

TFL FOREST LTD. (TimberWest)

TREE FARM LICENCE No. 46

Appendix 2

**Supplemental Map Folio Report for
[REDACTED] MANAGEMENT PLAN No. 4**

December 1, 2001 - November 30, 2006



**BRITISH
COLUMBIA**

Ministry of
Forests

South Island Forest District

MEMORANDUM

January 15, 2000

cc. Jim Hockett

To: Ken Collingwood, Regional Manager
Vancouver Forest Region

Re: Tree Farm License (TFL) 46 – Operability Inventory

I have reviewed the TFL 46 Management Plan and Information Package with respect to the operability criteria.

I am satisfied that the operability criteria reflect current operations on TFL 46. I recommend that the operability criteria as detailed in the TFL 46 Timber Supply Analysis Information Package (October 13, 2000) be approved for timber supply analysis purposes.

If you require any additional information please contact Madeline Maley, A/Planning Officer at 250-731-3059.

Cindy Stern, District Manager
South Island Forest District



cc: Bud Koch, Timber Supply Analyst
Timber Supply Branch

Gilbert Brennenstuhl, Manager
Forest Tenures
TFL Forest Ltd.



Province of
British Columbia

Ministry of
Forests

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File: 19700-20/TFL46

August 6, 1993

T. JONES
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F. T. Leslie, R.P.F.
Administrative Forester
Fletcher Challenge Canada Limited
9th Floor, 700 West Georgia Street
Post Office Box 10058, Pacific Centre
Vancouver, British Columbia
V7Y 1J7

Dear F. T. Leslie:

The corrected operability mapping submitted to Len Leroux, Timber Coordinator, on August 3, 1993, is hereby approved for use in the timber supply analysis.

Yours truly,


Ken J. Ingram, R.P.F.
Regional Manager
Vancouver Forest Region

cc: Len Leroux, Timber Coordinator
Vancouver Forest Region

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FLETCHER CHALLENGE CANADA

February 12, 1992

Ministry of Forests
Vancouver Forest Region
4595 Canada Way
Burnaby, B.C.
V5G 4L9

Attention: L. Leroux, R.P.F.
Timber Coordinator

Dear Sir:

Re: Tree Farm Licence No. 46

Attached are the Terms of Reference to complete the Operability Mapping as required by the Chief Forester's approval letter of Management and Working Plan No. 2 dated December 31, 1991. The field work for this project was completed in 1991 and we propose to submit the maps to the Duncan Forest District Manager during March, 1992.

Yours truly,

F.T. Leslie, R.P.F.
Administrative Forester

Encl.

c.c. T. Walker, Manager, Duncan Forest District
T. Bakos, FCCL - South Island
G. Brennenstuhl, FCCL
D. Hoffman, FCCL

TREE FARM LICENCE NO. 46 - CAYCUSE AND RENFREW TERMS OF REFERENCE - OPERABILITY MAPPING

OBJECTIVES

The objective of the operability line is to delineate stands on a site specific basis which are economically accessible by conventional, helicopter or longline, yarding systems.

METHODOLOGY

Marginal timber types were assessed for merchantability by aerial reconnaissance. Each forest type was classified as economic or uneconomic based on stand structure and visible defect.

During the same helicopter flight all inaccessible areas were mapped and the accessible areas classified as to conventional, helicopter and longline yarding systems. The accessibility line was integrated with terrain stability mapping and ESA mapping, where available.

Economic operability was assumed if:

1. the stand had a volume of more than 250m³/ha.
2. the majority of the stand is of "J" grade or better, i.e. a pure pulp stand is not economic
3. some stands of less than 250m³/ha. where adjacent to better stands
4. isolated stands were evaluated on an individual basis given their value (size of the area, volume, species, grade) and their associated logging cost including road construction.

Conventional Yarding:

applies in all areas except helicopter and longline.

Helicopter logging:

applies in areas which are physically and/or environmentally inaccessible by conventional means and where the stand value makes this an economic alternative:

- a) for C, Y, F, S the standing timber must be "H" grade or better
- b) for Hembal more than 60% of the stand has to be "H" grade or better.

Yarding distances and elevation differences were not considered at this time.

cont'd . . .

Longline Yarding:

applies in areas where midslope roads are unacceptable and the stand value makes this an economic alternative. Yarding distances were not considered but rather this operability information can be used to help select the right longline system.

TIMING

The field work was carried out in early 1991 and maps will be submitted to the District Manager in Duncan for review in March 1992.

TERMS OF REFERENCE
AND METHODOLOGY FOR
E.S.A. MAPPING

FLETCHER CHALLENGE CANADA LIMITED
INTEGRATED RESOURCE ANALYSIS SECTION
MARCH 2, 1992

The following outlines the terms of reference and methodology we propose to use for mapping the Environmentally Sensitive Areas (ESA's) in Tree Farm Licence 46.*

I. ESA Mapping Objectives

The primary objective of ESA mapping is to identify areas that are environmentally sensitive and/or significantly valuable to other resource users. Specifically, ESA's may be areas of unstable or sensitive soils, have potentially severe regeneration problems, be prone to snow avalanching, have significant value for recreation, wildlife and/or fisheries, and/or may have special requirements to maintain water quality in domestic water supply areas.

Non-timber resource mapping has been utilized in the Five Year Development Planning process to highlight specific agency and public concerns for proposed development areas. Fletcher Challenge Canada routinely conducts many of these more detailed and specific resource inventories as part of our Five Year Development Planning process. Where specific resource data exists or where time constraints permit capture of this data, it is our intent to adapt this data to meet the objectives and standards of ESA mapping for TFL 46.

II. ESA Categories

A. Soils

1. Terms of Reference

Terrain mapping typically identifies the distribution and character of surficial materials and the processes acting upon them in a landscape. In British Columbia, terrain mapping of forested land most frequently utilizes the Terrain Classification System for British Columbia (Revised Edition - MoE Manual 10, 1988). Presently the committee to establish provincial terrain mapping standards in forested terrain (Chairman: Steve Chatwin - MoF Research Branch), is proposing a 5 class terrain stability hazard rating system utilizing the Terrain Classification System for British Columbia to evaluate relative slope stability of terrain units.

* excludes the Walbran and Rosander Drainages covered under previous commitments.

One such approach has been adopted in the West Strathcona Timber Harvesting - Geologic Hazards Management Plan (BCFS - Campbell River District.

ESA categories Es1 and Es2 are tentatively equated to Stability Classes 5 and 4. Class 5 areas show evidence of frequent and recurrent mass wasting throughout the unit. Generally, these areas have a very high potential for accelerated instability associated with road construction or forest harvesting. Class 4 areas show evidence of scattered, infrequent, natural instability and/or features associated with potential instability such as high drainage density, gullying and steep slopes. The potential for accelerated instability associated with road construction or forest harvesting may exist in Class 4 areas. Forest development in Class 4 areas is conditional on a more detailed review of the potential for instability and development of specific techniques to avoid this potential.

Preliminary ESA mapping in the Walbran drainage indicates that the 5 Class terrain stability mapping results in a more detailed and operational Es1 and Es2 mapping than MoF standards. Terrain Class 5 correlates very well with Es1. Terrain Class 4 units, however, are far more numerous and extensive than the MoF Es2 units. As such, an AAC netdown factor of 20% has been proposed by MoF Inventory Branch. This factor is less than the 40% to 60% proposed for the MoF Es2 category.

Classes 3, 2 and 1 warrant no special considerations over and above those already outlined in the B.C. Forest Service Engineering Specifications for the Planning, Design, Location, Construction, and Maintenance of Logging Roads and Drainage Structures in the Vancouver Forest Region.

<u>Terrain Stability Class</u>	<u>ESA Class</u>
5	Es1
4	Es2
3	
2	
1	

Soils susceptible to erosion other than mass wasting will be identified and rated as Es1 and Es2 based on the potential loss to site productivity which could result from forest development utilizing the Terrain Classification System for British Columbia in combination with local experience.

2. Methodology

Terrain Mapping will be undertaken by interpreting landforms from 1:20,000 scale orthophotos, identifying them and assigning a stability rating to each landform. The more critical units will be ground checked to verify relative ratings.

Information and background pertaining to soil stability, sensitivity and erosional hazards will be as referenced in the Terrain Classification System for British Columbia and in Chapter 2 of the Ministry of Forests' Forest Inventory Manual.

B. Forest Regeneration

1. Terms of Reference

Potential regeneration problems are dependent on local biotic, climatic and geographic conditions, harvest techniques, silvicultural treatments, and reforestation methods and procedures. Identifying areas of concern depends heavily on local experience and expertise.

Areas where geoclimatic conditions severely limit successful regeneration will be identified as Epl, or an area of high sensitivity. For areas where brush competition or wildlife browsing may cause forest regeneration problems, reestablishment can usually be dealt with on an operational level.

Areas of regeneration concern where development or harvesting could have a serious deleterious impact on the site. Consideration must be given to geoclimatic and geophysical conditions in an on-site evaluation and prescription prior to development or harvest.

2. Methodology

Interpretation of 1:20 000 scale orthophotos, topographic maps and accumulated local expertise will be used to identify areas of sensitivity.

C. Snow Avalanche

1. Terms of Reference

Areas identified requiring avalanche protection will be based on evidence of previous avalanche activity. Leave strips and/or buffer zones will be left for areas threatened in potential runout zones and will be mapped as an "Ea" sensitive area. Areas of concern are as described in Chapter 2 of the Forest Inventory Manual.

2. Methodology

Avalanche hazard areas will be identified using 1:20 000 scale orthophotos. Ground checking of critical areas will be conducted in association with terrain and landform stability field work.

D. Recreation

1. Terms of Reference

Detailed recreation inventories have been done for the Walbran and Rosander planning units at 1:20,000 scale according to the Recreation Manual, MoF, July 1988. These inventories, completed by an independent recreation consultant, detail the relative significance of an area for recreational activity considering both biophysical and cultural features. Reconnaissance 1:50 000 scale recreation inventories, completed by the same consultant, cover the remainder of the TFL.

Areas will be designated Er1 or Er2 relative to their Feature Significance (A, B, C or D) and Management Classification (0, 1 or 2). Areas identified as Er1 are to be managed exclusively for recreation and areas identified as Er2 require consultation with recreation staff prior to development.

Table 1. ESA Recreation Equivalents

MC\FS	A	B	C	D
0	Er1 *	Er1 *	-	-
1	Er2	Er2	-	-
2	-	-	-	-

* Consultation with recreation staff recommended.

Areas requiring detailed viewscape analysis will be left open for review. Viewscape values are considered in the analysis, but the MoF has yet to determine the impacts on ESA's recognized in the Landscape Planning Handbook, MoF, May 1981.

2. Methodology

The recreation inventory for the Walbran and Rosander planning units was undertaken using 1:20,000 orthophotos with ground checks, drawing upon local knowledge and expertise. The reconnaissance 1:50,000 scale recreation inventory of the remainder of the TFL was completed in 1986 using a variety of air photo scales, local knowledge and expertise, and limited ground truthing.

E. Wildlife

1. Terms of Reference

To this point in time, evaluation of wildlife habitat significance has been somewhat subjective.

Presently the Ministry of Environment (Fish and Wildlife Branch), Ministry of Forests (Research Branch) and Fletcher Challenge Canada, are in the process of completing the TFL 46 Deer Management Plan, a land classification system for evaluating critical wintering habitat for coastal black-tailed deer.

When completed, this system will evaluate an area by determinants such as slope, aspect, terrain, snow cover, forest cover type and biogeoclimatic subzone/variant to determine areas critical to the species' seasonal requirements. Using this type of system tool to identify critical ungulate habitat will better aid long-term forest management and help to minimize resource conflicts.

2. Methodology

In the interim, prior to completion of the T.F.L. 46 Deer Management Plan, Fletcher Challenge Canada will map those areas of significant value to coastal black-tailed deer and Roosevelt elk as identified by FCC and Ministry of Environment staff. The coastal black-tailed deer mapping will be refined upon completion of the T.F.L. 46 Deer Management.

It is recognized that areas of significant value for wildlife other than coastal black-tailed deer and Roosevelt elk do exist within T.F.L. 46 (i.e. eagles, marbled murrelets, black bear, furbearers, biodiversity, etc.). At this time, criteria for mapping these values are in the developmental stages. As such, we are unable to map ESA's for wildlife values other than coastal black-tailed deer and Roosevelt elk. Locations of eagle nest sites are, however, identified as part of the Five Year Development Planning process.

Critical winter habitat for coastal black-tail deer and Roosevelt elk in (deep/moderate) snow zones where second growth stands could not meet ungulate requirements for shelter and food will be mapped and designated Ew1. High value winter habitat for coastal black-tail deer and Roosevelt elk in (low/moderate) snow zones where second growth stands could meet ungulate requirements for shelter and food will be mapped and designated Ew2.

In Ew1 areas, there is a wildlife requirement for habitat attributes that would be seriously degraded or destroyed by any forest harvesting. Sufficient amounts of that habitat must be left unharvested to meet wildlife habitat protection objectives for the area. In Ew2 areas, special management practices such as partial cutting, reduced stocking standards, extended rotations, etc. will be used to maintain wildlife habitat attributes.

F. Watersheds

1. Terms of Reference

The Eh classification will be used to delineate watersheds or portions of watersheds that require protection or special management to maintain water supply quantity, quality and seasonal distribution. Buffer zones in community watersheds, domestic water supplies and areas where development or harvesting would have severely adverse effects on water quality, quantity or seasonal distribution will be designated Eh1.

Areas that warrant special management considerations but do not directly impact on community or domestic water supplies will be designated Eh2.

2. Methodology

Consultation with the Ministry of Environment, Water Management Branch for records detailing purpose and use of water licences or other potential domestic or commercial supplies within or confluent to the planning units.

G. Fisheries

1. Terms of Reference

Stream reaches will be classified as per the Coastal Fisheries/Forestry Guidelines, MoF et al, 1988, 2nd edition:

"Highest value fisheries habitats (Class I) require the highest level of management effort from both fisheries and forest managers, to maintain productive capabilities. Lowest value habitats (Class IV) require minimal protection, with fisheries protection measures limited to those required in consideration of downstream impacts on higher class reaches."

<u>ESA Class</u>	<u>FFG Class</u>
Diamond	I
Circle	II
Square	III
Triangle	IV

2. Methodology

Streams in the planning units have been classified as part of the Five Year Development Plan process. Fisheries values from the plan will be transcribed to ESA symbology.

III. Nature of Product

The final ESA summary will include all of the above outlined ESA categories delineated in ESA terms on a 1:20,000 scale topographic base map with support documentation outlining the criteria used in delineating the sensitive units.

FLETCHER CHALLENGE CANADA LIMITED
Coast Wood Products T.F.L. #46
Environmentally Sensitive Areas
Scale 1:20 000

ESA Purpose:

ESA's are mapped to identify areas of operational concern within the boundaries of the working forest for the purpose of forest management planning. Areas with soils that are fragile or unstable, where there may be concerns in the ability to regenerate a site, the recreation values are provincially or regionally significant, there is potential exposure to avalanche hazard, the wildlife habitat values are high, there are established water licences, and/or fisheries values are high, are outlined as ESA's.

ESA category 1 areas are sensitive to disturbance, where the unit would be more appropriately managed exclusively for the concern. ESA category 2 areas are less critical, requiring an on-site inspection detailing special concerns, techniques to be applied, or conditions to be met during development and/or harvest. The actual polygon line may shift as a result of further field work.

- Es1 Areas showing evidence of recurrent mass wasting throughout, where mass wasting is the dominant geomorphic process. These units are frequently associated with high drainage density, gullying and steep slopes and, as such, have an inherent natural instability associated with them.
- Es2 Areas showing scattered evidence of natural instability and/or features associated with potential instability, such as high drainage density, gullying, and steep slopes. Harvesting is conditional upon on-site evaluation and prescription in units of specific concern.
- Ep1 Areas of regeneration concern where geoclimatic factors could severely limit the success of regenerating a site.
- Ep2 Areas of regeneration concern where development or harvesting could have a serious deleterious impact on the site. Consideration must be given to geoclimatic and geophysical conditions in an on-site evaluation and prescription prior to development or harvest.
- Er1 Areas with unique features not common to the province, with high capability to attract recreational, educational or scientific use, and would be more appropriately managed exclusively for their use.
- Er2 Areas with unique features not common to the region, with high capability to attract recreational use and are of primary importance to BCFS recreation program. Consultation with recreation staff is mandatory prior to resource decision affecting the land unit.

T.F.D. 146 E.S.A.'s, cont.

- Ea Areas exposed to snow chute or avalanche hazard.
- Ew1 Areas of wildlife habitat where no forest harvesting will be permitted.
- Ew2 Areas of wildlife habitat where special forest management practices must be used to maintain wildlife habitat values.
- Eh1 Areas with high water values where timber harvesting would have serious, long-term, adverse effects on water quality, quantity and/or seasonal distribution.
- Eh2 Areas with moderate water values where harvesting is subject to special management considerations.
- ◆ Streams or stream reaches having high fisheries value and stream-sensitivity rating; Coastal Fish Forestry Guidelines Class I equivalent.
- Streams or stream reaches having moderate fisheries value and stream-sensitivity rating; Coastal Fish Forestry Guidelines Class II equivalent.
- Streams or stream reaches having low fisheries value and stream-sensitivity rating; Coastal Fish Forestry Guidelines Class III equivalent.
- ▲ Streams or stream reaches having nil fisheries value and stream-sensitivity rating; Coastal Fish Forestry Guidelines Class IV equivalent.

ESA Category Sources and References

- Es - Terrain Classification System for British Columbia (Revised edition - MoE Manual 10, December 1988); Howes, D.E. and Kenk, E. eds.
- Mapped by A.N. Chatterton, R.P.F., Forest Pedologist and Glenn Farenholtz, Resource Analysis Engineer, Integrated Resource Analysis Section, Fletcher Challenge Canada Ltd.
- Ep - Mapped by R.J.F. Elder, R.P.F., Silviculturist, Integrated Resource Analysis Section, Fletcher Challenge Canada Ltd.
- Ea - Forest Inventory Manual, Chapter Two, Environmentally Sensitive Areas, 1984, MoF, Section 2.5.
- Mapped by G.D. Farenholtz, Resource Analysis Engineer, Integrated Resource Analysis Section, Fletcher Challenge Canada Ltd.
- Er - Recreation Manual, MoF, July 1988.
- Mapped by Jeremy B. Webb, Recreation Resource Consultant, 3156 Cobble Hill Road, Cobble Hill, B.C.
- Ew - Mapped by D.J. Lindsay, R.P.Bio., Fish and Wildlife Biologist and W.B. Wall, Fish and Wildlife Technician, Integrated Resource Analysis Section, Fletcher Challenge Canada Ltd.
- Eh - MoE Water Management Branch, Water Licence Master List.
- Mapped by G.D. Farenholtz, Resource Analysis Engineer, Integrated Resource Analysis Section, Fletcher Challenge Canada Ltd.
- Ef - Coastal Fisheries/Forestry Guidelines, MoF et al, 1988, 2nd ed.
- Mapped by D.J. Lindsay, R.P.Bio., Fish and Wildlife Biologist and W.B. Wall, Fish and Wildlife Technician, Integrated Resource Analysis Section, Fletcher Challenge Canada Ltd.
- ESA Map information compiled by G.D. Farenholtz, Resource Analysis Engineer, Integrated Resource Analysis Section, Fletcher Challenge Canada Ltd.



C.C. Ken Kaps
 Jim McPhalen
 Jim Hackett

File: 16200-01

DEC 13 2000

Gilbert Brennenstuhl, RPF
 Manager, Forest Tenures
 TFL Holdings Ltd.
 2300-1055 West Georgia Street
 Vancouver, British Columbia
 V6E 3P3

Dear Gilbert Brennenstuhl:

The Ministry of Forests staff have evaluated the visual landscape inventory of November, 1999, for Timber Forest Licence (TFL) 46, and have found the inventory to be satisfactory. Please address the comments resulting from this review, contained in the attachment. The inventory is approved for use, however, please note that if you are considering using this information for timber supply modelling, I will refer you to the Ministry of Forests' publication, *Procedures for Factoring Visual Resources into Timber Supply Analyses (March, 1998)* for further guidance. You may wish to contact the district manager regarding the extent of known scenic area and its management in the TFL.



For further information, contact Kevin Lee, Regional Landscape Forester at (250) 751-7112.

Yours truly,

Ken Collingwood
 Regional Manager
 Vancouver Forest Region

Attachment: Regional Review of TFL 46 (November, 1999) Visual Landscape Inventory

pc: Cindy Stern, District Manager, South Island Forest District

• THE GOVERNMENT OF BRITISH COLUMBIA IS AN "EMPLOYMENT EQUITY EMPLOYER" •

Ministry of
 Forests

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REFERENCE MAP

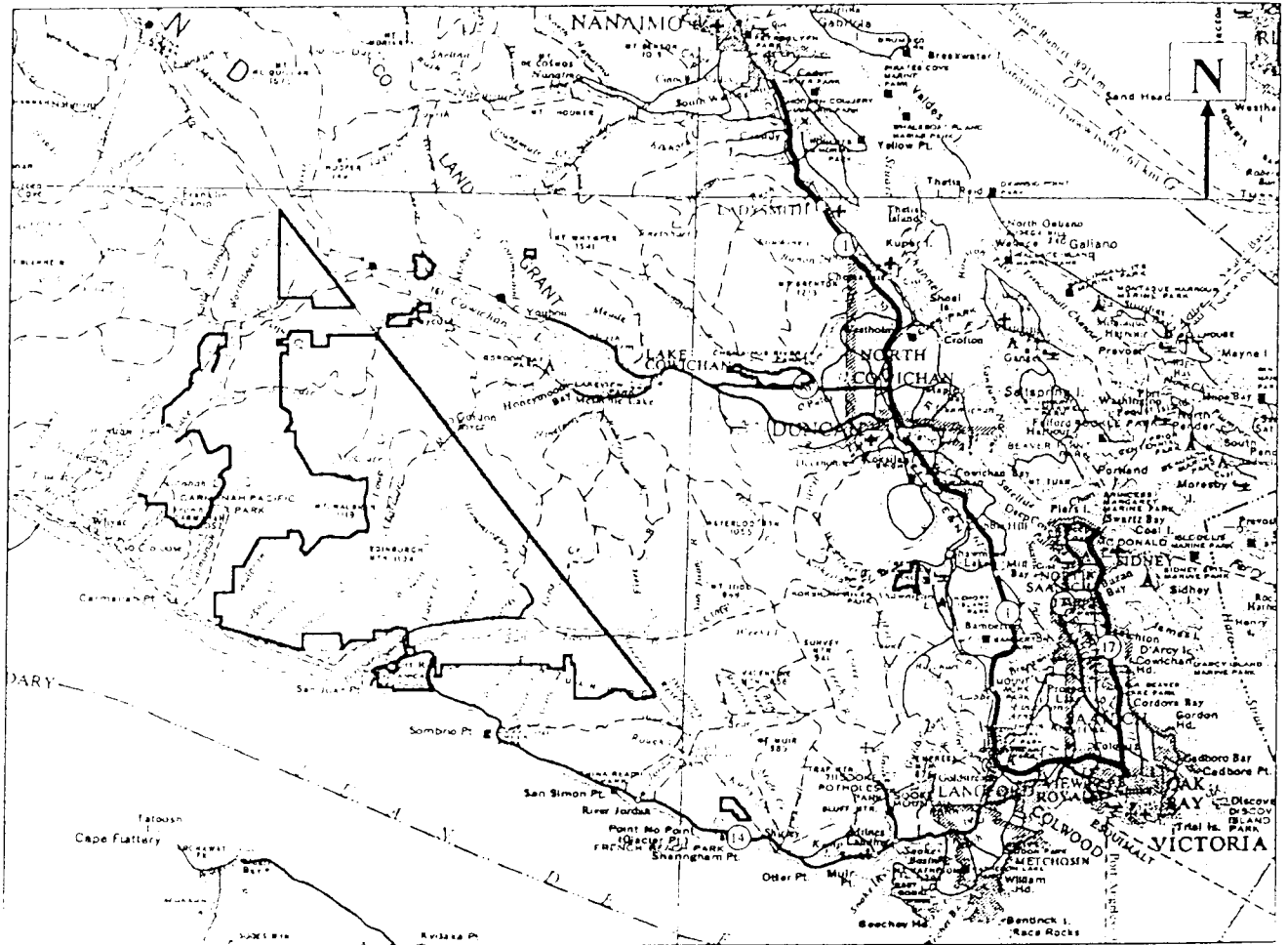


Figure 1: The areas outlined in black are the extent of TFL 46. The map scale is 1:600 000.

INTRODUCTION

Project Background

This visual landscape inventory project was completed under contract for TFL Forest Ltd. The project was undertaken by the staff of RRL Recreation Resources Ltd. The project was initiated in May 1999 and completed in November 1999.

Study Area

TFL 46 covers approximately 84,000 ha on southern Vancouver Island. It reaches west to Nitinat Lake, south to the Juan de Fuca Strait, east to Shawnigan Lake and north to Cowichan Lake. Isolated pieces of the TFL area are located up east Cottonwood Creek, along the north shore of Cowichan Lake, west of Shawnigan Lake, along Hill 60, and close to Muir Creek near Jordan River.

TFL 46 is bordered by Camanah Walbran Provincial Park and by Pacific Rim National Park.

Two Special Management Zones (SMZs) are located within TFL 46: the Walbran Periphery SMZ and the San Juan Ridge SMZ.

Project Objectives

1. To update, where required, the existing visual landscape inventory for all of the visible land base within TFL 46. The existing inventory was already at the current (May 1997) Resource Inventory Committee (RIC) Standards.
2. To consolidate separate visual landscape inventory reports and digital spatial information that have been produced since 1994 for the TFL and for the special management zones.
3. To delete from the visual landscape inventory the parts of the TFL that have been removed since the last inventory.
4. To delete from the visual landscape inventory the parts of the TFL that are no longer considered scenic areas.
5. To generate seamlessly numbered spatial information and associated attributes for an ARCInfo GIS platform.

Note: The recreation features and recreation opportunity spectrum inventories have also been updated and revised for TFL 46.

The updated inventory provides a current visual landscape data base to assist with recreation analysis and integrated resource management planning. The data provided by this inventory serves as a reference for developing forest management strategies and plans.

Project Products

Products produced for this project include:

- ◆ visual landscape inventory digital map files (coverages) - ARCInfo Format.
- ◆ visual landscape inventory report
- ◆ photograph panoramas from Nitinat Lake

Previous Work

In July-August 1992 and June 1993 a quadrant standard inventory was completed for most of the TFL (it did not include Shawnigan Lake and the Hill 60 area) on 1:50000 scale NTS maps. Photographic panoramas were taken for the June 1993 mapping from Nitinat Lake, but the remainder of the landscapes in the TFL were not photographed.

In February 1994, a visual landscape inventory was completed on private forest lands owned by TimberWest Forest Limited which are visible from Cowichan Lake. The format was the quadrant system. Photographic panoramas were taken of all landscape units from viewpoints on the lake and on the shore of the lake.

In May 1996 a Recreation and Landscape Inventory and Analysis was completed for the San Juan Ridge Special Management Zone. The landscape inventory and analysis updated and revised existing landscape units in TFL 46 and added new units within the Special Management Zone. The format used was the quadrant system and a modified version of the quadrant system using only Recommended Visual Quality Classes. Panoramas were taken of views from the Kludahk Trail along the San Juan Ridge.

In March 1997, Recreation, Visual Landscape and ROS Inventories were completed for the Walbran Periphery Special Management Zone. The landscape inventory updated and revised existing landscape units from TFL 46. The format used was the quadrant system. Photograph panoramas were taken of landscape units within the SMZ.

In October 1997, a complete visual landscape inventory was completed for all of TFL 46 using the May 1997 standard. The inventory incorporated information from the SMZ reports. All landscapes, except for Nitinat Lake and the SMZ areas, were rephotographed.

In September 1999, a visual landscape inventory, analysis, design and presentation project was completed for landscapes visible from Nitinat Lake, regardless of tenure. The mapping, VSU attributes, viewpoints and panoramas have been incorporated into this update.

General Landscape Character

Topography in TFL 46 is mainly mountainous with steep valleys. The exceptions are the broad valleys containing Cowichan Lake and the San Juan River. The highest peak in the TFL is Mount Edinburgh at 1120m. The San Juan Ridge is the only sub-alpine landscapes within the TFL.

TFL 46 is an active working forest with a mosaic of forest ages. The area is heavily roaded with mainlines and numerous secondary logging roads.

Most landscapes within the TFL are modified. Areas logged prior to 1950 are covered with uniform second growth and often appear unmodified.

Travel Corridors

There are seven road travel corridors and three lakes within TFL 46 from which the visual landscape inventory was completed. These ten areas comprise the *known* scenic areas and scenic areas within TFL 46.

- Harris Mainline
- Shawnigan Mainline
- Rosander Mainline
- McClure Mainline
- Glad Lake Mainline
- Highway 18
- Nitinat Mainline
- Cowichan Lake
- Shawnigan Lake
- Nitinat Lake

Harris Mainline

The Harris Mainline is part of a public road leading from Mesachie Lake to Port Renfrew. Twenty seven km of the Harris Mainline within TFL 46 has been mapped. Rating Points along the Harris Mainline are H43-H50.

The Harris Mainline has changed little since the 1997 landscape inventory. The north end of the travel corridor has been removed from the TFL and is no longer managed as a scenic area. Much of the road is still screened. An informal pullout at the Old Harris Creek Camp (H49) is the only large view along the road. Two new heli-logging cutblocks are visible from this pullout. A rest stop with a short interpretative trail leading to a large Sitka spruce, 28 km north of Port Renfrew, does not offer any views.

Sensitivities to visual alteration are moderate on units viewed from the road and high on units viewed from recreation sites.

Gordon Mainline

The Gordon Mainline is an active logging road running from the Gordon River Camp south to the junction with Harris Mainline near Port Renfrew. The road is closed to the public during working hours. For the 1997 inventory, 29 km of the road was inventoried. Since then, most of the Gordon Mainline is no longer managed as a scenic area. Only the lower 4 km from the junction with the Harris Mainline near Port Renfrew up to the bridge over the Gordon River is still a scenic area. Rating Points along the Gordon Mainline are G41 and G42.

Sensitivities to visual alteration are high and moderate on units viewed from the beach at Port San Juan and the lower bridge over the Gordon River.

Shawnigan Mainline (also called Bear Creek Mainline)

As of July 3, 1997 only the first eight km of the road were open. The road receives low public vehicle use beyond the San Juan Recreation Site. For the 1997 inventory, the entire length of the road was inventoried. Since then, only as far as the San Juan Recreation Site is considered a scenic area. Ratings points are S52 and S53. Sensitivity to visual alteration is low.

Rosander Mainline

The Rosander Mainline is the road to the Camanah Valley. Fourteen km of the road is within TFL 46. Rating points are N33-N35.

Since previous inventories, vegetative screening along the road has increased in size and height. Units viewed from the road are now either fully or partially screened by vegetation. Many units that were rated from Rosander Mainline in earlier inventories are now rated from Nitinat Lake. The lake offers more expansive views than the road.

Sensitivities to visual alteration are moderate to high.

McClure Mainline (includes some of Caycuse Mainline)

The McClure Mainline leads to the Walbran Valley. Twenty-four km of the McClure Mainline within TFL 46 have been mapped. Rating Points along the road are M5-M10.

The McClure Mainline has changed little since the 1997 inventory. Vegetative screening continues to increase in height and density. The most expansive views along the road are near the turnoff (Branch road M7) to the Caycuse Fir (rating points M6 and M7).

Sensitivities to visual alteration are low to moderate north of McClure Lake, and high on landscapes viewed directly from the lake.

Glad Lake Mainline

The Glad Lake Mainline parallels Walbran Creek. Eight km of the Glad Lake Mainline within TFL 46 have been mapped. Rating Points along the road are G11-G17.

Landscapes viewed from the Glad Lake Mainline have not changed much since the 1997 inventory. The first cutblocks in the area at the beginning of the road are starting to show green-up, although the existing visual condition is still excessively modified. Recent cutblocks are visible at the base of House Cone and on the slopes west of West Walbran Creek.

Sensitivities to visual alteration range from very high on the Walbran floodplain to moderate in out-lying areas.

Highway 18

Highway 18 runs west-east for twenty seven km from Duncan to Cowichan Lake. TFL 46 is adjacent to the highway for eight km. Rating points along the highway are C55 and C56.

The view is largely screened with only glimpse views. The sensitivity to visual alteration is high due to large numbers of viewers.

Nitinat Mainline

Nitinat Mainline is a public road linking Cowichan Lake with Nitinat Lake. It is also the main route to the Carmanah Valley and Nitinat Lake. Eight km of the road within TFL 46 has been mapped.

The road is generally completely screened, with the exception of a glimpse view from the Vernon Creek Trestle (N1). Sensitivities to visual alteration are very low.

Cowichan Lake

Cowichan Lake is thirty two km long and three km wide. Four small pieces of TFL 46 are scattered around the lake. Rating Points on the lake are C2-C5. Visual sensitivities to alteration are moderate.

Shawnigan Lake

Shawnigan Lake is eight km long and averages one km wide. TFL 46 is close to the west side of the lake for six km. Rating Points on the lake are SL 57 and SL 58.

Visual sensitivity to alteration is moderate and high because of the high recreation use and the numerous homes around the lake.

Nitinat Lake

Nitinat Lake is twenty four km long and one to two km wide. It is open to the Pacific Ocean at the south end. Most afternoons, thermal winds arise that blow fifteen to twenty knots. The conditions are ideal for windsurfing and Nitinat is considered one of the best locations for windsurfing in North America. TFL 46 borders Nitinat Lake for fourteen km. Rating points on the lake are N19-N32.

Sensitivities to visual alteration range from low on background and low-lying units to very high around Lady Falls.

METHODOLOGY

This project was completed using the methodology outlined in the Ministry of Forests, Forest Practices Branch publication entitled Visual Landscape Inventory, Procedures & Standards (May 1997). The project is an update of the existing inventory completed in August 1997 to the 1997 standard.

Variations

This project has two minor variations from the May 1997 visual landscape inventory standard:

1. **data entry program** - the MoF produced Recreation Inventory System (RIS) data entry program was not used as it has errors. A MS Access database was created and converted to a dbase file for linking with the spatial information.
2. **rating point numbering system** - rating points are numbered seamlessly across the entire TFL using a letter and number combination as a unique identifier for each rating point. This allows easy addition of new rating points and gives each rating point a unique identity that does not require a mapsheet identifier.

Project Process

A pre-project meeting was held in May 1999 between RRL and TFL Forest staff. The meeting served to establish the terms of reference prior to the start of the project.

Field work took place from in July and September 1997. The existing visual condition was checked in areas of recent harvesting.

Subsequent office work entailed updating of mapping, data entry, assembly of photographs and report writing.

SUMMARY TABLES

The following tables summarise the distribution of existing visual condition, visual absorption capability, biophysical rating, viewer condition, viewer rating, visual sensitivity and recommended visual quality class in TFL 46.

Table Legend

<i>P</i> - Preserved	<i>L</i> - Low	1 - very high sensitivity to human-made visual alteration
<i>R</i> - Retained	<i>H</i> -High	2 - high sensitivity to human-made visual alteration
<i>PR</i> - Partially Retained	<i>M</i> - Moderate	3 - moderate sensitivity to human-made visual alteration
<i>M</i> - Modified		4 - low sensitivity to human-made visual alteration
<i>MM</i> - Maximally Modified		5 - very low sensitivity to human-made visual alteration
<i>EM</i> - Excessively Modified		

Default Recommended Visual Quality Classes (RVQCs) are laid out in a letter by Henry Benskin, Director of the Forest Practices Branch (August 25, 1997). They provide an interim direction for visual landscape analysis and recommendations for the planning and management of areas in the absence of VQOs. (Refer to Appendix I)

Final RVQCs were chosen by RRL. Generally the final RVQC is within the default range, but if it is not, then a rationale statement is provided.

Visual Sensitivity Units viewed from Cowichan Lake

VSU	Rating Point	Existing Visual Condition	Visual Absorption Capability	Biophysical Rating	Viewing Condition	Viewer Rating	Visual Sensitivity Class	Default Recommended Visual Quality Class (RVQC)	Final RVQC
0003	C2	M	M	M	H	M	3	PR-M	PR
0004	C3	PR	L	M	H	M	3	PR-M	PR
0005	C3	R	M	M	H	M	3	PR-M	PR
0006	C5	R	M	H	H	M	3	PR-M	PR
0007	C6	MM	M	L	M	L	4	PR-MM	M
0177	C2	M	M	M	H	M	3	PR-M	PR
0215	C6	MM	M	L	M	L	4	PR-MM	M

Visual Sensitivity Units viewed from McClure Mainline

VSU	Rating Point	Existing Visual Condition	Visual Absorption Capability	Biophysical Rating	Viewing Condition	Viewer Rating	Visual Sensitivity Class	Default Recommended Visual Quality Class (RVQC)	Final RVQC
0009	0	M	M	M	L	L	5	M-MM	M
0010	0	R	M	L	M	L	4	PR-MM	M
0011	M5	M	M	M	L	M	4	PR-MM	M
0012	M6	R	M	M	M	M	3	PR-M	M
0013	M6	PR	M	M	M	M	3	PR-M	M
0014	M6	EM	M	M	H	M	3	PR-M	M
0015	M7	R	M	M	M	L	4	PR-MM	M
0016	M7	M	M	M	M	M	3	PR-M	M
0017	M7	M	M	L	L	L	5	M-MM	M
0018	M9	MM	L	M	H	M	3	PR-M	M
0019	M7	R	M	L	L	L	5	M-MM	M
0020	M8	R	M	L	L	L	4	PR-MM	M
0021	0	MM	M	L	M	M	3	PR-M	M
0022	M7	PR	M	M	L	L	4	PR-MM	M
0023	M10	M	M	M	H	M	3	PR-M	M
0024	M10	MM	M	H	H	M	2	R-PR	PR
0025	M9	PR	L	H	H	M	2	R-PR	PR

Visual Sensitivity Units viewed from Glad Lake Mainline

VSU	Rating Point	Existing Visual Condition	Visual Absorption Capability	Biophysical Rating	Viewing Condition	Viewer Rating	Visual Sensitivity Class	Default Recommended Visual Quality Class (RVQC)	Final RVQC
0026	0	EM	M	M	M	M	3	PR-M	PR
0027	W18	R	L	M	M	M	3	PR-M	PR
0028	W18	R	L	H	M	M	2	R-PR	R
0029	0	EM	L	M	M	M	3	PR-M	PR
0030	G11	R	L	M	M	M	3	PR-M	PR
0031	G13	M	M	M	M	M	3	PR-M	PR
0032	G16	M	M	M	L	M	3	PR-M	PR
0033	G13	P	L	M	H	M	2	R-PR	R
0034	G15	P	L	M	H	H	2	R-PR	R
0035	G14	PR	M	M	M	H	2	R-PR	R
0036	G14	R	M	H	H	H	1	P-R	R
0037	G14	EM	M	L	M	M	3	PR-M	PR
0038	G17	R	L	M	H	H	1	P-R	R
0039	G17	P	L	M	M	H	2	R-PR	R
0040	0	MM	M	M	L	M	3	PR-M	PR
0041	G16	R	M	M	M	M	3	PR-M	PR

Visual Sensitivity Units viewed from Nitinat Lake, Nitinat Mainline and Rosander Mainline

Part of the Nitinat visual landscape inventory, analysis, design and presentation project included getting consensus on RVQCs for the VSUs. Listed below in the table are the stakeholder RVQCs collected simultaneously in the field. The MoF RVQC at the end of the table is a distillation of the stakeholder RVQCs

Inventory Parameters										Stakeholder RVQCs				MoF RVQCs
VSU	Rating Point	EVC	VAC	BR	VC	VR	VSC	Default RVQC	RRL RVQC	Joe Thorne, Dittidaht Rep.	Wayne French, Macmillan Bloedel	Steve Lorimer, TimberWest	Kevin Lee, Vancouver Forest Region	MoF
0001	N1	R	M	L	L	L	5	M-MM	M	not part of the Nitinat project				
0002	N1	PR	M	M	L	L	5	M-MM	M					
0053	N35	P	M	M	H	L	3	PR-M	PR					
0054	N35	M	H	M	H	L	3	PR-M	PR					
0042	N20	M	L	L	H	M	3	PR-M	M	M	M	M	M	M
0043	N23	M	M	M	H	H	2	R-PR	PR	PR-M	M	M	PR	PR
0044	N23	R	M	M	H	H	2	R-PR	PR	PR	PR	PR	R	PR
0045	N33	PR	L	M	H	H	2	R-PR	PR	PR	PR	PR	R	PR
0046	N26	R	M	M	H	H	2	R-PR	PR	M	M	M	M	M
0047	N27	P	L	H	H	H	1	P-R	P	P	P	P	P	P
0049	N31	R	L	M	H	M	2	R-PR	R	R	R	R	R	R
0050	N29	R	H	M	H	M	3	PR-M	PR	M	M	M	M	PR
0051	N30	P	M	M	M	M	3	PR-M	PR	PR	PR	PR	R	PR
0052	N32	R	L	M	M	M	3	PR-M	PR	PR	M	M	PR	PR
0055	N29	R	M	L	M	L	4	PR-MM	M	M	M	M	-	M
0056	N29	M	M	M	H	M	3	PR-M	PR	M	M	M	PR	PR
0057	N29	R	L	M	M	L	3	PR-M	PR	M	M	M	M	PR
0058	N31	P	M	M	L	L	4	PR-MM	M	M	M	M	-	M
0059	N31	R	M	H	H	M	2	R-PR	PR	M	M	M	-	PR
0060	N31	R	H	L	M	L	4	PR-MM	M	M	M	M	-	M
0061	N32	MM	M	M	M	L	3	PR-M	PR	PR	M	M	PR	PR
0062	N31	MM	L	M	H	M	2	R-PR	PR	PR?	M	M	PR	PR
0063	N24	MM	M	M	H	M	3	PR-M	PR	PR	PR	PR	PR	PR
0064	N31	P	L	M	L	L	3	PR-M	PR	M	M	M	-	PR
0065	N31	P	M	M	L	L	4	PR-MM	PR	M	M	M	-	M
0133	N26	PR	M	L	L	L	4	PR-MM	M	M	M	M	M	M
0134	N26	MM	M	M	L	L	4	PR-MM	M	M	M	M	M	M

Visual Sensitivity Units viewed from the Harris, Shawnigan (Bear Creek) and Gordon Mainlines

These three are combined together because the scenic areas along the Gordon and Shawnigan Mainlines are short.

VSU	Rating Point	Existing Visual Condition	Visual Absorption Capability	Biophysical Rating	Viewing Condition	Viewer Rating	Visual Sensitivity Class	Default Recommended Visual Quality Class (RVQC)	Final RVQC
0082	H43	M	M	M	M	H	3	PR-M	M
0083	H43	EM	M	L	M	H	3	PR-M	M
0085	G41	PR	M	M	M	M	3	PR-M	M
0087	H43	PR	M	M	H	H	2	R-PR	PR
0088	0	MM	M	L	M	M	3	PR-M	M
0093	H44	EM	M	M	H	H	2	R-PR	PR
0094	H44	R	L	M	M	H	3	PR-M	M
0095	H44	MM	M	M	H	H	2	R-PR	PR
0096	H45	PR	M	H	H	H	2	R-PR	PR
0097	H43	PR	H	M	H	H	2	R-PR	PR
0098	H43	MM	H	M	H	H	2	R-PR	PR
0099	H43	M	M	M	H	H	2	R-PR	PR
0100	0	M	M	L	M	M	3	PR-M	M
0101	0	R	M	L	M	M	3	PR-M	M
0103	H45	MM	M	M	H	H	2	R-PR	PR
0106	H46	MM	M	M	M	H	3	PR-M	M
0111	S52	PR	M	L	L	L	4	PR-MM	M
0112	S53	R	M	L	M	L	4	PR-MM	M
0115	H45	M	M	M	L	H	4	PR-MM	M
0117	H47	R	L	M	H	H	2	R-PR	PR
0118	H48	R	M	M	H	M	3	PR-M	M
0119	H44	R	M	L	L	M	5	M-MM	M
0120	0	PR	M	L	L	M	4	PR-MM	M
0121	H49	R	M	M	M	M	3	PR-M	M
0122	H49	PR	L	M	M	M	3	PR-M	M
0123	H49	R	L	M	M	M	3	PR-M	M
0125	H50	R	M	M	M	M	3	PR-M	M
0126	0	R	M	M	L	M	4	PR-MM	M
0212	H43	MM	H	M	H	H	2	R-PR	PR

Visual Sensitivity Units on the San Juan Ridge

VSU	Rating Point	Existing Visual Condition	Visual Absorption Capability	Biophysical Rating	Viewing Condition	Viewer Rating	Visual Sensitivity Class	Default Recommended Visual Quality Class (RVQC)	Final RVQC
0102	The standard parameters are not available for the San Juan Ridge.						2	R-PR	PR
0104	The landscape was considered from the perspective of people on the Kludahk Trail. Zones with different RVQCs were recommended along the trail.						2	R-PR	PR
0105							2	R-PR	R
0107							2	R-PR	PR
0108							3	PR-M	PR
0109							2	R-PR	PR
0110							1	P-R	R

Visual Sensitivity Units viewed from Highway 18

VSU	Rating Point	Existing Visual Condition	Visual Absorption Capability	Biophysical Rating	Viewing Condition	Viewer Rating	Visual Sensitivity Class	Default Recommended Visual Quality Class (RVQC)	Final RVQC
0127	C56	R	L	M	H	M	2	R-PR	PR
0214	C56	R	L	M	H	M	2	R-PR	PR

Visual Sensitivity Units viewed from Shawnigan Lake

VSU	Rating Point	Existing Visual Condition	Visual Absorption Capability	Biophysical Rating	Viewing Condition	Viewer Rating	Visual Sensitivity Class	Default Recommended Visual Quality Class (RVQC)	Final RVQC
0213	SL5	R	M	M	H	H	3	PR-M	PR
0128	SL5	R	M	M	H	H	3	PR-M	PR
0131	SL5	R	M	L	M	H	3	PR-M	PR
0130	SL5	PR	M	M	H	H	2	R-PR	PR

REFERENCES

Beautiful British Columbia Travel Guide. Beautiful British Columbia Magazine. Victoria. 1994.

Completing the Vancouver Island Land-Use Plan Special Feature Protected Areas Summary Report. Prepared by: Land Use Coordination Office, Ministry of Government Services. February 1996.

Hiking Through History Trails of the San Juan Valley. Teresa Burton. Port Renfrew Community Association. Port Renfrew, B.C. 1993.

Kludahk Trail Inventory: Mapping and report. Ministry of Forests, Duncan Forest District, TimberWest Forest Limited & Western Forest Products. 1:20,000 TRIM (NAD 83) mapping and accompanying report and photographs. A detailed inventory of the location and features along the Kludahk Trail.

Landscape Inventory and Analysis Tree Farm Licence 46 Caycuse - Renfrew. Prepared by RRL Recreation Resources Ltd. for Fletcher Challenge Canada Limited. Revised June 1993.

Nitinaht Lake: Visual Landscape Inventory, Analysis, Design and Presentation project. Prepared by RRL Recreation Resources Ltd. for Ministry of Forests, Vancouver Forest Region. September 10, 1999.

Recreation Analysis of Tree Farm Licence 46 Caycuse-Renfrew. Prepared by RRL Recreation Resources Ltd. for Timber West Forest Limited. Revised June 1995.

Recreation Inventory: South Island Private Lands. Prepared by RRL Recreation Resources Ltd. for TimberWest Forest Limited. November 1994.

Recreation, Visual Landscape & ROS Inventories - Walbran Periphery Low Intensity Area. Prepared by RRL Recreation Resources Ltd. for TimberWest Forest Limited and MacMillan Bloedel. March 1997.

San Juan Ridge Low Intensity Area: Recreation and Landscape Inventory and Analysis. Prepared by RRL Recreation Resources Ltd. for Ministry of Forests, Duncan Forest District, Western Forest Products Limited and TimberWest Forest Limited. May 1996.

Visual Landscape Inventory Procedures & Standards Manual. Prepared by B.C. Ministry of Forests, Forest Practices Branch for Resources Inventory, Cultural Task Force. May 1997

APPENDIX I INTERIM ANALYSIS DIRECTION (H. Benskin's letter)

File: 16250-01

August 25, 1997

To: All Regional Managers
All District Managers

From: Henry Benskin, R.P.F.
Director
Forest Practices Branch

Re: Visual Landscape Inventory Standards and Procedures and interim direction
respecting analysis

Enclosed is a copy of the *Visual Landscape Inventory: Procedures and Standards Manual* for your information and use.

These procedures and standards have been developed in consultation with your staff (see attached memo from Tom Hall) and have been approved by me, Director Forest Practices Branch and Data Custodian for this business area. They have been submitted to the Resources Inventory Steering Committee and have been accepted as Ministry of Forests standards.

These procedures and standards will evolve over time. The need for change and improvement will be identified through continued training, testing and field application. To maintain version control, any needed changes will be reviewed and incorporated into this document annually after each field season.

During the development of these procedures and standards, Recommended Visual Quality Objectives (RVQOs) were removed from the inventory in order to keep the visual landscape inventory and analysis functions separate. This clarification of the inventory function, however, did not address the need to clarify how to carry out a visual landscape analysis, how to manage visually sensitive or scenic areas in absence of VQOs, or how to establish VQOs.



Interim Analysis Direction

Your staff have requested that we provide some interim direction on carrying out visual landscape analyses, and developing recommendations for the planning and management of areas in the absence of VQOs.

Consequently, the following interim direction for visual landscape analyses is provided for your consideration and use:

1. The current term Recommended Visual Quality Objective (RVQO) should be dropped and replaced with the term Recommended Visual Quality Class (RVQC). This name change will clarify the distinction between an objective established under the Forest Practices Code and staff advice recommended as a result of a visual landscape analysis.
2. A Recommended Visual Quality Class (RVQC) should be understood to be a specialists recommendation that describes the level of alteration that would be appropriate for a visual sensitivity unit considering visual and other resource values.

The RVQC does not comprehensively consider all socio-economic factors, is not determined through a planning or decision making process and is not necessarily endorsed by government or other stakeholders. RVQCs are not established VQOs under the Forest Practices Code.

3. RVQC's should be determined and recorded as follows:

- determine a default RVQC based on the VSC by using the following table:

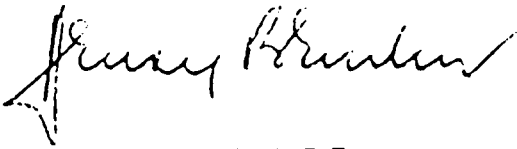
		Visual Sensitivity Class (VSC)				
		1	2	3	4	5
RVQC		P-R	R-PR	PR-M	PR-M-MM	M-MM

- determine a final RVQC, based on professional judgement and guided by long-standing but largely undocumented experiences and methods.
 - record the default and final RVQC and where the default and final RVQCs are different the record the rationale for this difference on the attached form.
4. Uses of RVQC's include:
 - input to planning processes;
 - input to TSR II (where the RVQC reflects current management practice); and
 - operational guidance for managing visual resources in lieu of established VQOs.
 5. RVQC's may be derived at the time an inventory is completed if requested by a district manager or planning process but must be kept separate from inventory data.
 6. RVQC's will be stored digitally as an administrative attribute within the corporate recreation inventory data base.

7. As visual landscape inventories and analyses are updated RVQO's on existing visual landscape inventories should be deleted, and interim RVQC's should be entered as an administrative attribute.

To ensure visual quality classes are recommended more consistently across the province in the future, Forest Practices Branch staff will work with your regional visual landscape specialists to develop visual landscape analysis procedures and standards for your review. This work will be done in conjunction with the development of a new visual resource policy. Ultimately, old RVQO's and interim RVQC's should be reviewed in light of the new policy that will be developed.

In you have any questions or would like additional information please call Jacques Marc, Senior Visual Resource Specialist at (250) 387-8481.



Henry Benskin, R.P.F.
Director
Forest Practices Branch

Attachments

cc: Tom Hall, Manager, Information, Evaluation and Audit Section
Jacques Marc, Senior Visual Resource Specialist, Forest Development Section



PRELIMINARY VISUAL LANDSCAPE ANALYSIS AND RECOMMENDATION OF VISUAL QUALITY CLASSES

Page ____ of ____

Forest District(s): _____

Project Name(s): _____

Date Completed: _____

Completed by: _____ Affiliation: _____

Inventory Data							Analysis		Comments/Rationale	
1:20,000 BCGS MAP #	VSU #	EVC	VAC	BR	VC	VR	VSC	Default RVQC		Final RVQC

<p>VSU (Visual Sensitivity Unit)</p> <p>EVC (Existing Visual Condition):</p> <p>VAC (Visual Absorption Capability):</p> <p>BR (Biophysical Rating):</p> <p>VC (Viewing Condition):</p> <p>VR (Viewer Rating):</p> <p>VSC (Visual Sensitivity Class):</p> <p>RVQC (Recommended Visual Quality Class):</p>	<p>P=Preserved</p> <p>M=Modified</p> <p>H=High</p> <p>H=High</p> <p>H=High</p> <p>H=High</p> <p>1=Very High Sensitivity</p> <p>4=Low Sensitivity</p> <p>P=Preservation</p> <p>M=Modification</p>	<p>R=Retained</p> <p>MM=Maximally Modified</p> <p>M= Medium</p> <p>M= Medium</p> <p>M= Medium</p> <p>M= Medium</p> <p>2=High Sensitivity</p> <p>5=Very Low Sensitivity</p> <p>R=Retention</p> <p>MM=Maximum Modification</p>	<p>PR=Partially Retained</p> <p>EM=Excessively Modified</p> <p>L=Low</p> <p>L=Low</p> <p>L=Low</p> <p>L=Low</p> <p>3=Moderate Sensitivity</p> <p>PR=Partial Retention</p>
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APPENDIX II PHOTOGRAPH PANORAMAS

ACKNOWLEDGEMENTS

Project administration, support and background materials for the Visual Landscape Inventory of Tree Farm Licence (TFL) 46 was provided by Mark Carter R.P.F., Divisional Engineer of TFL Forest Ltd., Honeymoon Bay Operation. Technical assistance was provided by Jerry Miehn and Dana Mussato of the GIS department, TFL Forest Ltd.

Randy Taylor, Resource Officer Recreation, South Island Forest District provided input and interpretation of the inventory standards.

Map digitizing and attribute management was done by Cooney Consulting of Sidney, B.C.

09/25/2001 11:00 FAX 250 729 9481

TIMBERWEST NANAIMO

002

08/23/01 THU 14:24 FAX 604 654 4662

TIMBERWEST

--- NANAIMO OFFICE

001



Ken Kape

File: 16350-20/TFL 46

AUG 16 2001

Don McMullan, R.P.F.
Chief Forester
TimberWest Forest Corporation
Box 11101
Vancouver, British-Columbia
V6E 3P3

Dear Don McMullan:

This is to advise that the recreation inventory for Tree Farm Licence (TFL) 46 has been reviewed by the South Island District and Vancouver Forest Regional staff and is hereby approved for timber supply analysis purposes.

It should be noted however, that the standard Ministry of Forests Recreation Features Inventory Classification forms and checklists have not been completed according to the latest Resources Inventory Committee standard (1998). For example, several data fields are missing data or are incomplete including: missing mapsheet numbers, incorrect polygon numbering, lack of photographic reference numbers, date, name of photographer, etc. These omissions are not considered serious and do not impact the technical content of the actual inventory. In order to ensure consistency among recreation inventories, however, oversights should be addressed in future inventory updates.



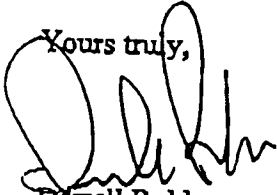
Another component of the inventory that is deficient involves the Inventory Report. It does not include a Chapter 5.0, "Issues and Recommendations." This is considered an important part of the inventory, as it identifies the recreation issues that have been raised in the inventory and makes a number of recommendations on how to address them. This information can then be used to prepare the recreation component of the TFL Management Plan.

Don McMullan

It is acknowledged that this inventory primarily involved a rollover process of existing data with some updating of information where necessary, however the deficiencies noted above should be addressed in any future inventories that are undertaken.

If there are any questions on this review, please contact Doug Herchmer, Recreation Forester, Forest Practices, Vancouver Forest Region, at (250) 751-7104.

Yours truly,



Darrell Robb
Acting Regional Manager
Vancouver Forest Region

pc: Doug Herchmer, Recreation Forester
Vancouver Forest Region

**RECREATION ANALYSIS REPORT
TIMBERWEST FOREST LIMITED
TREE FARM LICENCE 46
CAYCUSE - RENFREW**

**December 1994
Revised June 1995**

RRL Recreation Resources Limited

RRL Recreation Resources Limited

3156 Cobble Hill Road
R.R. 1, Cobble Hill, B.C. Canada
V0R 1L0 Tel/Fax: (604) 743-4046

June 26, 1995

Mr. Frank Leslie, R.P.F.,
Administrative Forester, Forest Resource Services
TimberWest Forest Limited
Suite 2300
1055 West Georgia Street
Vancouver, B.C.
V6E 3P3

RE: Revised Recreation Analysis Report - TFL 46 - 2nd Draft

Dear Frank:

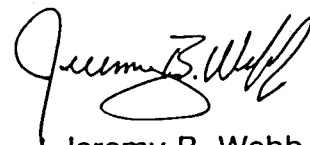
Enclosed is a copy of the revised recreation analysis report for TFL 46. Copies have been sent to Tom Jones and to Steve Lorimer.

The revised includes changes which reflect comments made on the first draft and includes information on the San Juan and Walbran Low Intensity Area's, which are new since the first draft of this report was produced.

Information on the fees being charged at the campsites is included. Changes have been made to the maps in the report, to indicate the boundaries of the proposed Walbran and Nitinat Protected Areas.

If you have any comments or suggestions regarding the second draft, please do not hesitate to contact me.

Sincerely,



Jeremy B. Webb

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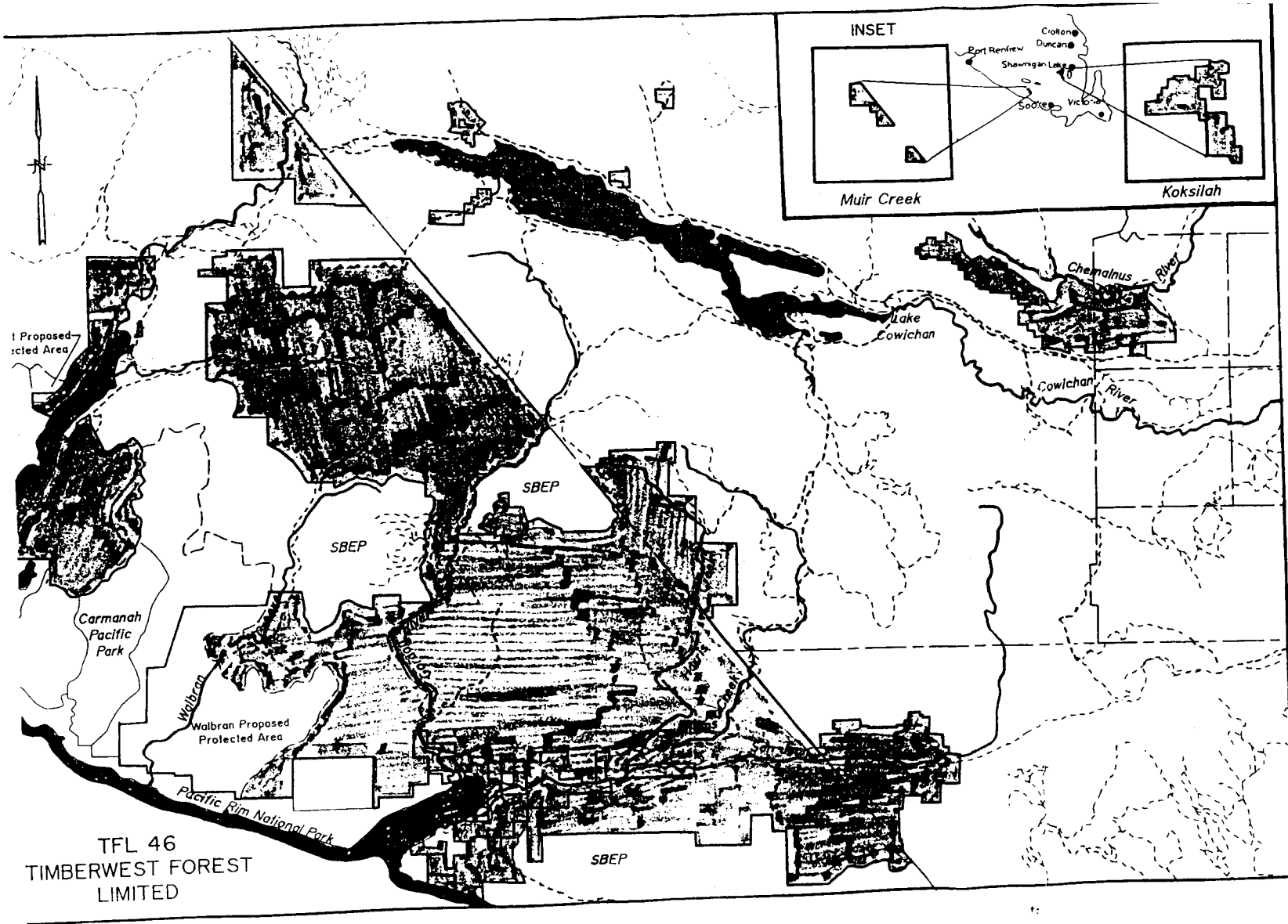
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EXECUTIVE SUMMARY

The Recreation Analysis Report presents options and recommendations for the management of recreation and landscapes resources in Tree Farm Licence 46. The analysis is based on a review of the recreation and landscape features in the TFL. The existing and potential use of these resources by the public for recreation forms the basis for this analysis.

The format for this report is outlined in: An Interim Guide for Completing a Recreation Analysis Report in the Vancouver Forest Region, Ministry of Forests, January 1994. A copy of this guide is enclosed in the back pocket of this report.

Management of recreation resources and forest landscapes in TFL 46 is moving from a generally informal, reactive approach, towards a more planned 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.

For the first time since 1989, the recreation and landscape planning environment for TFL 46 has begun to stabilize. Resource conflicts in the Walbran and Carmanah Valleys have been decreased as a result of their withdrawal from TFL 46 and TFL 44. A Low Intensity Area (LIA) has been established in the Walbran Valley. Small Business Enterprise Program areas have been established.

This recreation analysis report includes a summary of recreation and landscape resources within Tree Farm Licence 46. Key resources management issues are highlighted and management options, rational and implications are discussed.

1.0 INTRODUCTION

1.1 Purpose

The Recreation Analysis Report has been prepared as a planning and background document for the TFL 46 Management Working Plan. It provides an assessment of recreation and landscape resources in the TFL, including current and future supply and demand for recreation opportunities. Recreation Management options are included in the analysis.

The recreation analysis report draws together the key biophysical recreation feature and forest landscape data contained in the recreation and landscape inventories completed for TFL 46. Both of these inventories were completed in November and December 1992 and were revised in June 1993.

The recreation resource analysis for Tree Farm License 46 also compares the supply of recreation opportunities (features, activities, settings) in the TFL with existing use and demand for public/commercial recreation. Recreation resources within and outside of TFL 46 are assessed on a local and regional basis in terms of current and future demand and the availability of resources to meet that demand.

The recreation analysis report is comprised of six main sections:

Sections 1 and 2:	Establish the project terms of reference.
Section 3	Provides a description of existing recreation/landscape resource values.
Section 4	Describes recreation use values and demand.
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 Interim Guide for Completing a Recreation Analysis Report is enclosed in the back pocket of this report.

A number of tables, figures and appendices are included which illustrate:

- a) the current features and activities available
- b) the distribution of ROS Classes
- c) landscape features
- d) potential facilities

1.2 Background Information

- a. **Area:** Tree Farm License 46 is located on the southwestern of Vancouver Island. TFL 46 is located within the Vancouver Forest Region and wholly within the Duncan Forest District. The study area location map indicates the location and boundaries of TFL 46.

1.0 INTRODUCTION

1.2 Background Information (continued)

- b. **Recreation Management Classes:** TFL 46 encompasses an area of approximately 82,136 ha*. Of that area, 15,780 ha are rated as requiring special management consideration for recreation. 66,356 ha are rated as requiring no special management consideration for recreation. There are three formally managed recreation sites. In addition there are several informal campsites and trails and numerous interpretative signs located in the TFL.

* Original area measures from the June 1993 recreation inventory summary tables have been updated to reflect the proposed (1994) removal of parts of the Walbran Creek drainage and portions of the Nitinat Blocks from TFL 46 to Protected Area status.

Park and Ecological Reserve Boundaries: TFL 46 borders on Pacific Rim National Park, Carmanah Pacific Provincial Park, Koksilah River Provincial Park, Walbran Creek Protected Area and the Juan De Fuca Marine Trail. TFL 46 also borders on Ecological Reserves #83 - San Juan Ridge and #54 - Nitinat Lake.

TFL 46 also borders TFL 25 Block 1, administered by Western Forest Products, Jordan River Operations and borders Pacific Forest Products, Private Managed Forest Land, Cowichan Lake Operations.

Protected Areas and Low Intensity Areas (LIA's)

TFL 46 includes 2 LIA's. The San Juan Ridge LIA (#22) is 1 km wide and is centred along the height-of-land of the San Juan Ridge. This LIA encompasses a total area of 2,615 ha and extends from Walker Lake in the east, west to Falls Creek. Hiking trails, and a backcountry cabin have been constructed. This area supports year-around recreation opportunities for hiking, back country skiing and snowshoeing, nature study, camping and photography.

The Walbran Periphery LIA (#21) encompasses 2,615 ha and borders on the proposed Walbran Protected Area.

The Walbran proposed Protected Area (#22) Option 1, encompasses 9,486 ha and borders Pacific Rim National Park. This area is highly contested by forest industry and environmental sectors. Conservation of old growth forests, attractive recreation features, fisheries and ecological values are among the main resource management issues.

The Nitinat proposed Protected Area (#20), Option #3, encompasses 226 ha and provides a viewshed buffer for visitors to Hitchie Lake within the adjacent National Park.

The final boundaries of these Protected Areas and LIA's is under review and is subject to change. The implementation of LIA's and Protected Areas will generally improve opportunities for recreation. The lack of infrastructure, i.e. trails, campsites, maps etc. limits the accessibility of these areas and low levels of recreational use can be expected.

Recreation Management Units: For the purposes of this analysis report, TFL 46 has been divided into 19 Recreation Management Units (RMU's), which form the framework for developing recreation management objectives in the TFL. Recreation/landscape resource management objectives are summarized in Section 5.2 in Tables 4 & 5. Recreation features are identified in the recreation inventory (June 1993) and have been assigned Feature Significance and Management Class ratings. These are summarized in Table 1 in Section 3.0.

1.0 INTRODUCTION

1.2 Background Information (continued)

- c: **Recreation Feature Significance:** TFL 46 contains numerous outstanding biophysical features in addition to offering extensive roaded areas which support motorized recreation activities. Non-motorized areas are limited to small uplands within the TFL. Key recreation features are identified in Figure 4 at the end of this report.
- d. **Terrain:** TFL 46 is dissected by three major river valleys. The San Juan River is 45km in length and flows west to east to the confluence with Port Renfrew. It has a low gradient and is located along the San Juan lineament, one of the major geological structures on Vancouver Island. The Gordon River is 32 km in length, flows north to south to the confluence with Port Renfrew. It has a low gradient in lower reaches with a steeper gradient in upper sections. The Caycuse River, flows west to east, frequently in deeply incised canyons, with a generally moderate gradient in lower reaches to the confluence with the head of Nitinat Lake.

Other rivers and creeks used for recreation in TFL 46 include portions of the Nitinat River, Harris Creek, Lens Creek and Fairy Creek. Numerous minor creeks are also present within TFL 46.

The topography ranges from near sea level to approximately 1060 metres (Edinburgh Mountain) in elevation. A small portion of the TFL borders the west coast of Vancouver Island, along Juan de Fuca Strait and on the east side of Port San Juan.

With the exception of the San Juan River valley, which is broad and has a low gradient, the valleys within TFL 46 are narrow and are bordered by fairly rugged terrain.

- e. **Biogeoclimatic Subzones:** within the TFL include:

CWHmm1	Submontane Moist Maritime CWH
CWHmm2	Montane Moist Maritime CWH
CWHvh1	Southern Very Wet Hypermaritime CWH
CWHvm1	Submontane Very Wet Maritime CWH
CWHvm2	Montane Very Wet Maritime CWH
MHmm1	Windward Moist Maritime MH

- f. **Cultural:** Cultural and heritage characteristics of the TFL include historic resource extraction, (mining and logging) and travel routes. Several native archaeological sites are located within the TFL. In addition, logging dates back to the early 1900's, which first focused on the large sitka spruce of the San Juan Valley and lower Gordon River. The spruce was largely used for aircraft construction during the second world war. Evidence of railway logging includes old grades, wooden trestles, springboard notches and large stumps which are visible reminders of past logging history. Several old railway grades in the San Juan River valley have recently been cleared (1994) by volunteers from Port Renfrew and marked as walking trails.
- g. **Access:** TFL 46 is within approximately a one hour drive of the communities of Duncan, Ladysmith and Chemainus. The nearest communities are the Village of Youbou and the Village of Lake Cowichan. Honeymoon Bay, located on the south shore of Cowichan Lake is a small community which borders on TFL 46. Port Renfrew, located at the head of Port San Juan on the west coast is another small community which borders onto TFL 46.

1.0 INTRODUCTION

1.2 Background Information (continued)

g. Access: (continued)

From Victoria, TFL 46 is accessed via the West Coast Highway #14 through Sooke or through Duncan via the Lake Cowichan Highway #18. Travel time to TFL 46 from Victoria is approximately 1 hour 45 minutes.

Access throughout the TFL is facilitated by the numerous logging roads. There are also abandoned railroad grades, in varying condition (i.e. some have been cleared and marked as trails suitable for walking, horse back riding or mountain biking). Four wheel driving is generally not encouraged on disused logging roads due to negative impacts which contribute to soil erosion.

- h. **Climate:** The climate is typically west coast Vancouver Island, locally modified by elevation and aspect. Generally damp and mild with drier summers and the potential for significant snowfall in higher elevation areas. Areas of snowfall accumulation, such as along San Juan Ridge support winter recreation activities.

- i. **Recreation Activities:** A detailed summary of existing and potential recreation activities is provided in Section 3.3.

Most recreation activities centre around either the lakes and rivers within TFL 46 or along the roaded travel corridors. The San Juan Ridge is growing in popularity as a summer and winter recreation destination. The main and secondary or spur roads are popular with visitors. Due to the numerous maintained roads in the TFL, a high proportion of recreation activity is vehicle based or motorized.

There is a broad, provincial trend towards more non-motorized recreation activities. Increases in nature study, wildlife viewing, canoeing, rock climbing, beach activities and walking for pleasure are experiencing the highest annual growth rates. (Ref. Protected Areas Strategy for B.C. Supply and Demand Issues and Trends. February 1994 p.85).

Recreation activities take place year round in TFL 46, with seasonal peaks in the summer, on holiday weekends and during prime hunting season, where deer is the main game species. An increasing amount of winter recreation appears to be taking place. Angling, viewing, driving and exploring the logging roads are among the most popular year round recreation activities.

- j. **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 46 in December 1992 and was revised in June 1993 to include landscapes visible from Nitinat Lake.

Recreation opportunities are focused around the main vehicle travel corridors, on the lakes and along the main river valleys. Visual quality objectives have been developed for the landscapes viewed from these areas for the vehicle travel corridors within the TFL.

A total of approximately 122 km of secondary travel vehicle corridors are identified in the 1993 landscape inventory and analysis. Seven travel corridors have been mapped for landscape sensitivity and levels of visual quality (Visual Quality Objectives - VQO's) have been recommended.

1.0 INTRODUCTION

J. Landscape Values: (continued)

The proposed removal of the lower portion of Walbran Creek and upper Nitinat from TFL 46 will slightly reduce the amount of travel corridor and landscape areas under management with the TFL. However, the adjacency of a new park and Protected Areas can be expected to create new management expectations for landscape along these park/TFL interfaces and along travel routes within the TFL leading to these areas.

2.0 METHODOLOGY/PROCEDURES

Background information for this recreation analysis was obtained from the recreation and landscape inventories, use surveys, public consultation, licensees and provincial government ministries. More recreation use information would be helpful in assessing visitor needs and in developing recreation and landscape management strategies.

The Interim Guide for Completing a Recreation Analysis Report In the Vancouver Forest Region, Ministry of Forests, January 1994, has been used as the main reference for completing this analysis.

2.1 Public, Agency and Licensee Input

Local, regional and provincial recreation user groups, associations and individuals were contacted during the summer of 1992 as part of the recreation inventory for TFL 46. A summary of the responses to the recreation inventory is included in Appendix II.

Information from the inventory has assisted with establishing approximate levels of existing recreational use of the TFL lands. Further data on visitor numbers, areas of use, activities pursued, duration of visits, etc. would help to develop a more comprehensive approach to management of recreation and landscape resources in the TFL.

As part of the servicing and maintenance programs at the Lizard, Fairy and San Juan River campsites, a further survey of recreational users of TFL 46 is recommended.

3.0 DESCRIPTION OF EXISTING RECREATION RESOURCE VALUES

SUMMARY TABLES - TABLE 1

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			
Caycuse/ Renfrew	4	13,029	4	60,381	V1,M3,M2,L5	p,a,q,n,k,j	Special management recommended for lakes, major rivers, campsites and for visual areas around them. Also, regions of limestone bedrock with spelunking (caving) potential.
	3	3,273	3	2,743	V1,L5,W3,Q2	p,l,q,n,i,k	San Juan Ridge, Mount Edinburgh and areas bordering on Mount Bolduc TSA. Small, semi-open forested plateaus
	2	2,182	3	8,932	E3,Q2	p,l	Unmodified areas in Walbran Valley, Fair Creek Mountain.
	1	0	1	0			
AREA SUMMARY: (0,1) 18,484 ha (2) 72,056 ha				TOTAL: Management Class (0,1,2) 90,540 ha			

* ROS CLASSES:

- (1) Primitive
- (2) Semi-Primitive Non-Motorized
- (3) Semi-Primitive Motorized
- (4) Roaded Resource Land
- (5) Rural
- (6) Urban

** NOTE: Area totals in Table 1 may differ slightly from other block area measures due to small variances in map print size, line width or cumulative error.

SUMMARY TABLES - TABLE 2

TABLE 2 - EXISTING RECREATION SITES AND TRAILS (TimberWest & MoF)

RESOURCE EMPHASIS AREA	SITES ¹				TRAILS ²		
	VEHICLE ACCESS		BACKCOUNTRY ³		Type	#	kms
	#	vus	#	Units			
San Juan River	900-0270	5					
Fairy Lake	900-0268	35			Non motorized		1 km
Lizard Lake	900-0269	10			Non motorized		1 km
TOTAL		50					2 km

¹ See Chapter 9 for an explanation of vehicle access vs.backcountry sites.

² See Chapter 10 for an explanation of trail types.

³ Since trails may overlap resource areas, the total may not be the arithmetic total of the column.

SUMMARY TABLES - TABLE 3

TABLE 3 - EXISTING RECREATION SITES AND TRAILS (TW/MoF)

RESOURCE EMPHASIS AREA	SITES ¹						TRAILS ²			
	VEHICLE ACCESS			BACKCOUNTRY			Agency	Type	#	Unit
	Agency	#	vus	Agency	#	Unit				
San Juan River	TW/MoF	900-0270	5							
Fairy Lake	TW/MoF	900-0268	35				TW/MoF	NM		1 km
Lizard Lake	TW/MoF	900-0269	10				TW/MoF	NM		1 km
TOTAL			50							2 km

¹ See Chapter 9 for an explanation of vehicle access vs. backcountry sites.

² See Chapter 10 for an explanation of trail types.

³ Since trails may overlap resource areas, the total may not be the arithmetic total of the column.

3.1 Key Features

The location of key features in TFL 46 is illustrated in Figure 2 - Key Recreation Features (page 38), which provides a summary and overview of the spatial distribution of the main features in the TFL. A total of 28 features are identified. Key recreation activities are summarized in Section 3.3.

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

a. Lakes and Rivers

Fairy Lake (33 ha) and Lizard Lake (9ha) are popular with small boaters and canoes. Fairy Lake is actually a back channel of the San Juan River. Both lakes have seasonally maintained campsites.

The San Juan River is popular as a kayaking, canoeing or rafting route. The river is braided into several channels along the lower 15 km (as measured from the confluence with Port Renfrew).

Commercial recreational use of the San Juan River is increasing. Jet boat tours, angling trips, kayak and canoe trips, photography and nature study are among the programs offered by commercial guides.

The lower Gordon River is suitable for canoeing, given proper attention to normal water safety practices. While the waters are generally calm, the current is quite strong and care should be taken. This river also has potential for commercial recreational use.

b. Historic trails and interpretation:

There are several historic railway logging roads located in TFL 46. Recently, trails along several old grades have been cleared by volunteers from Port Renfrew. The trails were cleared and marked under an informal agreement between Teresa Burton, The Port Renfrew Community Association, TimberWest and the Ministry of Forests. The trails provide for safe hiking and offer interpretation opportunities of old logging history and natural features. There are areas in TFL 46 which are suitable for additional trail construction.

The trails and old roads have no formal status and their location is not mapped on current operational maps. There are no formal management plans for the maintenance or protection of these old roads and trails. These trails are unlikely to qualify for heritage status or protection. No funding has been provided by TimberWest for the maintenance or development of these trails. Limited funding has been provided by the Duncan Forest District.

Under the new Forest Practices Code of B.C. Act, Section 102, these trails could be classified as formal trails and would be assigned a T2-Managed Trail designation.

Managed trails are eligible for Ministry of Forests funding (when available) for maintenance and upgrading. Managed trails may be relocated as necessary i.e. to avoid wet areas or when road construction or forest harvesting occurs. Trails may be re-established in their original location following a disturbance, or may be relocated to a suitable location.

Further work, maintenance or trail building, without formal permission from the Ministry of Forests and the Licensee is not permitted under Section 102 of the Forest Practices Code of B.C. Act.

3.1 Key Features

b. Historic trails and interpretation: (continued)

Identification of all trails on operation maps is recommended.

Interpretative signs on some trails would help walkers to understand the historical nature of forestry in the area. There is a long established interest in logging and forestry history in B.C. Some of the trails in TFL 46 could provide information on this history which is not well identified within the TFL.

c. Travel corridors (vehicle/motorized)

Over the past decades, thousands of kilometres of logging roads and railways have been built for logging purposes. Many of these roads and rights-of-way are still in use.

Communities around TFL 46 including Cowichan Lake, Nitinat, Port Renfrew and Caycuse rely on parts of the TimberWest road systems for access to other parts of Vancouver Island.

There are seven main travel corridors in TFL 46. These are:

1. Rosander Mainline (access to Nitinat Lake and Carmanah Pacific Provincial Park)
2. Caycuse Mainline (Vernon Creek)
3. Caycuse/McClure
4. Glad Lake Mainline (access to Walbran Valley) *who will maintain this road, the bridges??
5. Gordon River Mainline
6. Harris Creek Mainline
7. San Juan River

Visual Quality Objectives are identified for all landscapes visible from these seven travel corridors in TFL 46. The highest visitor use occurs along the Harris and Gordon River Mainlines. These roads link the Village of Lake Cowichan and Port Renfrew. The Harris Mainline is the preferred travel route. Refer to Section 3.7, for a summary of Visual Quality Objectives for the TFL.

d. Inter-agency agreements/contracts

Low Intensity Areas (LIA)

The Low Intensity Area (LIA) is a new (April 1995) management tool developed by the Ministry of Forests, Land Use Coordination Office, in Victoria. It is designed as a frame work for cooperative management of resources in areas where high quality recreation, landscape, ecological, wildlife or forestry values overlap.

San Juan Ridge LIA

Along the upper San Juan Ridge, a series of trails are being developed with the support of Western Forest Products Limited, Pacific Forest Products Limited, TimberWest Forest Limited and the Ministry of Forest. The San Juan Ridge/Kudahk Trail system proposes to link Sooke with Port Renfrew and will allow access to an attractive sub-alpine, back-country area.

The majority of the trail system is located within the San Juan Ridge Low Intensity Area (LIA). This is a Management Zone, approximately 1 km in width, centred on the height-of-land, which is being managed for the high recreation, landscape, ecological and forestry values.

3.1 Key Features

d. Inter-agency agreements/contracts

San Juan Ridge LIA (continued)

The trail system, extending from Port Renfrew, follows the height-of-land along most of the San Juan Ridge. 34 km of constructed trail and flagged route have been established by the Kludahk Club, which is based in Sooke and has 150 members.

A backcountry cabin (with accommodation for approximately 10-12 people) has been constructed in a meadow at the eastern end of the San Juan Ridge, and there are several sign post located along the trail which name the lakes, meadows and points of interest. There are also canoes located at Noyse Lakes and at Wye Lake. The trail passes by Noyse Lakes, Blakeney Lake, Wye Lake and Walker Lake.

Recreation activities include hiking, canoeing and swimming in small lakes, wildlife viewing, camping and nature study. The ridge supports cross country skiing and snow-shoeing in winter. This is an increasingly popular area which receives year round use.

There are several access points from the terminus of logging roads in TFL 25/1, and in TFL 46 and through Pacific Forest Products Limited private forest lands.

The trail has been surveyed (RRL-GPS Kludahk Trail Survey, April/May 1995) and copies of the survey are available from the Duncan Forest District Recreation Officer. The survey is on TRIM map bases, NAD 83 @ 1:20,000 mapping scale.

Walbran Low Intensity Area (LIA)

The Walbran LIA encompasses an area at Sandstone Creek between the watershed boundary of Cullite Creek and Pacific Rim National Park and includes the west bank of East Walbran Creek and the south bank of South Walbran Creek.

Old growth (forest) biodiversity values are present. In addition, the Walbran is an anadromous fish stream. The Walbran LIA borders on the Walbran Protected Area, and borders on Pacific Rim National Park.

Management of recreation and landscape values associated with Walbran Creek and Fletcher Falls are key issues. There are several informal trails, some with split-cedar boardwalk. The trails should be examined for potential hazards.

- e. **Cave and karst** resources have been identified in a detailed cave and karst inventory completed in March 1993 by RRL for the Duncan Forest District. Within TFL 46 there are several areas of karst, some of which support known caves. Other karst areas require further field exploration to assess the location, extent and quality of karst features.

An informal agreement between the Duncan Forest District and the Vancouver Island Caving Exploration Group (VICEG) is intended to advise the cavers of any upcoming forest development plans which overlay karst areas. The cavers are to be given an opportunity to field check these areas for cave values, and depending on the resources found, specific management plans will be made. The names, addresses and telephone numbers of the VICEG are included in Appendix I.

3.2 Recreation Opportunity Spectrum - ROS

The following table provides a summary of the distribution of ROS Classes in TFL 46

Recreation Opportunity Spectrum Distribution for TFL 46 (1994)

ROS CLASS - CURRENT DISTRIBUTION - 1994	
PRIMITIVE	0 ha
SEMI-PRIMITIVE NON-MOTORIZED	4669 ha
SEMI-PRIMITIVE MOTORIZED	5882 ha
ROADED RESOURCE LAND	71585 ha
RURAL	0 ha
URBAN	0 ha

The spatial distribution of current ROS Classes is illustrated in Figure 5 at the back of this report.

Approximately 8,400 ha were proposed for removal from TFL 46 in 1994. Removal included part of the Nitinat and the Lower Walbran areas. These proposed removals are reflected in this table. In 1992/1993, approximately 5% of TFL 46 was allocated to the Small Business Forestry Enterprise Program (SBFEP) as part of the agreement for transfer of the west coast portion of TFL 46 to TFL 54.

The areas which have been removed are being managed in the interim as Protected Areas, prior to being formally designated as park areas. The final boundaries of these areas are under review. Consequently, the area proposed for removal is approximate and may be revised when the final boundaries are determined.

3.3 Existing and Potential Activities Summary

Activity	Existing and Potential Areas
a-angling	Rivers: San Juan, Nitinat, Gordon. Shaw Creek, Walbran Creek, Doobah Creek. Lakes: Nitinat, Doobah, Oyees, Sprise, Joshua, McClure, Fairy, Lizard, Pixie, McClure, Tuck.
b-boating	As above.
c-canoeing	As above.
d-kayaking/rafting	Rivers: San Juan, Nitinat, Gordon.
e-scuba/skin diving	Nitinat Lake, Cowichan Lake.
f-water skiing	Cowichan Lake.
g-swimming	Most water bodies during summer months.
h-beach activities	Most rivers, creeks and lakes.
i-camping/picnicking	Fairy Lake, Lizard Lake, San Juan River Campsites. Numerous informal campsites exist in the TFL (Tuck Lake, Daykins Bay, Nitinat River, McClure Lake).
j-hunting	Throughout TFL 46, except around logging camps, active logging areas and residential areas. Refer to hunting regulations synopsis.
k-caving	Numerous cave and karst resources are available. Contact MoF in Duncan or Vancouver Cave Exploration Group in Victoria.
l-hiking	San Juan Ridge Trails. Lomas Lake Trail. Lizard Lake Trail. Hiking Through History Trails, (San Juan River Valley).
m-mountaineering	Edinburgh Mountain (1134m), Mt. Rosander (1020m) House Cone (1040m), Mt. Walbran (1119m) Towinut Mtn. (1249m).
n-nature study	Throughout much of the TFL.
o-orienteeing	Throughout much of the TFL.
p-viewing	Throughout much of the TFL.
q-wildlife viewing	Throughout much of the TFL.
r-gathering/collecting	Throughout much of the TFL.
s-horseback riding	Limited equestrian use of TFL 46.
t-trail bike riding	Mainline, secondary and spur logging roads.
u-four wheel driving	Generally any road which is not gated or does not have significant barriers, i.e. ditches.
v-snowmobiling	Logging roads, railroad grades
w-snowshoeing	logging roads, railroad grades
xc-skiing	Backcountry xc skiing on San Juan Ridge, old railway grades

3.4 Recreation Issues

Areas where recreation and landscape values will potentially have an impact on the management of timber resources are identified in the recreation and landscape inventories. The use of Feature Significance and Management Class ratings in the recreation inventory, and VQO's in the landscape inventory, act as guides for management of these resources.

Several recreation and landscape issues were identified through the recreation inventory and public consultation process. These are summarized as follows:

i) Access

The deactivation of roads was a common concern of motorized recreational users. While seasonal and permanent road deactivation is part of normal forestry practice, it is generally poorly received by a significant portion of the motorized recreation users.

Having increased information available (at visitor centres for example) regarding the number of roads available, which roads are open, their condition etc., would help to inform visitors to the TFL. There are a significant number of visitors and potential visitors to the TFL who support road deactivation, preferring to hike or to hunt in non-motorized areas.

While approximately 150-250 km of road will be deactivated annually, over 600 km of 2 wheel drive and 4 wheel drive roads will remain available within TFL 46.

ii) Recreation

Within TFL 46, thousands of kilometres of logging roads and railways have been built for logging purposes. Many of these roads and rights-of-way are still in use.

Communities around TFL 46 including Nitinat, Port Renfrew and Caycuse rely on parts of the TimberWest road systems for access to other parts of Vancouver Island.

As secondary and spur roads are deactivated, motorized recreational activity can be expected to be concentrated in a smaller area. In the 1994-1998 TimberWest Operating Plan, a total of 236 km of road are scheduled for regular maintenance while 256.5 km of road are scheduled for semi-permanent (trail bike/ATV access) deactivation. An additional 289.6 km of road will be deactivated on a seasonal basis (four wheel drive access).

The deactivation of roads will particularly influence hunting activity as a high percentage of this activity is currently motorized based. A trend towards increased non-motorized hunting may develop. Additionally, a trend towards concentration of recreational use along the main travel routes may develop as secondary roads are deactivated.

Vehicles are usually used to access an area for recreation. Once the visitors reach their destination, non-motorized recreation activities are very popular. There is a broad (provincial and national) trend towards non-motorized recreation. Within TFL 46, increases in nature study, walking and hiking, wildlife viewing, canoeing etc. can be expected.

iii) Facilities

Existing recreation facilities and trails are summarized in Table 3. Increased maintenance of these sites and expansion and upgrading of facilities will be necessary to meet visitor needs.

3.4 Recreation Issues (continued)

iv) Landscape

Maintenance of landscape quality is necessary within lake viewsheds, along motorized and non-motorized travel corridors and in association with most higher value recreation features. Visual Quality Objectives have been approved for travel corridors and specific features in TFL 46. Travel corridors are listed in Section 3.1. Landscape values are summarized in Section 3.7.

v) Historical Resources

Extensive railway logging took place in portions of TFL 46 in the early 1900's. Remains of old railway grades and camps are candidates for historical interpretation. Expansion on the history of logging in TFL 46 would add to visitor experiences and would help to develop a greater awareness of the time lines associated with forestry activity.

Protection of some of these historical resources has potential to restrict or influence forest harvesting in some areas. Development of interpretative materials would improve visitor appreciation of the historical nature of forest management in TFL 46. While a small number of historic features are identified in the TFL, further sites are present and should be identified on the next update of the recreation inventory.

vi) Archaeological Resources

When archaeological resources are formally identified they are classified as "sites" by the Archaeology Branch of the Ministry of Small Business, Tourism and Culture, Victoria. Only one archaeological site in TFL 46 is identified in the archaeological inventory. However, it is likely, given the traditional use and habitation by the Nootka and Coast Salish, that additional archaeological sites may be located in these areas and along the San Juan River and Lower Gordon River.

3.5 Forest Service/Licensee Recreation Sites and Trails

Trails

The "Hiking through History" trails built by Teresa Burton in the San Juan Valley, with support of volunteers from the Port Renfrew Community Association, are an initial step towards recognition of the settlement and logging history of TFL 46.

The trails are recognized through the Federation of Mountain Clubs of BC, under their "Adopt a Trail" program. A guide book has been published (1994) illustrating the relationship between these trails and local history. These are, however, informal trails at present (T1) and they have no formal management prescriptions or funding. They are informally supported by TimberWest and by the Duncan Forest District, which has loaned tools for trail construction.

These trails would derive several benefits from being designated as formal recreation trails (T2). Benefits include being available for funding of maintenance, signs, maps and increased safety through regular maintenance, etc. Recreation sites and trails are summarized in Table 2 in Section 3.0.

3.6 Parks, commercial and Private Recreation Facilities

Several commercial tourism businesses use portions of the TFL for their operation, or pass through the TFL during the course of their business.

The hunting territory which includes TFL 46 is held by Fred Olson, who is based in the Village of Lake Cowichan. The guide takes clients on hunts, primarily for deer and black bear. Fishing guides operate on all of the major rivers in TFL 46. Fishing guides will travel the roads in TFL 46 to access Nitinat Lake and the open Pacific through the Nitinat Gap. Guides also travel through the TFL to Port Renfrew for ocean fishing.

Commercial recreational use of the San Juan River by fishing guides is increasing. Photo safaris, nature studies, fishing guiding, jet boat tours and transport of canoes up-river are among the services offered by guides on the San Juan River.

One private party has expressed interest in development of a seasonal base camp at Daykin Bay from which day hikes, fishing and nature study trips could be based. Daykins Bay is also a potential site for more permanent facilities, i.e. lodges, campsites etc.

The Ditidaht Band, located at the head of Nitinat Lake is currently preparing plans for a commercial recreation development. A service station was completed in 1993 and a small hotel was opened in 1994.

3.7 Visual Quality/Scenic Resources

The main travel corridors in TFL 46 are summarized in Section 3.1 - C - Travel Corridors. The spatial distribution of these corridors and the corresponding Visual Quality Objectives are illustrated in Figure 4 at the back of this report. Management of these areas will be governed by cover constraints based on approved Visual Quality Objectives. These cover constraints will frequently coincide with recreation/wildlife/fishery/slope stability values. In addition, provisions in the Forest Practices Code Act pertaining to river, stream and water body management zones will, in some instances, also accommodate landscape management objectives.

TFL 46 Landscape Summary Table - June 1993

Landscape Sensitivity Ratings (LSR)

LSR	AREA	%
HIGH	3974 ha	18%
MEDIUM	12226 ha	56%
LOW	5563 ha	26%
TOTAL VISIBLE AREA: 21764 ha		

Visual Absorption Capability (VAC)

VAC	AREA	%
HIGH	5557 ha	26%
MEDIUM	11767 ha	54%
LOW	4440 ha	20%
TOTAL VISIBLE AREA: 21764 ha		

Existing Visual Condition (EVC)

EVC	AREA	%
R	10308 ha	47%
PR	2027 ha	9%
M	6119 ha	28%
MM	2355 ha	11%
EM	955	5%
TOTAL VISIBLE AREA: 21764 ha		

Visual Quality Objective (VQO)

VQO	AREA	%
R	347 ha	1%
PR	7210 ha	33%
M	14051 ha	65%
MM	156 ha	1%
EM	0 ha	0%
TOTAL VISIBLE AREA: 21764 ha		

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

3.8 Wilderness

Wilderness, is defined by the Ministry of Forests as: "An area no less than 1000 ha, no less than 8km from any primitive road, and essentially in a pristine condition with no evidence of alteration by humans".

There are no areas which fully qualify as "Wilderness" within the Duncan Forest District (or in TFL 46). Approximately 4669 ha of TFL 46 are rated as Semi-Primitive Non Motorized. The spatial distribution of these areas is illustrated in the ROS Distribution Map.

The San Juan Ridge, which extends partially into TFL 46 does not fully qualify for Wilderness designation under the Forest act as it does not meet the minimum size and remoteness criteria. However, the high quality back-country recreation, landscape and ecological values on the plateau are being managed through a Low Intensity Area (LIA) Management Zone. The San Juan Ridge LIA is described earlier in this report in Section 3.1- d.

4.0 DESCRIPTION OF USE, VALUE AND DEMAND

4.1 Current Demand

Precise measures of recreational use in TFL 46 are unavailable. Limited surveys have been conducted at the recreation sites through the recreation and landscape inventories completed for the TFL.

The most popular campsites appear to be Fairy Lake and Lizard Lake. The San Juan Campsite is considered to receive the lowest use of the three formal campsites. Informal camping at Daykins Bay and at Tuck Lake has been popular for many years.

Several roads provide access to the TFL, none of which are controlled by gates or watch persons. Vehicle traffic along mainline roads is discouraged during working hours. Access into active operational areas is generally restricted. Open public access is available during all non operational periods. There is no charge for use of roads. Free maps are available from the TimberWest visitor centre in Lake Cowichan, the Duncan Chamber of Commerce and the Duncan Forest District.

As measures are taken to curtail informal camping around Cowichan Lake, increased pressure can be expected in TFL 46. Development of additional campsites (refer to recreation analysis report for TimberWest South Island Private Lands, Nov. 94) and the expansion of existing facilities are possible management solutions.

It is generally desirable to discourage informal camping (also referred to as "dispersed use") in TFL 46. There is a long established tradition of self-serve, informal style camping in working forests. However, the negative impacts increase as the visitor numbers grow. Informal campsites are most often located near still or flowing water. Currently, the negative impacts, which include damage to trees and vegetation, garbage accumulation and improper sanitation, appear to have a limited impact on the environment in TFL 46. However, increased use is seen as a continuing trend and proactive measures to reduce informal camping (which is frequently long term for periods of weeks or months in single locations) should be considered.

The distribution of information regarding the location of facilities, trails, forest tour programs, and areas for particular activities (i.e. directions on where to go fishing, canoeing etc) would also help to encourage visitors to use managed facilities as their main base for recreation activities in TFL 46. Visitors who wish to have an "informal" camping experience could be provided with information brochures on sanitation, fire safety, etc.

4.1 Current Demand (continued)

Recreation Use outside of TFL 46.

Park and Recreation Site Visitor Summary

Park/Campsite	Year	Number of Visitors
Carmanah Pacific*	March - October 1994	3,820 Overnight Campers 7,801 Day Users
Carmanah Pacific*	March - October 1993	4,217 Overnight Campers 9,068 Day use
Carmanah Pacific*	March - October 1992	3,020 Overnight Campers 11,311 Day use
Botanical Beach*	March - October 1994	39,882.5 Day Users
Botanical Beach*	March - October 1993	30,000 Day Users
Botanical Beach*	March - October 1992	41,265 Day Users
Nitinat Campsite**	May - October 1993	13,850 Visitors
West Coast Trail***	Annual (1993/1994)	Approximately 8,000 hikers/year.

- * Ref. BC Parks Visitor Services. G. Broome. November 1994
- ** Ref. R. Taylor, Ministry of Forests, Port Alberni Forest District
- *** Ref. Parks Canada - Pacific Rim, Tofino/Ucluelet, H. Hambleton

The Ministry of Environment maintains a record of angling use on many lakes and rivers. The following data is available for the main lakes in TFL 46.

**Ministry of Environment
Angling Use Records - Lake Summary (1986 & 1989)**

LAKE NAME	ESTIMATED # OF ANGLERS		ESTIMATED ANGLER DAYS		ESTIMATED CATCH	
	1986	1989	1986	1989	1986	1989
Fairy Lake	215	447	490	400	595	131
Lizard Lake	100	280	215	161	300	89
Oyees	5	-	10	-	50	-
Doobah	6	25	6	235	0	470
Sprise	36	36	191	191	60	60
Nitinat	50	364	70	590	100	197

4.1 Current Demand (continued)

Hunting is a major recreational use of TFL 46 and is one of the few activities of which some measure of participation is available. The Ministry of Environment, Wildlife Branch, Biometrics Section collects data on hunting use.

TFL 46 falls within Wildlife Management Unit 1-3. This Management Unit extends beyond the TFL boundary. Statistics are presented by Management Unit. Although many of the reported kill locations were located in the TFL area, the statistics are based on a larger area. Game birds hunted within TFL 46 include: Blue Grouse, Spruce Grouse, Ruffed Grouse, Sharp Tailed Grouse, Pheasant, Quail, Duck and Goose.

Wildlife Management Unit 1-3 Hunting Statistics Summary Table

YEAR	SPECIES	ESTIMATED # OF HUNTERS	ESTIMATED HUNTER DAYS*	ESTIMATED KILL FIGURES
1990	Black Bear	98	574	39
	Cougar	9	28	5
	Mule Deer	1003	6631	481
	Wolf	52	855	0
1991	Black Bear	150	762	80
	Cougar	8	40	2
	Mule Deer	1050	6481	604
	Wolf	35	105	0
1992	Black Bear	215	971	94
	Cougar	19	128	6
	Mule Deer	1164	7929	334
	Wolf	56	210	0

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

4.2 Forecasting Demand and Projecting Trends

Recent improvements to Botanical Beach, the establishment of Parkinson Creek Seal Grotto Provincial Park and the Juan De Fuca Marine Trail and the San Juan Ridge-Kludahk Trail can be expected to attract additional visitors to Port Renfrew and to Lake Cowichan via the travel corridors through TFL 46.

This continuing increase in recreational use has several implications for management of recreation and landscape resources in TFL 46. In addition to planning for possible expansion of existing facilities (which have not been substantially enlarged for some time), it may be necessary and desirable to provide additional facilities and services. The current visitor use data is limited in that it does not provide sufficient information on where visitors travel within the TFL or what activities they pursue or would like to pursue, duration of visits etc.

Gathering more detailed information, through a questionnaire or survey distributed at the Cowichan Lake Visitor Centre and at the recreation sites should be considered a first step in gaining more information on visitor use and trends in TFL 46.

4.3 Estimate of Intrinsic Recreation Values

The majority of TFL 46 is rated as Recreation Opportunity Spectrum (ROS) Class 4 - Roaded Resource Land. The land base is developed with extensive mainline logging road and spur road systems. Much of the landscape has been altered by the ongoing cycle of forest harvesting, forest regrowth and subsequent harvesting.

Motorized recreation activities have the highest participation levels in TFL 46. Ongoing forest harvesting and road construction will continue to provide areas and opportunities for motorized recreation.

Deactivation of secondary and spur roads will provide increased opportunity for non-motorized recreation. i.e. hiking, mountain biking, horseback riding, etc.

The well known recreation destinations, including San Juan River, Fairy Lake, Lizard Lake, Daykins Bay, Nitinat River, and the Gordon, Harris and Rosander Mainlines can be expected to continue to receive moderate to high recreational use. Areas which are accessible to vehicles will become increasingly well known as the population of southern Vancouver Island increases. Demand for backroad or off-road travel continues to be popular. The high use of formal and informal campsites during peak periods, causes visitors to travel further to find "wilderness" recreation.

Improved management of intensive recreation areas i.e. rivers, lakes and travel corridors will increase the long term capability of these areas to sustain quality recreation opportunities. The carrying capacity of the TFL can be increased in key areas by upgrading existing facilities, extending trails and upgrading maintenance thus adding to the quality of the visitor's experience while accommodating more visits.

More direct management of the information available to visitors, i.e. maps, brochures, detailed circle tours or trips, may be used to guide patterns of visitor use in and throughout the TFL.

4.3 Estimate of Intrinsic Recreation Values (continued)

TFL 46 provides features and settings which support non-motorized recreation activities. Bird watching, wildlife viewing, walking, hiking and nature study occur throughout TFL 46. These are individual, family and group activities which are steadily increasing in popularity throughout B.C.

4.4 Gaps in Meeting Outdoor Recreation's Needs

Lands in TFL 46 support a wide range of recreation opportunities. Most recreation activity has a motorized component. The activity may be primarily of a motorized type, i.e. off-road driving or may use motorized transportation as part of the activity, i.e. 4x4 vehicle to access an area for hunting, or using motorized boat to travel on the San Juan River or on Nitinat Lake.

The highly developed nature of TFL 46 and of southern Vancouver Island, limits the availability of backcountry or wilderness type recreation opportunities. There are several regional, provincial and national parks, ecological reserves and protected areas which form the foundation for semi-wilderness recreation on southern Vancouver Island. The San Juan Ridge-Kludahk Trail is located partly within TFL 46 and provides high quality backcountry recreation opportunities.

Within TFL 46, there is no accommodation for visitors outside of the three formal campsites and several informal campsites. There is accommodation available at full service campsites, hotels, motels, bed and breakfasts, lodges and resorts located adjacent to TFL 46 at Port Renfrew and at Lake Cowichan.

Some recreation activities within the TFL are already managed to a certain level. Hunting and fishing are among the two most frequently participated in activities and are controlled by many formal regulations. The quality, safety, etc. are usually enhanced through these regulations.

Continuing the trend towards more intensive recreation management includes upgrading suitable informal trails to formal recreation trail (T2) status, developing an interpretative forest area, (at Lizard Lake), implementing fee for service structures at campsites (started in 1995) and surveying visitors to help plan future recreation management activities.

General area maps are available through TimberWest or from the Ministry of Forests, Duncan Forest District. These maps are popular with visitors to TFL 46. The most popular map is the "Guide to Forest Land of Southern Vancouver Island". A wider range of brochures, detailing interpretative forest features, trails, hikes, etc., would encourage visitors to explore specific areas or features in the TFL.

4.5 Commercial Recreation

Several areas of TFL 46 appear to have good potential for commercial tourism development. A more detailed study of commercial opportunities, in conjunction with an assessment of potential impacts on forest management activities, is recommended.

Commercial opportunities may include resorts or cottages on the lakes, cottage rentals, recreational waterfront lots or leases, higher level campsite facilities i.e. showers and stores, mountain bike tours, nature study tours, hiking tours, etc. Any change from forestry to another land use (i.e. commercial recreation), is required to undergo a detailed review process involving the Ministry of Crown Lands, the Ministry of Forests and the licensee holder.

4.6 Fee structure for existing facilities:

A fee for service, initiated in June 1995 has been implemented at the three campsites in TFL 46. A higher level of service and improved and expanded facilities are being provided. An increased staff presence in the recreation sites provides personal contact and a highly visible information source for visitors to TFL 46 lands.

Registration forms similar to those provided at provincial campsites and at some private campsites should be completed by at least one individual from each visitor party. Maps should be available which identify TimberWest forest lands, features of interest, safety information and contact numbers for additional information. Provision of communications at the campsites for emergency purposes should be given serious consideration.

The campsites are, for many visitors, the first formal contact with TimberWest Forest Limited. They provide an important opportunity to make a good, first impression.

The implementation of a reasonable fee for service structure, similar to those charged at Provincial Parks, National Parks and at private facilities should be acceptable to most visitors. The increased safety and the improvement in services and facilities will enhance the quality of the recreation experience and should more than offset any negative reaction from visitors.

4.6 Fee structure for existing facilities:

Summarized below are several examples of campsite, parking and hiking fees. Fees are for 1995 unless otherwise noted:

1. BC Parks: \$6.00 - \$15.50 per party/night depending on level of service.
2. BC Parks: \$4.00/person/night in backcountry recreation areas.
3. Duncan Forest District Recreation Sites: \$5.00 per party/night (1994 rate).
4. West Coast Trail: \$25.00 reservation fee, \$60.00/person user fee - total \$85.00/person.
5. Pacific Rim National Park, Green Point Campsite: \$18.00/party/campsite/night.
6. Pacific Rim National Park, Broken Islands: \$5.00/person/day camping fee.
7. TimberWest Forest Limited: \$10.00 per party/night, \$8.00 per party/night for seniors.

5.0 RECREATION MANAGEMENT OPTIONS AND RECOMMENDATIONS

5.1 Recreation Analysis - Background

A review of existing use levels suggests that recreation resources available in TFL 46 are adequate to sustain current recreation use. However, more intensive recreation and landscape management practices will be required to ensure that recreation opportunities remain available to visitors to the TFL. Increased maintenance of existing facilities, possible expansion of some campsites, and maintenance and building of walking trails are some of the actions which will help to support recreation activity in TFL 46.

5.1a Supply and Demand

Accurate measures of recreational use are not available. There are six road routes which access TFL 46 lands. Measures of recreational use outside of the three established recreation sites are not available.

While precise user numbers would help in developing refined management actions, some general information is available regarding recreational use of TFL 46 lands and some actions can be taken.

1. Recreation use continues to grow at a steadily increasing rate.
2. The three campsites can hold up to a combined total of approximately 80-90 vehicles at peak periods. An equal or greater number of vehicles may also be located at informal sites outside of the established campsites, during these peak times, (typically weekends during June, July and August).
3. The expected reduction of informal sites around Cowichan Lake can be expected to further increase recreational use throughout TFL 46.
4. The vast majority of recreational use in TFL 46 is motorized based, ie. visitors arrive by vehicle, camp in or near their vehicle and frequently bring additional motorized and/or non-motorized transport with them (boats with motors, ATV's, motor cycles, canoes, mountain bikes, etc.).
5. Expansion or upgrades to existing facilities has been limited over the past 5-10 years.
6. Family groups are among the more frequent visitors to the campsites.

Based on the above observations, the following actions are recommended for the three formal campsites in TFL 46:

Campsites:

Fairy Lake: #900-0269. Capacity: 35 Campsites. The most heavily used formal campsite in TFL 46. Upgrading the existing trail, preferably to form a loop type walk should be considered. The trail should be classified as a formal recreation trail (T2). There is space available at this site for expansion.

Lizard Lake: #900-0269. Capacity: 10 Campsites. Located 17.5 km from Port Renfrew. A small day use area at the northeast corner of the Lake has been requested by family groups from Port Renfrew. The day use area could include a parking area and picnic tables. The developed campsite area at Lizard Lake can become quite busy during the summer and a quieter area on the lake could be made available with small improvements.

A rough trail loops around Lizard Lake. The trail passes through various ecosystems and has good potential for development as an interpretative trail. The trail should be upgraded and classified as a formal recreation trail (T2).

5.1a Supply and Demand

San Juan River Campsite: #900-0270. Capacity: 5 Campsites. Currently receives the lowest use of the three sites. Attractive swimming area during summer months. Good gravel road access from Port Renfrew and from Lake Cowichan. There is space available at this site for expansion. Daily visits by service staff is recommended during July and August.

Trails:

Existing trails should be identified and recorded on TimberWest forestry and planning maps. Suitable trails should be formally managed and classified as recreation trails (T2). The San Juan River, "Hiking Through History Trails" located in the San Juan River Valley are good candidates for more formal management.

Portions of two trails located in the Walbran Valley are located in the TFL, (the remainder of the trails are located within the Walbran Protected Area). The trails within the TFL access Fletcher Falls and parts of Walbran Creek. These trails may be considered for formal management. Rough cedar board walks have been constructed and are reportedly in unsafe condition in several places. Field checks are recommended.

Harris Creek Rest Stop. Located 26.8km from the Port Renfrew recreation centre. A short trail should be constructed from the Harris Creek Rest Stop to a large Sitka Spruce tree located above the Creek.

5.1b Key Issues

Recreation management in the TFL centres around key recreation and landscape features. These features are identified in the recreation and landscape inventories for TFL 46. The Recreation Resource Evaluation, Section 5.2, outlines recreation resource management objectives, rationale and implications for the TFL.

5.1c Shortfalls

Visitors to TFL 46 have not been surveyed to determine perceived shortfalls. A range of opportunities are offered throughout the RRL/SPM/SPNM ROS Classes. There is a limited amount of undeveloped land (SPNM and P Classes) within TFL 46, located in upland areas. The San Juan Ridge (SPNM) has an expanding trail network. Approximately 38 km of route and trail are available to hikers. This upland area is located partially within TFL 46 and supports high quality backcountry recreation opportunities.

5.1d Potential conflict areas

The Feature Significance, Management Class and Visual Quality Objective ratings of features and landscapes in the TFL 46 recreation and landscape inventories, provides the basis for developing integrated resource management plans. In areas where high timber and high recreation and/or landscape values coincide, detailed evaluation and assessment of the resource values is necessary.

5.2 Recreation Management Direction Scenarios

This section outlines strategies for management of specific biophysical features. These resources i.e. fish, forests, wildlife etc. generally 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), including interpretative forest sites
4. Protected Areas Strategy study areas, recreation corridor plans, heritage trails, etc.
5. VQO's, visually sensitive corridors.

Large scale maps which identify the recreation, landscape and ROS Class management emphasis areas are included in Figures 4,6,7 and 10 at the back of this report.

To assist with development of management approaches for TFL 46, the TFL has been divided into Recreation Management Units (RMU's). Each RMU groups together features which have similar characteristics and management needs.

In TFL 46, a total of seventeen RMU's are identified. The location of the RMU's is illustrated in Figure #1 at the back of this report. Figure #1 also highlights the main recreation resources and issues associated with each RMU.

Table 4 provides a summary overview of recreation management objectives for each RMU, as well as outlining potential management implications.

5.2 Recreation Management Direction Scenarios (continued)

Table 4 - Recreation Resource Evaluation - TFL 46

Recreation Management Group	ANALYSIS SCENARIO	ROS CLASS	RECREATION RESOURCE MANAGEMENT OBJECTIVES	RATIONAL	IMPLICATIONS
RMU - 1 Nitinat Corridor	1	RRL (4)	<p>a) Forest landscape management along travel corridor.</p> <p>b) Identification of cave and karst resources.</p> <p>c) Management of informal camping along Nitinat River.</p>	<p>Travel corridor to Nitinat Lake and to Carmanah Pacific Park. Visual Quality Objectives have been established for this corridor.</p> <p>Significant karst resources are located in the area.</p> <p>Nitinat River is a high quality feature with road access and informal campsites. Receives moderate to heavy recreation use. There are no sanitary facilities.</p>	<p>Modification of cutblocks, possible increase in rotation period. Potential for alternative harvesting systems.</p> <p>Possible need for alternative harvesting methods. Possible reduction in AAC for some karst values. Refer to Duncan Forest District Karst Inventory.</p> <p>Potential for campsite development. Further field checking is necessary.</p>
RMU 2 Caycuse River Corridor	1	RRL (4)	<p>a) Maintain mainline road access.</p>	<p>Popular area for deer hunting. Steelhead angling lower Caycuse River. Secondary travel corridor to Nitinat Lake and to Carmanah Pacific Park.</p>	<p>Forestry practices are adequate to maintain recreation opportunities.</p>
RMU 3 McClure Corridor	1	RRL (4)	<p>a) Maintain mainline road access.</p> <p>b) Management of landscape resources.</p> <p>c) Upgrade facilities at the informal campsite at McClure Lake.</p> <p>d) Identification of cave and karst resources.</p>	<p>Access corridor to Walbran Creek.</p> <p>Visual Quality Objectives have been established for this area.</p> <p>Popular lake with no facilities.</p> <p>Preliminary inventory has identified cave & karst features.</p>	<p>Forestry practices are adequate to maintain recreation opportunities.</p> <p>Use of landscape design techniques.</p> <p>Improved recreation opportunities. Expenditure for improvements and maintenance.</p> <p>Refer to Duncan Forest District Cave and Karst Inventory.</p>

5.2 Recreation Management Direction Scenarios (continued)

Table 4 - Recreation Resource Evaluation - TFL 46 (continued)

Recreation Management Group	ANALYSIS SCENARIO	ROS CLASS	RECREATION RESOURCE MANAGEMENT OBJECTIVES	RATIONAL	IMPLICATIONS
RMU 4 Gordon Corridor	1	RRL (4)	<p>a) Maintain mainline road access.</p> <p>b) Management of landscape resources.</p> <p>c) Identification of cave and karst resources.</p> <p>d) Upgrade interpretative materials for Grants Grove. Candidate for interpretative trail.</p>	<p>One of two main travel corridors through TFL 46, linking the Village of Lake Cowichan with Port Renfrew.</p> <p>VQO's have been established for this area.</p> <p>Karst resources are located in the area.</p> <p>Stand of old growth conifer forest set aside for interpretative purposes.</p>	<p>Forestry practices are adequate to maintain recreation opportunities.</p> <p>VQO's are established in the landscape inventory for TFL 46.</p> <p>Refer to Duncan Forest District Cave and Karst Inventory.</p> <p>This stand has been deferred from logging by TW and is set aside for interpretative purposes.</p>
RMU - 5 Harris Corridor	1	RRL (4)	<p>a) Maintain mainline road access between Lake Cowichan and Port Renfrew.</p> <p>b) Management of landscape resources.</p> <p>c) Identification of cave and karst resources.</p> <p>d) Formal management of logging history trails developed by T. Burton in 1993/94.</p> <p>e) Develop interpretation site at a large Sitka Spruce tree located adjacent to Harris Creek.</p>	<p>One of two main travel corridors through TFL 46, linking the Village of Lake Cowichan with Port Renfrew.</p> <p>VQO's have been established for this corridor.</p> <p>Significant karst resources are located in the area.</p> <p>Formal management of trails is required under section 102 of the Forest Practices Code Act.</p> <p>Large Sitka Spruce tree is located a short distance off Harris Main. Interesting interpretative recreation opportunities.</p>	<p>Opportunities for forest interpretation, demonstration.</p> <p>VQO's are established in the landscape inventory for TFL 46.</p> <p>Refer to Duncan Forest District Cave Inventory.</p> <p>Identification of trail locations onto operation and planning maps.</p> <p>Identification of spruce tree on operational and visitor maps. Short trail with interpretative signs to be constructed.</p>
RMU 6 Highway #14 Corridor	1	RRL (4)	<p>a) Maintenance of landscape quality.</p> <p>b) Rural interface forest. Frequent recreational use by local residents.</p>	<p>Viewed from Highway #14 and from residential areas.</p> <p>Easy access from Hwy. #14.</p>	<p>VQO of Partial Retention - Modification recommended.</p> <p>Provide signs and TimberWest contact telephone number.</p>

5.2 Recreation Management Direction Scenarios (continued)

Table 4 - Recreation Resource Evaluation - TFL 46 (continued)

Recreation Management Group	ANALYSIS SCENARIO	ROS CLASS	RECREATION RESOURCE MANAGEMENT OBJECTIVES	RATIONAL	IMPLICATIONS
RMU 7 Limestone	1	RRL (4)	a) Known caves need protection. There are unsurveyed areas where the extent of karst is not known. The Vancouver Island Cave Exploration Group is available for field evaluation of karst resources.	A range of karst features are available for recreation. Full extent of this resource is not known. Management of karst resources needs improvement.	Detailed identification of karst and caves at a scale of 1:20,000 or smaller. Update the 1993 Duncan Forest District cave & karst inventory
RMU 8 Doobah	1	RRL (4)	a) Maintain Rosander Mainline road access. b) Maintenance of landscape quality. Overall VQO's of Partial Retention for visible landscapes. c) Large Cedar trees are located adjacent to Oyees and Doobah Lake. Reserves are established around these features.	Access corridor via Rosander Mainline, to Carmanah Pacific Park and to Daykins Bay, site of potential recreation development.	VQO's are established in the landscape inventory for TFL 46. Daykins Bay may increase in popularity if and when development of facilities takes place.
RMU 9 Nitinat	1	RRL (4)	a) Maintenance of landscape quality. Overall VQO's of Partial Retention for visible landscapes. b) Maintain road access through TFL lands as this is the only road access to Knob Point Recreation Site	Popular windsurfing, fishing and camping destination. Knob Point is a jump-off point for visitors to the Nitinat Lake Chain within Pacific Rim National Park.	VQO's are established in the landscape inventory for TFL 46. High potential for significant increases in use as this area becomes more popular.
RMU 10 Cowichan	1	RRL (4)	a) Maintenance of landscape quality. Overall VQO's of Partial Retention for visible landscapes.	Cowichan Lake is a popular recreation destination.	VQO's are established in the landscape inventory for TFL 46.
RMU 11 Hill 60	1	RRL (4)	a) Maintenance of landscape quality. Overall VQO's of Partial Retention for visible landscapes.	Hill 60 is a well known local landscape. VQO's have been established for this area.	Modification of cutblocks, possible increase in rotation period. Potential for alternative harvesting systems. Potential AAC implications.
RMU 12 Tuck Lake	1	RRL (4)	a) Maintenance of landscape quality. b) Provision of outhouses during April - October angling season.	Popular camping and fishing destination. Currently has no facilities.	Expenditures for outhouses. Possible upgrades to rustic campsites.

5.2 Recreation Management Direction Scenarios (continued)

Table 4 - Recreation Resource Evaluation - TFL 46 (continued)

Recreation Management Group	ANALYSIS SCENARIO	ROS CLASS	RECREATION RESOURCE MANAGEMENT OBJECTIVES	RATIONAL	IMPLICATIONS
RMU 13 Walbran Valley	1	RRL (4)	<p>a) Develop recreation and landscape management objectives which meet the Walbran Valley Low Intensity Area (LIA).</p> <p>b) Identify trails and potential hazards.</p> <p>c) Review McClure Lake informal campsite as a candidate for upgrading.</p>	<p>Only road access to Walbran Valley.</p> <p>Informal trails have been built but have had no formal maintenance.</p> <p>McClure Lake is used as an informal campsite with no facilities.</p>	<p>Rosander Mainline is an active logging road.</p> <p>Field checking and evaluation of trails. Possible expenditures to upgrade and/or maintain trails.</p> <p>Expenditures for outhouses. Possible upgrades to rustic campsites.</p>
RMU 15 San Juan River Valley	1	RRL (4)	<p>Management of established recreation sites.</p> <p>Upgrading of existing trails to managed trail standards.</p> <p>Maintenance of VQO's in the river valley.</p>	<p>Main river corridor within TFL 46 which supports a range of high quality recreation activities.</p>	<p>Continued upgrading, maintenance, and possible expansion of campsite facilities.</p> <p>Identification and management of recreation trails in Management Working Plan.</p> <p>VQO's are established for this travel corridor.</p>
RMU 16 San Juan Ridge	1	SPNM (2)	<p>Management of backcountry recreation, landscape, ecological and forestry values in the San Juan Ridge Low Intensity Area (LIA).</p> <p>Support of the Sooke Kludahk Outdoors Club work to improve recreation access, trails and facilities on the S.J. Ridge.</p> <p>Working with MoF, WFP and PFP to identify and manage for recreation and landscape resources along the San Juan Ridge. Identify boundary locations, recreation and forestry management options.</p>	<p>Sub-alpine environment with attractive lakes and meadows.</p> <p>One of the very few unmodified upland areas within TFL lands and which also offers high quality recreation opportunities.</p> <p>Long term maintenance of resource values within the San Juan Ridge LIA will require detailed planning.</p>	<p>Identification of trail locations and LIA boundary onto operation and planning maps.</p> <p>A network of trails is being constructed. Support of volunteer work. Identify in TFL 46 visitor maps.</p> <p>Review of forest harvesting plans to ensure objectives of the San Juan Ridge LIA are maintained.</p>
RMU 17 Shaw Creek	1	RRL (4)	<p>Protection of resident roosevelt elk herd. Access is gated and Ministry of Environment patrols regularly occur.</p>	<p>Protection of elk herd.</p>	<p>Monitoring of users in the Shaw Creek valleys.</p>

5.2 Recreation Management Direction Scenarios (continued)

Table 4 - Recreation Resource Evaluation - TFL 46 (continued)

Recreation Management Group	ANALYSIS SCENARIO	ROS CLASS	RECREATION RESOURCE MANAGEMENT OBJECTIVES	RATIONAL	IMPLICATIONS
RMU 18 Lomas Lake Trail	1	RRL (4)	Access to the Lomas Lake trail is through TFL 46 lands. Identify the hiking trail access on operational maps.	The trails are described in a popular hiking guide book and are well known to local hikers.	Normal forestry activities are adequate to maintain recreation values. Communication with hiking groups to determine if any improvements are necessary.
RMU 19 Working Forest (Multi-Resource Use Areas)	1	RRL (4)	Normal forestry management practices. Inform visitors of road names, provide safety information signs. Provide woods tour programs.	Help to ensure safety of visitors to the TFL. Provide information that will assist in direction and route finding.	Normal forestry activities are adequate to maintain recreation values.

5.2 Recreation Management Direction Scenarios (continued)**Recreation Inventory Projection - ROS Distribution Projection for year 2000 - TFL 46**

This inventory projection, (Table 5) for TFL 46 will be compiled following a review of the 1995 Five Year Development Plan.

The spatial distribution of ROS Classes will shift as TFL 46 undergoes the cyclical process of forest harvesting and regrowth. The extensive development of the TFL at present (81% is classed as RRL), will continue to facilitate motorized recreation. As road systems are deactivated, an increase in opportunities for non motorized recreation (mountain biking, hiking) can be expected.

Overall, over the next 5-10 years, the change in the spatial distribution of ROS Classes in TFL 46 is expected to be limited. Planned harvesting will increase some of the Roaded Resource Land Classes, while at the same time, previously harvested areas will recover to Semi-Primitive Motorized conditions.

5.2 Recreation Management Direction Scenarios (continued)

Table 6 Projected Recreation Sites and Trails (TimberWest/Ministry of Forests)

RESOURCE EMPHASIS AREA	SITES ¹				TRAILS ²			
	VEHICLE ACCESS		BACKCOUNTRY		Agency	Type	Length	Unit
	Name	vus	Agency	Unit				
TFL 46	1. Fairy Lake	35 vus	TimberWest		Non-Motorized (T1)	Total of approx 17 km	San Juan River Valley, "Hiking Through History" trails	
	2. Lizard Lake	10 vus						
3. San Juan River	5 vus	TimberWest			Non-Motorized (T1)	Est. 2-3 km	Walbran Valley.	
	<p>NOTE: Existing sites and capacities are shown. There are currently no plans for expansion of existing facilities. A survey of existing recreation use (Summer 1995) will be used to assess the level and schedule for future facility upgrades and expansion.</p>							
TOTAL						19-20 km ³		

¹ See Chapter 9 for an explanation of vehicle access vs. backcountry sites.

² See Chapter 10 for an explanation of trail types.

³ Since trails may overlap resource areas, the total may not be the arithmetic total of the column.

5.2 Recreation Management Direction Scenarios (continued)

The recreation management objectives, rational and implications summarized in Table 4 - Recreation Resource Evaluation, provide a framework for management of recreation and landscape resources in TFL 46.

5.3 Evaluation of Recreation Management Options

The recreation resource management objectives outlined in Table 4 are based on an analysis of existing regional and provincial recreation trends.

Managing the resources in TFL 46 to meet the recreational needs of visitors requires ongoing planning and consideration of other resource values in the TFL. The recreation resource management objectives have been developed based on this "integrated" type of management approach.

The key elements identified in this analysis report are:

1. The approach towards fee for service at recreation facilities .
2. Evaluation and formal management of suitable trails.
3. Communication and support of recreation user groups active in TFL 46
4. Shared recreation management with responsible user groups
5. Interface management; TFL 46 borders on parks, ecological reserves, Low Intensity Areas, Protected Areas, urban areas, trails etc.

6.0 RECOMMENDATIONS

Many of the recreation and landscape features in TFL 46 are becoming increasingly popular and valuable. The following recommendations highlight the main recreation and landscape management issues which should be addressed in TFL 46.

i) Pro-active management: *More intensive management of recreation and landscape resources in TFL 46 is recommended.*

The existing approach tends to be informal and reactive, rather than formal and pro-active. While perhaps the two most popular recreation activities, angling and hunting are highly regulated, other recreation activities receive little or no formal management.

ii) User group communication: *Development of a more formal and pro-active approach to recreation and landscape management in the TFL.* The recent (1993) recreation, landscape and cave/karst inventories (completed by TimberWest and the Duncan Forest District) identify a wide range of biophysical features in TFL 46 which require special management consideration.

Invite recreation stake holders to Five Year Development Plan reviews and to an annual open house, hosted by TimberWest and the Duncan Forest District. Other licensees may also wish to participate. The purpose is to discuss resource management issues and to share information on recreation and landscape features in TFL 46.

iii) Visitor Survey - Summer 1995: *Survey visitors in TFL 46 to improve recreation and landscape planning.* Current visitor statistics are limited. The number of visitors, length of stay, activities pursued, family use, origin of visitors etc. are important factors to consider in management of recreation and landscape resources in the TFL.

6.0 RECOMMENDATIONS (continued)

iv) Monitor the fee for service program at TFL 46 campsites: *Keep track of visitor comments and respond where possible by making suitable changes, improvements, additions to programs etc.*

NOTE: Effective June 23, 1995, fees will be charged for overnight camping at TFL 46. Camping fees are \$10.00/night per unit at the designated campsites (\$7.00 for seniors).

v) 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 trails construction and maintenance. There are several advantages to formal trail designation including eligibility for Ministry of Forest recreation program funding (when available).*

The "Walking Through History Trails" in the San Juan Valley and the rough trail around Lizard Lake are good candidates for formal trail designation. These trails offer visitors a close up view of the forest and of the history of settlement and logging in the area. The Lizard Lake trail also has potential for interpretative forest signs.

vi) San Juan Ridge Low Intensity Area: *Manage recreation, landscape, ecological and forestry values as per the LIA terms of reference. While the majority of this sub-alpine ridge is located in TFL 25 Block 1, a portion lies within TFL 46. Joint meetings between recreation stakeholders, forest licensees and the Ministry of Forests are recommended. The terms of reference and long-term management objectives for the San Juan Ridge LIA need further development.*

Semi-wilderness areas are limited on southern Vancouver Island and can be expected to become increasingly rare as settlement of the area expands. An active outdoors group with 150 members, the Kludahk Outdoor Club based in Sooke has the support of Western Forest Products, TimberWest, Pacific Forest Products and the Ministry of Forests in building trails and in placing a management emphasis on the recreation, landscape and ecological values associated with the San Juan Ridge.

vii) Park/Reserve/Protected Area/Low Intensity Area/Rural Interfaces and related travel corridors: *The relatively high number and high profile of these adjoining parks, reserves and communities suggests a need for ongoing communication between the stakeholders.*

TFL 46 borders on four parks, two ecological reserves, two LIA's and three rural communities. Travel to and from these areas is through TFL 46. The proximity of these parks, reserves and communities suggests a range of forest management implications. The core management action is communication with the various stakeholders. The Ministry of Forests may act at the District, Regional or Branch level to facilitate this communication.

6.0 RECOMMENDATIONS (continued)

viii) Assess existing recreation use and visitor travel in TFL 46 and plan for potential future trends: *Use patterns, travel patterns can quickly change. Proactive measures, i.e. maintaining a VQO level of PR along certain corridors may be appropriate. Additional facilities, in existing and new locations will likely be required to meet visitor needs in the near future.*

Existing use patterns provide some indication as to probable management implications i.e. the Rosander Mainline receives use from approximately 1200 visitor vehicles/year enroute to/from Carmanah Pacific Park. Management of a higher level of landscape quality along this travel corridor, is reflected in the landscape inventory and analysis for the TFL.

Existing use patterns may change unexpectedly as a result of a new road being developed, a newspaper or television news story or documentary or as a result of a planned development which gains publicity. Visitor vehicle traffic on the road access to the Nitinat Triangle within Pacific Rim National Park is currently very low (unconfirmed estimates of 200-300 visitors/year). However, this level of use could increase given the high quality of the features in the area which are currently under-utilized for recreation.

ix) Shared recreation management: *Sharing management of recreation opportunities in the TFL may be worth further study.* There are numerous, well established recreation user groups which are active in TFL 46 (hunting, angling, hiking, caving, canoeing, kayaking, wildlife and nature study, four wheel driving).

In the case of TimberWest South Island Private Lands, responsible recreation user groups are provided with keys to gates in order to access certain areas for recreation. This approach has been quite successful, leading to shared responsibility of an area while facilitating responsible recreational use.

Candidates for shared management might include Tuck Lake or Daykins Bay on Nitinat Lake. Access to these areas could be gated on a seasonal basis and a local group or groups could maintain campsite facilities. A modest fee for service could be administered. Possible benefits are improved management and increased visitor satisfaction.

x) Inform public of impending change: *The established approach of advising the public of upcoming events, changes or opportunities for participation in the review of development plans should continue.*

Improvements in communication may include developing a detailed and current stakeholder list and maintaining contact with these individuals and groups.

Feedback from the public and from stakeholders should be encouraged and responded to.

APPENDIX - I TFL 46 Resource Contacts

Ministry of Forests, Duncan Forest District		Tel:	746-2765
TimberWest Forest Limited, Gordon River		Tel:	749-6805
Western Forest Products Limited, Jordan River		Tel:	646-2031
Pacific Forest Products Limited, Ladysmith		Tel:	245-3233
Cowichan Logging Office		Tel:	749-3796
Kludahk Outdoors Club members:			
Maywell Wickheim:	Residence:	Tel:	642-4420
	Work:	Tel:	642-3523
Phoebe Dunbar	Residence:	Tel:	642-4342
	Work:	Tel:	642-6371
Vancouver Island Cave Exploration Group:			
Graham and Linda Heslop	Residence:	Tel:	595-3259
Ron Kozsan	Residence:	Tel:	744-3937
	Work:	Tel:	389-3074
Outdoor Recreation Council of B.C.		Tel:	737-3058

NOTE:

This is not a complete list of recreation groups which are active in TFL 46. For more detailed lists, refer to the TFL 46 Recreation Inventory Report (Revised June 1993) or contact the Ministry of Forests, Duncan Forest District. Detailed recreation group contact lists are also available from RRL Recreation Resources Limited.

FIGURE 2

Recreation Sites Facilities and Activities (Existing and Potential)

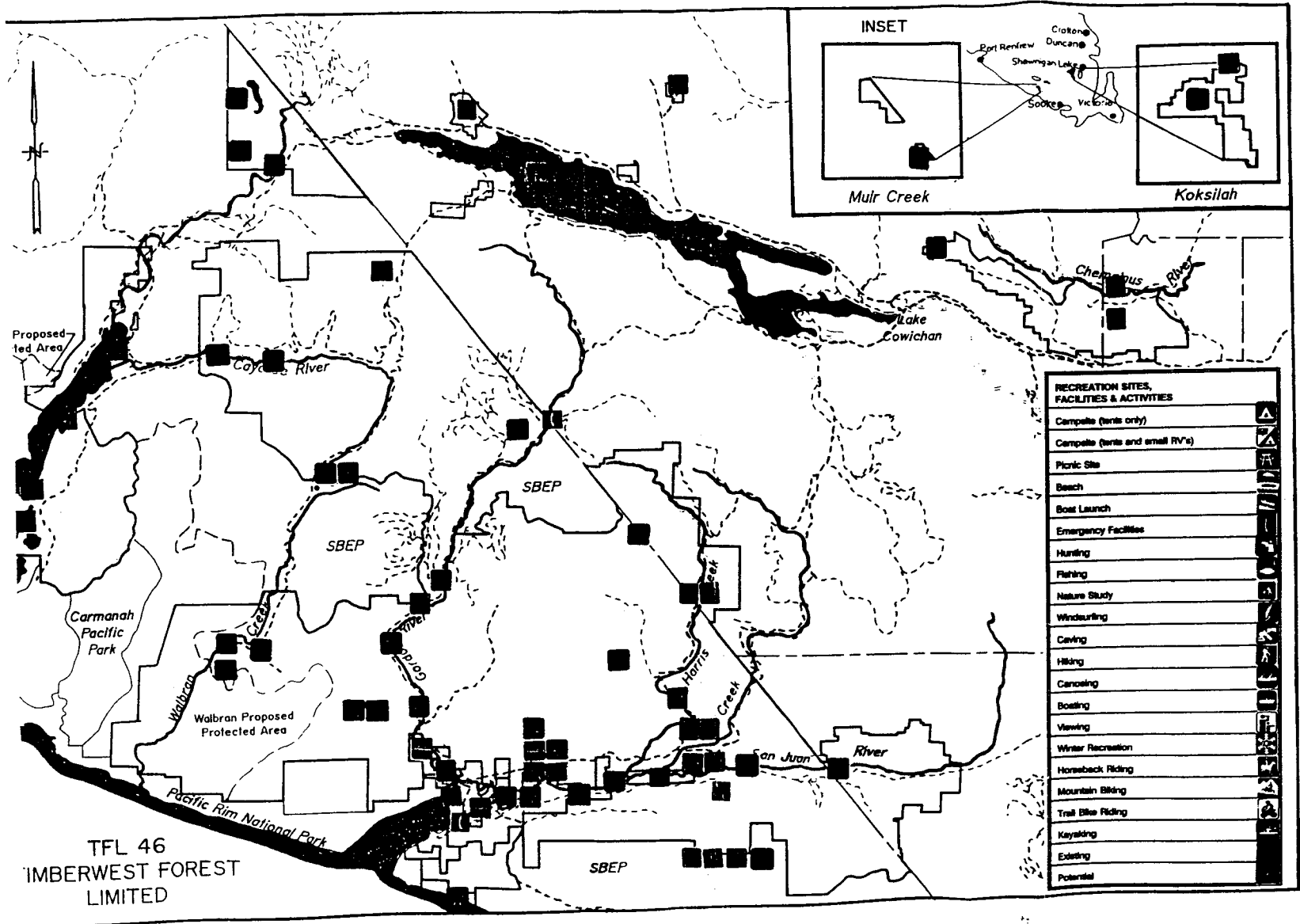


FIGURE 3

Key Recreation Features

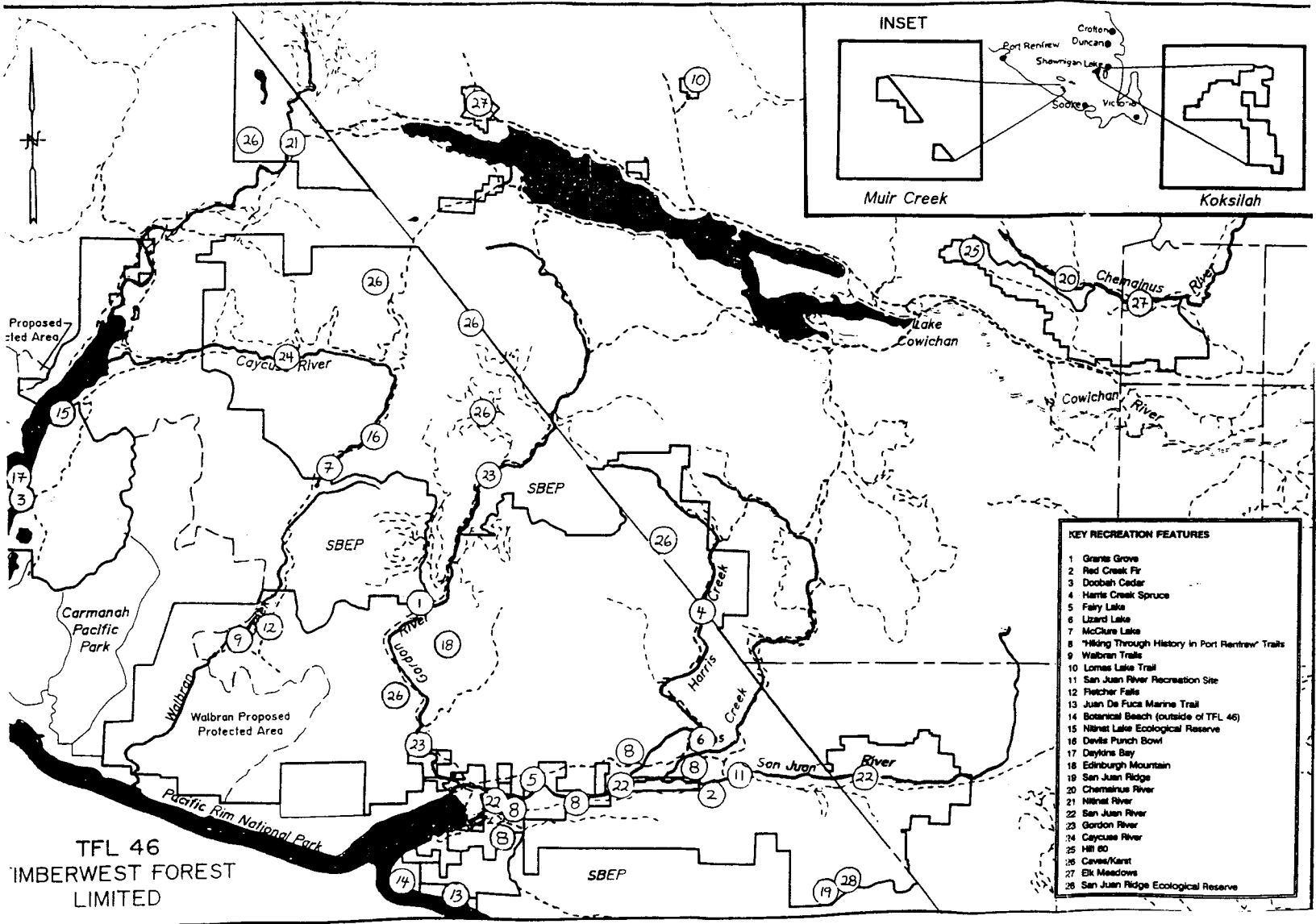
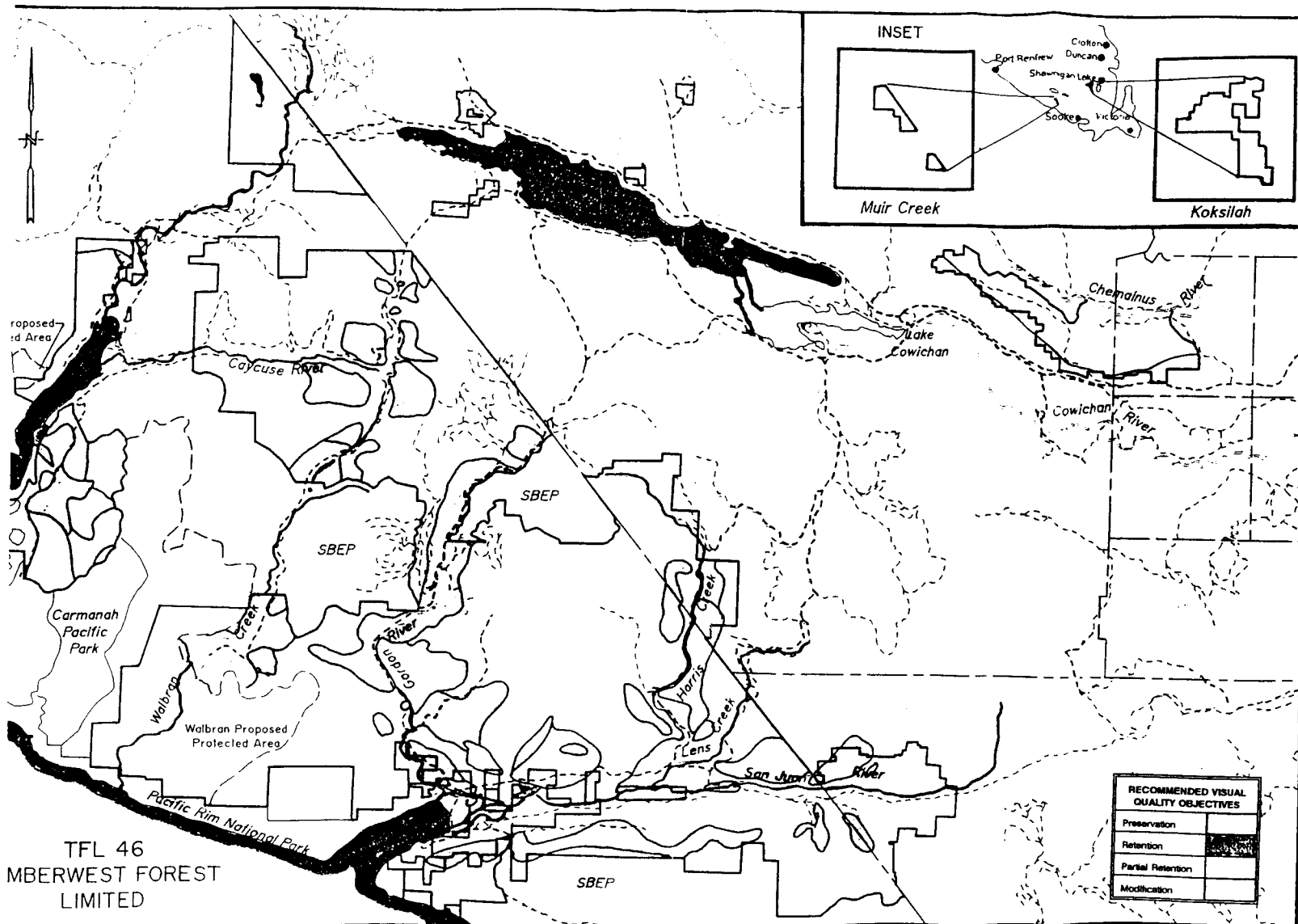


FIGURE 4

Recommended Visual Quality Objectives Map

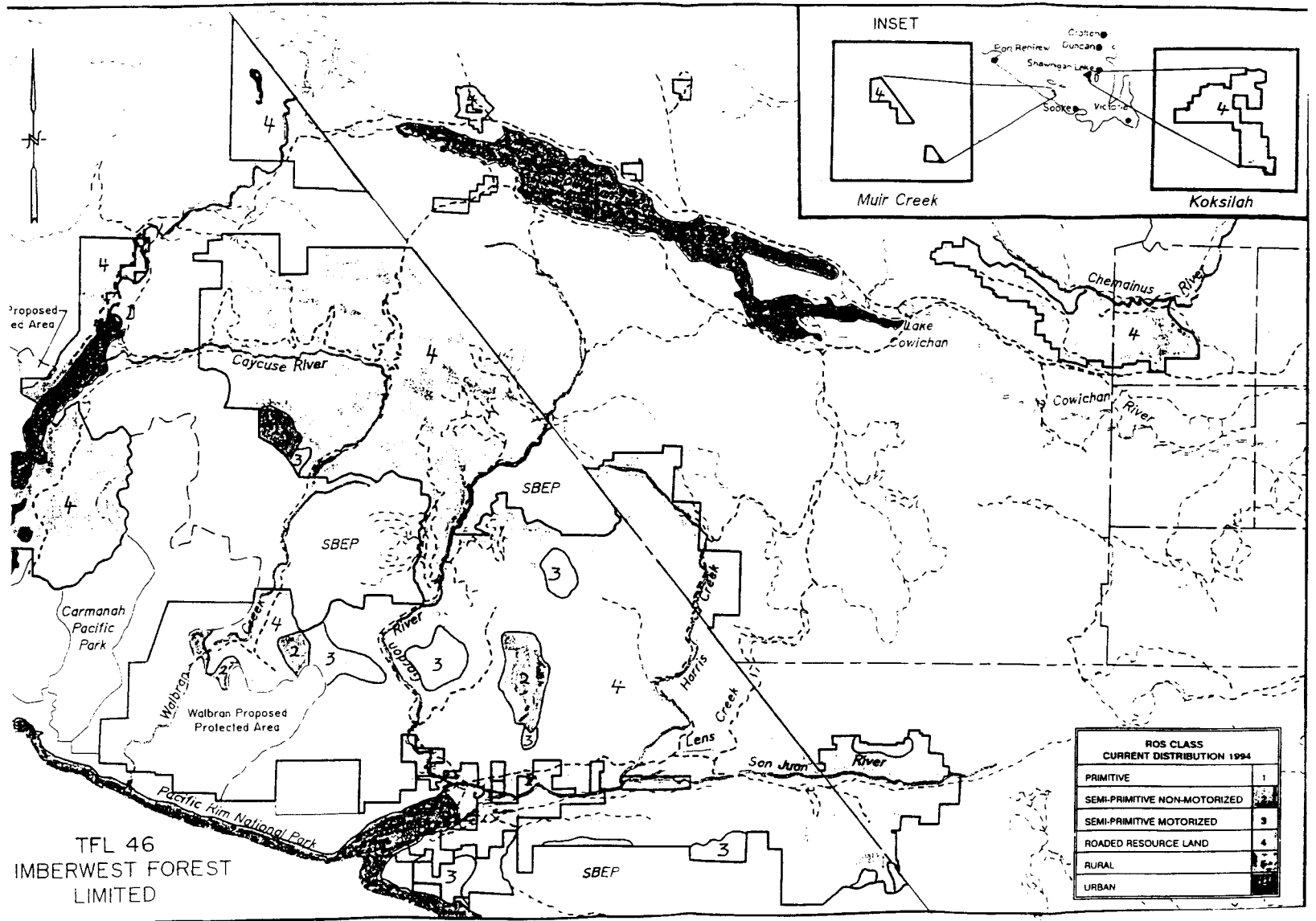


TFL 46
 MBERWEST FOREST
 LIMITED

RECOMMENDED VISUAL QUALITY OBJECTIVES	
Preservation	
Retention	
Partial Retention	
Modification	

FIGURE 5

ROS Map - Current Distribution

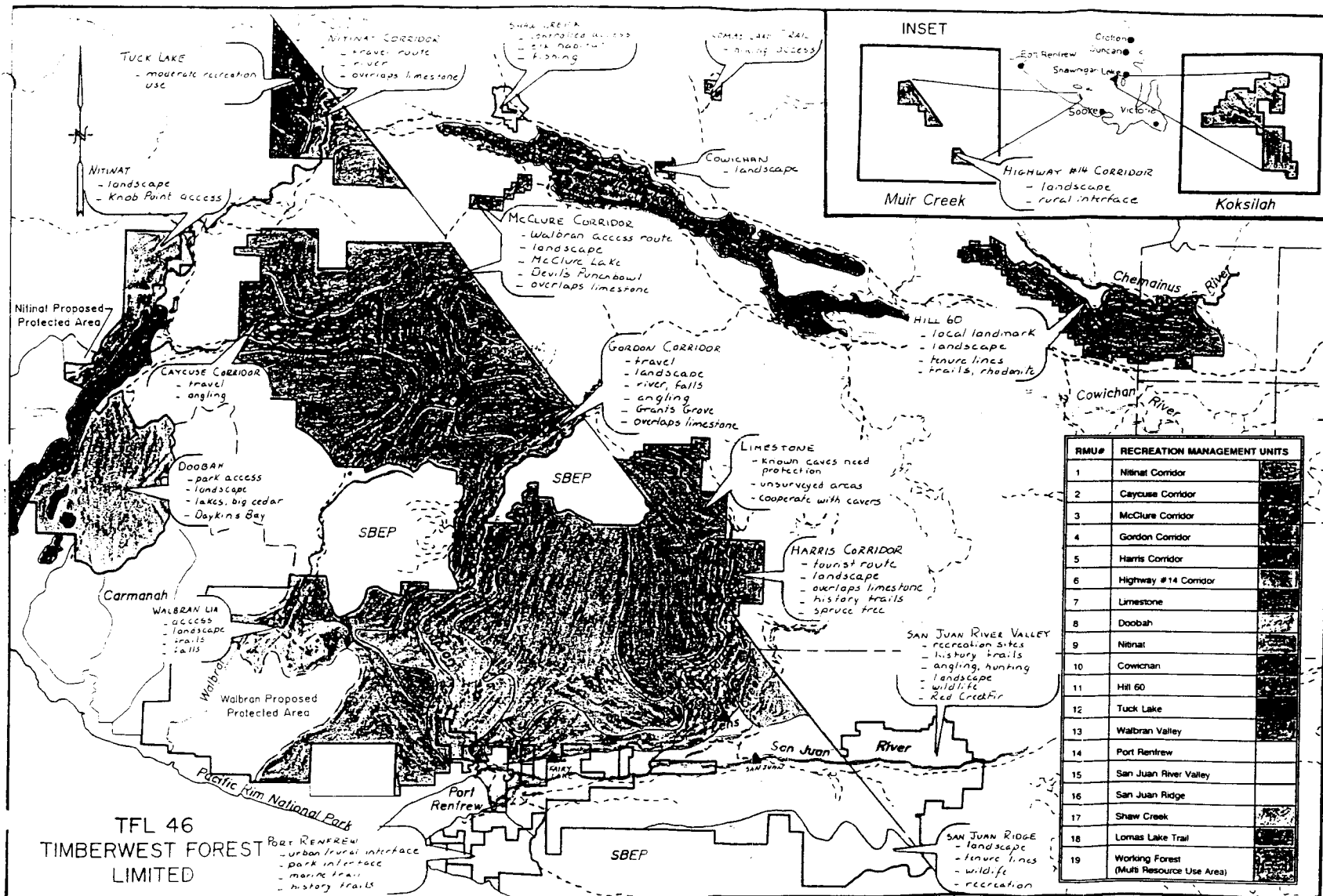


TFL 46
IMBERWEST FOREST
LIMITED

ROS CLASS CURRENT DISTRIBUTION 1994	
PRIMITIVE	1
SEMI-PRIMITIVE NON-MOTORIZED	2
SEMI-PRIMITIVE MOTORIZED	3
ROADED RESOURCE LAND	4
RURAL	5
URBAN	

FIGURE 6

Recreation Management Units Map



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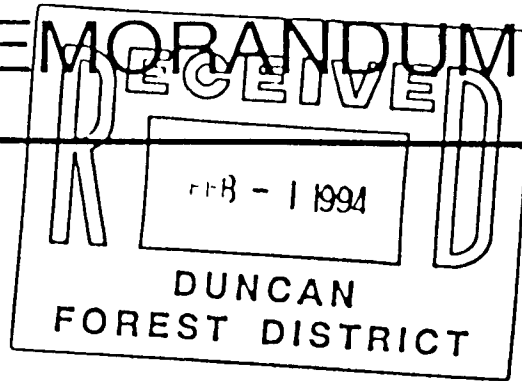
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**An Interim Guide for Completing a Recreation Analysis Report
in the Vancouver Forest Region**



MEMORANDUM



File: 16320-02

January 26, 1994

Vancouver Circular Letter VR94-572

To: All Circular Letter Holders
Vancouver Forest Region

Re: **An Interim Guide for Completing a Recreation Analysis Report
in the Vancouver Forest Region**

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The purpose of this circular letter is to clarify the requirements for undertaking a Recreation Analysis Report as part of the Resource Planning Process for both tree farm licences (TFLs) and timber supply areas (TSAs).

The Recreation Analysis Report presents options and recommendations for the management of the recreation resource based on the supply of recreation opportunities, existing and potential future use, and the demand for public and/or commercial recreation.

The Recreation Analysis Report is submitted for the Regional Manager's approval following the Statement of Management Options, Objectives and Procedures approval for TFLs and the Options Report approval for the TSAs. It is then used for developing the management plan itself.

For further information, please contact Charlie Western, Recreation Officer at 660-7608.


Ken J. Ingram
Regional Manager
Vancouver Forest Region

Attachment

cc: Charlie Western, Recreation Officer
Vancouver Forest Region

An Interim Guide for Completing a Recreation Analysis Report in the Vancouver Forest Region

i EXECUTIVE SUMMARY

This section should summarize purpose of analysis, procedures followed, recommendations, proposed actions and state conclusions. This section should not be any longer than one or two pages and be prepared upon the completion of the recreation analysis itself.

ii TABLE OF CONTENTS

1.0 Introduction

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

The recreation analysis 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 resource 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 options and recommendations for management of the recreation resource.

1.2 Background Information

- 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, regional summarized from the recreation features inventory context.
- c) Describe proximity of parks, recreation sites/trails communities and transportation corridors relative to the management area.
- d) Discuss what effect climate may have on recreation pursuits.
- e) Describe in general what recreation use and opportunities presently exist within the management area.

2.0 Methodology / Procedures

This section should mention how the data was collected and analyzed, e.g.) through 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.

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.

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.

.../5

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 Commercial Recreation

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?

5.0 Recreation Management Strategies, Options and Recommendations

The Forest Service or licensee should explain strategies it will use to manage specific key features, develop a set of options from which further analysis', such as timber supply analysis, can be undertaken, make recommendations and choose an option.

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 Direction Scenarios

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) would be managed in the Management Plan.

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

- a) Recreation features to be protected, tables 4 & 5.
- 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.

A map identifying the recreation, landscape and wilderness emphasis areas should be prepared for each option.

5.3 Evaluation of Options

The impacts, benefits and costs of each of the above options should be analyzed and evaluated.

6.0 Recommendations

A recommendation option should be identified.

7.0 Appendices

Resource Management Zone

Descriptions Within TFL 46

VILUP

The Vancouver Island Land Use Plan (VILUP) Higher Level Plan Order came into effect on December 1, 2000. The following resource management zones lying within TFL 46 were established through the VILUP: Special Management Zones (SMZs) 21 and 22 – the Walbran Periphery and San Juan Ridge; Enhanced Forestry Zone (EFZ) 47 - Loss-Jordan and General Management Zones (GMZs) 34, 45, and 46 – E&N South, Nitinat, and Gordon-Caycuse-San Juan.

SMZs

SMZs management priorities must incorporate identified primary environmental, recreational and cultural/heritage values. SMZ 21 lies within the Walbran watershed bordering the northeast corner of the Walbran Protected Area. The primary values are fish habitat, old-growth biodiversity and recreation opportunities. This zone should be managed as a focal area for old seral forest retention, with emphasis on riparian areas and recreational access management.

SMZ 22 extends along the San Juan Ridge on the southern perimeter of the San Juan watershed. The primary values include upland recreational opportunities and visual qualities associated with the trail corridor. The primary management guidance is to maintain recreational and scenic values and opportunities associated with the trail.

EFZs

EFZs are managed to produce higher volumes and values of timber while respecting environmental protection standards of the FPC. EFZ 47 (the Loss-Jordan) is located in the Loss Creek and lower Jordan watersheds along with areas of Crown land south and

west of the E&N land grant boundary, west of SMZ 22 and south of GMZ 46. The primary values include timber, fish, recreation, and tourism.

GMZs

GMZs are managed under standard integrated resource management strategies of the FPC. GMZ 34 (E&N South) is located in the southern portion of the E&N belt, from Fanny Bay south. It contains pockets of Crown provincial forest and the objectives of the VISLUP apply to the Crown land portions only. There is significant timber value within GMZ 34. It is particularly suitable for enhancing growth and yield management on the large blocks of Crown provincial forest land. This zone also offers significant recreation and scenic values and tourism associated with the intensively managed and roaded lands. Fish and wildlife values are significant and biodiversity conservation and restoration is recommended with an emphasis on retention or, where required, active restoration of mature and old seral forest attributes and age classes.

GMZ 45 (Nitinat) is located in the Nitinat watershed and it includes Nitinat Lake, bounded by the E&N land grant boundary and the boundaries of TFL 44 and TFL 46. There are particular opportunities to enhance growth and yield. Wildlife habitat requires heightened management attention. Recreation, tourism, scenic and cultural heritage values are also significant.

GMZ 46 (Gordon-Caycuse-San Juan) is located in the Gordon, Caycuse, and San Juan watersheds, excluding the San Juan SMZ, but including portions of the Walbran Landscape Unit outside of the Walbran SMZ and Carmanah-Walbran Park. Significant timber values exist in this GMZ, along with high fish, wildlife, biodiversity and recreation values.