

Section One – General Introduction to Forest Licence Management

This section provides a general introduction to the management of forest licences in British Columbia and the licensees' obligations and responsibilities. See Appendix 1 for a list of useful definitions related to forest licence management.

A. Acts and Regulations

There are three main pieces of legislation that govern forest harvesting in British Columbia. Several other acts and regulations affect harvesting to some degree.

1. The *Forest Act* (FA) and regulations deal primarily with the amount of timber that can be harvested, who can do that harvesting, and the value of the harvested timber.
2. The *Forest and Range Practices Act* (FRPA) and regulations deal primarily with the actual harvesting activities, including the necessary planning for roads and cutblocks, silvicultural requirements, and environmental standards that must be met. This Act also sets out penalties for failure to perform according to its standards.
3. The *Forest Practices Code of British Columbia Act* (FPC) and regulations. Although FRPA has largely replaced the FPC, some aspects of the FPC, continue to apply (i.e., those concerning strategic planning and fire control).

Several other non-timber acts and regulations also affect timber harvesting, for example:

- *Fisheries Act*
- *Water Act*
- *Wildlife Act*
- Others

B. Finding Timber

How Much Forest Is There?

The province of British Columbia covers 95 million hectares (ha). Of this area, about 60 million ha are forested, of which 57 million ha are publicly owned. About 25 million ha are available for harvesting. The rest of the province's forest land is in parks or reserves, or is unmerchantable timber.

Determining the Allowable Annual Cut

British Columbia is divided into two types of large forest management units:

1. [Timber Supply Area](#) (TSA) and
2. Tree Farm Licence (TFL).

There are 37 TSAs and 34 TFLs in the province.

For every TFL and TSA, the Chief Forester determines the amount of timber that can be harvested each year (m³/yr).

The Chief Forester's determination considers such things as:

- the portion of the TSA or TFL on which timber can be harvested (e.g., what areas are in parks, or will be managed for wildlife),
- the rate at which the forest is growing,
- the risk of disease, and
- the effect of the rate of harvest on communities in the area and on the province as a whole.

Changes resulting from forest fires, disease outbreaks, and new land use plans may affect forest use and timber supply. Therefore, the AACs for each TFL and TSA are generally re-calculated every 5 years to make sure these changes are noted and properly accounted for.

The AACs for TFLs and TSAs will vary in size. For example, the Prince George TSA has an AAC of 12 250 000 m³; whereas the AAC for the Cranberry TSA is 110 000 m³.

C. The Right to Harvest

Forms of Harvesting Rights

Rights to harvest timber are granted through numerous types of licences and permits. Most common types are:

1. TFL
2. [Forest Licence](#) (FL).
3. Forest Licence to Cut (FLTC)

Tree Farm Licences apply to a specific land area and are commonly referred to as "area-based tenures." These licences have a term of 25 years and are replaceable. AAC determination is necessary to determine how much timber should be harvested from the area covered by the TFL.

Forest Licences apply to a specific volume of timber that can be harvested within one or more TSAs. These licences are often referred to as "volume-based tenures." The AAC for the TSA is determined by the Chief Forester,

and then the volume available for harvest is allocated to timber tenures by the Ministry of Forests and Range.

Forest Licences may be replaceable or non-replaceable. Replaceable licences have generally been granted to people or companies that have built a mill as a condition for getting the licence. Non-replaceable forest licences (NRFL) have generally been granted where the Ministry of Forests and Range wants either to manage a specific timber problem, (e.g., harvesting beetle-killed wood), or to provide other harvesting opportunities where timber has become available for allocation.

A third type of licence, not nearly as common, is the Forestry Licence to Cut (FLTC). This licence tends to be a small volume based tenure, often applied for salvage operations. It can be issued by the Regional Executive Director, District Manager or Timber Sales Manager.

Criteria for Granting a Forest Licence

The Ministry of Forests and Range offers a licence agreement through a competitive process. A key feature is a bonus bid or bonus offer. The Ministry of Forests and Range uses predetermined criteria to determine the successful applicant. It is important that the applicant carefully reviews and understands the obligations and liabilities of managing a Forest Licence before entering into an agreement.

D. Rents and Security

Forest licensees must pay an annual rent to the Province. The present rate is \$0.37/m³ of AAC. Of this amount, \$0.25/m³ is for general rent and \$0.12/m³ is for fire preparedness.

Non-replaceable licence holders are required to provide a silviculture deposit in case silvicultural obligations are not met. The amount of the security necessary is determined by the District Manager on a licence-by-licence basis.

Approved forms of security are outlined below in section I.

E. 'Right to Harvest' to 'Free to Grow'

Although a licence may grant a right to harvest, a great many requirements must be met before harvesting can actually occur. A Forest Stewardship Plan containing [forest development units](#) must be prepared and approved. Site plans for cutblocks and roads inside the forest development units must be prepared; these plans are not submitted for approval, but must be made available upon request. Applications for [cutting permits](#), road permits, and road use permits must be submitted. It is only when a cutting permit or road permit has been issued that harvesting can begin on a cutblock, or road right-of-way.

The Forest Stewardship Plan

The Forest Stewardship Plan (FSP) is the primary harvesting management plan. The FSP has a term of 5 years. The plan must have maps that show the boundaries of forest development units (FDUs) and must specify results or propose strategies in relation to objectives set by government. An FDU is an area where development may take place during the term of the plan. Cutblocks and roads are located inside the FDU.

There are 11 objectives set by government, which include:

- soils,
- visual quality,
- timber,
- forage and associated plant communities,
- water,
- fish,
- wildlife,
- biodiversity,
- recreation resources,
- cultural heritage resources, and,
- resource features.

These objectives, and factors relating to them, are prescribed in the Forest Planning and Practices Regulation (FPPR). Government may also establish other objectives for site-specific areas (e.g., wildlife habitat areas and visually sensitive areas).

Under normal circumstances, the FSP must be available for review and comment for 60 days. The licensee is expected to directly contact people who might be affected by the proposed harvesting operations. The licensee must consider comments from all stakeholders when preparing the FSP; such as;

- First Nations,
- public,
- trappers/ guides,
- range holders, and
- other government tenure holders.

The FSP must be approved by the Minister of Forests and Range before any operations proposed by it can be carried out. The Minister must approve the FSP if:

- it complies with the regulated requirements,
- its results and strategies are consistent with government objectives, and
- it is consistent with the harvesting rights for which it is prepared.

Site Plans

A site plan (SP) for cutblocks and roads must be prepared before harvesting or road construction begins. The SP must identify the approximate location of the cutblock or the road, and show how the results or strategies of the FSP apply to the site. Site plans address such things as cutblock location and design, reforestation plans, and road location and design plans. An SP must be made available to the public if requested, but it does not have to be submitted to the Minister for approval.

Cutting Permits

A cutting permit (CP) formally authorizes the harvesting of timber. [Appraisal data](#) may accompany the application for a CP. This data includes information about the quality and quantity of timber and the expected development strategies and harvesting methods. Such data is used to determine the [stumpage rate](#) for the timber. The stumpage rate is the price that government charges for the timber (in \$/m³). An extremely important part of collecting the necessary appraisal information is the cruise. Timber cruising involves gathering information on timber volume and quality in a statistically proper way. Other information (e.g., soil conditions and riparian classifications) that might prove valuable for the planning of harvesting and silviculture operations may be collected during the cruise.

Road Permits

Harvesting a road right of way and building an access road are usually necessary to carry out timber harvesting. The authority to do this comes with the issuance of a road permit (RP). Applications for RPs are usually made along with the cutting permit application. Appraisal data is also required.

Road Use Permits

A road use permit (RUP) allows the licensee to use a road under another licensee's road permit. An RUP is often required in areas where several licensees are operating in the same general vicinity.

Reforestation and Free to Grow

If timber is harvested from an area, the licensee that is responsible for the harvest is also responsible for establishing a new forest on the area. This responsibility includes planting seedlings and undertaking stand-tending activities. Stand tending prevents competing plants from crowding out or killing the seedlings until the new stand has reached [free to grow](#) status. "Free to grow" means that the stand is healthy and its further growth to maturity will not be affected by competition from other plants or trees. Once

the stand has been declared [free growing](#) (by meeting the [stocking standards](#) in the SP) by the licensee, the licensee obligation for the cutblock ends.

To reach free growing usually takes 10 years or more. This means that the licensee will continue to carry a significant liability for some years beyond the term of the licence.

Road Deactivation

The licensee may be required to deactivate roads after harvesting. Roads are usually deactivated to reduce the possibility of environmental damage in the future.

Licensees will continue to be liable for road maintenance until relieved of their obligations by the District Manager. This obligation may continue beyond the term of the forest licence.

Fire Protection

Licensees must have a certain amount of equipment and training for forest firefighting, and must participate in fighting fires that break out in the licensee's area of operations.

F. Policy Structure of the Forest and Range Practices Act

The Forest and Range Practices Act and Regulations is the new regulatory structure for forest practices (enacted on January 31, 2004), replacing much of the Forest Practices Code (enacted in 1995).

“Results-based” Legislation, Due Diligence, and Professional Reliance

The Forest and Range Practices Act is considered “results-based” legislation. This means that the desired result or objective is defined in the legislation, but no legislated direction is given to the licensee on how to achieve the result. It is up to the licensee to determine how they will achieve the result.

Two concepts are particularly important in how FRPA functions. These are:

1. due diligence, and
2. professional reliance.

The legal concept of due diligence refers to the level of judgement, care, and activity that a person would reasonably be expected to achieve under particular circumstances. Part of being duly diligent is to be sure that competent people are responsible for carrying out forest management responsibilities. An important component of ensuring competence is professional reliance—that is, relying on registered professionals to apply good judgement and act in the interests of the environment and public.

Registered professionals include:

- Professional Agrologists (PAg),
- Professional Engineers (PEng) and Professional Geoscientists (PGeo),
- Registered Professional Biologists (RPBio),
- Registered Professional Foresters (RPF) and,
- Registered Forest Technologists (RFT).

Registered professionals belong to professional regulatory bodies, for example, RPF's belong to the Association of British Columbia Forest Professionals. These regulatory bodies establish standards of conduct and practice and can discipline their members. This is often referred to as professional accountability.

Compliance and Enforcement

The Forest and Range Practices Act has an extensive range of penalties for breaches of the Act and regulations. Penalties range from \$2000 to \$1 000 000. Different contraventions have different maximum amounts. In some circumstances, a person contravening FRPA may also be sentenced to a jail term.

G. Relationships with Government Agencies

Managing a forest licence includes working with a number of government agencies as plans are developed and operational areas are defined. While the B.C. Ministry of Forests and Range is the primary decision maker and the agency the licensee works with the most, the B.C. Ministry of Environment has a significant influence on the location and timing of harvesting operations through their responsibilities for water and wildlife management. In addition, because of their responsibility for the salmon fishery, Fisheries and Oceans Canada may have considerable influence on forest operations around certain streams and rivers. Both the Ministry of Environment and Fisheries and Oceans Canada have enforcement authority outside that of the Forest and Range Practices Act.

The Ministry of Forests and Range

The Ministry of Forests and Range operates at three administrative levels:

1. Forest District,
2. Forest Region, and
3. Headquarters.

The Forest District is the most local level and is where most operational decisions are made. The District Manager can make a number of decisions on behalf of the Minister of Forests and Range, including those involved

with the approval of FSPs and administrative penalty decisions.

The majority of the relationship between the licensee and the Ministry takes place at the Forest District level.

The Forest Region takes in a number of forest districts. The region is responsible for the overall performance of the forest districts and provides a number of specialized services,(e.g., research and quality assurance) to the districts and the general public. Some aspects of forest licence management are a regional responsibility, including the setting of stumpage rates.

Headquarters includes the Minister and the senior management of the Ministry. Headquarters is responsible for the overall performance of the Ministry, including the establishment of policy direction and the development of legislation. Headquarters also provides province-wide specialty services, including specialized research and analysis. The Minister and Chief Forester also have specific responsibility for a number of forest management decisions.

There are three forest regions in the province:

1. Coast Forest Region (8 forest districts; regional office in Nanaimo),
2. Northern Interior Forest Region (9 forest districts; regional office in Prince George), and
3. Southern Interior Forest Region (12 forest districts; regional office in Kamloops).

See Appendix 2 for a list of helpful government links and contact numbers.

H. Cost Ranges for Forest Licence Management Activities

The cost ranges for a specific licence or individual cutblock may vary considerably, as shown below for the Northern Interior. Costs may vary significantly in the Southern Interior and the Coast.

<i>100 000 m³ AAC; 500 000 m³ over 5-year term of licence</i>		
Rents and Deposits ^a		
Deposit	\$0.15/m ³	\$15 000 (one time)
Rent	\$0.37/m ³	\$37 000 (annually)
Year one		\$52 000
Year two onward		\$37 000
Operations – General Overhead and Planning		
General admin overhead	\$3.50/m ³	
FSP development	\$0.50–1/m ³	
Cruising, layout	\$5/m ³	
<i>Subtotal</i>	<i>\$9.50/m³</i>	
New Road Construction	\$unknown	
Operations – Harvesting		
Ground skidding	\$15–30/m ³	
Cable yarding	\$25–45/m ³	
Skyline	\$25–50/m ³	
Helicopter	\$60–80/m ³	
<i>Subtotal</i>	<i>\$15–80/m³</i>	
Operations – Trucking		
<i>Subtotal</i>	<i>\$5–25/m³</i>	
Operations – Silviculture		
Basic reforestation	\$800/ha	
Site preparation	\$250–500/ha	
Vegetation management	\$250–1250/ha	
Surveys	\$15–45/ha	
<i>Subtotal</i>	<i>\$815–2595/ha</i>	
At 400 m ³ /ha, costs per m ³ =	\$2.05–6.50/m ³	
<i>Subtotal</i>	<i>\$2.05–6.50/m³</i>	
Operations – Road Maintenance		
<i>Subtotal</i>	<i>\$0–4.25/m³</i>	
Operations Cost Range	\$31.55–125.50/m ³	
Add in Stumpage	\$ unknown	
Add in Road Construction	\$ unknown	

a Silviculture deposit will be required for non-replaceable forest licences; amounts are determined by District Manager.

Appendix 1 – Glossary

Allowable Annual Cut (AAC): The allowable rate of timber harvest from a specified area of land. The Chief Forester sets AACs for timber supply areas (TSAs) and tree farm licences (TFLs) in accordance with Section 8 of the *Forest Act*.

AAC apportionment: The distribution of the AAC for a TSA among timber tenures by the Minister in accordance with Section 10 of the *Forest Act*.

Administrative review: An appeal of a determination under Sections 127–129 of the *Forest Practices Code of British Columbia Act*.

Appraisal: The price, or stumpage, that government charges for timber is determined through the appraisal system. The appraisal system uses statistical and mathematical formulas to balance the international market price for lumber and chips against timber species and quality, and forest harvesting and management costs, to arrive at a price per cubic metre (m³) for each species.

Available volumes: The portion of total inventory volume that is available for harvesting after all management constraints on timber harvesting have been considered, including definition of the timber harvesting land base, age of tree merchantability, deferrals, and any other priorities or constraints on timber harvesting.

Basic silviculture: Harvesting methods and silviculture operations including seed collecting, site preparation, artificial and natural regeneration, brushing, spacing and stand tending, and other operations that are for the purpose of establishing a free-growing crop of trees of a commercially valuable species and are required in a regulation, pre-harvest silviculture prescription, or silviculture prescription.

Critical wildlife habitat: Part or all of a specific place occupied by a wildlife species or a population of such species and recognized as being essential for the maintenance of the population.

Critical winter range: Forested habitat, usually stands of mature or old-growth conifers, that provides deer and elk with resources critical to survival during severe winters.

Cruise: Involves the gathering of timber volume and quality information through statistical sampling of a timber stand. The volume and quality information gathered is necessary to determine the stumpage rate through the appraisal system.

Cutting authority: As defined in the Forest Practices Code of British Columbia Cutblock and Road Review Regulation, a cutting permit or an application for a cutting permit or a timber sale licence or a timber sale licence that has been advertised.

Cutting permit: A legal document that authorizes the permit holder to harvest trees under a licence issued under the *Forest Act*.

Discretionary authority: The power to make a decision where the choice of whether to make a decision is that of the decision maker.

Economically operable: Forest stands for which log prices exceed harvesting costs, including profit and return to capital.

Falldown effect: A decline in timber supply or harvest level associated with the transition from harvesting the original stock of natural mature timber over one rotation to harvesting at a non-declining level (typically equal to the annual increment) after conversion to a forest with a balanced age class structure.

Forage: Grasses, herbs, and small shrubs that can be used as feed for livestock or wildlife.

Forest development unit: An area where development may take place during the term of the Forest Stewardship Plan.

Forest inventory: An assessment of forest resources, including digitized maps and a database which describes the location and nature of forest cover (including tree size, age, volume, and species composition) as well as a description of other forest values, such as soils, vegetation, and wildlife features.

Forest licence: A forest licence allows orderly timber harvest over a portion of a sustained yield management unit, and the timely reforestation of harvested areas according to a strategic resource management plan prepared by the Forest Service for each TSA. The licence has a term of 15–20 years, generally replaceable every 5 years (some are non-replaceable), and operating areas that shift over time. Once an area is harvested and reforested, the licensee moves to another part of the TSA. A forest licence specifies an annual allowable cut, requires a management and working plan, and specified management activities.

Forest Practices Board: The "public watchdog" agency established under the *Forest and Range Practices Act* to audit the activities of both the forest industry and the government. The Board may also investigate complaints.

Forest profile: The range of forest conditions that exists across the landscape, including such factors as timber species, quality, condition and age, location, elevation, topography, accessibility, and economic viability.

Free to grow: The stand is healthy and its further growth to maturity will not be affected by competition from other plants or trees.

Free growing: Stocking standards have been met as per the silviculture prescription or site plan by the licensee.

Greened-up: A cutblock that supports a stand of trees which has attained the green-up height specified in a higher level plan for the area or, in the absence of a higher level plan for the area, has attained a height that is 3 m or greater; if under a silvicultural prescription, the cutblock meets the stocking requirements of that prescription; if not under a silviculture prescription, the cutblock meets the stocking specifications for that biogeoclimatic ecosystem classification specified by the Regional Manager.

Habitat: The place where an organism lives, and (or) the conditions of that environment including the soil, vegetation, water, and food.

Impact assessment: A study of the potential future effects of resource development on other resources and on social, economic, and (or) environmental conditions.

Inoperable lands: Lands that are unsuited for timber production now and in the foreseeable future by virtue of: elevation; topography; inaccessible location; low value of timber; small size of timber stands; steep or unstable soils that cannot be harvested without serious and irreversible damage to the soil or water resources; or designation as parks, wilderness areas, or other uses incompatible with timber production.

Judicial review: A review of a decision by a court authorized and conducted under the *Judicial Review Procedure Act* primarily concerned with the fairness of the procedures used to make a decision, whether or not the decision maker was acting within his or her jurisdiction, and errors of law.

Management plan: A management plan, or management and working plan, approved under a tree farm licence, woodlot licence, pulpwood agreement, or forest licence; contains inventory and other resource data.

Multiple Use Sustained Yield Calculation (MUSYC): A linear programming forest planning model developed by the United States Forest Service. This model is currently used as the British Columbia Forest Service's standard forest planning model for carrying out TSA timber supply computer analysis.

Natural disturbance regimes: The historic patterns (frequency and extent) of fire, insects, wind, landslides, and other natural processes in an area.

Net down procedure: The process of identifying the net land base, or is the number of hectares of forest land that actually contribute to the AAC. The process involves "netting down" the TSA gross area to the TSA gross forest area, then to the TSA net forest area. Areas and (or) volumes are sequentially deleted or reduced from the gross land base for a number of considerations (e.g., in privately owned, non-forest or non-productive, environmentally sensitive, unmerchantable, and inaccessible areas).

Objective: A goal or aim.

Operable timber: Available timber that can be economically logged with present harvesting methods after consideration of access, timber quality, and market price.

Operating area: Geographic subunits of TSAs that have been assigned to individual major licensees for the purposes of long-term planning. The boundaries are subject to change as the timber profile within a TSA changes over time.

Operational plan: A forest stewardship plan, woodlot licence plan, range use plan, or range stewardship plan.

Quasi-judicial: A decision made by a government official or tribunal that involves the application of policy to a particular set of facts requiring the exercise of discretion and the application of the principles of natural justice.

Stocking standards: Measurable standards to ensure that the desired stand conditions are met.

Stumpage rate: The price that government charges for timber (in \$/m³).

Timber Supply Area (TSA): An integrated resource management unit established in accordance with Section 6 of the *Forest Act*. Timber supply areas were originally defined by an established pattern of wood flow from management units to the primary timber-using industries.

Timber Supply Block: A division of a TSA.

Utilization standards: The dimensions (stump height, top diameter, base diameter, and length) and quality of trees that must be cut and removed from Crown land during harvesting operations.

Waste: The volume of timber left on the harvested area that should have been removed in accordance with the minimum utilization standards in the cutting authority. It forms part of the AAC for cut-control purposes.

Yield analysis: The study of forest yield over time using mathematical models and inventory data.

Yield curve: A representation of stand volume, usually as a function of stand age, in graphical or tabular form.

Appendix 2 – Information Contacts

Northern Interior Forest Region	http://www.for.gov.bc.ca/rni/
Mackenzie Forest District	http://www.for.gov.bc.ca/dmk/
B.C. Ministry of Environment	http://wlapwww.gov.bc.ca/ or http://www.env.gov.bc.ca/
Fisheries and Oceans Canada	http://www.dfo-mpo.gc.ca/
Acts, regulations, and reports <i>(On-line access to the bulk of forest legislation and policies.)</i>	http://www.for.gov.bc.ca/mof/acts.htm
Forms index <i>(On-line access to the majority of B.C. Ministry of Forests and Range forms.)</i>	http://www.for.gov.bc.ca/pscripts/isb/forms/forms.asp
Forest and Range Practices Act training <i>(On-line access to all FRPA training modules.)</i>	http://www.for.gov.bc.ca/code/training/frpa/fpc_transition_training.html
Electronic forest management <i>(Provides the opportunity to submit all key information, including appraisal.)</i>	http://www.for.gov.bc.ca/his/esd/
Government of British Columbia <i>(Primary Web access point for all government services and sites.)</i>	http://www.gov.bc.ca/bvprd/bc/home.do

Professional Association Contacts

Association of British Columbia Forestry Professionals

1030–1188 West Georgia Street
Vancouver, BC V6E 4A2
Telephone: 604-687-8027
Facsimile: 604-687-3264
Email: info@abcfp.ca
Web page: www.abcfp.ca

Association of Professional Engineers and Geoscientists of B.C.

200–4010 Regent Street
Burnaby, BC V5C 6N2
Telephone: 604-430-8035 Toll free in Canada: 1-888-430-8035
Facsimile: 604-430-8085
Email: apeginfo@apeg.bc.ca Web page: www.apeg.bc.ca

British Columbia Institute of Agrologists

205–733 Johnson Street

Victoria, BC V8W 3C7

Telephone: 250-380-9292

Toll free: 1-877-855-9291

Facsimile: 250-380-9233

Email: p.ag@shaw.ca

Web page: www.bcia.com

College of Applied Biology

205–733 Johnson Street

Victoria, BC V8W 3C7

Telephone: 250-383-3306

Facsimile: 250-383-2400

Email: cab@cab-bc.org

Web page: www.cab-bc.org
