RECREATION ANALYSIS
AND
MANAGEMENT STRATEGY REPORT

TREE FARM LICENCE 38
Squamish

INTERNATIONAL FOREST PRODUCTS LIMITED

April 1996

RRL Recreation Resources Ltd.

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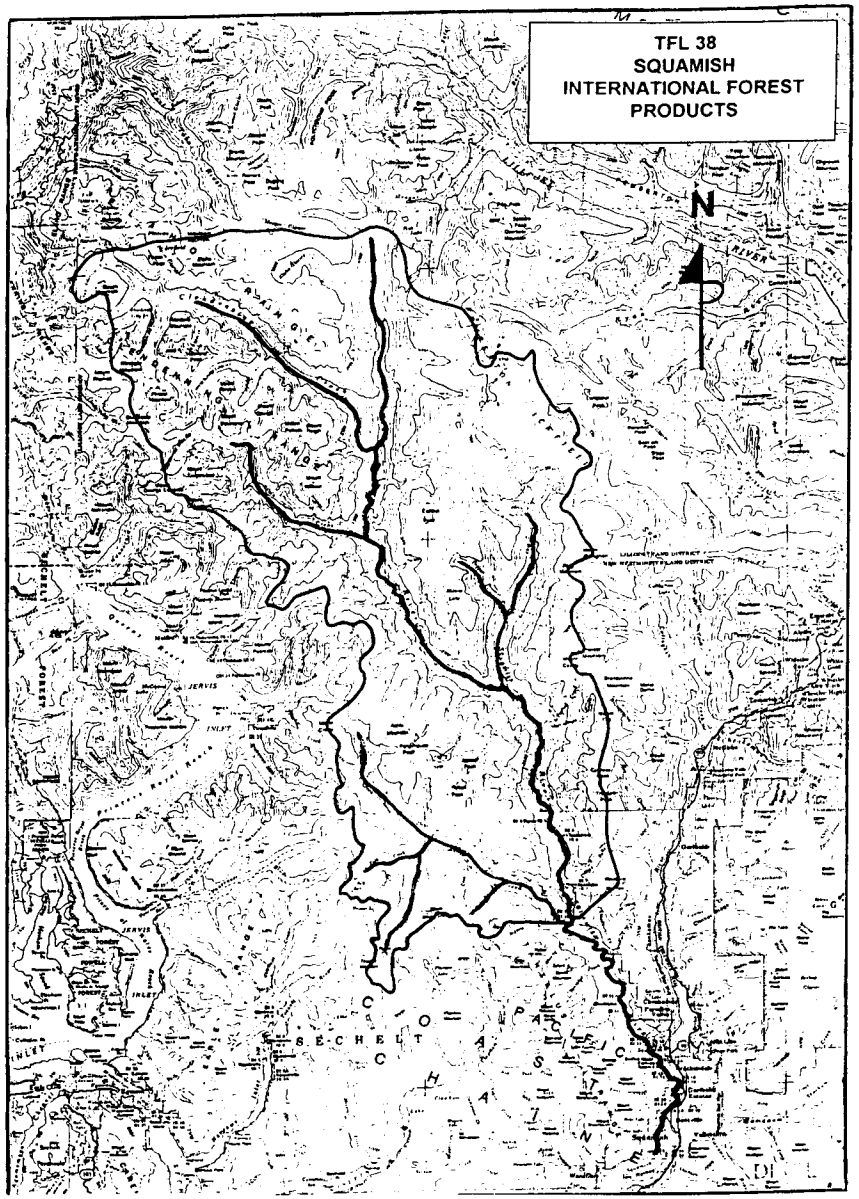

ACKNOWLEDGEMENTS

This project was completed by RRL Recreation Resources Ltd. under contract to International Forest Products (INTERFOR) Limited. Project support was provided by Laszlo Kardos, R.P.F., P.Eng. Resource Forester, INTERFOR.

Background information including Regional and Soo TSA analysis reports was provided by John Tisdale, Resource Officer Recreation, Ministry of Forests, Squamish Forest District.

Information received from resource agencies, recreation groups and organizations, (gathered during the recreation inventory for TFL 38) contributed to several sections of the analysis, including Sections 3.3 - 3.8, 4.0 and 5.0.

This analysis has been prepared by Jeremy B. Webb at RRL Recreation Resources Ltd. He may be reached at tel/fax: (604) 743-4046, or at 3156 Cobble Hill Road, RR #1, Cobble Hill, B.C. V0R 1L0. His Email address is jeremy.webb@cyberstore.ca.

Maps were prepared by Debbie James at RRL and are based on information gathered for the recreation and landscape inventories for TFL 38 (October 1994, August 1994 respectively).

EXECUTIVE SUMMARY

The initial format for Recreation Analysis Reports was based on the guidelines outlined in: An Interim Guide for Completing a Recreation Analysis Report in the Vancouver Forest Region, Ministry of Forests, January 1994.

This format was reviewed by the Ministry of Forests and slightly revised in January 1996 and was retitled: Recreation Analysis and Management Strategy Report, Vancouver Forest Region Guide. A copy of this guide is enclosed in the back pocket of this report.

RECREATION ANALYSIS AND MANAGEMENT REPORT - PURPOSE

The recreation analysis and management report provides a summary of recreation and landscape resources within Tree Farm Licence 38 - Squamish. The purpose of the analysis is to provide a review of the supply and demand for recreation resources and how these apply to TFL 38 and what management implications result.

Key resource management issues are highlighted and management options, rational and implications are identified. A proposed recreation management plan is outlined in the final section of the report.

Several small, coloured maps are included in the report which illustrate the location of important recreation and landscape features and identify potential wildlife viewing areas, mountaineering routes, and the distribution of developed and undeveloped areas in the TFL.

There are also several tables which summarize the type of recreation features and landscape resources which are available.

Areas requiring special coverage or landscape management consideration are discussed as are potential sites for recreation campsites or facilities.

Consideration has been given to resources in adjoining tenures. In developing some of the management strategies in TFL 38, existing recreation land use plans, such as those developed in the adjoining Soo TSA, have been adopted where suitable.

For example, the criteria used to define the extensive backcountry or wilderness areas and recreation Resource Units developed in the Soo TSA along the north and east boundary of TFL 38, have been adopted and used to define similar types of areas in TFL 38. These includes a continuation of the Pemberton Icefied and linking of backcountry or wilderness areas in the Clendenning and Sim Creek systems with the headwaters of the Lillooet River in the Soo TSA.

Similar colours and Resource Unit labels to those used in Ministry of Forest Management Plans have been used on the maps in this report. For example Map 7 which identifies Recreation Management Units in TFL 38, is similar to Figure 2 - Soo TSA Resource Units, 1993 Soo TSA Management Plan.

THE RECREATION AND LANDSCAPE PLANNING AND MANAGEMENT ENVIRONMENT

Management of recreation resources and forest landscapes in TFL 38 (and in other TFL's and TSA's) is moving from a generally informal, reactive approach, towards a more planned, proactive and systematic approach.

New forest management tools are being applied (Forest Practices Code, Geographic Information Systems, Digital Terrain Modelling etc.) and up to date recreation and landscape inventories are available.

EXECUTIVE SUMMARY

THE RECREATION AND LANDSCAPE PLANNING AND MANAGEMENT ENVIRONMENT (continued)

Landscape and recreation inventories have recently been completed for TFL 38. The recreation inventory was completed in October 1994. The recreation inventory was revised in October and December 1994 and updated (changed to a TRIM base) in September 1995. The landscape inventory and analysis were completed in August, 1994.

The combination of new forest management tools and current recreation and landscape resource inventories will enable long term plans to be developed which will help manage the supply of recreation and landscape resources in TFL 38 in order to meet increasing demand.

WILDERNESS AND PROTECTED AREA PROPOSALS

Several backcountry areas within or adjoining TFL 38 have been proposed as wilderness reserve areas by outdoor recreation clubs, organizations and special interest groups. These areas include the Kallahan, Upper Lillooet area and the Randy Stoltmann, Sim and Clendenning Creeks Wilderness Areas.

Negotiations on these and others areas are ongoing as part of the broader, provincial scale program which is nearing its objective of protection of 12% of the provincial land base through Protected Area designation.

As a consequence of these proposals in TFL 38, increased public awareness regarding INTERFOR operations in the TFL has occurred and construction of the Elaho Giant trail (MoF #6358) has taken place. Additional impacts on TFL 38 may include establishment of a Protected Area in the Clendenning, Sims, Elaho area. This would provide a reserve for high quality recreation opportunities i.e., nature interpretation, photography, wildlife viewing, backcountry skiing, hiking, mountaineering and wilderness travel.

Impacts on timber supply have not yet been determined. However in addition to possible reductions to the operable land base in available for harvesting, increased traffic and visitation to TFL 38 would likely develop. The adjacency of a wilderness area to working forest areas would also have impacts on forestry operations. Low intensity forest management along the wilderness area boundary could be required. Refer also to Section 3.8.

FORESTRY ACTIVITY AND LANDSCAPE RESOURCES

A detailed landscape inventory and analysis has been completed from mainline corridors in TFL 38. Visual resources are summarized in Section 3.7. The distribution of Visual Quality Objectives in TFL 38 is summarized on Map 6.

Visual resources are also identified in non-roaded areas through use of a V0 code. This code indicates landscape resources are important to the recreation qualities of an area and that further assessment of landscapes would be necessary if forest harvesting is proposed in these areas.

Management of landscape quality in TFL 38 is guided by the landscape inventory and analysis completed in August 1994.

1.0 INTRODUCTION

1.1 Purpose

The Recreation Analysis and Management Strategy Report has been prepared as a planning and background document for the TFL 38 Management Plan.

The recreation analysis report draws together the key biophysical recreation features and forest landscape data contained in the Recreation Inventory report and maps (updated September 1995) and Landscape Inventory and Analysis (August 1994) for TFL 38.

The recreation analysis for Tree Farm Licence 38 compares the regional and provincial supply of recreation opportunities (features, activities, settings) in the TFL with existing use and demand for public/commercial recreation.

Recreation resources within and bordering on the TFL are assessed on a local and regional basis in terms of current and future demand, activity trends and the availability of resources to meet these demands.

The recreation analysis report is comprised of six main sections:

Sections 1 & 2	Establish the project's terms of reference.
Section 3	Provides a description of existing recreation/landscape resource values.
Section 4	Describes recreation use values and activity demands.
Section 5	Outlines recreation/landscape management strategies and management options for specific recreation/landscape features.
Section 6	Recommends management options for specific features and for broader resource management issues. Maintenance of landscape quality, provision of lands across a certain range of ROS (Recreation Opportunity Spectrum) Classes are among the issues discussed in this section.

A copy of the Recreation Analysis and Management Strategy Report, is enclosed in the back pocket of this report.

Tables, figures and appendices are included which illustrate:

a) TFL 38 location and boundary	(Map 1)
b) the current features and activities available	(Map 2)
c) mountaineering and hiking routes	(Map 3)
d) the distribution of ROS Classes	(Map 4)
e) potential locations for facility development	(Map 5)
f) the distribution of Visual Quality Objectives (VQO's)	(Map 6)
g) recreation management units	(Map 7)
h) tenures adjoining TFL 38	(Map 8)

1.2 Background Information

a. **Location/Area:** Located north of the community of Squamish, Tree Farm Licence 38 encompasses a total area of approximately 218,392 ha of which 63,222 or 29% is considered productive for forestry. Three main drainages, the Squamish River, Elaho River and Ashlu River are located within TFL 38. The Elaho River is fed by two large secondary drainages: Clendenning Creek and Sims Creek. The location of TFL 38 is illustrated in Map 1.

1.0 INTRODUCTION

1.2 **Background Information** (continued)

TFL 38 - Squamish is administered by International Forest Products, Empire Logging Division. TFL 38 borders on TFL 10 - Toba Inlet (also administered by International Forest Products), and borders on the Soo TSA and the Sunshine Coast TSA.

Adjoining tenures are illustrated in Map 8.

TFL 38 is located in the Vancouver Forest Region and wholly within the Squamish Forest District.

TFL 38 is accessible by mainline logging road from the community of Squamish. There is only one road entrance to the TFL.

b. **Recreation Management Classes:** TFL 38 encompasses approximately 220,471 ha. Of that area, approximately 73% is rated as requiring special consideration for recreation (Management Class "1" or "0"). 27% of the land base is rated as requiring no special management consideration for recreation. These Management Classes are summarized in Table 1 in Section 3.0 of this report.

"Special Management" considerations are outlined in detail in the "Executive Summary" of the Recreation Inventory Report for TFL 38 (Sept. 95).

c. **Environmental Sensitivity Area (ESA) Calculations:**

Both recreation and landscape inventories were completed for TFL 38 in 1994/1995. The recreation inventory covers all of the land base in the TFL. The landscape inventory covers travel corridors and lower portions of roaded corridors in the TFL.

The landscape inventory was completed prior to the recreation inventory. This enabled the recreation inventory to include information from the landscape inventory.

In preparation for determining Environmental Sensitivity Area (ESA) calculations, the recreation and landscape inventories undergo a polygon/landscape unit review to determine the *net-down* or *cover constraint* required to protect or manage the recreation or landscape features. The methodology for assessing net downs and cover constraints is outlined in: "*Procedures for Factoring Recreation Resources into Timber Supply Analysis*" Ministry of Forests Technical Report, Recreation Branch, 1993:1.

In polygons where there are other resource values, (in addition to visual values) and where the cover constraint was not considered to be sufficient to "protect" the resource value (i.e. perhaps eagle perch trees on a steep slope within an attractive landscape unit viewed from an inlet) then the "1" or higher ("0") Management Class is usually retained.

In cases where landscape is the main value, and/or the cover constraint is considered sufficient to "protect" the resource values, then Management Class "2", i.e. "normal" forest management practices are usually acceptable.

In areas where no landscape inventory has been done, and where landscape values are present, the polygon attributes will include a V0 code and a (minimum) Management Class code of "1".

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d. **Recreation Sites:**

The following recreation sites are located within TFL 38:

Riverside (#900-0265 - formal recreation site)
Hideaway (#900-0266 - formal recreation site)
Ashlu Canyon (informal recreation site)
Elaho/Squamish River Bridge (informal recreation site)
Squamish River - Mile 29.5 (informal recreation site)
Turbid Creek - Mile 33 (informal recreation site)

Some of the recreation sites are formally managed while others are informal, i.e. are not maintained and have no facilities. Formally managed sites are maintained and have limited facilities.

In addition to the campsites which are accessible by road, there are numerous "informal" trails and campsites in backcountry areas. These sites are not managed by any agency, but may be maintained by the user(s), i.e. the High Falls Creek Trail is maintained by volunteers from the North Shore Hikers Club. Refer to Map 2 and Map 5.

e. **Park and Ecological Reserve Boundaries:**

There are no ecological reserves in TFL 38. TFL 38 does not border on any park areas, however, proposed wilderness areas may be approved which would both remove lands from TFL 38 and the TFL would border on these areas. There are Provincial Parks, Recreation Areas and Ministry of Forests recreation sites in close proximity to TFL 38. These include Garibaldi Park, Princess Louisa Marine Park, Meager Creek Hot Springs, Alice Lake Park and Lake Lovely Water R.A.

TFL 38 borders on areas in the Soo TSA and the Sunshine Coast TSA which include lands which have been promoted as protected areas or wilderness management areas. These areas include:

Upper Lillooet River/Kallahan Protected Area
Stoltmann/Clendenning/Sims Wilderness Area

Potential recreation/landscape reserve areas:

There are good opportunities for extensive recreation reserve areas in TFL 38. Some of these candidate areas are linear in nature, following rivers or creeks and others may cover either a small, localized site or may cover a more extensive area.

High value recreation areas such as the Squamish, Ashlu and Elaho River corridors and Sims and Clendenning Creeks could be included within recreation reserves. Boundaries of the reserves could follow linear riparian management zones which vary in width depending on riparian classifications of the river or stream. (Ref. Forest Practices Code, Operational Planning. Part 10 Riparian Management Areas. April 7/95).

1.0 INTRODUCTION

Potential recreation/landscape reserve areas: (continued)

There are several advantages to establishing recreation reserves areas. These include:

1. Clear management focus for specific areas, sites or features.
2. Established reserves help with long term planning.
3. Highly "visible" and serve to emphasis "integrated" forestry management practices.
4. Facilitate visitor recreation planning through identification on maps, brochures etc.

f. **Recreation Management Units:** For the purposes of this analysis report, TFL 38 has been divided into eight (8) Recreation Management Units (RMU's), which form the framework for developing the recreation management objectives in the TFL. These recreation objectives are outlined in Section 6.0.

Recreation/landscape resource management objectives are summarized (for each RMU) in Tables 4 & 5 in Section 5.2.

Recreation features are identified in the recreation inventory (Sept. 95) and have been assigned Feature Significance and Management Class ratings. These are summarized in Table 1 in Section 3.0.

g. **Recreation Feature Significance:** The Ministry of Forests recreation inventory system includes a rating of biophysical feature significance based on the quality, uniqueness and availability of the feature.

The location of recreation features in TFL 38 which have high "significance" is illustrated in Map 2 in Section 3.0.

h. **Terrain and Topography:**

The topography in TFL 38 ranges in elevation from near sea level to a maximum of approximately 2882 metres (Elaho Mountain) elevation.

Five large river and creek drainages traverse the TFL, flowing mainly from north to south to the Squamish River, which flows south to its confluence with the head of Howe Sound.

Above the valley bottom areas there is generally dense, conifer, forest cover extending up to the treeline. Upland areas, with the exception of some large icefields, are steep, with sub-alpine and alpine vegetation at higher levels. Upland areas are generally quite rugged and require strenuous hiking to cover any distances.

i. **Cultural:**

There are no archaeological sites recorded on the Heritage Conservation Branch inventory (Ministry of Municipal Affairs, Recreation and Culture. A possible site at the head of Shovelnose Creek is recorded in the recreation inventory for TFL 38. Mountaineers familiar with the area reported that chipped and heated obsidian are present at the site. (TFL 38 Recreation Inventory 1995).

1.0 INTRODUCTION

i. **Cultural:** (continued)

It appears likely that there are prehistoric sites in TFL 38, given the access afforded by the Squamish River and the relatively easy terrain along the river valley. TFL 38 is within the traditional territory of the Squamish Band, First Nations.

Early exploration of the Squamish - Elaho - Clendenning drainages by Stanley Smith are documented in the Canadian Alpine Journal and local mountaineering books. See Section 3.0.

j. **Access:**

There is good road access along the three main river drainages in TFL 38. Roads are located in the Squamish, Ashlu and Elaho Rivers. Road access extends almost the full length of each of these drainages. In addition, there are numerous secondary and spur roads which all provide access to more remote parts of the TFL.

Many of the older logging roads are overgrown or are deactivated, but they do allow hiking access to many of the alpine traverses.

Refer to the map in the back pocket of this report. Contact INTERFOR Empire Logging Division in Squamish for current road conditions (Tel: 892-5244).

k. **Climate:**

Seasonal changes in weather are a major factor which directly affect the type of activities which occur in TFL 38. The numbers of visitors also are affected.

The majority of recreation use occurs during April - December. Limited recreation use occurs January - March. Participation in different activities varies depending on several factors including availability of the resource i.e. steelhead runs or weather, i.e. availability of snow or stable weather, which allows extended backcountry skiing traverses, or social schedules, i.e. school and statutory holidays.

Snowfall restricts road use during the winter months. The ends of mainline roads are generally free of snow by the third week of April to the first week of May.

l. **Recreation Activities:**

A detailed summary of existing and potential recreation activities is provided in Section 3.3.

Recreation activities take place throughout much of TFL 38. Valley bottoms, rivers and creeks, sub-alpine and alpine areas and the extensive snow fields and glaciers are all used for outdoor recreation activities.

Valley bottoms which are not roaded tend to be heavily forested or have dense vegetation which makes travel on foot slow and difficult until sub-alpine and alpine areas are reached. Most of the long distance mountaineering routes stay above the treeline.

Recreation activities take place year around, with the type of activity varying depending on the season.

1.0 INTRODUCTION

l. **Recreation Activities:** (continued)

Both non-motorized and motorized recreation activities are supported in TFL 38. Motorized recreation is not limited to areas with road access, as snowmobiling occurs in some of the more remote areas i.e. the Pemberton Icefield.

The different recreation activities which occur in TFL 38 are listed in Section 3.3.

m. **Landscape Values:** Landscape sensitivity and recommended visual quality objectives are summarized in Section 3.7

A detailed landscape inventory and analysis was completed for TFL 38 in August 1994. A total of 71,074 ha (approximately 33% of TFL 38) has been mapped from the Squamish, Ashlu and Elaho road corridors.

Overall landscape quality in these areas is very high. 56,193 ha or 79% of the landscapes visible from the main travel corridors have an Existing Visual Condition (EVC) of Partial Retention or higher.

TFL 38 has some areas of poor landscape quality. 7110 ha have an EVC of Maximum Modification or Excessive Modification. The recommended Visual Quality Objectives for these areas is Partial Retention. (Note: these areas have been measured in plan view).

Refer to the landscape inventory for the location of these areas.

The requirements of visually effective green-up or VEG, may reduce the available harvest in some areas until the previously harvested areas have recovered. Time periods to achieve VEG are estimated at a minimum of 14 years and/or a minimum height of 3. (Ref. First Look at Visually Effective Green-up in B.C., MoF 1:1994)

2.0 METHODOLOGY/PROCEDURES

Background information for this recreation analysis was obtained from the recreation and landscape inventories, and through recreation use surveys, regional recreation analysis reports and from licensees and provincial government ministries.

2.1 Public, Agency and Licensee Input

Local, regional and provincial recreation user groups, associations and individuals were contacted during 1994 and 1995 as part of the recreation and landscape inventories for TFL 38.

Information from the recreation surveys and from interviews with individuals, guides, outdoor recreation groups, has helped determine areas of existing and potential recreational use, the activities pursued, duration of visits and locations of routes and key features.

3.0 DESCRIPTION OF EXISTING RECREATION RESOURCE VALUES

TABLE 1 - RECREATION INVENTORY SUMMARY

RESOURCE EMPHASIS AREA	MANAGEMENT CLASS(0,1)		MANAGEMENT CLASS (2)		KEY FEATURES	KEY ACTIVITY	COMMENTS & RESOURCE IMPLICATIONS
	ROS	Ha	ROS	Ha			
TFL 38 - Squamish	4	9,237	4	6,170	E2, E3, A1, W5, V1, V2, M2, M3, L9	a, p, q, l, j, u, d, i, t	-landscape management -facility provision and maintenance
	3	9,565	3	30,998	E2, E3, M2, M3, W5	a, p, q, l, t, j, u	-access management -motorized - non-motorized interface
	2	39,390	2	16,523	Q1, R1, W5, E1, E7, L8	l, m, p, q, i, m, x, v	-trails, routes -access management
	1	103,177	1	5,411	Q1, R1, G1, G2, W5, E1	l, m, x, p, n, q, i	-access management -activity impacts and compatibility
TOTAL: (0,1) 161,369 ha (2) 59,102 ha (0,1,2) 220,471 ha							

3.0 DESCRIPTION OF EXISTING RECREATION RESOURCE VALUES

TABLE 3 - EXISTING RECREATION SITES AND TRAILS (INTERFOR)

RESOURCE EMPHASIS AREA	SITES[1]				TRAILS[3]		
	VEHICLE ACCESS		BACKCOUNTRY[2]				
	#	vus	#	Units	Type	#	km
TFL 38 - Squamish	900-0265 (Riverside) 900-0266 (Hideaway) ___-___ (Ashlu Canyon) ___-___ (Elaho/Squamish Bridge ___-___ (Squamish River, Mile 29.5) ___-___ (Turbid Creek, Mile 33)				T2 Highfalls T2 Demmger T2 Elaho Giant	#6133 #6326 #6358	9.5 km 1.0 km 1.0 km
	NOTE: In addition to the recreation sites listed, there are sites in sub alpine and alpine areas which are accessible by hiking routes. Refer to the recreation inventory for TFL 38.						
TOTAL							9.5 km

KEY RECREATION FEATURES

1. High Falls Creek Trail
2. Sigurd Creek Trail
3. Hideaway Recreation Site
4. Riverside Recreation Site
5. 29 1/2 Mile Recreation Site
6. 30 Mile Recreation Site
7. Elaho Bridge Recreation Site
8. Squamish River
9. Squamish River Canyon
10. Elaho River
11. Devil's Elbow
12. Elaho Canyon
13. Ashlu Canyon
14. Ashlu Falls (Mile 25)
15. Peach Creek Falls
16. "Truck Wash" (Maude Frickett Creek)
17. High Falls Creek Canyon
18. Nymph Pool
19. Spam Lake
20. Jill G. and Adrianna Lakes
21. Ashlu Mountain
22. Mount Cayley
23. Ring Mountain
24. Table Mountain
25. Cloudburst Mountain
26. Mount Fee
27. Pemberton Icefield
28. Clendenning Glacier
29. Tinniswood Glacier
30. Elaho Glacier
31. Ashlu-Elaho Divide
32. Squamish-Cheakamus Divide
33. Tricouni Lakes Alpine Area
34. Blanca Lakes Alpine Area
35. Sigurd Lake Alpine Area
36. Falk/Tatlow Alpine Area
37. Elaho Range
38. Clendenning Range
39. Clendenning Valley
40. Sims Valley
41. Bierman Lakes Alpine Area
42. Racoon Pass
43. Ashlu Mine Site
44. Roadside Old Growth Stands
45. Glacial Erosion Features
46. Plateau
47. Upper Elaho Trail and Old Growth

3.0 DESCRIPTION OF EXISTING RECREATION RESOURCE VALUES

3.1 Key Features

The location of key features in TFL 38 is illustrated in Map 2 - Key Recreation Features of this report. Map 2 provides a summary and overview of the spatial distribution of the main features in the TFL. Key recreation activities are summarized in Section 3.3.

The main recreation features and associated activities are summarized as follows:

a. Lakes and Rivers

Lakes: There are no lakes of significant size (over 100 ha surface area) in TFL 38. In addition, of the small lakes within the TFL, few are located in areas with road access, i.e. in the valley bottoms. Exceptions include "Nymph Pool" on Tatlow Creek at the A1105 bridge crossing.

There are numerous lakes located in alpine areas. Most of these, i.e. Tricouni (Seagram) Lakes, Sigurd Lake, Teare Lake and Goldbrick Lake are backcountry recreation destinations and are well known to local outdoor groups.

Rivers:

Three main river systems are located in TFL 38. The main characteristics of each river are summarized as follows:

Squamish River. Length within TFL 38 is approximately 49 km. The mainstem rises from 30 metres elevation to 1066 metres elevation at the headwaters near Table Mountain. Supports fish species: Salmon, Steelhead, Dolly Varden, rainbow trout. An average of approximately 500 anglers fish for steelhead along the Squamish River. 200-600 wild steelhead are caught and released each year (Ref. Ministry of Environment - Release Records Data Base. 1988-1993).

Commercial river rafting is established on the Squamish and Elaho Rivers. Four rafting companies conduct rafting trips in TFL 38. Refer to Section 4.5.

Formal and informal campsites are found along the river bank. The wide range of wildlife has the potential to support nature study. Eagle viewing attracts large numbers to the Squamish river every fall. Upwards to 3700 eagles have been counted at Brackendale (January 1994).

Ashlu River. Length: 36 km. Elevation rises from 30 metres at the confluence with the Squamish River to 1158 metres at the height-of-land headwaters.

Elaho River. Length: 60 km. Elevation rises from 152 metres at the confluence with the Squamish River to 1128 metres elevation at the headwaters. Angling, camping, river rafting, canoeing (on suitable sections) and kayaking, wildlife viewing, photography. Devils Elbow canyon is a well known feature. Moose, wolf, goats, grizzly bears. Rainbow trout and Dolly Varden. Steelhead are present to just above Devils Elbow.

The start of the Elaho Giant Trail is located at the terminus of the Elaho Mainline. The trail leads through stands of large Douglas fir.

3.0 DESCRIPTION OF EXISTING RECREATION RESOURCE VALUES

b. Historic trails, old logging roads and historical interpretation:

TRAILS AND ROUTES

There are numerous high quality mountaineering traverses and routes in TFL 38. (Refer to Map 3 on the following page). Most of the routes are accessed off the end of logging spur roads, some of which are passable by four wheel drive vehicle up to a certain point. Visitors should contact Empire Logging Division in Squamish (Tel: 892-5244) to obtain current road information.

These hiking and climbing routes are well described in several books. Detailed information regarding hazards, access, difficulty ratings and feature attractions is provided. (Fairly, A Guide to Climbing and Hiking in Southwestern B.C.).

Trails and routes are mapped on current operational maps. Files are maintained by the Squamish Forest District. The most recently constructed trails are the Deminger Trail (#6326) located at 34 Mile, and the Elaho Giant Trail (#6358) located at the end of the Elaho Mainline.

Formal management plans for the maintenance and protection of these trails is being developed. Planned improvements to the Deminger Trail include the addition of interpretative signs. (D. Dobeck. April 1996).

Under the new Forest Practices Code Act, Section 102, trails or paths which qualify as formal trails would be assigned a T2-Managed Trail designation. Project numbers and Schedule A exhibits would be prepared for each trail. Further work, maintenance or trail building, without formal permission from the Ministry of Forests is not permitted under Section 102.

Recent route/trail building (Elaho Giant Trail, #6358) by special interest groups in the Elaho River area has caused controversy. Routes/trails have been built to draw public attention to groves of low elevation, old growth Douglas fir. Trees of record size are reported to be present. These areas are proposed for forest development and harvesting. Roads and bridge building has been started. The area has also been proposed by the Western Canada Wilderness Committee as "The Stoltman Wilderness". Maintenance of this trail has been by WCWC. (WCWC Tel: 683-8220) (See also Section 3.8 - Wilderness).

The High Falls Creek Trail (#6133) is informally maintained by members of the North Shore Hikers Club (Contact Person: Halvor Lunden, Tel: 738-8639).

Identification of trails and mountaineering/skiing routes on forestry operation and management maps assists with planning and management of these resources. Identification of the trails and routes on a separate, detailed map base may also be helpful if any rescue efforts were required.

No native trails or archaeological sites have been identified to date in TFL 38. Old trails are likely to be present. Their condition or significance is not known. Further research into these features could enhance the protection and management of these resources where they exist.

Early exploration of the Squamish, Elaho and Clendenning Rivers is recorded in an account by Stanley Smith who travelled the area in 1893 in search of an overland route through the Coast Mountains to the Pacific Ocean. (Ref. Fairley 1993 and Munday, Canadian Alpine Journal 1940).

TFL 38
SQUAMISH
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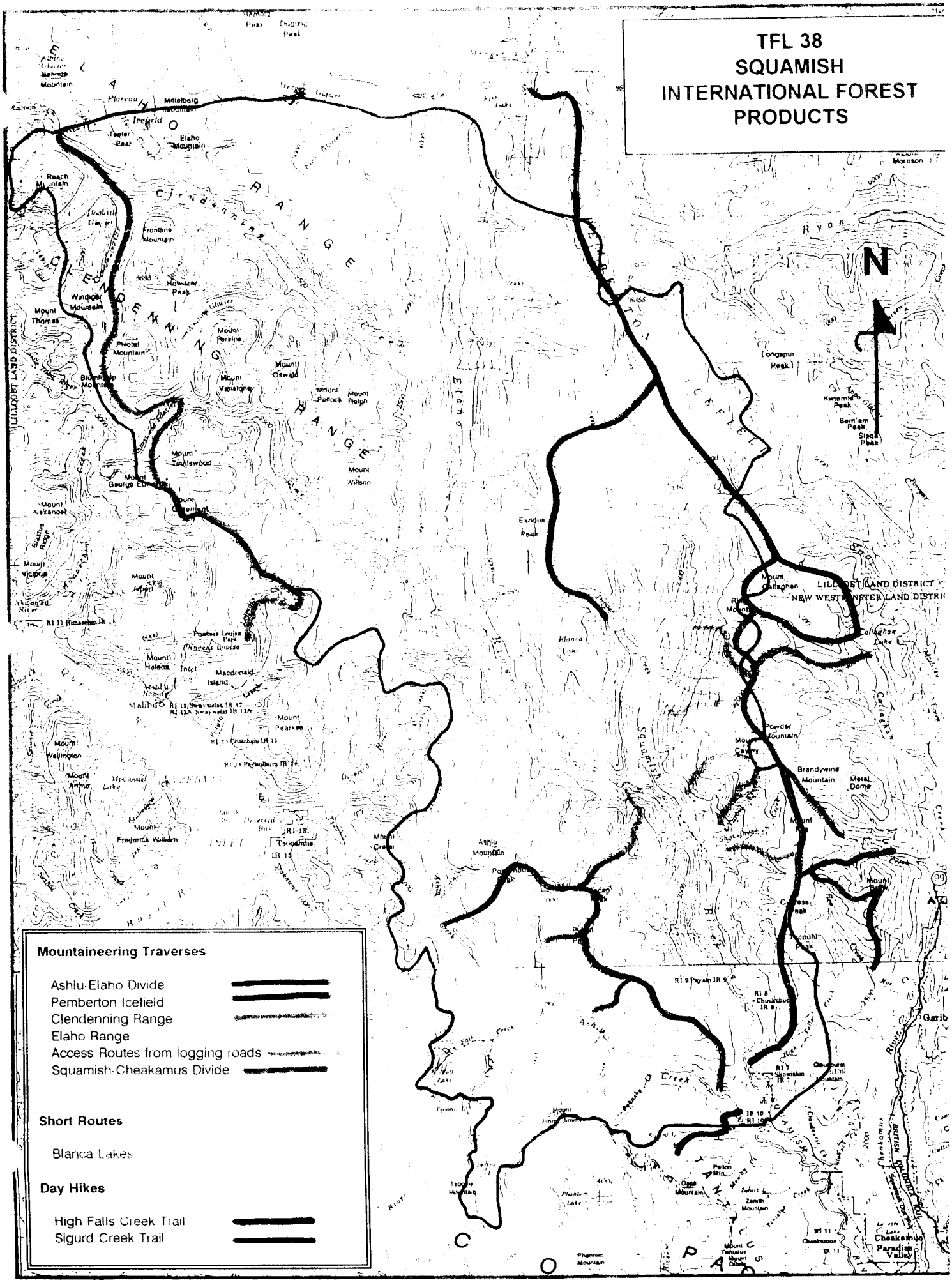


3.0 DESCRIPTION OF EXISTING RECREATION RESOURCE VALUES

TRAILS AND ROUTES (continued)

Backcountry Routes and Access Roads In TFL 38:

Route or Destination	Access route
Ashlu-Elaho Divide	A700 spur logging roads on north side of Ashlu M/L and from the Elaho M/L at the old bridge site.
Mount Cayley	Branch 800 roads off Squamish M/L
Blanca Lakes, Blanca Peaks, Maude Frickett Lake	From E140, S420 logging spurs through steep forest on west flank of the Squamish River valley. Also gentle approach through open timber on Maude Frickett Creek off Branch 300 on the Elaho M/L.
Peach Creek Falls	Via short road off G Main
Sigurd Lake	West access off Branch 600 roads off Ashlu M/L. East access up Sigurd Creek Trail. Trailhead west side of Ashlu River near Ashlu Bridge.
Pemberton Icefield	North access - logging roads along Meager Creek past the hotsprings South access - logging roads along Callaghan Creek. Alternate south access through the Blanca Lakes.
Clendenning Range	South access from the head of Princess Louisa Inlet. North access across Elaho Glacier from Meager Glacier.
Elaho Range	From Meager Creek logging roads to Meager Glacier
Squamish-Cheakamus Divide	South access from High Falls Creek Trail or from logging roads along Roe Creek or Brandywine Creek. North access from logging roads along Callaghan Creek.
Ashlu Mountain	Leave Ashlu M/L near mile 40, just north of Shortcut Creek.
Cloudburst Mountain	Branch 200 off Squamish M/L
Tricouni and Seagram Lakes	High Falls Creek Trail, north of the Powerhouse @ Mile 23 along the Squamish Mainline.

Backcountry Brochure Opportunity

The location of mountaineering routes, contact phone numbers and safety information could be provided in a map/brochure. INTERFOR could either produce the brochure or support and assist with development of the concept and publication.

INTERFOR's knowledge of road access and development plans, which affect access routes to mountaineering routes, would be fundamental to accurate development of such a brochure or map.

The early 1893 exploration and surveying of the Squamish, Elaho and Clendenning Rivers and on up to Chilko and Tatla Lake by Stanley Smith and his companion Mr. Doolittle (Fairley 1993) could be included as part of a brochure, highlighting some of the history in TFL 38. Smith's travels are detailed in the 1940 edition of the Canadian Alpine Journal in an article by Don Munday.

Traditional travel routes of First Nations could also be illustrated in a brochure.

3.0 DESCRIPTION OF EXISTING RECREATION RESOURCE VALUES

c. Travel Corridors:

Motorized Travel Corridors

An extensive road system has been developed in TFL 38 to access areas for logging. The road network provides access to the Squamish, Ashlu and Elaho Rivers. In addition, spur roads, which vary in condition; some are passable by four wheel drive vehicles, other are deactivated, provide access at least a part of the way to sub alpine lakes and to the start of several alpine traverses. There are approximately 112 km of mainline road in TFL 38.

Road Corridor Summary

Mainline	Length (km)
Squamish	42
Ashlu	30
Elaho	40

Visual Quality Objectives are identified (August 1994) for landscapes visible from the Squamish, Ashlu and Elaho road corridors. Refer to Section 3.7, for a summary of Visual Quality Objectives for the TFL. The distribution of VQO's along travel corridors is illustrated in Map 6.

Non-Motorized Travel Corridors

Extensive travel on foot or on skiis takes place in the sub alpine and alpine areas of TFL 38. Mountaineering and ski-touring routes are identified on Map 3 of this report.

3.2 Recreation Opportunity Spectrum - ROS

The following table provides a summary of the distribution of ROS Classes in TFL 38.

Recreation Opportunity Spectrum Distribution

TFL 38 - Squamish

ROS CLASS DISTRIBUTION	1995	1986*
PRIMITIVE	108,588	76,826
SEMI-PRIMITIVE NON-MOTORIZED	55,913	90,707
SEMI-PRIMITIVE MOTORIZED	40,563	32,354
ROADED RESOURCE LAND	15,407	18,144
RURAL	-	-
URBAN	-	-
Total Area	220,471	218,031

*(S. Patterson: 1986 TFL 38 Recreation Inventory).

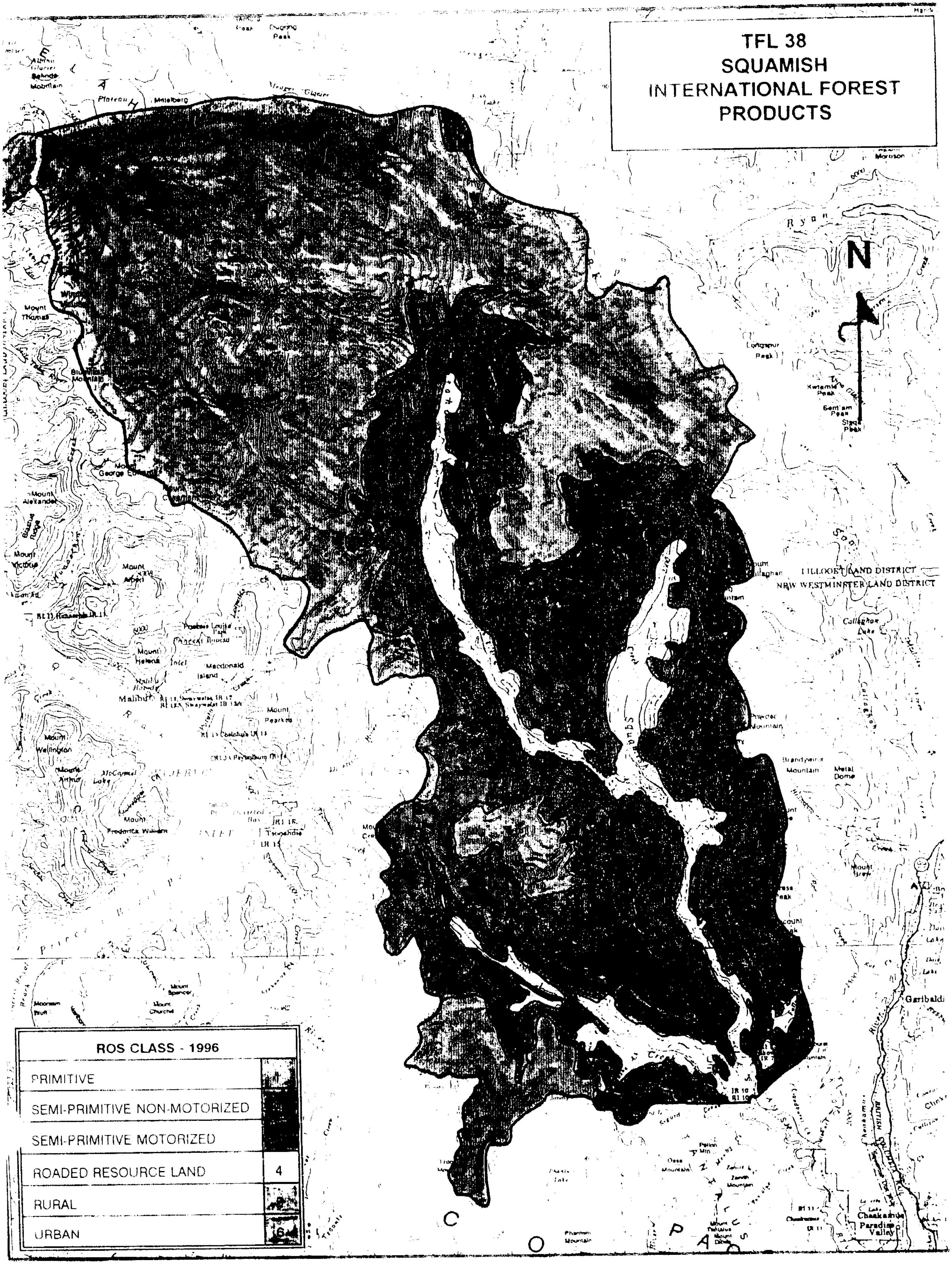
Notes: Changes in interpretation of ROS Class definitions accounts for differences between earlier and current Primitive Class measures. If Primitive and Semi-Primitive Non-Motorized Classes are combined for 1995 and for 1986, the distributions are similar indicating that the distribution of Primitive land has remained stable over the past 10 years.

Increases in the amount of Roaded Resource Land are reflected (and would be expected) in this summary. The amount of Semi-Primitive Motorized land has decreased as RRL has increased.

The spatial distribution of current ROS Classes is illustrated in Map 4 on the following page of this report.

The above table reflects the September 1995 distribution of ROS Classes and Management Classes within TFL 38. Minor changes to the ROS Class distribution as a result of ongoing forest harvesting and recovery, will develop over time in operable forest areas in the TFL.

The area measures are based on digital planimeter measures of 1:20,000 scale forest cover paper map prints. The total area may vary from other TFL area measures due to slight errors in area measures, line widths etc.


TFL 38
SQUAMISH
INTERNATIONAL FOREST
PRODUCTS
N
LILLOOET LAND DISTRICT
NEW WESTMINSTER LAND DISTRICT
ROS CLASS - 1996
PRIMITIVE
SEMI-PRIMITIVE NON-MOTORIZED
SEMI-PRIMITIVE MOTORIZED
ROADED RESOURCE LAND
4
RURAL
URBAN
6

3.3 Existing and Potential Activities Summary

Activity	Existing and Potential Areas
a-angling	Squamish River, lower reaches of Ashlu River, Elaho River are the main recreational fishery areas. Angling for salmon and steelhead. All angling is subject to current regulations. Heli fishing: Jill Lake, Adrianna Lake, Snafu Ck. area. Dolly varden, rainbow trout, salmon, steelhead.
b-boating	Squamish River. More suited to kayaking, rafting, canoeing.
c-canoeing	Squamish River, Elaho River. Several river rafters have drown in rivers in TFL 38. "Devils Elbow" on the lower Elaho is particularly dangerous and should be approached only with experienced river guides with local knowledge. The Ashlu is not suited for canoeing or rafting.
d-kayaking/rafting	As above. There are several commercial river rafting companies which offer trips in TFL 38.
e-scuba/skin diving	Rivers and lakes are not suitable
f-water skiing	No lakes available. Location is too remote.
g-swimming	Waters are generally too cold (glacial fed) to encourage swimming. A hot spring is reputed to be located between Mt. Cayley and Mt. Fee. Possible swimming?
h-beach activities	Sand and gravel bars along the Squamish River are very popular with campers in summer. Sites along the Elaho are also popular.
i-camping/picnicking	As above.
j-hunting	In areas open to hunting, except around logging camps, active logging areas and residential areas. Refer to hunting regulations synopsis.
k-caving	No caves reported in TFL 38.
l-hiking	There are two trails and several overnight routes which are suitable for experienced hikers. Logging mainline and spur roads provide access to important alpine routes.
m-mountaineering	Six well established mountaineering routes in TFL 38. There are also several shorter, overnight routes. There are also two trails. Refer to Map 3. Most routes continue on to adjoining tenures.
n-nature study	Throughout TFL 38.
o-orienteering	Potential throughout much of the TFL.
p-viewing	High use along road corridors. High sensitivity also associated with mountaineering routes which have views into the TFL. Several backcountry mountaineering routes have spectacular views.
q-wildlife viewing	Throughout TFL 38 - deer, wolf, black bear and grizzly bear, moose, goat, a wide variety of birds.
r-gathering/collecting	Box wood is gathered along the Squamish River corridor. Mushroom picking, berries, gathering floral supplies is growing in popularity. Trends in native plant gardens may result in increased interest in plants in TFL 38. Measures to protect plants in the TFL may be necessary.
s-horseback riding	Not fully assessed. Some potential for equestrian use along lower banks of the Squamish River.
t-trail bike riding	Mainline, secondary and spur logging roads.
u-four wheel driving	Very popular. ATV's are also commonly in use on roads and along dry river beds.
v-snowmobiling	Extensive use. Pemberton Icefield is popular. Some conflicts with backcountry skiers in this area.
w-snowshoeing	Throughout the TFL. Growing in popularity. Pemberton Icefield, Table Mountain, Ring Mountain.
x-skiing	Very popular. Main mountaineering/ski-mountaineering routes are identified in Map 3. Extensive backcountry areas i.e. Pemberton Icefield is 33,000 ha in area.
y-icefishing	Not available.

3.4 Recreation Issues

Areas where recreation and landscape values have potential to impact on the management of timber resources are identified in the TFL 38 recreation and landscape inventories.

The Feature Significance and Management Class codes used in the recreation inventory and the Visual Quality Objectives (VQO's) used in the landscape inventory, act as basic guides for management of these non-timber resources.

The information provided in the recreation surveys completed during the recreation inventory for TFL 38 provides detailed information regarding many recreation features and the types of activities in which visitors participate.

I) Access

Logging roads go through a cycle of activation and deactivation as areas are developed and then undergo recovery. While seasonal and permanent road deactivation is part of normal forestry practice, there are implications for recreational users.

In TFL 38 there are several mountaineering routes which access backcountry areas of TFL 38. Access to many of these mountaineering routes is via mainline and spur or secondary logging roads. The condition of roads in TFL 38 varies from two wheel drive, four wheel drive or impassable except on foot. The location of routes is illustrated in Map 3.

Having road status information available through brochures or maps, regarding which roads are open, their condition etc., would help potential visitors to plan their recreation activities in TFL 38.

Road conditions and other information could be posted on the INTERNET with an INTERFOR home page.

In cases where access is particularly important for recreation use i.e. to an alpine traverse, campsite or high quality lake, consideration for maintaining the access should be given, i.e. INTERFOR maintains the Branch 200 road for recreation access to Cloudburst Mountain and the Tricouni Lakes.

The access route summary table in Section 3.0 can be used as a guide to roads and routes used for backcountry recreation in TFL 38.

INTERFOR currently (and Weldwood historically) has no trail building or maintenance building program. Existing trails have been build by local outdoor groups under their own initiatives.

There are three formally managed trails in TFL 38 (Refer to Section 3.5). In addition there are numerous hiking and climbing routes in TFL 38. Routes are considered to be different from trails as they are generally not clearly marked and have no improvements such as cleared paths.

Plans for further trail building could be considered, in conjunction with outdoor recreation groups, who could develop and/or maintain formal trail systems in TFL 38.

In addition to demonstration forests or forest reserve areas and upgraded campsites, trails could be part of a broad recreation and landscape management initiative, designed to keep pace with future recreation use.

3.4 Recreation Issues

I) Access (continued)

Many visitors and potential visitors to the TFL would be largely unaffected by logging road deactivation, which is confined to secondary and spur roads. Mainline roads are kept open, allowing motorized visitors access to the Squamish, Ashlu and Elaho drainages.

For visitors wanting detailed road information, a map of mountaineering routes and access roads could be provided by INTERFOR and could be made available through the Outdoor Recreation Council, the Federation of Mountain Clubs of B.C., the Alpine Club of Canada or through regional and local tourism centres.

ii) Recreation

Non-Motorized

The majority of TFL 38 (165,500 ha or 75%) is undeveloped. Of this area, 108,588 ha are within the Primitive Class of the Recreation Opportunity Spectrum (ROS) and 55,913 ha are within the Semi-Primitive Non-Motorized Class. These areas include such features as the Pemberton Icefield, the Sim and Clendenning drainages, Ashlu Mountain area between the Ashlu and Elaho River drainages and includes extensive areas used for high elevation alpine traverses.

These extensive backcountry areas are well known to outdoor recreationists and have substantial capacity to support increased use. Most activity in these backcountry areas includes at least one overnight camp and frequently longer stays. Long distance ski/mountaineering traverses of 6-21 days duration, in the backcountry of TFL 38 are being undertaken by an increasing number of visitors.

Management emphasis in these areas should continue to be on providing extensive areas which can support backcountry, non-motorized forms of recreation activities.

Motorized

The extensive mainline and spur logging road network in TFL 38 permits motorized travel along each of the main river corridors as well as to several sub-alpine areas. Motorized recreation includes two and four wheel drive and ATV vehicles.

Key recreation activities are summarized in Section 3.3 in a table format. The spatial distribution of recreation sites, facilities and activities is illustrated in Map 5.

iii) Facilities

Recreation facilities are limited relative to the numbers of recreation users. This is a management issue in motorized areas and less so in non-motorized areas.

The existing facilities include picnic tables, outhouses and fire rings at some sites. Ongoing vandalism occurs. There is evidence of discharge of firearms (i.e. bullet holes in garbage containers) in campsite areas.

3.4 Recreation Issues

iii) Facilities (continued)

Upgrading of recreation site facilities, in cooperation with the Ministry of Forests and with local outdoor recreation clubs or public service groups is one approach which could improve recreation site conditions.

There are approximately 10-11 informal recreation sites in addition to six "formal" campsites. Only two sites, Hideaway (900-0266) and Riverside (900-0265) have actual Schedule "A" designated site status. Formal status of both sites dates from November 28, 1979.

A telephone for emergency use could be made available at Camp 3 near the Elaho Squamish River junction and at Camp 2 near the high falls Creek hydro station. Several requests for an emergency telephone were made in the TFL 38 recreation survey (1995).

iv) Landscape

Landscape sensitivity has been identified in TFL 38 along motorized and non-motorized travel corridors and in association with most higher value recreation features . Visual Quality Objectives have been developed for travel corridors and specific features in TFL 38. Landscape values are summarized in Section 3.7.

v) Historical Resources

Logging and settlement history of the Squamish River area and TFL 38 is not well documented in existing INTERFOR public information materials. Remains of old logging camps and settlements often have potential candidates for historical interpretation.

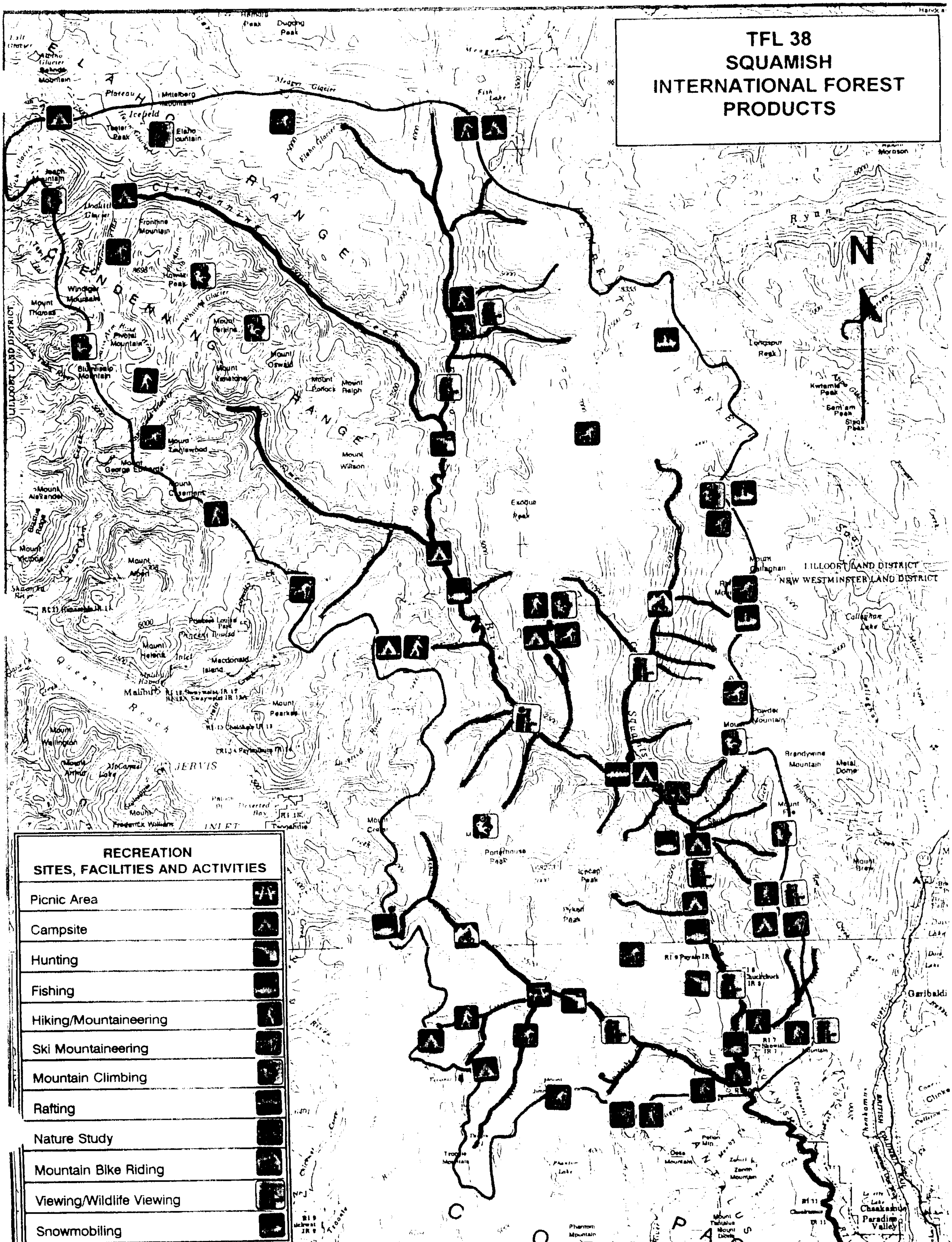
Expansion on the history of logging in TFL 38 could provide visitors with a greater awareness of the time lines associated with forestry activity and of the historical nature of forest management in TFL 38. This could answer some frequently asked questions such as "how long until the forest comes back?"

A format similar to that used in the book, The Working Forest of British Columbia (G. Burch, A. Walker, P. Robson, 1995) could be used effectively in public input programs, i.e. review of development plans and facilitation of discussion on forest management issues.

vi) Archaeological Resources

When historical or archaeological resources are formally identified, they are classified as "archaeological sites" by the Archaeology Branch of the Ministry of Small Business, Tourism and Culture, Victoria.

No prehistoric sites are currently recorded in TFL 38.


TFL 38
SQUAMISH
INTERNATIONAL FOREST
PRODUCTS
N
RECREATION
SITES, FACILITIES AND ACTIVITIES
Picnic Area
Campsite
Hunting
Fishing
Hiking/Mountaineering
Ski Mountaineering
Mountain Climbing
Rafting
Nature Study
Mountain Bike Riding
Viewing/Wildlife Viewing
Snowmobiling
LILLOOET LAND DISTRICT
NEW WESTMINSTER LAND DISTRICT
Exodus Peak
Longspur Peak
Mount Callaghan
Brandywine Mountain
Metal Dome
Powder Mountain
Mount Fee
Mount Brew
Garibaldi
Paradise Valley
Mount Sir Richard
Mount Tantalus
Mount Dione
Phantom Mountain
Mount Jimmy Jimmy
Tricouni Mountain
Ossa Mountain
Zenith Mountain
Ponderhouse Peak
Icecap Peak
Pykett Peak
Mount Wilson
Mount Pollock
Mount Ralph
Mount Oswald
Mount Perkins
Mount Vanstone
Mount Tinniswood
Mount George Edwards
Mount Casement
Mount Alfred
Mount Wellington
Mount Arthur
Mount Helena
Mount Pearkes
Mount Frederick William
Mount Thomas
Mount Victoria
Malibu
Queens Reach
JERVIS INLET
Macdonald Island
Frontline Mountain
Howitt Peak
Windigo Mountain
Blumlisalp Mountain
Joseph Mountain
Elaho Mountain
Icefield
Fish Lake
Callaghan Lake
Kwetamin Peak
Sem'am Peak
Slag Peak
Morrison
Dugong Peak
Plateau
Mittelberg Mountain

3.5 Licensee/Forest Service Recreation Sites and Trails

Recreation Sites - Motorized Access:

There are approximately 10-11 informal recreation sites in addition to six "formal" campsites. These sites have motorized access. Only two sites, Hideaway (900-0266) and Riverside (no 900 number) have actual Schedule "A" designated site status. Formal status of both sites dates from November 28, 1979. (Refer also to Section 3.4)

Recreation Sites - Non-Motorized Access:

In the backcountry of TFL 38, there are several popular informal campsite areas which have no motorized access. These include sites at Racoon Pass, base of Doolittle Glacier, Seagram/Tricouni Lakes, Relay, Falk, Tearne and Goldbrick Lakes, and on an open plateau area south of Meager Creek along the TFL boundary. Refer to Map 2 and Map 5 which illustrate the location of these sites.

Trails: There are three formally designated trails in TFL 38.

Non-Motorized Trails - TFL 38

High Creek Falls Trail	#6133
Deminger Trail	#6326
Elaho Giant Trail	#6358

Trails provide additional areas for non-motorized recreation and allow visitors to view the forests from another perspective.

There are opportunities for trails to traverse demonstration forests, follow along river banks or to improve access to sub-alpine and alpine meadows or lakes in TFL 38.

Trails derive several benefits from being designated as formal recreation trails (T2). Benefits include being available for funding of construction, maintenance, signs, maps, etc. under the Ministry of Forests and Forest Renewal B.C. programs.

3.6 Parks, Commercial and Private Recreation

BC Lands has recently (April 1996) completed the first draft of a report titled "Sea to Sky Commercial Backcountry Recreation Opportunities Study". The report encompasses the Soo TSA and TFL 38. This report is due for release in May 1996. This report contains a review of potential sites and opportunities in the Squamish, Howe Sound area. (Crown Lands, Burnaby. Tel: 660-5500).

The Ministry of Small Business, Tourism and Culture compiled a Tourism Resource Inventory in 1994 which includes southwestern B.C.. While this report is still not available as a report, the inventory includes maps which rate land base capability to support commercial tourism operations and activities. (R. Gowan, Planner-SBTC, April 30/96).

3.6 Parks, Commercial and Private Recreation (continued)

The planned Squamish Forest District Land and Resource Management Plan will draw the SBTC, BC Lands reports and others to develop a regional analysis of recreation and landscape supply and demand. The LRMP process is expected to be initiated in the 1996 government fiscal year. (Norbert Grenenger, Planning Officer, MoF Squamish. May 1, 1996).

Commercial recreation activities or business within TFL 38 include guided river rafting, kayaking, fishing, backcountry skiing, mountaineering, heli-skiing and glacier skiing.

There is no hunting guiding territory (MoE Management Unit 2-6) in TFL 38.

There are nine licensed angling guides who use the Squamish, Elaho and Ashlu Rivers in TFL 38. (1995/1996 Government Fiscal Year. MoE Surrey Office: Ron Gellner. Tel: 582-5200).

Angling is well established on the Squamish River. However, conservation measures could close the river to sport and food fishery in the near future in an effort to replenish stocks which are decreasing.

Six rafting companies (1996) are permitted by BC Parks Commercial River Rafting Program, to conduct trips on the Squamish and Elaho Rivers in TFL 38. (BC Parks, Commercial River Rafting Program. Ktistine Wallach. Tel: 356-0858)

RAFTING COMPANIES IN TFL 38 (1996)

Company	Telephone	Employees	Years Established	Trips year
Rec Rafting Adventures	(604) 684-4438	-	-	-
Rivers and Oceans Unlimited Expeditions	(604) 685-3732	12	3-5	30-50
Wedge Rafting Ltd.	(604) Tel: 932-7171	10	6-10	20 plus
Whistler River Adventures	(604) Tel: 932-3532	20	11-20	30
Sunwolf Outdoor Centre	(604) Tel: 898-1537	-	Established Sept. 1995	-
River Quest	(604) Tel: 898-4633	-	Applying for permit for 1996	-

There are approximately 14 rafting companies which operate in the Vancouver Forest Region (Recreation Inventory and Supply Analysis. Terra Firma 1994).

3.7 Visual Quality/Scenic Resources

The main travel corridors in TFL 38 are summarized in Section 1.2.

The spatial distribution of Visual Quality Objectives (VQO's) along these corridors is illustrated in Map 6 at the end of this section. Management of these areas is governed by MoF cover constraints based on approved VQO's.

These cover constraints frequently coincide with recreation, wildlife, fishery and slope stability values. In addition, provisions in the Forest Practices Code Act pertaining to river, stream and river riparian management zones can coincide with recreation and landscape management objectives.

3.7 Visual Quality/Scenic Resources

Landscape resources along the Squamish, Ashlu and Elaho River drainages were assess in 1994. The distribution of this resources is summarized below.

TFL 38 - Squamish - Motorized Travel Corridors - Landscape Summary Tables

TABLE 1 Landscape Sensitivity (LSR)

LSR	AREA	%
HIGH	19,831 ha	28%
MEDIUM	48,681 ha	68%
LOW	2,565 ha	4%
TOTAL VISIBLE AREA:	71,074 ha	

TABLE 2 Visual Absorption Capability (VAC)

VAC	AREA	%
HIGH	2,068 ha	3%
MEDIUM	40,150 ha	56%
LOW	28,836 ha	41%
TOTAL VISIBLE AREA: 71,074 ha		

TABLE 3 Existing Visual Condition (EVC)

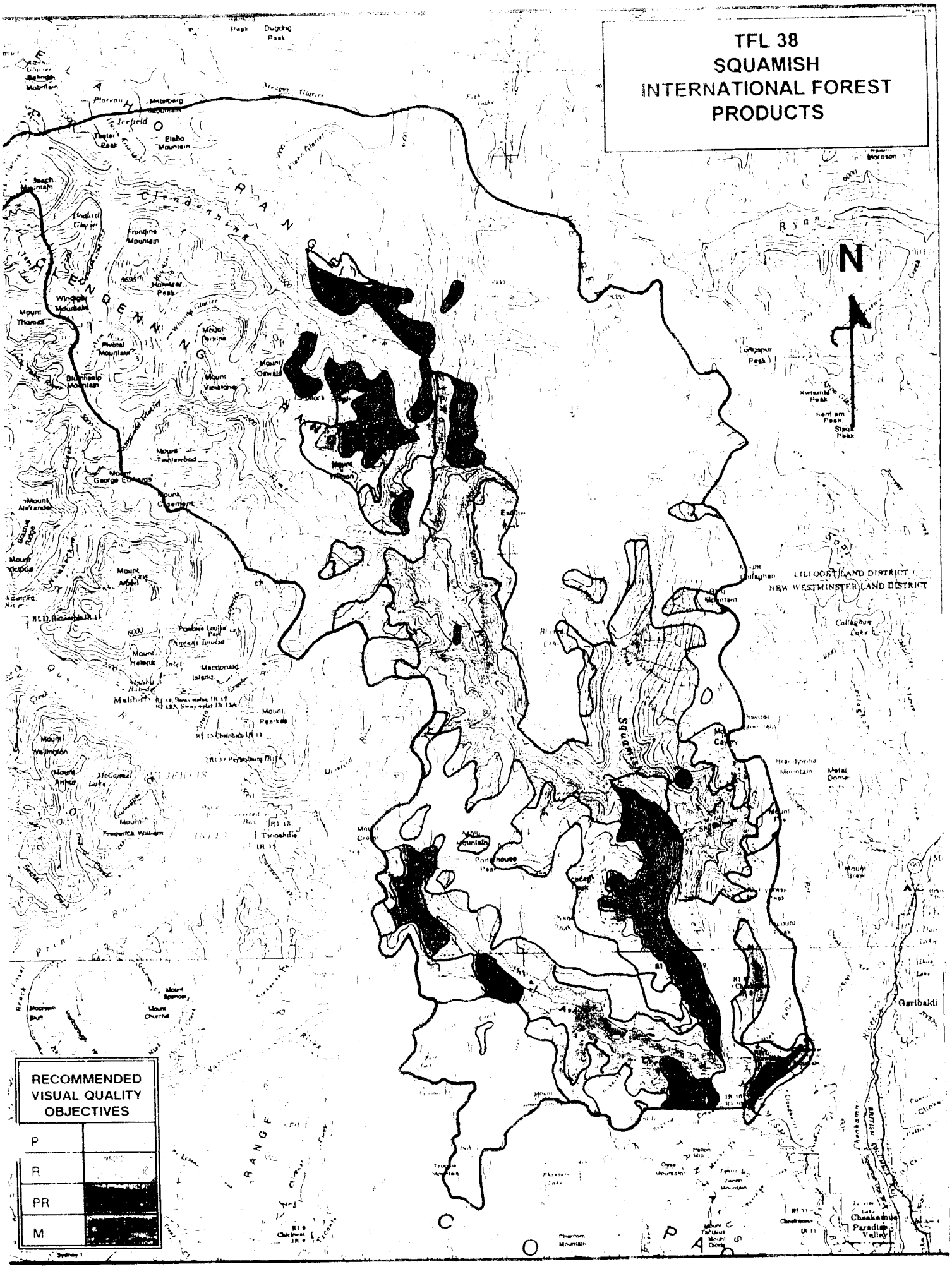
EVC	AREA	%
P	0 ha	0%
R	52,737 ha	74%
PR	3,456 ha	5%
M	7,771 ha	11%
MM	6467 ha	9%
EM	643 ha	1%
TOTAL VISIBLE AREA: 71,074 ha		

TABLE 4 Visual Quality Objectives (VQO's)

RVQO	AREA	%
P	0 ha	0%
R	19,287 ha	27%
PR	14,440 ha	21%
M	37,347 ha	52%
MM	0 ha	0%
EM	0 ha	0%
TOTAL VISIBLE AREA: 71,074 ha		

Total Area of TFL 38: 218,392 ha
Total Area Visible: 71,074 ha or 33% of TFL 38 is visible from the Squamish, Ashlu and Elaho logging road mainlines.

VQO AND EVC CODES: P - Preservation, R - Retention, PR - Partial Retention, M - Modification, MM - Maximum Modification, EM - Excessive Modification


TFL 38
SQUAMISH
INTERNATIONAL FOREST
PRODUCTS
N
RECOMMENDED
VISUAL QUALITY
OBJECTIVES
P
R
PR
M
LILLOOET LAND DISTRICT
NEW WESTMINSTER LAND DISTRICT

3.8 Wilderness

Wilderness, is defined by the Ministry of Forests as: *An area no less than 5000 ha, no less than 8 km from any primitive road, and essentially in a pristine condition with no evidence of alteration by humans.* (Ref. Ministry of Forests Recreation Manual, Section 6.3.1).

"Wilderness" recreation activities can be supported in a range of settings. However, features must be unmodified and the area must be of sufficient size to support activities such as hiking, camping, viewing the scenery or wildlife viewing. These type of activities require considerable space and an arbitrary area of a minimum of 5000 ha is suggested by the MoF guidelines.

Topographic heights-of-land, deep bowls or tarns may create small, isolated areas which have "wilderness" characteristics. These areas are sometimes referred to as "pocket wilderness". In these instances, the size and remoteness criteria are not as important as are the unmodified features within the "pocket wilderness".

Section 3.2 provides a summary of ROS Classes. The hectares in each Class are shown, and as a percentage of the total TFL 38 area. The spatial distribution of the ROS Classes is illustrated in the ROS Distribution Map, (Map 4) in Section 3.2 of this report.

The majority of TFL 38, 165,500 ha or 75% of the land area is rated as Primitive or Semi-Primitive. In this backcountry area, the lack of trails and dense vegetation focuses most of recreation use in the sub-alpine and alpine. Much of the upland areas have scattered sub-alpine or alpine vegetation which is very attractive and is suitable for extended hiking. These upland areas have potential to attract increased numbers of visitors in the future, particularly if access were improved.

TFL 38 borders TFL 10 to the west. TFL 10 encompasses an extensive area (approximately 208,525 ha) which is classed Primitive and Semi-Primitive. These areas in TFL 38 and TFL 10, combined with adjoining areas in TFL 39 and in the Soo Timber Supply Area (TSA) and in the Sunshine Coast TSA, comprise an extensive backcountry area which supports very high quality recreation opportunities. While there are extensive timber resources in these areas, there are also large areas which are either not forested, or may be considered non-productive or inoperable for forestry purposes. There are also several wilderness area proposals which over lie these backcountry areas.

Pacific Ecoregion - Wilderness Area Distribution by Biogeoclimatic Zone

Biogeoclimatic Zone	Roaded	Roadless (million ha.)		Total
		Operable	Inoperable*	
CWH	1.4	0.8	0.5	2.7
MH	0.4	0.4	0.9	1.7
AT	<0.1	<0.1	1.4	1.4
TOTAL	1.8	1.2	2.8	5.8

* Includes Protected Areas

TFL 38 represents about 4% of the Pacific Ranges Ecoregion (218,392 ha of a total of 5,800,000 ha) and represents about 6% of inoperable roadless area (wilderness (172,305 ha of 2,800,000 ha) within this region, assuming the bulk of the area that doesn't contribute to the Timber Harvesting Land Base is inoperable (e.g. 218,392 ha minus 46,087 ha). (Ref. T. Vold, Provincial Wilderness Forester, Victoria 4/19/96).

3.8 Wilderness Management

A joint management strategy, identifying the extent of the backcountry resource within the Pacific Ecoregion and outlining the main management objectives for the area, should be considered. More formal management of these resources would improve recreation opportunities and could serve to reduce potential conflicts between recreation and timber resources.

A strategy for future management of these backcountry areas is increasingly necessary in order to meet future demands for high quality backcountry recreation.

Resource conflicts based on the management of these backcountry areas have taken place i.e. Sim/Clendenning. Future conflicts in other backcountry areas appears likely. A forward-looking recreation and landscape management strategy can identify potential conflicts, or can address conflicts before the management of them becomes difficult i.e., conflicts between snowmobilers and skiers in the Pemberton Icefield area. Further study of existing and potential conflicts is necessary prior to development of a management strategy.

The main management objective for most of the backcountry areas should be preservation of wilderness settings for backcountry recreation opportunities. The size of these areas should be based in part on providing areas with sufficient carrying capacity to accommodate future increases in use.

Preliminary boundary definition for this area could be based on Primitive Class areas and could be refined through a review of timber supply and recreation values.

INTERFOR has within TFL 10, TFL 38 and TFL 45, a total of approximately 425,000 ha of Primitive Class land. Each of these TFL's also border on extensive Primitive land areas. Note that there is no Primitive Class land in TFL 54 - Maquinna (Clayoquot Sound), also licensed to INTERFOR.

Wilderness Management - Commercial Tourism

Conflicts between commercial recreation and forestry activity in TFL 38 are currently limited. However, the interface between logging development, primarily road based harvesting and commercial recreation business can be sensitive.

Development plans in TFL 38 are moving towards several backcountry areas. Consideration of the possible impacts of timber harvesting on tourism, and impacts of tourism on timber harvesting will require consideration during the anticipated review of applications for commercial backcountry recreation business.

Landscape resources, including landscapes viewed by river rafters or mountaineering parties, play a key role in commercial tourism opportunities. Management of landscapes requires careful consideration along motorized corridors and non motorized corridors and when they are viewed from backcountry areas.

The Ministry of Crown Lands has recently completed (April 1995) a draft Sea to Sky - Backcountry Commercial Recreation Tourism Opportunities Study. Applications for permits for commercial recreation businesses are on hold until this report is reviewed and formally released.

3.8 Wilderness Management (continued)

There is keen interest by many parties to develop commercial backcountry recreation businesses in Squamish, Whistler and along the Sea to Sky corridor. As commercial recreation applications are reviewed, impacts on management of backcountry resources in TFL 38, and adjoining backcountry areas should be considered.

The backcountry or wilderness areas within INTERFOR tenures, include the highest peak within British Columbia, Mount Waddington, elevation 4016 metres. Numerous peaks over 10,000 ft/3048 metres, large glaciers and extensive ice and snow fields including the Pemberton Icefield in TFL 38, (33,000 ha area) are strong indications that a strategy for management of backcountry areas is necessary if impacts of forestry operations are to be addressed.

4.0 DESCRIPTION OF USE, VALUE AND DEMAND

4.1 Current Demand

Current and potential recreation activities in TFL 38 are summarized in a table in Section 3.3.

Visitor trends for adjoining areas i.e. the Soo TSA and the Greater Vancouver Regional District, can be broadly interpreted to help determine potential trends in recreation activities which will likely apply to TFL 38.

Refer to Section 5.1b for a summary of supply and demand. Refer also to Section 3.1, for a summary of key features.

4.2 Forecasting Demand and Projecting Trends

Accurate measures of number of visitors, or reliable statistical estimates are not available for TFL 38. However, some general trends are summarized as follows:

Use of Ministry of Forests recreation sites in the Soo TSA has increased approximately 10% per year between 1989-1992. 1993 visitation is estimated to have increased by 12% with the exception of Meager Creek, where visitation during the period November-March increased from approximately 10,750 in 1992 to 23,000 in 1994, an increase of 214%. (Changes in record keeping partially account for this change in recorded numbers of visitors. J. Tisdale, Recreation Officer, Squamish Forest District. April 1996).

Increases in the number of visitors to TFL 38 are substantial. Recent increases of 52% per year in TFL 38 are reported by INTERFOR. This compares with approximate annual increases of 12% per year for Garibaldi Provincial Park. (Soo Coalition Newspaper, 1995).

Visitor trends in TFL 38 have not been studied sufficiently to determine which factors are contributing to the increases in TFL 38, or which activities are the most popular. A general observation is that motorized recreation has increased the most, and that camping along the main river corridors has increased dramatically over the last 5-10 years.

Whether this increase in use will continue at the same, greater or lesser rate is difficult to determine. It is likely however, that use will continue to grow.

Steady as opposed to dramatic increases in outdoor recreation appear most likely. However, some activities, such as river rafting may see significant increases as river awareness increases (through such provincial initiatives as Heritage Rivers, BC Rivers Day etc).

4.0 DESCRIPTION OF USE, VALUE AND DEMAND

4.2 Forecasting Demand and Projecting Trends (continued)

Increases in mountaineering can be expected in TFL 38. The broader interest in mountaineering as an outdoor recreation activity is contributing to increased participation. TFL 38 offers a range of mountaineering opportunities which range from moderate difficulty to "challenging on an international scale".

Opportunities for extended backcountry hiking, skiing, ski touring, ski mountaineering and snowmobiling trips are well supported in TFL 38. These activities are growing in popularity. The area is readily accessible from Vancouver, Squamish or Whistler via road/routes, helicopter or ski plane.

A high demand for large backcountry or wilderness areas was expressed by Squamish residents. Residents of the GVRD and the Fraser Valley also have expressed strong demand for backcountry recreation areas. (Ref. GVRD Household Survey. Jan. 1994).

Photography and nature study are growing rapidly in popularity. The extensive road networks in TFL 38, and the attractiveness of the three main drainages will likely attract increased numbers of visitors to these corridors.

Off-road or four-wheel driving continues to be popular. Magazine articles and books make reference to specific roads and routes in TFL 38. Increased use will likely develop.

Commercial recreation in TFL 38, including river rafting, kayaking, angling, snowmobiling and guiding for general outdoor recreation trips and for more specific trips such as mountaineering is still on a relatively small scale. No commercial recreation facilities have been built in TFL 38 to date but proposals appear likely.

Demand for increased quality of campsites facilities, services and facilities are being seen at Ministry of Forests and Licensee campsites. Measures to meet this demand can include increased presence of staff at campsites, training of summer staff, fees for service, closure of gates to campsites during evening hours, etc. (similar to Provincial & Federal Parks).

There appears to be a general willingness to pay for recreation services providing the service or facilities are of higher quality than would otherwise be available. This is reflected in the acceptance of cost-recovery type fee schedules being implemented at provincial and national parks and at Ministry of Forests and some forest industry campsites, i.e. TFL 46 TimberWest Forest Limited).

Growing interest in forestry issues may be partially met through forestry tours and through demonstration and interpretative forests. There are three interpretative forests in the Soo TSA. Development of an interpretive forest in TFL 38 would add to this base. No visitation data from the Soo TSA interpretative forests is available, so it is not possible to determine whether another interpretative forest is necessary simply based on visitor numbers. However, potential interpretative forest sites in TFL 38 could be identified and planned to accommodate anticipated future demands.

TFL 38 is off any major travel corridor, and has a single road entrance/exit. This single access point would allow counts of vehicle traffic to be made, which could assist with recreation and landscape planning. Single point access also would enable campsite fee collection.

4.0 DESCRIPTION OF USE, VALUE AND DEMAND

4.2 **Forecasting Demand and Projecting Trends** (continued)

While increases in vehicle traffic have occurred along Highway 99 (7.3% per year at Squamish), use on secondary or logging roads in the Squamish area has not been measured. However, there is likely a trend towards increased recreational use of roads in TFL 38 and this increase will place greater demands on management of landscape quality viewed from these roads and from key recreation areas in the TFL.

Angling is a well established recreation activity in TFL 38 and continues to be popular along the Squamish, Ashlu and Elaho Drainages. Angling for steelhead (catch and release) is popular and numbers of anglers will likely increase as the quality areas for angling in the TFL attract new anglers.

4.3 **Estimate of Intrinsic Recreation Values**

There is an established practice of self-serve, informal style camping and recreating in working forests and in the backcountry areas throughout British Columbia. TFL 38 provides extensive areas and resources where outdoor recreation activity can take place. The presence of these areas or sites, or knowing that they are available, is important to visitors planning a visit or actually visiting the area.

4.4 **Gaps in Meeting Outdoor Recreation's Needs**

- Better identification of informal recreation sites and backcountry recreation areas and routes on forestry operational and planning maps.

- Provide more information for visitors regarding TFL 38 recreation features and forestry operations, history, future management plans, etc.

- A range of brochures, detailing forest features, trails, routes, hikes, etc., would encourage visitors to explore specific areas or features in the TFL.

- Upgraded campsites and additional campsites and trails to meet the growing demand. This includes interpretative forests, signs, etc.

- Improve availability of emergency shelter and communications. Telephones could be available for emergency use at INTERFOR Camp 3 at the Elaho Squamish junction and at Camp 2 near the BC Hydro station near Mile 22 on the Squamish mainline.

- Supporting the trend towards more intensive recreation management could include upgrading suitable informal trails to formal recreation trail (T2) status.

4.4 **Gaps in Meeting Outdoor Recreation's Needs** (continued)

Communication With User Groups

- There is a generally negative, resource depletion image associated with forestry and a positive, resource protection image associated with parks, ecological reserves, etc. Continued emphasis on programs, publications e.g. The Working Forest or Pacific Forest - The Forest Reborn, may be taken to reduce the gap between these conflicting images. Increased emphasis should be placed on the linkage between forest harvesting, management of visual impacts and planning for recreation use and other non-timber values, as being current and ongoing normal forest management practice.

- Forest harvesting areas are distributed throughout TFL 38. In this "working forest", active logging, particularly heli-logging and alternative logging sites, will be of interest to most visitors. Information on heli-logging and other harvesting systems could be made available to visitors.

- Brochures which provide visitors with guidelines for responsible camping could be made available at visitor centres. Practices similar to the BC Parks and Ministry of Forests, "You pack it in - You pack it out" could be promoted. Signs and brochures are available from the Ministry of Forests. Implementing fees for campsite use and providing daily servicing could also be used to improve camping experiences in TFL 38.

Recreation Services - Benefits

The involvement of INTERFOR in servicing recreational opportunities in TFL 38 appears to have several positive aspects including:

1. A measure of control over recreational use where currently it is limited.

2. INTERFOR currently derives no direct monetary return from recreation or landscape resources. The high quality landscapes and recreation features, along with the existing logging and forestry infrastructure, could generate revenue for INTERFOR if a commercial infrastructure were developed by INTERFOR. This could also provide INTERFOR with some management control in the working forest - commercial tourism interface.

3. Direct communication with visitors to the area.

4. Opportunity to inform visitors about forestry management in TFL 38, i.e. explanation of landscape management tools and to show examples in the field.

5. Increase visitor satisfaction. TFL 38 offers very high quality recreation/landscape resources. However, facilities are limited and some are of poor quality. Most visitors have a high quality experience. However, as use increases, it may be come increasingly difficult to maintain visitor satisfaction without improved facilities, increased site servicing, and more formal programs and management.

6. Reduced conflicts over resource use by incorporating stakeholder input into forestry, recreation, wilderness and landscape management planning.

4.5 Commercial Recreation

Commercial tourism use of TFL 38 is limited. Refer to Section 3.6.

Several areas of TFL 38 have good potential to support commercial tourism activities. A more detailed study of commercial opportunities, in conjunction with an assessment of potential impacts on forest management activities, is recommended.

Commercial opportunities in TFL 38 include:

1. campsites or resorts/lodges/cabins along rivers or in remote backcountry areas, snowmobile tours, ski touring, heli-skiing.
2. mountain bike tours along logging roads during non working hours.
3. guided nature study tours, hiking tours, etc.
4. guided rafting, boating, canoeing, kayaking trips on the Squamish, Ashlu and Elaho River systems.

Any change from forestry use to another land use (i.e. commercial recreation), would undergo a detailed application review process involving the Ministry of Crown Lands, the Ministry of Forests, the licensee holder and the general public.

5.0 RECREATION MANAGEMENT OPTIONS AND RECOMMENDATIONS

5.1a Recreation Analysis - Background

A review of existing use levels suggests that while the recreation resources available in TFL 38 are more than adequate to sustain current and projected recreation use; implementing intensive recreation and landscape management could ensure the quality of recreation experiences are available for future use.

Management of key recreation features, backcountry areas and of sensitive landscape resources will be the three main factors which influence the capability of the TFL to sustain future increases in recreational use.

5.1b Supply and Demand

In addition to visitor/vehicle counts, angling and hunting statistics and information gathered in the recreation inventory for TFL 38 in 1994/1995, there are several regional and provincial socio-economic reports and outdoor recreation surveys which have recently been completed. A summary of supply and demand issues affecting TFL 38 is as follows:

Supply

TFL 38 is within the Vancouver Forest Region, which accounts for 52% of all outdoor recreation use in British Columbia. An estimated 45 million visits to provincial forest lands took place in 1993. (Ministry of Forests 1991. Outdoor recreation survey 1989-1990: How British Columbian's use and value their public forest lands for recreation.)

Squamish residents generally place a higher value and have higher participation rates in outdoor recreation activities than do residents in the GVRD or the Fraser Valley. 70% of Squamish residents consider outdoor recreation to be very important. This compares with 53% of GVRD residents and 45% of Fraser Valley residents. (Household Survey for Planning Future Outdoor Recreation and Natural Areas GVRD-Praxis. 1993).

TFL 38 is both an access corridor to outdoor recreation, and a destination in itself. Roaded and non-roaded areas attract visitors for day trips, overnight camping and for more extended periods of up to two weeks.

Demand

Outdoor recreation is pursued as a major activity by both B.C. residents and non-residents. TFL 38 has resources which can meet demand for both roaded and non-roaded recreation. Approximately two-thirds of all B.C. Resident, outdoor recreation in provincial forests, occurs in roaded areas (35 million visitor days) and one-third occurs in roadless, backcountry areas (18 million visitor days). (1989-1990 Outdoor Recreation Survey).

B.C.'s outdoors are an important provincial tourism trademark. Adventure tourism or commercial backcountry recreation is reported to be the fastest growing sector of the tourism industry. (B.C. Ministry of Environment, Lands and Parks, 1994. Commercial backcountry recreation policy.)

In the Squamish area, 41% of employment is forestry based, 23% various community businesses, 11% accommodation and food services, 12% unemployment benefits and 13% from pension income. (1986 Census).

5.1b Supply and Demand

Demand (continued) In 1994, approximately 16,770 people visited TFL 38 on weekends and undertook outdoor recreation activities. (INTERFOR weekend visitor counts, 1994). If the recent trend continues (of 50% increases each year), an estimated 190,000 people/year could visit TFL 38 during weekends by the year 2030.

TFL 38 Visitor Activity Summary (Weldwood/Interior Records)

Activity	Number of Visitors														
	1972	1973	1974	1975	1976	1977	1978	1979	1980		1988	1989[1]	1990[2]	1991[3]	1992
Canoeing	105	269	141	126	150	110	124	225	197		63	38	89	67	118
Fishing	5,173	5,332	4,271	3,320	2,448	1,989	1,433	1,913	1,640		679	953	1,270	1,611	1,325
Hunting	648	486	308	383	223	203	181	245	201		258	193	351	549	614
Sightseeing/recreation	3,530	3,555	2,755	1,979	2,395	3,319	1,485	2,284	2,760		1,348	1,471	1,523	2,284	2,609
Prospecting	84	35	203	64	73	256	89	35	33		45	27	19	63	110
Hiking	131	142	240	128	167	123	70	99	105		186	106	413	520	557
Firewood			667	319	477	677	184						94	122	124
Recreation/camping			266	64	27	250		61					991	1,739	2,075
Boxwood picking												39		94	85
Skiing	28											27	31	39	20
Rafting												14	24	45	116
Mushroom picking															72
Bee keeping								8				37	39		22
Trapping													5		
TOTAL	9,679	9,819	8,873	6,385	5,960	6,907	3,566	4,870	4,936		2,579	2,905	4,849	7,133	7,877

1972-1980 - April/May - October/November weekends only

[1] February - November on weekends only
[2] January - December on weekends only
[3] March 1 - December 1 on weekends only

5.1b Supply and Demand

The Biometrics Section of the Ministry of Environment, Lands and Park Wildlife Branch collects data on hunting use from surveys mailed to hunters. This raw data is analyzed and estimates of use are extrapolated from survey responses. In addition to the five mammal species listed in the table below, game birds are hunted in TFL 38. Species include: Ruffed Grouse, Goose, Blue Grouse, ducks, Spruce or Franklin's Grouse and Ptarmigan.

YEAR	SPECIES	ESTIMATED NUMBER OF HUNTERS	ESTIMATED HUNTER DAYS*	ESTIMATED KILL FIGURES
1988	Black Bear	44	208	12
	Wolf	n/a	n/a	n/a
	Mule Deer	112	360	51
	Mountain Goat	1	1	0
	Cougar	n/a	n/a	n/a
1989	Black Bear	81	217	21
	Wolf	12	240	0
	Mule Deer	83	210	12
	Mountain Goat	5	22	0
	Cougar	n/a	n/a	n/a
1990	Black Bear	66	198	18
	Wolf	6	48	0
	Mule Deer	130	933	31
	Mountain Goat	5	20	1
	Cougar	n/a	n/a	n/a
1991	Black Bear	97	312	27
	Wolf	n/a	n/a	n/a
	Mule Deer	158	669	64
	Mountain Goat	2	2	2
	Cougar	n/a	n/a	n/a
1992	Black Bear	98	429	20
	Wolf	n/a	n/a	n/a
	Mule Deer	158	632	89
	Mountain Goat	9	54	2
	Cougar	2	2	0

*Hunter Day: Any portion of a day that one person attempted hunting, whether successful or not

5.1b Supply and Demand

The Outdoor Recreation Council reported 1 million client days (visitor days) of use with those adventure tourism operators who have packaged tours in B.C. in 1986. About 55% of clients are non-residents (20% from other parts of Canada, 25% from the U.S.A. and 10% from overseas). (Outdoor Recreation Council of B.C. 1988 Adventure travel in B.C.).

Approximately 10% of all outdoor recreation use in B.C. takes place in wilderness or non-roaded areas. These are areas which can be reached only by trails, waterways or air. This equates to approximately 9 million visitor days in B.C. in 1993. (Ministry of Forests. Outdoor recreation survey 1989-1990).

The proximity of TFL 38 to the GVRD population base suggests that a higher than average amount of backcountry recreation use probably takes place in this TFL.

An estimated 121,650 people travelled from the GVRD to Squamish to participate in a range of outdoor recreation activities. Modest increases in day hiking, backpacking, bicycling on roads, horseback riding, canoeing or kayaking, downhill skiing or snowboarding, cross-country skiing and golfing are projected for residents of the Squamish area. (Praxis 1993). Most of these activities can be supported by resources within TFL 38.

The top 10 services participants in outdoor recreation activities are looking for are:

Desired Recreation Services

-brochures, maps, etc. about places to go
-walking or jogging trails in local parks
-cleaning and garbage pick-up
-developed campsites
-safety and security services
-nature education programs
-hiking trails in backcountry
-picnic facilities
-primitive campsites
-outdoor ski instruction

(Praxis 1993)

Residents of Squamish place a particularly high priority on acquisition of land for recreation and conservation. (Praxis 1993). Placing a management emphasis on backcountry, stream side areas and on high value recreation features within TFL 38 would contribute to meeting this need. Similar management approaches have been identified in the adjoining Soo TSA (Soo TSA Forest Management Plan. 1993).

5.2 Recreation Management Direction Scenarios

This section outlines strategies for management of recreation values associated with biophysical features in TFL 38. These resources i.e. fish, forests, wildlife, landscapes, etc., generally also have resource values other than for recreation. This section identifies the following:

1. Recreation values and features to be protected (Tables 4 & 5).
2. ROS objectives/hectares by ROS class (Tables 4 & 5).
3. The number of sites and trails to be developed and maintained, (Tables 6 & 7).
4. VQO's, visually sensitive corridors.

Recreation Management Units (RMU's)

To assist with the development of management approaches for TFL 38, the TFL has been divided into Recreation Management Units (RMU's). Each RMU groups together features which have similar characteristics and management objectives.

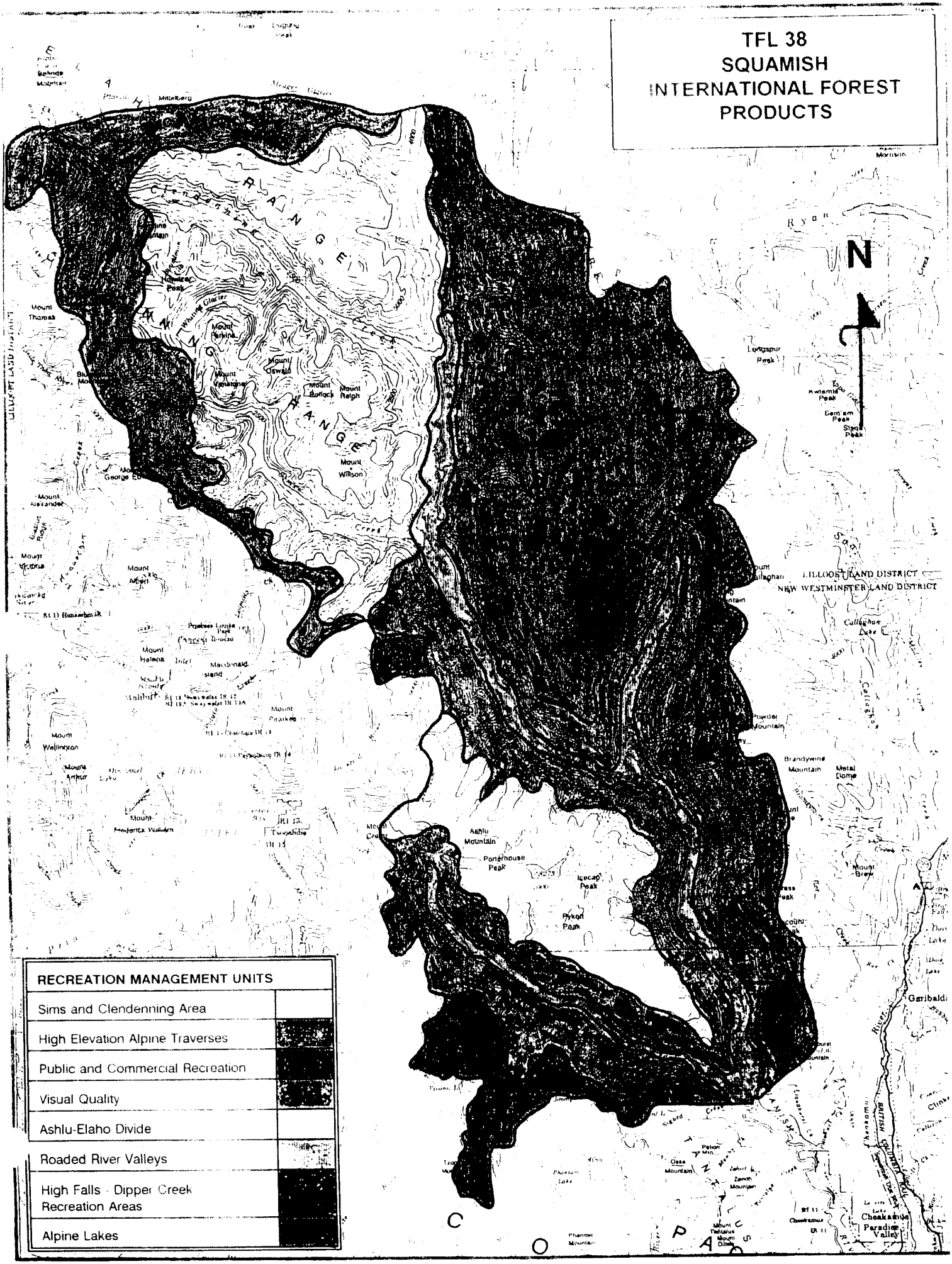
Small scale maps which identify the recreation, ROS Class and landscape management emphasis areas are illustrated in Map 2, Map 4 and Map 7.

1. Table 4 (following pages) provides a summary of recreation management objectives for each RMU.

2. The main recreation resources and issues associated with each RMU are illustrated in Map 5 in Section 3.4 of the report.

3. In TFL 38, eight RMU's are identified. The location of the RMU's is illustrated in Map 7 on the following page.

TFL 38
SQUAMISH
INTERNATIONAL FOREST
PRODUCTS



5.2 Recreation Management Direction Scenarios (continued)

Table 4 - Recreation Resource Evaluation - TFL 38

Recreation Management Group	ANALYSIS SCENARIO	ROS CLASS	RECREATION RESOURCE MANAGEMENT OBJECTIVES	RATIONAL	IMPLICATIONS
RMU - 1 Sims and Clendenning	1	(1) P	a) Emphasis on management of remote mountain and alpine environments for backcountry recreation.	High quality areas most suitably managed for backcountry/wilderness recreation.	High recreation and high timber values overlap. Backcountry recreation management boundaries need to be determined.
			b) Long term management focus on coordinated management across tenure holdings of backcountry/wilderness recreation areas.	Active support of backcountry recreation use in INTERFOR TFL licenses.	Clearer management focus on recreational use of backcountry areas.
			c) Identify mountaineering, ski mountaineering and hiking routes on forestry maps in order to incorporate these features into operational planning.	Develop forestry planning and initiatives which incorporate recreation and landscape management objectives	Resource management decisions which are assisted by stakeholder input.
			d) Establish areas in TFL 38 which can accommodate anticipated increases in use and increased demand for high quality backcountry recreation and landscape features.	High quality recreation and landscape features require formal management	Management strategy required for remote backcountry recreation and landscape resources
RMU - 2 High Elevation Alpine Traverses	1	(1) P	a) Promotion of backcountry mountaineering, ski mountaineering opportunities.	High quality areas within and adjoining TFL 38 most suitably managed for backcountry recreation.	Management to emphasise recreation and landscape values in backcountry areas of TFL 38.
RMU - 3 Public and Commercial Recreation	1	(3) SPM (2) SPNM (1) P	a) Protection of recreation features and provision of recreation facilities to support public and commercial recreation through visual quality management, maintenance of roads and trails, signs and campsites.	Includes high quality recreation and landscape features along the Squamish-Cheakamus Divide	Small-scale harvesting permitted in operable timber outside of reserves surrounding recreation features.
RMU - 4 Visual Quality	1	(4) RRL (3) SPM (2) SPNM	a) Reduce visual impact of forest harvesting along TFL 38 travel corridors and in association with high quality recreation features. b) Maintain landscape quality to meet future demands.	Reduce impacts on timber supply through management of landscape resources.	VQO's are established in the landscape inventory for TFL 38. Forest harvesting and related development designed to meet or exceed visual quality objectives.

5.2 Recreation Management Direction Scenarios (continued)

Table 4 - Recreation Resource Evaluation - TFL 38 (continued)

Recreation Management Group	ANALYSIS SCENARIO	ROS CLASS	RECREATION RESOURCE MANAGEMENT OBJECTIVES	RATIONAL	IMPLICATIONS
RMU - 5 Ashlu-Elaho Divide	1	(3) SPM (2) SPNM (1) P	a) Management emphasis on backcountry recreation. b) Work with user groups to identify and maintain access to important recreation areas.	One of the more accessible backcountry areas in TFL 38. High value backcountry recreation area.	Pro-active planning to reduce resource conflict and to fulfil future demand for recreation and landscape resources. Possible costs for access maintenance. Maintain contact with user groups.
RMU - 6 Roaded River Valleys	1	(4) RRL (3) SPM (2) SPNM (1) P	a) Identify access routes through operations areas to sub-alpine and alpine routes and traverses	Areas adjoining valley bottoms and at the head of drainages are generally traversed enroute to/from hiking, mountaineering routes	Future construction or upgrading of trails linking with alpine traverses.
			b) Manage visual impact of forest harvesting along TFL 38 travel corridors	Visual Quality Objectives are established for travel corridors in TFL 38	Management of visual quality.
			c) Upgrade and develop new campsites as needs grow. Consider closure of Riverside and Hideaway sites due to persistent flooding and construction of new sites.	Provide adequate recreation facilities	Campsite maintenance and construction.
			d) Better informed visitors regarding forestry operations, recreation opportunities.	Develop a broad base of informed visitors to help with management of forestry and recreation resources.	
RMU - 7 High Falls - Dipper Creek Recreation Areas	1	(4) RRL (3) SPM (2) SPNM	a) Maintain trail and road access to sub-alpine areas. b) Manage for increases in use. Provide sub-alpine, road accessible sites.	Very popular recreation features. Support established recreation use.	Continue road maintenance program. Provide facilities.
RMU - 8 Alpine Lakes	1	(2) SPNM (1) P	a) Management of interface between adjoining tenures. b) Management of wilderness-working forest interface. c) Emphasis on backcountry recreation values.	High quality backcountry recreation and landscape resources hold long-term potential for recreational use.	Non-productive areas for forestry. Low potential for resource conflicts.

5.2 Recreation Management Direction Scenarios (continued)

Recreation Inventory Projection - Recreation Opportunity Spectrum (ROS) Classes

Forest harvesting related activity are the main factors which will continue to shift the spatial distribution of ROS Classes in TFL 38. Development of hydro lines or other structures would also affect ROS Class distribution.

The current distribution of ROS Classes in TFL 38 is illustrated on Map 4.

The lower portions of the Sims and Clendenning Creeks are proposed for forest harvesting. These areas are currently classified as Primitive (ROS Class 1) and would change to Roaded Resource Land (ROS Class 4) as harvesting occurs. The harvesting plans are controversial as the old growth forests in these two drainages are currently unaltered by any development.

For the majority of TFL 38, minor shifts in ROS Class distribution will take place as the operable land base is developed, and as previously developed areas recover from harvesting. The majority of TFL 38 is inoperable (71% or 155,170 ha) and most of the land base will remain classified as Primitive areas, except where the proximity of roads or harvesting influences these areas.

The distribution of ROS Classes in TFL 38 is similar to other coastal TFL's, where operable forest land is very limited, relative to the extensive sub alpine, alpine and mountainous topography which predominates the TFL and usually extends beyond its boundaries.

Recreation Analysis and Management Strategy Report
Tree Farm Licence 38 - Squamish
International Forest Products Limited
April 1996

5.2 Recreation Management Direction Scenarios (continued)

Recreation Inventory Projection - Recreation Opportunity Spectrum (ROS) Classes

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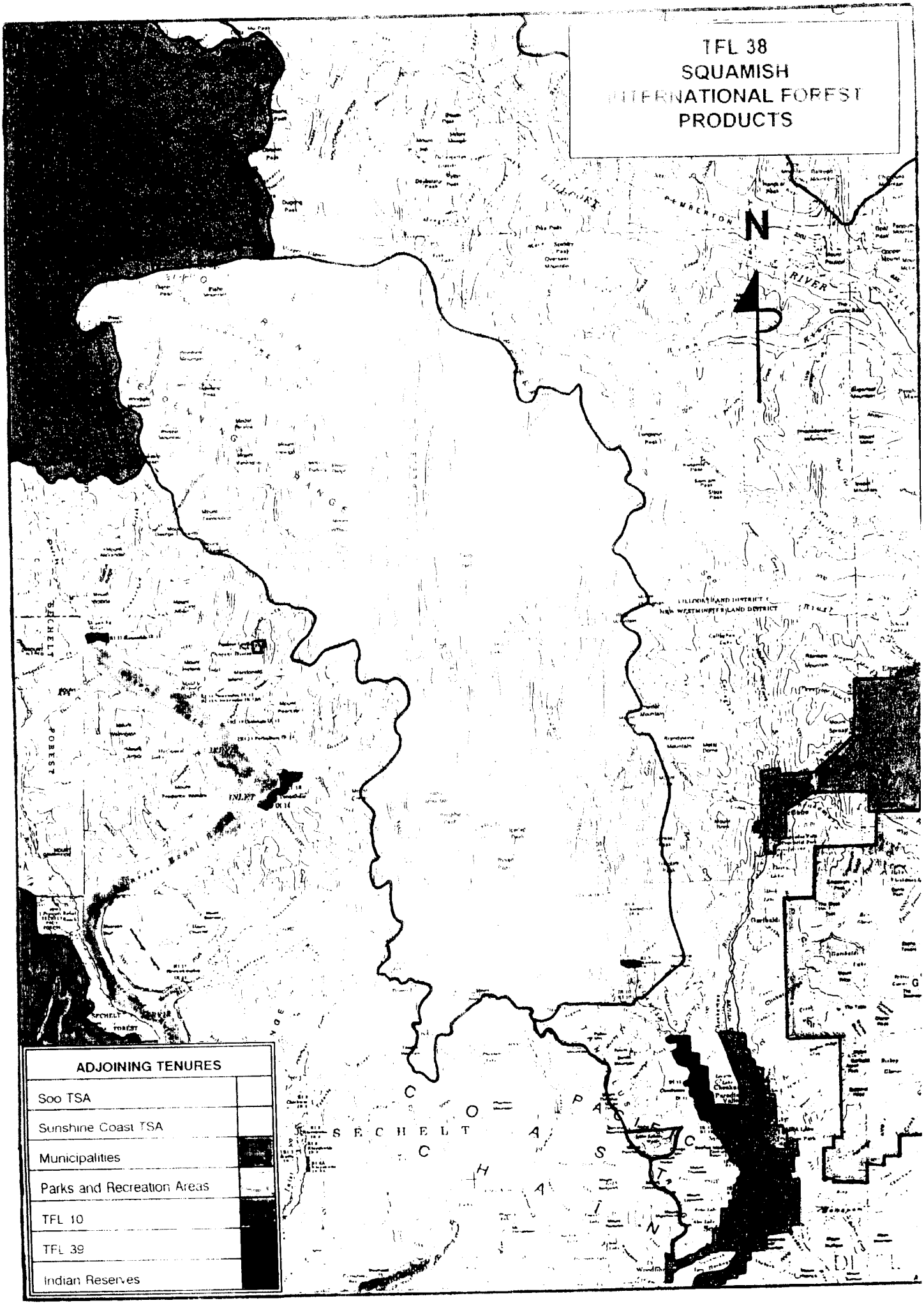
TFL 38
SQUAMISH
INTERNATIONAL FOREST
PRODUCTS
N
ADJOINING TENURES
Soo TSA
Sunshine Coast TSA
Municipalities
Parks and Recreation Areas
TFL 10
TFL 39
Indian Reserves

6.0 RECOMMENDATIONS - Draft Recreation Management Strategy

Recreation and landscape resources in TFL 38 and in adjoining TSA and TFL and in near by Park lands are becoming increasingly valuable and increasingly in demand. Outdoor recreation use is increasing rapidly along with the growing population on the lower Mainland and the Sunshine Coast. The population of the GVRD is expected to double by the year 2030 to approximately 3,000,000 people. (Praxis 1993).

In the case of TFL's and TSA's, maintaining a viable timber supply as well as providing recreation and landscape resources is becoming increasingly difficult as resources diminish and demand increases.

Management of key features and communication with users will be important in order to minimize impacts on timber supply while providing for high quality recreation opportunities within the working forest environment.

The challenge of balancing supply with demand while continuing with forest management activities can be directed by specific objectives which aim to maintain a sustained supply of timber and non-timber resources.

6.1 SUMMARY OF MANAGEMENT OBJECTIVES

i) Pro-active management: *More intensive management of recreation and landscape resources in TFL 38. Longer term plans, particularly for wilderness areas and landscape resources.*

Historically, management has tended towards informal and reactive solutions, rather than formal and pro-active solutions. Landscape impacts are more frequently assessed on a block by block basis rather than on a broader, Landscape Management Unit (LMU), watershed or travel corridor basis.

Management of landscape resources should be in keeping with specific recreation values. Landscape management should be coordination with other forestry activities.

Longer term plans for management of landscape quality, throughout TFL 38, will help ensure recreation opportunities and landscape resources are maintained at levels which can accommodate increased use in the future.

ii) User group communication: *Development of a more formal and structured approach to recreation and landscape management in the TFL, involving stakeholders.*

Continue with the current program of communication with stake holders. Providing stakeholders with background information, including maps, summary reports, etc., and soliciting information and comments on company activities appears to be an effective means of obtaining input from the public.

Stakeholder communication has helped to identify recreation user groups which are active in TFL 38 i.e. hunting, angling, hiking, canoeing, kayaking, wildlife and nature study, backcountry skiing, snowmobiling, etc. (TFL 38 Recreation Inventory, 1995).

Consider formation of stakeholder groups which can provide input into management of specific recreation and landscape resources in TFL 38.

6.1 SUMMARY OF MANAGEMENT OBJECTIVES

ii) User group communication: (continued)

Potential candidates for shared management include backcountry users i.e. Alpine Club of Canada, Outdoor Recreation Club members, Federation of Mountain Clubs, B.C. Snowmobile Association, Steelhead Association, etc.

iii) Formal Trail Management: *Examine existing trails and determine which ones are suitable for more formal management as recreation trails (T2).* The Forest Practices Code Act, Section 102, outlines the standards for trail construction and maintenance. One main advantage of formal trail designation is eligibility for MoF and FRBC recreation program funding.

The Deminger Trail (#6326) is the only trail within TFL 38 which is actively managed by INTERFOR. Informal management of the High Fall Creek trail (#6133) is undertaken by members of the North Shore Hikers Club and the Elaho Giant trail (#6358) is maintained by members of WCWC.

Backcountry travel in the TFL is usually accessed via logging roads and hiking "routes". Access to these "routes" would be improved with the planned development of trails.

Trails offer visitors a close up view of the forest and of the history of settlement and logging in the area. Trails also offer an alternative recreation activity which can be enjoyed by people of a variety of ages and abilities.

Designation of a formal trail (T2) does not preclude logging activities. Harvesting may take place, however, the trail location remains, and the trail may be re-established following the harvest, or relocated to a new location. Keeping a formal record of trails assists with record keeping and tracking of the recreation facilities and activities which are available and are being managed in a working forest.
Trail development and management also plays a key role in accommodating recreation use. Trails focus use in a specific area or along a corridor. Improvements to the trail systems them to accommodate more visitors, while still providing a high quality walk or hike. Trails provide an effective means of increasing carrying capacity and can be managed to have a limited impact on timber supply.

iv) Designate recreation reserves in TFL 38: *Areas which have high recreation and landscape values are candidates for recreation reserves. In TFL 38 these could include:*

- River Corridors: Squamish, Ashlu, Elaho, Sim and Clendenning drainages.
- Interpretative forests areas, Deminger Trail.
- Existing and future recreation sites.
- Wilderness Management Emphasis areas.

Recreation reserves or trails could be located within riparian or alternative silviculture zones.

v) Assess existing recreation use and visitor travel in TFL 38 and adjoining tenures and plan for potential future trends: *Use patterns and travel patterns can change, however, the main road travel corridors in TFL 38 are well established. Proactive measures can include maintaining an average VQO level of Partial Retention (with Retention in some particularly sensitive landscape areas) along road travel corridors and in viewsheds for important recreation activity areas.*

6.1 SUMMARY OF MANAGEMENT OBJECTIVES

v) Assess existing recreation use and visitor travel in TFL 38 and adjoining tenures and plan for potential future trends: (continued)

Additional facilities are required to meet existing and future visitor needs. Present levels of facilities are limited.

Increases in recreation use of TFL 38 resources is anticipated. A shift towards pro-active recreation and landscape planning is recommended in order to manage impacts on timber supply while providing for outdoor recreation opportunities.

APPENDIX - I TFL 38 Resource Users and Managers

This is a summary list of resource users and managers associated with TFL 38. Further information is available from International Forest Products Limited or the Ministry of Forests in Squamish.

TFL 38 Resource Users and Managers

CONTACT NAME	TELEPHONE/ FACSIMILE
International Forest Products Limited - Empire Logging Division, Squamish	Tel: 892-5244 Fax: 892-9690
International Forest Products Limited - Vancouver - Head Office Resource Forester: Laszlo Kardos Chief Forester: Richard Slaco	Tel: 681-3221 Fax: 689-6858 Tel: 689-6843 Fax: 681-3221
Outdoor Recreation Council of British Columbia, Vancouver	Tel: 737-3058 Fax: 737-3666
Ministry of Forests - Vancouver Forest Region (Nanaimo) Regional Recreation/Landscape Officer	Tel: 751-7190 Fax: 751-7190 Tel: 751-7112
Ministry of Forests Recreation Branch, Victoria	Tel: 387-8475
Ministry of Forests, Squamish Forest District Resource Officer Recreation	Tel: 898-2128 Fax: 898-2191
Ministry of Small Business, Tourism and Culture, Victoria	Tel: 356-2175
Federation of Mountain Clubs of B.C., Vancouver	Tel: 737-3053
Ministry of Environment, Lands and Parks, Parks Department - Garibaldi/Sunshine District	Tel: 898-3678 Fax: 8908-4171
Ministry of Environment, Lands and Parks, Conservation Officer Service - Squamish	Tel: 892-5971 Fax: 892-5923
Ministry of Environment, Lands and Parks, Lower Mainland Region, Surrey Fish and Wildlife Regional Office	Tel: 582-5200 Fax: 660-8926
Squamish Band Office, North Vancouver Chief Joseph William Mathias	Tel: 985-7711 Fax: 985-7707

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i EXECUTIVE SUMMARY

This section summarizes the purpose of the Recreation Analysis and Management Strategy (RAMS) Report , the procedures followed, the results of analysis and strategies determined. This section should not be any longer than one or two pages and be prepared upon the completion of the report itself.

ii TABLE OF CONTENTS

1.0 Introduction

The introduction should set the context for report, the reason/purpose for doing the recreation analysis and the identification of the issues. It should also include a description of how the RAMS fits into the Management plan process and how the results affect management of recreation on the land base.

The RAMS report will include all activities under the recreation program, including visual landscape management and wilderness management and forest interpretation. The use of the word recreation is intended to imply the complete program.

1.1 Purpose

The purpose outlines the intent of the analysis. For example, the purpose of the recreation analysis report is to compare the supply of recreation opportunities (features, activities, settings) with the existing and future use, the demand for public/commercial recreation and to present strategies, objectives and options for management of the recreation resource.

1.2 Background Information and Zonation

a) Describe where the TFL/TSA is located and include a key map showing location, size and distribution of the management area.
b) Describe biophysical, cultural/heritage characteristics of the land base in general terms, summarized from the recreation features inventory and ROS.
c) Describe proximity of parks, recreation sites/trails communities and transportation corridors (access) relative to the management area.
d) Discuss what effect climate may have on recreation pursuits.
e) Describe in general what recreation use and opportunities and issues presently exist within the management area.

The Forest District should be divided into zones or management units definable by one or more of the above characteristics.

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2.0 Methodology / Procedures

This section should mention how the data was collected and analyzed, e.g.) though recreation inventory and consultation with the public, licensees and agencies. Refer to Recreation Manual - Chapter 8, Section 8.5.1.

3.0 Description of Existing Recreation Resource Values

This section should describe recreation values presently within the management area and identified in the recreation inventory (Hierarchical Summaries, Tables 1, 2, and 3 Chapter 8 of the Recreation Manual). This is not a repeat of the text portion of the recreation inventory report.

3.1 Key Features

List and describe important recreation features within the management area that will play a role in the direction of management, i.e., visual values, karst, coastline, waterfalls, springs, beaches etc.

Unique lakes and rivers that require special management prescriptions are to be identified and discussed.

Note if any designated and non-designated heritage trails pass through the management area and whether there is a management plan in place or would be required to protect the resource.

Delineate travel corridors running through the management area and describe management emphasis/strategies for these corridors.

List any other important recreation corridors, road, trail, or water and discuss the management strategies associated with these.

Quote any interagency agreements/contacts where applicable. State relevance of agreement, level of involvement, sources of information additional inventories and dates undertaken.

3.2 Recreation Opportunity Spectrum

Identify ROS classes as they currently exist in the management area and provide a list in the form of a summary table quantifying how much of each ROS class exists in terms of hectares and percent land base.

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3.3 Existing and Potential Activities

List the types of existing activities being pursued within the management area and note where they occur. In addition prepare a list for areas having potential for activities to occur but not currently utilized.

3.4 Recreation Issues

List the recreation issues within the management area as identified through the recreation inventory and public consultation and will form the basis for use in the Options reports. Delineate areas where recreation will impact timber harvest (VQO's, feature significance A, B, C, and management class 0,1, ROS objectives) and state how recreation integrates with harvest activities.

3.5 Forest Service/Licensee Recreation Sites and Trails

State number of formal and informal recreation sites and trails, (including interpretative forest sites) where they occur, who is responsible for them, facilities offered etc.

3.6 Parks, Commercial and Private Recreation Facilities

Note commercial recreation operations which occur within the management area. Identify the recreation features or opportunities within the management area they rely on. List the parks which occur within or adjacent to the management area and describe what opportunities they provide.

3.7 Visual Quality / Scenic Resources

Identify visually sensitive landforms which must be managed for scenic quality and comment on how these are to be managed in the future. Tie in specific areas in which visual landscape management plan will drive management and refer to Landscape Analysis process of setting VQO's.

3.8 Wilderness

Note the areas within the management area that meet the Ministry of Forests wilderness criteria, i.e. at least 1000 hectares in size and occur in SPNM or Primitive ROS class.

Comment on their potential to become wilderness study areas, considering uniqueness (is this type feature already represented elsewhere?), attributes (vegetation, unique habitat, spectacular scenery, superb beaches), proximity to population centres, access, development pending, etc.

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4.0 Description of Use, Value and Demand

4.1 Current Demand

Use surveys will be conducted to determine existing use levels for various activities within the management area. In addition, existing information collected by other agencies, businesses, etc. should be integrated in results.

List what activities currently occur within the management area using the BCFS Provincial Recreation Survey and state at what level they occur, e.g., sport fishing in # of angler days for a particular river system.

4.2 Forecasting Demand and Projecting Trends

Determine what the demand will be for various activities over the next 5-10 years using trend information collected by the Forest Service, through its provincial recreation survey, recreation site surveys and surveys completed by licensees and others. Focus on recreation issues identified for existing and potential activities the land base is capable of supporting.

4.3 Estimate of Intrinsic Recreation Values

People place a value on natural resources whether they currently use them for recreation or not. These values include, the knowledge that a particular resource exists in sufficient quantity and quality to meet current needs, that the option to use the resource in the future will be there, if they so desired (future demand) and that the resource will be maintained and sustained in sufficient quality and quantity to ensure its availability to future generations to enjoy.

Non-use values must be identified even if they are not quantified to ensure that these values are given sufficient consideration in land use planning and resource management activities (ties in to ROS objectives). These values are measured by "willingness to pay" questions in use surveys either in terms of actual expenditures or expressed intention to pay.

Intrinsic values keep options open for the future and must be considered in addition to the present use values the recreationist places on a piece of land to engage in a particular activity. The BCFS Provincial Recreation Survey provides a starting point to be enhanced with information gathered in local use surveys.

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4.4 Gaps in Meeting Outdoor Recreation's Needs

Given the existing use, projected demand and estimate of non-use values, identify gaps in meeting the recreational needs to ensure full recreational opportunities are met within the management area.

4.5 Recreation Suppliers

Estimate the number of people who are directly/indirectly employed in the recreation/ tourism field within the management area. i.e.) hunting/fishing guides, adventure tourism operations, etc.
Estimate what this employment represents in terms of wages and overall recreation dollars.
Based on current trends, state whether employment figures within the recreation sector will increase/decrease.
Would enhanced recreation opportunities increase employment opportunities and lead to a stable more diversified economy?

4.51 Commercial Suppliers
4.52 Others Government Agencies
4.53 First Nations

5.0 Recommended Management Strategies

The Forest Service or licensee should utilize the recreation analysis to develop recommended management strategies to be used to manage specific key features and with which further analyses, such as timber supply analysis, can be undertaken.

5.1 Recreation Analysis

Compare the supply of recreation opportunities, including scenic landscapes and wilderness, identified in the recreation inventory with use value and demand for recreation, landscape and wilderness.
Factor in the key recreation landscape and wilderness issues and the sensitivity and significance of these values in the management area.
Deal with how to overcome shortfalls identified in gaps determined in section 4.4.
Prioritize and set objectives for the integration of recreation and the management of "hot spots".

5.2 Recreation Management Stategies

Illustrate that the management area supplies recreation opportunities, use management studies have been completed, and provide a range of ways the recreation resource (recreation features, scenic landscapes and different ROS settings) could be managed in the Management Plan.

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The different strategies must recognize the need to manage and protect recreation and should identify;

a) Recreation features to be protected, tables 4 & 5 (refer to Recreation Manual, Chapter 8).
b) ROS objectives, hectares by ROS class, tables 4 & 5.
c) Number of sites and trails to be developed and maintained, tables 6 & 7 including interpretative forest sites.
d) Any Protected Area Strategy study area, recreation corridor plans, heritage trails, etc.
e) VQO's, visually sensitive corridors.

6.0 Recommended Recreation Management Objectives

Recommendation objectives should be identified specific to each zone or management unit.

7.0 Options and Recommendations

Recommendations on how to achieve the objectives

8.0 Appendices