Appendix 3. Table 2. Known Occurrences of Plant Species at Risk within Stikine Country Protected Areas. (Pojar 1976, 2000, CDC plant lists).

Scientific name	Common name	Provincial list	Mount Edziza Provincial Park, proposed Protected Area and RMZ[1]	Spatsizi Plateau Wilderness Provincial Park	Gladys Lake Ecological Reserve	Tatlatui Provincial Park	Habitat	BGC[2] Zone
Douglasia gormanii[3]	Gorman's douglasia	Blue		+	+		Rocky slopes in the alpine zone	AT
Draba cinerea	Gray-leaved draba	Blue			+		Dry meadows and cliffs in the montane to alpine zones	AT BWBS SWB
Draba corymbosa	Baffin's bay draba	Blue	+				Mesic to dry meadows in the alpine zone	AT
Draba fladnizensis	Austrian whitlow-grass	Blue	+	+	+		Mesic to dry meadows, cliffs and talus in the montane to alpine zone	AT BWBS SWB
Draba lactea	Milky draba	Blue	+		+		Mesic to dry meadows and cliffs in the montane to alpine zones	AT BWBS SWB
Draba lonchocarpa var. *thompsonii*	Lance-fruited whitlow-grass	Blue			+		Mesic to dry meadows, cliffs and scree slopes in the alpine zone	AT
Draba stenopetala[4]	Star-flowered draba	Red	+				Mesic to dry meadows and cliffs in the subalpine and alpine zones	AT
Epilobium davuricum	Swamp willowherb	Blue			+		Wet meadows and cliffs in the subalpine and alpine zones	AT SWB
Epilobium leptocarpum	Small-flowered willowherb	Blue	+				Moist meadows and stream banks in the montane to alpine zones	AT ESSF
Erigeron uniflorus var. *eriocephalus*[5]	Northern daisy	Blue			+		Moist to wet meadows in the alpine zone	AT
Eriophorum vaginatum spp. *Spissum*	Sheathed cotton-grass	Blue		+			Bogs, marshes and wet meadows in the montane to subalpine zones	BWBS SBS
Erysimum pallasii[6]	Pallas' wallflower	Blue	+				Dry talus slopes in the alpine zone	AT
Eutrema edwardsii	Edward's wallflower	Blue	+		+		Dry talus slopes in the subalpine and alpine zones	AT SWB
Festuca minutiflora	Little fescue	Blue	+				Dry, stony slopes in the alpine zone	AT
Juncus arcticus var. *alaskanus*	Arctic rush	Blue			+		Tidal flats and lake margins in the lowland and montane zones	AT BWBS ESSF
Koenigia islandica	Iceland Koenigia	Blue	+		+		Moist gravelly sites in the subalpine and alpine zones	AT SWB
Lupinus kuschei	Yukon lupine	Blue	+				Mesic, rocky, sandy or gravelly sites in the montane zone	BWBS
Luzula arctica	Arctic wood-rush	Blue	+		+		Moist meadows and snow bed sites in the subalpine and alpine zones	AT SWB
Luzula groenlandica[3]	Greenland wood-rush	Blue			+		Wet depressions and snow bed sites in the alpine zone	AT
Papaver alboroseum	Pale poppy	Blue				+	Mesic to dry sites in the alpine zone	AT
Ranunculus sulphureus	Sulphur buttercup	Blue		+	+		Moist meadows, bogs or gravelly sites in the alpine zone	AT
Salix raupii	Raup's willow	Red			+		Thickets in moist, open forests and on gravel floodplains in the montane zone	BWBS
Saxifraga nelsoniana spp. *Carlottae*	Cordate-leaved saxifrage	Red	+				Moist rocks, ledges and stream banks from the montane to alpine zones	AT SWB
Saxifraga serpyllifolia	Thyme-leaved saxifrage	Blue	+		+		Moist gravelly scree slopes in the alpine zone	AT
Senecio sheldonensis	Mount Sheldon buttercup	Blue			+		Wet to moist sites in the montane to alpine zones	AT SWB

[1] Mount Edziza RMZ = Mount Edziza Resource Management Zone
[2] Biogeoclimatic Zones that plants are found in Stikine Country Protected Areas: AT=Alpine Tundra; BWBS=Boreal White and Black Spruce; ESSF=Engelmann Spruce-Subalpine Fir; SWV=Spruce-Willow-Birch
[3] In B.C., known only from Spatsizi Plateau
[4] In B.C., known only from Mount Edziza and Tatshenshini areas
[5] In B.C., known only from Cold Fish Lake and Tatshenshini areas
[6] In B.C., known only from Mount Edziza

Appendix 3. Table 3. Plant species of taxonomic or distributional interest found in Gladys Lake Ecological Reserve. (Pojar 1986, 2000).	
Arabis lemmonii	*Ledum palustre* ssp. *decumbens*
Arnica lessingii	*Lupinus nootkatensis*
Artemisia michauxiana	*Luzula confusa*
Carex obtusata	*Minuartia dawsonensis*
Carex supina	*Oxytropis campestris* var. *jordalii*
Castilleja parviflora	*Oxytropis huddelsonii*
Cirsium edule	*Poa interior*
Draba alpina	*Poa rupicola*
Dryopteris fragrans	*Polygonum douglasii*
Epilobium luteum	*Ranunculus grayi*
Erigeron purpuratus	*Sedum divergens*
Fritillaria camschatcensis	*Selaginella sibrica*
Juncus biglumis	

Appendix 3. Table 4. Known Occurrences of Rar		Vegetation Ecosystems within Stikine Country Protected Areas. (Pojar in prep).				
Rare Ecosystem	**Site type**	**Mount Edziza Provincial Park, proposed Protected Area and RMZ[1]**	**Stikine River Provincial Park**	**Spatsizi Plateau Wilderness Provincial Park**	**Gladys Lake Ecological Reserve**	**Tatlatui Provincial Park**
Boreal White and Black Spruce – boreal steppe on steep sou		**and southwest facing slopes**				
Artemesia frigida – Elymus spp.	Boreal steppe	Klastline[2] Stikine River slopes Lower Mess Creek	Stikine River			
Juniperus x – Elymus trachycaulus – Artemisia (campestris frigida)	Warm and dry steep, south facing slopes	Klastline Lower Mess Creek Stikine Canyon	Stikine Canyon			
Elaeagnus commutata – Apocynum androsaemifolium – "Agropyron boreale" – Stipa hymenoides	Eroding slopes in scrub-steppe		Near confluence of Stikine and Tuya rivers; probably elsewhere in the canyon			
Juniperus horizontalis – Artemisia frigida – Calamagrostis purpurascens	Very dry boreal steppe on eroded, weakly calcareous soils	Klastline Stikine Canyon	Stikine Canyon			
Amelanchier alnifolia – Elymus trachycaulus	Warm dry steep, southwest facing slopes		+			
Alpine Tundra						
Kobresia myosuroides – Hierochloe alpina – Rhacomitrium lanuginosum – lichen	Very exposed alpine tundra on windswept ridgecrests	+		+	+	
Poa rupicola – Agropyron violaceum	Grassy promontories where sheep and goats graze and rest; lush, well manured	+		+	+	+
Mineral springs						
Salix brachycarpa – Muhlenbergia richardsonis	Extensive calcite formations	Mess Lake				
Calamagrostis stricta – Muhlenbergia richardsonis – Eleocharis quinqueflora	Extensive calcite formations	Mess Lake				
Boreal White and Black Spruce and Spruce Willow Birch – Pa		**ally stabilized talus slopes**				
Dryopteris fragrans – Rhacomitrium lanuginosum – Umbilicaria spp.	Partially stabilized talus slopes	Mount Edziza Klastline	+	+	+	Likely
Juniperus communis – Arctostaphylos uva-ursi – Dryopteris fragrans	Partially stabilized talus slopes	Mount Edziza Klastline	+	+	+	Likely

[1] Mount Edziza RMZ = Mount Edziza Resource Management Zone
[2] Locality of occurrence; +=present; likely = likely

Appendix 3. Table 5. Typical Historic Patterns of Wildfire Disturbance for Biogeoclimatic Zones in Stikine Country Protected Areas (Parminter 1992).

Zone	Cover type	Fire type	Fire Intensity	Mean Fire Return Interval[1] (years)			Fire size (ha)		
				Minimum	Average	Maximum	Minimum	Average	Maximum
BWBS	Black Spruce[2]	Surface and crown	Medium-high	50-75	75-125	125-175	3-5	3000-10000	200000
	Aspen/ Pine/ Spruce			75-100	100-150	140-250			
	Pine/ Spruce/ Fir			100-150	150-200	200-300			
SWB	Fir/ Spruce	Surface and crown	Medium-high	150-200	200-350	350-500	3-5	150-2000	>5000
ESSF	Pine/ Spruce/ Fir	Surface	Low-medium	150-200	200-300	350-500	0.1-5	50-150	150-500
		Surface and crown	Medium-high						
AT		Surface	Low-medium	250	300-400	500-600	0.1-5	5-50	50-150

[1] Mean fire interval refers to the average length of time for fire to return to a site; some sites will burn more frequently while others may not experience fire for significantly longer periods

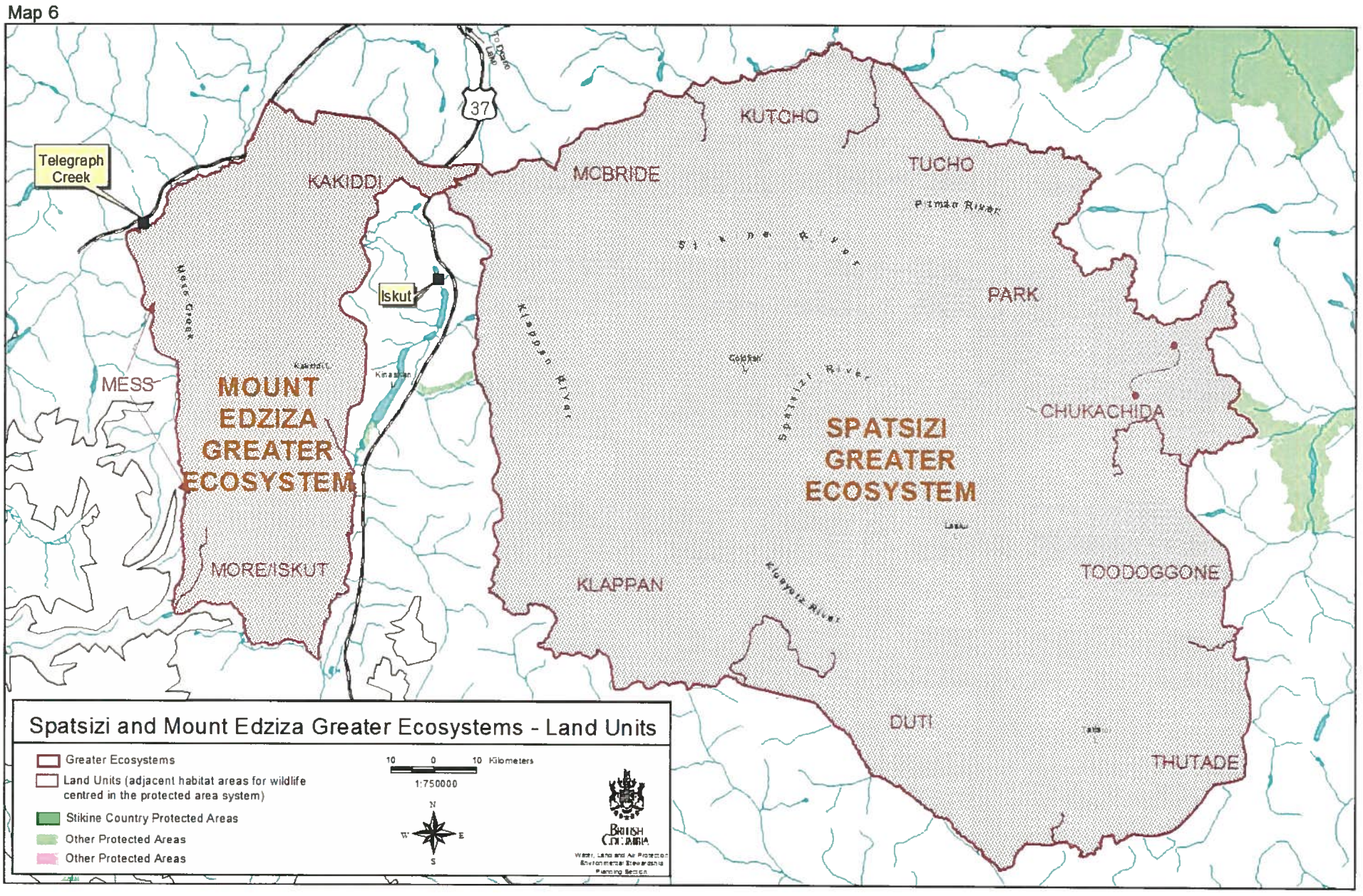
[2] Spruce = white spruce

19 Appendix 4. Stikine Country Protected Areas Values, Issues and Concerns on Adjacent Lands

Information in this appendix for land units adjacent to Stikine Country Protected Areas relates to protected area values in Stikine Country Protected Areas. Map 6 shows the land units in the Spatsizi Greater Ecosystem and Mount Edziza Greater Ecosystem. Protected area values describe natural (mostly wildlife) and cultural heritage values that primarily use or are associated with Stikine Country Protected Areas. Other values may also occur within those land units but are not described below if they do not contribute to protected area values. For example, for the Klappan land unit, values are described with respect to Spatsizi caribou and moose populations; Stone's sheep and Stone's sheep habitat are also present but are not considered part of the Spatsizi Plateau Wilderness Provincial Park Stone's sheep population or range and are not included as part of the values. Issues and concerns are based on protected area values within the land unit, and on protected area values within the Stikine Country Protected Areas System.

Map 6. Spatsizi and Mount Edziza Greater Ecosystems Land Units.

Map 6


Telegraph Creek
37
KAKIDDI
MCBRIDE
KUTCHO
TUCHO
Iskut
PARK
MESS
MOUNT EDZIZA GREATER ECOSYSTEM
SPATSIZI GREATER ECOSYSTEM
CHUKACHIDA
MORE/ISKUT
KLAPPAN
TOODOGGONE
DUTI
THUTADE
Spatsizi and Mount Edziza Greater Ecosystems - Land Units
Greater Ecosystems
Land Units (adjacent habitat areas for wildlife centred in the protected area system)
Stikine Country Protected Areas
Other Protected Areas
Other Protected Areas
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Appendix 4. Stikine Country Protected Areas Values, Issues and Concerns on Adjacent Lands.

Land Unit	Protected Area Values	Issues/Concerns	LRMP	LRMP Resource Management Zone	LRMP Resource Management Category
McBride	• Spatsizi caribou low elevation winter range along McBride River • Spatsizi caribou winter range (high and low elevation) • Spatsizi caribou calving, summer and rutting habitat (high and low elevation)	• Effects of future forest harvesting on low elevation caribou winter range along McBride River. • Effects of potential future industrial access on Spatsizi caribou and caribou habitat. • Effects of potential future industrial activities on water quality of streams in Stikine River Provincial Park.	Cassiar Iskut-Stikine	McBride	General with Area Specific Management
				General	General
Kutcho	• Spatsizi caribou winter range (high and low elevation) • Spatsizi caribou calving, summer and rutting habitat (high and low elevation)	• Uncertainty of land management policies for this area. • Effects of current and potential future industrial access (originating from the Jade Road) on Spatsizi caribou and caribou habitat.	Dease-Liard	(LRMP not yet underway)	
Tucho	• Spatsizi caribou calving, summer, rutting and winter habitat • Spatsizi moose summer and winter habitat	• Effects of potential future industrial access and activities on Spatsizi caribou and caribou habitat and Spatsizi moose and moose habitat. • Effects of potential future industrial activities on water quality of streams, and bull trout in Stikine River Provincial Park and Pitman River Protected Area.	Cassiar Iskut-Stikine	Hottah-Tucho Lakes	General with Area Specific Management
Park	• Spatsizi caribou calving, summer, rutting and winter habitat • Spatsizi moose calving and summer habitat	• Effects of potential future industrial access and activities on Spatsizi caribou and caribou habitat and Spatsizi moose and moose habitat. • Impacts of potential future industrial activities on water quality of streams and bull trout in Stikine River Provincial Park, Pitman River Protected Area and Chukachida Protected Area.	Cassiar Iskut-Stikine	General	General
Chukachida	• Spatsizi caribou calving, summer and rutting habitat • Spatsizi moose calving and summer habitat	• Effects of the decommissioned road from Sturdee airstrip to Albert's Hump and current ATV and snowmobile use of that road on Metsantan and other protected area values. • Impacts of potential future industrial access and activities on Spatsizi caribou and caribou habitat and Spatsizi moose and moose habitat • Effects of potential future industrial activities on water quality of streams and bull trout in Stikine River Provincial Park and Chukachida Protected Area. • Effects of potential future industrial access on Metsantan, and on recreational use of the Stikine River canoe route.	Cassiar Iskut-Stikine	Chukachida	General

Appendix 4. Stikine Country Protected Areas Values, Issues and Concerns on Adjacent Lands.

Land Unit	Protected Area Values	Issues/Concerns	LRMP	LRMP Resource Management Zone	LRMP Resource Management Category
Toodoggone	• Spatsizi caribou calving, summer and rutting habitat • Spatsizi caribou rutting habitat on Edozadelly Mountain • Spatsizi caribou winter habitat along Sturdee River and Toodoggone River • Tatlatui moose winter habitat along Sturdee River and Toodoggone River	• Effects of the decommissioned road from Sturdee airstrip to Albert's Hump and current ATV and snowmobile use of that road on the southeastern portion of Spatsizi Plateau Wilderness Provincial Park. • Effects of potential future industrial access and activities on Spatsizi caribou and caribou habitat and Spatsizi moose and moose habitat, especially winter range along the Toodoggone River, rutting areas in the Edozadelly Mountain area, and winter range (lichen flats) along the upper Sturdee River. • Effects of ATV and snowmobile activity originating from the Omineca Mining Road on caribou and moose and their fall and winter range along the upper Sturdee River. • Effects of ATV and snowmobile activity originating from the Omineca Mining Road and entering Tatlatui Provincial Park.	Mackenzie	Firesteel	Wild land
				Thutade	Mining and Wildlife Special
Thutade	• Spatsizi caribou calving, summer and rutting habitat • Spatsizi caribou fall migration across Thutade Lake • Tatlatui mountain goat winter and kidding areas on north side of Thutade Lake • Tatlatui grizzly bear spring habitat on north side of Thutade Lake	• Effects of potential future industrial access and activities on Spatsizi caribou and caribou habitat, Spatsizi moose and moose habitat, Tatlatui mountain goats and mountain goat habitat, and Tatlatui grizzly bears and their habitat. • Effects of the current access to Thutade Lake from the Omineca Mining Road on Tatlatui mountain goats, caribou, grizzly bears and Stone's sheep using south facing slopes on the north side of Thutade Lake. • Impacts caused by ATV and snowmobile activity originating from the Omineca Mining Road and entering Tatlatui Provincial Park. • Effects of potential access to Tabletop Mountain on Spatsizi caribou and moose and Tatlatui Stone's sheep, mountain goats and grizzly bears. • Effects of potential introductions of fish species (primarily bull trout) into Tabletop Creek that could potentially spread into the Firesteel River system.	Mackenzie	Firesteel	Wild land
				Thutade	Mining and Wildlife Special
Duti	• Spatsizi caribou calving, summer and rutting habitat • Tatlatui Stone's sheep range • Tatlatui grizzly bear spring habitat.	• Effects of potential future industrial access and activities on Spatsizi caribou and caribou habitat, Spatsizi moose and moose habitat, Tatlatui mountain goats, Stone's sheep and grizzly bears and their habitat. • Effects of potential future industrial access on recreational access to and use of Spatsizi and Tatlatui provincial parks, especially in the Fire Flats and upper Duti River areas	Fort St. James	Groundhog	Special
				Skeena	Multipurpose

Appendix 4. Stikine Country Protected Areas Values, Issues and Concerns on Adjacent Lands.

Land Unit	Protected Area Values	Issues/Concerns	LRMP	LRMP Resource Management Zone	LRMP Resource Management Category
Klappan	• Spatsizi caribou low elevation winter range along the lower portion of the Klappan River • Spatsizi caribou calving and summer habitat (high and low elevation) • Spatsizi moose winter range along the Klappan River	• Effects of potential future industrial access and activities on Spatsizi caribou and caribou habitat, Spatsizi moose and moose habitat, and grizzly bears and their habitat. • Effects of potential future industrial access on recreational access to and use of Spatsizi Plateau Wilderness Provincial Park. • Access on the BC Rail grade.	Cassiar Iskut-Stikine	Klappan	General with Area Specific Management
				Todagin	General with Area Specific Management
				Iskut Lakes	General with Area Specific Management
				General	General
			Kalum	(LRMP not yet underway)	
Kakiddi	• Mount Edziza/Stikine moose winter habitat • Klastline deer habitat • Rainbow trout only fish system • creek drainage into Kakiddi Lakes chain and Klastline River • viewscape from Kakiddi Lakes chain	• Effects of potential future industrial access and activities on Mount Edziza caribou and caribou habitat, Mount Edziza and Stikine moose and moose habitat, Klastline deer and deer habitat, and Stikine mountain goats and their habitat. • Impacts of potential future industrial activities and access on water quality of streams and the rainbow trout only fish system in the Kakiddi Creek drainage, and on water quality and aquatic habitat in the Klastline River drainage. • Effects of potential future industrial access on recreational access to and use of Mount Edziza Provincial Park, and the proposed Mount Edziza Protected Area, and Stikine River Provincial Park.	Cassiar Iskut-Stikine	Kakiddi/ Mowdade/ Nuttlude Lakes	General with Area Specific Management
				General	General
Mount Edziza Mineral Claims	• Mount Edziza caribou, Stone's sheep, mountain goat and moose habitat • Rainbow trout only fish system • Creek drainage into Kakiddi Lakes chain • viewscape from Kakiddi Lakes chain • Pipe Organ Mountain	• Effects of potential future industrial access and activities on Mount Edziza caribou, Stone's sheep, mountain goats, moose and their habitat. • Effects of potential future industrial activities and access on water quality of streams and the rainbow trout only fish system in the Kakiddi Creek drainage. • Impacts of potential future industrial access on recreational access to and use of Mount Edziza Provincial Park and the proposed Mount Edziza Protected Area.	Cassiar Iskut-Stikine	Mount Edziza	General with Area Specific Management

Appendix 4. Stikine Country Protected Areas Values, Issues and Concerns on Adjacent Lands.					
Land Unit	**Protected Area Values**	**Issues/Concerns**	**LRMP**	**LRMP Resource Management Zone**	**LRMP Resource Management Category**
Iskut/More	• Mount Edziza Stone's sheep and mountain goat range	• Effects of potential future industrial access and activities on Mount Edziza Stone's sheep and mountain goats and their habitat. • Effects of potential future industrial access in the More Creek area on recreational access to and use of Mount Edziza Provincial Park.	Cassiar Iskut-Stikine	Middle Iskut	General with Area Specific Management
				General	General
Mess	• creek drainage into Mess Creek	• Effects of potential future industrial access and activities, especially along Mess Creek and Shaft Creek on recreational access to and use of Mount Edziza Provincial Park. • Effects of potential future industrial activities and access on water quality of streams in the Mess Creek drainage.	Cassiar Iskut-Stikine	General	General

20 Appendix 5. Agreement between BC Parks and the Tahltan Joint Councils

PURPOSE

This agreement seeks to define the government to government relationship between the Tahltan Joint Councils and BC Parks (the parties) with respect to existing and new protected areas within the traditional territory of the Tahltan Band Council and the Iskut Band Council as representatives of the Tahltan Nation.

BC Parks seeks direct advice and information from the Tahltan Joint Councils regarding protected areas within the Tahltan traditional territory in order to ensure these areas are protected and sustained for the benefit of all British Columbians now and in the future.

The Tahltan Joint Councils seek to provide direct advice to BC Parks regarding the management and sustainability of protected areas to ensure that lands are protected and sustained for Tahltan traditional use and practices and the continued exercise of traditional rights within Tahltan traditional territory.

GENERAL

This agreement and the establishment of new protected areas are without prejudice to any aboriginal rights, title or interest of the Tahltan and Iskut First Nations and, with the consent of both parties on renewal, may continue until such time as the rights and responsibilities of the Tahltan Joint Councils in respect to protected areas are more permanently defined in treaties, court decisions or otherwise.

This agreement is without prejudice to the position that either party may take in future treaty negotiations.

The parties will work together in a spirit of cooperation, respect and friendship to address matters of mutual interest and in a manner consistent with a government to government relationship.

Any recommendations and actions resulting from this agreement must be in accordance with the Park Act, Ecological Reserves Act or other applicable legislation, regulations and policies.

Existing rights and tenures within protected areas will be honoured.

The operation of this agreement will not unduly delay decisions that need to be made by BC Parks to provide for the management and operation of protected areas.

PROTECTED AREAS COMMITTEE

The parities will establish a protected areas committee comprised of up to 4 representatives appointed by the Tahltan Joint Councils and up to 4 representatives appointed by BC Parks. Representatives appointed by BC Parks may include third party stakeholders with a demonstrated interest in protected areas.

At the request of either party, meetings or portions of meetings may involve Tahltan First Nation and BC Parks staff only due to the sensitive government to government nature of information under discussion e.g. location of cultural heritage sites that the Tahltan First Nation do not want to be in the public domain.

The committee will operate on a consensus basis and will meet 2-4 times per year in locations and at times agreed by its members.

The committee will provide a forum for the parties to share information, discuss issues and where appropriate make recommendations with respect to protected areas. The committee may deal with the following matters and any other matters mutually agreed upon:

- preparation and review of management plans and management direction statements.
- review of annual management plans and capital development projects.
- review of applications for commercial permits and other uses.
- identification and facilitation of the exercise of aboriginal rights and traditional uses by the Tahltan First Nations.
- sharing of information and undertaking inventories of cultural heritage, wildlife, recreation and other resources.
- accurate description of the culture and history of the Tahltan First Nation in any communications and extension materials or activities developed with respect to protected areas.
- identification and facilitation of economic opportunities and employment by members of the Tahltan First Nation associated with protected areas.
- the establishment of new protected areas under the provincial government's Protected Areas Strategy.
- past grievances of the Tahltan First Nations including the burning of Tahltan trapping cabins in the 1950's, the process for the establishment of the Stikine Recreation Area and definition of Tahltan traditional gathering and trapping rights with respect to the Park Act and BC Parks enforcement policies.

The Tahltan Joint Councils will require a formal information protocol that guarantees confidentiality and assures protection of archaeological and heritage sites and values prior to any exchange of cultural and heritage information.

The committee will develop a detailed terms of reference and may develop an action plan to guide its operation including specific objectives, procedures, evaluation methods and other matters mutually agreed upon. The action plan will be submitted to the parties for approval and be subject to available funding.

TERM AND AMENDMENT

This agreement is for a period of 5 years subject to renewal by mutual consent of the parties.

This agreement may be amended by the mutual consent of both parties and be terminated by either party on 6 months written notice.

Should the operation of this agreement negatively impact the interests or rights of other First Nations whose traditional territories overlap with those of the Tahltan First Nations or third parties, then the parties will endeavour to establish solutions, to the satisfaction of the other First Nations or third parties.

COSTS OF PARTICIPATION AND IMPLEMENTATION

The parties will endeavour to work together to secure funding from other sources to help offset the costs of the parties and initiatives related to protected areas.

This agreement dated 16 June 2000.

(Original signed by:)

H. Markides
District Manager, BC Parks

L. Louie
Yvonne Tashoots
Chiefs, Tahltan Joint Councils

21 Appendix 6. Significant physical features of Stikine Country Protected Areas

Appendix 6. Significant Physical Features of Stikine Country Protected Areas.								
	Mount Edziza Provincial Park and proposed Mount Edziza Protected Area	**Mount Edziza RMZ[1]**	**Stikine River Provincial Park**	**Pitman River Protected Area**	**Chukachida Protected Area**	**Spatsizi Plateau Wilderness Provincial Park**	**Gladys Lake Ecological Reserve**	**Tatlatui Provincial Park**
Water features	Mess Creek Canyon		Grand Canyon of the Stikine River					
Hot springs	Taweh Creek Elwyn Creek Mess Creek Mess Lake							
Physical features	Tahltan Eagle	Pipe Organ Mountain				Complex folds (Eaglenest Range); Spatsizi (Red Goat) Mountain	Complex folds (Eaglenest Range)	Complex folds
Fossils						Ammonites (Eaglenest Range)	Ammonites (Eaglenest Range)	
Volcanic features	Mount Edziza Eve Cone Coffee Crater Cocoa Crater Spectrum Range Obsidian							

[1] Mount Edziza RMZ = Mount Edziza Resource Management Zone

22 Appendix 7. Wildlife Features of Stikine Country Protected Areas

Appendix 7. Table 1. Expected and Recorded Occurrences of Wildlife Species in Stikine Country Protected Areas.

Expected Occurrence	Mount Edziza Provincial Park, proposed Protected Area and RMZ[1]	Stikine River Provincial Park	Spatsizi Plateau Wilderness Provincial Park and Gladys Lake Ecological Reserve	Tatlatui Provincial Park
Meadow vole	+[2]	+	+	+
Long-tailed vole			+	
Mountain heather-vole			+	
Boreal red-backed vole			+	
Tundra red-backed vole	+	+	+	+
Siberian lemming			+	+
Northern bog-lemming			+	
Western Jumping mouse			+	+
Deer mouse	+	+	+	+
Navigator shrew			+	
Cinereus shrew			+	
Wandering shrew			+	
Little brown bat			+	
Western spotted frog			S	+
Northwestern toad			+	
Northern wood frog			+	
Long-toed salamander			S	

[1] Mount Edziza RMZ = Mount Edziza Resource Management Zone
[2] + = recorded occurrence; S=suspected occurrence

Appendix 7. Table 2. Recorded Occurrences of Bird Species in Stikine Country Protected Areas. (+ = recorded occurrence; U = unconfirmed report).				
	Mount Edziza Provincial Park, proposed Protected Area and RMZ[1]	Stikine River Provincial Park	Spatsizi Plateau Wilderness Provincial Park and Gladys Lake Ecological Reserve	Tatlatui Provincial Park
Common Loon	+		+	+
Yellow-billed Loon			+	
Arctic Loon	+		+	
Red-throated Loon			+	
Red-necked Grebe	+	+	+	
Horned Grebe	+	+	+	
Tundra Swan			+	
Trumpeter Swan		+		
Canada Goose	+	+	+	+
Mallard	+	+	+	+
Green-winged Teal	+	+	+	+
American widgeon	+	+	+	
Northern pintail	+	+	+	+
Northern Shoveler	+		+	
Blue-winged Teal			+	+
Redhead			+	
Ring-necked Duck		+	+	
Greater Scaup	+	+	+	+
Lesser Scaup	+		+	+
Black Scoter			+	
White-winged Scoter	+		+	+
Surf Scoter	+		+	+
Harlequin Duck			+	+
Oldsquaw	+			+
Barrow's Goldeneye		+	+	+
Common Goldeneye	+		+	+
Bufflehead	+	+	+	+
Common merganser	+	+	+	+
Red-breasted Merganser			+	
American Coot	+			
Semipalmated Plover	+		+	+
Killdeer			+	
Black-bellied Plover			+	
Lesser Golden Plover	+		+	
Whimbrel			+	
Greater Yellowlegs	+	+	U	+
Lesser Yellowlegs			+	+
Solitary Sandpiper	+		+	+
Spotted Sandpiper	+	+	+	+
Wandering Tattler	+		+	
Red-necked Phalarope	+		+	+
Long-billed Dowitcher	+		+	
Common Snipe	+		+	+
Sanderling			+	+
Semipalmated Sandpiper	+		+	+
Western Sandpiper		+	+	+
Least Sandpiper	+		+	+
Upland Sandpiper			+	
Long-tailed Jaegar			U	U
Bonaparte's Gull	+		+	+
Mew Gull	+		+	+
Herring Gull	+	+	+	+
California Gull			+	
Glaucous Gull			+	
Glaucous-winged Gull				+
Arctic Tern	+		+	+
Golden Eagle	+	+	+	+
Bald Eagle	+	+	+	+

Appendix 7. Table 2. Recorded Occurrences of Bird Species in Stikine Country Protected Areas. (+ = recorded occurrence; U = unconfirmed report).

	Mount Edziza Provincial Park, proposed Protected Area and RMZ[1]	Stikine River Provincial Park	Spatsizi Plateau Wilderness Provincial Park and Gladys Lake Ecological Reserve	Tatlatui Provincial Park
Northern Harrier	+	+	+	+
Sharp-shinned Hawk	+	+	+	
Northern Goshawk	+		+	+
Red-tailed Hawk	+		+	
Rough-legged Hawk			+	
Osprey	+		+	+
American Kestrel	+	+	+	+
Merlin	+		+	+
Peregrine Falcon	+		U	
Gyrfalcon	+	+	+	+
Ruffed Grouse	+	+	+	+
Spruce Grouse	+	+	+	+
Blue Grouse			+	+
White-tailed Ptarmigan	+		+	
Rock Ptarmigan	+		+	+
Willow Ptarmigan	+		+	+
Sharp-tailed Grouse	+			
Mourning Dove			+	
Short-eared Owl			+	
Great Horned Owl	+	+	+	
Northern Pygmy-Owl			+	
Northern Hawk-Owl	+		+	
Boreal Owl		+		
Common Nighthawk	+	+	+	+
Rufous Hummingbird	+		+	
Belted Kingfisher	+		+	
Northern Flicker	+	+	+	+
Yellow-bellied Sapsucker		+	+	
Downy Woodpecker			+	
Hairy Woodpecker		+	+	
Black-backed Woodpecker	+	+	+	
Northern three-toed Woodpecker		+		
Olive-sided Flycatcher			+	+
Western Wood-Pewee	+	+	+	
Eastern Phoebe			+	
Say's Phoebe	+	+	+	+
Hammond's Flycatcher			+	
Least Flycatcher			+	
Willow Flycatcher			+	
Alder Flycatcher		+		
Yellow-bellied Flycatcher			+	
Horned Lark	+	+	+	+
Tree Swallow		+	+	+
Violet-green Swallow		+	+	
Bank Swallow		+	+	
Northern Rough-winged Swallow		+	U	+
Cliff Swallow	+		+	+
Barn Swallow		+	+	+
Stellar's Jay			+	+
Gray Jay	+	+	+	+
Black-billed Magpie		+		
American Crow	+		+	+
Common Raven	+	+	+	+
Black-capped Chickadee	+	+	+	+
Mountain Chickadee	+		+	
Boreal Chickadee	+	+	+	+
Red-breasted Nuthatch	+	+	+	
Winter Wren	+	+	+	

Appendix 7. Table 2. Recorded Occurrences of Bird Species in Stikine Country Protected Areas. (+ = recorded occurrence; U = unconfirmed report).

	Mount Edziza Provincial Park, proposed Protected Area and RMZ[1]	Stikine River Provincial Park	Spatsizi Plateau Wilderness Provincial Park and Gladys Lake Ecological Reserve	Tatlatui Provincial Park
Golden-crowned Kinglet		+	+	+
Ruby-crowned Kinglet	+	+	+	+
Mountain Bluebird		+	+	
Townsend's Solitaire	+	+	+	
Swainson's Thrush		+	+	+
Gray-cheeked Thrush		+	+	+
Hermit Thrush		+	+	+
Varied Thrush	+	+	+	
American Robin	+	+	+	+
Northern Wheatear	+		+	
Northern Shrike			+	
Water Pipit	+	+	+	+
American Dipper	+	+	+	+
Bohemian Waxwing	+	+	+	+
Cedar Waxwing	+		+	
European Starling			+	
Solitary Vireo			+	
Warbling Vireo		+	+	
Tennessee Warbler			+	
Orange-crowned Warbler		+	+	
Black-and white Warbler			+	+
Yellow-rumped Warbler	+	+	+	+
Townsend's Warbler		+	+	
Blackpoll Warbler		+	+	+
Yellow Warbler		+	+	+
MacGillivray's Warbler		+	+	
Wilson's Warbler	+	+	+	+
Northern Waterthrush			+	+
Common Yellowthroat	+	+	+	+
American Redstart		+	+	+
Le Conte's Sparrow			+	
Savannah Sparrow	+	+	+	+
Song Sparrow	+	+		+
American Tree Sparrow	+	+	+	+
Chipping Sparrow		+	+	+
Dark-eyed Junco	+	+	+	+
White-crowned Sparrow	+	+	+	+
Golden-crowned Sparrow	+	+	+	+
Fox Sparrow			+	
Lincoln's Sparrow		+	+	+
Smith's Longspur			+	+
Lapland Longspur			+	
Snow Bunting	+		+	+
Western Meadowlark			+	
Red-winged Blackbird	+		+	+
Rusty Blackbird	+	+	+	+
Brewer's Blackbird			+	
Brown-headed Cowbird	+	+	+	+
Common Grackle			+	
Western Tanager		+	+	
Pine Siskin		+	+	+
White-winged Crossbill	+		+	
Pine Grosbeak		+	+	+
Common Redpoll	+		U	
Hoary Redpoll			U	
Rosy Finch	+		+	
Purple Finch		+	+	

[1] Mount Edziza RMZ = Mount Edziza Resource Management Zone

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23 Appendix 8. Hunting statistics for Stikine Country Protected Areas

Appendix 8. Summary of Hunting Regulations, Guide Quotas and Average Annual Harvests for Stikine Country Protected Areas 1999/2000. The Bag Limit for Each Species is 1. Guide Quotas are based on the Average Annual Quota for those Species with 3-year Quota Guidelines.

	Mount Edziza Provincial Park, proposed Protected Area and Resource Management Zone	Stikine River Provincial Park[1]		Spatsizi Plateau Wilderness Provincial Park	Tatlatui Provincial Park
Wildlife Management Unit	6-21	6-21 6-22	6-20A[2] (6-19)	6-20A[2]	7-39
Stone's sheep					
Regulation	LEH	Open	LEH		Closed
Season	Aug 1 – Oct 26	Aug 1 – Oct 15	Aug 1 – Oct 26		
Class	Full Curl	Full Curl	Full Curl		
# LEH permits	6	N/A	37		
Guide-Outfitter quota	1	(17)[3]	2 (19)[3]	7(2)[3,4]	
Average annual resident harvest (1990-1995)	0.7	0.0	0.5	3.7	
Average annual non-resident harvest (1990-1995)	0.7	0.0	1.5	7.0	
Mountain goat					
Regulation	LEH	Open	LEH/Closed[5]		Open
Season	Aug 1 – Oct 15	Aug 1 – Oct 15	Aug 1 – Oct 15		Aug 15 – Oct 15
Class	Adult only		Adult only		Adult only
# LEH permits	10	N/A	37		N/A
Guide-Outfitter quota	4	1	1(+)[3]	13(+)[3]	4(8)[8]
Average annual resident harvest (1990-1995)	1.0	1.0	0.5	3.5	2.0
Average annual non-resident	1.5	1.0	0.7	11.8	2.7
Caribou					
Regulation	Closed	Closed (6-21) Open (6-22)	LEH		LEH/Open[7]
Season		Aug 15 – Oct 10	Aug 15 – Oct 15		Aug 15 – Oct 15
Class		5 Point Bulls	Bulls only		Bulls only (LEH) 5 Point Bulls (Open)
# LEH permits		N/A	52		(14)[8]
Guide-Outfitter quota		(+)[3]	2(17+)[3]	20 (17)[3]	(12)
Average annual resident harvest (1990-1995)		0	0.0	7.8	0.0
Average annual non-resident harvest (1990-1995)		0	0.3	16.2	0.5
Moose					
Regulation	Open	Open	LEH		Open/LEH[9]
Season	Aug 15 – Nov 15	Aug 15 – Nov 15	Aug 15 – Nov 15		Aug 15 – Nov 5
Class	Bulls	Bulls	Bull only		Immature Bulls (Open) Bulls only (LEH)
# LEH permits	N/A	N/A	125		(85)[10]
Guide-Outfitter quota	(+)[3]	(+)[3]	10(11+)[3]	30(11)[3]	(11)
Average annual resident harvest (1990-1995)			8.7		
Average annual non-resident harvest (1990-1995)			22.5		

Appendix 8. Summary of Hunting Regulations, Guide Quotas and Average Annual Harvests for Stikine Country Protected Areas 1999/2000. The Bag Limit for Each Species is 1. Guide Quotas are based on the Average Annual Quota for those Species with 3-year Quota Guidelines.

	Mount Edziza Provincial Park, proposed Protected Area and Resource Management Zone	Stikine River Provincial Park[1]		Spatsizi Plateau Wilderness Provincial Park	Tatlatui Provincial Park
Wildlife Management Unit	6-21	6-21 6-22	6-20A[2] (6-19)	6-20A[2]	7-39
Grizzly bears					
Regulation	LEH	LEH	LEH		LEH
Season (spring)	April 15 – June 15	April 15 – June 15	April 15 – June 15		April 15 – June 15
Season (fall)	Sept 1 – Nov 15	Sept 1 – Nov 15	Sept 1 – Nov 15		Sept 1 – Nov 15
Class	Adult only	Adult only	Adult only		Adult only
# LEH permits	5	20[11] (6-21B) 25[11] (6-22)	7		(5)[10]
Guide-Outfitter quota	1(2)	0 (2)	3 (2)	1 (2)	(2)
Average annual resident harvest (1990-1995)	0.2	0.3	0.0	0.2	0.3
Average annual non-resident harvest (1990-1995)	0.0	0.0	0.2	1.3	0.8

[1] Stikine River Provincial Park is divided into two sections: east of Highway 37 (MU6-20A, 6-19) and west of Highway 37 (MU 6-21, 6-22)

[2] MU6-20A includes that portion of MU6-20 that lies within Spatsizi Plateau Wilderness Provincial Park and the former Stikine River Recreation Area and that portion of MU6-19 that lies within the former Stikine River Recreation Area; information presented in this table for Stikine River Provincial Park is based on the former Stikine River Recreation Area; season, class and number of LEH permits is reported for 6-20A as a whole but harvests are reported for each park (Stikine River, Spatsizi) separately

[3] (N)=Number of territory-wide guide quota (combined for all guides with portions of their territory in the park) with no specific reference to parks; + indicates no specific quota for the species; (N+) indicates 1 or more guides with a territory-wide quota and 1 or more guides with no species quota; for some parks although no specific species quotas for the park exists, that species may not be present in the portion of the guide's territory that lies within the park

[4] For Spatsizi Plateau Wilderness Provincial Park most of the park lies within 1 guide territory with park specific quotas; a small portion of a second guide's territory also lies within the park but that guide does not have park specific quotas; the small portion of the second guide's territory that lies within the park will be exempt [illegible] which is [illegible] MU6-20A

[5] A small portion of MU6-20A (west side of the Spatsizi Plateau) is closed to mountain goat hunting

[6] Only 4 goats may be harvested from that portion of MU7-39 west of Thutade Creek, Thutade Lake, and the Firesteel River

[7] MU 7-39 zones B,C,D are LEH and include the northern part of Tatlatui Provincial Park north of the Firesteel River, Rognaas Creek, Kitchener Lake, Stalk Creek and Stalk Lake; the rest of the park is open for caribou hunting

[8] Total number of LEH permits for zones B,C,D of MU7-39; only portions of those zones occur within Tatlatui Provincial Park

[9] Both open and LEH applies to all of MU7-39; open season for Immature bulls only; LEH for Bulls only

[10] Total number of LEH permits for MU7-39; Tatlatui Provincial Park covers only a portion of 7-39

[11] Total number of LEH permits for zone B of MU6-21 and for MU6-22; Stikine River Provincial Park covers only a portion of both MU's

24 Appendix 9. Aquatic Characteristics of Stikine Country Protected Areas

Appendix 9. Table 1. Distribution of Freshwater Fish Species within Stikine Country Protected Areas.

	Arctic Grayling	Burbot	Dolly Varden/ Bull trout	Lake trout	Longnose sucker	Prickly sculpin	Rainbow trout	Rocky Mountain Whitefish
Mount Edziza Provincial Park, proposed Protected Area and Resource Management Zone								
Mowdade Lake							+[1]	
Mowchilla Lake							+	
Kakiddi Lake							+	
Nuttlude Lake							+	
Stikine River Provincial Park (upstream of the Grand Canyon)[2]								
Stikine River	+	+	+	+	+	+	+	+
Spatsizi Plateau Wilderness Provincial Park								
Upper Stikine River	+	+	+	+	+	+	+	+
Tuaton Lake			+		+	+	+	+
Laslui Lake	+		+		+		+	+
Chukachida River	L		+				L	
Chapea Lake							+	
Ella Creek							+	
Ella Lake			+		L		+	L
Hotlesklwa Creek			L				+	+
Hotlesklwa Lake			+		+		+	+
Happy Lake							+	+
Spatsizi River	+	+	+		+		+	+
Kliweguh Creek			+					
Mink Creek	+		+	+			+	+
Cold Fish Lake	+	+	+	+		+	+	+
Buckinghorse Lake							+	
Klahowya Lake							+	
Tatlatui Provincial Park								
Tatlatui Lake							+	
Firesteel River							+	
Kitchener Lake							+	
Rognaas Creek							+	
Lower Stalk Lake							+	
Upper Stalk Lake							+	
Stalk Creek							+	
Trygve Lake							+	

[1] + = present; L = likely present
[2] includes Pitman River Protected Area and Chukachida Protected Area

Appendix 9. Table 2. Reported Relative Fish Size, Fish Density and Lake Characteristics of Selected Waters in Stikine Country Protected Areas. (DeGisi 1998).

	Relative Fish Density	Relative Fish Size	Relative Lake depth	Relative lake productivity	Comments
Mount Edziza Provincial Park, proposed Protected Area and Resource Management Zone					
Mowdade Lake	High	Small	Shallow	Moderate	
Mowchilla Lake	High	Small	Shallow	Moderate	
Kakiddi Lake	High	Small	Shallow	Moderate	
Nuttlude Lake	High	Small	Shallow	Moderate	
Spatsizi Plateau Wilderness Provincial Park					
Tuaton Lake			Moderate	Low	Cold
Chapea Lake	High	Small			
Hotleskiwa Creek					Moderate amount of good fish habitat
Hotleskiwa Lake			Moderate	Low-moderate	
Kliweguh Creek					Likely used by bull trout for spawning at locations where they are vulnerable to harvest
Cold Fish Lake			Deep	Low	Cold
Buckinghorse Lake	Low	Large	Moderate	Moderate	Spawning habitat does not appear limiting
Klahowya Lake	Low	Large	Shallow	Low	Low fish density and large size of fish is possibly because of limited spawning or rearing habitat
Tatlatui Provincial Park					
Tatlatui Lake	High	Moderate	Deep	Low	
Firesteel River	Very high	Small - Moderate			Fish density atypically high
Kitchener Lake		Large	Deep	Low	
Lower Stalk Lake	Low	Large	Shallow	Low	

Appendix 9. Table 3. Summary of General and Special Angling Regulations for Stikine Country Protected Areas 2000/2001.

	Tatlatui Provincial Park[1] (Region 7)	**All other parks** (Region 6)
General regulations – daily catch quotas		
Trout/char • Over 50 cm (includes steelhead) • Dolly Varden/bull trout and lake trout combined • From streams • Under 30 cm from streams	5 No more than 1 No more than 3 No more than 2 -	5 No more than 1 No more than 3 No more than 2 0[2]
Burbot	-	5
Whitefish (all species combined)	-	15
Arctic grayling	-	3
General regulations		
No fishing April 1 – June 30	All streams	Iskut River streams (upstream of Forest Kerr Canyon)
Barbless hooks[3]		All streams
Single hook	All streams	All streams
Bait ban	All streams	
Set lining		Burbot
Special Regulations		
Trout/char daily and possession quota = 2 (none over 50 cm)		Buckinghorse Lake Klahowya Lake
Rainbow trout daily quota = 2	Tatlatui Lake	
Rainbow trout daily quota = 2 (none over 50 cm), No fishing Nov 1 – Apr 30		Buckley Lake
No fishing within 100 metres of outlet May 15 - July 31		Buckinghorse Lake Klahowya Lake
Single hook		Buckinghorse Lake Klahowya Lake
Single barbless hook		Buckley Lake
Bait ban	Stalk Lakes	Buckinghorse Lake Klahowya Lake Buckley Lake

[1] Regulations for Tatlatui Provincial Park include only those regulations in Region 7 pertaining to rainbow trout and Tatlatui Provincial Park waters (Peace River watershed)

[2] Catch and release only

[3] Barbless hooks for all Pacific streams in Regions 6 and 7

Appendix 9. Table 4. Number of Rod Days Allocated for Guided Angling for Waters in Stikine Country Protected Areas.		
Waters	**# rod days**	**# angling guides**
Stikine River Provincial Park		
Stikine River	245	3
Tahltan River[1]	90	2
Stikine River Provincial Park/Chukachida Protected Area		
Chukachida River/Stikine River[2]	20	1
Chukachida Protected Area		
Chukachida Lake	120	3
Pitman River Protected Area		
Pitman Lake	85	1
Spatsizi Plateau Wilderness Provincial Park		
Buckinghorse Lake	88	1
Chapea Creek	12	1
Chapea Lake	12	1
Cold Fish Lake	192	1
Ella Creek	96	1
Ella Lake	96	1
Hotleskiwa Lake	40	1
Klahowya Lake	30	1
Laslui Lake	260	1
Mink Creek	192	1
Tuaton Lake	190	1
Tatlatui Provincial Park		
Firesteel River	-	3
Kitchener Lake	-	2
Rognass Creek	-	2
Stalk Lake	-	2
Tatlatui Lake	-	1

[1] Angler days on the Tahltan River are currently allocated for the Stikine River Recreation Area; the Tahltan River is outside of Stikine River Provincial Park
[2] Angler days were allocated for the Chukachida and Stikine rivers combined

25 Appendix 10. Structures in Stikine Country Protected Areas.

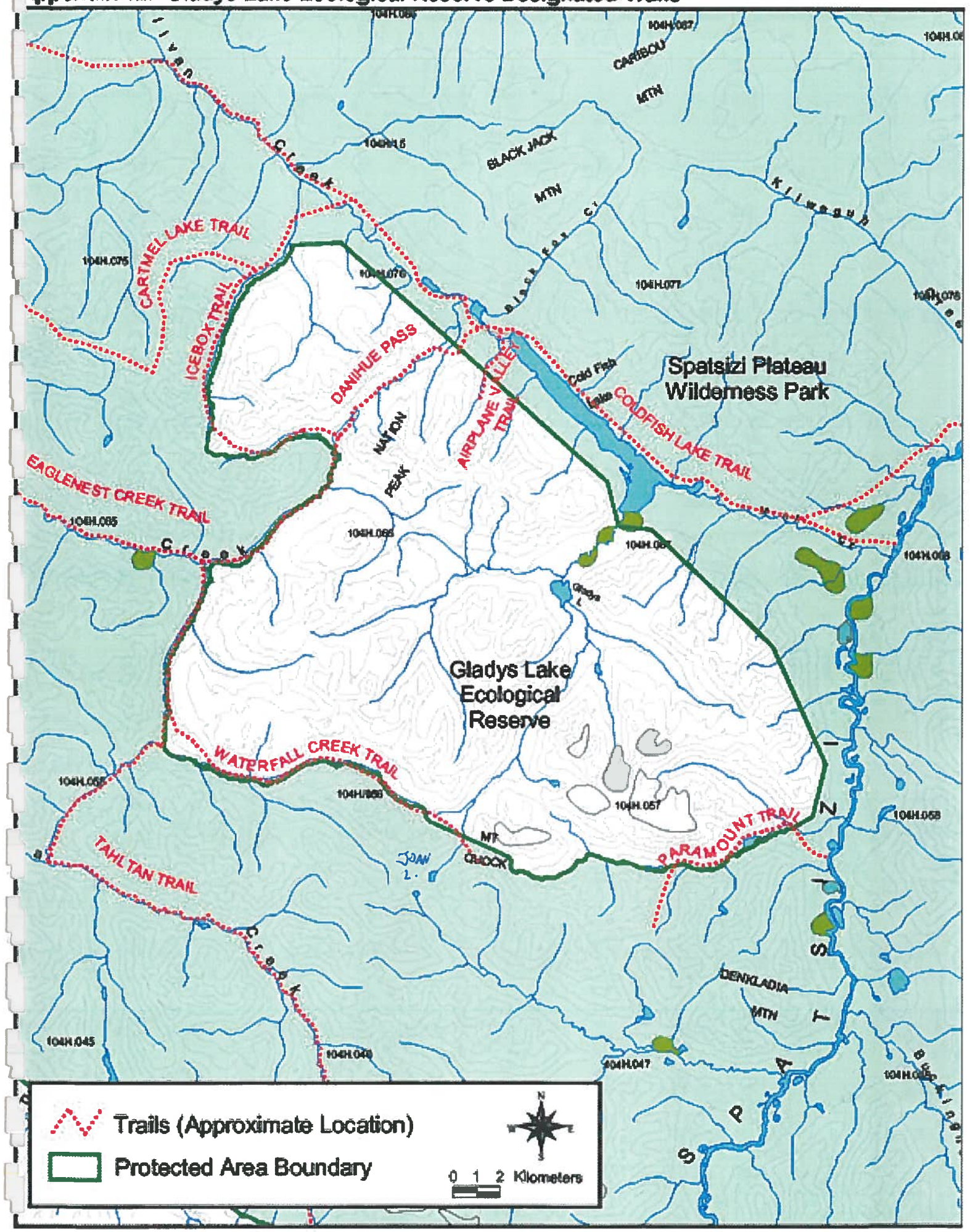
Appendix 10. Structures in Stikine Country Protected Areas.				
Provincial Park	**Location**	**Site**	**Facilities**	**Facility Details**
Mount Edziza – Commercial	Buckley Lake	EC1	Guide-outfitter Camp, 5 structures	3 tent frames, 1 corral, 1 tree cache
	Chakima Creek	EC2	Guide-outfitter Camp	Tent camp Fire ring, tent poles, food cache
	Williams Camp	EC3	Guide-outfitter Camp	Tent camp Fire ring, tent poles, food cache
Mount Edziza – Public	Buckley Lake	EP1	4 structures	1 Dock, 1 info shelter, 1 bear cache, 1 bridge
	Mowdade Lake	EP2	4 Structures	1 Dock, 1 info shelter, 1 bear cache, 1 bridge
	Trail from Buckley to the alpine	EP3	1 structure	800 metres of split log
	Buckley Lake Area	EP3	3 structures	Remains of three old cabins
	Across from Telegraph Creek	EP4	Approximately 8 structures	Old Tahltan Village site
	Three Mile Lake Area	EP5	2 structures	Sam Berger's Old Cabin
	Chakima Creek Trail	EP6	2 structures	2 bridges
	Klastline River	EP7	bridge	1 bridge
Mess Creek - Commercial	Mess Lake	MC1	Trappers cabin and outbuildings	1 cabin
	Mess Creek 1	MC2	Trappers Cabin	Unknown
	Mess Creek 2	MC3	Trappers Cabin	Unknown
Stikine River – Commercial; Permanent	Chukachida River	SRC1	Guide-outfitter Camp	1 cabin, 1 pit toilet
	Cullivan Creek	SRC2	Guide-outfitter Camp	Tent camp, tent poles only
	McBride Creek	SRC3	Trapping cabin	1 cabin, 1 storage shed, 1 pit toilet
	Upper Stikine Lodge	SRC4	Guide-outfitter Camp	1 cookhouse/lodge, 2 cabins, 1 barn, 1 tack shed, 1 dock, 1 meat and fuel shed, 1 corral, 1 storage shed, 1 pit toilet
	Stikine River	SRC6	BCR Rail Bridge	Unused bridge
	Mount Meehaus	SRC7	NW Tel Repeater	1 Communication shell
Stikine River – Public	Beggarly Canyon	SRP1	Bridge and Campsite	Bridge, campsite
	Park Creek	SRP2	Old Guide Camp, 6 structures	Remains of 3 cabins, 1 tent frame, 1 pit toilet, 1 corral
	Upper Stikine	SRP3	Public cabin, 2 structures	1 cabin, 1 treasure chest toilet

Appendix 10. Structures in Stikine Country P otected Areas.

Provincial Park	Location	Site	Facilities	Facility Details
Pitman River – Commercial	Pitman Lake	PC1	Guide-outfitter Camp	Unknown
Chukachida	Chukachida Lake	CC1	2 commercial camps	About 5 structures
Gladys Lake Ecological Reserve	Gladys Lake	GP1	Research Cabin	1 Cabin
	Gladys Lake	GP1	Old camp, 2 structures	1 Food cache, 1 fallen tent frame
	McMillan Camp	GP2	Old camp, 2 structures	1 Food cache, 1 picnic table
Spatsizi – Commercial – Permanent	Bear Creek	SC1	Guide-outfitter Camp	1 Tent Frame
	Buckinghorse Lake	SC2	Guide-outfitter Camp	1 cookhouse, 2 tent frames, 1 shower tent, 1 corral, 1 storage shed, 1 pit toilet
	Bug Lake	SC3	Guide-outfitter Camp	1 cookhouse, 1 dock, 3 cabins, 1 duplex, 1 woodshed, 1 meat house, 1 tack shed, 1 corral, 1 dock, 1 pit toilet, 1 garden shed, 1 horse shoeing shelter, 1shower building, 1 root cellar, 1 food cache
	Cold Fish Lake – rainbow	SC4	Guide-outfitter Camp, 3 structures	1 cabin, 1 dock, 1pit toilet
	Ella Lake	SC5	Guide-outfitter Camp, 1 structure	1 cabin
	Laslui Lake	SC6	Guide-outfitter Camp, 18 structures	1 cookhouse, 2 duplexes, 1 tack shed, 2 woodsheds, 1 meat house/storage shed, 1 dock, 2 yurts, 1water tank, 3 outhouses, 1 fuel storage, 1cabin, 1 wash house, 1 composting toilet (double), 1 corral
	Ross River	SC7	Guide-outfitter Camp	1 tent frame, 1 tree cache, 1 corral
	Tuaton Lake	SC8	Guide-outfitter Camp, 3 structures	1 tent frame, 1 wood shed, 1 pit toilet
	Black Jack Mt	SC14	NW Tel Repeater	1 communication shell
Spatsizi – Private Inholding	Hyland Post	SC15	Guide-outfitter Camp	About 12 structures (private land)
Spatsizi – Commercial; Tent Camps	Cache Creek	SC9	Guide-outfitter Camp	Tent Camp1 tent frame, 1 corral, 1 food cache
	Dawson River	SC10	Guide-outfitter Camp	Tent Camp tent poles, table and food cache
	MacDonald Creek	SC11	Guide-outfitter Camp	Tent Camp tent poles, table, food cache
	Ram Creek	SC12	Guide-outfitter Camp	Tent Camp tent poles, table, food cache
	Waterfall Creek	SC13	Guide-outfitter Camp	Tent Camp tent poles, table, food cache

Appendix 10. Structures in Stikine Country Protected Areas.				
Provincial Park	**Location**	**Site**	**Facilities**	**Facility Details**
Spatsizi – Public	Chapea Creek	SP1	Campsite	Campsite1 pit toilet
	Airplane Valley	SP15	1 structure	1 foot bridge
	Cold Fish Lake	SP2	22 Structures	1 cookhouse, 8 cabins, 1 tack shed, 1 corral, 2 storage shed, 1 dock, 1 shower building, 1 old cookhouse, 1 meat cache, 3 pit toilets, 1 water system, 1 wood shed
	Cold Fish Lake East end	SP5	3 structures	1 table, 1corral, tent poles, 1 food cache
	Eaglenest Creek Trail Tsargoss Lake Camp	SP7	1 structure	Remains of old cabin
	Eaglenest Creek Trail	SP8	1 structure	1 km of split log
	Little Blue Berry Creek Camp	SP9	1 structure	1 bridge
	Eaglenest Creek Trail Campsite #3	SP10	1 structure	1 bridge
	Danihue Pass Trail	SP11	2 structures	2 small foot bridges
	Didene Creek	SP3	Campsite, 3 structures	Campsite, toilet, info shelter, food cache
	Tuaton Lake	SP12	Campsite, 2 structures	1 backcountry pit toilet, 1 info shelter
	Fountain Rapids	SP4	Campsite, 2 structures	Campsite, 1 backcountry toilet, 1 canoe rest
	Metsantan	SP6	Old Tahltan Village	1 guide-outfitter cabin, 1 wood shed, 1 tent frame, and approximately 14 historical cabins
	Black Fox Creek	SP13	Bridge	1 bridge
	Porcupine Hotel	SP14	Cabin	1 cabin
Tatlatui - Commercial	Firesteel River	TC1	Guide-outfitter Camp, 5 structures	1 cabin, 1 tent frame, 1 shower, 1 storage shed, 1 pit toilet
	Firesteel River	TC2	Guide-outfitter Camp, 10 structures	1 cookhouse, 3 cabins, 1 storage shed, 2 pit toilets, 1 shower, 1 dock, 1 smoke house
	Kitchener Lake	TC3	Guide-outfitter Camp, 10 structures	1 cookhouse, 3 cabins, 1 shower, 1 dock, 1 meat house, 1 storage shed, 2 pit toilets
	Stalk Lake	TC4	Guide-outfitter Camp, 8 structures	2 cabins, 1 shower/storage building, 2 pit toilets, 1 cook house, 1 meat shed, 1 dock
	Tatlatui Lake	TC5	Guide-outfitter Camp, 14 structures	4 cabins, 2 tent frames, 1 dock, 1 storage shed, 1 fuel shed, 1 shower building c/w septic tank, 1 wood shed, 2 pit toilets, 1 cookhouse/lodge
Tatlatui – Public	Kitchener Lake	TP1	Public cabin, 3 structures	1 cabin, 1 storage shed, 1 pit toilet.

Appendix 12. Gladys Lake Ecological Reserve Designated Trails



26 Appendix 11. Gladys Lake Ecological Reserve Designated Trails

Appendix 11. Map of Gladys Lake Ecological Reserve Designated Trails.

27 Appendix 12. Example of fuel handling and storage and waste management guidelines

Currently, the following fuel storage and handling guidelines apply to only one commercial operator in Stikine Country Protected Areas:

- As fuel storage presents a potential for environmental contamination the permittee must adhere to the following storage guidelines:
  - Maximum of 5 drums stored at one time;
  - Drums must be in new to good shape;
  - Drums must be stored at least 50 metres from the river (high water mark);
  - Drums must not be visible to the general public;
  - Drums must be stored in a vertical position, covered by a tarp if necessary;
  - No fuel may be stored over the winter;
  - All empty drums must be removed;
  - No fuel sales;
  - Have a 45 gallon drum on site with a removable lid and have store inside a shovel for digging a trench or scooping up contaminated soil, absorbent pads to soak up fuel spills on land/water, and garbage bags, or alternatively, have a commercial fuel spill kit available in the boat;
  - If possible store drums in a location which would cause accidental spillage to flow away from the river; and,
  - The *Environmental Stewardship Division* area supervisor must approve all fuel storage locations.

No guidelines are in place for propane storage and handling.

The following waste management guidelines apply for most permitted base camps:

- Adequate toilet facilities, as approved by the province, shall be provided and maintained by the permittee. No toilet shall be located nearer than 45 metres from the high waterline of any pond, lake, stream or river.
- Sanitary wastes shall be disposed of in accordance with the *Litter Act*, *Waste Management Act* and to the satisfaction of the province.
- All garbage, debris or effluent resulting from uses under the permit shall be burned. All unburned garbage (tin cans, bottles, discarded metals, etc) shall be removed from the park to the satisfaction of the province. All empty fuel drums shall be removed from the park.

28 Appendix 13. Environmental Stewardship Division Protected Areas Management Planning Zone Descriptions.

Environmental Stewardship Division Protected Areas Management Planning Zone Descriptions					
	Intensive Recreation	Natural Environment	Special Feature	Wilderness Recreation	Wilderness Conservation
Objective	To provide for a variety of readily accessible, facility-oriented outdoor recreation opportunities.	To protect scenic values and to provide for backcountry recreation opportunities in a largely undisturbed natural environment.	To protect and present significant natural or cultural resources, features or processes because of their special character, fragility and heritage values.	To protect a remote, undisturbed natural landscape and to provide backcountry recreation opportunities dependent on a pristine environment where air access may be permitted to designated sites.	To protect a remote, undisturbed natural landscape and to provide unassisted backcountry recreation opportunities dependent on a pristine environment where no motorized activities will be allowed.
Use Level	Relatively high density and long duration types of use.	Relatively low use but higher levels in association with nodes of activity or access.	Generally low.	Very low use, to provide solitary experiences and a wilderness atmosphere. Use may be controlled to protect the environment.	Very low use, to provide solitary experiences and a wilderness atmosphere. Use may be controlled to protect the environment.
Means of Access	All-weather public roads or other types of access where use levels are high (see "Impacts" below).	Motorised (powerboats, snowmobiles, all terrain vehicles), non-motorised (foot, horse, canoe, bicycles). Aircraft and motorboat access to drop-off and pickup points will be permitted.	Various; may require special access permit.	Non-mechanized; except may permit low frequency air access to designated sites and motorboat access in accordance with the Stikine Country Protected Areas Management Plan; foot, canoe (horses may be permitted).	Non-mechanized (no air access); foot, canoe (horses may be permitted).
Location	Contiguous with all-weather roads and covering immediate areas, modified landscapes or other high-use areas.	Removed from all-weather roads but easily accessible on a day-use basis. Accessible by mechanised means such as boat or plane.	Determined by location of special resources; may be surrounded by or next to any of the other zones.	Remote; not easily visited on a day-use basis.	Remote; not easily visited on a day-use basis.
Size of Zone	Small - usually less than 2,000 ha.	Can range from small to large.	Small; usually less than 2000 hectares.	Large; greater than 5,000 hectares.	Large; greater than 5,000 hectares.
Boundary Definition	Includes areas of high facility development in concentrated areas.	Boundaries should consider limits of activity/facility areas relative to ecosystem characteristics and features.	Area defined by biophysical characteristics or the nature and extent of cultural resources (adequate to afford protection).	Defined by ecosystem limits and geographic features. Boundaries will encompass areas of visitor interest for specific activities supported by air access.	Defined by ecosystem limits and geographic features.
Recreation Opportunities	Vehicle camping, picnicking, beach activities, power-boating, canoeing, kayaking, strolling, bicycling, historic and nature appreciation, fishing, snowplay, downhill and cross-country skiing, snowshoeing, specialised activities.	Walk-in/boat-in camping, powerboating, hunting, canoeing, kayaking, backpacking, historic and nature appreciation, fishing, cross-country skiing, snowmobiling, river rafting, horseback riding, heli-skiing, heli-hiking, and specialized activities.	Sight-seeing, historic and nature appreciation. May be subject to temporary closures or permanently restricted access.	Backpacking, canoeing, kayaking, river rafting, nature and historic appreciation, hunting, fishing, cross-country skiing, snowshoeing, horseback riding, specialized activities (e.g. caving, climbing).	Backpacking, canoeing, kayaking, river rafting, nature and historic appreciation, fishing, cross-country skiing, snowshoeing, horseback riding, specialized activities (e.g. caving, climbing).

Environmental Stewardship Div ion Protected Areas Management Planning Zone Descriptions					
	Intensive Recreation	**Natural Environ ent**	**Special Feature**	**Wilderness Recreation**	**Wilderness Conservation**
Facilities	May be intensely developed for user convenience. Campgrounds, landscaped picnic/play areas, trail accommodation or interpretative buildings, boat launches, administrative buildings, service compounds, gravel pits, disposal sites, wood lots; parking lots, etc.	Moderately developed fo ser convenience. Trails, walk in/boat-in campsites, she ers, accommodation building nay be permitted; facilities fo motorized access e.g. do s, landing strips, fuel storag etc.	Interpretative facilities only, resources are to be protected.	Minimal facility development for user convenience and safety, and protection of the environment e.g. trails, primitive campsites, etc. Some basic facilities at access points, e.g. dock, primitive shelter, etc.	None.
Impacts on Natural Environment	Includes natural resource features and phenomena in a primarily natural state but where human presence may be readily visible both through the existence of recreation facilities and of people using the zone. Includes areas of high facility development with significant impact on concentrated areas.	Area where human pres ce on the land is not normal visible, facility developm t limited to relatively small reas. Facilities are visually compatible with natural s ting.	None; resources to be maintained unimpaired.	Natural area generally free of evidence of modern human beings. Evidence of human presence is confined to specific facility sites. Facilities are visually compatible with natural setting.	Natural area generally free of evidence of modern human beings.
Management Guidelines	Oriented toward maintaining a high quality recreation experience. Intensive management of resource and/or control of visitor activities. Operational facilities designed for efficient operation while remaining unobtrusive to the park visitor.	Oriented to maintaining natural environment and high quality recreation experi ce. Visitor access may be re icted to preserve the recreatio experience or to limit imp cts. Separation of less comp ble recreational activities an transportation modes. Designation of transporta on may be necessary to avo potential conflicts (e.g. h se trails, cycle paths, hiking ails).	High level of management protection with ongoing monitoring. Oriented to maintaining resources and, where appropriate, a high quality recreational and interpretative experience. Active or passive management depending on size, location, and nature of the resource. Visitor access may be restricted to preserve the recreation experience and to limit impacts.	Oriented to protecting a pristine environment. Management actions are minimal and not evident. Managed to ensure low visitor use levels. Visitor access may be restricted to protect the natural environment and visitor experience.	Oriented to protecting a pristine environment. Management actions are minimal and not evident. Managed to ensure low visitor use levels. Visitor access may be restricted to protect the natural environment and visitor experience.
Examples of Zoning	Campground in Rathtrevor Beach Provincial Park; Gibson Pass ski area in E.C. Manning Provincial Park.	Core area in Cathedral P k; North beach in Naikoon Provincial Park.	Tidepools in Juan de Fuca Marine Provincial Park; Sunshine Meadows in Mount Assiniboine Provincial Park.	Tchaikazan Valley in Ts'yl-os Provincial Park; Bowron Lake Chain in Bowron Lake Provincial Park.	Upper Murray River watershed within Monkman Provincial Park; Garibaldi Provincial Park Nature Conservancy Area.

WYH.

Province of British Columbia
Ministry of
Lands, Parks
and Housing
Honourable James R. Chabot, Minister

Nature on Reserve
The Ecological Reserves Program in British Columbia

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NATURE ON RESERVE

by **Diane Swanson**

PHOTO BRISTOL FOSTER

One of B.C.'s most spectacular forests, a Sitka spruce stand near Port Chanal in the Queen Charlottes, will never be logged. Nor will man ever interfere with the rare Mara Meadow orchids near Salmon Arm, or the Stone sheep habitat at Gladys Lake on the Spatsizi Plateau. These three sites, and 90 others like them occupy a special position in the province. They have been set aside as Ecological Reserves. You won't see them advertised anywhere; they aren't marked on any tourist map. However, although a few very fragile reserves are accessible to the public only by special permit, the rest are normally open for such uses as hiking, bird watching and photography, as well as for their prime uses — research and education.

But why go to all the trouble of carefully setting aside these particular parcels of land? Because in each reserve there is something important to preserve. In some cases the special feature is a unique plant, animal or landform; more often it is an entire ecosystem typical to a particular region — a complete system of plants, animals and their environment.

PHOTO BRISTOL FOSTER

When this picture of Dr. V.J. Krajina inspecting mature Sitka spruce near Port Chanal on the Queen Charlottes was taken 10 years ago, the idea of setting aside select areas of the province to preserve both unique and representative ecological features was just in its infancy. Today there are 93 Ecological Reserves throughout B.C., with more still to come.

The Port Chanal Reserve, for instance, was not created solely to protect the mature Sitka spruce. It is also a nesting ground for many types of birds, especially peregrine falcons and their seabird prey.

Timber harvesting, mining and domestic grazing are forbidden in any Ecological Reserve. So are hunting, fishing and camping. This has led some people to ask why as many as 93 areas of Crown land should be tied up for apparently such a restricted purpose.

An editorial in *The Vancouver Sun* once condemned Ecological Reserves for "taking large chunks of land out of forestry." But the total area reserved is 85,000 hectares — less than one tenth of one per cent of the total area of B.C. Of this, less than a quarter is productive forest land. Even if proposals for future Ecological Reserves are taken into account, the overall area is not expected to exceed one half of one per cent of the province.

Dr. Bristol Foster, coordinator of the Ministry of Land, Parks and Housing's Ecological Reserves Unit and the person responsible for the reserves, thinks that people have felt threatened needlessly. "There has never been an Ecological Reserve created over the objection of even one agency," he says. "Approval of reserves is sought from all concerned government departments and industries."

B.C. already has a half million hectares in national parks and four and a half million hectares in provincial parks, recreation areas and wilderness conservancies. Why have Ecological Reserves too?

According to Gordon Macnab, Chief of Planning at Parks Branch, "The biggest difference between provincial parks and Ecological Reserves is that provincial parks conserve natural environments for people to enjoy and appreciate. Ecological Reserves were created to *conserve* the ecosystems and the landforms for scientific and educational purposes."

As such, the only uses really encouraged in Ecological Reserves are scientific or educational. With a permit, scientists may catch a sample of mice or even paint sea gulls pink, but their actions must be minimally disruptive to the reserve.

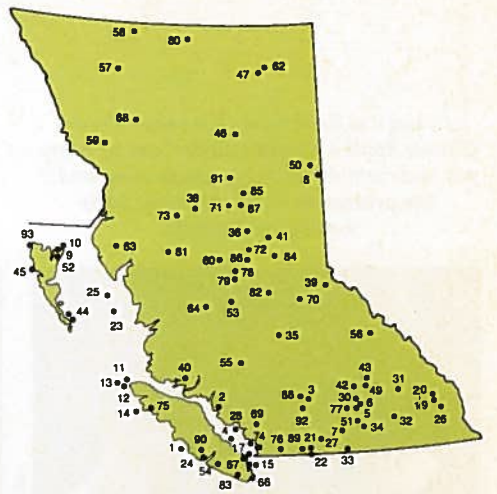
"The most important characteristic of Ecological Reserves is their permanence," says Dr. Bristol Foster. "This allows continuity of research over decades or even centuries. We cannot predict the sort of questions that will be asked of our Ecological Reserves in 10 or 100 years."

Clearly, the quickest way to destroy that permanence would be to overuse the reserves.

The first priority in establishing reserves is given to virgin lands. Botanist, Dr. V.C. Brink, member of the Ecological Reserve Advisory Board and President of the Federation of B.C. Naturalists says: "There has been strong emphasis on forest sites so far — rightly so. Now alpine areas, and estuaries need more attention. We critically need reserves in the lowland, but most of that land is owned outright."

All reserves are established on Crown land, and the Ecological Reserve Unit has no funds with which to purchase privately owned land. Also, a piece of Crown land under consideration for a reserve may form part of a forest company's Tree Farm Licence or be under lease as grazing land to ranchers. To get around these problems, certain land trade offs may be made whereby the Crown provides alternate forest or grazing land in exchange for the desired reserve sites.

The first reserves were set up in 1971 under the Ecological Reserve Act and were administered by the De-



(map) British Columbia has the greatest natural diversity of any province in Canada. Samples of these diverse ecosystems are set aside in Ecological Reserves for research and educational purposes, but many reserves are also open to the public for hiking, photography, bird watching and even cross-country skiing.

partment of Lands, Forests and Water Resources. In 1976 the separate Ecological Reserve Unit coordinated by Bristol Foster was moved to the newly created Ministry of the Environment. In 1978 the unit shifted to its present Ministry.

The establishment of ecological reserves in B.C. was part of a worldwide movement directed at conserving undisturbed examples of the world's many and varied biological communities. U.B.C. botanist Dr. V.J. Krajina, who has been at the forefront of ecological studies in this province, was a prime mover in promoting this concept. Today, he feels that if each biological community now protected by reserves were reserved in triplicate as insurance against floods and fires, B.C. would need a minimum of 150 such reserves — an additional 57 over the present number. Of course, as new communities and unique features are still being discovered, that figure will grow even higher.

Any member of the public can suggest areas to be set aside for reserves. This request is then studied by the Ecological Reserve Unit, and if it seems justified, it is passed on for approval to an advisory board.

This board is composed of representatives from government, industry, and the general public. (The Ministry of Forests is represented by its Chief Forester, Bill Young.) Finally, a reserve receives its specially designated status through an Order-in-Council.

When land is acquired for use as an Ecological Reserve, whole units, such as islands or complete watersheds, are ideal. When this is not possible, the well-being of the reserve will inevitably be affected by the land surrounding it.

By providing a buffer zone, parks can be good neighbours for reserves —especially compared with forest land which may be logged right to the reserve's boundary. Over one third of the present area in reserves is surrounded by provincial parks. However, the advertising given to parks also draws people to reserves. Says Bristol Foster: "Generally, we try to avoid placing Ecological Reserves near those parks which are now, or may be heavily used."

For the same reasons, towns and villages do not make good neighbours. Ignorance, vandalism or plain overuse can cause a lot of damage to Ecological Reserves. In the lower mainland especially, some reserves are already overused — even by well-meaning naturalists.

PHOTO TRUDY CARSON

Because of the ban on hunting in ecological reserves certain mammals with declining populations, such as the sea lions shown here, have been able to slowly increase their numbers.

However, where reserves are close to people, they are better able to serve as outdoor classrooms. One reserve at Ten Mile Point in Victoria is often used by students at the University of Victoria. Biology professor Dr. Alan Austin frequently takes small classes to study shore life at low tide.

But about one half of the existing reserves are relatively inaccessible to the public, and remote sites will be chosen whenever possible for the location of future reserves.

The size of present Ecological Reserves ranges from the .61 hectares set aside for a colony of double-crested cormorants at the Canoe Islets to the 33,185 hectares at Gladys Lake on the Spatsizi Plateau. The average reserve covers about 925 hectares.

Protecting Ecological Reserves is a problem. At each site prohibited uses are posted on signs which plead: "Please Help Us Protect This Area." But abuses occur.

The Ecological Reserves Unit of only two people is unable to police its widely dispersed sites, but sometimes field officers from other ministries note problems.

The public is also helpful in reporting misuses. The Federation of B.C. Naturalists, for example, has adopted a watchdog function toward reserves such as one east of Vernon. On their

Ecological Reserve staff member Trudy Carson holds a Cassin's auklet, one of many sea birds whose nesting grounds come under the protection of the Anthony Islets Ecological Reserve.

PHOTO BRISTOL FOSTER

The V.J. Krajina Ecological Reserve in the Queen Charlottes protects coastal forests, marine communities, sea bird nest sites, an estuary, a salmon spawning stream and the coastal bog pictured here.

PHOTO BRISTOL FOSTER

regular visits they have reported some vandalism.

In most cases there are no plans to protect Ecological Reserves from natural intrusions like disease, insect infestation or even fire. Natural change is a part of ecosystems. This change is of as much interest and value to the scientist as the living organisms contained in these ecosystems.

The Ministry of Forests requires the Ecological Reserves Unit to state its preference for fire management in each reserve. In some, natural fires will be left to burn, as fire is a natural component of the ecosystem. In others, the Ministry of Forests will be asked to reduce litter through controlled burning so that fire-dependent species can continue to survive. But where the existing ecosystems are threatened, a reserve fire will be fought.

Most of the research in B.C.'s Ecological Reserves has been on sea birds and flora. Very little has been done on big game. Ray Halladay, Chief of Wildlife Management, Fish and Wildlife Branch says, "Our use of Ecological Reserves has been very limited. But it will increase as more reserves are created specifically for animals. These reserves will be especially useful to us as benchmark areas."

With forestry so important to the economy of B.C., Bristol Foster feels reserves could be put to good research use by foresters. But there's a problem — any research that alters the environment has to be closely controlled. On the other hand, there is still much that can be done without disturbing the trees.

"Within five years, we hope to be using Ecological Reserves more," says Dr. Ted Baker, Research Division, Ministry of Forests. "Studies of successful natural tree stands can save a lot of trial and error research in reforestation. But we need ecosystems with a range of productivity for this kind of research. Many of the present Ecological Reserves are only marginal areas."

At MacMillan Bloedel, Grant Ainscough says: "Our research doesn't relate to old growth forests. We are dealing with shorter harvest rotations and plantations, for example. But research in Ecological Reserves may be valuable as a measure of the productivity of logging sites and in the selection of species to put back on them. As we get into more intensive management of our forests, reserves may one day help with mistakes that haven't even been identified yet."

Indeed, answering questions yet to be asked may prove to be the Reserves' most valuable function. For now, the existence of Ecological Reserves really needs no more justification than man's desire to retain undisturbed, for research purposes, some part of his natural environment.