Report No. 199

APPLICATION FOR ECOLOGICAL RESERVE

1. Legal description of the area (or general "Metes and bounds" description)

2. Geographical location (relate to nearest settlement, mountain, river, etc.)

   Morrison Creek and forest near Morrison Lake, north of Babine Lake

3. Indicate the biogeoclimatic zone of which the reserve is representative.

   Mostly SBS, ESSFb (this subalpine zone is marginally represented at the highest elevations)

4. Approximate total acreage.

   11,638 acres (-800 acres of Lakes)

5. Purpose of the reserve.

   A combination of virgin sub-boreal forest and secondary vegetation (after logging) for experimentation. [about 2/3 of this area was logged either selectively (B_1) or by clearcut (B_2)]

   (a) Primary (state acreage)

   $A_1 + A_2$: 5,102 + 558 = 5,660 acres

   (in this area, lakes cover 500 acres)

   (b) Others if any (state acreage)

   $B_1 + B_2$: 1,644 + 4,334 = 5,978 acres

   (c) Buffer areas (state acreage)

   - -

6. Attach a map and indicate: (a) the perimeters and acreage of the areas detailed in 5 above, and (b) indicate the species and total timber volumes in these areas.

   Abies lasiocarpa, Betula papyrifera, Picea engelmannii, P. glauca, P. mariana, Pinus contorta, Populus tremuloides, P. trichocarpa (the better trees were exploited in area B_1 and clearcut logging was applied in the area B_2)

V.J. Krajina Jim Pojar

Signature V.J. Krajina, Jim Pojar,
I.B.P. Surveyor
Peter Small and Calvin Parsons

INTERNATIONAL BIOLOGICAL PROGRAMME

SECTION CT : CONSERVATION OF TERRESTRIAL BIOLOGICAL COMMUNITIES

CHECK SHEET (Mark VII) FOR SURVEY OF IBP AREAS*

To be completed with reference to the GUIDE TO THE CHECK SHEET

Serial Number | | | | | | | |

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1. 1. Name of surveyor V.J. Krajina*, Jim Pojar*, Peter Small**, C. Parsons*

2. Address of surveyor *Department of Botany, U.B.C., Vancouver, B.C.
**Inventory Division, B.C. Forest Service,
B.C. Dept. of Lands, Forests and Water Resources,
Victoria, B.C.

3. Check Sheet completed (a) on site .....X..... (b) from records ..X.....

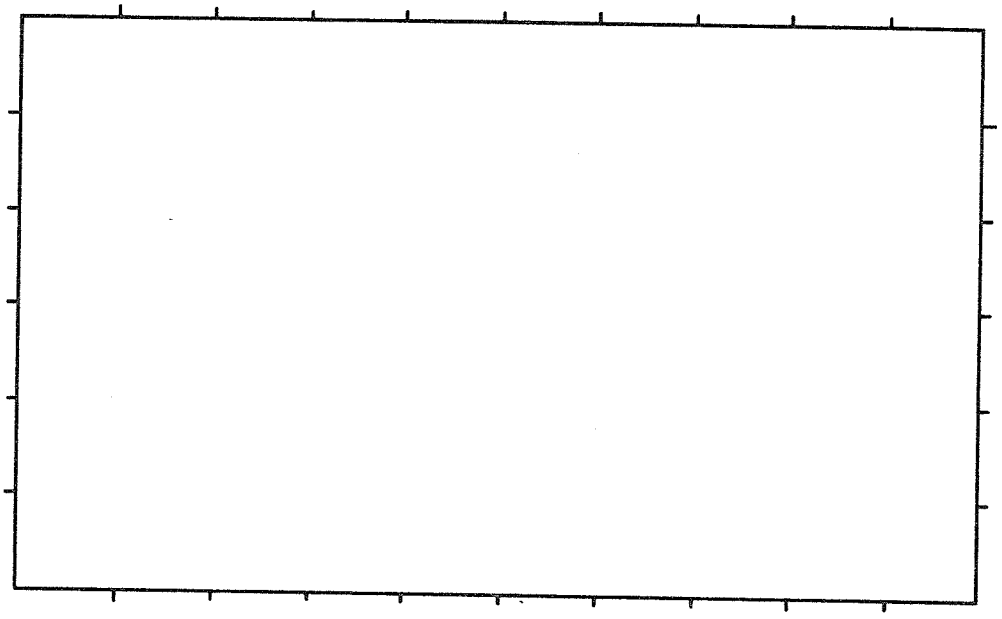
4. Date Check Sheet completed ..November 1, 1974.....

2. 1. Name of IBP Area Morrison Creek and forest near Morrison Lake, north of Babine Lake

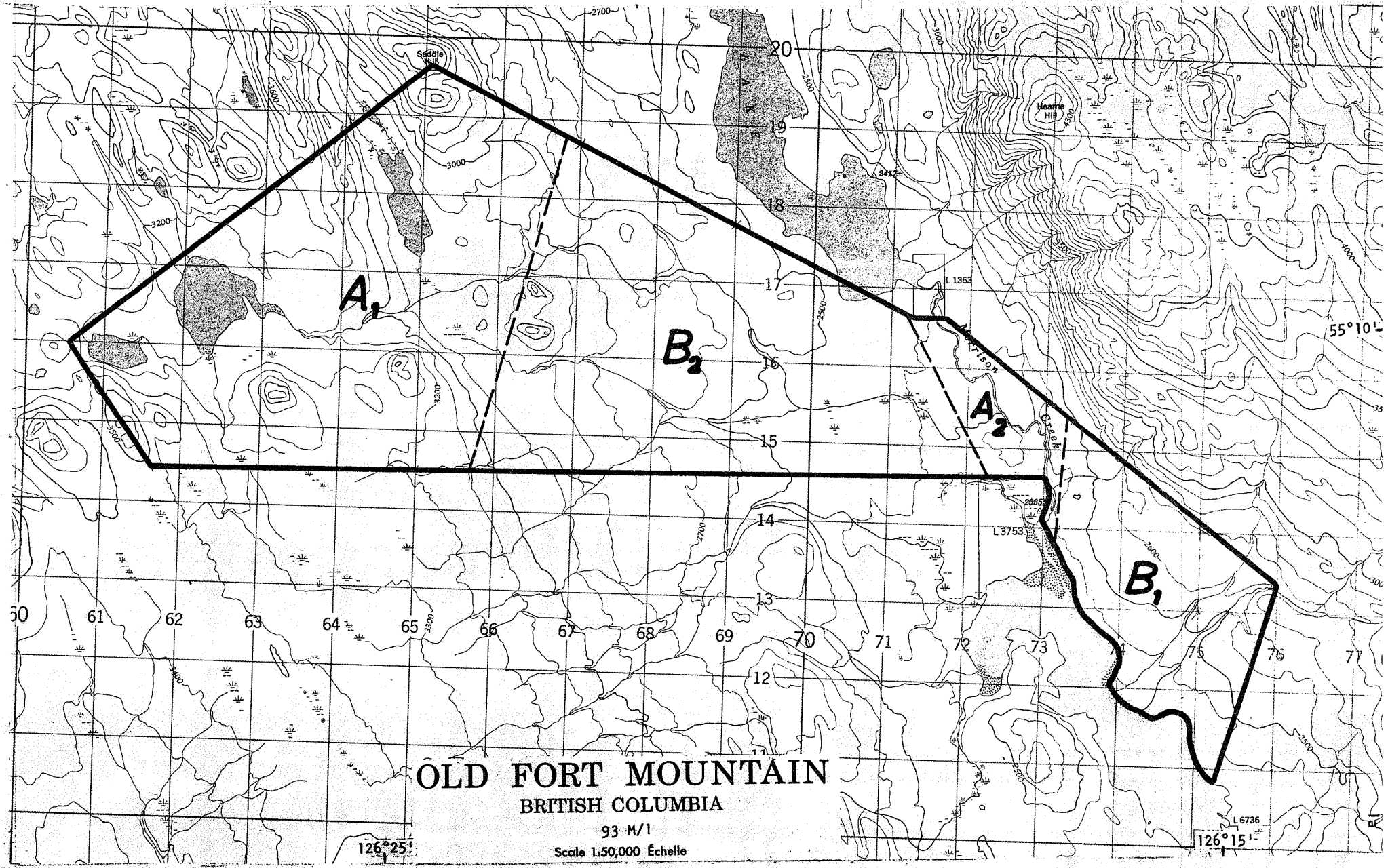
2. Name of IBP Subdivision (or serial letter) ...mainly SBS, a little of ESSFb

3. Map of IBP Area* showing boundaries attached? Yes ..X..... No .....

4. Sketch map of IBP Area*. Please mark direction of north, the scale and grid numbers where applicable.



* For " IBP Area ", read IBP Area and/or IBP Subdivision.


A1
B2
A2
B1
Saddle Hill
Hearne Hill
Morrison Creek
L 1363
L 3753
L 6736
55°10'
126°25'
126°15'
OLD FORT MOUNTAIN
BRITISH COLUMBIA
93 M/1
Scale 1:50,000 Échelle

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3. **Location of IBP Area***

1. Latitude 55 ° 06.8-11.9' N Longitude 126 ° 14.3-28.7' W
2. Country Canada

State or Province British Columbia County Smithers (Babine Lake)

(State or Province ..... County .....)

4. **Administration**

National 1. Official category Crown Land

2. Address of administration British Columbia Department of Lands, Forests and Water Resources, Parliament Buildings Victoria, B.C.

International Class

3.

Included in U.N. List	Rejected from U.N. List	Area with formal conservation status	No formal cons. status
(A)	(B)	(C)	(D) X

5. **Characteristics of IBP Area***

1. Surface area (state units of measurement) 11,638 acres, pristine: 5,660 acres commercially used: 5,978 acres
2. Altitude (state units of measurement) Maximum 3600' (1100m) - Saddle Hill

Minimum 2350' (716m) - Babine Lake

6. **Climate**

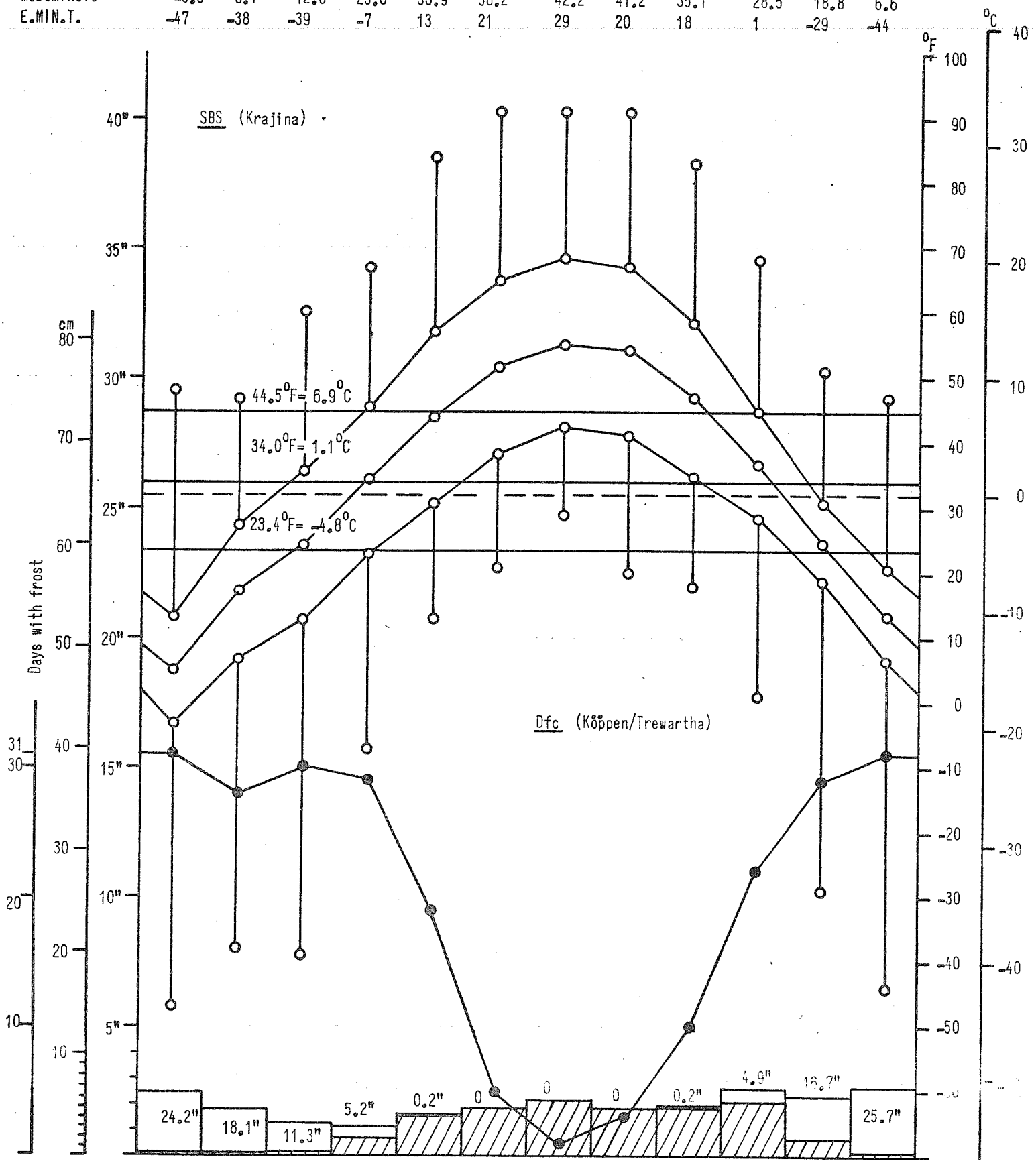
Nearest climatological station :

1. Name Babine (Lake)
2. Climatological station on IBP Area*? Yes ..... No ...X....
3. If (2) not, distance from edge of IBP Area* (state units) 12 mi.
4. Direction from IBP Area* NW
5. Additional data sheet attached? Yes X No .....

Babine Lake

BABINE LAKE 55°19'N, 126°37'W, 2360' ASL. Record: 20-22 years.
Months above 50°F: 3, below 32°F: 5, A.M.T.P. 23.65", A.M.S.F. 106.5", snow % A.M.T.P.: 45.03, days with frost, yearly: 238

E.MAX.T.	48	47	60	67	84	91	91	91	83	68	51	47
M.D.MAX.T.	13.5	27.7	35.8	45.7	57.2	65.1	68.3	66.9	58.4	44.8	30.8	20.3
M.D.T.	5.1	17.2	24.2	34.4	44.1	51.7	55.2	54.1	46.8	36.7	24.8	13.5
M.D.MIN.T.	-3.3	6.7	12.6	23.0	30.9	38.2	42.2	41.2	35.1	28.5	18.8	6.6
E.MIN.T.	-47	-38	-39	-7	13	21	29	20	18	1	-29	-44



Days with frost	31	28	30	29	19	5	1	3	10	22	29	31
M.M.T.P.	2.49	1.85	1.23	1.16	1.56	1.80	2.12	1.88	1.97	2.59	2.35	2.65
Months	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

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7. **Vegetation and Soil**

1

Vegetation

Biogeo-climatic zone:

SBS

Community Reference Number	Vegetation Code: Primary Structural Group	Class	Group	Formation	Sub-Formation	Plant communities (give usual name using full Latin names of a species where applicable)	Area (state units)
1	1	A	1	7	a	Peltigero (aphthosae - rufescentis) - Pleurozio (schreberi) - Arctostaphylo (uvae-ursi) - Pinetum contortae	
2	1	A	1	7	a	Pleurozio (schreberi) - Ptilio (cristae-castrensis) - Vaccinio (caespitosi) - Equiseto (sylvatici) - Pino (contortae) - Piceetum marianae	
3	1	A	2	1		Rubo (parviflori - pubescentis) - Populetum tremuloidis	
4	1	A	1	7	a	Hylocomio (splendentis) - Vaccinio (caespitosi - membranacei) - Pino (contortae) - Abieto (lasiocarpae) - Piceetum glaucae - engelmannii	
5	1	A	1	7	a	Ptilio (cristae-castrensis) - Hylocomio (splendentis) - Corno (canadensis) - Gymnocarpio (dryopteridis) - Piceo (engelmannii - glaucae) - Abietetum lasiocarpae	
6	1	D	1	4	a	Plagiomnio (rugici) - Salico (drummondianae) - Piceetum glaucae - engelmannii	
7	1	A	1	7	a	Plagiomnio (ciliaris) - Rubo (parviflori - strigosi) - Oplopanaco (horridi) - Piceo (glaucae x engelmannii) - Abietetum lasiocarpae	
8	1	M	2	2		Caricetum rostratae	
9	2	I	2	3		Menyanthetum trifoliatae	
10							
11							
12							
13							
14							
15							
16							

Please give information about further communities on a separate sheet

Morrison Creek - Morrison Lake

Partial list of plants:

Vascular plants: *Abies lasiocarpa*
Acer glabrum
Actaea rubra
Alnus sinuata
Alnus tenuifolia
Alopecurus aequalis
Amelanchier alnifolia
Angelica genuflexa
Aquilegia formosa
Arabis glabra
Aralia nudicaulis
Arctostaphylos uva-ursi
Arnica amplexicaulis
Arnica cordifolia
Aster ciliolatus
Aster conspicuus
Aster modestus
Betula papyrifera
Bromus anomalus
Bromus inermis
Calamagrostis canadensis
Carex canescens
Carex disperma
Carex macloviana
Carex rostrata
Castilleja miniata
Cerastium vulgatum
Chrysosplenium tetrandrum
Cinna latifolia
Clintonia uniflora
Collomia linearis
Cornus canadensis
Epilobium angustifolium
Equisetum arvense
Equisetum pratense
Equisetum sylvaticum

Fragaria virginiana
Geocaulon lividum
Geum rivale
Gymnocarpium dryopteris
Heracleum lanatum
Hippuris vulgaris
Juniperus nana
Lappula echinata
Lathyrus nevadensis
Lathyrus ochroleucus
Linnaea borealis
Lonicera involucrata
Luzula parviflora
Lycopodium annotinum
Lycopodium complanatum
Menyanthes trifoliata
Mitella nuda
Oplopanax horridus
Oryzopsis asperifolia
Osmorhiza chilensis
Petasites palmatus
Picea engelmannii
Picea glauca
Picea mariana
} and their hybrids
Pinus contorta
Poa palustris
Populus tremuloides
Populus trichocarpa
Potentilla norvegica
Pyrola asarifolia
Pyrola secunda
Ranunculus gmelinii ssp. purshii
Ranunculus uncinatus (=R. bongardii)
Ribes glandulosum
Ribes hudsonianum
Ribes lacustre
Ribes oxyacanthoides
Rosa acicularis
Rubus parviflorus
Rubus pubescens

Rubus strigosus
Rumex occidentalis
Salix bebbiana
Salix drummondiana
Salix scouleriana
Schizachne purpurascens
Shepherdia canadensis
Sium suave
Smilacina racemosa
Trisetum canescens
Vaccinium caespitosum
Vaccinium membranaceum
Veronica americana
Viburnum edule

Bryophytes:

Barbilophozia spp.
Drepanocladus spp.
Fontinalis sp.
Hylocomium splendens
Plagiomnium ciliare
Plagiomnium rugicum
Pleurozium schreberi
Ptilidium pulcherrimum
Ptilium crista-castrensis
Rhizomnium pseudopunctatum
Rhytidiadelphus triquetrus

Lichens:

Cladonia gracilis
Cladonia squamosa
Peltigera aphthosa
Peltigera horizontalis
Peltigera polydactyla
Peltigera rufescens

Fungi:

Boletus rufus
Ganoderma complanatum
Lactarius deliciosus
Polyporus sulphureus

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7. (cont.) 2

Soil

Community Reference Number	Soil type	Other notes
1	ABC F_5	Dystric Brunisol
2	$AGC_{/ABC}$ P_{2/F_5}	Gleyed Mini Podzol
3	$AC_{/ABC}$ I_{2/F_5}	Regosol - Luvisol
4	ABC F_5	Dystric Brunisol
5	ABC F_5	Brown Wooded Brunisol - Luvisol
6	A O	Low Moor Fen
7	$AGC_{/ABC}$ P_{2/F_5}	Gleyed Brunisol
8	AGC $P_{1/2}$	Gleysol
9	AGC $P_{1/2}$	Subaqueous Gleysol
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

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8. **Similar Communities in Country (or State)**

Community Reference Number	Protected					Protected and Unprotected				
	Abundant	Infrequent	None known	Decreasing	Increasing	Abundant	Infrequent	None known	Decreasing	Increasing
1			X						X	
2			X						X	
3			X						X	
4			X						X	
5			X						X	
6			X				X			
7			X						X	
8			X			X				
9			X				X			
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

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9. **Landscape**

1. General Landscape (give brief description) .....
Gently - ± sharply dissected hills
.....
.....

2. Relief Type

Relief Type	Flat	Undulating (0)-200 m.	Hilly 200-1000 m.	Mountainous > 1000 m.	%
Sharply dissected			5		5
Gently dissected			75	20	95
Incised					
Skeletonised					
%			80	20	100%

3. Special landscape features (list) fairly deep ravine of a creek (Morrison Creek)
.....
.....

10. **Coastline of IBP Area*** none

1. Protected bays and/or inlets — Many ☐ Few ☐ None ☐

2. Substratum. % of coast

Rock	Boulder Beach	Shingle Beach	Sand Beach	Shell Beach	Mud	Coral	Ice

3. Physiography. % of coast

Cliffed	Sloping	Flat

4. Special Coastal Features (list) .....
.....
.....

5. Tide. Maximum range (state units of measurement) .....

6. Total length of coastline :

Less than 1 km. ☐ 1-10 km. ☐ Above 10 km. ☐

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11. **Freshwater within IBP Area***

1.

	Permanent	Intermittent
General		
Standing	X	
Running	X	

2. Standing Water

	Permanent	Intermittent	Unproductive	Productive
Swamps	X		X	
Ponds	X			
Lakes	X			

3. Running Water

	Permanent	Intermittent	
Springs, cold	X		
Springs, hot			
Streams	X		Morrison Creek
Rivers			

4. Special freshwater features .....

.....

12. **Salt and Brackish Water within IBP Area*** none

Salt Lakes		Lagoon		.....	
Estuaries		Salt pools		.....	

13. **Adjacent Water Bodies (not within IBP Area*)**

1. Fresh [ ] Lake [X] River [ ] Stream [ ]

Babine Lake & Morrison Lake

2. Salt and Brackish none

Estuary	Salt lake	Salt pool	Lagoon	Ocean		

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14. **Outstanding Floral and Faunal Features**

1. None .....

2. Fauna

	Species diversity	Abundance of individuals	Superabundance of individuals	Rare species	Threatened/Relict species	Spp. of biogeographical interest	Exceptional Associations	Breeding or Nesting Populations	Migrating Populations	Wintering Populations		
Mammalia	X	X						X		X		
Aves	X	X		X				X	X	X		
Reptilia												
Amphibia		?										
Pisces	X	X										
Insecta	X	X						X		X		

3. Names of main threatened, endemic, relict and rare species

Frequent: moose, mule deer, racoon, beaver, black bear,
bald eagle, trout
(beaver dams are observable)

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4. Flora

	Species diversity	Abundance of particular species	Rare species	Threatened/relict species	Spp. of biogeographical interest	Exceptional associations	Outstanding specimens				
Angiospermae :											
trees		X									
shrubs	X	X									
herbs	X	X			X						
grass		X									
Gymnospermae	X	X			X						
Pteridophyta		X									
Bryophyta	X	X			X						
Lichens and Algae	X	X			X						

5. Names of main threatened, endemic, relict and rare species

.....

.....

.....

15. **Exceptional Interest of IBP Area***

It includes not only pristine parts of nature but also substantial secondary parts, necessary for experimentation.

.....

.....

.....

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16. **Significant Human Impact**

1. General : None in entire IBP Area* .....

None in part of IBP Area* ...X.....

Impact on entire IBP Area* .....

2. Particular

	Past impact	Present impact	Trend			
			Increasing	Decreasing	No change	No information
Cultivation					?	
Drainage					?	
Other soil disturbance			X			
Grazing					X	
Selective flora disturbance			X			
Logging	X					
Plantation					X	
Hunting			X			
Removal of predators					?	
Pesticides					X	
Introductions — plants			X			
Introductions — animals					X	
Fire	X				X	
Permanent habitation					X	
Recreation and tourism			X			
Research					X	

roads

3. Additional details on each type of impact attached?

Yes ..... No ...X.....

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17. **Conservation Status** (required)

	Protection			Utilisation			Conservation Management			Permitted Research			
	none	partial	total	none	controlled	uncontrolled	none	to alter status	to maintain status	experimental	observational	prohibited	
Flora			X	X					X	X	X		
Fauna			X		X				X	X	X		fish
Non-living			X	X					X		X		

18. **References**

1. List major biological/geographical references for the IBP Area.

   Sheet attached? Yes ..... No .....

2. List main maps available for the IBP Area.

   List attached? Yes ..... No 93 M/1

3. Aerial photographs for the IBP Area available?

   For whole area .....X..... For part of area ..... None .....

19. **Other Relevant Information**

This area would protect Morrison Creek area, the conservation of which might be important for fisheries (wild life).

V.J. Krajina Jim Pojar

Signed V.J. Krajina, Jim Pojar,

(Surveyor)

Peter Small, Calvin Parsons