Boundary Tree Farm Licence
Tree Farm Licence 8

PROPOSED
MANAGEMENT PLAN NO. 10
2002-2006

Pope & Talbot Ltd.
Boundary Timber Division

PREAMBLE

Management Plan 10 has been duly prepared and submitted to fulfill the licencee's obligation under Section 2 of the tree farm licence agreement and according to the conditions stipulated by the Chief Forester of British Columbia.

The management plan was prepared by Pope & Talbot Ltd., Midway Timber Division. Timberline Forest Inventory Consultants Limited undertook the timber supply analysis and assisted in the plan preparation. Personnel who made significant contributions towards completing the plan were G.C. Bekker, R.P.F., R.G. Waterous, E.C. Wang, R.P.F., and D.M. Carson, R.P.F.

PROFESSIONAL FORESTER CERTIFICATION

I certify that this work fulfils accepted standards and that I did personally supervise the work.

G.C. Bekker, R.P.F.
Forestry Manager

COMPANY SUBMISSION

Submitted on _____2002 on behalf of ***Pope & Talbot Ltd.***

R. Hanson, R.P.F.
Woodlands Manager

DISTRIBUTION LIST

Copies of this management plan have been distributed as indicated below. Revisions or amendments will be distributed when necessary.

Pope & Talbot Ltd.

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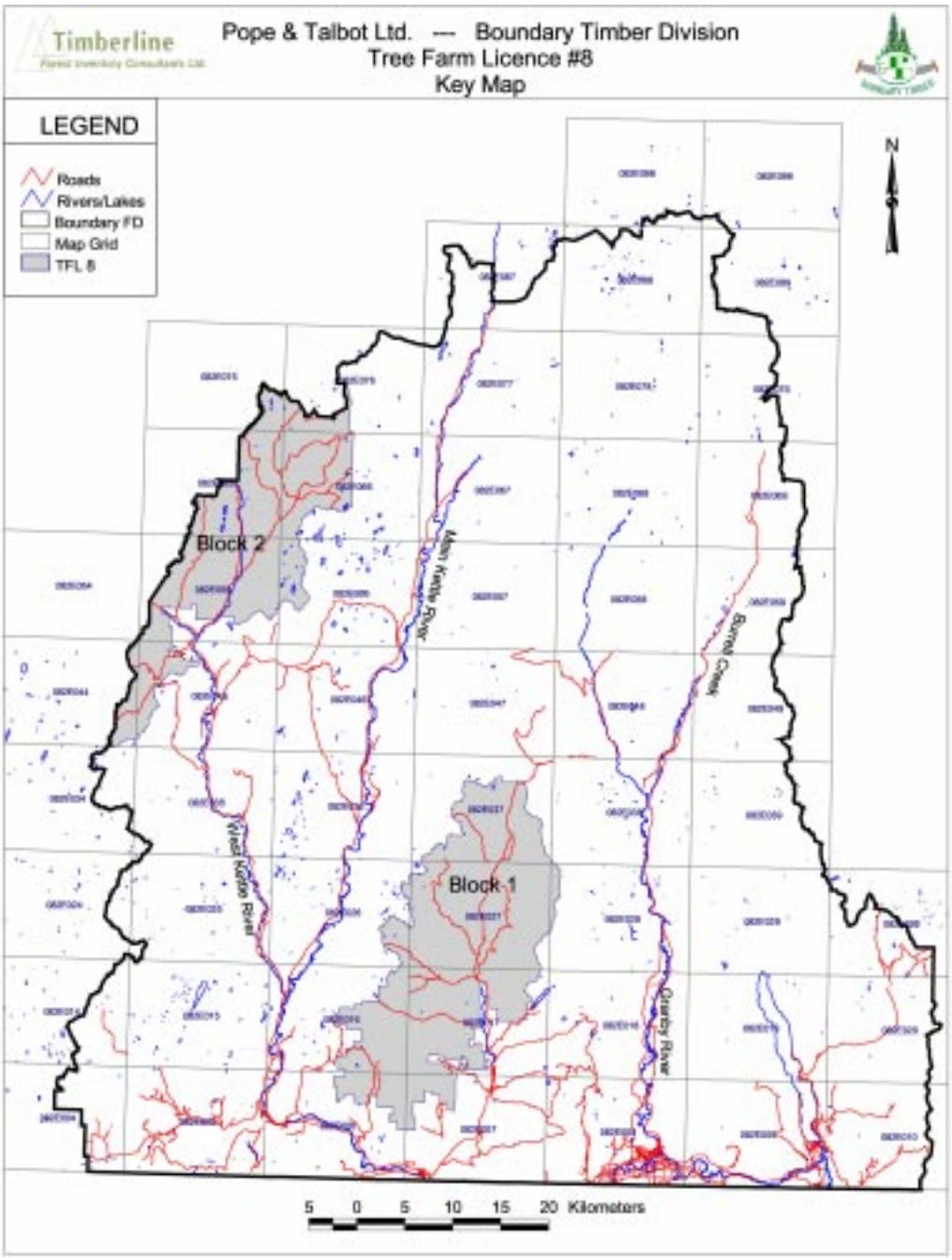

Figure 1 – Key Map

1.0 INTRODUCTION

Tree Farm Licence (TFL) 8 was established in 1968 and is held by Pope & Talbot Ltd. The licence area has been under a continuous forest management program for 26 years; this is the tenth management plan. The term of the plan is the five-year period from 2002 to 2006. It outlines the role Pope & Talbot Ltd. has as the licence holder.

This management plan provides the goals, objectives and strategies that will be followed by the company in managing TFL 8. It describes the resource management activities that will take place over the next five years for both timber and non-timber values. It provides a general indication of where harvesting will take place for the next twenty years.

The management plan is prepared at a forest landscape level to provide direction for more specific planning that is required for operations. It is a strategic level plan designed to provide a balanced forest land management strategy that considers the different kinds of resources found in the licence area and their level of use.

1.1 PHYSICAL DESCRIPTION

TFL 8 consists of 77,456 hectares of crown land and fresh water in the Boundary Forest District in the south central interior of B.C. Management Plan No. 9 reported 77,664 ha. A deletion of 163 ha in 1998 reduced the area to 77,501 ha. The difference of 45 ha between MP 8 and MP 9 can only be attributed to differences in mapping systems.

TFL 8 has two distinct units, Block 1 in the Boundary Creek area, north of Greenwood, and Block 2 in the Trapping Creek and Carmi Creek drainages, north of Beaverdell. Communities in the vicinity of TFL 8 include Grand Forks, Greenwood, Midway, Rock Creek, Westbridge and Beaverdell. These towns are located along Highway 3 and Highway 33 which connect Rock Creek with Kelowna. Refer to the key map (Figure 1).

The licence area occurs in an intermountain system of lesser mountain ranges and plateau country. The surrounding hills are part of the Okanagan Highlands and the Midway Range on the western side of the Monashee Mountains. The climate is arid to sub-humid continental with warm summers and cool, snowy winters. In the past, natural forest fires were common. Large animals, notably mule and white-tailed deer, moose, elk and black bear are prevalent throughout the area, along with numerous smaller animals, reptiles, amphibians and birds.

The forests are predominately mixtures of Douglas-fir, larch, lodgepole pine and ponderosa pine types at lower and mid elevations, and lodgepole pine, and spruce/balsam types at the higher elevations. Ecologically they occur primarily in

the Montane Spruce, Interior Douglas-fir, and Interior Cedar Hemlock biogeoclimatic zones. Productive forest comprises about 94% of the TFL area.

Volcanism and mountain formation as well as glacial action have shaped the topography in TFL 8. Granitic intrusions are prominent in higher elevations whereas ultra-basic (mainly basalt) intrusion can be found on lower slopes and in valleys. Glaciation has created extensive areas of moraine tills, lacustrine silts and sands, outwash material, spillways, gullies, flood plains and kame terraces.

Most soils are highly permeable although there are pockets of loess and clay types which retain moisture even through extended periods of drought. Soils are neutral to alkaline and have a tendency to cement because of a high content of free carbonates and other minerals. A thin layer of post glacial volcanic ash is found through much of the region, believed to be from Mt. Baker's last eruption 6,000 years ago.

Along with parent material, climate also influences soil pH and type. Annual precipitation in the vicinity of the TFL ranges from about 30 to 127 centimetres (increasing with elevation) with drought periods frequently as long as 80 days. Temperatures in January average -9°C at 1,200 metres above sea level (where most forest occurs) increasing to an average of 15°C in July. The frost-free period may last from only 20 to 100 days. Because of low humidity, droughts, and frequent thunderstorms, the summer season is often characterized by extreme fire hazard.

1.2 HISTORY

In the first half of the 20th century, the forests now comprising TFL 8 experienced limited harvesting. The Ingram, Motherlode and Windfall Creek watersheds in Block 1 were selectively logged beginning about 1925, perpetuating growth of the uneven-aged Douglas-fir, larch, ponderosa pine forest stands typical of the southern interior drybelt. In Block 2, small amounts of timber were harvested for ties, trestle members, and bridge timbers for the Kettle Valley Railway. Sawlogs were also logged in the late 1920's and 30's for the H.B. Simpson sawmill that was producing mostly ponderosa pine lumber.

The Sherbinins and McMynns were two families that figured prominently in the Boundary district's logging industry in the 1930s. Together they purchased a small sawmill in Midway in 1936 that produced lumber for shipment by rail to the prairie provinces. This was to add to the Sherbinin's previous acquisition of a steam-powered and wood-fired mill capable of cutting 35,000 board feet of lumber per day. By 1940, combined production from the Midway and Ingram Creek operations had reached 9 million board feet annually. In 1943, these operations were incorporated as Boundary Sawmills Ltd.

Boundary Sawmills Ltd. continued to grow to an annual lumber production of 30 million board feet and was granted Block 1 of Tree Farm Licence 8 in 1951. Block 2 was originally acquired by the Olinger Lumber Company as TFL 11 in 1952, but was later assigned to Boundary Sawmills in 1968.

In 1960, Tony Hilliard, a forest engineer with the Boundary Sawmills Ltd., spearheaded the formation of a loose association of forest companies, together forming K-V Timber Ltd. The purpose was to give all of the companies bidding for crown cutting rights the chance to acquire timber at the "upset" price (the price at which bidding begins for standing timber). The association dissolved, however, in the late 1960s when the open bidding process was replaced by the sale of timber sale harvesting licences.

Boundary Sawmills Ltd. continued to expand by buying and consolidating a number of local operations including Grand Forks Sawmills, Fritz Sawmills Ltd., Olinger Sawmills Ltd., and the timber quota of Sandner Brothers Lumber Co. Ltd. at Christina Lake. The consolidated enterprise was renamed Boundary Forest Products Ltd. After a protracted strike in 1967, and faced with the costs of expanding and modernizing to utilize "third band" timber, Boundary Forest Products was sold to Pope & Talbot Inc. of Portland, Oregon in 1969. It was a purchase that would allow Pope & Talbot Inc. to expand its operations into Canada. The Canadian operations were later named Pope & Talbot Ltd.

The company is a subsidiary of Pope & Talbot Inc. The parent firm is an integrated wood-fibre products company that produces pulp and softwood lumber. The solid wood products operations are located in South Dakota and B.C. These operations produce random dimension and machine stress rated lumber and boards which are sold almost exclusively on the North American market. In B.C., the company's head office is located in Grand Forks, with its sawmills in the West Kootenay region located in Midway, Grand Forks and Castlegar. All sawmills produce kiln dried, random length dimension lumber.

1.3 COMMITMENTS

This section presents the commitments of Pope and Talbot with respect to TFL 8. Italicised information summarizes current performance on each issue.

- ISO 14001:1996 Woodlands Environmental Management System Registration

Pope & Talbot's Boundary Timber Division which encompasses all operations on Tree Farm Licence 8 achieved ISO 14001:1996 registration as of October 27, 2000. This registration is for 3 years and requires continuous auditing to ensure continued conformance with the ISO standard. Internal and

independent third party audits are conducted annually to monitor our performance. As well the system has quarterly reporting of corrective actions, incidents and contraventions. The registration covers all activities including planning, road construction, timber harvesting, transportation, reforestation, and equipment maintenance. The basis for the environmental management system is Pope & Talbot's Environmental Policy (see Appendix I).

Pope & Talbot is committed to excellence in environmental performance by conducting its business in a manner which safeguards the environment and the health and safety if its employees, customers and the public while being successful in the industry. There are five environmental programs: Each of roads, harvesting, planning, silviculture, and equipment maintenance. These programs are focused on managing seven significant environmental aspects: fire prevention, fuel storage and handling, maintenance of natural drainage patterns, maintenance of water quality, protection of riparian values and fish habitat, management of terrain stability and protection of soil resources. There are emergency response procedures for fire and fuel spill events. This system is based on continuous improvement through annual performance reviews, audits, corrective actions and incident tracking. Pope & Talbot will continue to upgrade environmental management systems and provide the certification of our management procedures and products to meet the needs of our customers.

Commitments Associated with Approval of Management Plan No. 9

Management Plan No. 9 was approved by the Chief Forester of B.C. subject to the following conditions:

- The submission of additional information outlining the management of poor site Douglas-fir/larch stands.

This information was submitted and accepted by the Chief Forester on February 1st, 1999.

- Refinement of the assumptions used in timber supply analysis to characterize cutblock adjacency under different uneven-aged silviculture systems.

As an element of stand and forest level modelling of alternate silviculture systems, this management plan and the accompanying timber supply analysis have addressed this issue.

Additional goals and commitments made in MP No. 9 are as follows:

- The results of a forest cover inventory audit are to be incorporated into the timber supply analysis for the next AAC determination.

The results of the TFL 8 inventory audit completed by Resources Inventory Branch, December 1998, showed that the forest cover inventory of mature

and immature forests were acceptable. There was a minor issue with the results for non-forest classification which did not warrant a reclassification or inventory adjustment.

Two studies have been completed which deal with site index and site productivity. The site index project is titled Potential Site Index Estimates for the Major Commercial Tree Species on TFL 8 (J.S. Thrower and Associates, 2001). The second project is Statistical Adjustment of Dense Lodgepole Pine Polygons in the Boundary Forest District (J.S. Thrower and Associates, 1999). The results from these studies, which can be found as appendices to the Timber Supply Analysis Information Report, have been incorporated into the yield predictions for the timber supply review.

- Undertake a study to improve estimates of site index and productivity.

Two studies, a site index adjustment project and one examining dense pine stands, have been completed and incorporated into the yield predictions for the timber supply analysis.

Commitments Associated with the AAC Determination

In his rationale for determination of the AAC, the Chief Forester indicated a number of tasks to be carried out during the term of MP No. 9:

- Evaluate alternative strategies for managing deciduous and mixed stands.

There is a relatively small area of deciduous and mixed stands on TFL 8. When these stands are encountered during the planning process they are normally not included in the harvesting prescriptions. When they are located in or adjacent to a silviculture prescription they are usually reserved from harvesting and either left as reserved single trees or reserved as wildlife tree patches.

- Re-assess and compile data specific to the TFL in respect of roads, trails and landings.

A review of this data has been completed and the results are incorporated into the timber supply analysis. The information was collected from retrospective sampling of site disturbance surveys completed between 1997 and 2000.

- Develop a plan for the management of landscape-level biodiversity, incorporating all relevant West Kootenay/Boundary Land Use Plan guidelines, boundaries, objectives and prescriptions, and including designated landscape units and biodiversity emphases.

This management plan and the associated timber supply analysis includes methodologies to fully address landscape-level biodiversity as prescribed by

current legislation and policy. As of April 30, 2001 there are some aspects of the Kootenay/Boundary Higher Level Plan Order that are not fully understood by the Ministry of Forests and Ministry of Environment Lands and Parks (MoELP) and therefore this plan will address the current understanding of the Kootenay/Boundary Higher Level Plan Order (HLPO).

- Test accuracy of site indexes applied in current analysis.

A site index adjustment project has been completed and the results have been incorporated in the timber supply analysis.

- Work with Ministry of Sustainable Resource Management (MSRM) staff to update non-timber resource inventories, particularly for wildlife habitat.

Inventory work has been carried out on the following wildlife habitat and related species:

1. *Mule deer winter range habitat inventory has been carried out in 1999 and 2000. This project will carry on into the term of MP No. 10;*
2. *P&T and the MSRM have partnered to collect data on red and blue listed species;*
3. *Work has also been carried out on evaluations of the practice of leaving wildlife tree stubs; and*
4. *Fish and fish habitat inventory has also been completed on approximately 50% of the drainages in TFL 8.*

- Review riparian class assignments and verify by field inspection.

Riparian stream classification has taken place on areas that have been proposed for harvesting. Through FRBC funded fish and fish habitat inventories, significant areas of the Tree Farm have now had detailed inventory analysis. Forsite Consultants have compiled known classifications and augmented them with inferred classifications for use in timber supply analysis. Additional areas will be completed during the MP No. 10 term.

P&T participates in the Boundary Forest District committee that consolidates known fish inventory information from all sources with the goal of sharing this information among all users. This information is also used in the Local Area Agreement regarding riparian classification.

- Evaluate and quantify by system and species, the total amount of area that will be subject to uneven-aged harvesting systems.

The practice of using uneven-aged silviculture systems has been reviewed over the term of MP No. 9. During the term of MP No. 9 the following breakdown of silviculture systems has been used:

a) Clearcuts and clearcuts with reserves - 46%

b) Seed tree - 24%

c) Selection cuts - 20%

d) Shelterwood - 10%

These percentages have been calculated by area. If they were done by volume the selection and shelterwood cuts would be cut in half and the clearcut and seedtree cuts would increase proportionately. These results have been incorporated into the timber supply analysis for MP No. 10.

- Compile data specific to the TFL for loss due to natural causes, to improve accuracy of non-recoverable loss estimates.

Over the course of MP 9, P&T aggressively pursued the salvage of losses due to fire damaged stands, windthrow, and insect and diseases. This is possible in part to the high degree of accessible (roaded) ground in TFL 8. As a result of the salvage efforts, the nonrecoverable losses have been kept to a minimum. This data has been used in the timber supply analysis.

Management Plan No. 10 Commitments

The goals and commitments made in this management plan are summarized below for reference.

Planning

- Maintain an updated forest inventory
- Look for opportunities to improve estimates of site index and productivity
- Upgrade and refine ranking of stream and wetlands into riparian classes
- Co-operate with MSRM to field verify and refine mapping of high value wildlife habitat
- Submit a biannual or annually updated forest development plan to the District Manager
- Maintain two years of approved cutting permits at equivalent AAC level
- Consult with the Ministry of Forests (MoF), MSRM, the Ministry of Water, Land and Air Protection (MWLAP) and the public as required when preparing operational plans
- Submit an annual report each year to the Regional Manager

Harvesting

- Log 163,535 m^3 annually between 2002-2006 in compliance with cut control
- Conduct operations in accordance with cutting permit obligations, site disturbance standards and in accordance with FPC
- Meet or exceed MoF utilization standards
- Maintain the road network work so that it is safe and efficient to use

Silviculture

- Promptly reforest all logged areas with ecologically suitable species unless exempted from doing so
- Meet basic silviculture goals as per Table 4.1
- Maintain the required seed supply to ensure we meet our reforestation needs
- Utilize genetically improved seed when it is available
- Treat competing brush species to ensure free growing stands are achieved within the required time frames
- Meet backlog reforestation goals as per Table 4.2
- Space reforested areas to reduce inter-tree competition as required to meet our free growing standards
- Obtain funding where possible for incremental silviculture projects

Forest Health

- Design silviculture systems to minimize insect and disease losses
- Aggressively salvage diseased and insect damaged timber
- Priorize harvesting to ensure that infested stands are promptly dealt with

Protection

- Maintain an updated fire preparedness plan
- Maintain a high standard of fire preparedness
- Maintain an efficient fire fighting organization
- All operations will be conducted according to the Forest Fire Prevention and Suppression Regulation

Range

- Cooperate with range permittees and the MoF in the range program
- Protect range improvements in all operations

Recreation

- Cooperate with Ministry of Forests to provide recreation opportunities
- Report discovery of historic or archaeological sites to the Government
- Protect recreation facilities during all operations
- Manage the designated scenic areas through appropriate landscape design

2.0 PLANNING

2.1 AUTHORITY AND ADMINISTRATION

TFL 8 is gazetted as a provincial forest and is administered by the MoF, under the authority of the Forest Act. It lies within the Boundary Forest District of the Nelson Forest Region. The MoF District Manager has the responsibility to ensure that TFL 8 is operated in accordance with an approved management plan. This includes adhering to integrated resource management guidelines as defined by MoF policy and FPC guidebooks. Before the company can initiate any harvesting, a detailed forest planning process must be followed. This means that a series of strategic and operational plans need to be submitted and approved by the MoF. The Ministry of Water, Land and Air Protection (MWLAP) has the mandate to administer water, wildlife and fisheries resources, and pesticide use on Crown land. Accordingly, MWLAP reviews and comments on harvesting plans and permit applications prepared by Pope & Talbot. The company has established direct communication and working relationships with this agency. Joint field inspections of proposed harvesting areas are part of this process. The MoF approves forest development plans with comments from MWLAP. The MoF ultimately issues cutting permits and other operating permits after the inter-agency review is complete.

The submission of this plan fulfils a condition required in clause 2.00 of the licence document and the obligations of the licencee as detailed in Section 35 of the Forest Act. Key resource legislation and policy, which apply are presented below:

- Forest Act
- In 1994 the provincial government legislated the Forest Practices Code of B.C. Act (FPC). The FPC and its regulations took affect on June 15, 1995.
- The Kootenay/Boundary Land Use Plan - Implementation Strategy (KBLUP-IS) was approved by Government in 1997.
- On January 31 2001 the Government of BC established the Kootenay/Boundary Higher Level Plan Order pursuant to Sections 3(1), 3(2) and 9.1 of the Forest Practices Code of British Columbia Act.
- Range Act

The plan has been prepared within the framework of the present integrated resource planning guidelines and regulations administered by the Ministry of Forests. The standards, specifications and guidelines that are to be followed at an

operational level are referred to in the plan. The implementation of the strategies in this plan will be through a number of operational and site-specific plans that are continuously being prepared and updated. Notably, these are a forest development plan, silviculture prescriptions, fire protection pre-organization plan, cutting permits and road permits.

The Forest Practices Code of BC Act and its Regulations have added a strong legal framework to which operations must comply. The accompanying FPC Guidebooks are intended to assist licencees in conducting operations in accordance with the FPC Regulations.

2.2 PLANNING PROCESS

MoF policies require Pope & Talbot to complete detailed forest planning procedures before cutting permits and road permits are issued to the company. No harvesting or road construction can take place on the TFL without an approved cutting permit or road permit issued by the MoF. The planning process is hierarchical, stepping down through strategic and operational levels of planning. Various plans are required at each level and the amount of detail needed increases progressively at each level.

Strategic plans include this management plan, the Kootenay/Boundary Land Use Plan – Implementation Strategy (1997) and the Kootenay/Boundary Higher Level Plan Order (January 2001).

The operational planning regulation of the FPC outlines the content requirement for operational plans. MoF Regional or District guidelines or formats for the various plans when they are more specific than FPC guidelines will be considered when they are available. FPC regulations and guidebooks in some cases have reiterated existing operating ground rules or have expanded on them.

The key features of this process are:

- Planning considers all forest values through an integrated resource management approach;
- An open-planning process is followed with opportunities for all stakeholders and the public to participate;
- The different levels and kinds of plans are revised regularly, both annually and periodically, as scheduled;
- Total resource plans will be prepared for specific units as deemed necessary; and
- All plans are reviewed as required with the government agencies (MoF, MWLAP and MSRM) before they are finalized.

The various plans that Pope & Talbot will prepare regularly are described in Table 2.1. These plans represent part of the on-going forest management program of TFL 8.

Table 2.1 Forest Planning List

Type	Purpose	Renewal
(A) STRATEGIC LEVEL PLANS		
Kootenay/Boundary Higher Level Plan Order	Establishes resource management zones and resource management zone objectives. Sets TFL 8 within the Boundary Resource Management Zone	To be reviewed in 2004
Kootenay/Boundary Land Use Plan	Establishes regional objectives and resource management zones	Every 10 years
Landscape Unit Plans	Defines boundaries and objectives of landscape units	Updated as required
Management Plan	Details the objectives, goals and strategies for managing the TFL	Updated every five years
Twenty-year Spatial Feasibility	Outlines the proposed pattern of harvesting of the licence area for a 20 year period	Updated every five years
Local Resource Use Plan	Details land-use allocation and resource management plan for a specific area	Prepared as needed
(B) OPERATIONAL LEVEL PLANS		
Total Resource Plan	Provides for long term integrated resource development of a resource unit and direction for five-year development plans	Prepared as needed
Fire Pre-organization Plan	Action plan that details the operational readiness to prevent, detect and suppress forest fires	Updated annually
Special Use Permit	Application to use or occupy Crown land for gravel pit, sort yard or facility	Annually
Forest Development Plan	Indicates proposed harvest cutblocks and road construction scheduled for a five-year period	Updated annually/biannually
Road Maintenance and Deactivation Plan	Identifies operational roads to be maintained or deactivated	Updated annually
Cutting Permit	Application for an operational logging plan for a group of cutblocks	Renewed annually as needed
Logging Plan (no longer required by legislation but still used by P&T)	Describes road construction and logging operations, resource identification and protection measures and rehabilitation activities for a cutblock	Amend as needed
Silviculture Prescription	Prescribes the silvicultural system and regeneration plan for harvesting and reforesting a cutblock	Amendments as needed
Stand Management Prescription	Prescribes silviculture treatments to be carried out on a free-growing stand	Amend as needed
Access Management Plan	Outlines status and condition of road network not covered in forest development plan	Prepared as needed

All of these plans provide direction for the management of TFL 8. Pope & Talbot is accountable for their implementation once they have been approved through the operation activities.

Table 2.2 provides the management planning schedule under which this plan was prepared.

Table 2.2 Management Planning Schedule

Months prior to MP expiry	Component	Due Date
20	Regional Manager (RM) provides MP Review & guidelines *(2.03)*	December 31, 2000
18	Timber Supply Forester (TSF) may provide timber supply information requirements *(2.05(g))*	February 28, 2001
16	Licensee submits IP to TSF *(2.04)* Licensee submits DMP to RM *(2.08)*, and refers and advertises DMP *(2.12)*	April 30, 2001
13	TSF accepts IP *(2.06)* or does not accept IP *(2.07)* RM provides comments on DMP to Licensee *(2.16)*	July 31, 2001
12	Licensee submits copy of notice, comments and proposals regarding DMP*(2.17)*	August 31, 2001
10	Licensee submits TYP to District Manager (DM) *(2.18)* and Analysis to TSF *(2.22)*	October 31, 2001
7	DM accepts TYP *(2.20)* or does not accept TYP *(2.21)* TSF accepts Analysis *(2.24)* or does not accept Analysis *(2.25)*	January 31, 2002
4	Licensee submits PMP to CF and RM *(2.26)*	April 30, 2002
2	CF approves PMP *(2.28)* or does not approve PMP *(2.31)*	June 30, 2002
0	Expiry of current MP	August 31, 2002

Effective January 31, 2001 the Government of B.C. established the Kootenay/Boundary Higher Level Plan (HLP). The HLP established the Boundary Resource Management Zone and the corresponding objectives. The applicable objectives include biodiversity emphasis, old and mature forest, greenup and patch size, grizzly bear habitat, consumptive use streams, enhanced resource development zones, fire maintained ecosystems, visual quality, and the forest economy.

Related to the HLP are landscape unit plans (LUP) which are expected to be complete by 2003. Once these plans are in place they will provide direction for preparation of forest development plans, silviculture prescriptions, and cutting permits. The benefits of this approach include being able to take a long term view of diversifying the harvest pattern, establishing a priority harvest schedule, maintaining biodiversity and dealing with other resource values more specifically.

2.2.1 Twenty-year Spatial Feasibility

A 20-year spatial feasibility study has been completed for the TFL. It covers the period 2002 to 2022. The intent of this exercise is to project spatially a proposed general pattern of development and harvesting at a cutblock level for the

recommended AAC of 163,535 m^3/year. The plan was prepared under terms of reference approved by the District Manager, Boundary Forest District. It will also help determine whether the current AAC is spatially and temporally feasible in the short term. It is a paper plan that illustrates a potential harvesting pattern over a 20-year period considering current management practices, forest cover constraints and resource planning guidelines used in the Boundary Forest District including the Higher Level Plan Order.

Development plans were the basis for cutblock identification as well as photo interpretation and the field experience of our logging engineers for the first five years of the 20 year plan. The remaining 15 years have been assigned harvesting blocks based on the specified harvesting rules. Scheduling has been done in five-year increments. Potential blocks were put into their first available period without consideration for the total volume available in the period. The spatial distribution of the cutblocks uses a cut and leave pattern that satisfies basic timber adjacency and green-up requirements. The 20-year Spatial Feasibility study is documented in Appendix IV which can be referred to for further detail.

2.2.2 Local Resource Use Plan

A Local Resource Use plan (LRUP) may be required when resource issues in a particular area cannot be solved within the usual planning framework. A planning committee would be established with representatives from the company, government agencies and the public. The committee prepares the plan by consensus, drawing up specific detailed prescriptions. To date an LRUP has not been required for an area within the TFL.

2.2.3 Forest Development Plan

A forest development plan is intended to implement the goals and strategies contained in the management plan at a tactical level. It will also follow the direction of other higher level plans, where they exist. *The Operational Planning Regulation* of the FPC outlines the content required for a forest development plan. The development plan will show the proposed harvesting pattern by cutblock, by year, for five years. It will provide information on silvicultural systems and logging methods, road development, and volumes to be harvested. Details on field management, road maintenance and deactivation are also covered.

Every other year (or in some cases every year) the plan will be updated by adding one or two years to it. This update will take into account activities from the previous years, adjustments resulting from field verification of proposed cutblocks, and revisions that seem advisable as a result of feedback from resource agencies and the public. In this way it becomes an “evergreen” five-year plan that

is renewed periodically. The process from review to approval takes about six months.

The Forest Development Plan will be provided as a draft to the MoF and MWLAP. It will also be advertised for public viewing. All comments and concerns received will be taken into account before finalizing the plan. After any revisions have been made, the final plan will be submitted. Approval is made by the District Manager, Boundary Forest District.

2.2.4 Cutting Permits

The company's goal is to maintain a volume equivalent to two years of AAC covered by approved cutting permits. This will allow for operational flexibility. Cutting permit applications will be submitted to the MoF throughout the year. In normal circumstances they will be submitted in accordance with the approved Forest Development Plan. On occasion, it may be necessary to obtain cutting permits not in the development plan to salvage damaged timber. Sufficient cutting permit applications will be submitted to enable Pope & Talbot to provide a continuous and adequate log inventory for the Midway and Grand Forks sawmills over an operating year. As operations progress, amendments to approved cutting permits will be prepared as needed. Where required this may include amendments to the forest development plan and specific silviculture prescriptions.

3.0 RESOURCE INVENTORIES

This section outlines the present status of the inventories for timber and non-timber resources. The collection of timber and recreation inventory information for the TFL is a licencee responsibility. For other resources, existing data or information are gathered and presented here.

Table 3.1 Resource Inventories

Inventory	Status	Source/Comments/Approval
Recreation	Unchanged since MP No. 9. No analysis implications	Timberline
Forest cover	Dense lodgepole pine adjustments incorporated.	Source: P&T, Forsite Consulting. Pl Adjustment: J.S. Thrower and Assoc.
Ecosystem inventory	Terrestrial Ecosystem mapping (TEM)	MoF Resources Inventory Branch, March 2000
Landscape units	Defined by the KBLUP, including biodiversity emphasis ratings.	KB HLPO January 2001
Terrain stability – Level C and D	Level C coverage is incomplete. Terrain D was used were C is unavailable.	FRBC April 1999
Operability	There are no operability issues on the TFL and no operability coverage was required.	n/a
Fish habitat	Forest practices code riparian classification based on local knowledge and some MoF classification.	BC MWALP August 2001
Wildlife habitat – deer winter range	As identified by the District Manager, Boundary Forest District.	DM, DBO October 1998
TFL boundary	The current boundary is used, including exclusion of Woodlot 470.	Source: P&T, Forsite, Timberline
Connectivity corridors	Defined by the KBLUP.	KB HLPO January 2001
Riparian zone buffers	Constructed by Timberline as per the Analysis Information Package.	Timberline
Roads	Current coverage of the existing road network.	P&T, Forsite
Ownership	Pope and Talbot special coverage, not forest cover attribute based.	P&T, Timberline
Trans-Canada Trail	Designated portions of the Kettle Valley Railway	P&T, Timberline
Visual quality objectives	Draft	DBO
Known scenic areas	Defined by the KBLUP.	KB HLPO January 2001

3.1 FOREST COVER INVENTORY

Pope & Talbot maintains a timber inventory at two levels. At the strategic level an inventory database is maintained for resource planning, making projections of timber supply and associated strategic analysis. At the operational level, timber cruising is done to provide volume estimates for individual cutblocks. This enables detailed harvesting planning and preparation of cutting permit applications.

A re-inventory of TFL 8 commenced in the spring of 1993 and was completed in the summer of 1994. The timber type stratification detail was refined on new colour 1:15,000 scale aerial photographs. These replaced the outdated 1962 photography that was the photo base for the 1972 and 1983/84 inventories. A distinct refinement and increase in detail was noted in the immature lodgepole pine and mature spruce balsam types due partly to timber type boundary enhancements afforded by colour photography and to the more detailed operational stratification specifications which were requested.

The base maps were re-mapped with NAD 83 control, creating an equivalent to refined or enhanced TRIM maps. All or part of 19 BCGS mapsheets at a scale of 1:20,000 were created.

The timber inventory is kept on a computerized database, in a geographic information system (GIS) environment. The timber inventory database will be updated annually for changes resulting from logging, fires, regeneration status and other disturbances. Copies of updated inventory graphics and data files will be provided to the MoF when an update is completed. For preparation of MP No. 10 the forest cover inventory has been updated for disturbance and projected to January 1, 2000.

Operational level timber inventory (timber cruising) will be completed for preparing cutting permit applications. This inventory provides specific information for individual cutblocks on species by volume, with stand and stock tables and lumber recovery factors. MoF Provincial cruising manuals and Nelson Forest Region Cruising Guidelines and volume compilation procedures are used.

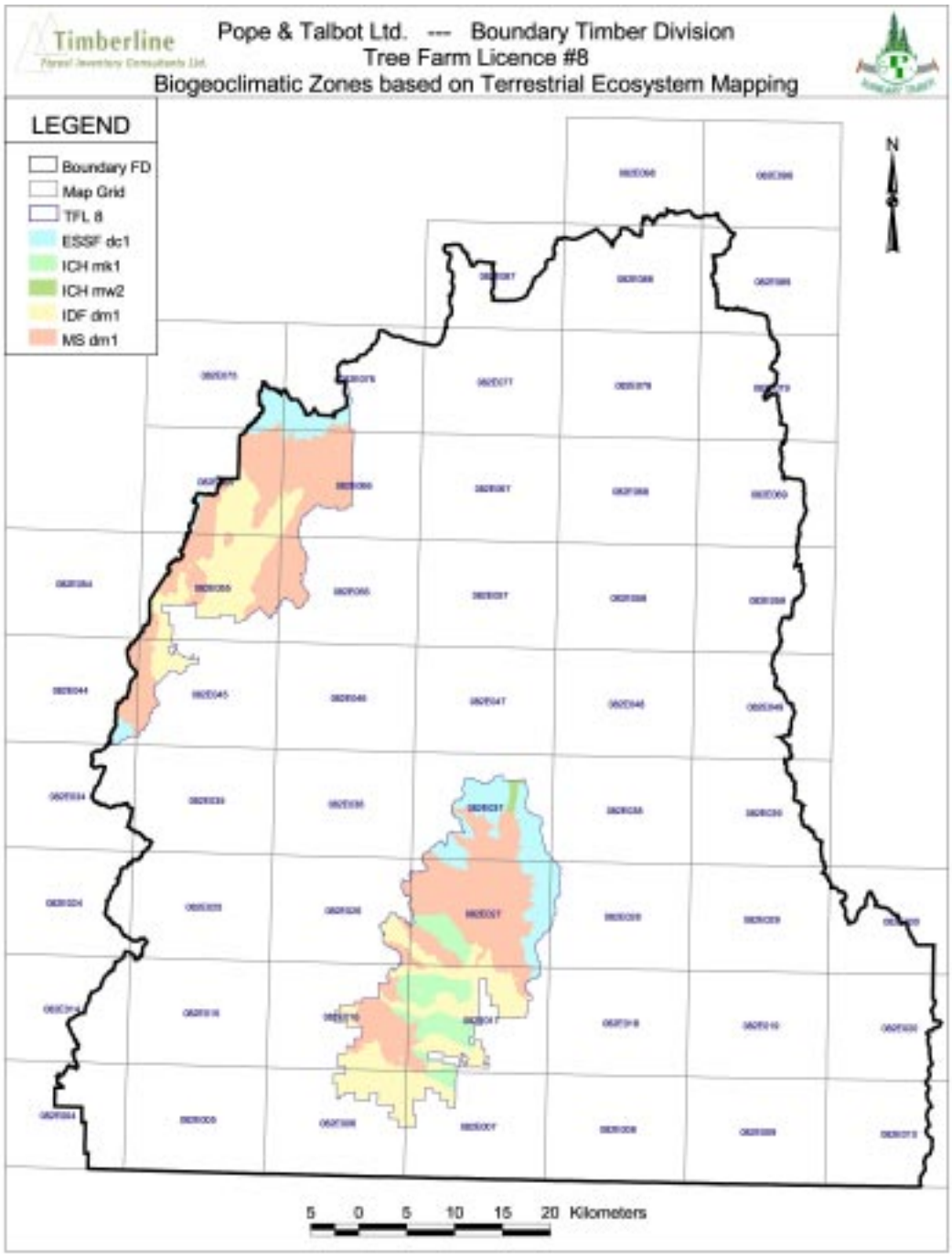

Figure 2 – Biogeoclimatic Zones

3.2 ECOSYSTEM INVENTORY

A terrestrial ecosystem mapping (TEM) project was completed for the TFL. This was the source of biogeoclimatic zone information used in this management planning process. One exception is the delineation of landscape unit boundaries which were based on provincial BEC inventory mapping.

Five biogeoclimatic subzones are found in TFL 8. The boundaries are illustrated in Figure 2.

3.3 RECREATION AND LANDSCAPE INVENTORY

A recreation inventory was completed for TFL 8 during 1995. It classified and mapped recreation opportunities including the visual features and scenic areas on the TFL visible from viewpoints along Highways 3 and 33. In 1996 the MoF commissioned Mirkwood Consultants to produce a draft visual quality objectives report for the Boundary Forest District (including TFL 8). This analysis resulted in 2.1 percent of TFL 8 having visual quality objectives (VQO).

During the term of MP 9 there have been three recreationally related events that have some impact on TFL 8:

1. The announcement of the Kootenay/Boundary Higher Level Plan has resulted in designated scenic areas within the TFL. This will require the establishment of VQOs and harvesting to meet those objectives. The scenic areas in the HLP mirrors the information contained in the Mirkwood report. The exception is that the Mirkwood report included an additional area of VQOs surrounding Jewel Lake which is located in Block 1. The timber supply analysis will utilize the more constraining draft VQOs .
2. The abandoned Kettle Valley Railway grade has been designated as the route of the Trans Canada Trail through the TFL. This item has no analysis implications other than the removal of the old rail grade and associated buffer out of the productive forest landbase.
3. The announcement of the Kettle River as a heritage river. This item has no analysis implications.

Most recreation activity depends on the use of main roads and established trails. The TFL is well roaded and has good access to most of the area. The most popular activities include hunting, camping, picnicking, hiking, biking, boating and fishing. Winter activities include cross-country skiing and snowmobiling.

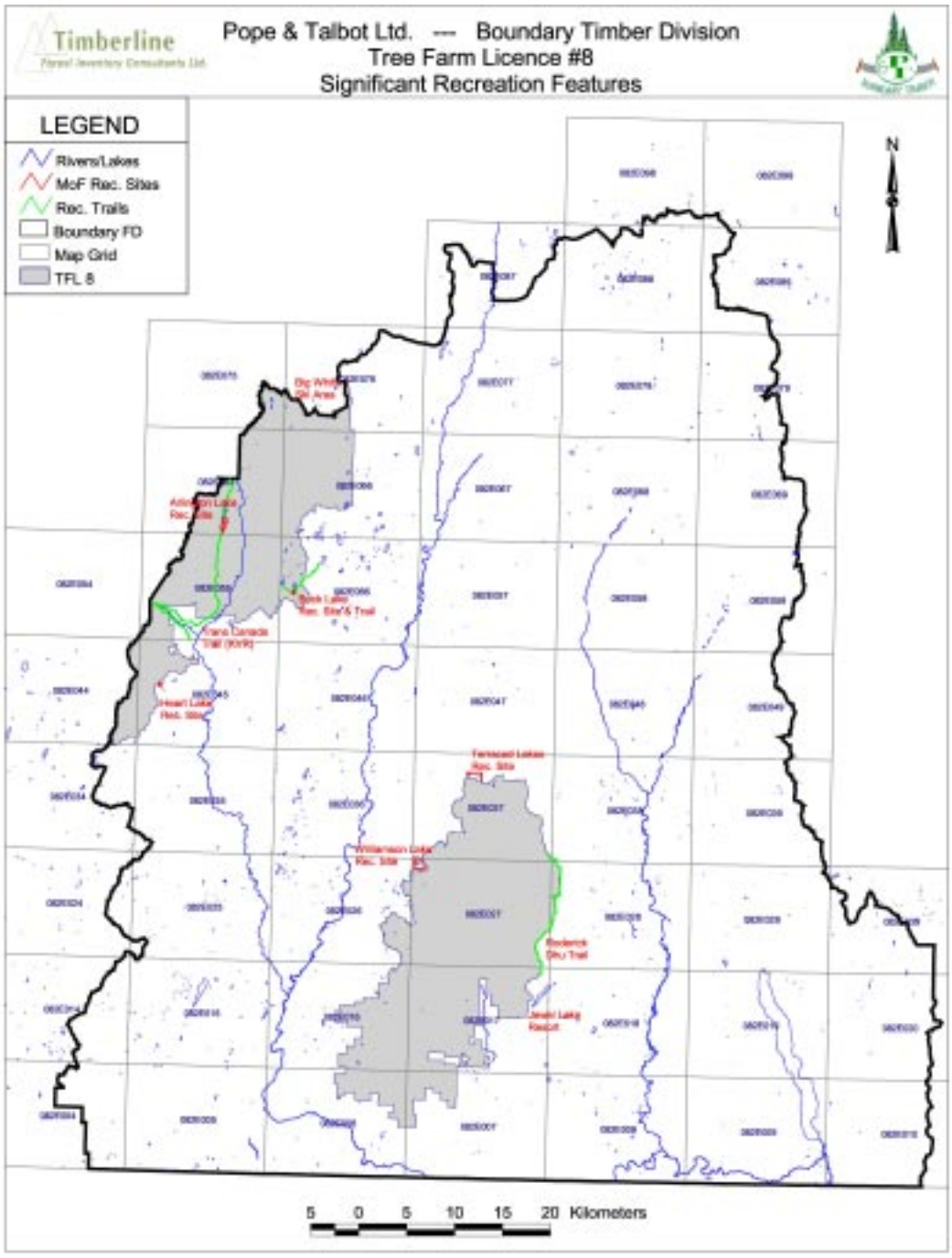

Figure 3 – Significant Recreation Features

The Big White Ski Resort is the only commercial recreation business operating on TFL 8. Most of the Resort's activities occur outside of TFL 8 however during the term of MP9 they have expanded their use of the Controlled Recreation Area (CRA). These activities include a lodge, gondola, tubing park, and a possible golf course. These activities and the areas associated with them are not compatible with growing trees for commercial purposes. It is our expectation that these areas will be excluded from the tree farm at some later date.

The MoF maintains three recreation sites which have a total of 18 vehicle units. These recreation sites are generally used throughout the summer for camping and in the spring and fall for hunting and fishing.

In Block 1 there is an unmanaged, dispersed-use trail, approximately 13 km long, along the eastern ridge between Roderick Dhu Lookout and Almond Mountain. In Block 2 there is one managed trail about 1.1 km long connecting Buck Lake and China Lake. Both of these trails have been designated as recreation trails under a HLP. The Big White cross-country trail system also comes into part of the TFL in the northern corner of Block 2. Several small provincial parks and recreation facilities are also located adjacent to or in the vicinity of the TFL. They include Conkle Lake, Johnstone Creek, and Boundary Creek provincial parks and the Kettle River recreation area. These recreation features are illustrated in Figure 3.

3.4 ENVIRONMENTALLY SENSITIVE AREAS

Environmentally sensitive areas (ESAs) were assigned to forest cover polygons in the 1993 re-inventory classification. It covered three categories, Es soils, Ep regeneration difficulties and Esp combined soil/regeneration sensitivity.

3.5 TERRAIN STABILITY MAPPING

Terrain stability mapping at a survey intensity level (TSIL) C were completed for Wallace Creek and portions of East Fork Creek in 1998. Additional terrain mapping at a TSIL level D were completed for the remainder of TFL 8 in March, 1999.

Terrain stability is implemented at level C, and at level D where level C is not available.

3.6 FISHERIES HABITAT

Rivers and streams in the licence contain several species of resident fish including rainbow trout, mountain whitefish, and brook trout.

All silviculture prescriptions have riparian assessments completed prior to submission for approval. This is done by field engineers or other people qualified to make these assessments.

In addition to this, and with funding from Forest Renewal BC, fish and fish habitat inventory has been utilized for most of the term of MP No. 9. This inventory has involved sampling on approximately 50% of the drainages. On a stream reach basis, 23% of the reaches have been riparian classified. Our goal is to increase this stream reach classification to 50% and drainage sampling to 100%, subject to funding, during the term of MP No. 10.

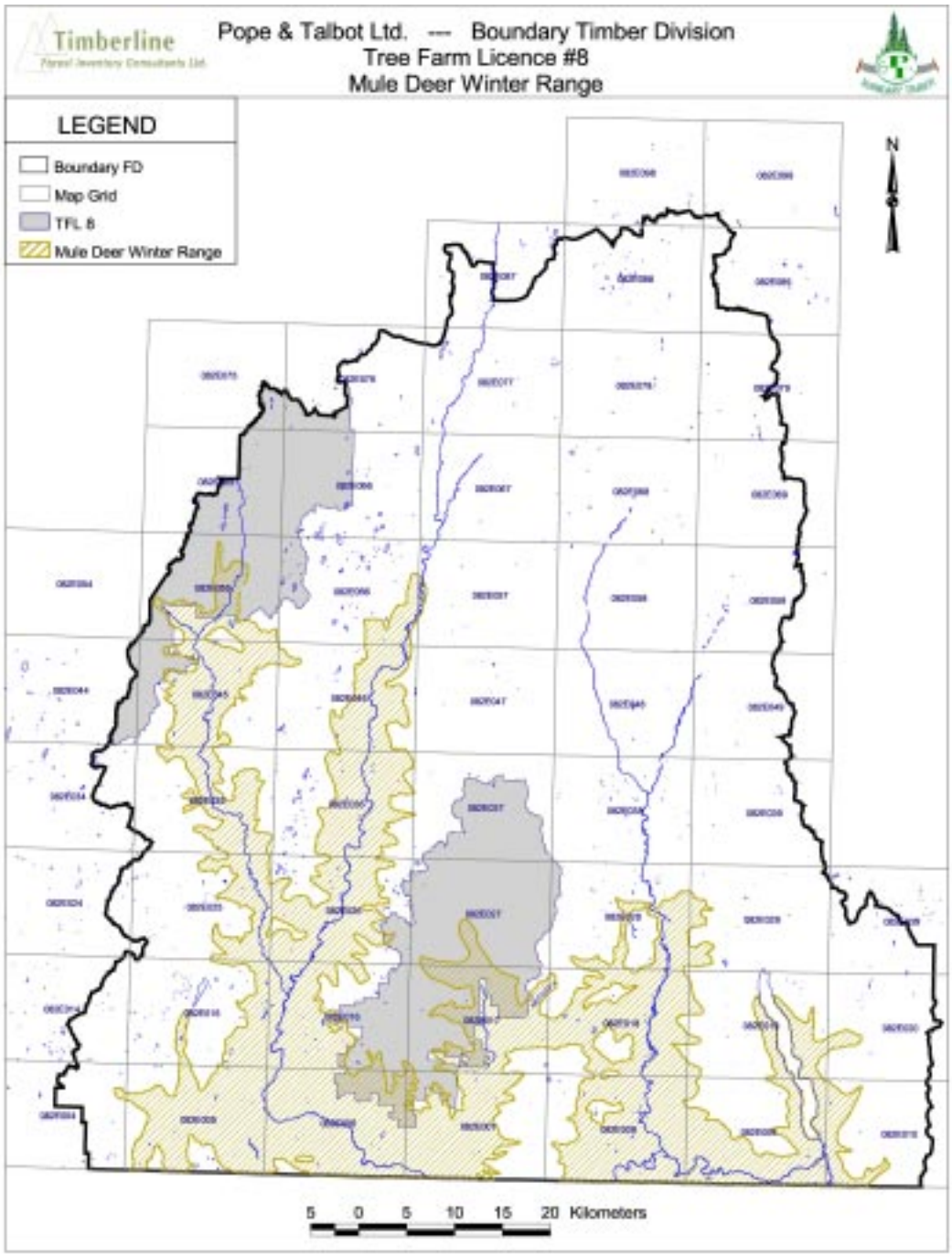

Figure 4 – Mule Deer Winter Range

3.7 WILDLIFE HABITAT

Numerous animals and birds thrive in a broad diversity of habitat types throughout the TFL.

The Kootenay/Boundary Land Use Plan – Implementation Strategy (KBLUP-IS) Section 3.5 is being used as a guide in forest development planning for decisions regarding mule deer winter range. Pope & Talbot is continuing to work together with the MSRM and MWLAP to improve the mapping and interpretation of mule deer winter range.

Mule deer winter range as identified by the Boundary Forest District Manager on October 14, 1998 is presented in Figure 4.

The Higher Level Plan Order mandates maintenance of mature and old forests adjacent to avalanche tracks, which are important for grizzly bear habitat. These rules apply once such habitat is mapped. The MWLAP has not provided mapping of avalanche tracks for the Boundary Forest District. This type of habitat is very limited on TFL 8 but will be incorporated when it becomes available.

3.8 WATER

The Kettle River is an important water resource in the Boundary area. Two tributaries of the Kettle River drain the TFL, Boundary Creek and the West Kettle. Boundary Creek flows south through Block 1 until it joins the Kettle River at Midway. Streams in Block 1 tributary to Boundary Creek include Henderson, Windfall, Wallace and Jewel Creeks. The West Kettle flows through Block 2, south past Beaverdell to Westbridge, where it joins the Kettle River. Streams in Block 2, tributary to the West Kettle include Trapping, Carmi, Wilkinson, Ptarmigan and Hall Creeks.

The Kettle River itself is a major tributary of the Columbia River which eventually drains into the Pacific Ocean. Water produced by all of these drainages is used downstream for domestic consumption, agricultural irrigation and industrial purposes. Water is abundant and the needs of licenced water users have been easily met so far. However, water temperature and summer low flows are two important factors that need consideration.

Water Management Branch, formerly of the Ministry of Environment, has issued 46 water use licences on streams flowing into, or out of, the TFL 8. A listing of these licenced water users is found in Appendix II(b). Six of these licences are within the TFL. Thirty five are associated with Block 1 and nine are associated with Block 2. Twenty three of the water licences are for irrigation purposes, seventeen are for domestic consumption, and the remainder are for other uses.

Licenced water use is presented in Figure 5.

The Higher Level Plan Order establishes additional streamside management requirements for consumptive use streams (Objective 6). The MWLAP had not provided information regarding consumptive water intakes in time for incorporation into MP No. 10 so streamside management cannot be implemented at this time.

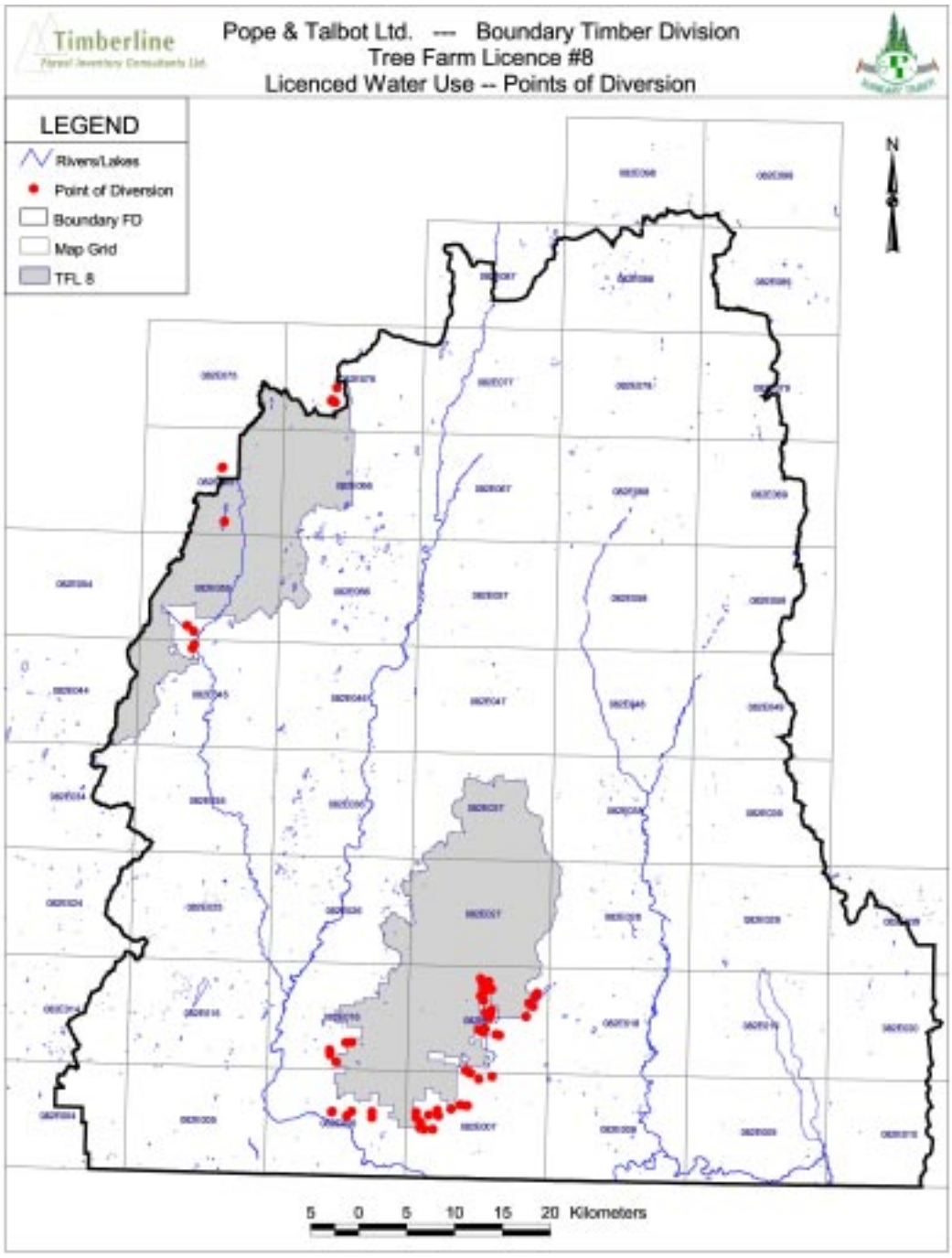

Figure 5 – Licenced Water Use

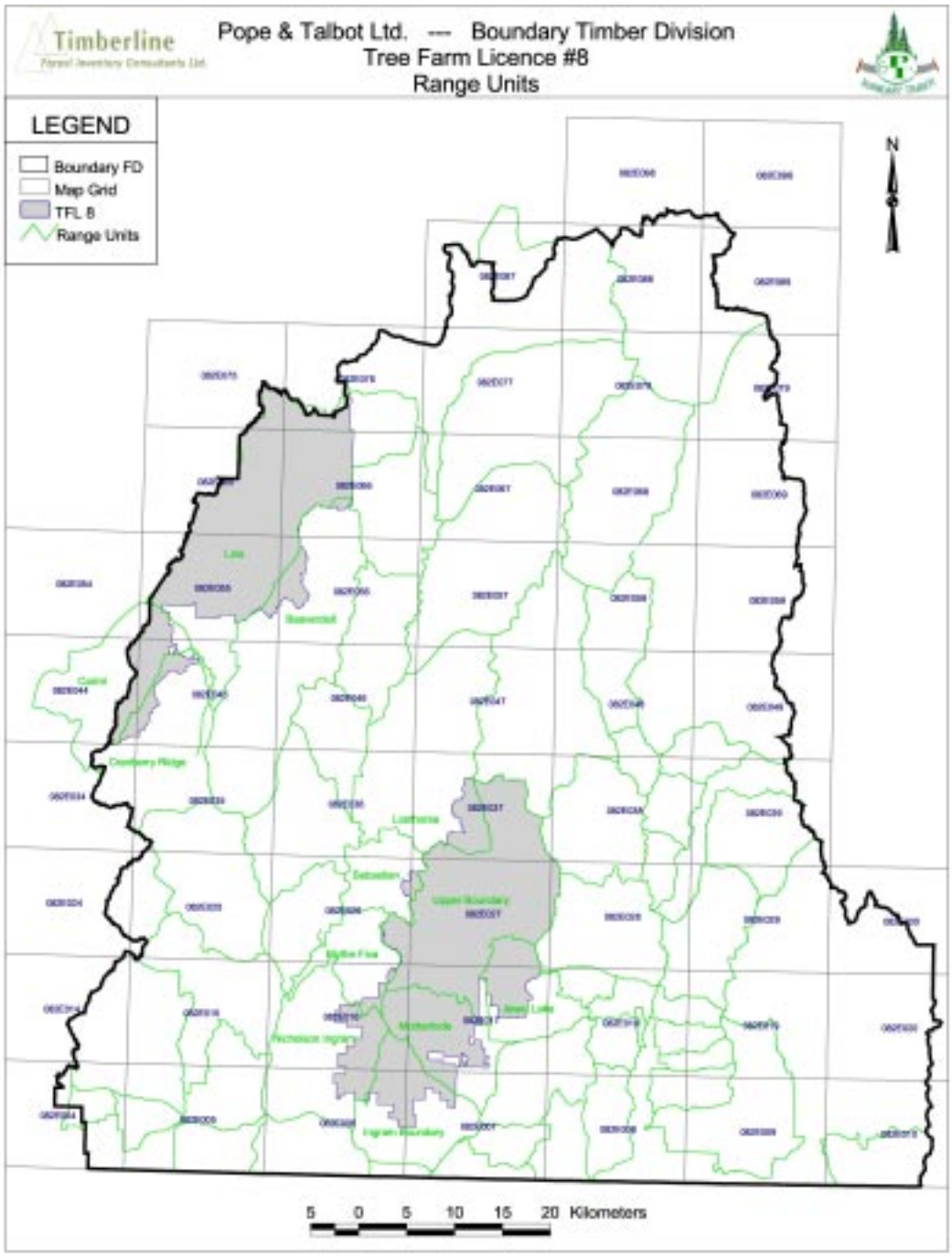

Figure 6 – Range Units

3.9 RANGE

TFL 8 is covered in whole or in part by 10 range units. There are 19 range permittees with either 10-year grazing licences or one to five-year grazing permits. There are six range units within Block 1 and four within Block 2. Figure 6 shows their boundaries.

3.10 HERITAGE/CULTURAL RESOURCES

Cultural heritage resources refer to archaeological sites, early pioneering features, historical landscape features and traditional use sites. Most historical sites in the vicinity of TFL 8 are part of old mine sites associated with the Boundary district's early mining industry spanning from 1890 to the 1920's.

Most heritage sites are congregated in the Greenwood vicinity. There are seven known historical sites in total. They are listed as follows:

- King Solomon Mine;
- The Agate/Opal Collection site;
- Deadwood and Motherlode Mine ruins;
- Twin Bridges site;
- China Creek placer mine;
- Roderick-Dhu fire lookout; and
- Carmi-Penticton road.

The Kettle Valley Railway (KVR) corridor extends west to east, from Glenfir to Midway. This has not officially been designated as a heritage site, although it is designated as the route that the Trans Canada Trail will follow through the TFL. Nonetheless the KVR corridor is still a significant feature in the area. No archaeological sites or evidence of native settlements have been discovered or reported within either block of the TFL. There are several sites outside the TFL boundary, especially along the Kettle River between Rock Creek and Midway (south of Block 1), and a small site at Allendale Lake (south of Block 2).

4.0 MANAGEMENT OBJECTIVES AND STRATEGIES

Management objectives and strategies for Management Plan No. 10 are a continuation and refinement of those in the previous management plan. They build on the progress and accomplishments of the previous planning period. The management objectives provide a comprehensive direction of how the licence area is to be managed. The specific objectives and strategies for the next five years can be found in the relevant sections below.

4.1 MANAGEMENT AND UTILIZATION OF TIMBER RESOURCES

During the terms of Management and Working Plans 7 & 8, the harvesting strategy focused on control of the mountain pine beetle epidemic. For this reason past harvesting has been concentrated in attacked and susceptible lodgepole pine stands in the Trapping Creek and Arlington Lake operating areas in the Carmi block (Block 2). This changed early in the term of Management Plan No. 9. Now that the epidemic has declined, more harvesting has been taking place in the Boundary block which has more mixed fir/larch/pine stands.

For stands in enhanced resource development zones (ERDZ-T), the Higher Level Plan Order declares green-up to be accomplished when a stand is successfully regenerated. There are significant areas of enhanced timber development zones on the TFL, and timber supply modelling reflects these.

Objectives:

- Maximize the allowable annual cut providing integrated resource use goals can be met;
- Provide a continuous supply of sawlogs for the company sawmills; and
- Adopt management practices and activities that will increase the fibre flow and productivity of the licence area over the long term.

4.1.1 Harvesting Systems

Harvesting patterns and layout will be done in accordance with the FPC and the applicable guidebooks. The cutting pattern will be designed on a three-pass system, dispersed over the TFL. The following strategies and principles will be used:

- Environmentally sound harvesting practices;
- Diversified cutting pattern throughout the operable forest;
- Silvicultural systems ecologically appropriate for the site;
- Shelterwood systems when economically possible;

- Maximum block size less than 40 hectares in clearcut areas unless approved by the District Manager; and
- Partial cut areas may exceed 40 hectares.

Both conventional landing and roadside logging systems will continue to be used. Steeper ground will be logged by cable systems. This is estimated to be less than 10% of the area to be harvested.

The selection of stands for harvesting is guided by the management objectives. The order of priority will be as follows:

- Stands damaged by catastrophic events such as fire, blowdown, other insects and diseases;
- Even-aged stands greater than 60 years old; and
- Mixed species stands suitable for selection cutting.

4.1.2 Utilization Level

The minimum utilization standards for standing timber and logs will be the MoF interior utilization standards as specified in the TFL agreement.

These standards are used consistently for inventory compilations, the allowable annual cut, and cutting permit cruise compilations. Variance to these standards may be necessary from time to time and will be stated specifically in the cutting permit application.

Logs will be utilized and scaled according to the MoF Interior Scaling Regulation (BC Reg 563/78). Pope & Talbot's goal is to utilize all logs meeting the minimum firmwood specification. The log utilization standards may vary on specific cutting permits, for example, when market conditions or incentives enable logs below the minimum standard to be processed economically into lumber and or wood chips. This means green and dead lumber reject logs (grades 4 & 5), undersize logs (grade 6), and small diameter tops may become usable. These opportunities very much depend on a strong chip demand, high market prices and the ability to economically process small diameter logs (<10 cm top) into chips.

There is some additional fibre in small diameter pine stands (stocking class 4) that is not included in the net landbase. Small diameter logs from these stands are used by producers of orchard props, fence posts and rails. Utilization of these stands can be accomplished by thinning or clearcutting. The company has been co-operating with the Ministry of Forests and small operators in utilizing this type of stand in TFL 8.

During the term of MP No. 9 the demand for hardwood fibre has been relatively low. Less than 100 m^3 of hardwood were commercially utilized in this

five year timeframe. Utilization of deciduous species from TFL 8 will remain an option however it is not expected to be significant in the near future. Deciduous species aspen, cottonwood and birch may be utilized when an interest develops. This may include use by Pope & Talbot itself or by trading logs to other small operators.

Residue surveys will be conducted annually on cutblocks logged according to standards acceptable to the MoF. The avoidable and unavoidable waste volumes (based on utilization standards) will be reported to the MoF for cut control recording and stumpage billing.

4.1.3 Allowable Annual Cut

Effective September 1, 1997 the Chief Forester of B.C. set the AAC for TFL 8 at 145 000 m^3 per year. This was unchanged from the previous determination. Instrument No. 20 which was effective August 12, 1998 deleted 163 hectares from Schedule B lands on TFL 8. The new AAC was set at 144 720 m^3 per year.

In association with MP No. 10 a timber supply analysis was undertaken to examine potential harvest options and to provide guidance in proposing the AAC for the next five years. The completed timber supply analysis report is in Appendix III. It is a detailed report describing the analysis methodology, management assumptions used and the results. The report provides the provincial Chief Forester with the technical basis for determining the AAC for TFL 8.

Pope and Talbot is recommending the AAC be set at 163,535 m3 per year for the duration of Management Plan No. 10.

4.1.4 Small Business Forest Enterprise Program

There is a small business program AAC of 6,970 m^3/year apportioned from the TFL AAC. The District Manager, Boundary Forest District is responsible for planning and administering SBFEP timber sale licences.

At present the small business program has one operating area in Block 1. Pope & Talbot and the MoF have agreed to some guiding principles to facilitate the successful delivery of the small business program. The planning, administration and operation of the small business timber sales program needs to be carried out in co-operation with Pope & Talbot's operations. The MoF is responsible for the development and award of the timber sale licences, logging supervision, fire protection, basic silviculture, road maintenance and all post-harvest activities until free growing is reached.

The small business operating area in Block 1 is north of cutting permit 3C and north-west of the East Fork road. A total cut of 34,850 m^3 can be taken out

within a five year period. The MoF is responsible for the design and construction of all forest roads when they are to be used by the small business program.

Timber harvested under the Small Scale Salvage Program is applied to the Small Business Forest Enterprise Program's apportionment.

4.2 PROTECTION AND CONSERVATION OF NON-TIMBER VALUES AND RESOURCES

The importance of co-ordinating harvest planning and operations with non-timber resources is recognized. Pope & Talbot is committed to pursuing integrated resource use strategies. Reflecting the objectives of all stakeholders and providing a blend of their specific interests requires careful planning and development of consensus among those involved.

The diversity of forest ecosystems and the inherent biological diversity across the forest landscape must be maintained if the objective of sustainability and long-term forest productivity is to be met. To some degree this objective is hampered by the lack of specific management goals for many of the non-timber resources. The level and reliability of the inventories for those resources is continually being improved. The strategies in this plan are based on the non-timber resource information currently available.

Objectives:

- Manage the TFL lands by environmentally sound integrated resource use principles within the context of government regulations and resource management guidelines;
- Follow forest management and harvesting strategies that will sustain a continuous supply of timber in balance with the maintenance of non-timber resources through provision for water production, grazing, fish, wildlife and recreation uses;
- Recognize sensitive soil management issues and minimize detrimental impact on soil resources;
- Maintain the water production capability of the licence area in terms of quality and quantity so that impacts on licenced water rights holders are minimized;
- Minimize the effect of forestry operations on the stream network as they pertain to water quality, fish habitat, wildlife habitat and recreation, and aesthetics;
- Provide a diversity of habitats capable of supporting naturally occurring populations of wildlife species and contributing to biological diversity;

- Protect cultural heritage features by strict adherence to the Heritage Conservation Act;
- Visual quality objectives will be utilized when they become established;
- Continue to provide the public with opportunities for dispersed recreational use of the licence area; and
- Use forest landscape planning techniques for the design and planning of harvesting in identified visually sensitive viewscapes.

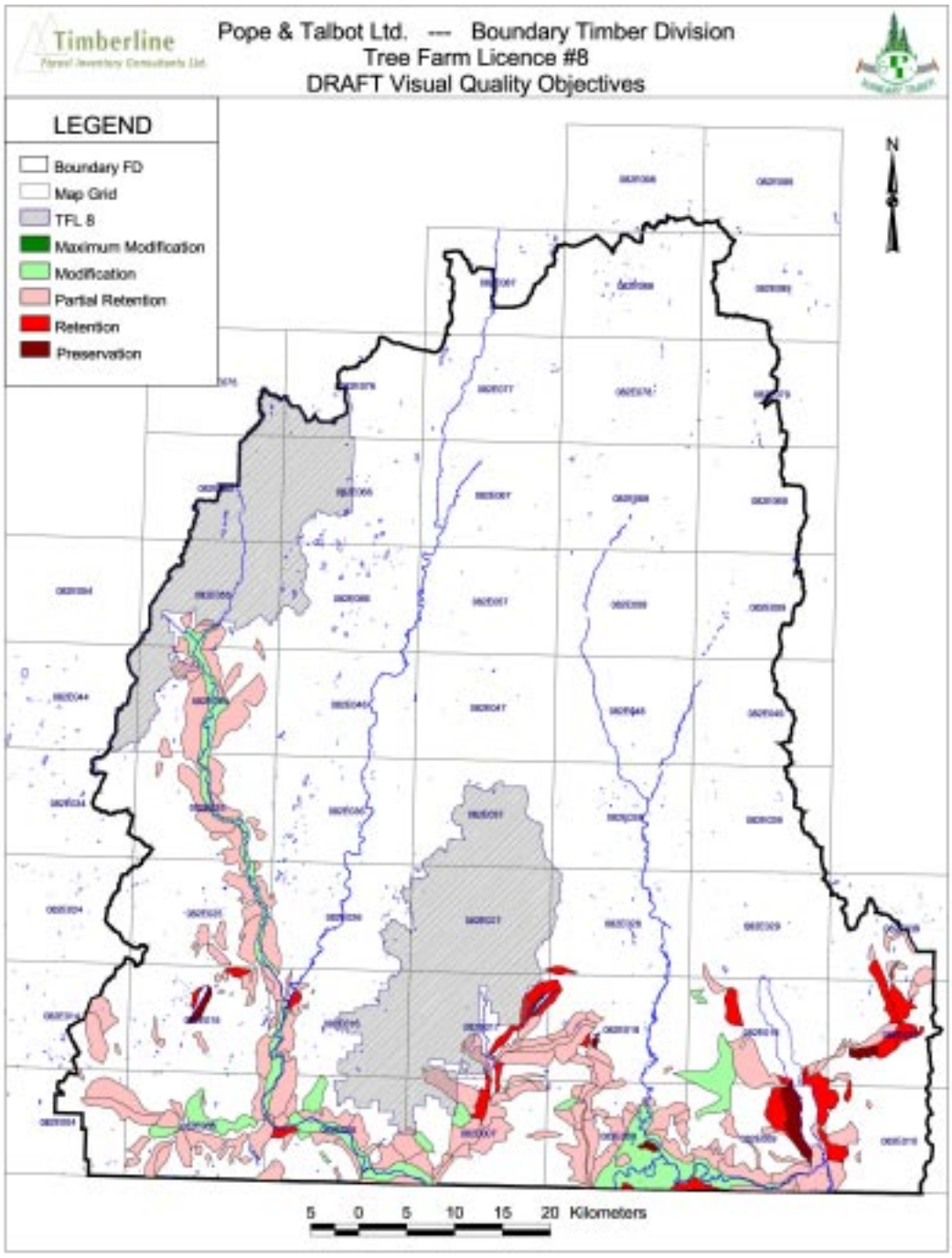

Figure 7 – Draft Visual Quality Objectives

4.2.1 Visual Quality

The Kootenay/Boundary Higher Level Plan Order established known scenic areas to conserve the quality of views from communities, major waterways and major highways (Objective 9).

A forest landscape derives its scenic value and sensitivity from its prominence, attractiveness and the opportunity to view its features. The appearance and condition of a landscape is continually modified by natural events and by harvesting activities. Most of TFL 8 is not visible to the travelling public. Small portions of the Carmi block (Block 2) can be seen from Highway 33. Likewise a small area of Boundary Creek and its tributaries in Block 1 are visible from Highway 3. In the Mirkwood Draft Visual Quality Objectives Report, 2.1% of the TFL area was classified as having landscape sensitivity. In the HLP, known scenic areas account for 1.8% of the TFL area.

Pope & Talbot's objective is to design openings to fit or blend into the natural landscape, not to restrict or eliminate harvesting within the viewscapes. Figure 7 presents Draft Visual Quality Objectives. The company will use forest landscape design techniques described in the *Visual Landscape Design Training Manual* and partial cutting systems for planning harvesting in visually sensitive areas. Compromise may also be necessary to deal with large scale forest health concerns. Recommended forest cover rules can also be relaxed when dealing with background viewscapes. Landscape sensitivity will be addressed in the forest development plan, silviculture prescriptions, and cutting permit applications to ensure that the overall scenic quality is being carefully considered.

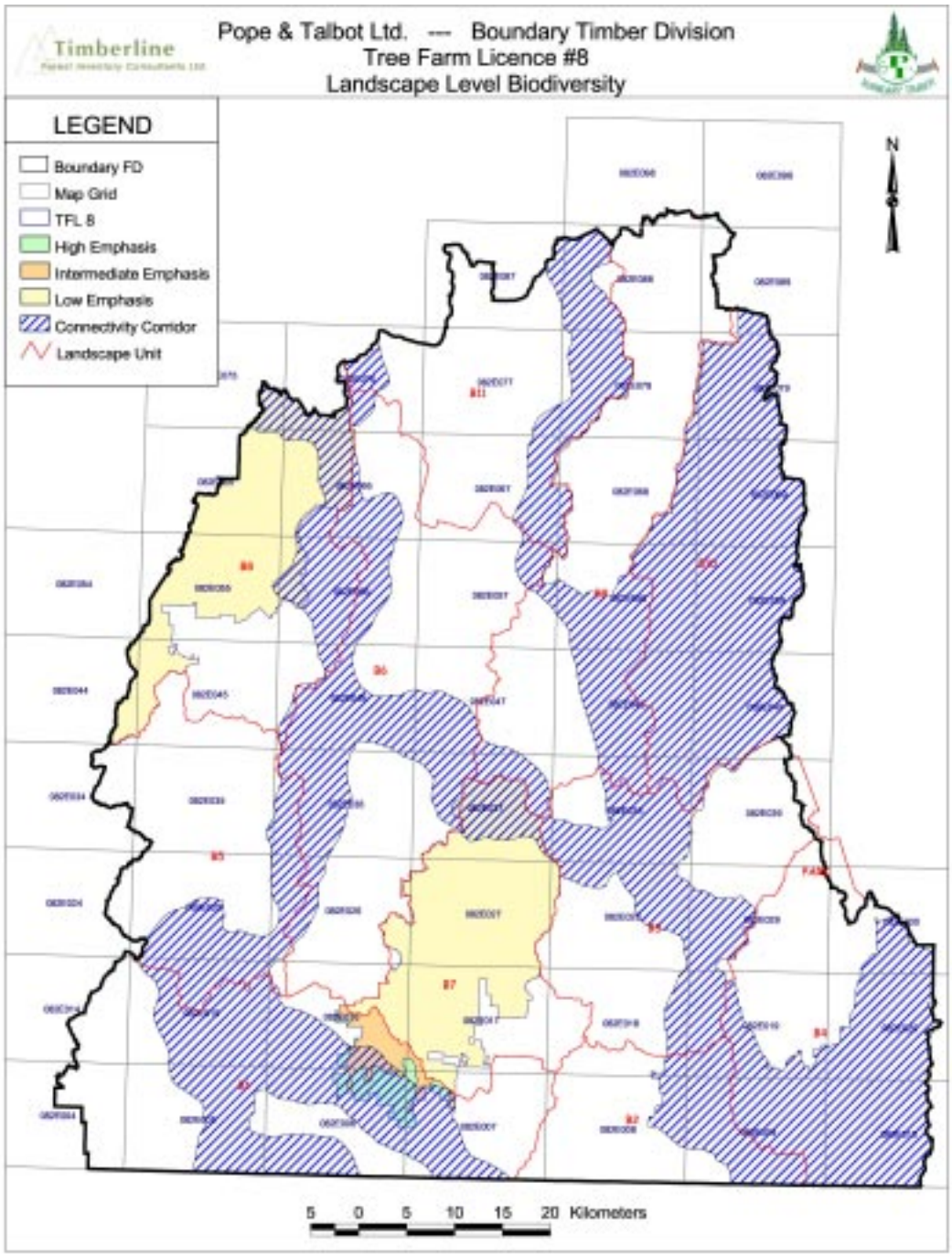

Figure 8 – Landscape Biodiversity

4.2.2 Landscape Level Biological Diversity

Following the concepts included in the *Biodiversity Guidebook*, Pope and Talbot's objective is to maintain acceptable levels of landscape level biological diversity. As is noted in the Guidebook, however, not all elements of biodiversity can or should be maintained on every hectare.

Landscape level planning and operational practices currently used on the TFL all contribute to maintaining biodiversity. This includes retention of old growth forests, provision for wildlife travel corridors, identification of riparian areas and streamside management zones and leaving wildlife trees on cutblocks.

To contribute to the conservation of biodiversity, the Kootenay/Boundary Higher Level Plan Order assigns biodiversity emphasis (Objective 1) as shown in Figure 8. The biodiversity emphasis in the plan order assigned 90.5% low, 5% intermediate, and 4.5% high, within TFL 8. These emphasis classifications determine the distribution requirements of 'old' and 'mature plus old' seral stages (Objective 2) to be applied to the landscape unit by biogeoclimatic zone. Figure 8 includes landscape units as defined by the Kootenay/Boundary Higher Level Plan.

To contribute to the conservation of biodiversity through the emulation of natural disturbance patterns and to provide for more cost-effective timber harvesting the Order established green-up and patch size distribution guidelines (Objective 4). Variation from FPC and other guidelines is documented in the Timber Supply Analysis (Appendix III).

Connectivity corridors shown on that same figure are established by the Order for purposes of regional forest ecosystem connectivity (Objective 5). It is recognized that harvesting will take place inside these. The Order provides guidance on contribution to connectivity.

Due to frequent and repeated fires in the past, very few timber stands on the licence area have developed to their ecosystem climax stage. In the absence of this fire history the forest would have a much higher proportion of Douglas-fir/ponderosa pine, spruce/balsam types. However, these forest types will now, with continuing fire protection efforts, have a better chance than under entirely "natural conditions" to develop into their climax phase. This will vary depending on the natural disturbance type (NDT). Such forest types can be identified and may be deferred from harvesting for a period of time to contribute to the old growth and mature seral stage retention requirements outlined in the *Biodiversity Guidebook*. It is the company's intention to create a variety of conditions through harvesting which promote the growth of early seral and mature forest cover types. This will depend on the silviculture system that is employed.

4.2.3 Stand Level Biological Diversity

In each cutblock, trees such as snags, culls, and wolfy veterans provide valuable habitat for birds and small mammals. Wildlife use this diversity in stand structure as places to feed, nest, perch and roost. To the extent permitted by WCB regulations some of these trees will be left standing on the cutblock. They are attractive for cavity nesting birds and raptors. Pope & Talbot has also initiated a program of creating wildlife tree stubs during logging. Selected trees are cut at three metre height. An ongoing study has indicated that these stubs are well used by birds and mammals.

The cutting permit and silviculture prescription process identifies wildlife tree patches. Stand level biodiversity attributes are, and will be, addressed within the individual cut block SP through the application of logging methods, utilization standards, site preparation, fuel management, and reforestation methods. Where feasible, and in consideration of the previously noted cut block issues, important structural attributes such as wildlife trees, coarse woody debris (CWD), tree species diversity and understory vegetation diversity will be addressed.

4.2.4 Fire Maintained Ecosystems

To restore and maintain the ecological integrity of fire-maintained ecosystems, the HLPO provides flexibility to undertake alternate treatments which will provide an ecologically appropriate mosaic of habitats (Objective 8). Pope & Talbot is an active participant in the Boundary District Fire Maintained Ecosystem Restoration (FMER) committee. There are potential opportunities for restoring ecosystems on TFL 8 through harvesting and other treatments. These will be pursued as they arise.

4.2.5 Soil Conservation

Site disturbance resulting from road construction and harvesting practices is a concern because it can result in soil compaction leading to subsequent decreases in forest productivity. For each cutblock, attention will be paid to matching the planned logging system and equipment to the season of logging and to the placement of landings to minimize the degree of site disturbance. The maximum site disturbance levels for each cutblock are given in the specific silviculture prescription. The *Forest Practices Code Soil Conservation Guidebook* will be used in planning and harvesting decisions.

After logging is completed the degree of site disturbance will be assessed, by inspection or by survey. Rehabilitation work may be needed to ensure compliance with site disturbance targets. Rehabilitation treatments cover temporary roads, backspar trails, spur roads, skid trails and landings. The recovered areas may also be planted and grass-seeded with erosion control mix.

4.2.6 Water and Riparian Resources

Water flow from the TFL is an important resource that is used by a number of downstream users. The creeks and streams all eventually drain into the Kettle River, which itself is a major tributary of the Columbia River catchment. Therefore, it is essential that the quantity, quality, and timing of water produced by the watersheds is maintained.

The company's strategy for watershed management includes carrying out appropriate development planning at a watershed level and emphasizing the use of protective practices during harvesting and road construction and silviculture activities. The importance of considering hydrological impacts of harvesting when preparing forest development plans is recognized. The MoF *Interior Watershed Assessment Procedure Guidebook (1999)* provides direction for watershed level planning. The watershed assessment procedure will be used for specific watersheds where District Manager direction is given or where appropriate.

At an operational level, measures to minimize hydrological impacts from development will be implemented in the design and placement of stream crossings, in road construction and maintenance practices, and in harvesting practices. Terrain sensitivity analysis will be carried out for areas where more information is needed to prepare a forest development plan. In situations where slope stability is in question, geotechnical surveys and soil sensitivity surveys will be completed. The findings will be used to assist in preparing the best possible road location and pattern of development. Hydrological and geotechnical specialists will also be used when conditions affecting stream flow and water production are a concern. Roads and bridges will be constructed and maintained so that the impact on water quality is kept to a minimum.

When operating in and around watercourses the following general principles apply:

- Installation of bridges and culverts requiring in-stream construction work will have the approval of the MWLAP as required and/or be in compliance with the BFD In-stream Work Windows and Measures (IWWM);
- All operations will be conducted in a manner to ensure that water courses and drainage patterns are not adversely affected;
- Roads and bridges will be constructed and maintained so that run-off and impact on water quality are minimized;
- Every effort will be made to minimize soil disturbance that leads to increased run-off and sedimentation;

- Roads no longer required will be deactivated and the natural drainage patterns restored; and
- Areas of disturbed soil that can be revegetated will be seeded with appropriate erosion control grass seed mix.

Buffers of trees and/or broadleaf shrubs around the perimeter of swamps, meadows, streams and lakeshores are maintained. The width of the reserves and buffers depends on the riparian classification and the management prescription. These areas are flagged in the field to indicate the boundaries of these machine free buffer zones prior to harvesting or site preparation activities. Conifer trees are felled away from the boundary of the feature being protected.

4.2.7 Heritage

Information on native settlement and use of the area in the vicinity of the TFL is limited. Although government records at present do not show any archaeological sites, this does not necessarily mean that such sites do not exist. Future discovery of other unknown archaeological sites is possible. If the company becomes aware of any potential sites or artifacts the Heritage Conservation Branch, Ministry of Small Business, Tourism and Culture in Victoria and the District Manager will be notified. An archaeological overview assessment for the Boundary Forest District has been completed. Pope & Talbot will carry out any follow-up archaeological impact assessment as required.

4.2.8 Recreation

Recreation use within the TFL can be considered to be relatively low. The majority of use is by local regional residents, and increasingly by people from the Okanagan valley. The more popular recreation activities include camping at Arlington Lake and Buck Lake campsites during the summer. In the fall and winter there is a lot of hunting and snowmobiling. There is also a walk-in lake (Terrace Lake) that gets occasional use.

Recreation use and timber harvesting have co-existed on the TFL in harmony for several years. Recreation use is expected to increase gradually with the general increase in regional population.

The MoF may continue to maintain the existing campsites on the TFL. No additional facilities are planned for the next five years. The company will co-operate with the MoF in managing the recreation program.

Good road access is fundamental to ensuring that the public can pursue the kinds of dispersed recreation activities they enjoy. The company will consider recreation features and activities when preparing road access, maintenance and deactivation planning. It is anticipated that as the road network continues to be

developed and expanded so will public use of the roads. The company intends to use parts of the disused Kettle Valley Railway corridor that traverses north/south through the Carmi block for access and log hauling. Any use of the old rail grade will be in co-operation with the B.C. Assets and Lands Corporation.

4.2.9 Range

Use of the range land on TFL 8 is one of the dominant and more visible non-timber resources. The range program is administered by the MoF. The MoF range officer prepares Range Use Plans (RUP) co-operatively with tenure holders, licencees and other resource agencies. A RUP has been completed for all of the range units on TFL 8. Pope & Talbot's role is to co-operate with the MoF and the range permittees in implementation of the range program. Nineteen grazing permits have been issued for a total of 3,150 animal unit months (AUM).

Updated forest development plans are referred to the MoF range officer for information and comment. Range permittees are also notified of upcoming forest development plans.

Pope & Talbot will conduct operations in a manner that does not conflict with the range improvements of the range permittees and their cattle grazing. Similarly, the permittees are expected to respect the company's legal obligation to perform basic silvicultural activities and establish free growing conifer regeneration on cutblocks harvested within the range units.

Company personnel and contractors have been instructed on the importance of protecting range improvements such as fences, cattle guards, corrals *etc*., against damage. Any damage to these improvements caused by harvesting will be repaired or remedied. It is important that the MoF inform Pope & Talbot of any planned range improvement projects in a timely manner so that conflicts can be minimized. This would include details of work planned for range enhancement and improvement including grass seeding.

The company uses the Boundary Forest District *Guidelines to Minimize Cattle Tree Conflicts (1990)* in the hope that the adverse effects of grazing on plantations will be mitigated. Damage can be minimized by improving grazing patterns and by more intensive cattle management. These guidelines will be revised as the need arises.

An abundant deer population occurs on the licence area. Because the possibility exists for competition between ungulates and cattle for forage, range management requires co-operation between MWLAP and MoF.

4.2.10 Fish and Wildlife Habitat

The cumulative effect of over 30 years of harvesting has been to alter the forest structure. It has created a broad diversity of vegetation cover and forest habitat types. A wide variety of animals and birds are thriving. Notable examples include deer, moose, elk, black bear, small mammals and furbearers, grouse and other birds. At the same time the improved access provided by the permanent road network has increased the hunting pressure and has enabled more recreational fishing on the small lakes.

Maintaining wildlife populations depends on providing suitable diversity of habitat across the forest landscape. Forest level planning and operational practices ensure that continuing forest diversity is provided. At the forest landscape level the company is co-operating with MSRM to identify and map critical wildlife habitats such as winter range.

In order to maintain populations of the various wildlife species, it is important that their habitat requirements are properly identified. This requires habitat inventory classification and identification at both the forest landscape level and at the stand level. Concepts on the management of wildlife habitat have been progressing rapidly in the past five years. The company endeavours to stay abreast of new approaches and suggested guidelines, and to implement them as appropriate.

At an operational level, wildlife habitat requirements are allowed for in development planning and in cutblock design. Specific factors to be considered for a particular cutblock are noted in the silviculture prescription. The company has also adopted several specific operating practices in order to maintain wildlife habitat:

Slash accumulations can provide habitat for small mammals such as pine marten. Scattered slash and woody debris piles may be left unburned to provide this cover. The amount of debris left intact will be decided specifically for each cutblock. The main concern is not to compromise the fire hazard. Pope & Talbot has initiated this program to enhance the habitat for pine marten.

MWLAP and the federal Department of Fisheries and Oceans are the government agencies responsible for managing the fisheries resource. The goal of these agencies is to ensure that the productive capacity of fish bearing waters is maintained. Some creeks and streams in the TFL contain resident fish populations. The company uses a number of practices to protect fish habitat. All streams and riparian areas within or adjacent to proposed cutblocks and roads will be identified and classified in accordance with the FPC. Riparian reserves and machine-free buffers will be described in silviculture prescriptions and shown on

the logging plan maps. Boundaries of reserves and buffers will be marked in the field.

Prior to commencement of logging operations, practices to maintain streambank integrity and fish habitat will be reviewed with the logging contractor. Any special protective measures required by MWLAP and noted in the silviculture prescription and logging plan will also be discussed.

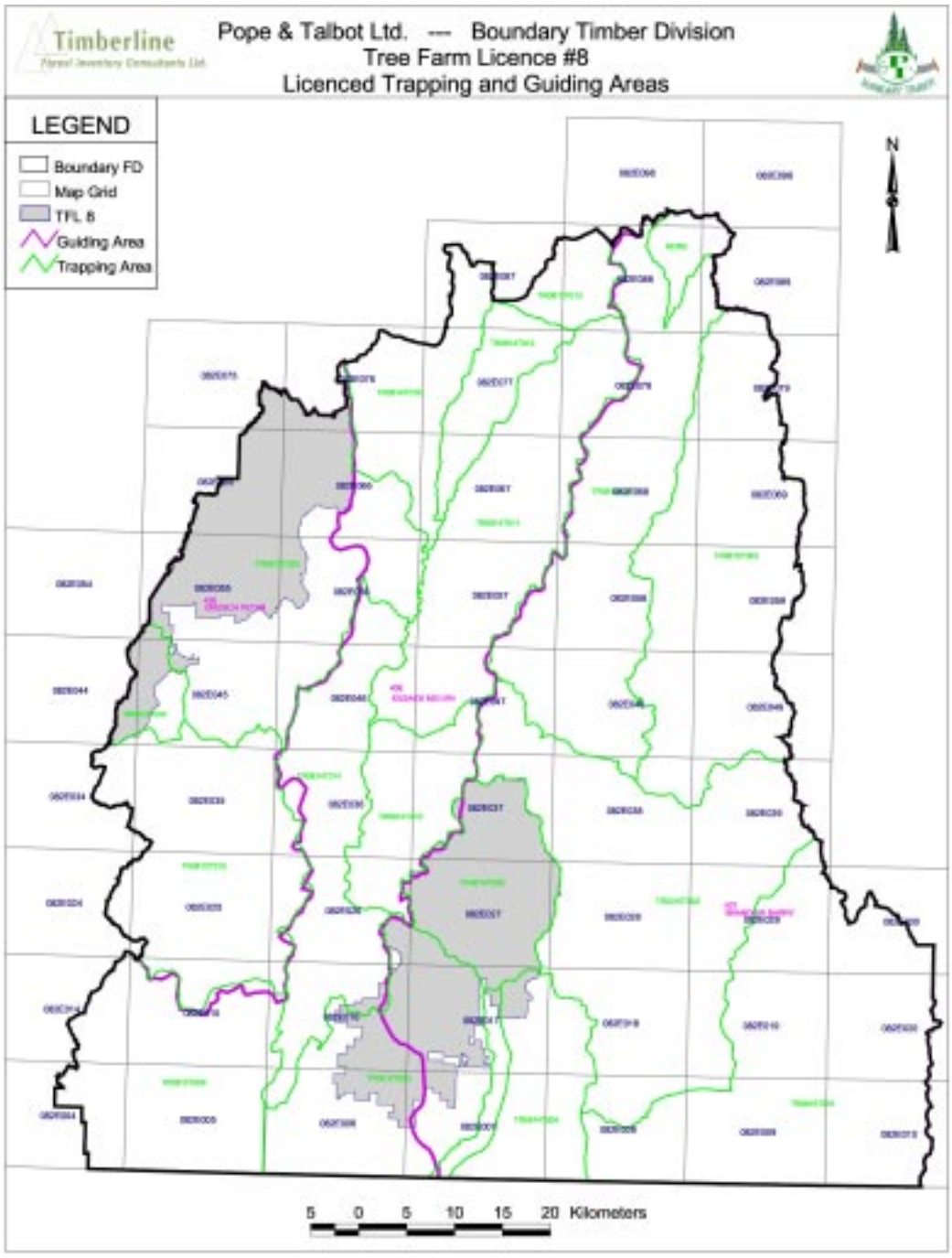

Figure 9 – Licenced Trapping and Guiding Areas

4.3 INTEGRATION OF HARVESTING ACTIVITIES WITH NON-TIMBER USES

The TFL agreement requires integration of harvesting activities with users of TFL resources other than timber. These include use by trappers, guide outfitters, range tenure holders, other licenced users, and aboriginal people claiming an aboriginal interest in the area.

Objectives:

- Continue to co-operate with the MoF in its administration of a range program for the Boundary Forest District. The present production goal for TFL 8 determined by the MoF is 3,150 animal unit months from ten range units;
- Continue to consult and co-operate with Big White Ski Development in the integration of harvesting and outdoor recreation activities that occur within TFL 8; and
- Co-operate with the MoF when they consult with first nations people regarding TFL 8.

4.3.1 Trapping and Guiding

Figure 9 presents licenced trapping and guiding areas.

4.3.2 Mining

There is presently no active mining in TFL 8 however there are numerous claims. It is assumed that some level of prospecting occurs annually. The company does not normally receive referrals or information on mineral exploration from the Ministry of Energy and Mines. It is expected that the MoF will advise the company of any mineral exploration plans that will affect the TFL.

4.3.3 Big White Ski Resort Ltd.

Big White Ski Resort Ltd. operates a ski hill development adjacent to TFL 8. Surrounding the ski hill is a controlled recreation area that takes in a portion of TFL 8. Recreational activities such as cross country skiing and snowmobiling, as well as timber harvesting, take place within this area. Pope & Talbot is committed to working with Big White to ensure that both recreation and harvesting can occur safely and with minimal impacts on each others operations.

4.4 FOREST FIRE PROTECTION

Objectives:

- Pope & Talbot will undertake to protect the licence area from damage caused by uncontrolled wildfires. The goal is to minimize damage from

fire in the productive forest and to maximize the salvage of fire-damaged timber.

4.4.1 Prevention

Fire protection awareness and preparedness will be reflected in all operational activities including planning, harvesting, road construction and silviculture. The MoF undertakes monitoring of the fire weather index and the fire danger class and advises the company of build-up during the fire season.

A reduction in fire hazard will be achieved by fuel management measures such as disposal of logging slash and debris accumulations. All burning is done according to an approved burning plan and permit. Where practical, the company will attempt to locate cut block boundaries along natural fire breaks such as roads, streams and ridges. Fuel loading on all harvested blocks and silviculturally treated blocks will be disposed of in accordance with MoF standards.

4.4.2 Preparedness

A fire preparedness plan will be submitted annually or as required. Projects and proposals to achieve the fire protection objective of discovery and control of all fires before the beginning of the next day's burning period will be listed in the preparedness plan and referenced to the accompanying map. A high standard of fire preparedness and an efficient fire fighting organization will be maintained for the duration of the fire season.

4.4.3 Suppression

Fire suppression equipment and procedures will be maintained as specified in Part 10 of the Forest Act. All fire, protection, detection and suppression operations will be conducted in accordance with the *Forest Fire Prevention and Suppression Regulation (BC Reg 169/95).* The company will take initial action to control fires within its area of operation before the suppression is taken over by the MoF.

4.4.4 Smoke Management

The company understands the need to minimize smoke emissions from slash disposal and silviculture burning. The strategy to reduce smoke production is to use spring burns whenever feasible and to replace burning with mechanical site preparation treatments as much as is practical. However, fall burning still remains as an option. Smoke management will be addressed according to the approved burning plan. All burning will comply with MWLAP open burning regulations concerning smoke dispersal and venting index.

4.5 FOREST HEALTH

Objectives:

- Protect the timber stands from damage and losses caused by insects and disease;
- Minimize volume losses by ensuring that a healthy forest structure is maintained by employing practices that minimize the activity and outbreaks of pest infestations and disease; and
- Priorize harvesting in timber stands infected with or damaged by pests or diseases.

Numerous insects and diseases occur in the forests of TFL 8. Except for isolated occurrences of spruce bark beetle and somewhat more widespread occurrences of Douglas-fir bark beetle, activity has been at an endemic level. Forest health management has focused on control of these infestations. The occurrence of root rots and dwarf mistletoe is also having an influence on harvesting and management strategies. Most of the forest health issues concern the condition of the mature forest. The regenerated forests have been vigorous and healthy and relatively free from insects and disease. Pocket infestations of commandra stem rust, root collar weevil, pine and spruce leader weevil, and needle casts have been detected. To date, this activity has been confined to small isolated patches. Voles are also an agent which inflicts damage to isolated pockets of regenerated forest.

In keeping with the forest health management objectives, a program that will protect and enhance the short and long term productivity of the TFL will be maintained. A pro-active strategy will be adopted for detection and control of pests and diseases. This program will principally deal with activities and harvesting of twilight and mature stands. The forest development plan may include an annual update on the forest health status, and detail control measures which may be required.

4.5.1 Detection

The general incidence and level of insect and disease infestation is jointly monitored each year by the MoF and P&T. Pope & Talbot participates in these surveys and uses this information to record pest occurrence specific to TFL 8. The excellent road network on the TFL means that pest activity can be readily monitored from the ground. By using results from reconnaissance flights and ground monitoring, the company is able to keep close tabs on new and potential infestations.

For root rots, the company undertakes a risk assessment matrix method as described in *Armillaria Root Disease Management Guidelines for the Nelson Forest Region,* Technical Report TR-014. Additional information on pest incidence is noted when field data are acquired for preparing silviculture prescriptions. For regenerated stands, forest health status is monitored by silviculture surveys. Pest activity is one of the attributes noted on the survey cards. Silvicultural surveys will include collecting information on the forest health status of cutblocks.

To ensure that pest and disease activity is detected early in the cycle the following strategy is provided:

- All blowdown will be reported promptly;
- Close annual monitoring will be done on areas with known disease problems and the results will be used to prepare action plans and control treatments;
- Initial reconnaissance of proposed cutblocks will include data collection on present and potential pest activity; the information will be used in preparing silviculture prescriptions and harvesting plans; and
- Surveys of infected areas will be carried out for use in preparing control plans and silviculture prescriptions; more intensive detailed ground surveys will be carried out where necessary to assess levels of known diseases such as Armillaria root rot and bark beetle.

4.5.2 Prevention and Control

It is not possible or desirable to eradicate pest and diseases from the forest. Rather, the strategy will be to try to maintain their incidence at an endemic level by preventing conditions that favour disease build-up and spread. These measures will include:

- Practising biological control techniques when available such as using trap trees for Douglas-fir bark beetle;
- Reducing inoculum potential for root rots through de-stumping and planting resistant species;
- Reforestation with mixtures of species ecologically suited to the site;
- Sanitation spacing and density control in managed stands; and
- Acquiring and maintaining knowledge of advances in pest control technology and applying new techniques as appropriate.

Control action plans will be drawn up in response to a build-up or outbreak of pest activity. Blowdown and root rot centres in mature stands serve as

infection centres for outbreaks of Douglas-fir and spruce bark beetle attack. Pope & Talbot will promote an aggressive salvage program to salvage stands damaged by insects, disease or windthrow. Priority will be given to salvage harvesting and clean-up of blowdown patches. To be effective, prompt approval of salvage cutting permit applications by the MoF is necessary. Control strategies for specific pests are described below.

Bark Beetles

During the term of MP 9 there have been significant levels of Douglas-fir and spruce bark beetle infestations. The former has been addressed with an aggressive harvesting program coupled with trap tree follow up. The fir beetle populations are still high but it is hoped that they will drop in the near future. The TFL has had one large spruce beetle infestation and this has been dealt with by aggressive harvesting. Subsequent spruce beetle probes indicate that the populations are now at a endemic level.

Mountain Pine Beetle

Between 1980 and 1994 the infestation of lodgepole pine stands by mountain pine beetle were at epidemic proportions but the populations have now subsided to endemic levels. The company is pursuing long term strategies to reduce the potential of another epidemic.

Pope & Talbot's long term objective is to develop a beetle-resistant forest by manipulation of stand structure. Mixed species stands are more resistant to mountain pine beetle infestations. Partial cutting leaving Douglas-fir and larch seed trees, and shelterwood systems are being used wherever feasible. This will increase the percentage of Douglas-fir and larch in the next forest. In juvenile spacing, Douglas-fir and larch are favoured over lodgepole pine to increase the species diversity. New plantations are generally established with mixes of lodgepole pine, spruce and/or larch seedlings. All of these strategies will help to achieve the long term beetle control objective.

By using a variety of harvesting patterns and a mosaic of age and species, the mountain pine beetle will not be such a problem in the future.

Mistletoe

Mistletoe infections are of concern in many lodgepole pine stands. Residual trees known to be mistletoe infected will be eradicated during post-logging site preparation. Western larch mistletoe and Douglas-fir mistletoe occur in scattered pockets throughout Block 1. These infections will be dealt with as they are detected.

Western Spruce Budworm

An incipient infestation of Douglas-fir by the western spruce budworm began spreading into the Boundary Forest District from the south-west during the mid 1980's and subsided in 1993. Although the infestation and defoliation levels are currently at low levels, the cyclical activity of the budworm insect is a cause for concern. The defoliation by this insect in multi-layered fir stands has been catastrophic in some areas in the Kamloops Forest Region and south of the border in Washington State. An increase in the infestation and defoliation levels by this insect has caused Pope & Talbot to re-examine the strategy of managing mixed Douglas-fir types as uneven-aged stands. To reduce the risk of problems with western spruce budworm defoliation, the company will employ shelterwood and/or group selection systems to promote a relatively even-aged multi-species stand structure as much as possible.

Root Rots

Root rots are of particular concern. *Armillaria* species is the primary problem. The *Root Disease Management Guidebook* outlines suggested strategies for managing root disease. These will be followed where practical on a site-specific basis. Better detection methods employed over the past few years have identified more root rot infections than were previously thought to exist. Effective control techniques for root rot are still being developed and tested. At present high levels of infection have been dealt with by de-stumping following logging. The company will continue to use root removal treatments when this is practical. Pope & Talbot supports more research into the applicability of this treatment in the southern Interior.

Where root rot infestations are found, even-aged silviculture systems will be promoted. Other treatments will be considered after they have been discussed and approved by the MoF District Manager. For example, Pope & Talbot intends to plant more root rot resistant species such as larch and yellow pine. Stocking levels may be reduced as appropriate in the drier subzones, i.e., IDF and MS.

4.5.3 Non-recoverable losses

Damage to timber caused by fire, wind, insects, diseases and other pests contribute to loss in harvestable volumes. This volume loss is difficult to quantify, although losses to insect and disease that normally occupy stands (endemic losses) are accounted for in empirical yield curve estimates. Depending on the type of damage and stand accessibility, losses due to catastrophic or epidemic events may be either salvageable or unsalvageable. These unsalvageable losses are not accounted for in the yield curves. Estimates of these losses are derived with guidance from the document titled "Methods to Estimate Unsalvaged

Losses for Timber Supply Reviews" (February 2000) produced by Forest Practices Branch in cooperation with Research and Timber Supply Branches. TFL 8 specific estimates were finalized in September 2001 and are documented in the Timber Supply Analysis Information Report (contained in Appendix III). These volumes will be discounted from the annual harvest levels indicated in the timber supply model.

4.6 SILVICULTURE

Objectives:

- Reforest all harvested areas promptly by maintaining a basic silviculture program in compliance with the silviculture practices regulation and silviculture prescriptions;
- Utilize Class A seed for seedling sowing requests whenever it is available; and
- Participate in the Fire Maintained Ecosystem Restoration Committee in the Boundary Forest District.

The purpose of the silviculture program is to provide effective forest renewal and to maintain and enhance forest productivity. Silviculture activities will be carried out to ensure that all areas harvested are reforested with acceptable coniferous and/or deciduous species. Regenerated stands will be tended to maintain and enhance growth rates, to improve timber quality and to provide for the environmental values.

Pope & Talbot has completed a Type 1 Incremental Silviculture Analysis for TFL 8 (Appendix IV). The report's key recommendations were:

- Use genetically improved stock;
- Emphasize full site occupancy;
- Encourage the establishment and development of mixed-species stands;
- Evaluate the potential for fertilization; and
- Look for opportunities to prune legacy stands.

The first three recommendations are being followed and the company is looking for opportunities to implement the last two points.

4.6.1 Basic Silviculture

Basic silviculture activities will be completed annually to meet the basic silviculture obligations. It will be done in accordance with the Silviculture Practices Regulation and the applicable Silviculture Prescription. Pope & Talbot

will fund all basic silviculture to be completed on cutblocks harvested after October 1987. It is assumed that Forest Renewal B.C. provide basic silviculture activity funding for cutblocks harvested prior to October 1987 and for silviculture work beyond basic obligations.

Generally, it has not been difficult to regenerate cutblocks on TFL 8 due to abundant natural seed supply. However, where natural seed supply is limited, natural regeneration is not always reliable or poses a higher risk of meeting free growing standards. For this reason, Pope & Talbot's strategy is to shorten the regeneration delay period by planting unless surveys suggest that natural regeneration is acceptable. The stand establishment strategy has the following components:

- Regenerate all logged area on average two years after logging is completed;
- Minimize regeneration delay by using aggressive site preparation and planting; regeneration delay is generally two years for planted blocks and three years for natural regeneration blocks;
- Keep the area reforested in balance with the area harvested annually; and
- Employ brushing and maximum density spacing treatments to ensure that free growing standards are met.

At present the ratio of planting to natural regeneration is about 70/30. This will change as there is more partial cutting. Species planted are predominantly lodgepole pine, western larch, Douglas-fir, and engelmann spruce, with minor amounts of subalpine fir, western red cedar, and ponderosa pine. Generally, mixed species planting will be prescribed. Improved stock from seed orchard seed will be used when it is available.

Once a cutblock has met the regeneration date, subsequent establishment and growth will be monitored by silvicultural surveys until free growing is declared. Brushing and maximum density spacing may be carried out to control brush competition and stocking levels as needed to reach free growing.

Table 4.1 shows the basic silviculture goals by activity for the five-year period 2002 – 2006.

Table 4.1 Basic Silviculture Program Goals (hectares)

Activity	2002	2003	2004	2005	2006
Regeneration	866	320	692	889	338
Free growing surveys	842	1064	655	1,282	699
Site preparation	400	350	400	400	400
Planting	941	421	400	450	450
Brushing	56	0	106	247	50
Spacing	101	197	90	89	65

4.6.2 Backlog Reforestation

There is a small area of pre-October 1987 area not sufficiently restocked sites. Typically these are patches one to two hectares in size on wetter microsites within cutblocks. Most of these areas are partially stocked but below the minimum standard due to extenuating site conditions such as high water table, riparian vegetation, cattle grazing or dry rocky hillsides. Some of these small areas may require intensive treatment to achieve full stocking. Some of the planting that is done is considered to be enhanced planting. This allows marginally stocked stands to be brought up to target stocking where it is feasible to do so.

Extensive surveys will be conducted on these sites. Sites will be evaluated to determine the most cost effective treatments, using stand yield models. On a site specific basis current stocking levels will be accepted as is. It is expected that Forest Renewal BC will provide funding for this work. Treatments may include but are not limited to excavator mounding, mechanical screefing, brushing, sanitation spacing and fill-planting. See Table 4.2.

Table 4.2 Backlog Reforestation Goals (hectares)

Activity	2001	2002	2003	2004	2005
Regeneration	91	100	120	120	0
Free growing	400	0	300	300	300
Site preparation	38	20	20	0	0
Planting	77	120	40	40	40
Brushing	80	40	50	50	50
Spacing	0	0	150	150	150
Pruning	0	0	0	0	0
Fertilizing	0	0	0	0	0

4.6.3 Silviculture Prescriptions

Silviculture prescriptions will be prepared for all proposed cutblocks and submitted to the District Manager for approval prior to commencement of harvesting. Each silviculture prescription provides a detailed classification of the ecological site series and a description of non-timber resource values. It also prescribes the silvicultural system, harvest method, reforestation treatments and stocking standards needed to produce a free-growing crop and the measures to accommodate non-timber resource values. The objectives will be consistent with the management objectives outlined in this plan.

Stocking standards used will be based on the *Establishment to Free Growing Guidebook* for the Nelson Forest Region. Target post-spacing densities on proposed juvenile spacing projects may vary by up to 800 stems/ha above the target stocking densities for the biogeoclimatic site series listed. Variances to the preferred and acceptable species and stocking levels in these guidelines may be proposed for specific cutblocks depending on stand level objectives. These reasons may include fibre production, biodiversity, root rot management and for non-timber related reasons.

An important reason for the stocking variance is to capture the potential productivity of the site as well as to enable flexibility for commercial thinning at some point. The company projects lodgepole pine stands in the future will be harvested at ages between 60 to 80 years with a 20 to 30 cm average diameter. Analysis of TIPSY yield projections show that merchantable volume increases with densities up to 1,600 stems/ha to 2,000 stems/ha. For example on an 80 year old pure lodgepole pine stand with site index 20, the maximum projected volume per ha. of 352 m^3 is achieved at a density of 1,600 stems/ha and is maintained up to 2000 stems/ha at which point it begins to decline. To meet these goals, spacing of lodgepole pine stands at ages 10-20 years needs to be at densities of about 1,600 – 2,000 stems/hectare. The TIPSY data show that merchantable volume can be maximized at these densities. These higher densities will promote faster canopy closure and enable better snow retention. Growing at these densities reduces branch diameter growth resulting in reduced knot size and log quality consistent with Pope & Talbot's goal of maximizing the Machine Stress Rated (MSR) lumber component. This strategy would apply to specific stands where the attributes suggest that such gains can be accomplished.

4.6.4 Site Preparation

Proper site preparation is key to early crop establishment. Mechanical treatments including disc trenching, mounding and hoe piling are used to create plantable spots. This approach is adopted to minimize burning. Broadcast burning however, is still an effective treatment and prescribed burning in the fall

remains as an option providing smoke management guidelines can be met. Spring broadcast burning will also be considered when it is appropriate.

Site preparation options are described in the silviculture prescription. Post-harvest assessment will be carried out to confirm the treatments.

4.6.5 Seed Supply

Sufficient cones will be collected as necessary to keep an adequate seed supply. The goal will be to maintain a five-year inventory of conifer seed based on the projected seedling requirements. Cone collection is an on-going program to assure that seed supply matches planting needs. The purpose is to have sufficient seed to bridge the characteristic periodicity in annual cone crops. Seed orchard (genetically improved) seed will be purchased as it becomes available. This will reduce the requirement for maintaining seed supplies from natural stands. At present the seed inventory is in balance with the goal and planting requirements. As of February 2001 the company's seed inventory was:

Table 4.3 Seed Inventory

Species	Number of Seedlots	Potential Seedlings (000's)	Years of Supply
Fd	6	73	1.5
L	6	4,388	10
Pl	19	11,133	11
Py	7	509	4
Bl	5	227	5
Cw	1	696	30
Sx	3	2,127	8

Given their variability, cone crops need to be monitored every year. Collections are made depending on the species needed in each seed planning zone, the size of the crop and the viability of the seed. Both blocks of the licence are covered by two seed planning zones; the Thompson Okanagan Dry (TOD) and the West Kootenay (WK). Cone collections will be made in accordance with the *Tree Cone and Tree Seed Regulation (BC Reg 284/82).*

Genetically improved seed is an important component of TFL 8's silviculture program. Using the example of lodgepole pine used in Section 4.6.3 shows how important the use of class A seed can be. If the same stand generates in TIPSY 352 m^3/ha using non-improved seed, using improved seed at a 11% gain will yield 390 m^3/ha. Gains can range between 5 and 24%. The percent gain is the percent in cubic metres over average wild stands at rotation age. One of the current limitations for some species is seed availability due to demand exceeding current

supply. Projections indicate that this issue will improve over time and also that the general trend is for increasing genetic gains in the future.

4.6.6 Silvicultural Surveys

During the stand establishment phase various types of silvicultural surveys will be conducted to monitor the status of the regeneration. The results are used to assess progress towards completing basic silvicultural obligations. The two key milestones, attainment of regeneration and free growing dates will be assessed within the prescribed time period. The survey results are also used to schedule any further silviculture treatments that are necessary to ensure that basic silviculture is achieved.

The types of surveys are linked together and often the actual survey performed may be a combination of these various surveys. The survey procedures used will conform to the MoF statistical requirements.

Treatment

Treatment surveys are performed on sites post-harvesting and post-silviculture treatment. Post-harvesting it is used to assess the number of plantable spots and the condition of the planting site. The results are used to finalize the planting prescription and confirm any site preparation option stated in the SP. When used after a silviculture treatment it is used to assess the results of the particular treatment and if necessary to prescribe any follow up necessary to ensure a free growing stand.

Survival

Survival surveys are performed two years and five years after planting. It assesses the total number of tree seedlings by species; their distribution, and achievement of regeneration delay. Brush competition is noted. Results are compared to the target stocking levels in the SP.

Regeneration

For naturally regenerated cutblocks the survey is performed three to seven years after harvesting to assess the total number and well-spaced conifer seedlings. Achievement of regeneration delay is determined. The species and distribution are also tallied and brush competition is noted. Results are compared to the target and minimum stocking levels and fill-planting is scheduled as necessary.

Brushing

Brushing surveys are performed on all cutblocks in conjunction with survival and regeneration surveys. Where necessary, the results are used to prescribe a brushing treatment.

Free Growing

This is the final survey used to assess the free growing status of a cutblock. For TFL 8 this usually occurs between five and 20 years after harvesting. The dates for the earliest and latest possible assessment survey are stated in each silviculture prescription. If results indicate that a cutblock meets the free growing standard and no further basic silviculture treatment is necessary, it is reported to the MoF that year. If the cutblock is not free growing, further treatment may be scheduled.

Pre-stand Tending

This survey is carried out on candidate areas for juvenile spacing, pruning or fertilizing. Stand parameters such as species, average diameter, height and stocking levels are used in determining the stand tending prescription.

4.6.7 Brushing

Controlling the growth and competition of herbaceous and woody vegetation in plantations is sometimes needed to ensure that the conifer seedlings become established and are growing free from competition. The goal of brush treatment is to ensure that free growing stocking standards are met. The strategy for vegetation management emphasizes early identification of possible brush competition and the timely application of control treatments needed. This will start at the reforestation planning stage when silviculture prescriptions will identify potential brush competition. The main competitive brush species are alder, willow, aspen and rhododendron.

Planting prescriptions for moist, rich sites will schedule planting with large sturdy stock types as soon as possible after site preparation is completed. To maintain the vigour of a plantation, timing of brushing treatment is critical. Treatments will be designed to reduce brush competition temporarily. It is recognized that vegetation complexes also provide preferred habitat and browse for wildlife. Shrub species such as false box, red osier dogwood, willow, huckleberry and aspen will be left untreated whenever free growing standards will not be compromised.

To date most brushing on TFL 8 has been by manual methods. Wherever economically practical, manual control techniques will continue to be used. Herbicide treatments will be applied when it is the most effective treatment. Pesticide use plan applications will be submitted to MWLAP in accordance with the protocol required. For the most part herbicide treatments are likely to be hack and squirt treatment of dense aspen clumps.

4.6.8 Basic Spacing

Regenerated stands whose stocking levels exceed the maximum density guideline of 10,000 countable stems/ha will be candidates for spacing treatments before the end of free growing assessment period. It is unlikely that these treatments will be required during the next five years, as this only applies to stands logged and regenerated after 1987. Silvicultural surveys will be used to identify blocks needing spacing. Treatment regimes will consider spacing densities of 600 to 800 stems/ha above target stocking standards densities. This regime will not preclude a commercial thinning option in the future. The rationale for increased spacing densities is provided in section 4.6.3. To increase the species mixture in regenerated lodgepole pine stands, Douglas-fir, larch, spruce and cedar receive priority selection when spacing and as dictated by the microsite.

4.6.9 Incremental Silviculture

Incremental silviculture refers to stand level treatments other than those defined as basic silviculture. These are not required by the *Silviculture Practices Regulation* and are optional activities that a licencee may elect to do. Usually incremental silviculture treatments are intended to increase the quality and value of a stand by the time of final harvest and/or provide stands with a diameter distribution suitable for commercial thinning. Potential treatments on TFL 8 may include juvenile spacing, pruning, fertilization and wildlife habitat enhancement. The underlying rationale for an incremental silviculture program is to improve the future yield from the regenerated stands and in some cases, provide stands with a diameter distribution suitable for commercial thinning.

The area of candidate stands suitable for these kinds of treatment varies. Specific treatments to increase yield would target dense naturally regenerated lodgepole pine stands, with selective thinning to favour Douglas-fir, larch and spruce in mixed stands and thinning of all-age fir/larch types. Stand management prescriptions will be prepared for all proposed treatments. Pope & Talbot will continue to aggressively pursue funding for intensive silviculture projects. Further studies may be undertaken to quantify the growth and productivity benefits of an incremental program for the TFL.

4.6.10 Silviculture Systems

A silvicultural system describes the cycle of activities by which a timber stand is tended, harvested and reforested over time. There are many different silvicultural systems depending on the management objectives, the age classes of the forest and the regeneration method to be used. The system chosen depends on consideration of the stand structure, forest resource values present, previous cutting pattern, costs and the forest management objectives.

The mixed species composition and the age class distribution inherent in the forest of TFL 8 provides some options when deciding on the silviculture system to use for a specific stand. Both even-aged and uneven-aged systems have been used over the past 50 years. Silvicultural systems most suitable for use in the TFL 8 are listed in the following table.

Table 4.4 Silvicultural Systems

Stand Type	Even-Aged Management			Un-even Aged Management	
	Clearcut	Seed Tree	Shelterwood	Group Selection	Single Tree Selection
Pine	√	–	–	–	–
Pine/Fir	√	√	√	√	√
Fir/Larch/Pine	√	√	√	√	√
Spruce/Balsam	√	–	–	–	–
Pine/Spruce/Balsam	√	–	–	√	–

The type group distribution is approximately 58% fir/larch/pine, 29% pine and 12% spruce/balsam. Pope & Talbot's strategy is to use a combination of both even-aged and uneven-aged management. The intent is to cause a shift in the forest structure to a mosaic of multi-species, multi-storey stands. This will be done by the use of shelterwood and group selection systems as much as possible. These systems are most suitable in mixed fir/larch stands. Selections systems can also be used in wildlife habitat areas, visually sensitive areas and for mountain pine beetle control. A more conventional approach of even-aged management with single species stands such as Douglas-fir or lodgepole pine carries a higher risk due to the susceptibility to spruce budworm, root rots and bark beetle.

4.7 TRANSPORTATION NETWORK

Objectives:

- Build and maintain a network of roads for the efficient extraction of timber resources;
- Maintain the road network to a standard that is efficient and safe to use and has minimum environmental impact; and
- Continue to develop the network of roads on TFL 8 emphasizing safety and efficient harvest of timber.

The main road network on the TFL has been developed progressively during the past 30 years. The existing network totals approximately 1,600 kilometres of roads consisting of highways (12 km.), secondary roads (181 km.), logging roads

(911 km.), and trails (514 km.), all numbers are approximate. This network provides main road access to all the major drainages of the TFL.

Roads are used by industrial traffic and by the public.

4.7.1 Road and Bridge Construction

No new main roads are planned for this planning period. Bridges, secondary roads, and spurs required to access new cutblocks will be shown in the forest development plan and cutting permit applications. Design and construction standards for new roads will utilize the *Forest Road Engineering Guidebook (September, 1995).*

4.7.2 Maintenance and Deactivation

Maintaining the transportation system is expensive but essential to permit the safe operation of logging trucks and light industrial traffic as well as to provide access to the public. A regular road maintenance schedule is kept. The frequency for grading the running surface is dependent on the usage, trafficability and sensitivity. The MoF makes scheduled bridge inspections every two years on these roads. Maintenance activities will include all bridges installed on roads administered by the MoF but are not always forest service roads (F.S.R.'s) :

- *Access, maintenance and deactivation plans:* These will be updated annually and included with the forest development plan submission. Road deactivation proposals will be reviewed with the MoF and as needed with MWLAP. Deactivation prescriptions are prepared specifically for each road section or cutting permit where necessary.
- *Operational maintenance:* Regular and periodic maintenance of all active road systems will be carried out. Active main and secondary roads are maintained to a hauling standard. Secondary and spur roads are maintained for pick-up access after hauling has been completed.

Maintenance includes grading road surfaces, clearing ditches and cleaning and replacing culverts to ensure adequate water flow, inspecting and maintaining bridge crossings, removing slide and slough material, brushing and stabilizing road banks and grass seeding, snow plowing and sanding, spot gravelling, sign maintenance, dust control, minor flood and storm damage.

Deactivation includes water-barring, cross-ditching, removing culverts, ripping landings and grass seeding. Bridges deemed to be unsafe will be removed. In some cases these deactivated roads will become passable by four-wheel drive access only.

4.7.3 Access Management

Pope & Talbot is aware that other resource users and the public use the road system. The extensive road network with numerous loop roads throughout both the Boundary and Trapping/Carmi blocks provide opportunities for a broad spectrum of recreational activities. There are in excess of 50 points of entry onto the road network. Access management strategies are included in the forest development plan.

The company has an open-road policy that allows unrestricted public access regardless of the status of any road. The public may use the logging roads at their own risk and are encouraged to avoid roads actively being used by logging trucks or to limit their use during working hours. However, there are some circumstances where access restrictions or road closures will apply, particularly during periods of high fire hazard. It is the responsibility of the MoF to notify the public of a road closure or general forest closure. Usually this is done by announcements on the local radio and in the newspaper.

No conflicts have arisen with the public use of the roads. However, some people, notably ranchers and recreationists, have commented on the number of roads that have been deactivated in situations where it has prevented access to their favourite spots.

5.0 CONSULTATION WITH OTHER RESOURCE USERS

Integration of harvesting activities with non-timber users is discussed in Section 4.3. Other resource users also have the opportunity to participate in public review processes, which are discussed in Section 9. The major opportunity for consultation with other resource users is through the development planning process (Section 9.1).

6.0 IMPACT SUMMARY OF MP IMPLEMENTATION

The timber supply analysis for MP No. 10 identifies a real and large opportunity for increased harvest levels on the TFL and economic benefits to the Province and the Boundary region. A conservative approach to balancing risk associated with changed assumptions indicates an immediate 16% increase in allowable cut is possible.

6.1 CURRENT AND PROJECTED USES OF WOOD SUPPLY

Sawmills in the Boundary region make a significant contribution to the local economy. There are two random dimension sawmills owned by Pope & Talbot while Canpar Industries Ltd. operates a fibre board plant at Grand Forks. There are also approximately 12 small independent sawmills licenced under the MoF SBFEP Category II program in the Boundary Forest District.

Logs harvested from TFL 8 supply the company's sawmills at Midway and Grand Forks. The following is a brief description of these operations and the logs supplied from both Pope & Talbot's TFL 8 and Forest Licence 18969.

6.1.1 Sawmills

Historically, Pope & Talbot has operated two sawmills, one located at Grand Forks and one at Midway. The Grand Forks mill operates on one shift while the Midway mill runs on two shifts per day. Both sawmills produce kiln dried, random length dimension lumber for the North American market. Approximately 90 percent of the lumber production is sold in the United States, 10 percent in Canada. The lumber by-products chips, sawdust, chip fines, planer shavings, hog fuel (bark and wood residue), are all sold to other manufacturing facilities in the region. This means that there is almost complete utilization of the logs processed by the sawmills. Input capacity based on one and two-shifts respectively is; Grand Forks 306,000 m^3/year, Midway 550,000 m^3/year.

The facilities at both sawmills are similar. Each sawmill achieves high lumber recovery by processing the logs through either of two log lines; a canter bandsaw for small and medium sized logs and a band headsaw for large diameter and irregular sized logs. Sizing and trimming of the rough lumber is done by computerized edger-optimisers and trimmers. Stacking by length and dimension prior to kiln drying is all done by automated computer-controlled stackers. After kiln-drying the lumber is processed through a planer, visually graded and stress-rated, then stamped and wrapped ready for market. The Midway and Grand Forks sawmills both have a continuous lumber tester unit which produces MSR lumber thereby optimising lumber grade recovery.

6.1.2 Products

Lumber: Each sawmill cuts lodgepole pine, spruce, balsam, Douglas-fir and larch. The lumber is random dimension, 1 x 4" through 2 x 12" in lengths of 6 to 24 feet. The Grand Forks mill also produces some timbers for overseas markets. The lumber grades produced are presented in Table 4.5.

Table 4.5 Lumber Grades

No. 1, 2, 3 lumber	general construction
Economy	temporary construction
MSR	used in truss manufacture
Clear and shop	mouldings, door and window stock

Chips: By-product wood chips are sold to Celgar Pulp Co. at Castlegar and Harmac in Nanaimo. Any surplus wood chips are sold to pulp mills in Washington State.

Planer shavings: Planer shavings, sawdust, and chip fines are sold to Canpar Industries Ltd., Grand Forks, as the raw material for manufacture into particleboard.

Hog fuel: Bark, chip rejects are sold as a fuel source to the Washington Water and Power electricity co-generation plant at Kettle Falls, Washington.

Production statistics for each sawmill are presented in Table 4.6.

Table 4.6 Sawmill Production Statistics

	Grand Forks	**Midway**	**TFL 8 Contribution**
Input volume	306,000 m^3/year	555,000 m^3/year	137,750m3/year
Output volume			
Dimension lumber	85 million fbm	160 million fbm	39 million fbm
By-product chips	48,000 BDU	81,000 BDU	21,000 BDU
Hog fuel	27,000 BDU	46,000 BDU	12,000 BDU
Planer shavings	15,000 BDU	22,000 BDU	6,000 BDU
Employees			
Woodlands	0	65	10
Sawmill	140	200	55
Staff	21	37	9

fbm – foot board measure
BDU – bone dry units

6.1.3 Log Supply

The log supply for both sawmills comes from Pope & Talbot's crown tenures and purchases from independent loggers and private owners. Some large diameter

spruce logs are traded with the company's Arrow Lakes division in return for small pine and spruce logs. Table 4.7 presents log demand and supply.

Table 4.7 Log Demand and Supply

Log demand	
Grand Forks	306,000
Midway	550,000
	856,000 m^3
Log supply	
Forest Licence	434,549
Tree Farm Licence 8	137,750 *
	572,299 m^3
Additional purchase volume required to supply mills	<283,701 m^3>

- The AAC of TFL 8 is currently 144,720 m^3 of which 6,970 m^3 has been allocated to the MoF small business program and 137,750 m^3 to Pope & Talbot. The recommended AAC for MP No. 10 is 163,535 m^3.

6.1.4 Projected Trends

Pope & Talbot's sawmills utilize modern technology to produce high quality lumber and as a result, are very competitive. This approach will continue as long as there is a secure and adequate log supply to justify continued capital investment. The Grand Forks sawmill has been operating on a one shift basis since 1995. The company continues to look for ways to improve the viability of this mill.

7.0 SIMILARITIES AND DIFFERENCES BETWEEN PLANS

Management Plan No. 10 has been formatted as per the replacement TFL agreement (March 1, 2000) and the *Guide for Tree Farm Licence Management Plans (20-month) and Calendar Year Reports* (March 2001).

Although management objectives remain largely unchanged, the plan reflects changes associated with implementation of the Forest Practices Code and the recently released Kootenay/Boundary Higher Level Plan Order.

8.0 SCHEDULE B PRORATE

No proration is required as there is no Schedule A land on the TFL.

9.0 PUBLIC CONSULTATION

Pope & Talbot recognizes that local communities have a strong interest in maintaining a viable forest industry. The company is committed to community involvement in making recommendations on land use decisions and other resource allocation decisions that affect them.

With regard to public consultation it is the intention of Pope and Talbot to:

- Provide for public consultation in all levels of TFL planning;
- Increase public awareness and knowledge of forest management activities;
- Participate in the preparation of local resource use plans as required; and
- Provide the public with opportunities to comment on management plans, forest development plans and operational activities.

Community interest in the conduct of operations on the TFL has remained at a relatively low level during the past five years. Some concern has been with road deactivation and harvesting as they impact on access for recreation and wildlife.

There is also a strong opinion within the communities of Grand Forks, Midway and the surrounding region that the economic benefits of local forestry operations should be accrued for the regional economy.

9.1 FOREST DEVELOPMENT PLAN

Public involvement can be continuous across all levels of the TFL planning hierarchy. The public will have an opportunity to participate during any of three phases: initial planning, review, and monitoring. The public is notified when a plan is available for public viewing by advertisements in the local newspaper. The main focus for public review will be on the forest development plan which is advertised prior to submission to the MoF.

Pope & Talbot keeps contact with those organizations and individuals with whom it has had consultations. In meeting with these various groups the purpose is to build a better awareness of dealing with the issues raised. The company has an “open-door policy” with respect to meeting with the public to discuss its activities. Ad hoc meetings will be held on request to discuss issues that arise from time to time. Plans available for public viewing will be made available at the company’s Grand Forks and Midway offices as well as at the MoF Boundary Forest District office in Grand Forks.

9.2 MANAGEMENT PLAN

As directed by the Regional Manager (December 29, 2000), a draft version of MP No. 10, as well as MP No 9 including resource inventories, was made available for public viewing and comment in the Pope and Talbot offices in Grand Forks and Midway for a period of sixty days following advertising in local newspapers. Advertising took place over two consecutive weeks. The advertisement as submitted to the Boundary Creek Times Mountaineer and the Gazette (Grand Forks) was as illustrated below.

Notice of Public Review

Tree Farm License #8
Draft Management Plan #10
Boundary Forest District

Notice is hereby given that Pope and Talbot Ltd. has recently submitted a DRAFT version of Management Plan #10 for Tree Farm License #8 to the Ministry of Forests. The Plan outlines the goals, objectives and strategies that will be followed in managing TFL #8. In addition, it describes the management activities that will take place over the next five years for both timber and non-timber forest resources and provides a general indication where harvesting activities are proposed over the next twenty years.

A copy of the Plan is available for review by First Nations, resource agencies, other licensed resource users, local governments and the general public prior to the ministry of Forests consideration of approval. Pope and Talbot Ltd. representatives will be available to discuss the proposed plan and receive comments.

Interested parties are invited to review the proposed plan at our Boundary Timber Division office in Midway, BC or the Pope and Talbot Ltd. corporate office in Grand Forks, BC during normal business hours from July 3, 2001 to September 3, 2001. Parties interested in viewing the plan are advised to arrange viewing times in advance, to ensure company representatives will be available to respond to questions or concerns. The DRAFT Plan may be revised as a result of written comments received by September 3, 2001.

For further information, please contact:

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The public review process yielded no input.

The Management Plan is the only component of the management planning process that is subject to public participation.

10.0 CONTRACTOR CLAUSE

Pope & Talbot is obligated to harvest 50% of the Schedule B AAC volume by independent logging contractors. Compliance with the *Timber Harvesting Contracts and Sub-contracts Regulation (BC Reg 258/91)* is required. Actual contract performance is reported annually to the MoF.

11.0 REVISIONS

Management Plan 10 is for the period 2002-2006. During this planning period should any events occur, or government resource policy initiatives arise that effect the strategies outlined in this plan, revisions may be prepared and submitted for approval. The provincial Chief Forester is also enabled to request amendments or revisions to a management plan in situations that arise that render the existing plan inadequate.

12.0 ANNUAL REPORT

An annual report will be submitted to the Regional Manager upon his request. It will contain reporting information regarding Licence performance and other related information.