land Is Our Future: Vision and Management Direction for Land and Resources*, including a description of seasonal movements for subsistence and economic activities using an extensive network of trails and waterways. There is a series of Tlingit village sites distributed throughout Tlingit territory, some of which have been documented more recently in archaeological records. Some of these sites include:

- seasonal village sites on the Taku River / T'akhu, the Nakina River / Nàkina â Hîn, Porter Lake, Nahlin, and Atlin Lake / Â Tlèn; and at the confluence of the Inklin and Nakina Rivers (known as Hîn Tlèn), the Silver Salmon and Nakina Rivers, and the Nakina and Sloko Rivers (also known as 'Canoe Landing');
- family homes at several locations along the Inklin and Sheslay Rivers with several permanent seasonal fishing camps along the Nakina, Silver Salmon, and other rivers; and,

[5] Perspectives on Taku River Tlingit First Nation's use and occupancy of their traditional territory has been provided by the Taku River Tlingit and have not been verified independently by the Province.

[6] Much of the details of Tlingit land use and occupancy is sensitive and is stored as private information, to be shared only with approval of the TRTFN. Efforts continue to find ways to protect the integrity and confidentiality of data so that the best of all possible data is available to support decision-making.

- important cultural and heritage sites including remains of cabins, semi-underground dwellings, grave houses, hearths and drying racks, food cache pits, and bridges across narrow canyons.

Village sites, numerous camps, and original trails in the Southern Lakes area are evidence of the TRTFN's ties to the 'inland Tlingit' in the Atlin and Tagish Lake areas.

The TRTFN have also developed and maintained trails throughout the territory, connecting the T'akhu with headwaters and interior areas, including eastward and northward into what is now the Yukon. From the Nakina River there are trails through the valleys to various destinations including Atlin, Gladys Lake, and Teslin Lake. Two main aboriginal trails connect Nakina River with the Atlin area. The first follows the Silver Salmon River to Kuthai Lake and from there to Atlin. The second follows the Sloko River to the south end of Kuthai Lake. Another aboriginal trail provided access to the upper Silver Salmon and Nakina Rivers and Paddy Lake. Patterns of trade with inland First Nations were also well established prior to European settlers with trails connecting the Taku and Tulsequah valleys to the interior.

Currently, most Taku River Tlingits live in the areas surrounding Atlin (on Five Mile Point Indian Reserve No.3 located south of Atlin, or on Indian Reserve No.4 within Atlin) and in Whitehorse, while others live throughout BC and Canada. There are eight TRTFN Indian reserves covering approximately 1,194 ha in the Plan Area. In recent years, the TRTFN have increased their effort to maintain and rejuvenate their land use throughout the territory, and work to assist young Tlingit people to become familiar with their history and participate in cultural land use activities.

Communities of other First Nations with an interest in the Plan Area are located outside of the Plan Area. Communities of the Carcross/Tagish and Teslin Tlingit First Nations are located in the Yukon. Other communities are in the towns of Dease Lake, Telegraph Creek, and Iskut, to the south of the Plan Area.

3.4 Community of Atlin and Other Residents

Atlin is the only sizable community and commercial centre in the Plan Area other than the Tlingit reserve on the eastern shores of Atlin Lake. The number of year-round residents in the town is currently around 500 (Atlin Improvement District website, 2009)[7]. Numbers increase in the summer months due to seasonal residents and workers. Atlin is unincorporated; it does not have a municipal government, nor is it part of a regional district. The locally elected trustees of the Atlin Community Improvement District, the community governing body, provide governance and leadership on issues related to local land use and development for residential and commercial purposes in the Atlin area. There are a few other small and scattered settlements in the northern portion of the Plan Area, located along the main road joining Atlin with the Alaska Highway.

3.5 Economic Profile of the Plan Area

The economy of the Plan Area exists in two forms: the informal land-based economy and the cash economy including resource industries and local enterprises.

3.5.1 Informal Land Based Economy

Land based activities—such as hunting, fishing, gathering of plants for food and medicine, and trading in goods and services associated with these activities—are important for the Tlingits and other members of the local Atlin community. Many TRT citizens continue to exercise their aboriginal rights and meet substantial parts of their families' economic needs by harvesting and gathering. Local Atlin residents also rely on hunting and gathering to sustain themselves and their family members.

[7] http://www.discoveratlin.com/AboutAtlin.php

For Tlingit citizens, their territory has enormous value not only as a place to secure food and other resources, and earn income from a livelihood, but also as a place to exercise their aboriginal rights and practice and promote their culture (see also Box A, Section 2). For the Tlingit community, the traditional land based way of life is not mere subsistence, or 'living off the land,' but represents a complex set of social activities and relationships that lie at the heart of their culture and their *khustìyxh* ('way of life'). For example, berry picking is not just food gathering, but also provides opportunities for Tlingits to socialize and to reinforce their cohesion as a social group, and it provides many teaching and learning opportunities for mothers and small children. Fishing or other traditional activities give Tlingits a sense of well-being and self-sufficiency, and reinforces the cultural belief that the health and abundance of salmon are at the core of Tlingit well-being. Fishing also provides opportunities for the sharing of knowledge and experience, and allows older fishers to teach younger Tlingit about respecting the land. For Tlingits the traditional land based economy is about providing healthy food and about gathering materials for clothing, fuel, or home construction; for participating in ceremony; for sharing or customary trade; and for art and crafts that support Tlingit *khustìyxh*.

The informal land based economy is part of the social and cultural fabric of the Tlingit and local community, and is a fundamental component of personal and community well-being.

3.5.2 Resource Industries and Local Enterprises

Because activities related to the cash economy are more easily quantified relative to the informal land based economy, they are described in some detail below. Most local businesses are summer operations including mineral exploration, tourism, home building, commercial fishing, trapping and guide outfitting. Winter businesses are primarily associated with recreational activities such as heli-skiing and trapping.

The TRTFN and various Tlingit enterprises currently provide a significant portion of the full-time and seasonal employment in the Atlin area. Other year-round employment is provided from provincial and federal government jobs, as well as the service sector.

- *Mineral Exploration & Development*: Mineral exploration and mining have a long history in the Plan Area and there are several significant past producing mines and sites where advanced mineral exploration has been undertaken; examples include the Tulsequah and Polaris-Taku deposits in the Taku River area, and Yellow Jacket in the Atlin area. Mineral exploration contributes to the local economy through seasonal employment and purchase of local goods and services.
- *Placer Mining*: Placer gold production has contributed to the local economy for over 100 years. Current activity is concentrated in creeks to the east and south of Atlin.
- *Tourism*: Tourism has been a consistent contributor to the local economy since the early 1900's. The area has many features that make it a desirable tourist destination, including spectacular scenery, significant cultural and historical values, and a variety of opportunities for front and backcountry activities. There is a wide range of tourism operations in the area currently, mainly based in Atlin. These include kayak rentals, white water rafting, art retreats, and guided outdoor recreation. Most businesses operate in the summer months, although there are a small number of winter operations. The tourism potential of the Plan Area is well recognized, however, the isolation of the area, relatively short tourist season, and small market base have meant limited development in this sector to date.
- *Recreation*: Locals and visitors benefit from an abundance of opportunities for outdoor enjoyment throughout the year in the Atlin Taku. Self-guided recreationists contribute to the local economy through the use of services (accommodations, restaurants) and the purchase of provisions and equipment.
- *Guide Outfitting*: The Atlin Taku area has long been renowned for its big game hunting (primarily Grizzly / Xóots and Black bears, Mountain sheep / Tawéi, Mountain Goat / Jánu, Caribou / Watsíx , and Moose / Dzísk'w). Nine guide outfitter territories overlapped the Plan Area in 2009. Guide outfitters have provided a relatively stable input into the economy of Atlin for the last 30-40 years.

- *Subsistence Fishing*: Fish represent a critical component of the culture and way of life for the TRTFN. Fish are far more than simply a source of food; they represent a belief system that includes legends, stories, songs and dance, of creative survival and mortality of the Tlingit race. Salmon and other fish are harvested for food, social and ceremonial purposes in lakes and rivers through the Plan Area, particularly in the Taku watershed.
- *Commercial Fishing*: Most of the commercial fishery is located on the lower Taku River (there are currently 16 commercial licences held by TRTFN and non-TRTFN fishers). Fifteen guided fishing operations were licensed in the Plan Area in 1999, primarily on major rivers and lakes.
- *Recreational Fishing*: Recreational (non-guided) fishing is an important part of the local subsistence economy. Fishing tends to be concentrated in readily accessible areas near roads, with lakes and rivers in the Atlin area being most heavily used.
- *Forestry*: Forestry activity in the Plan Area is limited to small scale timber harvesting operations. Much of the forested land is unroaded and/or classified as inoperable. The average annual timber harvest in the operable areas, primarily located in the vicinity of Atlin, ranges from 1,500-2,000 m^3/yr. It primarily provides timber for local home building, mine timbers, rough cut timber and firewood for residents.
- *Trapping*: Forty-four trapping territories overlapped the Plan Area in 2009. The number of trappers is unknown because lines may be inactive and each trapping territory can have several registered trappers or assistant trappers actively trapping. Marten, lynx, beaver, wolf and wolverine are the species most commonly trapped.

4. VISION STATEMENT & GUIDING PRINCIPLES FOR STRATEGIC PLANNING AND MANAGEMENT IN THE ATLIN TAKU AREA

The preparation of the Atlin Taku LUP was guided by the following:

- *Vision:* A description of a desired future for the Plan Area over the long-term.
- *Principles:* Fundamental assumptions, rules or standards to guide behaviour and action.

4.1 Land Use Plan Vision Statement

The TRTFN and BC were guided by the following vision when developing the Atlin Taku Land Use Plan. This Vision Statement was collaboratively developed by the TRTFN, BC, members of the community of Atlin, and interested stakeholders during a multi-party workshop held in Atlin June 13-14, 2008. It was approved by the JLF in November 2008.

Our common vision is for communities that are supportive, secure, and healthy, where people enjoy the peace and beauty of their natural surroundings and a sustainable quality of life.

Ecosystems are healthy and fully functioning, and special wilderness areas and cultural places are protected. The natural environment is productive and supports diverse and abundant animal, fish and plant species as well as sustainable opportunities for harvesting, gathering and other activities on the land, including the Tlingit land-based way of life - *Hà khustìyxh* – and the lifestyle of the local community.

Economic activity is diverse and vibrant, providing enduring employment and contributing to a just and prosperous future for our communities. Tlingit traditional land use has been sustained and revitalized, and exists in harmony with contemporary local land use. Greater certainty exists across the landbase, ensuring a balance between: sustainable economic development, the conservation of ecological values, Tlingit *khustìyxh* and the lifestyle of the local community.

Collectively, we are living up to a shared responsibility to manage the land and resources in a way that honors our elders and ensures that we meet the needs of today without compromising opportunities for future generations. There is greater trust among us all and a shared pride in the legacy we are leaving for our children and future generations.

4.2 Guiding Principles for Land Use Planning

The TRTFN and BC acknowledge that decisions and activities related to land use and resource management in the Plan Area will be guided by the following principles. These principles have been jointly developed; the Parties are also guided by additional principles unique to their own perspectives.

Land use and resource management plans and decisions will:

1. Provide for cultural, social and economic activities that support and balance healthy, resilient and sustainable communities and economies and that generate lasting local and provincial benefits.
2. Sustain diverse and healthy native biodiversity, wildlife, fish, and ecosystems across the landscape in perpetuity.
3. Give special attention to ecosystems that are rare, or at risk, and species that are at risk or are of special management concern, so that biodiversity across the landscape is maintained.
4. Sustain and enable the continuation of Tlingit *khustìyxh* (way of life).
5. Be informed by Tlingit concepts, values and understandings, and will incorporate elements of Tlingit language.
6. Address both Tlingit and Provincial interests, while balancing a broad spectrum of public, stakeholder and other First Nations interests.
7. Support the implementation of government to government agreements between the province and First Nations, which are negotiated separately from a land use plan, including initiatives to implement the New Relationship and Transformative Change Accord such as capacity building and resource revenue and benefit sharing.
8. Include monitoring appropriate to the scale and intensity of management actions, or significance of management concerns, with knowledge of changes incorporated into management decision-making.
9. Be informed by scientific, local and indigenous ecological knowledge, be made based on the best available information, and err on the side of caution when information is limited.
10. Incorporate a mutually agreeable assessment of risk and uncertainty at site, landscape and regional scales.
11. Result in a high probability of maintaining ecological integrity across the planning area while ensuring with a reasonable degree of certainty that the impacts from resource development to the potentially affected ecosystem at a project or landscape level (including air, water, plants and animals) are adequately understood, and can be effectively minimized through careful design, management and mitigation.
12. Be made at a level of accuracy that is appropriate to the scale of planning.
13. Be efficient, effective, and affordable as will the implementation of related decisions.
14. Result in effective joint stewardship that contributes to on-going trust and relationship building between British Columbia, the Tlingits, the local community and others.

5. UNDERSTANDING THE PLAN

The Atlin Taku Land Use Plan sets out resource management direction comprised of goals, objectives and implementation direction for the various land use zones and activities/uses in the Plan Area. There are two main types of resource management direction:

- **General Management Direction** addresses a number of key values identified as part of the planning process. The General Management Direction applies to the whole Plan Area.
- **Area-Specific Management Direction** applies within defined Land Use Zones and is incremental to the General Management Direction. Land Use Zones are mapped sub-areas that contain values distinct from the general landbase and, within which consistent resource management direction is to be applied.

Area-Specific Management Direction is incremental to the General Management Direction; if there is an inconsistency between the resource management direction for a land use zone and the General Management Direction, the zone-specific direction applies.

Land Use Zones in the Atlin Taku LUP include:

- **Protected Areas** from which specific industrial development activities (mineral exploration and development, hydroelectric development, forestry) are precluded; and
- **Area Specific Resource Management Zones** that allow industrial development but contain resource management direction to maintain the specific values for which the zone was identified.

All of the resource management direction in this Land Use Plan has the same general structure and contains some or all of the following components:

- **Context**: A synopsis of the resource/use in the Plan Area
- **Management Issues**: Concerns that were identified during the planning process and are addressed by the resource management direction.
- **Goals**: Broad descriptions of the desired long-term condition for specific resources or resource uses.
- **Objectives**: A desired future condition for individual aspects of a resource or resource use. Objectives should be specific, relevant and achievable, and describe outcomes that will achieve the broader goals.
- **Implementation Direction**: Statements that clarify how goals and objectives will be met through specific actions or activities of Crown agencies, TRTFN departments, or other land and resource users.
- **Maps** display where features or values of interest occur, or where zone/area specific management objectives occur.

5.1 Addressing Climate Change in the Atlin Taku Plan Area

Northern regions including the Atlin Taku Plan Area are susceptible to the effects of global climate change, and warming is reportedly occurring faster than in temperate and southern areas.[8] Under a changing climate, the Atlin Taku region can expect transformations in biodiversity and ecosystems.

The Land Use Plan aims to increase resilience in the face of climate change through a variety of measures including:

- large protected areas representing a diverse mix of ecosystems in the Atlin Taku region to protect key ecological and cultural values (see Chapter 8). These protected areas will exclude industrial development activities (e.g. mineral exploration, mining, major hydroelectric projects) and industrial access development;

[8] Pojar, J. 2009. Climate Change and Land Use Planning in the Atlin Taku Region, available on: http://www.ilmb.gov.bc.ca/slrp/lrmp/smithers/atlin_taku

- lower Taku and Nakina/Inklin protected areas designed to capture concentrated areas of enduring features;
- an extensive part of the Plan Area within which commercial forest harvesting is not allowed, thereby enabling carbon sequestration and maintaining landscape connectivity (see Chapter 6.5);
- general management direction for Aquatic and Riparian Habitat (Chapter 6.2) and Terrestrial Biodiversity and Wildlife Habitat (Chapter 6.3) based on ecosystem-based management principles that aim to achieve low risk to critical and high value habitats outside of protected areas;
- resource management direction to protect alpine areas that are projected to persist in the face of climate change;
- Area Specific Resource Management Zones to conserve 'enduring features' of the physical landscape, protect sensitive ecosystems, provide connectivity between protected areas, and for which incremental management direction is required (See Chapter 7); and,
- monitoring of plan implementation and a commitment to develop a scientifically rigorous monitoring regime capable of systematically identifying risks to sensitive resource values (see Chapter 9).

BC and TRTFN share an interest in developing carbon offsets associated with the sequestration of carbon and reductions in greenhouse gas emissions resulting from the establishment of protected areas and a commercial forest harvest zone. BC and TRTFN may explore potential carbon offset programs, either individually or jointly.

6. GENERAL RESOURCE MANAGEMENT DIRECTION

6.1 Access

6.1.1 Context

Much of the Plan Area is unroaded due to the rugged topography of the area, its remoteness from major transportation routes and population centers, and relatively limited economic imperative for industrial access development. Existing access includes:

- a small number of permanent all-season roads servicing the town of Atlin and properties on the east side of Atlin Lake along Warm Bay Road;
- a segment of the south Klondike Highway in the north-west corner of the Plan Area along Tutshi Lake;
- numerous non-status roads and trails in the vicinity of Atlin, many of which are legacies of historic mining and exploration activities, and which continue to provide access for outdoor recreationalists, hunters, trappers, mineral exploration and mining;
- the Muddy Lake Route in the Upper Sheslay watershed providing access to the old Golden Bear mine in the south-east portion of the Plan Area; and
- traditional trails established and used by the Taku River Tlingit for purposes including hunting, food gathering, and trade.

Three distinct regions have been identified within the Plan Area for the purpose of access planning and management (Map 3):

- **Atlin East:** This region includes Surprise Lake and Gladys Lake, which have a well-developed access network, and the area in and around the community of Atlin. Highway 7 links Atlin East to the Alaska Highway and Whitehorse.
- **Atlin West:** This region on the west side of Atlin Lake, including Tutshi Lake, includes several roads and trails that are not linked to major road networks. Current access into remote areas in this region is primarily by snowmobile in winter and by water (Tutshi and Tagish Lakes) or air (rotor and fixed wing) in other seasons.
- **Taku, including the Whiting watershed***:* This region is largely unroaded with the exception of the inactive Muddy Lake road to the Golden Bear mine site. Current access is primarily by fixed wing to the major lakes (King Salmon, Nakina, Tatsamenie, Trapper) by helicopter to remote areas, by boat or raft on the major rivers (Taku, Inklin, Sutlahine, Sheslay, Whiting), or on foot along trails (Telegraph, Nakina).

The Taku River watershed, which comprises a large portion of the Plan Area to the south of Atlin, is largely unroaded. The Taku River Tlingit have a fundamental cultural attachment to the Taku Watershed, reflecting a long history of use, occupation and spiritual connection. The watershed is also recognized nationally and internationally as a largely intact and productive salmon-bearing ecosystem. Due to its significant cultural and ecological values, any new applications for proposed roads and industrial access, or changes to access into this watershed will require careful consideration of the land use plan objectives and the deepest level of engagement consistent with the Government-to-Government *Land and Resource Management and Shared Decision Making Agreement* (see Sections 2.2, 6.1.4 and 8.5). The Taku Watershed will also have incremental resource management direction for access to ensure that the cultural, economic and ecological values of the area are adequately assessed and considered by both governments, with meaningful public and stakeholder input, prior to industrial access being authorized.

6.1.2 Management Issues

- Providing a range of access options to support a diversity of land uses.
- Roaded access for placer mine operations and mine development.
- Ongoing access to areas for recreation, hunting and other land uses.
- Access into remote regions by navigable rivers, floatplane-accessible lakes and remote airstrips.
- Risk of impacts to ecological and cultural values associated with roads and industrial access including sedimentation, landslides, habitat loss, wildlife mortality, increased access for predators, spread of invasive alien species and loss of wilderness.
- Risk of impacts to ecological, cultural and recreational values associated with motorized access (e.g. ATVs and snowmobiles) including sedimentation, habitat loss, wildlife mortality, increased access for predators, and conflicts between land users.

6.1.3 Goals

- Access for sustainable economic development and resource use is allowed.
- Access is planned and managed to minimize, and where possible avoid, short and long term ecological, cultural and social impacts.
- Access is managed to sustain cultural values and uses, opportunities for traditional harvesting activities, and wilderness qualities.

6.1.4 Objectives and Implementation Direction

The network of Protected Areas and Resource Management Zones (see Chapters 7, 8 and Map 18) and general management direction in other sections of Chapter 6 will contribute significantly to the achievement of these objectives.

Objective	Implementation Direction
1. Minimize and where possible avoid ecological, cultural and recreational impacts of industrial access throughout the Plan Area.	(a) Industrial access, including air access, is allowed where consistent with resource management direction in this plan. (b) If new industrial access is required in the Plan Area, the following conditions apply in reviewing new applications for such access: ▪ Access routes are to be planned and constructed to avoid impacts to sensitive ecological and cultural areas as defined by Maps 8, and 14, and Appendices C and D. Where this strategy is not practicable, design and apply measures to minimize and mitigate impacts to these sensitive areas. ▪ Minimize roads and to the extent practicable use shared routes for roads and infrastructure, including having new major transportation infrastructure use established road corridors. ▪ Operational planning should minimize the land area disturbed by industrial access, to the extent practicable. ▪ Operational planning should minimize the impacts of industrial access on recreation, visual quality, and wilderness aesthetics to the extent practicable. ▪ Deactivate, and where appropriate reclaim or restore roads, when the primary development user has completed operations and where access is no longer required to support mineral exploration or other resource development activities.

Objective	Implementation Direction
	▪ Minimize wildlife impacts, fish impacts and human-wildlife conflict in high value habitats through the use of access control measures where practicable during and following industrial activity. ▪ Access planning will seek and consider input by resource users, local governments, stakeholders, and the public.
2. Maintain the current network of roads in the Atlin East region except where noted.	(a) To the extent possible, use existing industrial access within the Atlin East Area as shown on Map 4. (b) The preferred access route for areas south and east of the O'Donnell River is via the Warm Bay Road. Discourage "through roads" through the Spruce Creek and Wilson Creek watersheds. (c) Deactivate roads and trails providing access to Rare and Sensitive Ecosystems (as defined on Map 8), High Value Wildlife Habitats (as defined on Maps 9-13), and sensitive cultural sites (as defined on Map 14) where continued access would: ▪ prevent land use plan objectives from being achieved; or ▪ degrade the functional integrity of the sensitive area; and ▪ where access is no longer required to support exploration or other resource development activities.
3. Minimize the development of new roads in the Atlin West region to maintain the cultural and ecological integrity of the area.	(a) Water-based access on Tagish Lake or Atlin Lake is the preferred method of connecting specific projects to existing regional access roads, unless; ▪ water access is impracticable; or ▪ the projected impacts from water access are greater than from roaded access. (b) Where the development of new roaded access is required as part of a water access option, use the shortest and lowest-impact feasible route from a lakeshore access point to the project site, including consideration of cost and safety.
4. Manage industrial access into the Taku Watershed to maintain the cultural and ecological integrity and recreational values of the watershed.	(a) Where industrial access is required, the following strategic access options are acceptable: ▪ To the Tulsequah Valley, the preferred access is by barge via the Taku River. ▪ If access via the Taku River is impracticable, industrial access from Atlin may be considered via a single strategic access route, a portion of which would pass through the area defined on Map 5.1: Tulsequah Valley / Tàłsu Xhê Héeni Strategic Access Area. Decisions related to this single strategic access route will be determined consistent with the Government-to-Government *Land and Resource Management and Shared Decision Making Agreement* and include consultation, and as appropriate, direct involvement of a proponent of a project, if and when required. ▪ Access to areas south and east of the Upper Gladys should be via a single strategic access route through the Upper Gladys protected area. Access to areas south of the Inklin River should be via an extension of the existing Muddy Lake road, preferably avoiding an additional crossing of the Sheslay River.

Objective	Implementation Direction
	▪ Where additional industrial access across the Sheslay River is required, access routes should be considered in the following order of priority, unless impracticable or more culturally, environmentally or socially harmful than alternate routes: ▪ at a location upstream of the Upper Sheslay River protected area; ▪ through the Lower Sheslay River RMZ (see section 7.2.8 and Map 18); ▪ through the Sheslay River Protected Area (see 8.5.9 and Map 18) ▪ Other options may be considered as a major amendment to the LUP (see section 9.4) where they are feasible and evaluated consistent with government-to-government agreements. Consideration of options will include public and stakeholder input. (b) Prior to access approvals or authorization, complete a detailed joint evaluation, consistent with the Government-to-Government *Land and Resource Management and Shared Decision Making Agreement*, that: ▪ considers all feasible access options; ▪ addresses potential adverse impacts on water quality, fish and fish habitat, wildlife and wildlife habitat; ▪ addresses potential adverse impacts on social, cultural, and recreational values and implications for Tlingit opportunities to continue Tlingit khustìyxh; ▪ considers socioeconomic costs and benefits to TRTFN, local communities and the people of BC; and ▪ identifies the primary users. (c) New industrial access routes require an access management plan to be in place, which must include an effectiveness monitoring and adaptive management regime to address impacts on cultural and ecological values. (d) New industrial access, including main access routes, will be deactivated, and where appropriate reclaimed or restored, after their primary use has been completed, reverting primary access to non-roaded means. Access roads may be reactivated for a new project after the completion of appropriate joint assessments, consistent with the Government-to-Government *Land and Resource Management and Shared Decision Making Agreement*. (e) Restore high value cultural areas along discrete sections of linear industrial access after the primary use has been completed.

6.2 Aquatic and Riparian Habitats

6.2.1 Context

There are three major drainage basins in the Plan Area: the Yukon River which flows north into the Bering Sea, and the Taku River and Whiting Rivers which flow into the Pacific Ocean. The Yukon drainage basin includes the Kusawa, Tutshi, Teslin and Gladys Rivers and the waters flowing into Atlin Lake and Tagish Lake. The Nakina, Inklin, Nahlin, and Sheslay Rivers are tributaries of the Taku River (Map 6).

Aquatic and riparian ecosystems in the Plan Area support a rich diversity of fish species. The Taku River drainage in particular has fish values of international, national and provincial significance. It supports 28 known fish species, including all five species of Pacific salmon and has the largest salmon returns of all the watersheds in the area. The Yukon drainage also supports a large variety of fish species, including Chinook and chum salmon, lake trout, grayling, and various whitefish species. Chinook salmon of Yukon River origin are only represented in the Plan Area in the Gladys River system, which supports one of the longest salmon runs in the world. Some fish species found in the Plan Area, including broad whitefish (BC red) and bull trout (BC blue) have been identified as being at risk or endangered.

The distribution of fish species is influenced by the coastal-interior geography of the Plan Area which creates a dynamic aquatic system and diverse types of fish habitat. Many systems in the Plan Area have glacial origins and as a result have naturally high turbidity and sediment values. Water quality is also affected by past and current human activity in some locations.

Commercial, recreational and First Nations fisheries all exist within the Plan Area. Many of the fish species found in the Plan Area, particularly salmon, have significant value to the local economy and livelihoods, and represent a critical component of Tlingit culture and khustìyxh or way of life. For generations the Tlingit have relied on salmon as a food source and as a point of connection in their relationship to the land.

6.2.2 Management Issues

- Risk of changes to the quality of aquatic ecosystems and fish habitat from impacts (historic, current, potential, cumulative) associated with local and upstream land use activities and related access, including sedimentation, point source contamination, in-stream withdrawals, stream diversions and removal of riverbed substrates.
- Impacts associated with land use activities and related access increase the risk of changes to ecological dynamics and function, including:
  - natural disturbance regimes, stream beds, stream bank integrity and function, aquatic-riparian interface, and riparian ecosystem; and,
  - ecological communities, aquatic biodiversity and culturally or economically important fish populations.
- Risk of introduction of alien invasive species into aquatic systems.
- Implications of climate-related changes on fish and aquatic habitats (e.g. changes to in-stream temperatures, flows, chemistry).
- Limited information on fish distribution and high value habitat and uncertainty related to changes in the health of aquatic and fish habitats in the absence of monitoring regimes.

6.2.3 Goals

- Environmental management of aquatic ecosystems, fish habitat and water quality lead the world.
- The structure, function, and natural productive capacity of aquatic and riparian ecosystems are maintained and are resilient to environmental change.
- The distribution, diversity and abundance of populations of all native fish species are maintained.
- Culturally significant aquatic systems and habitat for fish populations are protected.

6.2.4 Objectives & Implementation Direction

Resource management direction in this land use plan complements regulatory requirements for conservation of aquatic ecosystems, fish habitat and water quality and contributes to 'world class' management through the following measures:

- designating significant portions of high value aquatic habitats in proposed Protected Areas and Resource Management Zones, including key salmon-bearing rivers and lakes in the Taku Watershed;
- establishing objectives and implementation direction to ensure resource development poses a low risk to aquatic and fish habitat, water quality and associated ecological values;
- ongoing shared decision-making structures, processes and initiatives; and
- implementing monitoring and adaptive management arrangements (see Chapter 9).

The network of Protected Areas and Resource Management Zones (see Chapters 7-8, Map 18) and the No Commercial Forest Harvesting Zone (Chapter 6.5, Map 15) and general management direction in sections of Chapter 6 will contribute substantially to the achievement of these objectives.

Objective	Implementation Direction
1. Maintain water quality to support healthy aquatic ecosystems, fish habitat and fish populations.	(a) Use best practices for the planning, implementation and assessment of land use activities that have the potential to affect water quality (See Appendix B). (b) Locate industrial access to minimize or eliminate environmental impacts to aquatic and riparian ecosystems. (c) Identify streams affected by historic placer and hard rock mining operations and set priorities for reclamation where/when resources become available. (d) Promote education and public outreach as a tool to address water quality issues on both public and private lands. (e) Where resource development activities have caused degraded water quality, restore water quality as available resources allow.
2. Maintain water quantity and rate of flow, within the range of natural seasonal variability.	(a) Avoid or minimize, and mitigate the negative impacts on sensitive fish habitat of: ▪ water withdrawals; ▪ stream diversions; and ▪ alteration of drainage patterns, water flow and lake levels.

Objective	Implementation Direction
3. Maintain the functional integrity and productive capacity of aquatic and riparian habitat, including flood plains and wetlands.	(a) Use best practices for the planning, implementation and assessment of land use activities in riparian and aquatic habitats. (b) Ensure that management, operational or work plans for activities in, or adjacent to, aquatic and riparian habitats describe how this objective will be met. (c) The 1997 Placer Mining MOU applies until replaced by a placer mining regulation under the *Mines Act*. (d) Minimize and where possible avoid surface disturbance in the wet floodplain and all wetlands. (e) Wherever practicable, avoid constructing roads across active fans. Roads crossing active fans must be constructed such that they minimize impacts on hydrological processes. (f) Avoid constructing roads in dry floodplains to the extent practicable. (g) Locate settling ponds and tailings ponds outside dry and wet floodplains where practicable.
4. Protect the functional integrity of critical aquatic habitats.	(a) Ground disturbance within critical aquatic habitat and immediately adjacent areas[9] as shown on Map 7 is not allowed except where it would have no direct in-stream effect. (b) If no feasible alternative exists, ground disturbance is allowed provided an assessment shows impacts can be fully mitigated.
5. Maintain the functional integrity of salmon ecosystems, including terrestrial and aquatic habitats.	(a) Manage for low risk to salmon ecosystems including the establishment of Salmon Ecosystem Management Areas as shown on Map 7. Within these areas, the following is required. ▪ Use of best practices for the planning, implementation and assessment of land use activities. ▪ Development of a management plan by the proponent that describes how the proposed activities will, to the extent practicable: i. Maintain the integrity of the riparian ecosystems and of streams, lakes and wetlands: ii. Prevent the introduction of deleterious substances into a stream, lake or wetland; and, iii. Minimize the disturbance caused by the activity. ▪ Non-roaded access up to advanced exploration stage.

[9] See definition in glossary. Adjacent refers to any land from which there may be direct impacts on the habitat as a result of development. These direct impacts refer to significant changes in temperature, water quality, sedimentation, and bank stability. These areas are included in the polygons shown on Map 7.

Objective	Implementation Direction
6. Prevent the introduction and spread of invasive species into aquatic ecosystems.	(a) Ensure land use activities are consistent with the Invasive Alien Species Framework for BC.[10] (b) Promote education and public outreach to reduce the incidence of intentional and accidental introductions of invasive species into freshwater systems and prevent their spread.
7. Maintain water quality of headwater icefields and glaciers.	(a) Minimize and where possible avoid impacts to water quality from proposed resource development activities in the vicinity of glaciers and icefields.
8. Maintain the resilience of riparian and aquatic ecosystems in the face of climate change.	(a) Assess and address the potential variability in environmental conditions arising from climate change in the design and adaptive management of major resource development projects.

[10] Invasive Alien Species Framework for BC: Identifying and Addressing Threats to Biodiversity (http://www.env.gov.bc.ca/wld/documents/alien_species_framework_BC_0205.pdf)

6.3 Terrestrial Biodiversity and Wildlife Habitat

6.3.1 Context

The Atlin Taku area supports rich northern biodiversity, with significant biophysical diversity and landscape complexity ranging from coastally influenced to northern boreal inland systems. This biodiversity is fundamental and essential to khustìyxh; the Tlingit way of life. The local community of Atlin is also closely tied to the landscapes and biodiversity of the Plan Area.

Features of the biodiversity of the Atlin Taku Plan Area include:

- large, intact terrestrial and fresh water ecosystems;
- provincially and internationally significant populations of wildlife species, including Mountain Goat / Jánu, Stone's Sheep / Tawei, northern mountain Woodland Caribou / Watsíx, Moose / Dzísk'w and Grizzly bears / Xóots;
- a diversity of berries, plants, small mammals and birds highly valued by the Tlingit and others for subsistence uses;
- intact large mammal predator-prey and Grizzly bear / Xóots -wild salmon systems;
- ecosystems, species and habitats that are rare, vulnerable or of management concern; and
- important habitats for migratory species including waterfowl and songbirds.

The resource management direction provided in this chapter is based on both western science and local and indigenous knowledge. Local and indigenous ecological knowledge can increase our understanding of ecological dynamics and patterns across the Plan Area and through time.

6.3.1.1. Approach to Management of Terrestrial Biodiversity and Wildlife Habitats

Within the Plan Area, wildlife and biodiversity are managed according to a coarse-filter/ fine-filter approach. The following assumptions support the use of this two-scale approach to management.

- Conservation of most biodiversity, including wildlife species, may be addressed by managing and protecting landscapes to maintain the natural diversity, composition and configuration of habitats across the Plan Area. Much of the Atlin Taku is unmanaged and is maintained under natural dynamics including predator-prey and disease dynamics as well as ecosystem dynamics such as fire and successional patterns.
- Managing 'fine filter' biodiversity complements the broader coarse filter approach by conserving specific biodiversity values. This includes specific management as required to maintain or protect rare or sensitive ecosystems, species at risk, habitat features for species of regional concern (including species of cultural significance); and high value wildlife habitats for Moose / Dzísk'w, northern mountain Woodland Caribou / Watsíx, Mountain Goat / Jánu, Mountain Sheep, and Grizzly Bear / Xóots.[11] Managing 'fine filter' biodiversity complements the broader coarse filter approach by conserving these specific biodiversity values.

This chapter of the Land Use Plan presents coarse filter General Management Direction, followed by fine filter resource management direction. For Mountain Goat / Jánu, Stone's Sheep / Jánwu, northern mountain Woodland Caribou / Watsíx, Moose / Dzísk'w and Grizzly bears / Xóots, habitat mapping has been completed at a strategic scale to predict the distribution of the species' high value habitats across the Plan Area. Given the strategic nature of this mapping, landscape-level planning will provide a finer resolution of detail needed for operational planning for resource development activities.

6.3.2 Goals

- The health, productivity, distribution and diversity of native species and ecosystems across the Plan Area are maintained.

[11] For definitions of these terms, see the glossary.

- Landscape conditions are reflective of natural landscape dynamics and support the resilience of species, ecosystems and ecological processes to change.
- Patterns of seasonal and regional movement of wildlife, and the potential for movement in response to climate and landscape changes, are maintained.

6.3.3 Management Issues (Coarse & Fine Filter)

- Resilience of ecosystems and species to adapt to climate change.
- Maintenance of the integrity of high value wildlife habitats.
- Maintenance of connectivity to support movements and migration of species.
- Direct and indirect impacts to ecosystems, biodiversity and ecological processes through habitat loss, degradation, fragmentation, alienation and alteration.
- Introduction of invasive or new species or pathogens.
- Limited ecological knowledge for assessing cumulative effects on species and ecosystems
- Conserving rare and sensitive ecosystems, species at risk and of regional concern, and preventing additional ecosystems and species from becoming at-risk.
- Disturbance and displacement of wildlife from high value habitats.

6.3.4 Objectives and Implementation Direction

Resource management direction for terrestrial biodiversity is organized by six sub-sections:

- Coarse Filter Terrestrial Biodiversity;
- Fine Filter Terrestrial Biodiversity;
- Mountain Goat / Jánu and Stone's Sheep / Tawéi Habitat;
- Northern Mountain Woodland Caribou / Watsíx Habitat;
- Moose / Dzísk'w Habitat; and,
- Grizzly bear / Xóots Habitat.

The network of Protected Areas and Resource Management Zones (see Chapters 7-8, Map 18) and the No Commercial Forest Harvesting Zone (Chapter 6.5, Map 15) and general management direction in sections of Chapter 6 will contribute substantially to the achievement of these objectives.

6.3.4.1. Coarse Filter Terrestrial Biodiversity

Objective	Implementation Direction
1. Protect viable, representative examples of the natural diversity of the Plan Area, including major terrestrial and freshwater ecosystems and landforms	(a) This objective will be achieved through resource management direction in other sections of Chapter 6, as well as in Chapters 7 and 8.
2. Maintain connectivity across the landscape	(a) Avoid, minimize, or mitigate impacts from resource development activities on natural patterns of species movement.

Objective	Implementation Direction
3. Maintain natural ecosystem dynamics, including the composition, configuration and diversity of ecosystems and habitats	(a) Operational planning should minimize the land area disturbed by a resource development project, including industrial access, to the extent practicable. (b) Where areas disturbed by land use activities are reclaimed, use native species appropriate for the site and conditions where practicable. (c) Avoid or minimize the introduction of invasive species.[12] (d) Allow natural disturbance processes to operate within the No Commercial Forest Harvesting Zone, except where life or property are at risk.

6.3.4.2. Fine Filter Terrestrial Biodiversity

Objective	Implementation Direction
1. Maintain the functional integrity of rare and sensitive ecosystems.	(a) Use best practices to minimize or where possible avoid impacts from resource development activities within or adjacent to rare and sensitive ecosystems (as defined on Map 8).
2. Maintain the functional integrity of habitat for species at risk.	(a) Use best practices for the planning, assessment and implementation of land use activities that may impact species at risk (see Appendix H). (b) Avoid if possible or minimize and mitigate impacts from resource development activities on species at risk *(*see Appendix H).
3. Maintain wildlife habitat features for species of regional concern.	(a) Apply best management practices to the planning, assessment and implementation of land use activities for the protection of wildlife habitat features for species of regional concern (as defined in Appendix C; see also Appendices B and D). Where best management practices do not exist for specific kinds of wildlife features, assess potential impacts and develop appropriate mitigation strategies such as operational buffers around the features, or timing windows for activities.
4. Maintain the functional integrity of habitats for furbearing species.	(a) Minimize impacts from land use activities on habitats for furbearing species, including beaver, lynx, fisher, marten and wolverine.

[12] See BC Invasive Species Framework

Objective	Implementation Direction
5. Maintain the integrity of alpine areas likely to persist in the face of climate change.	(a) Use best management practices for recreational and industrial activities occurring in the projected persistent alpine areas identified on Map 17. (b) Minimize and mitigate, or where possible avoid, permanent infrastructure and linear developments within areas identified on Map 17. (c) If monitoring provides evidence of shifting ecosystem conditions leading to a significant decline in the availability of projected persistent alpine habitats in areas shown on Map 17, consider the development of additional resource management direction to address impacts to alpine habitats from land use activities.

6.3.4.3. Mountain Goat / Jánu and Stone's Sheep / Tawéi Habitat

The Atlin Taku Plan Area supports two species of mountain ungulate: Mountain Goat / Jánu and Stone's Sheep / Jánwu. Over half of the world's population of Mountain Goat / Jánu is found in BC. The Stone's Sheep / Tawéi is a sub-species (*Ovis dalli stonei*) of thinhorn sheep that only occur in northern BC and south-central Yukon.

Both species are highly valued by the Taku River Tlingit First Nation for food, ceremonial and cultural values and as an important component of Tlingit khustìyxh / way of life. These species are also highly valued by the residents of BC and the local communities. Under the BC Conservation Framework, Mountain Goat / Jánu are identified as a priority 1, Goal 2 species[13] and Stone's Sheep / Tawéi are identified as a priority 2, Goal 2 species.[14]

Mountain Goat / Jánu and Stone's Sheep / Tawéi are superbly adapted to survive in steep terrain. Their preferred habitats include steep, rugged cliffs and rocky outcrops that are inaccessible to most predators but are within distance of foraging habitats. Winter habitats that provide thermal cover and snow interception are preferred. Winter and natal habitats are essential to maintain reproductive potential and survival of the species, and both species are sensitive to disturbance during winter and natal periods. Additional critical habitats include site-specific features such as mineral licks and established trails linking habitats.

Objective	Implementation Direction
1. Maintain the functional integrity of high value winter habitats and natal areas for Mountain Goat / Jánu and Stone's Sheep / Jánwu.	(a) Use best practices for the planning, assessment and implementation of land use activities in or adjacent to potential winter and natal habitat (as shown on Maps 9 & 10, and described in Appendix C; see also Appendix B). (b) Minimize or where possible avoid impacts from resource development activities on high value winter and natal habitats. Mitigate unavoidable impacts as practicable. (c) Avoid where possible or minimize and mitigate construction of new permanent roads and permanent structures through and adjacent to high value Stone's Sheep / Tawéi and Mountain Goat / Jánu winter and natal habitat.

[13] Priority 1 Goal 2 of the BC Conservation Framework indicates the species is the highest priority for conservation under the goal of "preventing species and ecosystems from becoming at risk"

[14] Priority 2 Goal 2 of the BC Conservation Framework indicates the species is a high priority for conservation under the goal of "preventing species and ecosystems from becoming at risk"

Objective	Implementation Direction
2. Avoid where possible, or minimize the disturbance or displacement of Mountain Goat / Jánu and Stone's Sheep / Tawéi during winter and natal seasons.	(a) Activities which have the potential to disturb or displace Mountain Goat / Jánu and Stone's Sheep / Jánwu, including construction and blasting, that occur between Oct 1 and June 30 should: ▪ assess potential winter and natal habitats within 500m for recent occupancy by goats or sheep (i.e., observation of animals, recent tracks or scat); and, ▪ if evidence of recent occupancy is observed, activities that are potentially disruptive to Mountain Goat / Jánu and Stone's Sheep / Tawéi should be avoided between Oct 1 and June 30. ▪ Locate flight lines at least 1500m from occupied winter and natal habitats. This includes repeated flights to support commercial recreation, mineral exploration and other tenure holders.
3. Maintain goat and sheep access to seasonally important habitats.	(a) Identify mineral licks and movement corridors between high value habitats prior to commencement of any development activities that have the potential to disturb or displace goats or sheep from these habitats (Maps 9 & 10). (b) Minimize or where possible avoid permanent infrastructure and roads within 500m of mineral licks and trails linking high value habitats where these are known prior to or identified during development activities. (c) If animals are observed at licks, or on trails in the immediate vicinity of licks, temporarily delay construction, blasting and other potentially disruptive activities until animals leave the area.

6.3.4.4. Northern Mountain Woodland Caribou / Watsíx Habitat

Woodland Caribou / Watsíx in BC are divided into two ecotypes based on winter habitat use: southern and northern mountain. Caribou in the Plan Area are the northern mountain ecotype. The ranges of three caribou herds extend into the Plan Area: the Level-Kawdy, Atlin and Carcross-Squanga herds. All caribou habitat occurs in boreal ecosystems.

Caribou are highly valued by the Taku River Tlingit First Nation for food, ceremonial and cultural values and as an important component of Tlingit way of life (*khustìyxh*). Caribou are also highly valued by the residents of BC and the local communities. Additionally, Woodland Caribou / Watsíx are an integral component of northern ecosystems.

Northern mountain caribou are listed as a species of special concern in Canada by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). The B.C. Conservation Framework identifies the northern mountain caribou as a Priority 1 species under the goal of "maintaining the diversity of native species and ecosystems" (Goal 3).

Northern mountain caribou use alpine and sub-alpine habitats for calving, summer foraging and rutting. In winter they primarily use mature lodgepole pine habitats with high lichen content but may also be found on windswept alpine slopes. Winter habitat and the availability of terrestrial lichen is a critical factor for Woodland Caribou / Watsíx. Caribou / Watsíx move in small groups and show high fidelity to core habitat areas.

Objective	Implementation Direction
1. Maintain the functional integrity of high value winter and calving caribou habitat.	(a) Use best practices for the planning, assessment and implementation of land use activities in or adjacent to high value winter habitat (Map 11.1 and Appendix B and C) and in potential calving habitat (Map 11.2 and Appendix B and C). (b) Minimize or where possible avoid impacts from resource development activities on high value winter habitat and in calving habitat during the natal period. Mitigate unavoidable impacts as practicable. (c) Avoid where possible or minimize and mitigate impacts of new permanent roads and permanent structures in high value caribou winter and natal habitats.
2. Avoid where possible, or minimize, the disturbance or displacement of caribou during winter and calving seasons.	(a) Resource development activities occurring within 500m of potential calving habitat (as shown on Map 11.2 and described in Appendix C) between May 15 and July 15 should: ▪ assess potential calving habitats for recent occupancy by caribou (e.g., observation of animals, recent tracks or scat); and, ▪ if recent occupancy is observed, then construction, blasting and other activities potentially disruptive to Woodland Caribou / Watsíx should be avoided between May 15 to July 15. ▪ Locate flight lines at least 1500m from occupied calving habitats during the natal period. This includes repeated flights to support commercial recreation, mineral exploration and all tenure holders. (b) Schedule construction, blasting or other activities potentially disruptive to Woodland Caribou / Watsíx, within 500m of high value winter habitat (see Map 11.1 and Appendices C) between June 1 and Oct 31. (c) Encourage compliance with guidelines for motorized recreational use through education and outreach (e.g. signage) in high value winter habitat (Map 11.1 and appendix B and C) and calving habitats during the natal period (Map 11.2; Appendices B and C).

6.3.4.5. Moose / Dzísk'w Habitat

Moose / Dzísk'w are distributed throughout the Plan Area, and the region provides high quality Moose / Dzísk'w habitat, with ecological conditions underlying different densities of Moose / Dzísk'w across the Area.

Moose / Dzísk'w are highly valued by the Taku River Tlingit for food, ceremonial and cultural values and as an important component of Tlingit *khustìyxh*. Residents of BC and the local community also place a high value on Moose / Dzísk'w. Moose / Dzísk'w are integral component of northern ecosystems.

Winter habitat availability is critical to Moose / Dzísk'w, particularly in the more coastal valleys (Lower Taku, Whiting, Sloko, and Sutlahine valleys) where snow is deep and steep topography limits Moose / Dzísk'w to low elevation habitats (valley bottoms to ~300m).

Objective	Implementation Direction
1. Maintain functional integrity of high value winter habitats for Moose / Dzísk'w.	(a) Use best practices for the planning, assessment and implementation of land use activities within high value Moose / Dzísk'w winter habitat (see Map 12 and Appendices C; see also Appendix B). (b) Minimize or where possible avoid impacts of resource development activities within areas of high value winter habitat for Moose / Dzísk'w (Map 12, Appendix C). Mitigate unavoidable impacts as practicable.

6.3.4.6. Grizzly Bear / Xóots Habitat

Grizzly bears / Xóots are found throughout the Atlin Taku Plan Area. The highest densities of bears are associated with the salmon ecosystems of the Taku River, forming an internationally significant grizzly bear-salmon system.

Grizzly bears / Xóots have special cultural significance to the Taku River Tlingit First Nation, and Tlingit stories and legends describe the bear as a protective guardian with strength and cunning. Xóots / Grizzly bears are also highly valued by residents of BC, and there is growing interest and investment in bear-viewing opportunities generally in BC and specifically within the Taku system.

Grizzly bears / Xóots have been identified as a species of Special Concern by COSEWIC and are Blue-listed by the B.C. Conservation Data Centre. The B.C. Conservation Framework identifies Grizzly bears / Xóots as a priority 2 species under the goal of "preventing species and ecosystems from becoming at risk" (Goal 2).

Grizzly bears / Xóots have high space requirements and use a wide range of habitats through the year ranging from alpine areas to low elevation forests and wetlands. Grizzly bears / Xóots den during the winter, with dens potentially located in a wide diversity of habitats. Spring and fall habitat availability is essential to ensure high quality foraging opportunities for bears prior to, and immediately following, the winter denning period.

Objective	Implementation Direction
1. Maintain the functional integrity of high value spring and fall habitat for Grizzly bears / Xóots.	(a) Use best practices for the planning, assessment and implementation of land use activities in, or adjacent to, high value spring and fall habitat (as shown on Map 13, and described in Appendix C; see also Appendix B) (b) Minimize or where possible avoid impacts from resource development activities within high value spring and fall habitats. Mitigate unavoidable impacts as practicable. (c) Where practicable, avoid constructing new permanent roads and permanent structures within high value Grizzly bear / Xóots spring and fall habitat.

Objective	Implementation Direction
2. Minimize disturbance or displacement of Grizzly bears / Xóots from high value spring and fall habitats.	(a) Provide visual screening of fishing areas important for bears. (b) Resource development activities in high value spring and fall Grizzly bear / Xóots habitat should be scheduled to be completed: ▪ within high value fall habitats between December 1 and July 31; and, ▪ within high value spring habitats between July 1 and March 31.
3. Minimize the risk of mortality arising from bear/human conflicts.	(a) Promote Bear Smart practices within communities, on industrial sites and in areas of recreational use (Contact BC Ministry of Environment for additional information). (b) Locate permanent facilities to minimize bear/human conflicts and disruption of bear habitat use.

6.4 Culture and Heritage

6.4.1 Context

Community members in the Atlin Taku area, both Aboriginal and non-Aboriginal, identify strongly with the land and its resources. For the Tlingit, this is embodied in *khustìyxh* – the Tlingit way of life. *Khustìyxh* is a central concept for the Tlingits and is based on an ongoing and strong relationship with the land. The entire Tlingit territory is a repository of Tlingit history, language, tradition, legend, and spirituality. The Tlingits depend on the health of the environment in order to continue *khustìyxh*. Many non-Aboriginal local residents also derive their cultural identity from, and have a longstanding attachment to, the Atlin Taku region.

Land use activities such as hunting, fishing, berry picking, trapping, and gathering of food and medicinal plants are an integral part of the cultural, social and economic fabric of local communities in the Plan Area. There are many specific sites and features of historical and cultural significance to the Tlingit, reflecting both traditional occupation and the more recent history of settlement. Patterns of land use—such as campsites, trails, gathering areas, villages, gravesites, and spiritual places—correspond closely with prime fish and wildlife habitat and travel corridors. There is also a rich non-Aboriginal history within the Plan Area. There are numerous cultural and heritage resources of non-Aboriginal community members including the White Pass railway and Duchess Line, Telegraph Trail, Discovery Townsite and many historical buildings and other sites.

Some cultural and heritage resources automatically receive formal protection under British Columbia's *Heritage Conservation Act* (1996). These include pre-1846 archaeological sites and artifacts, including culturally modified trees, aboriginal rock art, and any burial places with historical or archaeological value. When these are encountered during development activities, there is a legal requirement under the *Heritage Conservation Act* to report the discovery and to cease activities until the significance of the site can be addressed.

Information associated with Tlingit cultural values is frequently documented through oral history. Documentation is often incomplete and thus Tlingit cultural values are not readily integrated into western scientific methods and management approaches.

6.4.2 Management Issues

- Effects of land use activities on specific cultural landscapes, sites and features of significance to the Tlingit, other First Nations and non-Aboriginal community members, including:
  - traditional resource harvesting and cultural use areas (and their associated camps, cabins, traditional trails);
  - village sites, grave sites;
  - archaeological sites;
  - cultural landscapes and features associated with Tlingit history, stories and mythology; and,
  - historical features and buildings related to non-Aboriginal settlers and prospectors.
- Sensitivities associated with the management and public release of cultural resource information, and a concern about the need to interpret this information in its proper context.
- Recognition and accurate recording and reporting of cultural heritage areas encountered during field operations.

6.4.3 Goals

- Traditional use areas, cultural heritage sites, sacred sites, and other features and values with heritage and cultural significance to the Tlingits are protected.
- Land and resource conditions support and enable Tlingit *khustìyxh* (way of life), including cultural practices and resource harvesting activities.

- Tlingit language, knowledge and land use practices are understood and incorporated into land and resource management.
- Land and resource conditions support and enable non-Aboriginal, land-based cultural activities.
- Heritage sites or features of provincial significance related to non-Aboriginal settlers and prospectors are recognized and protected.
- Planning and management of all land uses and resource development activities recognizes and respects the cultural heritage values associated with archaeological sites, First Nations cultural places, and pioneer heritage sites.

6.4.4 Objectives and Implementation Direction

The network of Protected Areas and Resource Management Zones (Map 18), and general management direction in other sections of Chapter 6, will contribute significantly to the achievement of these objectives.

Objectives	Implementation Direction
1. Maintain opportunities for Tlingit citizens to continue their land use and cultural practices in order to sustain their *khustìyxh*.	(a) Avoid where possible or minimize and mitigate adverse impacts of commercial land use activities on Tlingit opportunities to sustain *khustìyxh.* (b) Conduct a Tlingit Traditional Land Use Impact (TLUI) study appropriate to the scope of potential impacts as a requirement for the approval of a major new project or as required by the Government-to-Government *Land and Resource Management and Shared Decision Making Agreement*.
2. Maintain opportunities for local community members to continue participating in an outdoor oriented, rural lifestyle.	(a) Consider impacts of commercial land use activities on local community land use.
3. Conserve Tlingit archaeological and cultural sites, trails and features.	(a) Conserve the areas with high Tlingit cultural values shown on Map 14, by applying the resource management direction in Appendix E. (b) Where new archaeological and cultural sites are identified as a result of new archaeological and traditional knowledge studies, amend Map 14 in a manner consistent with the Government-to-Government *Land and Resource Management and Shared Decision Making Agreement.* (c) Avoid impacts from resource developments on trails identified in Map 14, including impacts from road development. If development is required near a trail, design land use activities to maintain the integrity of the trail corridor and minimize impacts on its use.

Objective	Implementation Direction
4. Conserve heritage sites or features of provincial significance.	(a) Consider designation of the following sites and features under the *Heritage Conservation Act,* or other appropriate Acts: ▪ Ben-My-Cree; ▪ Discovery; ▪ Scotia Bay; and, ▪ Telegraph Trail[15]
5. Ensure information related to Tlingit archaeological and traditional use sites is available to inform management decisions.	(a) TRTFN Lands and Resources Department to develop and maintain an information management system for archaeological, cultural and traditional use information. (b) TRTFN to conduct additional land use and occupancy mapping, as needed, to address information gaps. (c) TRTFN to share cultural resource data, as required, to ensure conservation of sites, trails, or features. (d) Promote best practices and procedures for identifying cultural heritage sites and features in the field and for ensuring these sites are documented and conserved.
6. Increase awareness and use of Tlingit language and cultural knowledge in planning and management.	(a) Include Tlingit place names and terminology and incorporate Tlingit knowledge in planning documents developed on a government-to-government basis.

[15] *Heritage Conservation Act* designations allow for access for mineral exploration and development activities, consistent with the access provisions of this Land Use Plan.

6.5 Forestry

6.5.1 Context

The forestry sector within the Plan Area is a small but important part of the local economy. There has been limited forest development in the area to date as the majority of forested land lacks road access or has relatively low timber volumes and value. Much of the landbase is classified as inoperable and the majority of timber harvested is accessed on existing roads within the Administrative Areas along Wilson Creek and near Fourth of July Creek.

The allowable annual cut (AAC) for the Cassiar Timber Supply Area (TSA) was determined in 2002, at which time the AAC for the Atlin Timber Supply Block was set at 32,000m^3. This volume will be re-assessed in the next timber supply review. At the time of plan approval, there were no major licensees or major timber processing facilities in the Atlin Timber Supply Block. All forestry activities were small-scale, with timber being used locally for log house building, rough cut timber and mine development.

6.5.2 Management Issues

- Potential conflict between commercial timber harvesting and ecological and cultural values including:
  - disturbance to critical or vulnerable wildlife, fish and aquatic habitats;
  - effect on ungulate winter range in the Atlin area; and,
  - impact on Tlingit cultural values (e.g. camps, cabins, trails) and resource gathering areas (e.g. hunting, fishing, berry picking, trapping).
- Climate change impacts on forest ecosystems:
  - Potential impact of climate change on forest ecosystems (e.g. change in forest structure, mountain pine beetle) and associated management implications.
- Impact of forest cover removal (as a result of logging or roads) on viewscapes from high use areas.

6.5.3 Goals

Forest development in the planning area:

- sustains social, ecological and environmental values and incorporates the best available information and knowledge;
- is small-scale, community-based and contributes to local jobs, economic development and local value-added enterprise; and,
- is ecologically based and undertaken in a way that protects cultural heritage sites and features and maintains traditional land uses and cultural landscapes.

6.5.4 Objectives and Implementation Direction

The network of Protected Areas and Resource Management Zones (Map 18), and general management direction in other sections of Chapter 6, will contribute significantly to the achievement of these objectives.

Objective	Implementation Direction
1. Maintain a long-term, secure and sustainable supply of timber that supports a small-scale, community-based forestry industry.	(a) Commercial harvesting[16] is permitted only within the Commercial Forest Harvest Zone (CFHZ) shown on Map 15. (b) Small block openings and selective harvesting methods are preferred.
2. Maintain opportunities for ground-based access to commercially viable stands of timber.	(a) Development of new roads to access viable stands of timber in the CFHZ is allowed subject to existing permitting and the resource management direction in this land use plan.
3. Ensure access to timber for local non-commercial needs, including firewood and building materials.	(a) Harvesting of small volumes of timber to meet local needs (e.g., non-commercial use of timber for firewood, building materials, fence rails, etc) can occur and is not limited to within the Commercial Forest Harvesting Zone. (b) Small block openings and selective harvesting are preferred.
4. Minimize impacts of forest development on Tlingit traditional land use activities, and cultural sites, features and landscapes.	(a) Commercial timber harvesting and associated road development is prohibited outside the Commercial Forest Harvest Zone (CFHZ) shown on Map 15[17] Exceptions include: ▪ timber harvesting as a secondary activity (e.g. associated with commercial recreation or tourism, mineral exploration road right-of-way, mine site development, hydro transmission lines, etc.). (b) Commercial timber harvesting in the current Administration Area on Wilson Creek can continue until first pass harvest is complete. Once first pass harvest is complete, there will no longer be commercial timber harvest allowed in the Wilson Creek Administration Area.
5. Ensure forest development is undertaken in a manner that minimizes impacts to wildlife habitats.	(a) Significant areas of known critical caribou winter range have been excluded from the Commercial Forest Harvest Zone (see Map 15).
6. Maintain quality of viewscapes within the Atlin area and along the Highway 7 road corridor.	(a) Maintain visual quality from the following viewscapes during cutblock layout: ▪ from the Atlin townsite and the east shore of Atlin lake, and ▪ along the Highway 7 road corridor, and Warm Bay Road.

[16] See glossary.
[17] The No Commercial Harvesting Zone includes all of the Plan Area outside of the Commercial Forest Harvesting Zone

6.6 Mineral Exploration and Mining

6.6.1 Context

The Atlin Taku area is rich in mineral deposits and the history of the area is strongly associated with mining. The town of Atlin, which was originally the Tlingit community of Wenah, grew out of the Klondike Gold Rush. The mining sector—including mineral exploration, placer and hardrock mining[18]—has continued to be a key contributor to the local economy.

Recent mineral potential mapping in the Atlin Taku indicates that portions of the Plan Area have high potential for the discovery of economic metallic mineral deposits. Current activity includes a number of major exploration projects as well as existing and prospective metallic mine operations. Placer mining has occurred in the vicinity of Atlin for over 100 years and continues to this day. It is primarily located in the valleys of the creeks draining Surprise, Atlin, and Gladys Lakes. Distance from markets and lack of infrastructure has limited exploration for, and development of, industrial mineral deposits.

The diversity of mineral resources in the Plan Area has attracted consistent interest in mineral exploration in the Atlin Taku. The activities associated with these investments provide direct and indirect economic and employment opportunities and other benefits to the Province, First Nations and local communities.

Both the Provincial and TRTFN governments encourage mineral exploration and mine development proponents to engage respectfully with the Tlingit at the earliest stage and throughout the life of a project. In general, respectful engagement[19] includes:

- establishing a positive and respectful working relationship at the outset of a project;
- sharing of information related to the project;
- identifying common values and concerns related to project design, planning and implementation, and clarifying shared expectations;
- maintaining open, honest and transparent communication based on mutual trust; and,
- a willingness to discuss opportunities to partner and to develop protocols and creative approaches to guide the relationship.

The TRTFN have defined detailed policies to provide further clarity with respect to such engagement, including procedures that proponents should follow to secure TRTFN support for mining-related activities in a timely fashion.

This chapter focuses on providing resource management direction with respect to mineral exploration and mining as a land use in the Atlin Taku region. There are also a range of other initiatives that inform or guide mineral exploration activities that are outside the scope of a land use plan, and which are undertaken by the TRTFN and BC, or in collaboration with other parties. These initiatives include the development of performance measures for mineral sector sustainability, resource revenue-sharing arrangements, and shared decision-making structures, processes and initiatives. In concert with the resource management direction set out in this Land Use Plan, the outcomes of these initiatives will contribute to achieving ‘world class’ mineral exploration in the Atlin Taku.

6.6.2 Management Issues

- Certainty of access to the landbase for mineral exploration and mine development to support a viable exploration industry and to maintain investor confidence.
- Mineral exploration, mine development and placer mining activities have the potential to affect cultural and ecological values. Issues include the need for:

[18] There are three methods of extracting minerals, depending on the type of mineral deposit: Hardrock mining, using underground tunnels or an open pit, where the minerals are found in the bedrock; Placer mining to extract gold and other metals from gravels and bedrock surfaces; and, gathering of surface deposits of industrial materials, including gravel.

[19] For information on best practices related to First Nations Engagement, see Appendix B.

- information on important cultural ecological, scenic and recreational values;
- management approaches to avoid or minimize impacts; and,
- appropriate levels of reclamation once activities are completed.

6.6.3 Goals

- A thriving and competitive mineral resources sector that demonstrates a strong commitment to corporate social responsibility.
- Mineral exploration and development that is environmentally and socially sustainable and supports the Tlingit's ability to sustain their *khustìyxh* (way of life).
- There is a high level of certainty with regard to areas where mineral exploration and development activities may occur and clarity with regard to management objectives to be achieved.
- Mineral exploration and development contributes economic benefits for the Tlingit, local communities and for BC as a whole.

6.6.4 Objectives and Implementation Direction

The network of Protected Areas and Resource Management Zones (Map 18), and general management direction in other sections of Chapter 6, will contribute significantly to the achievement of these objectives.

Management direction in this Land Use Plan supplements legislated requirements and associated regulations, and other BC or TRTFN policies. It is intended to achieve a higher standard of conservation for cultural and environmental values in the Atlin Taku.

Objective	Implementation Direction
1. Provide certainty with regard to the opportunities for the exploration and development of mineral resources.	(a) Mineral exploration and mine development is an acceptable land use outside of Protected Areas where conducted consistent with the resource management direction in this Land Use Plan and legislation.
2. Ensure that mineral exploration and development are undertaken in a socially and environmentally responsible manner.	(a) Use best management practices for mineral exploration and mine development to meet the land use objectives and implementation direction outlined in this plan.[20] (b) Encourage proponents to develop and adopt principles for corporate and social responsibility to guide operational activities and relationships with First Nations and local communities. (c) Develop and apply new performance standards for the mineral exploration sector if monitoring indicates that current standards are inadequate to meet land use objectives. (d) Encourage all mineral exploration proponents to work collaboratively with First Nations and local communities at the earliest stages of an exploration project. (e) Require advanced exploration proponents to provide sufficient information on resource values affected by proposed work activities to allow an assessment of potential impacts. Where sensitive

[20] For information on best practices for mineral exploration and development, see Appendix B.

Objective	Implementation Direction
	ecological or cultural values are potentially affected, information should include a summary of baseline conditions and any management strategies that will be applied consistent with this land use plan.
3. Ensure that placer mining activities and associated access development are undertaken in a manner that is sensitive to First Nations' cultural interests, values and uses and to wildlife habitat and sensitive ecosystems.	(a) Use best management practices for placer mining to meet the land use objectives and implementation direction outlined in this plan. (b) Provincial and Federal environmental legislation will continue to apply to placer activities within creeks not currently listed in Section 3 of the Placer Mine Waste Control Regulation
4. Ensure social, ecological, environmental and cultural impacts are assessed prior to mine development and in consideration of other developments within the Plan Area.	(a) Assess the full range of potential social, ecological, environmental and cultural impacts as part of the review for all new mine development projects. (b) Develop and apply mitigation strategies to address the social, ecological, environmental and cultural impacts of new mine development projects.
5. Provide local employment and opportunities for local economic diversification over the full lifecycle of mineral and aggregate projects	(a) Encourage companies to: ▪ Acquire goods, services and labour locally, where available. ▪ Create opportunities for training and capacity building for Tlingit and local community members.
6. Ensure full and timely reclamation of areas altered as a result of present and future mineral exploration, mine development activity and associated access, once operations are completed.	(a) Require performance criteria and plans for site reclamation to be in place prior to the development of any new mining-related projects and ensure that adequate financial resources are available to fulfill these requirements in a timely and comprehensive fashion.[21]
7. Undertake reclamation of "orphaned" mine sites (i.e. sites for which there is no tenure holder).	(a) Undertake an inventory of orphaned mine sites that identifies and sets priorities for reclamation based on environmental risk, feasibility and cost in a manner consistent with the Government-to-Government *Land and Resource Management and Shared Decision Making Agreement*. (b) Reclaim orphan mine sites according to priorities and as available resources allow.

[21] See requirements for reclamation as per Section 10 of the *Health, Safety and Reclamation Code for Mines in British Columbia* (2008), and summary of best practices included in AMEBC's *Handbook for Mineral and Coal Exploration in BC* (Section 14, pages 101-112) and in PDAC's *Excellence in Environmental Stewardship Toolkit* (Section 13, pages 181-213).

6.7 Recreation and Tourism

6.7.1 Context

Spectacular scenery, wilderness and a rich cultural and historical backdrop provide a multitude of recreation and tourism opportunities in the Plan Area. Attractions include accessible front-country and backcountry wilderness, chains of large lakes and navigable rivers, an abundance of salmon and large mammals, cultural and historic sites and trails, and scenic mountains and glacial landscapes.[22]

The region supports a wide array of seasonal opportunities for commercial and non-commercial outdoor recreation, including:

- nature based recreation such as wildlife viewing, scenery and hiking;
- non-motorized wilderness recreation such as paddling and rafting, hiking, backcountry skiing, hunting and fishing;
- motorized wilderness recreation such as boating, snowmobiling, heli-skiing and ATV'ing; and,
- guided and non-guided hunting and fishing.

Maintaining opportunities to participate in a diversity of recreational activities within the Plan Area is important to local residents and is a highly valued aspect of the rural lifestyles enjoyed by many of those living in Atlin and in the Southern Yukon. Furthermore, trapping and hunting are part of the unique culture of Atlin, and represent both an economic activity and a lifestyle.

The area also provides opportunities for other types of tourism such as front-country services and ventures associated with First Nations culture and Atlin's vibrant pioneer history.

Recreational activity in this area is strongly seasonal. Most commercial outfits operate between the months of May and September, although activities such as snowmobiling and heli-skiing also attract a number of winter visitors. Public (non-commercial) recreation occurs in the summer and winter, with most recreational activity occurring around Atlin and areas accessible by road. Atlin Provincial Park, at the south end of Atlin Lake, is popular with boaters.

The activities most affected by, and relevant to, strategic land use planning –commercial and non-commercial outdoor recreation –have objectives and implementation direction detailed in the Atlin-Taku Land Use Plan. Other tourism businesses will benefit from the resource management direction provided as they also have an interest in maintaining the quality of natural resources in the Plan Area.

- *Commercial recreation* refers to outdoor recreational activities provided on a fee-for-service basis, with a focus on experiences in a natural environment.
- *Non-commercial (public) recreation* refers to recreational activities that are undertaken by individuals or groups in a voluntary capacity and does not involve the payment of fees for services. For the most part, public recreation is unorganized and unguided.
- *Tourism* refers to travel away from a usual place of residence for predominantly recreational or leisure purposes or the provision of services to support this leisure travel.

All existing commercial recreation tenure holders are encouraged to operate in a manner consistent with this Land Use Plan. Detailed guidance regarding the activities of commercial recreational users is set out in the management plans developed by individual tenure holders and approved as part of the tenure agreement.

Non-commercial recreation will generally be managed through non-regulatory approaches such as encouragement of voluntary compliance through education, signage, etc.

[22] Peepre, J. 2009. *Recreation and Historic Features Assessment for the Atlin-Taku Land Use Planning Project*. Prepared for the Canadian Parks and Wilderness Society (CPAWS) BC Chapter

6.7.2 Management Issues

- The following are important management considerations regarding the value of the recreational resource to local residents and visitors to the Plan Area.
  - Having opportunities to participate in a diversity of recreational activities in all seasons is important to local residents and visitors to the area.
  - The aesthetic quality of landscapes in the Plan Area is important to the quality of the recreational experience. This includes the viewscape around the community of Atlin and the wilderness character of areas around tourism lodges, and within recreational corridors and recreational use areas.
  - Healthy fish and wildlife populations are integral to supporting wildlife-related commercial and non-commercial recreation (e.g. guided hunting and fishing; wildlife viewing).
- Industrial development and associated road access have the potential to impact recreation sites and features and the quality of the recreational experience.
- Tourism and recreational activities have the potential to impact natural systems, particularly in areas of intensive use. For example:
  - disturbance and displacement of wildlife,
  - impacts to aquatic and riparian systems and wildlife habitat, and
  - impacts to heritage and archaeological sites.
- Recreational activities have varying levels of compatibility (e.g., motorized and non-motorized use) and certain activities may have compatibility issues or conflict with other land use activities, particularly in areas of frequent or high use.
- Recreational users are interested in maintaining access to areas important for recreational use.

6.7.3 Goals

- Opportunities exist to participate in a diversity of recreational activities in all seasons.
- The Plan Area supports a vibrant, thriving and culturally/ecologically responsible commercial recreation and tourism industry that provides benefits to the local and provincial economy.
- The nature and level of tourism and recreation activity is sustainable and does not adversely impact ecological, natural, cultural and traditional use values within the Plan Area.
- Resource developments are undertaken in consideration of recreational values.

6.7.4 Objectives and Implementation Direction

The network of Protected Areas and Resource Management Zones (see Chapters 7, 8, Map 18) and general management direction for other sections of Chapter 6 will contribute to the achievement of these objectives.

Objective	Implementation Direction
1. Provide opportunities for ongoing access to high value recreational use areas.	(a) Maintain opportunities for public recreational use of high value recreational sites and trails identified in Map 16 except where such use conflicts with resource management direction for Tlingit Cultural Sites and Trails identified on Map 14.

Objective	Implementation Direction
2. Minimize the impact of recreation activities on biodiversity, ecosystems, ecosystem functions, wildlife and wildlife habitat.	(a) Encourage compliance of commercial operators and public recreationalists with best management practices (see Appendix B). (b) Ensure commercial tenure holders include strategies to address potential impacts on high value wildlife habitats (as defined in Chapter 6.3 and shown on Maps 9-13), wildlife habitat features for species of regional concern (as defined in Appendix D) or Rare and Sensitive Ecosystems (as defined by Map 8) within their management plans for commercial recreation activities. (c) Avoid the proliferation of summer motorized trails. (d) Ensure that high value wildlife habitats (as defined in Chapter 6.3), wildlife habitat features for species of regional concern (as defined in Appendix D) or Rare and Sensitive Ecosystems (as defined by Map 8) are identified in any future landscape level recreation management planning within the Plan Area. (e) Promote environmentally responsible commercial and public recreation use e.g., through education and signage.
3. Ensure that recreation use is consistent with the protection and conservation of cultural sites, features, artifacts and landscapes of aboriginal or pioneer origin.	(a) Promote culturally responsible commercial and public recreation use e.g., through education, signage, and discussions between recreational users and the TRTFN and the agencies responsible for the conservation and protection of those heritage resources (i.e. the Archaeology Branch and Heritage Branch).
4. Maintain visual quality of high value recreation sites and features and retain the natural quality of high value viewscapes.	(a) Minimize, and where possible avoid, impacts from land use and development activities on visual quality within identified cultural and recreational sites, trails, and features as identified on Map 16, and on recreational viewscapes identified in Appendix F.
5. Prevent and, where necessary, promote resolution of conflict between recreationalists and other land uses or between recreational user groups.	(a) Consider the potential incompatibilities and cumulative impacts of proposed activities on public and commercial recreational use when assessing applications for new permits or tenures. (b) Encourage dialogue among commercial recreation tenure holders, public recreational users and user groups associated with the Plan Area to resolve conflicts related to recreational use. (c) Resolve conflicts in consultation with recreational users where recreational uses have the potential to undermine the achievement of land use objectives. Potential remedies for resolving the conflict may include developing more detailed resource management direction for the area of concern, voluntary or mandatory restrictions on certain land uses or other appropriate strategies.

Objective	Implementation Direction
6. Promote the development of new or emerging tourism and outdoor recreation activities and markets that capitalize on the area's scenic and natural assets.	(a) Where resources are available, consider the following as priorities: ▪ undertake a tourism opportunity study to identify new tourism and outdoor recreation activities and markets; ▪ provide opportunities for training in tourism marketing and entrepreneurship; and ▪ promote partnerships and collaborative agreements between local businesses and the TRTFN.

7. AREA SPECIFIC RESOURCE MANAGEMENT ZONES

7.1 Context

Area Specific Resource Management Zones (ASRMZs) are geographically defined areas where there is resource management direction for some resource values that are incremental to the General Management Direction (GMD) (Chapter 6.0). The management intent for Area Specific RMZs is to maintain the sensitive values or specific uses for which the zone has been designated while allowing for a mix of appropriate land uses consistent with the management intent for the zone. Mineral exploration and development is considered an appropriate land use in all Area Specific Resource Management Zones.

The Atlin Taku Land Use Plan identifies eleven zones for area specific management, as shown in Map 18. Within each zone, resource management direction (management intent, objectives, implementation direction) has been developed to address the combination of resource values and management issues specific to the zone (cultural, wildlife habitat, ecological and/or recreational).

Area Specific Resource Management Zones	Approximate area (ha)
Atlin Community Zone / Wênàh	5,306
Blue Canyon / At Xá Koogu	77,831
Hackett – Camp Island	37,925
Hoboe – Willison Creeks / Síť Héeni	25, 837
Kawdy / Aan Tléin	130,412
Pine Creek / A Xéegi Deiyi	209
Racine Lake	3,758
Lower Sheslay River	8,375
Sloko River / Tl'úk Aayi Héeni	64,189
Tatsamenie-Trapper Lakes	94,191
Tulsequah Valley / Taas Teiyi Héeni	25,650
Total Area Specific Resource Management Zones	473,684

7.2 Area Specific Resource Management Direction

The following resource management zones are identified within the Plan Area. General Management Direction applies to all ASRMZs. However, where there is an inconsistency between the resource management direction for a land use zone and the General Management Direction, the zone-specific resource management direction will apply.

The table below summarizes a general set of implementation direction that applies within all Area Specific Resource Management Zones that are created as a result of this plan. Sections 7.2.1 to 7.2.11 outline additional area-specific resource management direction that will apply within individual zones. General Management Direction outlined in Section 6 also applies within the resource management zones.

Implementation Direction for All ASRMZs
a) Undertake an archaeological assessment and if required, an archaeological impact assessment, prior to new major projects. b) Mineral exploration and development must use current road networks or low impact methods such as foot and aerial access up to advanced stages of exploration in all ASRMZs. c) New applications for *Land Act* tenures or dispositions that arise will be assessed for any potential impacts of the application on the cultural values and uses of the area/site, and any requirements or mitigation measures that may be required to avoid or mitigate impacts will be specified.

7.2.1 Atlin / Wênàh Community Zone

The Atlin / Wênàh Community Zone encompasses the area surrounding the town of Atlin, including a portion of the eastern side of Atlin Lake that is considered suitable for future community expansion. The zone defines preferred areas for residential, commercial and industrial land development. The zone boundaries correspond with the Atlin townsite and rural residential areas identified in the 1981 Atlin Official Community Plan.

The zone includes a long-standing village location for the Tlingits, named Wênàh after the alkali beds found along the shores of the small lakes, which attracted caribou.

Management Intent for Atlin Community Zone / Wênàh
▪ To support local economic development for the community of Atlin, and the maintenance of its rural character and quality of life
Atlin Community Zone / Wênàh Implementation Direction
▪ Subject to availability of resources, update the Official Community Plan for the Atlin Community Zone as shown on Map 18 in partnership with the Atlin Community Improvement District and in a manner consistent with the Government-to-Government *Land and Resource Management and Shared Decision Making Agreement*. ▪ Maintain the quality of visual landscapes from the Atlin townsite and the eastern shore of Atlin Lake, the Highway 7 road corridor, and Warm Bay Road.

7.2.2 Blue Canyon / At Xá Koogu Resource Management Zone

Blue Canyon lies at the confluence of Spruce, McKinley and Bull Creeks in the area southeast of Atlin Township. The zone includes the O'Donnell River and extends northeast to the southern end of Gladys Lake.

Blue Canyon has a complex mix of land uses and values. It is a highly significant area for past and contemporary Tlingit land use, and includes numerous cultural sites, camps, and traditional trails. Given its close proximity to the township, the area is also highly valued by the Atlin community for recreational uses including camping, snowmobiling, quad riding, fishing, hiking, and hunting. In addition, Blue Canyon has high value caribou and Moose / Dzísk'w habitats that are important for providing the harvesting and recreational viewing values of the area. There are also numerous mineral and placer tenures.

The Tlingit name given to this zone is At Xá Koogu, which means "food box", in recognition of the importance of this area for Tlingit and local resident hunting and harvesting for food.

Management Intent for Blue Canyon / At Xá Koogu Resource Management
▪ To conserve high quality opportunities for the continuation of Tlingit *khustìyxh*, and local community sustenance and recreational uses, while allowing for a mix of appropriate land uses
Blue Canyon / At Xá Koogu RMZ Implementation Direction
▪ Manage access consistent with section 6.1.4 and local access plans, where applicable. ▪ Manage commercial land use to maintain the current range and quality of opportunities for sustaining Tlingit *khustìyxh* and non-commercial recreational use. ▪ Monitor and manage cumulative effects from land use activities to ensure risk to high value wildlife habitat and terrestrial biodiversity values does not increase over time. ▪ Manage mineral exploration and placer mining operations so as to reduce from present levels the net land area disturbed. ▪ Undertake reclamation activities for high value wildlife and aquatic habitat, as resources allow and consistent with the Government-to-Government *Land and Resource Management and Shared Decision Making Agreement*.

7.2.3 Hackett – Camp Island Resource Management Zone

This zone is located in the southeastern end of the planning area and includes sections of the Upper Sheslay and Upper Dudidontu and Hackett River valleys, as well as the Camp Island lakes.

Several sites of cultural significance are found in the river valleys within this zone, linked by traditional trails that connect this area to other parts of the Tlingit territory. The historic Telegraph Creek trail also passes through this zone.

Extensive wetlands and many small lakes are found within this zone, as well as spawning habitats for Pacific salmon and steelhead. The area supports high value habitats for caribou and Dzísk'w /Moose, and a number of rare and sensitive ecosystems. The zone includes several mineral tenures and there are sections of access roads connecting former mine workings, many of which are deactivated or are in disrepair. The Sheslay River forms the upper section of an internationally recognized rafting route through the Taku watershed.

Management Intent for Hackett – Camp Island Resource Management Zone
▪ To conserve high value cultural features and landscapes, wildlife habitat, and salmon habitat while allowing for a mix of appropriate land uses.
Hackett – Camp Island RMZ Implementation Direction
▪ Minimize, mitigate and where possible, avoid ground and in-stream disturbance within and adjacent to identified salmon-supporting waterways and spawning areas. ▪ Major hydroelectric development is prohibited within this zone. Small hydroelectric development for local use is allowed (e.g. to service local facilities such as cabins and lodges).

7.2.4 Hoboe – Willison Creeks / Sít' Héeni Resource Management Zone

The Hoboe-Willison RMZ is located adjacent to Atlin Park and encompasses a portion of the former Atlin Recreation Area. This RMZ includes the headwaters of Willison and Hoboe Creek and has been identified as an important area for both recreation and for protecting water quality. This RMZ also has very high mineral values. The Tlingit name for this area is Sít' Héeni, which means glacier water.

Management Intent for Hoboe-Willison Creeks / Sít' Héeni Resource Management Zone
▪ To conserve high quality sheep, goat and grizzly bear habitats, water quality and recreational opportunities and maintain opportunities for sustaining Tlingit *khustìyxh*, while allowing for a mix of appropriate land uses.
Hoboe-Willison Creeks / Sít' Héeni RMZ Implementation Direction
▪ Resource development in the zone will be undertaken in such a way as to avoid or minimize impacts to high quality wildlife habitats, cultural and recreational values and water quality. ▪ Consistent with 6.1.4.3, water based access to the mouth of Hoboe Creek is the preferred method of industrial access to the Hoboe Willison Creeks RMZ. ▪ Permanent resource roads are not allowed. Temporary roads for the purposes of advanced mineral exploration and mine development are allowed. ▪ Major hydroelectric development is prohibited within this zone. Small hydroelectric development for local use is allowed (e.g. to service local facilities such as cabins and lodges). ▪ Minimize and where possible avoid disturbance to mountain goats from helicopter and heliski activities. ▪ Locate and operate mineral exploration and development (and other industrial development) staging areas where they may occur on or near the shore of Willison Bay to minimize the footprint and effects on the cultural, ecological, visual, recreation and wilderness values of the RMZ, the adjoining protected areas and Atlin Lake.

7.2.5 Kawdy Resource Management Zone

The Kawdy Plateau is located in the southeast portion of the Plan Area. This zone consists primarily of the Nahlin Plateau and Level Mountain Range (a massive shield volcano with tuyas) which contain expanses of high alpine plateau that provide large areas of high quality winter habitat for caribou. A portion of this zone includes some of the extensive forested lowlands in the upper Nahlin River watershed. There are also extensive wetlands in this zone.

Rivers in the area support a variety of fish species, including extensive spawning habitat for Chinook and coho salmon. The area is actively used for hunting and trapping. The Tlingit name for this area is Aan Tléin, which means big land.

Projections suggest that this part of the Plan Area may experience the most dramatic changes as a result of climate change. The higher elevation plateau areas in the southern part of the zone are predicted to be of even greater significance in the future as persistent alpine areas and as a result, will provide important habitat for caribou over the long term.

Management Intent for Kawdy Resource Management Zone
▪ To conserve high value aquatic and wildlife habitat values, especially for Chinook salmon, coho salmon and caribou while allowing for a mix of appropriate land uses. ▪ Ensure management contributes to the long-term health of caribou populations.
Kawdy RMZ Implementation Direction
▪ Monitor and manage cumulative effects from land use activities to maintain low risk to aquatic and terrestrial biodiversity values. ▪ Minimize, mitigate and where possible avoid ground and in-stream disturbance within and adjacent to identified salmon-supporting waterways and spawning areas. Resource development in the zone will be undertaken in such a way as to avoid or minimize impacts to high value caribou winter and summer habitat (as identified on Maps 11.1 and 11.2 and Appendix C) for the Kawdy caribou population, and will consider cumulative resource development and industrial access impacts.

Kawdy / Aan Tléin RMZ Implementation Direction
▪ Permanent industrial access is not allowed. Temporary roads for the purposes of advanced mineral exploration and development are allowed with access restricted to working mine personnel, provided the road is fully deactivated and reclaimed, and where possible restored, when the primary development user has completed operations. ▪ Wind power development is not allowed. ▪ Major hydroelectric development is prohibited within this zone. Small hydroelectric development for local use is allowed (e.g. to service local facilities such as cabins and lodges).

7.2.6 Pine Creek / A Xéegi Deiyi Resource Management Zone

This zone is located to the immediate east of the town of Atlin and includes Pine Creek beach and delta, and abuts the proposed Monarch Mountain protected area. This area has cultural, natural and recreation values and is used daily by the residents of Atlin for recreational purposes such as walking, skiing, and bird watching. This zone also has high wildlife and fisher values--grayling are known to spawn in Pine Creek. Monarch Mountain hiking trail starts in this zone.

The area has important Tlingit cultural values including several archeological sites. The traditional trail up the mountain starts on the shore of Atlin Lake at a rock outcropping known in Tlingit as A Xéegi Deiyi (Shoulder Rock). It was called shoulder rock because the shoulder is a strong part of the body and this trail was a strong and powerful journey to the important healing lakes on the summit.

Management Intent for Pine Creek / A Xéegi Deiyi Resource Management Zone
▪ To conserve Tlingit cultural features, high value recreational, and natural features while allowing for a mix of appropriate land uses.
Pine Creek / A Xéegi Deiyi RMZ Implementation Direction
• Protect the integrity of the Monarch Mountain trail. • Maintain non-motorized recreational use access to the Monarch Mountain hiking trail. • Maintain recreational values and opportunities at Pine Creek beach and delta.

7.2.7 Racine Lake Resource Management Zone

This zone includes the lower portions of Racine Creek and Racine Lake, which drain into Tagish Lake. This zone is in the traditional territories of the Taku River Tlingit and the Carcross-Tagish First Nations and is of particular importance as one of the traditional use areas for the CTFN. There are very high lake trout values associated with Racine Lake, as well as Arctic grayling. The higher elevation areas provide high value habitat for mountain ungulates, including sheep, goat and caribou. Racine Falls was identified as a Goal 2 area by BC's Protected Areas Strategy for its recreational value. This area also contains several mineral tenures.

Management Intent for Racine Lake Resource Management Zone
▪ To conserve high quality opportunities for the continuation of Tlingit *khustiyxh* while allowing for a mix of appropriate land uses
Racine Lake RMZ Implementation Direction
▪ See Implementation Direction for All ASRMZs above. ▪ Hydroelectric development on Racine Falls is prohibited.

7.2.8 Lower Sheslay River Management Zone

This zone is a narrow corridor along the Sheslay River, connecting the Sheslay River Protected Area to the Nakina/Inklin Protected Area. The Sheslay River is highly valued for its recreational value and is an important part of existing guided wilderness river trips. As a tributary of the Taku, raft trips often start their journey on the Sheslay for the Sheslay-Inklin-Taku route.

In addition to recreation values, the Sheslay River has high fishery values and supports sockeye, Chinook and coho as they move upstream to their spawning habitats. The river also supports steelhead and provides important Grizzly bear / Xóots habitat; these high fisheries and wildlife values significantly contribute to the quality of the recreational opportunities. The river valley has an identified sensitive ecosystem (Map 8) that extends upstream from the confluence of the Sheslay and the Nahlin rivers.

Management Intent for Lower Sheslay River Resource Management Zone
▪ To conserve high value recreation opportunities, Tlingit *khustiyxh*, visual aesthetics and ecological values of the Sheslay River while allowing a mix of appropriate land uses.
Lower Sheslay River RMZ Implementation Direction
• Plan commercial development to minimize, mitigate and where possible avoid effects to the recreation values along the river and the visual aesthetics of the area. • Plan and manage commercial development and recreational use to ensure low risk to fisheries values, and maintain high value wildlife habitats. ▪ Minimize and where possible avoid disturbance to identified sensitive ecosystems. ▪ Ground based access for commercial development should minimize the impact to recreational use and visual aesthetics along the Sheslay River. Road development is encouraged to remain outside of the RMZ. If industrial access through the RMZ is required, use a single strategic access where feasible.

7.2.9 Sloko River / Tl'úk Aayi Héeni Resource Management Zone

The Sloko River / Tl'úk Aayi Héeni RMZ is located between Atlin Park and the Nakina-Inklin protected area and contains both the Sloko and Nakonake Rivers. This zone connects the adjacent park and protected areas, allowing the combined area to function as a single, large conservation unit.

This is an important area for cultural uses by the Tlingit with several traditional trails linking this zone to other parts of the Plan Area, as well as numerous cultural features and sites. The zone also has significant ecological values including high value habitats for Mountain Goat / Jánu, Mountain sheep / Jánwu and Grizzly bears / Xóots. Given its relatively close proximity to the community of Atlin, this area has significance for recreation, and is currently used for commercial heli-skiing.

Management Intent for Sloko River / Tl'úk Aayi Héeni Resource Management Zone
▪ To conserve wildlife habitats and landscape connectivity with adjacent protected areas and maintain opportunities for sustaining Tlingit *khustìyxh*, while allowing for a mix of appropriate land uses.
Sloko / Tl'úk Aayi Héeni RMZ Implementation Direction
▪ Monitor and manage cumulative effects from land use activities to maintain low risk to aquatic and wildlife habitats and to maintain terrestrial biodiversity values including connectivity attributes. ▪ Minimize, mitigate and where possible avoid ground and in-stream disturbance within and adjacent to identified salmon-supporting waterways and spawning areas. ▪ Permanent resource roads are not allowed. Temporary roads for the purposes of advanced mineral exploration and mine development are allowed. ▪ Major hydroelectric development is prohibited within this zone. Small hydroelectric development for local use is allowed (e.g. to service local facilities such as cabins and lodges).

7.2.10 Tatsamenie-Trapper Lakes Resource Management Zone

This zone is located in the southern part of the Taku watershed, and includes Tatsamenie and Wade Lakes, Tatsatua watershed and the headwaters of the Kowatua watershed surrounding Trapper Lake.

The areas surrounding the lakes in this zone have cultural importance for the Tlingit, and include a number of cultural sites and features. Traditional trails also connect this zone to other parts of the Taku watershed. The Tlingit name for Tatsamenie Lake is Delayi Âyi, which means trout lake.

The zone has regionally significant environmental and salmonid values, including riparian areas that have been identified as sensitive ecosystems. Tatsamenie and Trapper Lakes support healthy population of Dolly Varden, rainbow trout and lake trout and, together, have the highest lake trout values in the Plan Area. The watersheds support large Pacific salmon runs and there is a longstanding stock enhancement program for sockeye in the Tatsamenie watershed. The outlet of Tatsamenie Lake is notable for its conservation and recreation features such as wildlife viewing opportunities, salmon spawning and Grizzly bear / Xóots. The zone also includes high value sheep, Moose / Dzísk'w, Grizzly bear / Xóots and Mountain Goat / Jánu habitats. Additionally, there is a large riparian floodplain at the outlet of Little Trapper Lake and the area has relatively high karst occurrence and potential as well as productive meadows resulting from landslide activity.

Trapping and guide outfitting are important uses in the zone. There are also numerous mineral tenures in this zone. Given the remoteness of the area, current access for mineral exploration is by floatplane.

Management Intent for Tatsamenie-Trapper Lakes Resource Management Zone
▪ To conserve high fisheries values, cultural landscapes and remote wilderness recreation values of the Tatsamenie and Trapper Lakes area while allowing for a mix of appropriate land uses.
Tatsamenie-Trapper Lakes RMZ Implementation Direction
▪ Minimize and where possible avoid impacts from resource development activities within high value winter and summer habitats for sheep, goat, Moose / Dzísk'w, Caribou / Watsíx and Grizzly bear / Xóots (Maps 9-13 and Appendix C). ▪ Monitor and manage cumulative effects from land use activities to maintain low risk to aquatic and terrestrial biodiversity values.

Tatsamenie-Trapper Lakes RMZ Implementation Direction
▪ Major hydroelectric development is prohibited within this zone. Small hydroelectric development for local use is allowed (e.g. to service local facilities such as cabins and lodges). ▪ Minimize, mitigate, and where possible avoid ground and in-stream disturbance within and adjacent to identified salmon-supporting waterways and spawning areas. ▪ Continue to allow the lakes to be used as floatplane access for early stage mineral exploration. ▪ Plan mineral exploration and development (and other industrial development) staging areas and other infrastructure to minimize the effects on the cultural, ecological, visual, recreation and wilderness values of the RMZ – particularly from/on the lakes. Avoid using key cultural, ecological, and/or recreation sites for staging areas and other infrastructure. Consideration should be given to developing a set of guidelines for aerial access for industry on the key lakes in this RMZ.

7.2.11 Tulsequah Valley / Taas Teiyi Héeni Resource Management Zone

The Tulsequah valley extends from just south of Atlin Park and drains into the mainstem of the Taku. The areas adjacent to this zone include glacial lakes, which have international significance for their jökulhlaup (catastrophic, self-draining glacial lake) events that flow into the Tulsequah.

The Tulsequah Valley represents a core traditional use landscape for the TRTFN, and there are many sites identified within this area that represent land use and culturally significant values including camp sites, settlements and harvesting areas. Maple Ridge has been identified as an area of importance for the quality of maple available there, which was highly valued as the best material available for making snowshoes. Various areas have been identified as traditional harvesting sites for bear root, cranberries and a number of other important plants as well as Moose / Dzísk'w and other game species. The Tulsequah Valley and Shazah Pass formed one of the main routes that Tlingit travelled as they moved between coastal and inland areas seasonally to follow resources such as salmon up the Taku and to trade with inland peoples. The Tlingit name for this area is Taas Teiyi Héeni, which means root garden.

The area includes important goat habitat in the upper valley and on nunataks in adjacent glacial areas. In particular, the wetland and river valleys provide important Moose / Dzísk'w and Grizzly bear / Xóots habitat. A significant amount of salmon spawning habitats are found in this zone. The riparian floodplains and wetlands of the Tulsequah Valley have been identified as sensitive ecosystems that support very high value salmon spawning habitats.

Extensive mineral exploration and development has occurred in this zone, with mine sites at several locations including the Tulsequah Chief and Polaris sites. Access roads connecting the Tulsequah mine site to the Taku River were constructed in 2009. Acid mine drainage from historic workings at the Tulsequah site is recognized as a potential threat to fisheries values.

This zone is also used for commercial heli-skiing.

Management Intent for Tulsequah Valley / Taas Teiyi Héeni RMZ
▪ To balance the conservation of wildlife and salmon habitats, and high quality opportunities for the continuation of Tlingit *khustìyxh*, with exploration and mine development activities and other land uses. ▪ To ensure activities in the Tulsequah Valley RMZ do not impair the cultural, ecological and recreational values of the Lower Taku River Valley.

Tulsequah Valley / Taas Teiyi Héeni RMZ Implementation Direction
▪ Minimize, and where possible avoid, the impact from industrial activities in the Tulsequah Valley RMZ on the Lower Taku River Valley. ▪ Monitor and manage cumulative effects from land use activities to maintain low risk to aquatic and terrestrial biodiversity values. ▪ Manage commercial land use to maintain the current range and quality of opportunities for the practice of Tlingit *khustìyxh* and non-commercial recreational use. ▪ Minimize, mitigate and where possible avoid ground and in-stream disturbance within and adjacent to identified salmon-supporting waterways and spawning areas. ▪ Major hydroelectric development is prohibited. Hydroelectric development for local use is allowed (including industrial). ▪ Land use activities should not displace Moose / Dzísk'w from wintering yards. The use of best management practices are required, including the use of timing windows and appropriate buffers during the winter months. ▪ Minimize impacts to visual quality in the portions of this RMZ within the Taku valley.

8. PROTECTED AREAS

8.1 Context

The following thirteen new protected areas will be established in the Atlin Taku Plan Area, as shown on Map 18:

Protected Area	Approximate area (ha)
Atlin Mountain / Áa Tlein Shaa	8378
Upper Gladys River / Watsíx Deiyi	55,948
Golden Gate / Xáat Yádi Aani	6,160
Indian Lake – Hitchcock Creek / Át Ch'îni Shà	59,299
Kennicott Lake	488
Monarch Mountain / A Xéegi Deiyi	434
Mount Minto / K'iyán	5,651
Nakina – Inklin Rivers / Yáwu Yaa	290,059
Sheslay River	10,560
Taku River / T'akú Téix'	81,538
Little Trapper Lake	4,390
Tutshi Lake / T'ooch' Áayi	18,083
Willison Creek – Nelson Lake / Sít' Héeni	23,796
Total Protected Areas	564,782

8.2 Management Intent

The management intent for the protected areas in the Plan Area is to protect and enhance cultural and heritage resources; maintain Tlingit khustìyxh / way of life; protect and maintain biological diversity, natural environments and wilderness quality; and to provide recreational opportunities including hunting and fishing.

Within protected areas, industrial resource development activities are prohibited in order to protect the high values of these areas. Commercial logging, mining, oil and gas, major hydroelectric (other than local run-of-the-river projects that supply power to approved uses in the protected areas), major wind power development (other than local projects that supply power to approved uses in the protected area) and new roads (except as noted below) are not allowed.

8.3 Resource Management Direction

The table below summarizes a general set of objectives and implementation direction that apply within all protected areas that are created as a result of this plan. Section 8.5 outlines area-specific implementation direction that will apply within individual protected areas. Overall, this resource management direction will guide management of these protected areas until such time as a management plan is developed for each protected area. Any subsequent management plans will be consistent with the initial resource management direction provided by this plan.

Objectives for All Protected Areas

1. Protect the diversity of natural environments, including wildlife habitat values, riparian and aquatic ecosystems, salmon-bearing watersheds and wilderness quality.
2. Protect Tlingit cultural sites features and landscapes, and maintain opportunities for the practice of Tlingit *khustìyxh* (way of life), including the following:
   - hunting, trapping and fishing;
   - gathering traditional foods;
   - gathering plants for medicinal and ceremonial purposes;
   - cutting selected trees for ceremonial or artistic purposes;
   - conducting, teaching or demonstrating ceremonies of traditional, spiritual or religious significance;
   - seeking cultural or spiritual inspiration; and
   - constructing and using shelters, such as camps and cabins.
3. Protect heritage resources and values associated with pioneer settlement and development.
4. Assist in providing ecological connectivity within and beyond the Plan Area.
5. Provide places where nature can adapt to a changing climate.
6. Maintain natural conditions for the benefit, recreation, education and enjoyment of present and future generations, including opportunities for hunting, trapping and fishing.
7. Enable sustainable economic development activity consistent with Tlingit social, ceremonial and cultural uses, and where appropriate to the zoning and resource management direction for each protected area.

Implementation Direction for All Protected Areas

a) Management emphasis will be placed on maintaining the ecosystems, cultural and recreational resource values and natural features for which the protected areas were established.

b) Activities within protected areas will be managed with the intent to avoid impacts on First Nations cultural values and uses, including Tlingit Cultural Sites identified on Map 14.

c) Activities within protected areas will be managed with the intent to avoid impacts on wildlife and fish habitat, wilderness aesthetics and visual quality.

d) Commercial logging, mineral exploration and development, major hydroelectric or wind power generation and development, oil and gas development, and other similar types of industrial uses are not allowed in protected areas.

e) Small-scale hydroelectric and wind power generation is potentially acceptable for facilities such as cabins and lodges within protected areas, where consistent with the values and resource management direction for the protected area

f) Development of new roads is not allowed within protected areas, except as noted below in Section 8.5 (Area-Specific Implementation Direction).

g) The mineral tenures listed in appendix G will be excluded from the protected areas. If these tenures expire, the areas will be recommended for inclusion in the protected areas.

h) Existing tenures including licences and leases that are eligible to continue under the *Park Act* will be grandfathered into newly established protected areas where consistent with the resource management direction for that protected area.

i) Protected area management plans are to be developed collaboratively with the benefit of First Nations, public, and inter-agency participation. Protected area management plans may further define management objectives specific to each protected area, as well as acceptable uses and levels of use, zoning, and other strategies to minimize conflicts and help to ensure the integrity of important protected area values.

j) Trapping, guide outfitting and commercial recreation are acceptable activities within protected areas, except as noted below in Section 8.5 (Area-Specific Implementation Direction). Further specific resource management direction for these activities may be provided in protected area management plans.

k) Hunting, fishing and non-commercial recreation are acceptable activities within protected areas, except as noted below in Section 8.5 (Area-Specific Implementation Direction). Further specific resource management direction for these activities may be provided in protected area management plans.

Implementation Direction for All Protected Areas
l) Motorized recreation is acceptable subject to any area specific resource management direction provided to protect specific values. Further specific resource management direction for these activities may also be developed in protected area management plans. m) Where an industrial access route is permissible through a protected area, industrial access should minimize, and to the extent possible avoid, impacts to the cultural, ecological and recreational values of the protected area. n) Access by aircraft is acceptable for recreation and other allowable uses. Further resource management direction may be developed in protected area management plans.

8.4 Protected Areas Designation and Management

The Province and the Taku River Tlingit First Nation will establish protected areas through their respective legislative and administrative mechanisms consistent with the resource management direction for these zones as set out below.

BC and TRTFN will initiate a collaborative management planning process to develop management plans for each of the protected areas consistent with the Government-to-Government *Land and Resource Management and Shared Decision Making Agreement*.

8.5 Area Specific Resource Management Direction for Protected Areas

8.5.1 Atlin Mountain / Áa Tlein Shaa Protected Area

This protected area encompasses the eastern side of Atlin Mountain, the Atlin River, and a portion of the south shoreline of Graham Inlet. Atlin Mountain is a landmark viewscape from the town of Atlin. This zone has high recreational and wilderness values for the local community and is culturally significant to the TRTFN. The area was historically important to the Tlingit for harvesting, particularly for hunting sheep. Remains of stone blinds used for hunting sheep are still evident on Atlin Mountain. The Tlingit name for this protected area is Áa Tlein Shaa, which means big lake mountain. This area encompasses high value wildlife habitat (particularly sheep and goats) as well as a regionally significant population of lake trout in Atlin Lake.

The Atlin River flows from Atlin Lake to Graham Inlet and is an important access corridor between Atlin Lake and Tagish Lake. Tagish and Atlin Lakes are connected by Atlin River and are part of the headwaters of the Yukon River. The area has high recreational value for boating, fishing and camping. Atlin River is also a major waterway that serves guide outfitters and recreationalists, and is a corridor to Tagish Lake for services and supplies.

Atlin River is also a culturally significant landscape to the Tlingits. There are numerous camp locations, several archaeological sites, and a traditional trail that connects Atlin Lake to Graham Inlet. This zone has significant pioneer heritage values, including the rail bed of the historic Taku tram that operated on a single gauge railway from the 1920s to 1950s, along what was originally a Tlingit cultural trail called yaakw deiyi or boat trail. The rail bed is now used as a portage trail between the lakes.

The Atlin River has very high fish values, particularly as a waterway connecting the two large lakes. It provides habitat and a movement corridor between Tagish and Atlin Lakes for lake trout, arctic grayling, two species of whitefish, burbot and other fish species. In addition, the outlet into Atlin Lake has very high foraging values, particularly for Arctic grayling, which congregate in large numbers in this area.

Area Specific Implementation Direction for Atlin Mountain / Áa Tlein Shaa Protected Area
▪ Maintain the wilderness quality and visual character of Atlin Mountain. ▪ Maintain opportunities for recreational use of Atlin River. ▪ Maintain public and recreational access opportunities through the protected area, including boat and motorized winter recreation access between Atlin and Tagish Lakes.

8.5.2 Upper Gladys River/ Watsíx Deiyi Protected Area

This protected area extends from Gladys Lake to the headwaters of the Gladys River (Map 18). This protected area has high value wildlife habitat, is a high value Tlingit cultural landscape, and contributes to the creation of a large connected reserve system that includes the Nakina/Inklin Rivers / Yáwu Yaa protected area, Taku River / T'akú Téix' protected area and Atlin Park.

This zone contains large areas of high quality summer caribou habitat in the alpine areas. It also contains high habitat values for mountain sheep (summer and winter) and Xóots / Grizzly bears (summer and fall).

The zone includes TRTFN traditional use/occupation areas in the area of Eva and Angel Lakes. The TRT tradition trail system occurs in this area.

Angel and Eva Lakes are frequently used for fishing as well as snowmobiling in the winter. Yukon River Chinook are reported to occur here.

The Tlingit name for this protected area is Watsíx Deiyi, which means caribou trail, after the major caribou trail that extends the length of the Upper Gladys River valley.

Area Specific Implementation Direction for Upper Gladys River / Watsíx Deiyi Protected Area
▪ Maintain the remote wilderness quality and character of the protected area. ▪ If required for industrial development purposes, a single strategic industrial access route will be allowed that links the road networks in the Blue Canyon area through the Upper Gladys River protected area to the upper Nakina area (see section 6.1.4.4). ▪ Winter motorized recreation in high value caribou winter habitat (as identified on Map 11.1 and Appendix C) is not allowed. ▪ Snowmobile use by trapline tenure holders within high value caribou habitat (as identified on Map 11.1) is allowed as required by their tenured activities. Tenure holders should minimize disturbance of caribou to the extent possible.

8.5.3 Golden Gate / Xáat Yádi Aani Protected Area

The Golden Gate protected area is a high value Tlingit (TRTFN and CTFN) landscape that includes important cultural and recreational features in the islands, bays and shoreline at the junction of Tagish Lake and Graham Inlet, including Deep Bay. A confirmed important lake trout spawning site is in this area. The Tlingit name for this area is Xáat Yádi Aani, which is named after a village located close to the place where humpback whitefish congregated.

Area Specific Implementation Direction for Golden Gate / Xáat Yádi Aani Protected Area
▪ Maintain opportunities for public and commercial recreation use of the lake and lakeshore. ▪ Boat travel on Tagish Lake through the protected area is acceptable to support resource development.

8.5.4 Indian Lake – Hitchcock Creek / Át Ch'îni Shà Protected Area

This protected area is centered on Indian Lake and Hitchcock Creek at the northern end of the Plan Area and east of Atlin Lake (Map 18). This protected area connects to the proposed Agay Mene protected area immediately to the north in the Yukon Territory.

A multitude of values overlap within this protected area, including wildlife habitat, cultural values, sensitive ecosystems and recreational opportunities.

The zone supports a large proportion of the high quality winter habitats available to the Atlin caribou herd as well as much of the range of the Atlin sheep herd. Habitat values for Grizzly bears / Xóots and Moose / Dzísk'w are also high.

A number of rare and sensitive ecosystems have been identified in this area including at Indian Lake/Red Mountain and Steamboat Mountain.

The area includes high value cultural landscapes for the TRTFN, as well as traditional trails, many cultural sites, and seasonal village locations. There were seasonal Tlingit villages at Indian (Porter) Lake as well in the McDonald Lake area. These villages were located due to their proximity to good food harvesting locations. The Tlingit name for this protected area means "heart of the sheep."

The area has high recreational value for the local community. Areas such as Porter Lake, Steamboat Mountain and Fourth of July Creek are popular for resource gathering and recreation.

Area Specific Implementation Direction for Indian Lake – Hitchcock Creek / Át Ch'îni Shà Protected Area
▪ Protect high value caribou winter habitat. ▪ Ensure protected area management contributes to the long-term health of caribou and sheep populations ▪ Maintain the high recreational values of the area. ▪ Winter motorized recreation is not allowed. ▪ Snowmobile use by trapline tenure holders within high value caribou habitat (as identified on Map 11.1 and Appendix C) is allowed as required by their tenured activities. Tenure holders should minimize disturbance of caribou to the extent possible. ▪ Avoid disturbance of caribou and sheep during winter (Nov 1 – May 31) and natal (June 1 – July15) periods. Maintain a minimum of 500m from animals, and preferably stay out of their line of sight.

8.5.5 Kennicott Lake Protected Area

This small protected area encompasses a high value and historically important Tlingit cultural landscape associated with the war between the Tlingits and Tahltans. In Tlingit it is called Shéik'w Tooli, which means Red Rock Hill.

Area Specific Implementation Direction for Kennicott Lake Protected Area
▪ As per general implementation direction for all protected areas.

8.5.6 Monarch Mountain / A Xéegi Deiyi Protected Area

This zone is located to the immediate east of the town of Atlin. The area has high cultural significance to the TRTFN as it contains high value cultural landscapes including traditional use areas, sacred cultural areas and archaeological features; and is an integral part of the TRTFN traditional trail system. The area is also highly valued by local residents for its natural, historical and recreational values and it is heavily used year-round for activities such as, hiking, and bird watching. It serves as an important local amenity for tourists and is an important viewscape and landmark from the town of Atlin.

The protected area is named for the traditional Tlingit A Xéegi Deiyi, or shoulder mountain trail, which extends from the beach on the Atlin lake shoreline to the small lakes at the top of Monarch Mtn.

In addition to its recreation and cultural values, this zone also has high wildlife and fishery values. Grayling are known to spawn in Pine-Cup creeks and Monarch Mountain has high value sheep and goat habitat.

Area Specific Implementation Direction for Monarch Mountain / A Xéegi Deiyi Protected Area
▪ Maintain non-motorized recreational use accessed from the west side of Monarch Mountain. ▪ Establish the plateau of Monarch Mountain as a non-motorized recreation area. ▪ Maintain the visual quality from Atlin townsite. ▪ Maintain the Monarch Mountain hiking trail. ▪ Existing tenures, including licences and leases, that are eligible to continue under the *Park Act* will be grandfathered into the newly established protected area.

8.5.7 Mount Minto / K'iyán Protected Area

This protected area encompasses a high value Tlingit cultural landscape centered on Mount Minto. Mount Minto is a sacred mountain to the Tlingit people. There is a Tlingit legend that talks about a raft that was tied to this mountain during a great flood. According to legend, there remains a remnant of the rope used to tie the raft to the mountain, turned to stone on one of the ridges near the mountaintop. The Tlingit name for this mountain means "Hemlock at the base of it". Hemlock holds significance to the Tlingit people as it was used to make brush houses along the coast. There is a traditional Tlingit trail that winds up the south side of Mt Minto.

Area Specific Implementation Direction for Mount Minto / K'iyán Protected Area
▪ As per general implementation direction for all protected areas.

8.5.8 Nakina-Inklin Rivers / Yáwu Yaa Protected Area

This protected area connects to Atlin Park to the northwest, the Taku River protected area to the west and the Upper Gladys River protected area to the northeast, creating a large core network of contiguous protected areas. The zone includes the mainstem of the Inklin River.

This zone encompasses high value habitat for fish and wildlife. The Inklin River is the gateway into the Taku system from the headwaters of the Nahlin, Dudidontu, Sheslay and Sutlahine rivers. All five salmon species are found in the lower Inklin and there are known spawning locations in all the major rivers and creeks. Provincially-significant populations of steelhead and bulltrout are also found here.

The area has high and very high value Moose / Dzísk'w habitat (summer and winter), Mountain Goat / Jánu and sheep habitat (winter) and Grizzly bear / Xóots habitat (spring and summer) (see Maps 9, 10, 12 and 13). The extensive floodplain of the Inklin is a sensitive ecosystem and provides important habitat values (see Map 8).

There are many important cultural sites, features and landscapes throughout the area including numerous grave sites and archaeological sites (see Map 14). The largest Tlingit village in the watershed was in this area, as well as other important villages, battle sites and markers. There are also many traditional harvesting and hunting camps in this area, as well as several cabins. An extensive traditional trail system connects the Taku River and its main tributaries to the Teslin and Yukon watersheds. This includes the Nakina trail, which connects the Tlingit village at Canoe Landing to the Atlin area through Kuthai Lake. This large protected area is named after a well known Tlingit marker, called Yáwu Yaa, or 'face of the mountain', at the confluence of the Inklin and Nakina rivers.

The Inklin and Sutlahine Rivers are identified as recreational rivers, and the Inklin is an important river for commercial rafting.

Area Specific Implementation Direction for Nakina-Inklin Rivers / Yáwu Yaa Protected Area

- Maintain the remote wilderness quality and character of the protected area.
- Ensure protected area management contributes to the long-term health of Grizzly bear / Xóots and goat populations.
- Maintain opportunities for public and commercial recreation including wildlife viewing, river rafting and alpine hiking.
- Winter motorized recreation in high value caribou winter habitat (as identified on Map 11.1 and Appendix C) is not allowed. The protected area management planning process may determine specific areas for which winter motorized recreation within high value caribou winter habitat is an acceptable use, provided users avoid or minimize disturbance to animals.
- Snowmobile use by trapline tenure holders within high value caribou habitat (as identified on Map 11.1 and in Appendix C) is allowed as required by their tenured activities. Tenure holders should minimize disturbance of caribou to the extent possible.
- Minimize disturbance and displacement of Grizzly bears / Xóots from foraging at congregating areas.
- Identify strategic locations that may be appropriate for commercial bear viewing operations.
- If required for industrial development purposes, a single strategic industrial access route will be allowed through the protected area to the Tulsequah Valley (See section 6.1.4.4).

8.5.9 Sheslay River Protected Area

The Sheslay River Protected Area runs from the confluence of the Sheslay River and Tatsatua Creek to just downstream from the confluence of the Sheslay and Hackett Rivers.

The Sheslay River is highly valued for its recreational attributes and is an important part of existing guided wilderness river trips. As a tributary of the Taku, raft trips often start their journey on the Sheslay for the Sheslay-Inklin-Taku route. The area at the confluence of the Sheslay River and Tatsatua Creek has especially high recreational values, as it is a prime stop for paddlers travelling down the Sheslay. It contains a number of good camping areas, as well as hiking and goat-viewing opportunities.

In addition to recreation values, the Sheslay River has high fishery values and supports sockeye, Chinook and coho as they move upstream to their spawning habitats. The river also supports steelhead and provides important Grizzly bear / Xóots habitat; these high fisheries and wildlife values significantly contribute to the quality of the recreational opportunities.

The river valley has identified sensitive ecosystems (Map 8) that extend upstream from the confluence of the Sheslay and the Nahlin rivers. Three are riparian floodplain complexes which contain multi-level benches and non-forested floodplain wetlands (at the confluence of the Sheslay River and Tatsatua Creek, and a long linear corridor downstream from the Hackett-Sheslay confluence), as well as a wetland complex on the Sheslay River.

Area Specific Implementation Direction for Sheslay River Corridor Protected Area

- Maintain the remote wilderness quality and character and high recreational values of the Sheslay River corridor.
- Maintain opportunities for public and commercial recreation, particularly river travel by raft, canoe and kayak.
- Minimize and where possible avoid disturbance to identified sensitive ecosystems.

  If required for industrial development purposes, a single strategic industrial access route and a single Sheslay River crossing will be allowed through the protected area. However, consistent with 6.1.4.4.a, other access routes should be examined that avoid the Sheslay River protected area.

8.5.10 Taku River / T'akú Téix' Protected Area

The Taku River / T'akú Téix' protected area encompasses the BC portion of the Taku River main stem from the Alaska border to the confluence of the Nakina and Inklin Rivers (Map 18). It includes Flanagan Slough, King Salmon River and King Salmon Lake but excludes the Tulsequah River valley and the north side of the Taku River from the Taku-Tulsequah confluence to Yellow Bluff. The protected area is contiguous with the Nakina-Inklin protected area to the east.

The Taku River Tlingit have a deep and significant cultural attachment to the Taku River, reflecting a long history of use, occupation and spiritual connection. The watershed is also recognized as significant on a national and international scale as a largely intact and productive salmon-bearing ecosystem. The Tlingit name for this protected area is T'akú Téix', which means Heart of the Taku.

This zone contains some of the highest cultural, wildlife, fishery, ecological, recreational, scenic and commercial fishing values in the Plan Area:

- The Taku River mainstem provides important spawning habitat, as well as migratory and/or rearing habitat for all five species of pacific salmon. It is also provides important spawning and rearing locations for numerous other fish species including steelhead, coastal cutthroat and bull trout. Its broad low elevation floodplains and abundance of salmon provide very high habitat values for Xóots / Grizzly bear (spring, summer and fall) and Moose / Dzísk'w. Habitat values for Mountain Goat / Jánu are also high.

- The zone has several known occurrences of rare or sensitive ecosystems (see Map 8). There is a significant amount of karst in the area and an abundance of wetland habitats.
- The Taku River forms the heart of the TRTFN's traditional territory. The area has high value to the Tlingit as a cultural landscape and has a very high concentration of cultural uses and values, with an extensive traditional trail system traversing the area. There are numerous old village sites and gravesites along the Taku mainstem. In addition, King Salmon Lake was an important harvesting area for Tlingit people, and a Tlingit trail follows the King Salmon River from the King Salmon Flats area of the Taku to King Salmon Lake. The King Salmon Flats area itself also has high cultural significance, including archaeological sites and a sacred waterfall. Sustenance fishing for salmon continues as an important activity across the Protected Area, as does commercial salmon fishing in the Lower Taku area.
- The Taku is a major recreational river. There is high potential for the growth of ecotourism such as river rafting and wildlife viewing.

Area Specific Implementation Direction for Taku River / T'akú Téix' Protected Area
▪ Maintain the remote wilderness quality and character of the protected area. ▪ Commercial fishing and associated infrastructure (such as cabins and landing station) are acceptable. ▪ Maintain opportunities for public and commercial recreation including wildlife viewing, river rafting and alpine hiking. ▪ Identify strategic locations that may be appropriate for commercial bear viewing operations. ▪ Minimize disturbance and displacement of wildlife. ▪ Ensure protected area management contributes to the long-term health of Grizzly bear / Xóots, Moose / Dzísk'w and goat populations. ▪ If required for mine development in the Tulsequah Valley, barge access via the Taku River to Alaska will be allowed. Other industrial access is not allowed (see section 6.1.4). ▪ Provide Flanagan Slough with special management considerations for a higher level of biodiversity protection.

8.5.11 Little Trapper Lake Protected Area

This small protected area encompasses the area surrounding Little Trapper Lake and extends to the east shore of Trapper Lake. The zone is surrounded by the Tatsamenie/Trapper Lakes Area Specific Resource Management Zone.

Little Trapper Lake provides important salmonid spawning and rearing habitat (sockeye, coho and Chinook), and as a result, provides important Grizzly bear / Xóots habitat in the late summer and fall.

This was an important area for Tlingits to harvest salmon for winter storage. Because of the long migration, the salmon were less fat upon arriving at Trapper Lake, and were therefore less likely to go rancid when dried. The Tlingit name for this area is Oowaxóogu Xáat Deiyi Shú, which means 'end of the trail where they dried fish'.

Area Specific Implementation Direction for Trapper Lake Protected Area
▪ Activities related to assessments and small-scale stock enhancement are allowed. ▪ Existing tenures including licences or leases that are eligible to continue under the *Park Act* may be grandfathered into the newly established protected area.

8.5.12 Tutshi Lake / T'ooch' Áayi Protected Area

This protected area encompasses the eastern half of Tutshi Lake. Tutshi Lake is a culturally significant area for the Carcross/Tagish First Nation and is used intensively by members of the CTFN. The lake has high value lake trout habitat. The Tlingit name for this protected area is T'ooch' Áayi, which means charcoal lake, after the dark colour of the lake water.

Area Specific Implementation Direction for Tutshi Lake / T'ooch' Áayi Protected Area
▪ As per general implementation direction for protected areas.

8.5.13 Willison Creek – Nelson Lake / Sít' Héeni Protected Area

This protected area abuts Atlin Provincial Park and includes Willison Bay, Nelson Lake and a portion of Edgar Lake. It is also includes Warm Springs, near Willison Bay, and Willison Creek, which are important natural features for the residents of Atlin. The area contains high value goat habitat and recreational access to the Juneau icefield. There is a traditional Tlingit trail that goes from Willison Bay along Nelson and Edgar Lakes to the Wann River and Tagish Lake. The Tlingit name for this area is Sít' Héeni, which means Glacier Water.

Area Specific Implementation Direction for Willison Creek – Nelson Lake / Sít' Héeni Protected Area
▪ Maintain the remote wilderness quality and character of the protected area. ▪ Review prior resource management direction from the Atlin Recreation Area and consider consistency with an Atlin Park management plan. ▪ Water-based access on Atlin Lake to the mouth of Hoboe Creek is the preferred method of industrial access to the Hoboe-Willison Creeks RMZ, and is allowed through this protected area. Consistent with 6.1.4.3, if water based access is not practical, a single strategic industrial access route will be allowed through the protected area to access Hoboe Creek. ▪ The designation for the Atlin Recreation Area is to be rescinded upon designation of the Willison Creek – Nelson Lake Protected Area.

9. PLAN IMPLEMENTATION, MONITORING AND AMENDMENT

9.1 Introduction

The scope and nature of shared decision-making arrangements for the implementation, monitoring and amendment of the Land Use Plan and for other decision-making related to on-going resource management in the Plan Area is set out in the Government-to-Government *Land and Resource Management and Shared Decision Making Agreement*. The plan will be implemented by BC according to its laws, policies and decision-making processes and authorities, and by the TRTFN according to its laws, policies, customs, traditions and decision-making processes. Implementation will be based on best available knowledge and information and will be undertaken in a manner that optimizes benefits and minimizes impacts for all resource values. Both governments share a commitment to implement this Land Use Plan fully and in a timely manner.

Plan implementation and monitoring activities are subject to the availability of resources.

9.1.1 Adaptive Management

Adaptive management is a process that focuses on continuous improvement of management over time by applying new knowledge gained from monitoring, research, and practical experience to ongoing planning and management activities. Adaptive management acknowledges that current knowledge and information is imperfect, and includes developing strategies to adapt to both gradual and unexpected change by adjusting plans, policies, and practices as needed to address new management issues and incorporate evolving best practices.

An adaptive management approach will be applied in the Atlin Taku as a key component of plan implementation, monitoring and amendment. This approach is recognized as being particularly important due to the changing landscape conditions anticipated under climate change.

9.2 Implementation

The Land Use Plan is implemented through three primary means:

- specific implementation tasks, which include establishing legal designations and the development of more detailed plans such as collaborative management plans for new protected areas;
- the application of plan resource management direction to on-the-ground management of lands and resources including best management practices; and
- specific projects to give further effect to, or elaborate upon, plan resource management direction.

The Atlin community, members of the public, stakeholders and resource developers are encouraged to participate in the ongoing implementation of the Atlin Taku Land Use Plan. These parties can provide important feedback and advice over time as to how well the plan is being implemented and whether the stated management objectives are being achieved.

9.2.1 Capacity Building

Effective implementation of the Atlin Taku Land Use Plan will be dependent, in part, on the availability of sufficient technical resources and capacity in the region.

The TRTFN and BC will collaborate to enhance capacity through strategies such as:

- strengthening institutional arrangements, consistent with the Government-to-Government *Land and Resource Management and Shared Decision Making Agreement*;

- on-going technical cooperation between and among provincial agencies and TRTFN departments;
- cooperation between BC and TRTFN management officials and members of the local community, stakeholders and resource developers;
- appropriate utilization of each party's 'in house' expertise; and,
- involvement of independent scientists and advisors, as needed, to support research and monitoring initiatives.

9.3 Monitoring

Monitoring of the Land Use Plan will include:

- assessing the achievement of plan goals and objectives;
- strengthening baseline data on priority values;
- providing information to improve the management regime for the area; and,
- both traditional Tlingit and western knowledge and science.

Such monitoring efforts will also help to ensure that best management practices and world-class management, as called for in this Land Use Plan, are being achieved. Indicators and targets may be developed as part of plan implementation.

Given the remoteness of the region and in light of limited resources, monitoring efforts will be prioritized, with a focus on management issues where uncertainty is highest or where values are most sensitive to disturbance from resource development activities.

9.4 Amendment

Although the Land Use Plan has been prepared based on the best available information, it may require amendments over time on the basis of research and monitoring and as new information becomes available.

The timing and scope of amendments will depend on the significance and complexity of the changes required, the immediacy of a management issue, and the implications of the proposed amendments to ongoing land use activities. Amendments generally fall along the following spectrum.

- *Administrative revisions* are minor technical changes that do not affect the intent of the resource management direction set out in the plan. Examples of administrative revisions include refinements in descriptive text, spelling, or to correct recognized inaccuracies in the information presented.
- *Minor amendments* are more significant than administrative revisions. These could include information updates which are triggered by new knowledge of on-the-ground resource features and values, or refinements to resource management direction. They are limited to specific issues that are of low to moderate significance and complexity. Examples include updates to resource maps and appendices (for example cultural sites, critical aquatic habitat, rare and sensitive ecosystems), small changes to the boundaries of area-specific resource management zones, refinements to objectives and implementation direction in response to more detailed planning, and changes to make the plan conform to new laws and regulations.
- *Major amendments* are of such scope or significance as to require a major update to the plan document. These include changes to substantive aspects of the plan such as the vision, guiding principles, management goals or objectives, or land use designations. Major amendments may be triggered where credible information indicates that land use objectives are not being met and where the underlying issues can be addressed through improved resource management direction in the plan. Major amendments also include significant changes to the boundaries of area-specific resource management zones. Any future proposed changes to protected area boundaries for compelling provincial economic, environmental and social benefits will be considered in a manner consistent with the *Land*

and Resource Management and Shared Decision Making Agreement and associated policies of either Party on protected area boundary amendments.[23]

Proposals for amending the Land Use Plan will be reviewed jointly by the TRTFN and BC and specific amendments may be recommended, consistent with the *Land and Resource Management and Shared Decision Making Agreement*.

Where credible information indicates that values identified in the Land Use Plan are at risk, both governments commit to exploring solutions or options to address the underlying issues. Action may include amendments to this Land Use Plan. Changes to the Land Use Plan that affect current land uses or development proponents will be communicated promptly to all affected interests, and may be phased-in over time.

[23] Province of British Columbia. March 2010. Provincial Protected Area Boundary Adjustment Policy, Process and Guidelines. http://www.env.gov.bc.ca/bcparks/planning/docs/boundary_adj_guide.pdf

APPENDIX A: BACKGROUND INFORMATION REPORTS FOR THE ATLIN TAKU REGION

Detailed background information for joint planning discussions was provided by numerous studies and assessments related to land use and resource values in the Plan Area, including:

- Atlin Official Community Plan (Ministry of Municipal Affairs, 1981)
- Atlin Taku Planning Area Background Report (Horn and Tamblyn 2002)
- *Hà Tlátgi Hà Khustìyxh Sìti: Our Land is Our Future* (TRTFN, 2003)
- *A Conservation Area Design for the Territory of the Taku River Tlingit First Nation* (Heinemeyer, 2003)
- Rare Ecological Communities of the Atlin Taku Region (DeGroot and Pojar, 2008)
- Wildlife suitability models – handbook and technical report (Framework Agreement Technical Working Group, 2008)
- Community Values Mapping Project – Identification of Areas of Special Interest to the Community of Atlin (Integrated Land Management Bureau, 2008)
- Mineral Resources of the Atlin Taku Region—Background Report (Anastasia Ledwon, 2008)
- Summary Report—Atlin Taku Mineral Resource Assessment. British Columbia Geological Survey & Ministry of Energy, Mines and Petroleum Resources (MacIntyre and Kilby, 2009)
- Atlin Taku – Resource Atlas (Framework Agreement Technical Working Group, 2008)
- Atlin Taku Socio Economic Assessment Baseline Report (Westcoast CED, 2009)
- Sensitive Ecosystems of the Atlin Taku Planning Area (de Groot and Pojar, 2009)
- Atlin Taku Land Use Plan: Handbook of Subarea Descriptions for Community and Stakeholder Consultation (Framework Agreement Technical Working Group, 2009)
- Climate Change and Land Use Planning in the Atlin Taku Region (Pojar, 2009)
- Recreation and Historic Features Assessment for the Atlin-Taku Land Use Planning Project (Peepre, 2009)
- Report on Karst Resources: Atlin Taku Planning Area (Cave Management Services/Karst Care, 2009)

These documents are available on: http://www.ilmb.gov.bc.ca/slrp/lrmp/smithers/atlin_taku and/or www.trtfn.yikesite.com

APPENDIX B: BEST MANAGEMENT PRACTICES

Appendix B provides a list of current standards and best management practices to meet the goals and objectives outlined in the General Management Direction and area-specific resource management direction.

Aquatic and Riparian Habitat

- Handbook for Mineral and Coal Exploration in British Columbia. 2009. BC Ministry of Energy Mines and Petroleum Resources (www.empr.gov.bc.ca/Mining/Exploration/Documents/MXHandbook2008-09.pdf);
- Hydroriparian Planning Guide.2004. Coast Information Team. (ilmbwww.gov.bc.ca/citbc/pubpcit.html);
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APPENDIX C: FEATURES OF HIGH VALUE HABITAT FOR WILDLIFE SPECIES

Mountain Goats / Tawéi and Stone's Sheep / Jánwu:

Identifying features of high value winter habitats and natal areas include:

- Steep slopes of broken, rocky outcrops are typical escape terrain for sheep and goats, with steep (greater than 45° for goat and greater than 30 degrees for sheep), south-facing (aspects of 120-240) slopes being high quality winter and natal escape terrain;
- Open habitats on south-facing slopes (aspects of 120-240 degrees), including open forest, shrub and grasslands provides high quality winter and natal foraging habitat for:
  - Sheep when these foraging habitats are within 400m of escape terrain;
  - Goats when these foraging habitats are within 150m of escape terrain;
- Rocky outcrops or krumholtz;
- Mineral licks are primarily accessed during non-winter months, from high value summer habitat. Summer habitat within 5km of mineral licks, and corridors linking these habitats to mineral lick features receive special consideration (see GMD).

Summer habitat is identified as:

- Steep slopes of broken, rocky outcrops are typical escape terrain for sheep and goats, with steep (greater than 45° for goat and greater than 30 degrees for sheep) being high quality summer escape terrain.

Open habitats, including open forest, shrub and grasslands within 400m of escape terrain provides high quality summer foraging habitat for goats and sheep.

Northern Woodland Mountain Caribou / Watsíx:

Identifying features of high value winter habitat include:

- Old seral (typically >80 years old), open canopy lodgepole pine stands with terrestrial lichens.

Identifying features of high value natal habitats is similar to summer habitat:

- Flat or south-facing (120-240) alpine habitat.

Moose / Dzísk'w:

Features of high value winter habitat include:

- valley bottom wetland-forested complexes;
- regenerating burns (5-45 years old);
- habitats with high shrub density;
- wetlands and dry and wet floodplains;
- coniferous stands within 200m of large tributary streams and wetlands; and,
- alpine habitats within 200m of coniferous stands.

Grizzly Bear / Xóots:

Features of spring habitat include:

- south-facing (aspects 120 – 240) slopes with open (alpine, sub-alpine, shrub or grassland) habitats, and shrub or older seral stage forests within 1 km of these open slopes;
- south-facing avalanche chutes;
- ungulate natal areas; and,
- wet and dry floodplains, wetlands and riparian habitats.

Features of fall forage habitat include:

- salmon streams and floodplain and riparian habitats within 2 km of these streams; and,
- berry-producing areas, including burns 5-45 years old, and alpine areas.

APPENDIX D: WILDLIFE HABITAT FEATURES FOR SPECIES OF REGIONAL CONCERN

This Appendix lists the habitat features for species of regional concern for the Plan Area.

Habitat Features for Species of Regional Concern: local habitats for regionally important species that have high cultural value or are of concern and which may be sensitive to disturbance from resource development activities during part or all their life cycle. The list of habitat features for species of regional concern in this land use plan is in addition to the list of focal species and species at risk. This Appendix may be modified over time in a manner consistent with the Government-to-Government *Land and Resource Management and Shared Decision Making Agreement*.

1. a fisheries sensitive feature
2. a mineral lick
3. a wallow
4. a nest of a Bald Eagle
5. a nest of a Golden Eagle
6. a nest of an Osprey
7. a nest of a Swainson's Hawk
8. a nest of a Gyrfalcon
9. a nest of a Northern Goshawk
10. a nest of a Sharp-Shinned Hawk
11. a nest of a Peregrine Falcon
12. a nest of a Merlin
13. a nest of a Great Horned Owl
14. a nest of a Great Grey Owl
15. a nest of a Western Screech Owl
16. a nest of a Northern Pygmy Owl
17. a nest of a Northern Saw-Whet Owl
18. a nest of a Boreal Owl
19. a nest of a Northern Hawk Owl
20. a nest of a Raven
21. a nest of a Great Blue Heron
22. a nest of a Trumpeter Swan
23. a nest of a Harlequin Duck
24. a nest of a Common, Red-throated or Pacific Loon
25. Trumpeter Swan aggregations
26. Shorebird nesting aggregation (including Arctic Tern, Semipalmated Plover, Sandpipers, Bonepartes' gull, herring gull)
27. a Xóots / Grizzly Bear ground den
28. a hot spring or thermal spring
29. the area occupied by a Scouler's corydalis plant
30. the area occupied by a Tall Bugbane plant
31. a non-classified wetland
32. a bat hibernaculum
33. a bat maternity roost
34. a hoary marmot colony
35. a wolverine den
36. an area occupied by wood frogs, western toads, northern spotted frogs or long-toed salamanders
37. a wolf maternal den
38. a lynx maternal den

APPENDIX E: RESOURCE MANAGEMENT DIRECTION FOR TLINGIT CULTURAL SITES

Tlingit cultural sites represent areas of special cultural significance to the Tlingit. The values and uses associated with Tlingit cultural sites vary in their sensitivity to disturbance from resource development activities, irreplaceability of the site (e.g. burial or sacred sites) and the significance of the site to practice *khustìyxh*. As such, resource management direction varies from site to site. The following management intent applies to all Tlingit Cultural Sites:

Management Intent for All Tlingit Cultural Sites
▪ To conserve the integrity of Tlingit cultural features and resources, opportunities for harvesting, and the natural resources and ecological conditions that support cultural and spiritual uses integral to the continuation of Tlingit *khustìyxh*, or way of life, while allowing other compatible uses.

Based on these variations, Tlingit Cultural Sites have been divided into categories for management purposes as follows:

Class A:

Clearly defined, site specific areas of high cultural significance to the Tlingit, and include village sites, archaeological sites, grave sites, spiritual areas and intensive traditional use areas. These sites are highly sensitive to disturbance and are irreplaceable.

Class B:

Sites whose values have lower sensitivities to disturbance from other resource uses, or are dispersed through a broader area with high spiritual, cultural or traditional land use significance. These areas may include a mix of specific cultural features (camps, cabins, trails, etc.), archaeological sites, spiritual areas, traditional use areas, and/or traditional gathering areas.

Class C:

Cultural sites or areas within protected areas, which benefit from the resource management direction for those zones. Additional management objectives may be developed through protected area management planning or site specific planning in order to maintain the integrity of individual sites or values.

Objectives for All Tlingit Cultural Sites
▪ Protect the integrity of Tlingit cultural features and resources. ▪ Maintain natural resources and ecological conditions that provide opportunities for the practice of Tlingit *khustìyxh.* ▪ Maintain opportunities for compatible uses consistent with the management intent for Tlingit Cultural Sites.
Implementation Direction: Tlingit Cultural Sites
Class A <u>Forestry and Hydro:</u> ▪ Commercial timber harvesting and hydroelectric power generation, including “run of the river” projects, are not allowed. <u>Land Tenures:</u> ▪ No new *Land Act* tenures or dispositions will be allowed. Projects of provincial significance that cannot be practicably relocated may be allowed. Existing *Land Act* tenures and associated infrastructure will be grand-parented or amended where possible to mitigate impacts on Tlingit cultural sites. ▪ In the event that new applications for *Land Act* tenures or dispositions arise in areas adjacent to Tlingit Cultural Sites, assess any potential impacts of the application on the cultural values and uses of the site, and mitigation measures that may be required to avoid or mitigate impacts.

Mineral Exploration and Development:

- Exploration and development activities shall avoid surface disturbance to cultural sites to the extent feasible. Where surface disturbance is unavoidable, minimize impacts to the cultural values and uses of the area.
- Exploration and development must use low impact methods such as foot and aerial access up to the advanced exploration stage.
- No new road construction will be permitted prior to advanced exploration. If no feasible alternative is available for advanced exploration, road access may be considered subject to an assessment of impacts and identification of mitigation measures.
- Maintenance of existing roads for access to existing mineral tenures will be permitted with the intent of restoring the roaded areas when the tenure expires and access is no longer required.

Recreation:

- Commercial motorized recreation is not allowed within Tlingit cultural sites.

Class B:

Forestry and Hydro:

- Commercial timber harvesting is permissible, subject to the resource management direction provided in Section 6.5.
- "Run of the River" independent power production is permissible, subject to the resource management direction in this LUP.

Land Tenures:

- Assess new applications for *Land Act* tenures or dispositions that arise for potential impacts on the cultural values and uses of the area/site, and determine mitigation measures that may be required to avoid or mitigate impacts.
- Existing *Land Act* Tenures will be jointly reviewed prior to renewal or replacement and may be amended to ensure compatibility with the management intent for the site.

Mineral Exploration and Development:

- Mineral exploration and development, and related access, will be undertaken in a manner that minimizes impacts to the cultural values and uses of the area.
- Requirements to avoid or mitigate impacts may be specified in the Notice of Work (NoW).

Recreation:

- Commercial recreation lodges and facilities are encouraged to be located outside of Class B cultural areas. Requirements to avoid or mitigate impacts may be specified in the management plan or as a condition of the tenure.

Class C:

Class C cultural sites are located within protected areas. Resource management direction to conserve the integrity of Class C cultural sites will be developed through protected area management planning.

APPENDIX F: RECREATIONAL VIEWSCAPES

This appendix lists known recreational viewscapes within the Plan Area, including viewscapes from known recreational sites identified on Map 16.

- Goal 2 areas of recreational interest
    - Ben-My-Cree
    - Wann River
    - Fantail River
    - Mailbox Point
    - Golden Gate/Kips Cove
    - Deep Bay
    - Deep Bay Islands
    - Racine Falls
    - Tutshi River
    - Tutshi Island
    - Scotia Bay/Taku Landing
- Use, Recreation and Enjoyment of the Public Reserves (UREPS)
    - Gladys Lake West/Fish Lake
    - Pine Creek Beach
    - Tutshi Lake and River
- Recreation Sites (MOTCA)
    - MacDonald Lake Recreation Site
    - Como Lake Recreation Site
    - Surprise Lake Recreation Site
    - Palmer Lake Recreation Site
    - Warm Bay Recreation Site
    - The Grotto Recreation Site
- Trails
    - Telegraph Trail
    - Chilkoot Trail and Pass
    - Taku Tram Recreational Trail
- Highway Corridors
    - Klondike Highway Corridor
    - Atlin Road Corridor
- High Value Community Use Areas
    - Monarch Mountain and Trail
    - Pine Creek Falls
    - Pine Creek Flats
    - Discovery
    - Sentinal Mountain and Elderdo Trail
    - Trail to Graham Inlet (just south of Logger bay)
    - Trail from Atlin Lake to Talaha Bay (goes by Jones Lake)
- Major Lakes
    - Atlin Lake
    - Tagish Lake
    - Tutshi Lake
    - Gladys Lake
    - Surprise Lake
    - King Salmon Lake
    - Fantail and False Lakes
    - Nakina and Victoria Lakes
    - Nelson and Edgar Lakes
    - Camp Island Lakes
    - Tatsamenie, Trapper, Little Trapper and Tunjony Lakes
    - Whiting Lake
- River Corridors
    - Sheslay – Inklin – Taku River Corridor
    - 4th of July Creek
    - Consolation Creek
    - Gladys River
    - Whiting River
    - Tutshi River
- Other
    - Kawdy Plateau
    - Heart Peaks

APPENDIX G: MINERAL TENURES TO BE EXCLUDED FROM THE PROTECTED AREAS

The following mineral claims will be excluded from the protected area until such time as the tenures lapse (see section 8.3).

Protected Area	Mineral Claim	Tenure ID
Monarch Mountain / A Xéegi Deiyi	D-1	389658
Taku River / T'akú Téix'		502815 513821
Sheslay River		532149

APPENDIX H: SPECIES OF CONSERVATION CONCERN IN 2010

The tables below list the plant and animal species and ecological communities considered at risk and/ or of conservation concern in the Cassiar portion of the Skeena-Stikine Forest District, which overlaps, but extends beyond, the Atlin-Taku planning area. This list was assembled from the BC Species and Ecosystems Explorer website at www.env.gov.bc.ca/atrisk/toolintro.html and the BC Conservation Framework website at www.env.gov.bc.ca/conservationframework/results.html.

BACKGROUND

a. Global and provincial rankings

The BC Conservation Data Centre (CDC) provides information on the status, locations and level of protection of indigenous plants, animals and ecosystems (ecological communities) at risk in BC. The CDC assigns a sub-national conservation status to species and sub-species in BC (S1 – S6) based on the international NatureServe Conservation Status Assessment process[24]. Global and provincial conservation ranks, as shown in the tables below, are as follows:

G1, S1	Critically imperiled
G2, S2	Imperiled
G3, S3	Vulnerable
G4, S4	Apparently secure
G5, S5	Secure

These sub-national rankings place species on one of the following listings:

Red-listed: Extirpated, endangered or threatened. Red-listed species and sub-species may be legally designated as, or may be considered candidates for legal designations under the *Wildlife Act*.

Blue-listed: Special concern, i.e., particularly sensitive to human activities or natural events but not endangered or threatened

Yellow-listed: Not at risk

b. National rankings

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assesses the conservation status of wildlife at a national scale and makes formal recommendations on the designation of wildlife under the *Species at Risk Act*. COSEWIC rankings are as follows:

Extinct (X)	No longer exists
Extirpated (XT)	No longer exists in the wild in Canada; does exist elsewhere
Endangered (E)	Facing imminent extirpation or extinction
Threatened (T)	Likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction
Special Concern (SC)	May become threatened or endangered because of a combination of biological characteristics and identified threats
Data Deficient (DD)	Available information is insufficient to assess a species
Not at Risk (NAR)	The species has been evaluated and found to be not at risk of extinction given the current circumstances

c. BC Conservation Framework priorities

Table 2 shows the highest conservation priority assigned to each species by the BC Conservation Framework (BC CF). The BC CF was developed by the BC Ministry of Environment to coordinate and align conservation efforts across government and non-government sectors. The Framework uses global and provincial conservation status in its assessment, but also looks at criteria such as population trend, threats and feasibility of recovery in assigning conservation priorities and recommended management actions[25].

[24] For more information see http://www.natureserve.org/publications/ConsStatusAssess_StatusFactors.jsp
[25] The BC Conservation Framework website is http:// www.env.gov.bc.ca/conservationframework

The Three Goals of the BC CF are:

Goal 1: Contribute to global efforts for species and ecosystem conservation

Goal 2: Prevent species and ecosystems from becoming at risk

Goal 3: Maintain the diversity of native species and ecosystems

Each species receives a rank of 1 (highest) through 6 (lowest) under each of the three CF Goals and is placed under the goal in which it receives the highest score. For example, the mountain goat ranks as a priority 1 under goal 2. It is globally secure, but has declined in B.C., thereby raising the conservation concern.

There are four processes recognized in BC conservation planning, each differing in objectives and scope. The CDC (provincial and international and decided by independent biologists) and COSEWIC (national and decided by politicians) result in unprioritized lists of species of conservation concern. The Identified Wildlife Management Strategy (IWMS) is a subset of provincial CDC, but applicable only to forest and range managers and on Crown Land. The BC Conservation Framework uses CDC and COSEWIC lists and adds consideration for trend, threat and feasibility of recovery, to set priorities and to recommend actions based on the three BC CF goals:

1) Contribute to global efforts for species and ecosystem conservation;
2) Prevent species and ecosystems from becoming at risk;
3) Maintain the diversity of native species and ecosystems.

The addition of the BC CF should result in more co-ordination between the lists, and it explains why species and ecosystems of all status ranks--red, blue or yellow-- can be a high priority.

TABLES SHOWING SPECIES OF CONSERVATION CONCERN

In this section are three tables summarizing species of conservation concern:

Table 1. Animal species (invertebrate and vertebrate)
Table 2. Plant species
Table 3. Ecological communities

Species and sub-species have been included in these tables if they meet one or more of the following criteria:

1. Globally ranked by NatureServe as imperiled (G1 or G2);
2. Identified by Committee on the Status of Endangered Wildlife in Canada (COSEWIC) at a national scale as Endangered (E), Threatened (T) or Special Concern (SC);
3. Ranked subnationally by the BC Conservation Data Centre (BC CDC) as imperiled (S1 or S2) or placed on the Red or Blue list;
4. Assigned a Priority 1 or 2 under the BC Conservation Framework (BC CF) for one or more of the three BC CF goals.

Table 1. Animal species of conservation concern

Scientific Name	Common Name	Global Rank	COSEWIC Status	Prov. Rank	Prov. List	Highest Priority BC Cons Framework	
						CF Priority	CF Goal (s)
Fish							
Acipenser medirostris	Green Sturgeon	G3	SC	S1N	Red	2	3
Acrocheilus alutaceus	Chiselmouth	G5	NAR	S3S4	Blue	2	2
Coregonus nasus	Broad Whitefish	G5		S2S3	Blue	3	3
Oncorhynchus clarkii clarkii	Cutthroat Trout, *clarkii* subspecies	G4T4		S3S4	Blue	2	2
Oncorhynchus kisutch	Coho Salmon	G4	E	S4	Yellow	2	2
Salvelinus confluentus	Bull Trout	G3		S3	Blue	2	2
Salvelinus malma	Dolly Varden	G5		S3S4	Blue	2	2
Thaleichthys pacificus	Eulachon	G5		S2S3	Blue	2	3
Amphibians							
Anaxyrus boreas	Western Toad	G4	SC	S4	Yellow	2	2
Ensatina eschscholtzii	Common Ensatina	G5	NAR	S4	Yellow	2	2
Rana luteiventris	Columbia Spotted Frog	G4	NAR	S4	Yellow	2	2
Lithobates sylvaticus	Wood Frog	G5		S4	Yellow	2	2
Birds							
Arenaria melanocephala	Black Turnstone	G5		S4N,S5MJ	Yellow	2	2
Asio flammeus	Short-Eared Owl	G5	SC	S2N,S3B	Blue	2	2
Aythya affinis	Lesser Scaup	G5		S4S5B, S5N	Yellow	2	2
Aythya americana	Redhead	G5		S4S5B, S5N	Yellow	2	2
Aythya valisineria	Canvasback	G5		S4B	Yellow	2	2
Bartramia longicauda	Upland Sandpiper	G5		S1S2B	Red	1	3
Bonasa umbellus	Ruffed Grouse	G5		S4	Yellow	2	2
Brachyramphus marmoratus	Marbled Murrelet	G3G4	T	S3B, S3N	Blue	1	1, 2
Bucephala islandica	Barrow's Goldeneye	G5		S4B	Yellow	1	2
Buteo lagopus	Rough-legged Hawk	G5	NAR	S2S3N	Blue	2	3
Buteo swainsoni	Swainson's Hawk	G5		S2B	Red	2	3

Scientific Name	Common Name	Global Rank	COSEWIC Status	Prov. Rank	Prov. List	Highest Priority BC Cons Framework	
						CF Priority	CF Goal (s)
Carpodacus purpureus	Purple Finch	G5		S4B	Yellow	2	2
Catharus ustulatus	Swainson's Thrush	G5		S4S5B	Yellow	2	2
Certhia americana	Brown Creeper	G5		S4S5B	Yellow	1	2
Chaetura vauxi	Vaux's Swift	G5		S4S5B	Yellow	2	2
Charadrius vociferus	Killdeer	G5		S4B	Yellow	2	2
Chordeiles minor	Common Nighthawk	G5	T	S4B	Yellow	2	2
Circus cyaneus	Northern Harrier	G5	NAR	S4B	Yellow	2	2
Coccothraustes vespertinus	Evening Grosbeak	G5		S4S5B	Yellow	2	2
Contopus cooperi	Olive-sided flycatcher	G4	T	S3S4B	Blue	2	2
Contopus sordidulus	Western Wood-pewee	G5		S4B	Yellow	2	2
Cypseloides niger	Black Swift	G4		S4B	Yellow	2	2
Dendragapus fuliginous	Sooty Grouse	G5		S3S4	Blue	2	2
Dendragapus obscurus	Dusky Grouse	G5		S4	Yellow	2	2
Dendroica castanea	Bay-breasted Warbler	G5		S2B	Red	2	3
Dendroica petechia	Yellow Warbler	G5		S4S5B	Yellow	2	2
Empidonax difficilis	Pacific-slope Flycatcher	G5		S4S5B	Yellow	2	e
Euphagus carolinus	Rusty Blackbird	G4	SC	S3S4B	Blue	2	2
Falco peregrinus spp	Peregrine Falcon	G4	SC	S3B	No Status	2	2
Falco peregrinus anatum	Peregrine Falcon, *anatum* subspecies	G4T4	SC	S2B	Red	2	3
Falco sparverius	American Kestrel	G5		S4B	Yellow	2	2
Hirundo rustica	Barn Swallow	G5		S3S4B	Blue	2	2
Histrionicus histrionicus	Harlequin Duck	G4		S4B,S3N	Yellow	1	2
Limnodromus griseus	Short-Billed Dowitcher	G5		S2S4B	Blue	3	3
Limosa haemastica	Hudsonian Godwit	G4		S2B	Red	3	1, 3
Loxia curvirostra	Red Crossbill	G5		S4S5B	Yellow	2	2
Pelecanus erythrorhynchos	American White Pelican	G4	NAR	S1B	Red	1	3
Petrochelidon pyrrhonota	Cliff Swallow	G5		S4B	Yellow	2	2
Phalaropus lobatus	Red-Necked Phalarope	G4G55		S3S4B	Blue	2	2
Podilymbus podiceps	Pie-billed Grebe	G5		S4B	Yellow	2	2
Poecile rufescens	Chestnut-backed Chickadee	G5		S4S5B	Yellow	2	2
Pooecetes gramineus	Vesper Sparrow	G5		S4S5B	Yellow	2	2
Rallus limicola	Virginia Rail	G5		S4S5	Yellow	2	2

Scientific Name	Common Name	Global Rank	COSEWIC Status	Prov. Rank	Prov. List	Highest Priority BC Cons Framework	
						CF Priority	CF Goal (s)
Selasphorus rufus	Rufous Hummingbird	G5		S4B	Yellow	2	2
Stelgidopteryx serripennis	Northern Rough-winged Swallow	G5		S4B	Yellow	2	2
Sturnella neglecta	Western Meadowlark	G5		S4B	Yellow	2	2
Tachycineta bicolor	Tree Swallow	G5		S4S5B	Yellow	2	2
Tympanuchus phasianellus	Sharp-tailed Grouse	G4		S4	Yellow	2	2
Wilsonia pusilla	Wilson's Warbler	G5		S4B	Yellow	2	2
Zenaida macroura	Mourning Dove	G5		S4B	Yellow	2	2
Invertebrates - gastropods							
Fossaria truncatula	Attenuate Fossaria	G5		S3S4	Blue	2	2
Pristiloma stearnsi	Striated Tightcoil	G4G5		S4	Yellow	2	2
Invertebrates - insects							
Boloria astarte distincta	Astarte Fritillery *distincta* subspecies	G5T3		S2S3	Blue	2	1
Boloria epithore sigridae	Western Meadow Fritillary *sigridae* subspecies	G5T3		S2S4	Blue	3	1, 3
Colias hecla	Hecla Sulphur	G5		S1S3	Red	2	3
Euchloe naina	Green Marble	GU		S1S3	Red	2	3
Oeneis polixenes yukonensis	Polixenes Arctic *yukonensis* subspecies	G5T5		S1S3	Red	2	3
Parnassius Phoebus	Phoebus Parnassian	G5		S1S3	Red	2	3
Pontia sisymbrii beringiensis	California White, *beringiensis* subspecies	G5T3T4		S1S3	Red	2	3
Mammals							
Erethizon dorsatum	North American Porcupine	G5		S4	Yellow	2	2
Gulo gulo luscus	Wolverine, *luscus* subspecies	G4T4	SC	S3	Blue	2	2
Martes americana	American Marten	G5		S4S5	Yellow	2	2
Martes pennanti	Fisher	G5		S2S3	Blue	2	3
Myotis keenii	Keen's Myotis	G2G3	DD	S1S3	Red	1	1, 3
Ochotona collaris	Collared Pika	G5		S3S4	Blue	2	2
Oreamnos americanus	Mountain Goat	G5		S4	Yellow	1	2
Ovis dalli	Thinhorn Sheep	G5		S4	Yellow	2	2
Ovis dalli dalli	Dall's Sheep	G5T5		S2S3	Blue	2	3

Scientific Name	Common Name	Global Rank	COSEWIC Status	Prov. Rank	Prov. List	Highest Priority BC Cons Framework	
						CF Priority	CF Goal (s)
Ovis dalli stonei	Stone's Sheep	G5T4		S4	Yellow	2	2
Rangifer tarandus	Caribou	G5		S3S4	No Status	2	2
Rangifer tarandus pop. 15	Caribou, northern mountain population	G5T4Q	T / SC	S3	Blue	2	2
Sorex tundrensis	Tundra Shrew	G5		S1S2	Red	2	3
Ursus arctos	Grizzly Bear	G4	SC	S3	Blue	2	2

Table 2. Plant species of conservation concern

Scientific Name	Common Name	Global Rank	Prov. Rank	Prov. List	Highest Priority BC Cons Framework	
					CF Priority	CF Goal (s)
Fungus						
Nephroma occultum	Cryptic Paw	G4	S2S3	Blue	2	3
Non-vascular Plants						
Amphidium mougeotii		G5	S2S3	Blue	3	3
Andreaea rupestris var. *papillosa*		G5TNR	S1S3	Red	2	3
Aongstroemia longipes		G3G5	S2S3	Blue	3	3
Brachythecium groenlandicum		G3G5	S2S3	Blue	3	3
Brachythecium trachypodium		GU	S1S3	Red	2	3
Bryobrittonia longipes		G3	S2S3	Blue	3	3
Bryoerythrophyllum ferruginascens		G3G4	S1S3	Red	2	3
Bryum arcticum		G5?	S1S3	Red	2	3
Bryum muehlenbeckii		G4G5	S2S3	Blue	3	3
Calliergon richardsonii		G4	S2S3	Blue	3	3
Campylopus flexuosus		G5?	S2S3	Blue	3	3
Cinclidium arcticum		G4G5	S1S3	Red	2	3
Cnestrum alpestre		G3G5	S2S3	Blue	3	1, 3
Cnestrum schisti		G3G5	S1S3	Red	2	3
Cynodontium tenellum		G3G5Q	S2S3	Blue	3	3
Cyrtomnium hymenophylloides		G5?	S2S3	Blue	3	3
Cyrtomnium hymenophyllum		G3G5	S2S3	Blue	3	3
Desmatodon leucostoma		G2G4	S1S3	Red	2	3

Scientific Name	Common Name	Global Rank	Prov. Rank	Prov. List	Highest Priority BC Cons Framework	
					CF Priority	CF Goal (s)
Desmatodon systylius		G4G5	S1S3	Red	2	3
Dicranella cerviculata		G5?	S2S3	Blue	3	3
Dicranodontium subporodictyon		G3	S2S3	Blue	3	1, 3
Dicranum angustum		G5?	S1S3	Red	2	3
Dicranum fragilifolium		G4G5	S2S3	Blue	3	3
Dicranum spadiceum		G5?	S2S3	Blue	3	3
Didymodon asperifolius		G3G5	S1S3	Red	2	3
Didymodon johansenii		G5?	S1S3	Red	2	3
Drepanocladus crassicostatus		G3G5	S2S3	Blue	3	3
Drepanocladus lapponicus		GU	S1S3	Red	2	3
Drepanocladus trichophyllus		GU	S1S3	Red	2	3
Drepanocladus tundrae		GU	S1S3	Red	2	3
Encalypta alpina		G5?	S2S3	Blue	3	3
Encalypta brevicolla		G4	S2S3	Blue	3	3
Encalypta brevipes		G3	S2S3	Blue	3	3
Grimmia affinis		G4G5	S2S3	Blue	3	3
Hygrohypnum alpestre		G3G5	S1S3	Red	2	1, 3
Hygrohypnum duriusculum		G3G5	S2S3	Blue	2	1
Hygrohypnum polare		G5?	S1S3	Red	2	3
Hygrohypnum styriacum		GU	S2S3	Blue	3	3
Hypnum holmenii		GNR	S1S3	Red	2	3
Hypnum plicatulum		G5	S2S3	Blue	3	3
Hypnum pratense		G5	S2S3	Blue	3	3
Lescuraea saxicola		G4G5	S1S3	Red	2	3
Loeskypnum badium		G4G5	S2S3	Blue	3	3
Mnium arizonicum		G5?	S1S3	Red	2	3
Myurella sibirica		G4?	S1S3	Red	2	3
Oreas martiana		G5?	S1S3	Red	2	3
Orthothecium strictum		G5?	S2S3	Blue	3	3
Orthotrichum alpestre		G4G5	S2S3	Blue	3	3
Orthotrichum pylaisii		G4G5	S1S3	Red	2	3
Plagiomnium ciliare		G5	S1S3	Red	2	3

Scientific Name	Common Name	Global Rank	Prov. Rank	Prov. List	Highest Priority BC Cons Framework	
					CF Priority	CF Goal (s)
Pohlia atropurpurea		G4G5	S2S3	Blue	2	3
Pohlia elongata		G4G5	S2S3	Blue	3	3
Pohlia obtusifolia		G2G4	S2S3	Blue	3	1, 3
Pohlia sphagnicola		G2G3	S2S3	Blue	3	1, 3
Polytrichum longisetum		G5	S2S3	Blue	2	3
Pseudobryum cinclidioides		G5	S1S3	Red	2	3
Psilopilum cavifolium		GU	S1S3	Red	2	3
Racomitrium panschii		GU	S1S3	Red	2	3
Racomitrium pygmaeum		GU	S1S3	Red	2	3
Rhizomnium gracile		G4G5	S2S3	Blue	3	3
Rhizomnium punctatum		G5	S1S3	Red	2	3
Rhynchostegium serrulatum		G5	S1S3	Red	2	3
Schistidium agassizii		G3G5	S2S3	Blue	2	1
Schistidium boreale		GNR	S2S3	Blue	3	3
Schistidium dupretii		GNRQ	S2S3	Blue	3	3
Schistidium frigidum		GNR	S2S3	Blue	2	3
Schistidium pulvinatum		G5	S1S3	Red	2	3
Scorpidium turgescens		G3G5	S2S3	Blue	3	3
Splachnum luteum		G3	S2S3	Blue	3	3
Tayloria froelichiana		G3G5	S1S3	Red	2	3
Tayloria lingulata		G3G5	S2S3	Blue	3	1, 3
Tetraplodon angustatus		G4	S2S3	Blue	3	3
Tetraplodon pallidus		GU	S1S3	Red	2	3
Timmia megapolitana		G5	S2S3	Blue	2	3
Timmia norvegica		G4?	S2S3	Blue	3	3
Tortella inclinata		G4G5	S2S3	Blue	3	3
Ulota curvifolia		G3G5	S1S3	Red	2	1, 3
Vascular Plants - dicots						
Aphragmus eschscholtzianus	Eschscholtz's little nightmare	G3	S2S3	Blue	3	3
Arabis lignifera	Woody-branched rockcress	G5	S2S3	Blue	3	3
Arenaria longipedunculata	Low sandwort	G3G4Q	S1S3	Red	2	3
Artemisia alaskana	Alaskan sagebrush	G4	S2S3	Blue	3	3
Artemisia furcata var. *heterophylla*	Three-forked mugwort	G4TNR	S2S3	Blue	3	3

Scientific Name	Common Name	Global Rank	Prov. Rank	Prov. List	Highest Priority BC Cons Framework	
					CF Priority	CF Goal (s)
Astragalus umbellatus	Tundra milk-vetch	G4	S2S3	Blue	3	3
Bistorta plumosa	Meadow bistort	G5T5	S1S3	Red	2	3
Callitriche heterophylla ssp. *heterophylla*	Two-edged water-starwort	G5T5	S2S3	Blue	3	3
Caltha palustris var. *palustris*	Yellow marsh-marigold	G5T5	S2S3	Blue	2	3
Castilleja hyperborea	Northern paintbrush	G3G5	S2S3	Blue	3	3
Chamaerhodos erecta ssp. *nuttallii*	American chamaerhodos	G5T4T5	S2S3	Blue	3	3
Chrysosplenium wrightii	Wright's golden-saxifrage	G5?	S1S3	Red	2	3
Cicuta virosa	European water-hemlock	G4G5	S2S3	Blue	3	3
Cnidium cnidiifolium	Northern hemlock-parsley	G5	S1	Red	2	3
Cornus suecica	Dwarf bog bunchberry	G5	S1S3	Red	2	3
Descurainia sophioides	Northern tansy mustard	G5	S1S3	Red	2	3
Diapensia lapponica ssp. *obovata*	Diapensia	G5T5	S2S3	Blue	3	3
Douglasia gormanii	Gorman's douglasia	G4	S1S3	Red	2	3
Draba cinerea	Gray-leaved draba	G5	S2S3	Blue	3	3
Draba corymbosa	Baffin Bay draba	G4G5	S2S3	Blue	3	3
Draba fladnizensis	Austrian draba	G4	S2S3	Blue	3	3
Draba glabella var. *glabella*	Smooth draba	G4G5T4	S2S3	Blue	3	3
Draba lactea	Milky draba	G4	S2S3	Blue	3	3
Draba lonchocarpa var. *thompsonii*	Lance-fruited draba	G5T3T4	S2S3	Blue	3	3
Draba palanderiana	Palander's draba	G4G5	S1S3	Red	2	3
Draba porsildii	Porsild's draba	G3G4	S2S3	Blue	3	3
Draba ruaxes	Coast mountain draba	G4	S2S3	Blue	3	3
Draba stenopetala	Star-flowered draba	G3G4	S1	Red	2	3
Draba ventosa	Wind River draba	G3	S2S3	Blue	3	3
Epilobium davuricum	Northern swamp willowherb	G5	S1S3	Red	2	3
Epilobium halleanum	Hall's willowherb	G5	S2S3	Blue	2	3
Epilobium hornemannii ssp. *behringianum*	Hornemann's willowherb	G5T4	S2S3	Blue	3	3
Epilobium leptocarpum	Small-fruited willowherb	G5	S2S3	Blue	3	3
Erigeron uniflorus var. *eriocephalus*	Northern daisy	G5T4	S2S3	Blue	3	3
Eutrema edwardsii	Edwards wallflower	G4	S2S3	Blue	3	3
Gentianella tenella ssp. *tenella*	Slender gentian	G4G5T4	S1S3	Red	2	3
Geum rossii var. *rossii*	Ross' avens	G5T5	S2S3	Blue	3	3
Lomatogonium rotatum	Marsh felwort	G5	S2S3	Blue	3	3

Scientific Name	Common Name	Global Rank	Prov. Rank	Prov. List	Highest Priority BC Cons Framework	
					CF Priority	CF Goal (s)
Lupinus kuschei	Yukon lupine	G3G4	S2S3	Blue	3	3
Minuartia elegans	Northern sandwort	G4G5	S2S3	Blue	3	3
Minuartia stricta	Rock sandwort	G5	S2S3	Blue	3	3
Montia bostockii	Bostock's montia	G3	S2S3	Blue	3	3
Oxytropis campestris var. *davisii*	Davis' locoweed	G5T3	S3	Blue	2	1
Oxytropis campestris var. *jordalii*	Jordal's locoweed	G5T4	S2S3	Blue	3	3
Oxytropis maydelliana	Maydell's locoweed	G5	S2S3	Blue	3	3
Oxytropis scammaniana	Scamman's locoweed	G3G4	S2S3	Blue	3	3
Packera ogotorukensis	Ogotoruk Creek butterweed	G3G5	S1S3	Red	2	3
Papaver alboroseum	Pale poppy	G3G4	S2S3	Blue	3	3
Parrya nudicaulis	Northern parrya	G5	SH	Red	2	3
Pedicularis verticillata	Whorled lousewort	G4	S2S3	Blue	3	3
Penstemon gormanii	Gorman's penstemon	G4	S2S3	Blue	3	3
Physaria arctica	Arctic bladderpod	G4	S2S3	Blue	3	3
Pinguicula villosa	Hairy butterwort	G4	S2S3	Blue	2	3
Polemonium boreale	Northern Jacob's-ladder	G5	S2S3	Blue	3	3
Polemonium occidentale ssp. *occidentale*	Western Jacob's-ladder	G5?T5?	S2S3	Blue	2	3
Potentilla biflora	Two-flowered cinquefoil	G4G5	S2S3	Blue	3	3
Potentilla elegans	Elegant cinquefoil	G4	S1S3	Red	2	3
Potentilla nivea var. *pentaphylla*	Five-leaved cinquefoil	G5T4	S2S3	Blue	3	3
Primula cuneifolia ssp. *saxifragifolia*	Wedge-leaf primrose	G5TNR	S2S3	Blue	3	3
Ranunculus pedatifidus ssp. *affinis*	Birdfoot buttercup	G5T5	S2S3	Blue	3	3
Ranunculus sulphureus	Sulphur buttercup	G5	S2S3	Blue	3	3
Sagina nivalis	Snow pearlwort	G5	S2S3	Blue	3	3
Salix petiolaris	Meadow willow	G5	S2S3	Blue	2	3
Salix raupii	Raup's willow	G2	S1	Red	2	1, 3
Saussurea angustifolia var. *angustifolia*	Northern sawwort	G5TNR	SH	Red	2	3
Saxifraga hieraciifolia var. *hieraciifolia*	Hawkweed-leaved saxifrage	G4TNR	S1S3	Red	2	3
Saxifraga hirculus ssp. *hirculus*	Yellow marsh saxifrage	G5TNR	S1S3	Red	2	3
Saxifraga nelsoniana ssp. *carlottae*	Dotted saxifrage	G5T3?	S3	Blue	2	1
Saxifraga razshivinii	Large-petalled saxifrage	G4G5	S1S3	Red	2	3
Saxifraga serpyllifolia	Thyme-leaved saxifrage	G5	S2S3	Blue	3	3
Senecio sheldonensis	Mount Sheldon butterweed	G2G3	S2S3	Blue	2	1

Scientific Name	Common Name	Global Rank	Prov. Rank	Prov. List	Highest Priority BC Cons Framework	
					CF Priority	CF Goal (s)
Silene involucrata ssp. *involucrata*	Arctic campion	G5T5	S2S3	Blue	3	3
Silene ostenfeldii	Taimyr campion	G4?	S2S3	Blue	3	3
Tephroseris frigida	Purple-haired groundsel	G5	S2S3	Blue	3	3
Tephroseris lindstroemii	Northern groundsel	G4	S2S3	Blue	3	3
Tephroseris palustris	Marsh fleabane	G5	S1S3	Red	2	3
Tephroseris yukonensis	Yukon groundsel	G4G5Q	S2S3	Blue	3	3
Polystichum kruckebergii	Kruckeberg's holly fern	G4	S2S3	Blue	3	3
Woodsia alpina	Alpine cliff fern	G4	S2S3	Blue	3	3
Vascular Plants - monocots						
Arctophila fulva	Pendantgrass	G5	S2S3	Blue	3	3
Carex bicolor	Two-coloured sedge	G5	S2S3	Blue	3	3
Carex fuliginosa ssp. *misandra*	Short-leaved sedge	G5	S2S3	Blue	3	3
Carex incurviformis var. *incurviformis*	Curved-spiked sedge	G4G5T4T5	S2S3	Blue	3	3
Carex krausei	Krause's sedge	G4	S2S3	Blue	3	3
Carex lenticularis var. *dolia*	Enander's sedge	G5T3	S2S3	Blue	3	3
Carex membranacea	Fragile sedge	G5	S2S3	Blue	3	3
Carex rupestris ssp. *rupestris*	Curly sedge	G5T5?	S2S3	Blue	3	3
Carex tenera	Tender sedge	G5	S2S3	Blue	3	3
Festuca minutiflora	Little fescue	G5	S2S3	Blue	3	3
Glyceria pulchella	Slender mannagrass	G5	S2S3	Blue	3	3
Juncus albescens	Whitish rush	G5	S2S3	Blue	3	3
Juncus arcticus ssp. *alaskanus*	Arctic rush	G5T4T5	S2S3	Blue	3	3
Luzula confusa	Northern wood-rush	G5	S2S3	Blue	3	3
Luzula groenlandica	Greenland wood-rush	G4	S2S3	Blue	3	3
Luzula kjellmaniana	Kjellman's wood-rush	GNR	S2S3	Blue	3	3
Luzula nivalis	Arctic wood-rush	G5	S2S3	Blue	3	3
Poa abbreviata ssp. *pattersonii*	Abbreviated bluegrass	G5T5	S2S3	Blue	3	3
Poa pseudoabbreviata	Polar bluegrass	G4	S2S3	Blue	3	3
Potamogeton perfoliatus	Perfoliate pondweed	G5	S2S3	Blue	3	3
Stuckenia vaginata	Sheathing pondweed	G5	S2S3	Blue	3	3
Tofieldia coccinea	Northern false asphodel	G5	S2S3	Blue	3	3
Trichophorum pumilum	Dwarf clubrush	G5	S2S3	Blue	3	3

Scientific Name	Common Name	Global Rank	Prov. Rank	Prov. List	Highest Priority BC Cons Framework	
					CF Priority	CF Goal (s)
Sphagnum balticum		G2G4	S2S3	Blue	3	3

Table 3. Ecological communities of conservation concern

The ecological communities shown in the table below were identified on BC Species and Ecosystems Explorer, sorted by Forest District (Skeena-Stikine) and ecosection.

Ecosystem Group	Scientific Name	Common Name	Biogeoclimatic Zone(s)	Endemic	Global Rank	Prov. Rank	Prov. List	Highest Priority BC Cons Framework	
								CF Priority	CF Goal (s)
Alpine, Grassland, Herbaceous	*Calamagrostis purpurascens* Herbaceous Vegetation	purple reedgrass Herbaceous Vegetation	BAFA, CMA, MH		G2	S2	Red	2	
Alpine, Herbaceous	*Caltha leptosepala* Herbaceous Vegetation	white mountain marsh-marigold Herbaceous Vegetation	BAFA, ESSF		GNR	SNR	Yellow	Not Assessed	
Forest	*Picea sitchensis - Tsuga heterophylla / Gymnocarpium dryopteris*	Sitka spruce - western hemlock / oak fern	CWH	Y	GNR	S3S4	Yellow	2	1, 2
Forest	*Tsuga heterophylla - Picea sitchensis / Vaccinium alaskaense*	western hemlock - Sitka spruce / Alaskan blueberry	CWH		GNR	S4	Yellow	2	1, 2
Riparian, Forest	*Picea sitchensis / Rubus spectabilis* Wet Maritime	Sitka spruce / salmonberry Wet Maritime	CWH	Y	G3	S3	Blue	2	1, 2
Riparian, Forest	*Populus balsamifera* (ssp. *balsamifera*, ssp. *trichocarpa*) - *Picea* spp. / *Cornus stolonifera*	(balsam poplar, black cottonwood) - spruces / red-osier dogwood	BWBS, ICH, SBS		GNR	S2?	Red	2	2
Riparian, Forest	*Populus balsamifera* ssp. *trichocarpa - Alnus rubra / Rubus spectabilis*	black cottonwood - red alder / salmonberry	CWH		GNR	S3	Blue	2	1, 2
Riparian, Shrub, Herbaceous	*Salix lucida ssp. lasiandra / Cornus stolonifera / Equisetum spp.*	Pacific willow / red-osier dogwood / horsetails	BWBS	Y	G2	S2	Red	2	1
Wetland, Forest	*Picea sitchensis / Lysichiton americanus*	Sitka spruce / skunk cabbage	CWH		GNR	S3	Blue	2	2

Ecosystem Group	Scientific Name	Common Name	Biogeoclimatic Zone(s)	Endemic	Global Rank	Prov. Rank	Prov. List	Highest Priority BC Cons Framework	
								CF Priority	CF Goal (s)
Wetland, Herbaceous	*Carex aquatilis* / *Sphagnum* spp.	water sedge / peat-mosses	ESSF, SBS		GNR	S3S4	Yellow	2	1
Wetland, Herbaceous	*Carex lasiocarpa* / *Drepanocladus aduncus*	slender sedge / common hook-moss	BWBS, ICH, IDF, MS,SBPS, SBS	Y	G3	S3	Red	3	
Wetland, Herbaceous	*Carex sitchensis - Oenanthe sarmentosa*	Sitka sedge - Pacific water-parsley	CWH	Y	G3	S3	Blue	2	1
Wetland, Herbaceous	*Carex sitchensis* / *Sphagnum* spp.	Sitka sedge / peat-mosses	CWH, ICH, MH	Y	G2	S2	Red	1	1
Wetland, Herbaceous	*Equisetum fluviatile - Carex utriculata*	swamp horsetail - beaked sedge	BG, BWBS, ESSF, ICH, IDF, MS, SBPS, SBS		G4	S3	Blue	2	2
Wetland, Herbaceous	*Trichophorum cespitosum* / *Campylium stellatum*	tufted clubrush / golden star-moss	BWBS, ESSF, ICH, MS, SBS	Y	G2G3	S2S3	Blue	2	1
Wetland, Shrub	*Betula nana* / *Carex aquatilis*	scrub birch / water sedge	BWBS, ESSF, ICH, IDF, MS, SBPS, SBS, SWB	Y	G4	S3	Blue	2	2

APPENDIX I: GLOSSARY

Active Fan	Alluvial fan of an active stream system. An alluvial fan is a cone-like sediment accumulation that develops where streams reach the valley floor and deposit sediment and organic debris.
Adaptive management	A process that focuses on continuous improvement of management over time, by applying new knowledge gained from monitoring, research and practical experience to ongoing planning and management activities (see section 9.1.1).
Adjacent	Nearby to, and potentially subject to, direct or indirect impacts from a land use or development activity.
Advanced Mineral Exploration	Those activities requiring a Notice of Work and development of a Reclamation Program before a permit can be issued. The activities include the following: disturbance of the ground by mechanical means such as drilling, trenching and excavating; blasting; construction, modification, deactivation and reclamation of an exploration access and camps; induced polarization surveys using exposed electrodes; and site reclamation.
Allowable Annual Cut (AAC)	The rate of timber harvest permitted each year from a specified area of land, usually expressed as cubic metres of wood per year.
Archaeological assessment	Assessment based on fieldwork and ethnography research of the location, significance and sensitivity of archaeological resources in a given area. Such assessments may be undertaken at an overview or site level.
Archaeological Impact Assessments (AIA)	Archaeological Impact Assessments (AIA) are undertaken to identify the potential risk to archeological resources from a specific proposed resource development, and to identify the means to mitigate impacts on those resources.
Best management practices	A practice or combination of practices that are currently determined to be the most technologically or economically feasible means of preventing potential impacts.
Coarse filter management	An approach to sustaining biodiversity that strives to protect or reserve sufficient habitat to maintain most ecosystems, species and genes through time. Coarse filter management focuses on maintaining a diversity of structures and diversity of ecosystems across the landscape. This approach is often used in concert with a *fine filter approach*.
Commercial (forest) harvesting	Harvesting authorized under any major forest tenure, or harvesting where logs or wood products are sold commercially. (e.g., house logs, firewood, lumber, etc.).
Commercial recreation	Outdoor recreational activities provided on a fee-for-service basis, with a focus on experiences in a natural environment.
Committee on the Status of Endangered Wildlife in Canada (COSEWIC)	A committee of experts at the federal level that assesses and designates which wild species are in some danger of disappearing from Canada
Completion of Operations	For the purposes of roaded access, completion of operations is when the tenure holder surrenders or does not renew their Special Use Permit
Connectivity	Linkages between ecosystems and populations to form an interconnected network. At the landscape scale, connectivity refers to the degree to which a landscape facilitates or impedes movement of organisms among resource patches. The degree of interconnectedness and characteristics of connectivity linkages will vary in natural landscapes based on topography and natural disturbance regimes.
Conservancy	Areas designated for the protection of First Nations cultural values and uses, biological diversity, natural environments and recreational values. Conservancies are established by or under the *Park (Conservancy Enabling) Amendment Act (2006)* or the *Protected Areas of British Columbia Act.*
Core habitat area	Areas of high value habitat most frequently used by a wildlife species on a seasonal basis
Critical wildlife habitat	An ecosystem or particular ecosystem element occupied or used by a species or local population that is essential for its health and/or long-term persistence.
Critical aquatic habitat	Specific aquatic habitats identified as being of the highest ecological value where aquatic animals (and their predators) concentrate their activities, including critical spawning and rearing areas for anadromous and non-anadromous fish.

Cultural landscape	Any geographic area that has been modified, influenced or given special cultural meaning by people.
Cultural features cultural sites	Sites or natural features that are of cultural or archaeological significance to an aboriginal people or community.
Cumulative effects	Effects that result from the incremental impact of an action when added to other past, present and reasonably foreseeable future actions.
Deactivation	Activities implemented to stabilize a road or trail surface, either permanently or during a period of inactivity. While deactivation is primarily intended for the maintenance of slope stability and hydrological integrity, it may also be used to manage access. Deactivation activities are generally sufficient to make motorized access more difficult, depending on the method of access.
Deregulated stream	Historically-mined creeks on which placer mining operations are exempted under the Placer Mining Waste Control Regulation (2004) from requiring an *Environmental Management Act* permit to discharge process water. *Mines Act* permits require settling ponds for all operations.
Disturbance	A natural or human-caused change to landscape condition, such as change in forest structure and species. See also *Natural disturbance regime.* Is also used to describe a behavioral change in fish or wildlife, in direct or indirect response to human activities, and includes stress-related behaviors including increased movement or fleeing, reduced foraging, increased vigilance or altered habitat use.
Dry Floodplain	Floodplain that is higher than wet floodplains, flooded infrequently (approximately once in 6–30 years), and does not exhibit wetland vegetation types (unless flooded from the valley side). Within the biogeoclimatic ecosystem classification, "high fluvial bench" corresponds to dry floodplain (definition taken from the *Hydroriparian Planning Guide* (2004)[26])
Ecological integrity	The ability of an ecosystem to function healthily and continue to provide natural goods and services and maintain biodiversity. Includes the natural diversity of species and biological communities, ecosystem processes and functions, and their ability to absorb disturbance (resistance) and to recover from disturbance (resilience).
Ecosystem based management	An adaptive approach to managing human activities that seeks to ensure the co-existence of healthy, fully functioning ecosystems and human communities and cultures. The intent is to maintain those spatial and temporal characteristics of ecosystems such that component species and ecological processes can be sustained and human well-being supported and improved
Feasible access	Access that is feasible from an engineering, environmental, economic and social viewpoint. Engineering: can be built with today's knowledge and materials. Environmental: environmental concerns can be reasonably mitigated or regulated. Economic: the construction is within the economic availability of the proponent to complete. Social: society as a whole can benefit or not be impeded by the development.
Fine filter approach	An approach to maintaining biodiversity that is directed toward particular habitats or individual species that might not be adequately managed using the *coarse filter* approach to management. These habitats may be critical in some way and the species or their habitats of conservation concern.
Functional Integrity	See *Ecological integrity*
Goal	Broad statements that describe a general, desirable future end-state with respect to a particular subject (environmental, social or economic).
Ground disturbance	Any work or activity that results in a disturbance of the earth, including excavating, digging, drilling, quarrying and clearing.
Hard rock mining	Mining activity to extract hard minerals, which include materials containing metals (e.g., gold, silver, copper, zinc) or gems such as diamonds.
Heritage values	Values associated with an object or site having historical or cultural significance to British Columbia, a community or an aboriginal people. Heritage values derive from many sources, including historical associations, architectural or physical features or significance, environmental importance, associations with the community, and continuity of use.

[26] http://www.citbc.org/c-hpg-final-30Mar04.pdf

High value habitat	Areas having environmental attributes particularly suited to the habitat requirements of individual wildlife species. High value habitat differs from critical wildlife habitat in that high value habitat is not necessarily essential for the health and/or long-term persistence of a species.
Indicators	Measures of success in achieving goals and objectives for a specific resource value across the plan area and/or specific to a resource management zone; based on the best available information and subject to change as knowledge improves
Industrial Access	Linear infrastructure associated with industrial developments, including mineral exploration access (i.e. excavated trails, exploration trails, and temporary access roads), roads, railways, pipeline corridors and transmission lines.
Industrial Access Route	A corridor sufficient to accommodate Industrial Access and the requirement for future maintenance, upgrading, minor realignment and other linear infrastructure of approximately 500 m either side of the road centre line.
Invasive species	A species of plant or animal that has been introduced to an environment where it is not native, and that has since become a nuisance through rapid spread and increase in numbers, often to the detriment of native species.
Karst	Landforms and processes associated with dissolution of soluble rocks such as limestone, marble, dolomite or gypsum; characterized by underground drainage, caves and sinkholes.
Khustìyxh	Tlingit khustìyxh, or way of life, means the preservation, promotion, and protection of Tlingit identity and culture prescribed by ancestral rules and norms. It includes Tlingit rules and responsibilities for stewardship of the Territory, and for the protection and promotion of the continuity of Tlingit culture, language, knowledge, and oral history, through the exercise of Tlingit rights throughout the Territory through traditional use of the lands, waters, animals, fish and plants, and other resources for cultural, spiritual, social and economic purposes.
Land Use Zones	Mapped sub-areas that contain values distinct from the general landbase and, within which consistent resource management direction is to be applied.
Linear Developments	See *Industrial access.*
Major hydroelectric development or wind power generation	Any hydroelectric or wind power generation project large enough to require assessment under section 10 of the provincial Reviewable Projects Regulation, or that will connect to the provincial grid. Specifically, this includes any new project or modification of an existing project with a rated nameplate capacity of $\geq$ 50MW, a new electric transmission line of $\geq$ 40 km in length on a new right of way, and/or modification of an existing facility with a voltage of $\geq$ 500kV.
Major project / major resource development project	Any project large enough to require assessment under the provincial *Environmental Assessment Act* (2002*)* and associated Reviewable Projects Regulation or, for mineral developments, under review by the Mine Development Review Committee.
Mitigation	Resource management practices to avoid, minimize, rectify, reduce or compensate for the impact of one resource use on another.
Monitoring	A process of periodic or continuous auditing, observation, or data collection of a land use plan. Three types of monitoring are associated with ecosystem-based management: *implementation monitoring* ensures that the management procedures are being followed; *effectiveness monitoring* assesses whether management is attaining the objectives for each indicator; and *validation monitoring* tests the assumptions associated with the risk assessment models.
Natural disturbance regime	The historic patterns (frequency, extent and character) of fire, insects, wind, landslides, floods and other natural processes in an area.
Non-commercial recreation	Recreational activities that are undertaken by individuals or groups in a voluntary capacity and do not involve the payment of fees for services. For the most part, public recreation is unorganized and unguided.
Objective	A concise, measurable statement of a desirable future condition for a resource or resource use that is attainable through management action.
Official Community Plan	A land use plan that is developed and approved for a municipality or regional district according to the requirements of the *Local Government Act.*

Operational plan	A resource management plan that contains detail on the logistics for resource use / development in a particular area. Methods, schedules and responsibilities for accessing, harvesting, renewing and protecting resources are set out to enable site-specific operations to proceed. Operational plans are typically developed by resource tenure holders and are approved by the agency with regulatory responsibility for the resource sector.
Orphaned mine site	A historic mine that is dormant and has not been reclaimed. There is no valid *Mines Act* permit for the mine site and the mineral claims have reverted to the provincial government.
Permanent infrastructure	Infrastructure that is intended to remain in place for an indefinite period; not temporary. Infrastructure that may remain beyond the completion of a development project.
Persistent alpine	The portions of current alpine areas (defined as the CMA and BAFA biogeoclimatic zones in the Atlin Taku) that are projected to continue to have a sufficiently cold, windy and snowy climate that alpine vegetation and soils will persist 50 years or so into the future (based on projected Mean Annual Temperature increase of 3 degrees Celsius, and in consideration of local climate and topography. Persistent alpine will be in the higher elevation portions of the current alpine areas (refer to Map 17).
Placer mining	Washing or dredging to extract minerals from a placer, which is an alluvial deposit that contains particles of some valuable mineral. Placer mining is typically used to recover gold from alluvial deposits, taking advantage of the high density of gold, which allows it to sink rapidly from moving water.
Prospecting	Physical search for minerals, fossils, precious metals or mineral specimens
Protected Area Strategy	British Columbia's strategy to develop and expand the provincial system of protected areas. The goals of the strategy are to protect, viable, representative examples of natural diversity in the province, and special, natural, recreational and cultural heritage features.
Protected area	A designation for areas of land and water set aside to protect natural heritage, cultural heritage or recreational values (may include national park, provincial park or ecological reserve designation). They are generally established through strategic planning at regional or sub regional scales.
Rare and Sensitive Ecosystems	Regionally or provincially uncommon and/or ecologically fragile ecosystems that require special consideration when determining levels of risk. Within the Atlin-Taku planning area, these have been identified through field-based assessments or other credible information.
Reclamation	Any process or measures to promote soil conservation and the eventual re-establishment of land productivity on a disturbed site. Reclaimed land uses may be quite different from the original land use(s). With respect to mineral exploration and development, reclamation refers to activities undertaken after mineral exploration has ceased that are intended to return the land to an appropriate post-exploration condition—typically one that replicates pre-exploration conditions.
Recreation	See *Commercial recreation, Non-commercial recreation.*
Remediation	Actions to eliminate, limit, correct, counteract, mitigate or remove any contaminant from the environment or the adverse effects of any contaminant on the environment or human health. Remediation may include: site investigation, analysis, and interpretation; evaluation of methods of remediation; preparation and implementation of a remediation plan; and monitoring, verification and confirmation of whether the remediation efforts comply with the remediation plan, applicable standards and requirements imposed by a Director under the *Environmental Management Act*.
Restoration	The re-creation of the original landforms, land productivity and land uses on a disturbed site.
Resilience	Adaptive capacity to absorb disturbance; the amount of disturbance that can be sustained by a system before a change in its control or structure occurs.
Resource management zone	A zone of the planning area that is distinct from other zones with respect to biophysical characteristics, resource issues or resource management direction.

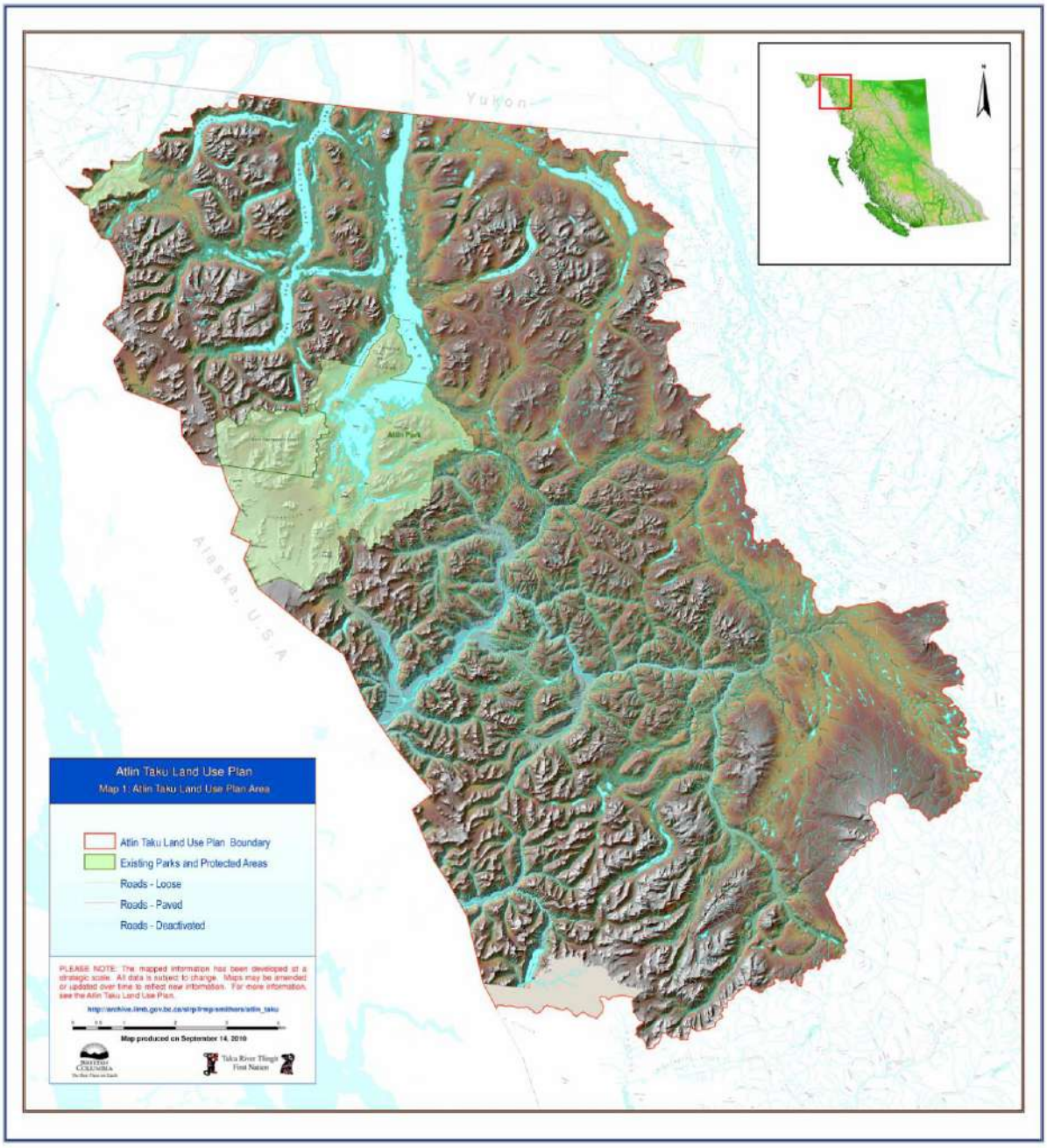
Resource values	Categories of natural resources that are valued in human terms. Resource values may be tangible or intangible and are normally represented in natural resource inventories (e.g., recreation, fish, wildlife, cultural heritage, mineral, water or timber resource values).
Riparian area	The interface between land and water at the margins of streams, lakes, ponds and wetlands, including the area dominated by continuous high moisture content and the adjacent upland vegetation that exerts an influence on it. Riparian areas typically exemplify a rich and diverse vegetative mosaic reflecting the influence of available surface and sub-surface moisture.
Risk	The possibility that attributes of ecological integrity or human well-being will be changed or lost. In the context of land management, it is interpreted as a combination of the probability of an undesired outcome (loss) and the potential magnitude of that outcome as a result of a particular management action.
Selection harvesting methods	A silvicultural system that removes mature timber either as single scattered individuals or in small groups at relatively short intervals, repeated indefinitely, where the continual establishment of regeneration is encouraged and an uneven-aged stand is maintained.
Sensitive Fish Habitat	Those waters and substrate necessary to fish for spawning, breeding, feeding, over-wintering or growth to maturity; “spawning, breeding, feeding, or growth to maturity” - covers the full life cycle of a species.
Species at risk	As defined by the *Species at Risk Act.* Species at risk means an extirpated, endangered or threatened species or a species of special concern.
Species of regional concern	Species that have particularly high cultural value or are otherwise of concern to the TRTFN and which may be sensitive to disturbance during part or all their life cycle. The list of species of regional concern in this land use plan is in addition to the list of focal species and species at risk.
Spiritual uses	Uses of the land and its resources for cultural and spiritual purposes.
Stakeholders	The range of groups and individuals who have a formal or informal stake in resource planning and management decisions, including: tenure holders, local resource user and community groups, non-governmental organizations, research institutions.
Sustainable management	An approach to management that seeks to find a balance between meeting the needs of our current generation while conserving natural resources and protecting the environment for the benefit of future generations. See also ecosystem-based management.
Targets	Specific desired results for each of the resource management indicators that have been identified.
Temporary roads	Roads that are only intended to remain in place until a development project is completed or for a finite period of time. With respect to mineral exploration and development, temporary roads are permanently reclaimed when the road is no longer required or has not been used for more than 3 years.
Timber supply block (TSB)	A division of a timber supply area, which is an area of the province created by the Ministry of Forests for the purpose of analysis, planning, and management of timber resources.
Tourism	Travel away from a usual place of residence for predominantly recreational or leisure purposes or the provision of services to support this leisure travel.
Traditional Use Site	A geographically defined site that has been traditionally used by one or more groups of people for some type of activity. These sites will often lack the physical evidence of human-made artifacts or structures; nonetheless, they maintain cultural significance to a living community of people. Traditional use sites are usually documented with the assistance of oral, historical or written archival sources. Examples include: sacred sites, ritual bathing pools, resource gathering sites such as berry-gathering grounds and culturally modified tress, and the site of a legendary or past event of cultural significance.
Viewscape	An area that may be viewed and mapped from one or more viewpoints and which has inherent scenic qualities and/or aesthetic values, as determined by those who view it.
Visual Quality	The quality of a viewscape based on the physical characteristics and social concern for an area.

Watershed	The area drained by a river or stream and its tributaries. The size of the watershed will depend on the size of the stream or river considered. From a practical planning standpoint, a watershed generally ranges in size from 500 to 50,000 hectares. Equivalent to drainage basin.
Wet Floodplain	Area adjacent to a stream channel that is flooded more frequently than once in five years and commonly exhibits wetland vegetation. Wet floodplains include old, filled channels and low floodplain surfaces. They form part or all of the active floodplain. Within the biogeoclimatic ecosystem classification, wet floodplains correspond to “low and middle fluvial benches.”

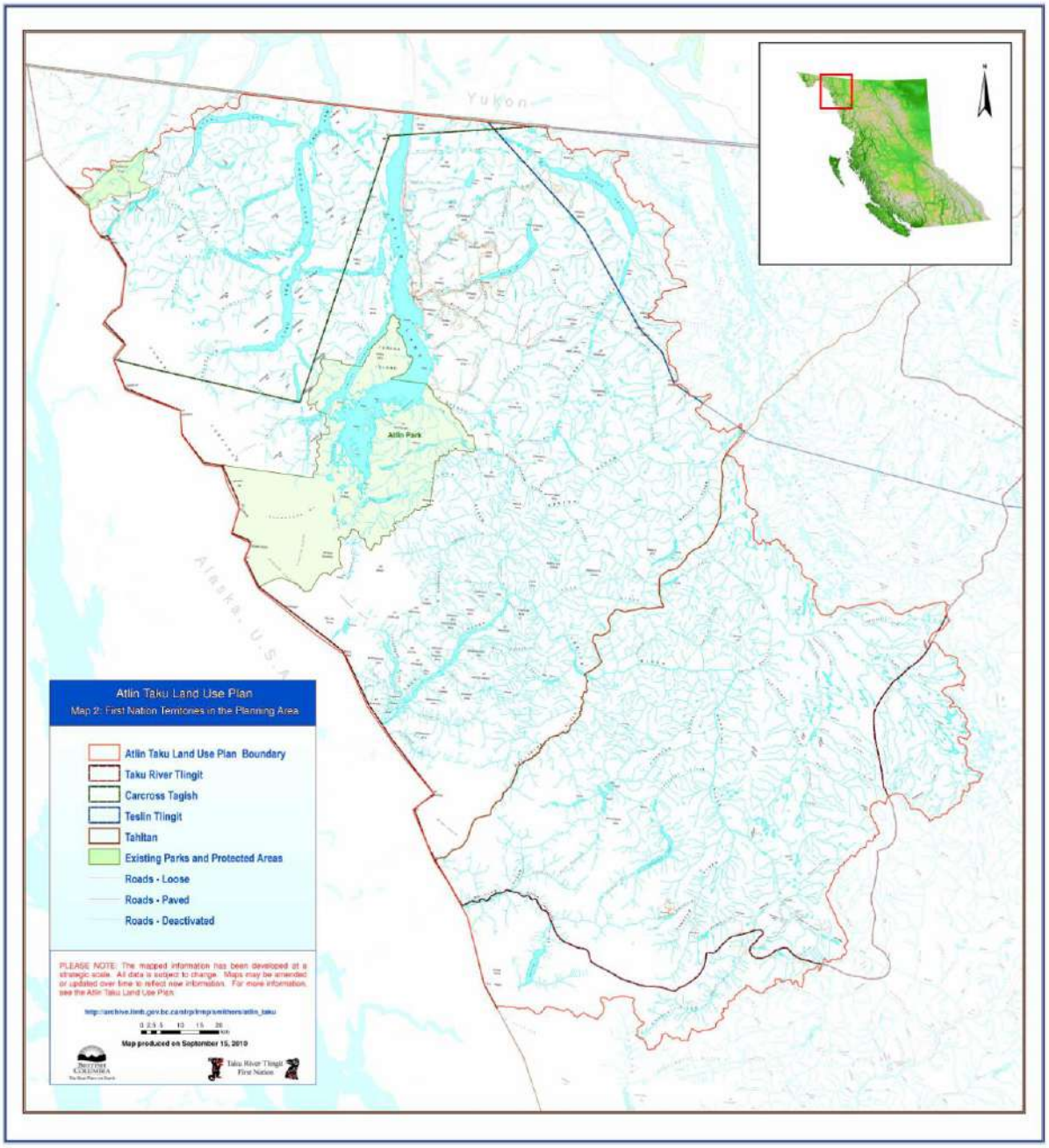
APPENDIX J: ATLIN TAKU LAND USE PLAN MAPS

Map Number	Title
Map 1	Atlin Taku Land Use Plan Area
Map 2	First Nation Territories in the Plan Area
Map 3	Access Regions in the Plan Area
Map 4	Road Inventory in Atlin East
Map 5.1	Tulsequah Valley / Tàłsu Xhê Héeni Strategic Access Area
Map 5.2	Hoboe Willison Creeks Strategic Access Area
Map 6	Major Drainage Basins in the Plan Area
Map 7	Salmon Ecosystem Management Areas and Critical Aquatic Habitat
Map 8	Rare and Sensitive Ecosystems
Map 9	High Value Goat /Tawéi Winter and Natal Habitat
Map 10	High Value Sheep / Jánwu Winter and Natal Habitat
Map 11.1	High Value Caribou / Watsíx Winter Habitat
Map 11.2	High Value Caribou / Watsíx Natal Habitat
Map 12	High Value Moose / Dzísk'w Winter Habitat
Map 13	High Value Spring and Fall Grizzly Bear / Xóots Habitat
Map 14	High Value Cultural Sites and Trails
Map 15	Commercial Forest Harvest Zone
Map 16	High Value Recreational Sites and Trails
Map 17	Projected Persistent Alpine
Map 18	Protected Areas and Area Specific Resource Management Zones

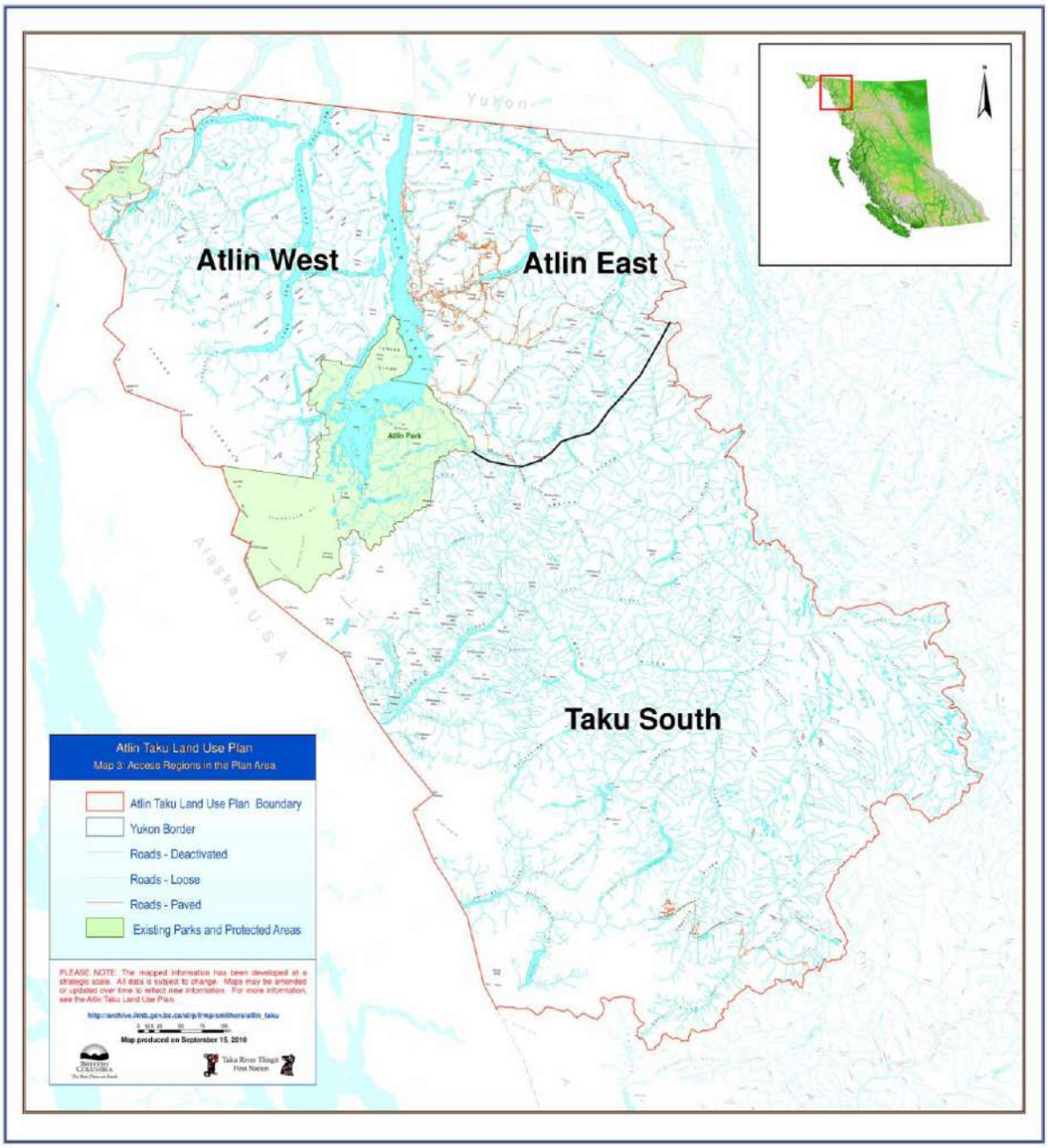
Map 1: Atlin Taku Land Use Plan Area



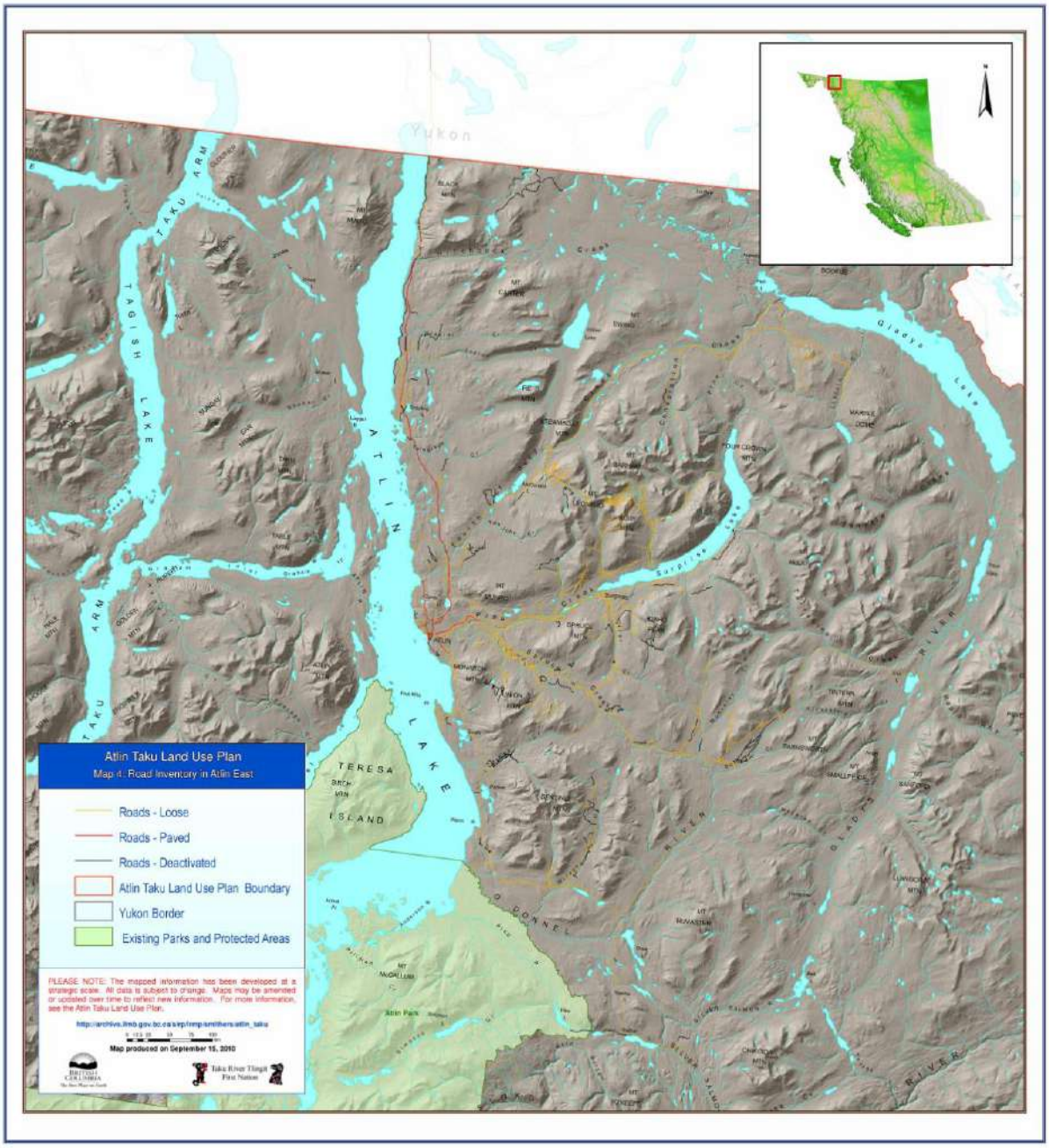
Map 2: First Nation Territories in the Plan Area



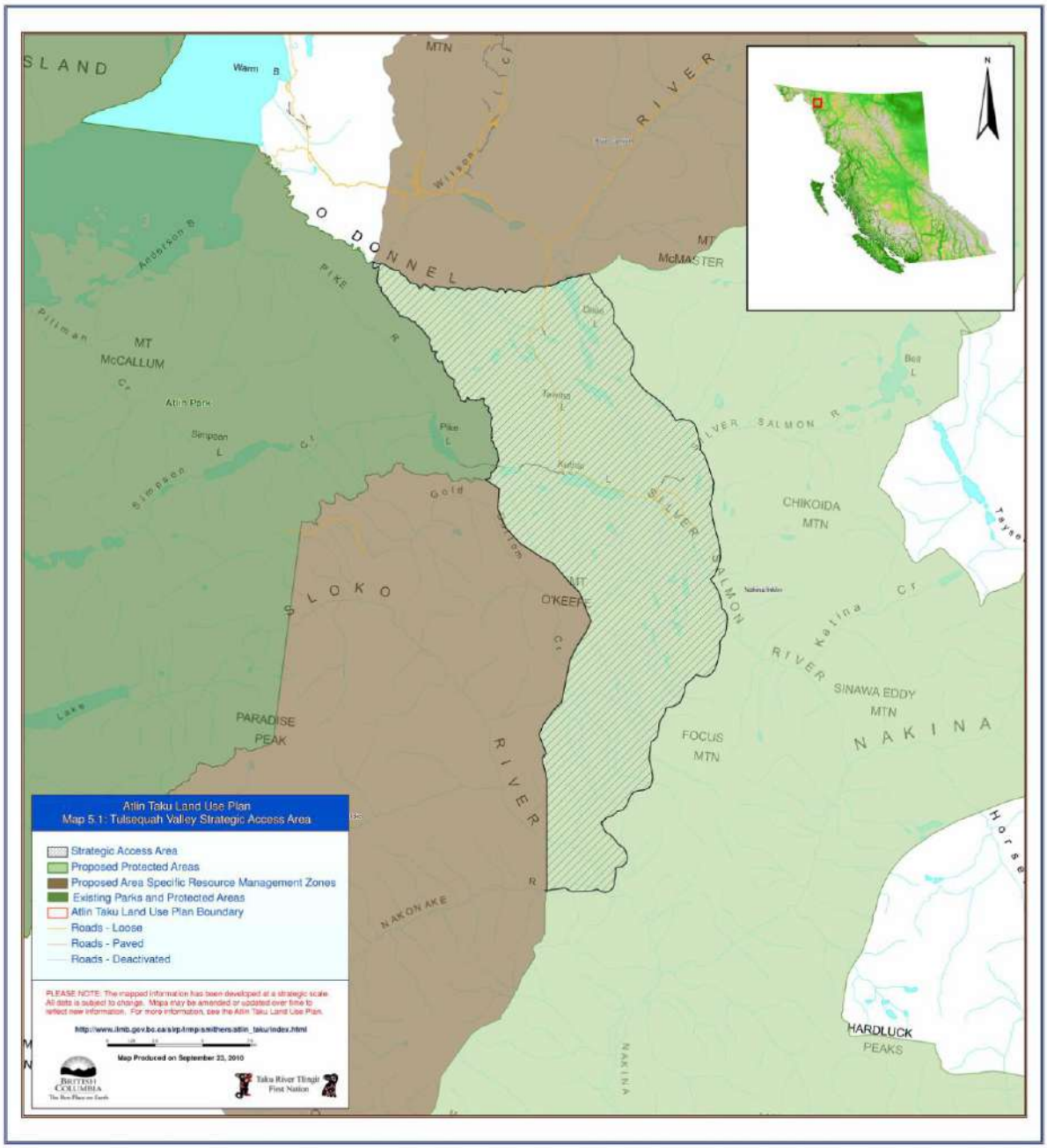
Map 3: Access Regions in the Plan Area



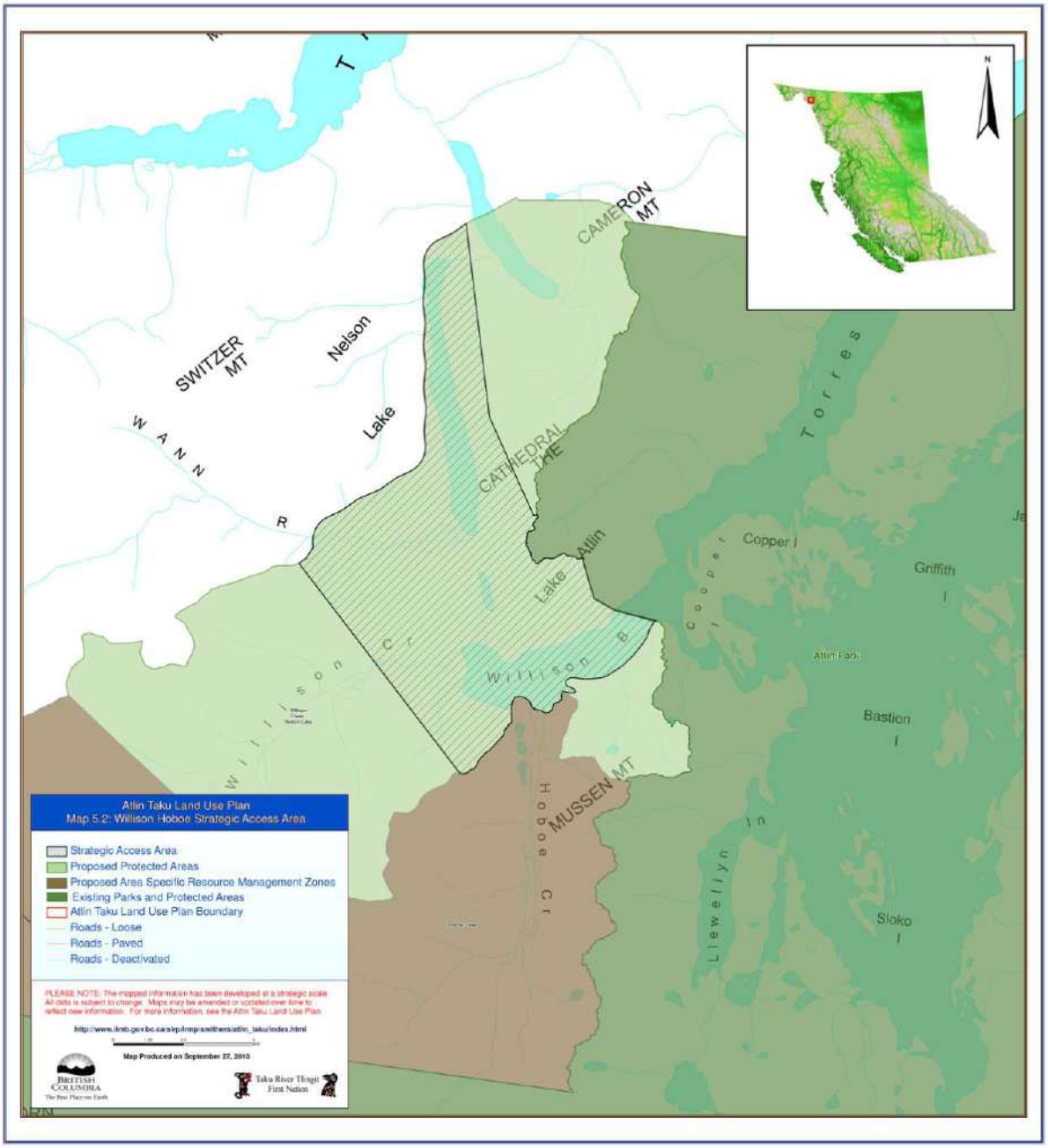
Map 4: Road Inventory in Atlin East



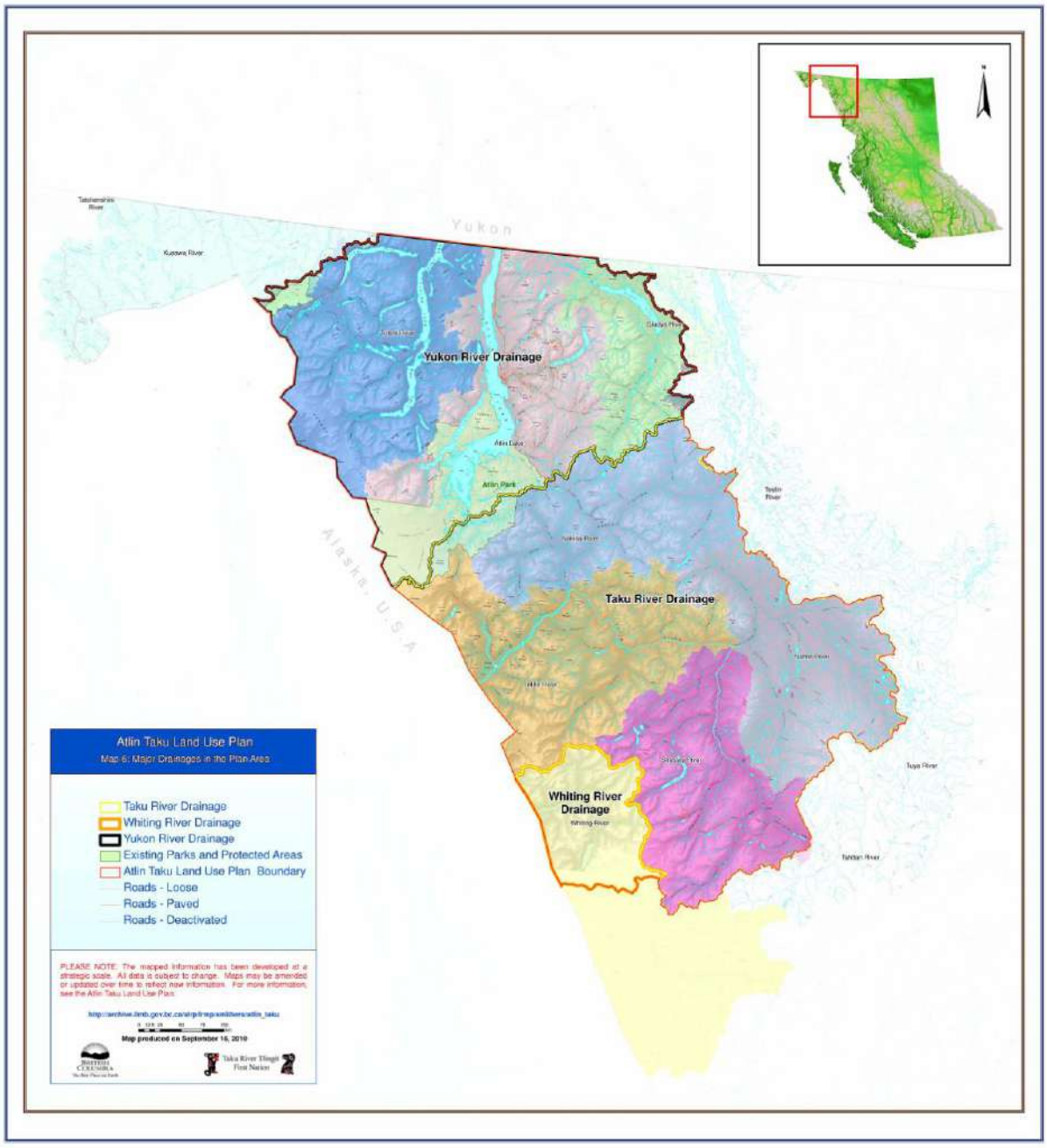
Map 5.1: Tulsequah Valley / Tàłsu Xhê Héeni Strategic Access Area



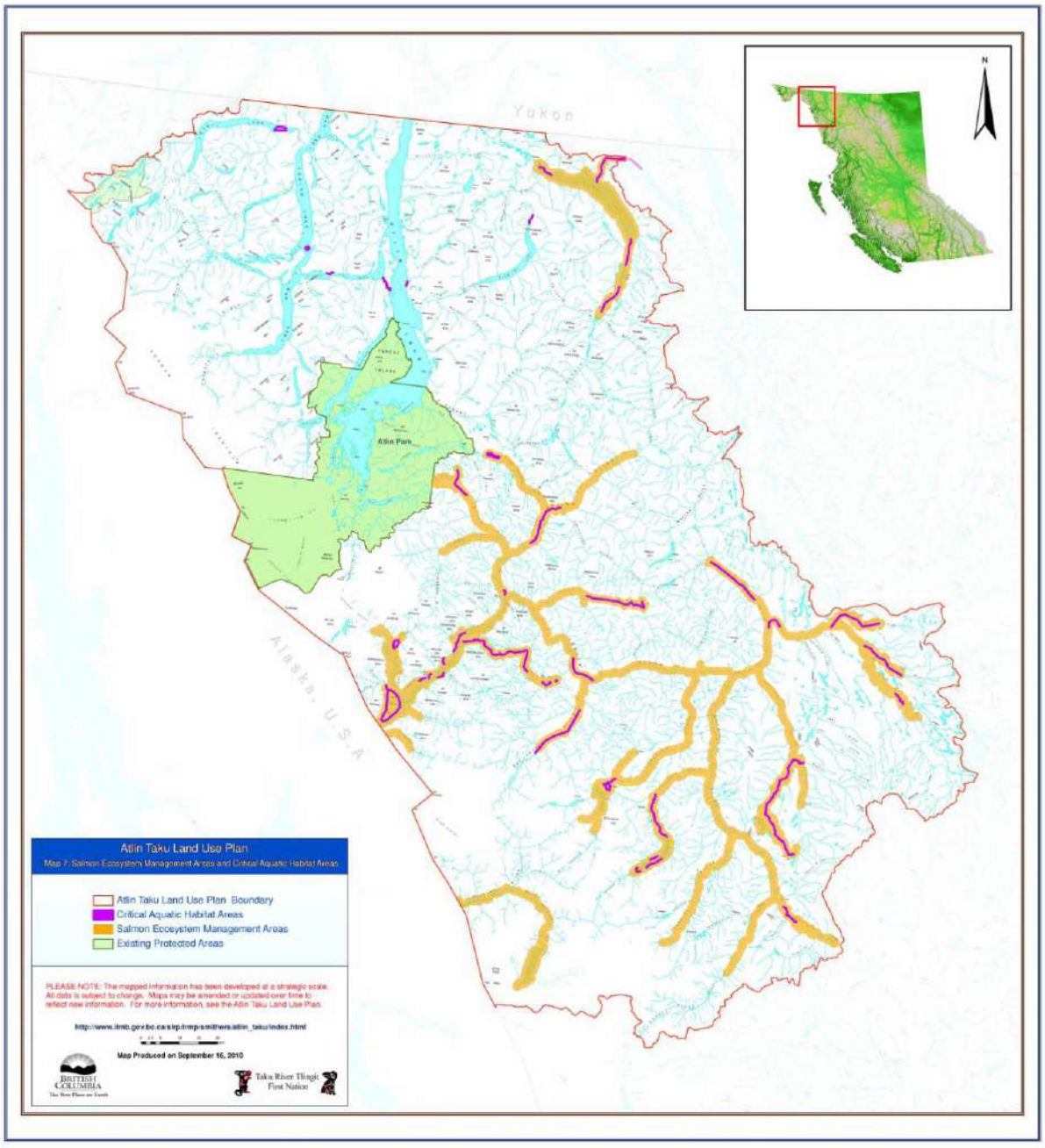
Map 5.2: Hoboe Willison Creek Strategic Access Area



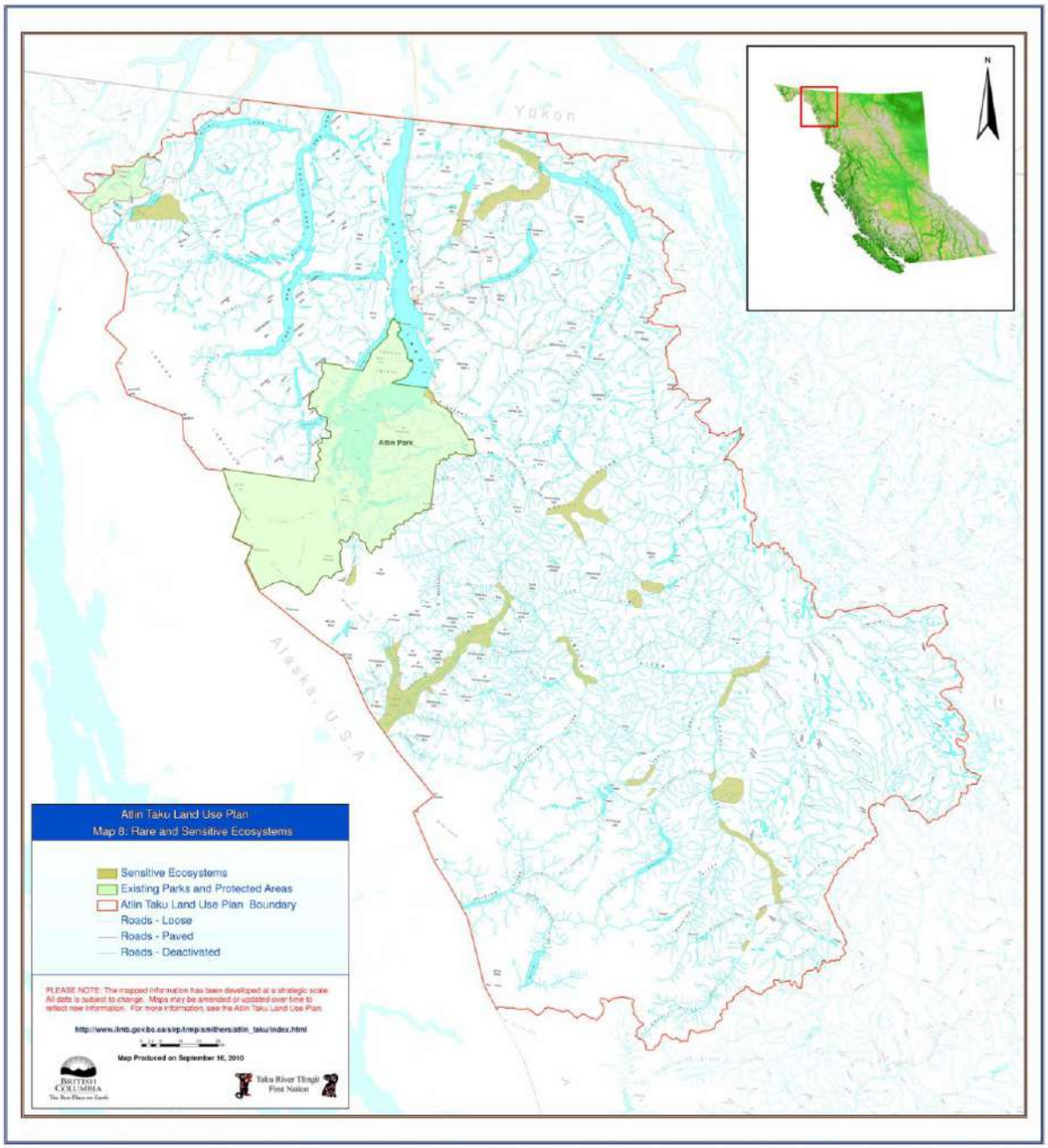
Map 6: Major Drainage Basins in the Plan Area



Map 7: Salmon Ecosystem Management Areas and Critical Aquatic Habitat

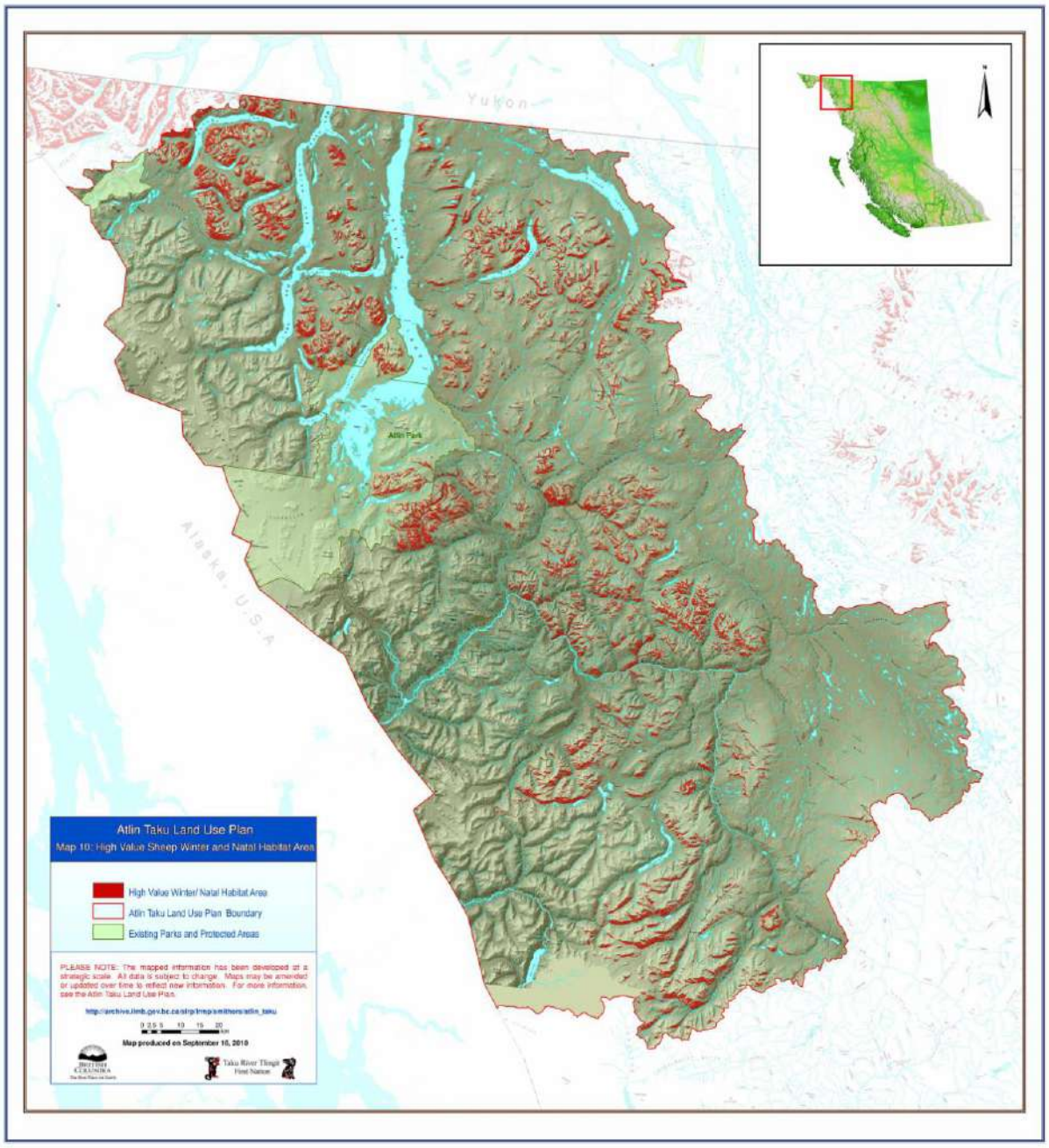


Map 8: Rare and Sensitive Ecosystems

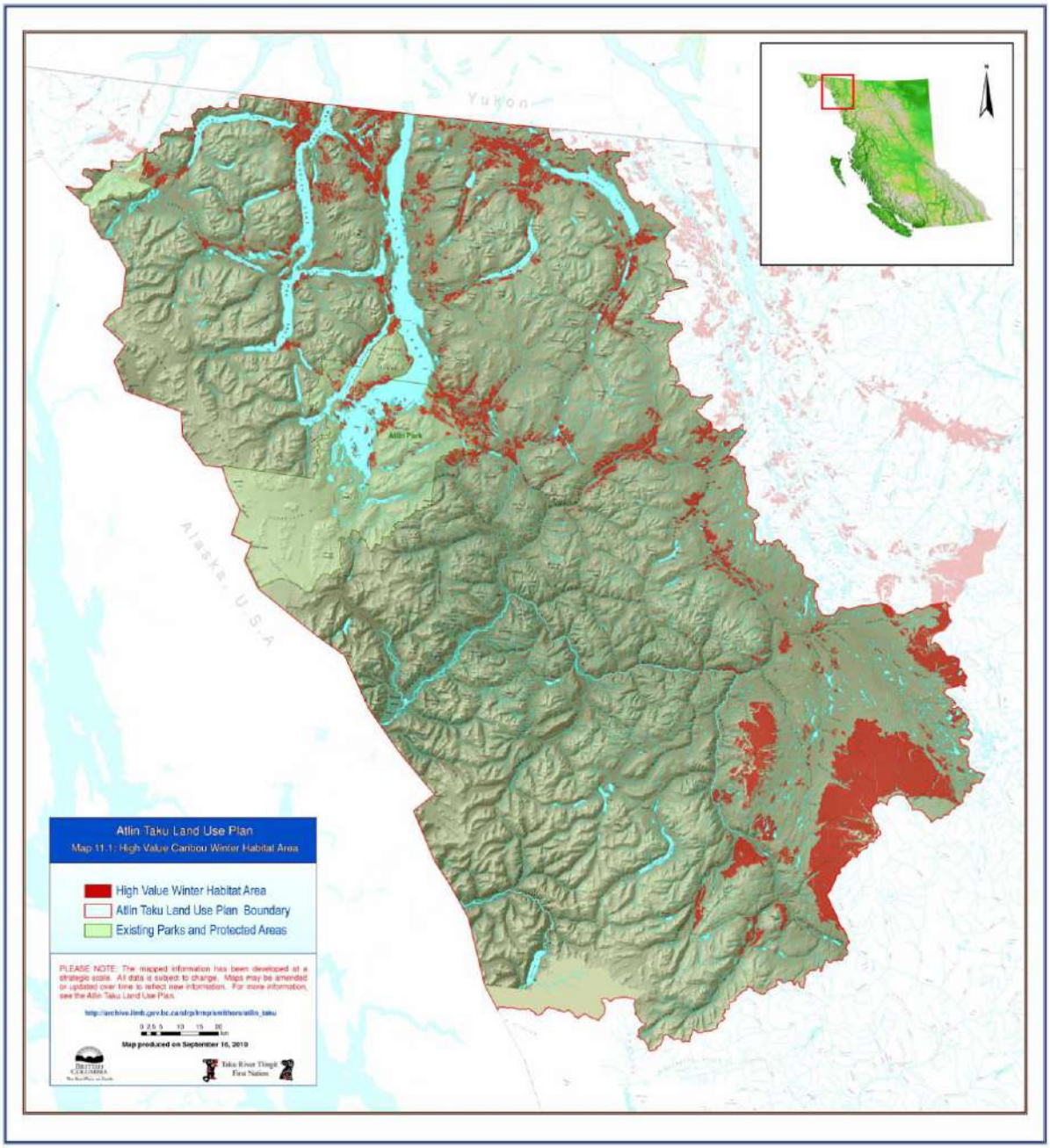


Map 9: High Value Goat / Tawéi Winter and Natal Habitat

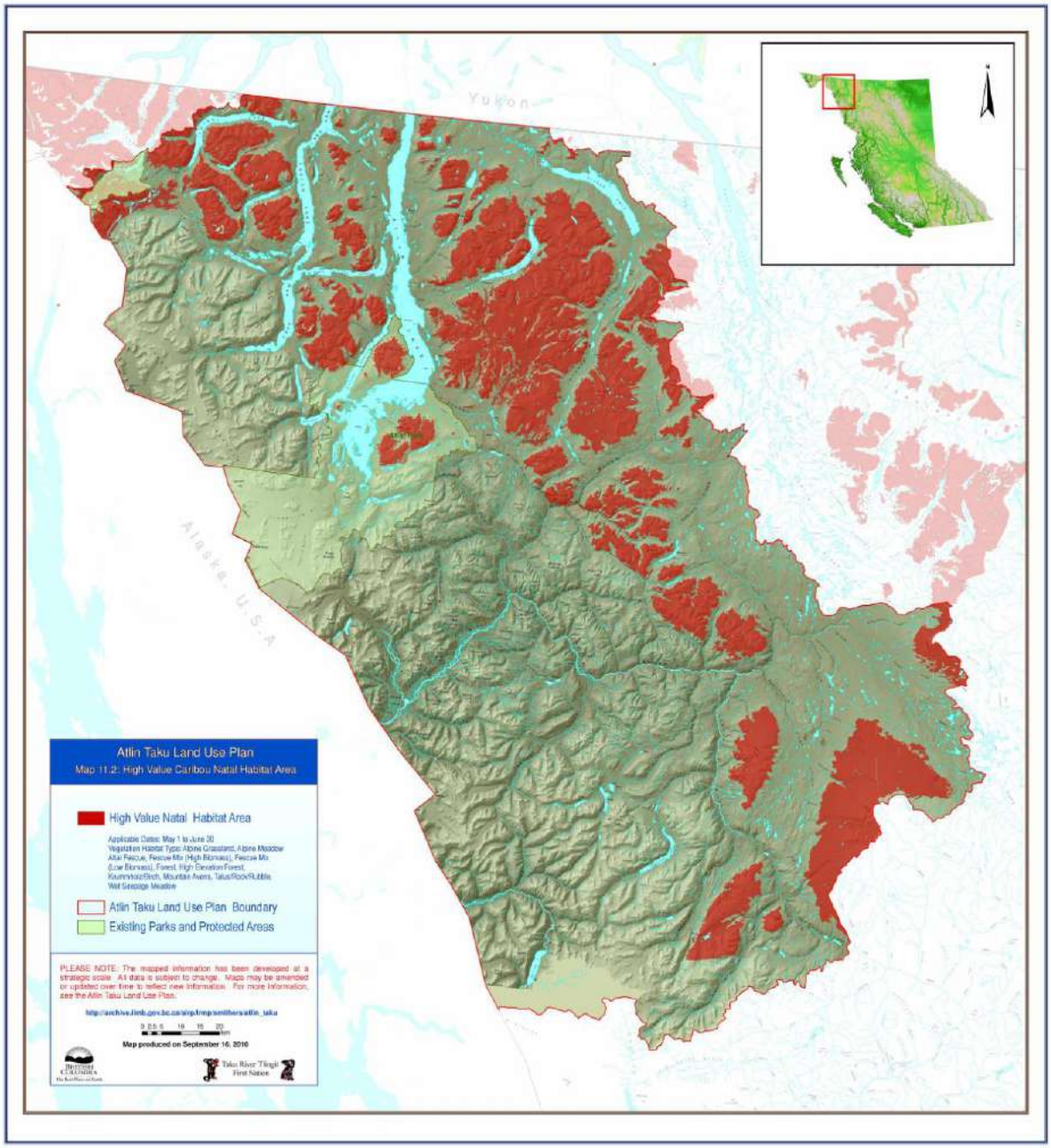
Map 10: High Value Sheep / Jánwu Winter and Natal Habitat



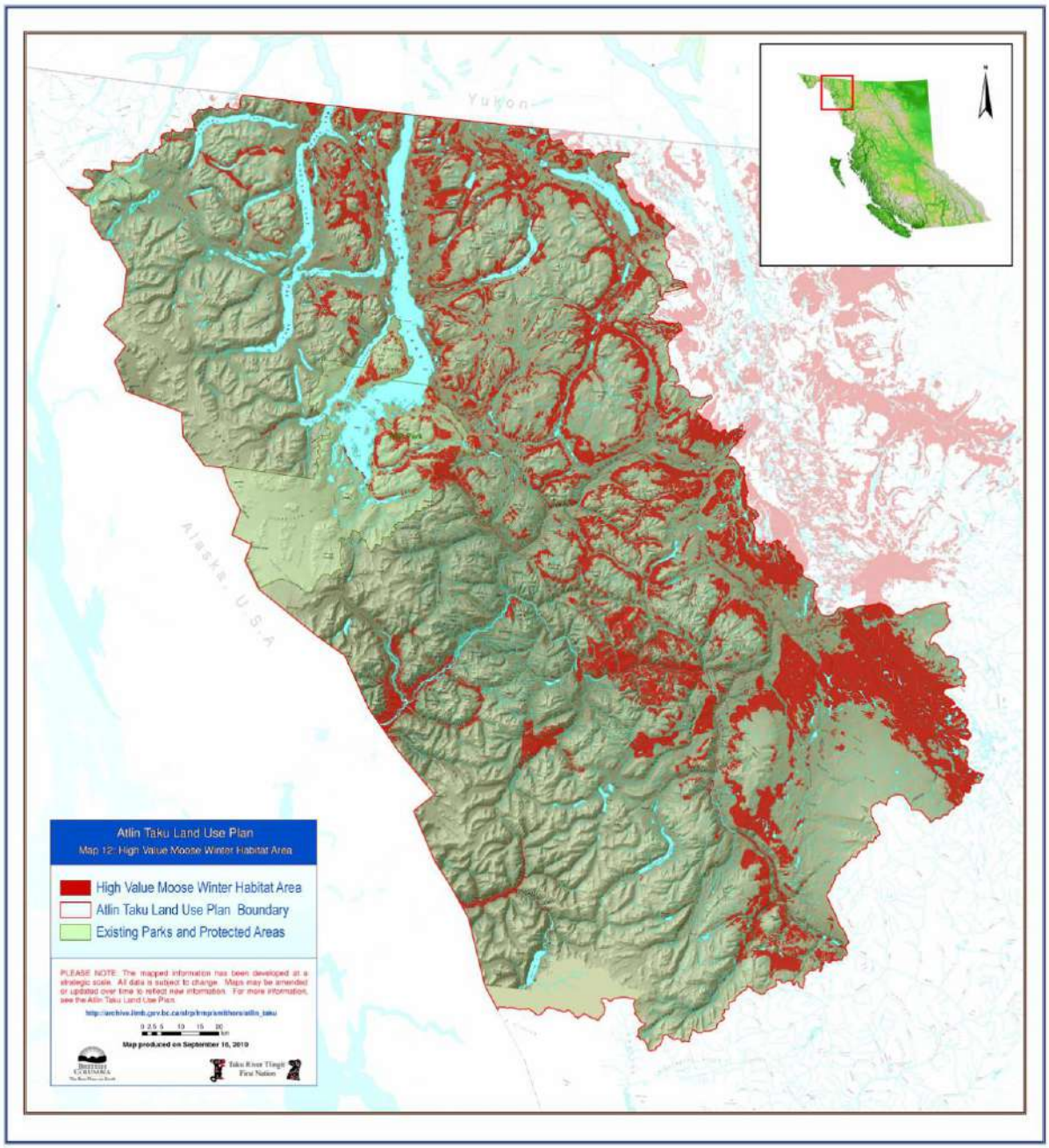
Map 11.1: High Value Caribou / Watsíx Winter Habitat



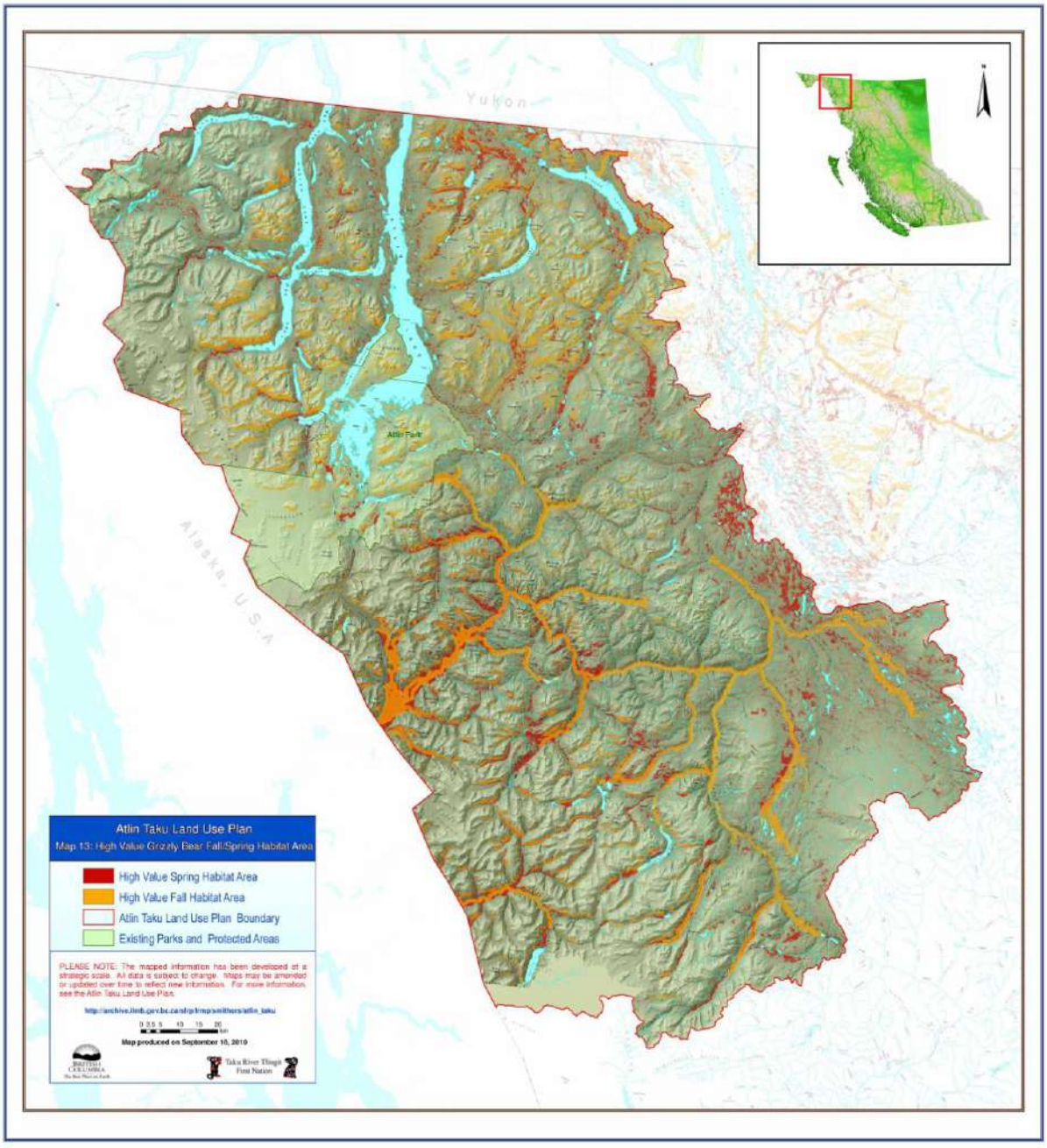
Map 11.2: High Value Caribou / Watsíx Natal Habitat



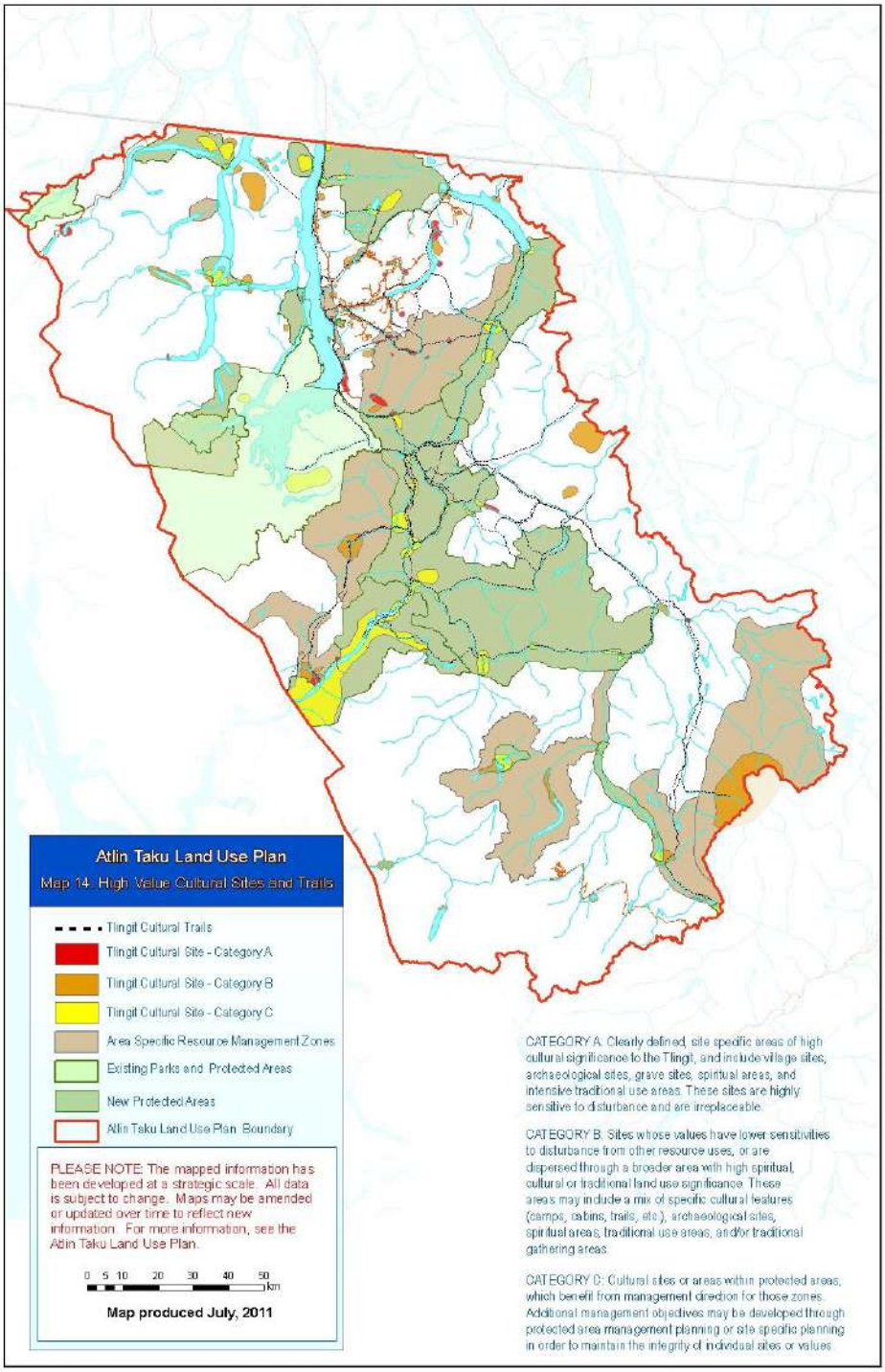
Map 12: High Value Moose / Dzísk'w Winter Habitat



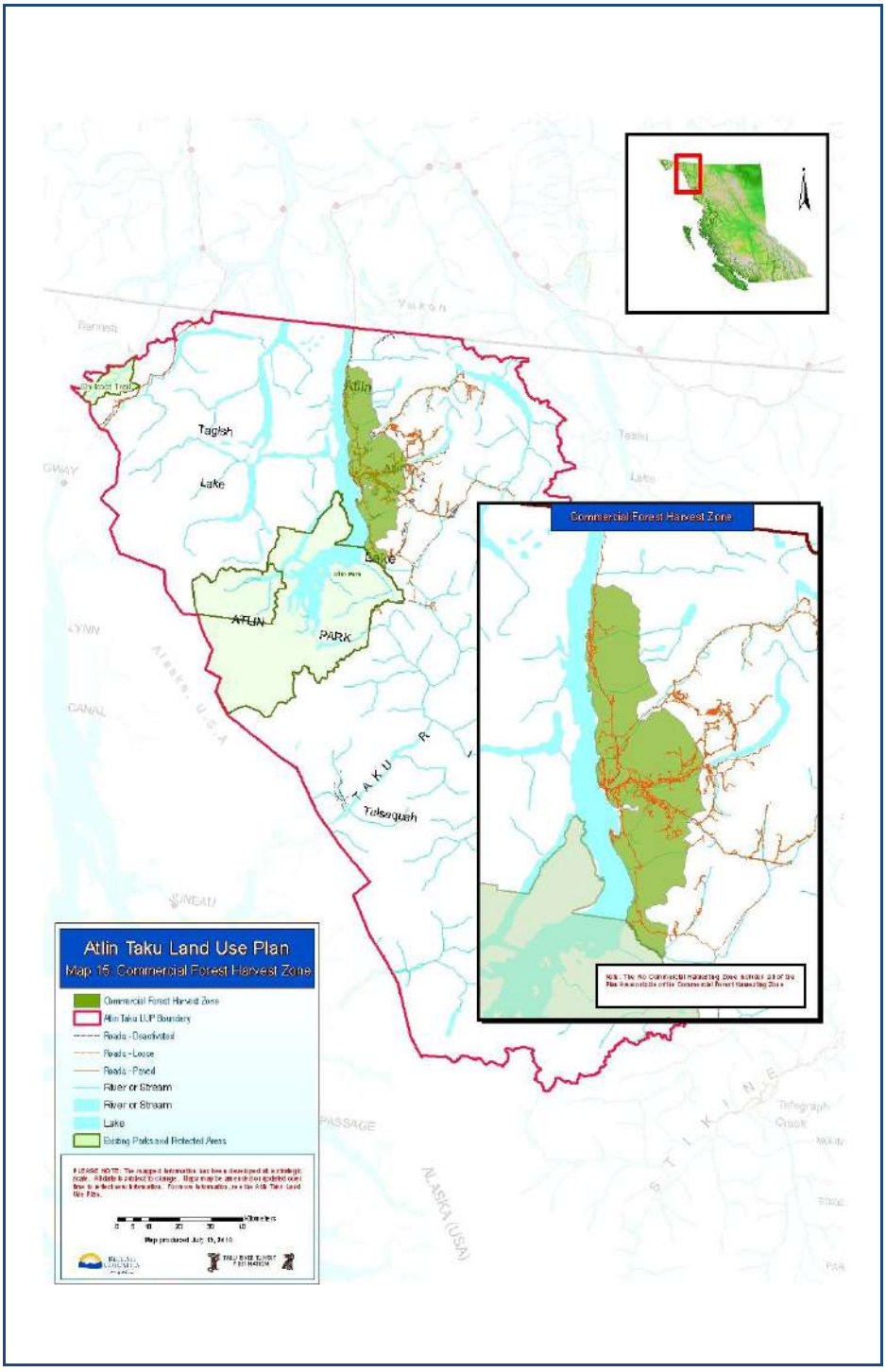
Map 13: High Value Spring and Fall Grizzly Bear / Xóots Habitat



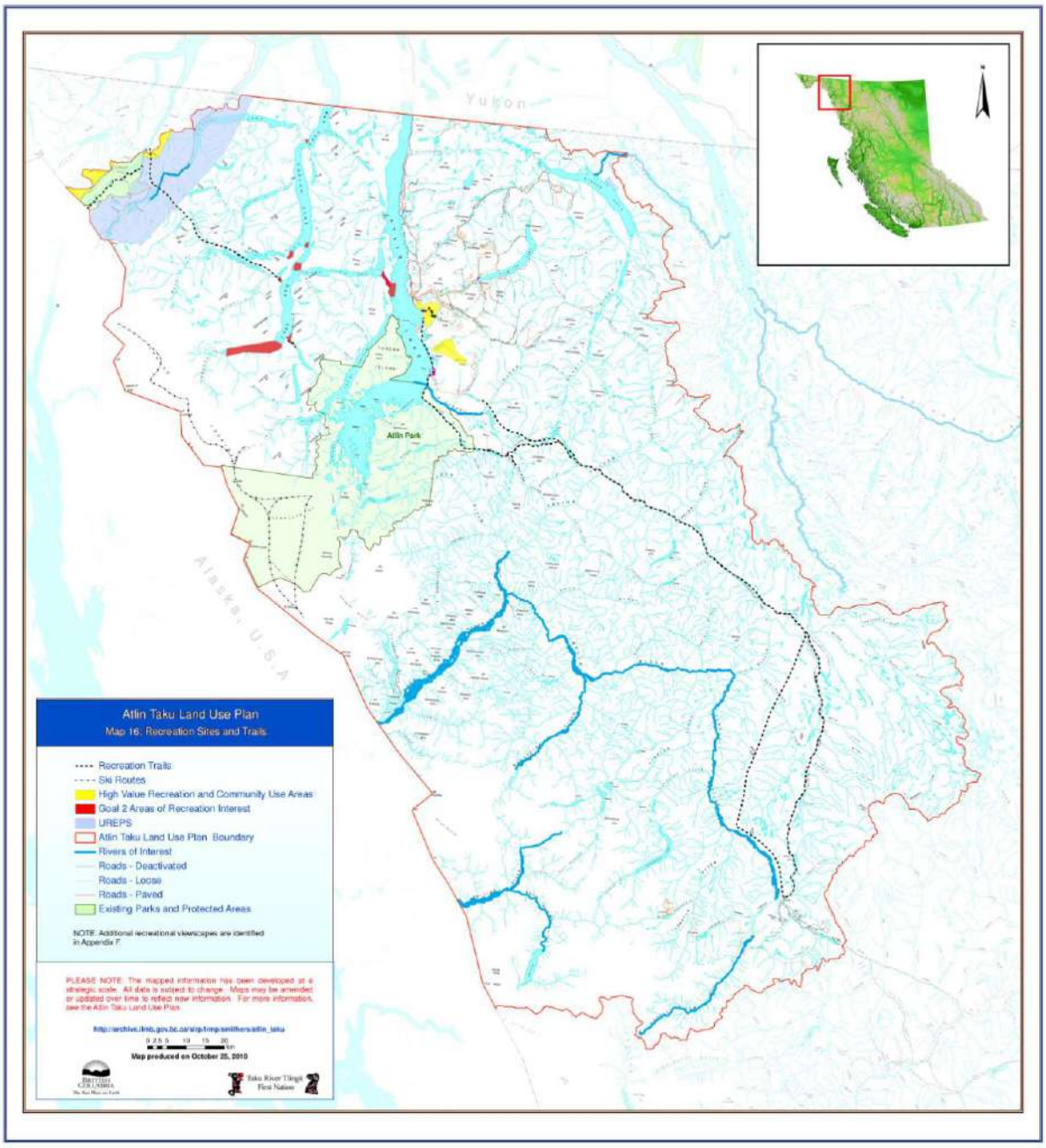
Map 14: High Value Cultural Site and Trails



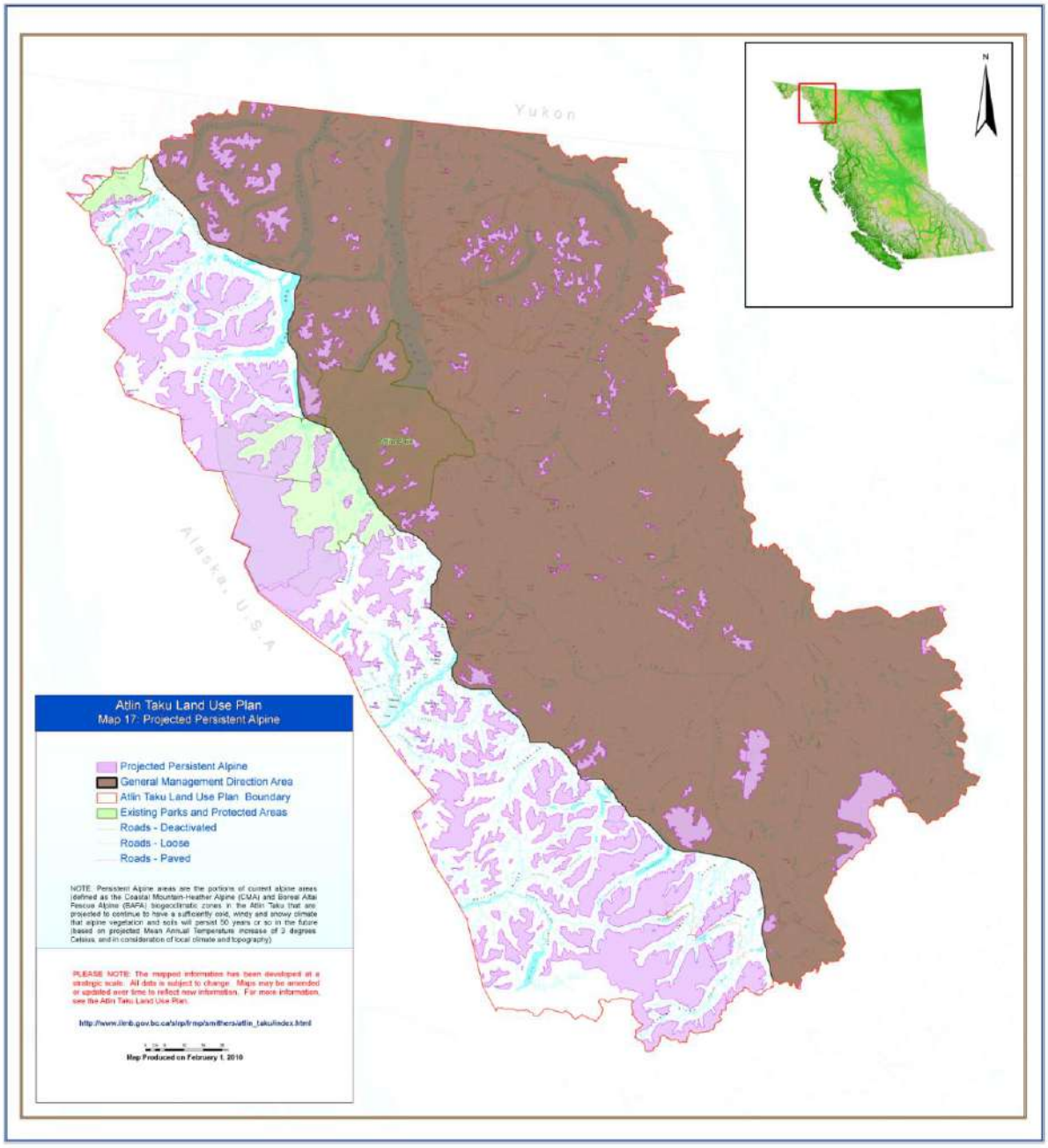
Map 15: Commercial Forest Harvest Zone



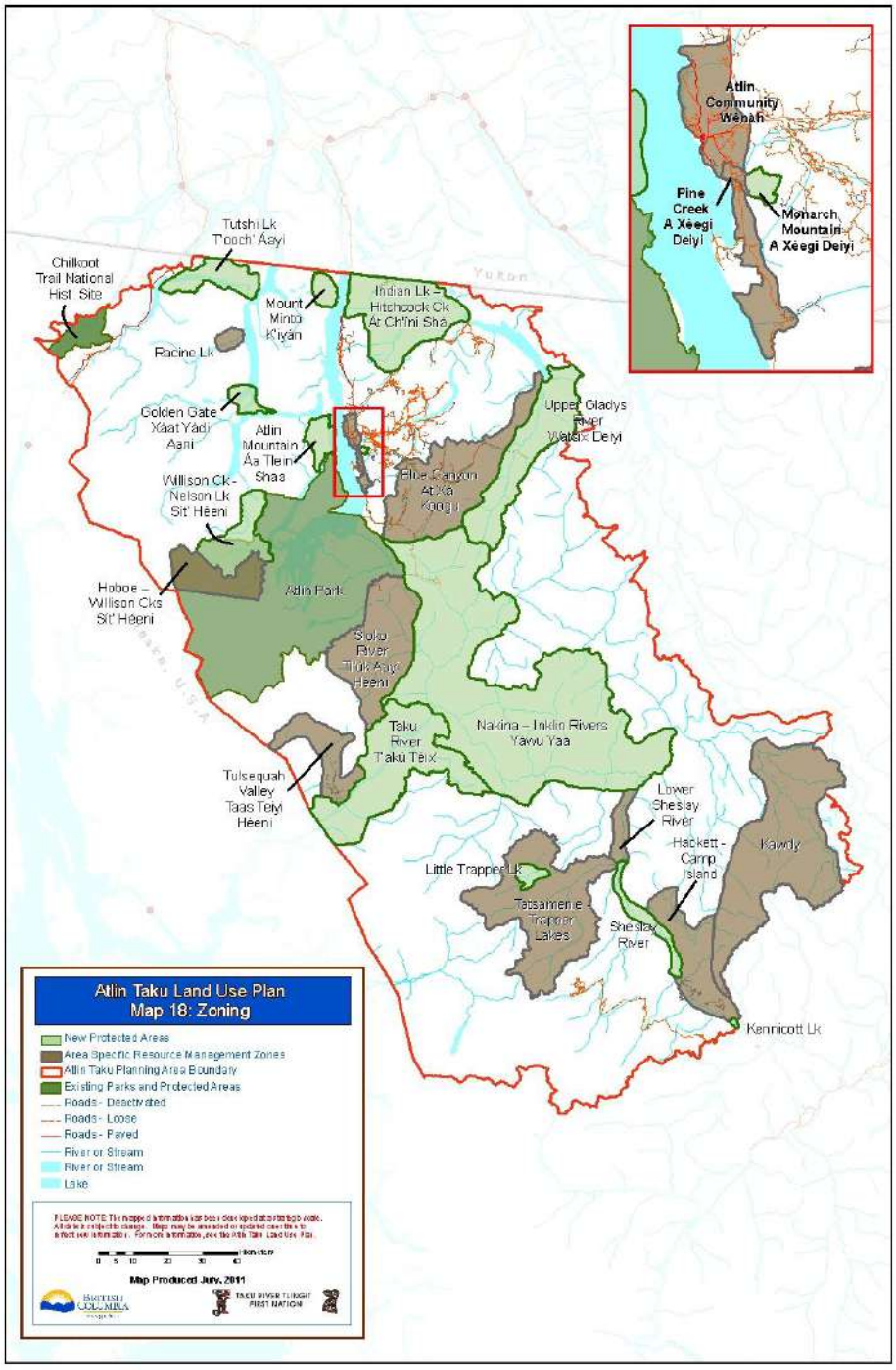
Map 16: High Value Recreational Site and Trails



Map 17: Projected Persistent Alpine



Map 18: Protected Areas and Area Specific Resource Management Zones



Wóoshtin wudidaa
Atlin Taku Land Use Plan