

Woodlot Management Home Study Course

Module 10

Managing Woodlot Finances A) Planning and Investment Guide

Preface

Many woodlot owners manage their woodlot as a small business. Others would like to learn more about using their woodlot as a source of revenue, want to learn about investing in woodlot, or want to learn how to decrease their tax burden.

Part A of Module 10, planning and Investment Guide, written by Shaun Scott of Forest Resource Consultants Inc., will help woodlot owners determine if purchasing a woodlot(s) will help fulfill their financial goals. It will also help them develop a business plan tailored to their particular situation and will show the financial benefits of improving and protecting their woodlot.

Part B, Tax and Estate Planning of this module will explain how a woodlot owner can minimize woodlot taxes and effectively plan inheritance of woodlot(s) to heirs.

This module is the tenth in a series of Woodlot Management Home Study Courses. Other modules in this series are:

1. *Introduction to Silviculture*
2. *Harvesting Systems*
3. *Stand Spacing*
4. *Wildlife and Forestry*
5. *Stand Establishment*
6. *Chain Saw Use and Safety*
7. *Woodlot Ecology*
8. *Wood Utilization and Technology*
9. *Woodlot Recreation*

They are available from the Nova Scotia Department of Natural Resources (DNR), Extension Services Division in Halifax, 424-5444 (twwhynot@gov.ns.ca) or Education and Publication Services in Truro, 893-5642 (nmtotten@gov.ns.ca). As with the other courses in this series, the Department of Natural Resources may hold a field day to present examples of the information on the course.

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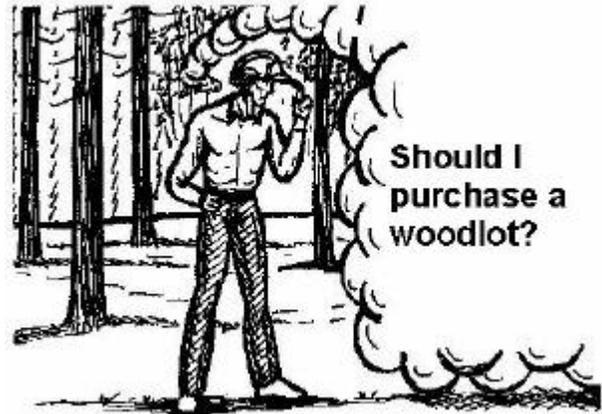
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Chapter One: Introduction

Introduction

Woodlots in the Maritimes have been used as a source of income and products since the early 1800's. Although some of the forest products have changed over the years, they still play an important role in the economic well-being of many woodlot owners.



Today, many people generate income from their woodlots. Forest resources such as pulp, logs, firewood, recreational activities, aggregates, maple syrup, and Christmas trees are sold by woodlot owners across the province.

Private woodlands exchange hands readily in the Maritimes, creating opportunities for people to purchase woodland at a reasonable price. Small woodlots represent a major portion of Maritime forest land, and their woodlot resources like never before in history. This increased demand in generating more and more business activity on today's woodlot.

The owner of the small woodlot business is faced with many of the challenges and opportunities that face other Maritimes small businesses.

Many successful small business attribute their success to planning and good financial management. Woodlot owners do not need to be an expert in the understanding of cash flow, tax considerations, government regulations, markets and financing. However, following the advice in Parts A and B of this module will help landowners meet some of the challenges of owning a business today.

Chapter 2 guides you through the purchase of a woodlot. The chapter covers subjects such as goal setting, places to search for properties, evaluating properties, and ensuring that there is proper title.

As with any value asset, protection becomes a priority. Chapter 3 discusses risks that you and your woodlot may be exposed to and suggests how to minimize risks to the landowner and woodlot.

Most woodlot owners want to improve their woodlot to increase it's value. Chapter 4 discusses methods to improve your woodlot. It will show that improving one resource of the woodlot may increase the value of another resource.

A big part of success in seizing opportunities and facing challenges is the ability to develop a plan for your small business. Chapter 5 discusses the steps used to do this. It ties your woodlot (resource) management plan to a financial plan, by identifying strengths and weaknesses of woodlot owners and the woodlot. It discusses strategy development, illustrates the use of budgets and operating plans in the planning process, and discusses methods to finance the woodlot's operations.

This module is designed for all woodlot owners. New woodlot owners will find information to assist them in managing their new asset, and experienced woodlot owners will be familiar with some of the material but will find some new material they can use to enhance their business.



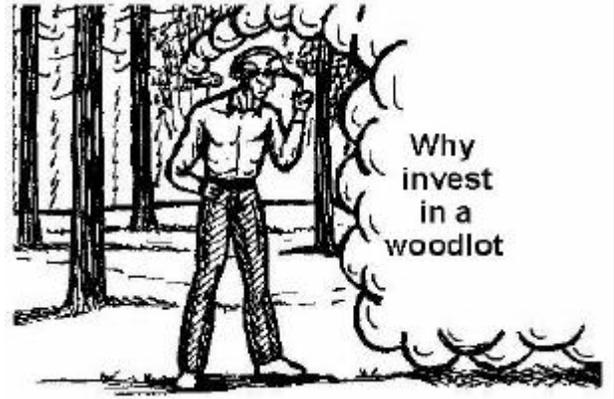
Figure 1. *Managing finances wisely creates opportunities for everyone.*

Lesson One Quiz

Based on your study of this lesson, please indicate whether the statement is True or False.
(Answers are at the end of the pages)

1. Forest products play an important role in the economic well-being of woodlot owners in the Maritimes.
T F
2. Managing woodlot finances can be as critical for woodlot owners as it is for other small business operators.
T F
3. Small woodlots do not change ownership very often, making it difficult to become a woodlot owner.
T F
4. There is less demand for forest products today than in the past.
T F

Chapter 2: Woodland as An Investment



Introduction

Investing in a woodlot is a big step for most people. The purchase of woodlots require a lot of money. You need to find the right woodlot to match your objectives and/or investment needs. Questions such as “What type of woodlot do I want? Where do I get the money to purchase it? Where do I find a woodlot to purchase? Will I pay too much for it? Will I get good title?” should be asked when deciding to purchase a woodlot.

This lesson will help you to answer these questions. You will learn how to match your objectives with woodlot characteristics in choosing a type of woodlot to best meet your goals. You will also learn to identify a potential woodlot, to value a woodlot, and will be exposed to instruments used to transfer titles.

Why Invest in a Woodlot?

People invest in woodland for recreation, for financial returns, or simply because they want to own a piece of the land. Other reasons may include keeping the woodland in the family or because the woodlot is part of the purchase of another asset such as a farm or cottage. Whatever the reason, purchasing a woodlot is exciting. It should also be a time of careful consideration, since each woodlot is different and has unique characteristics that should be considered in finding the ideal lot for you.



Each lot has its own challenges and potential, and not all woodlots will meet your investment objectives and individual needs.

Figure 2. *Before investing in a woodlot there are many things to consider.*

When preparing to purchase a woodlot, it is helpful to ask yourself, “Is this a short term or long term investment?” and “Do I have the financial resources to successfully complete the purchase?”

Short Term (Speculation)

A woodlot is sometimes purchased for speculation purposes. The objective in this case is to invest in the property in the hope that there will be great demand for the land and resources in the near future. This situation would allow you to sell it and realize a significant financial gain.

An example of this would be a woodlot purchased for \$10,000 that is sold two years later to a buyer for \$20,000, generating a capital gain of \$10,000. Because of the long term nature of woodlot management a woodlot usually does not make a good speculative investment.

Medium Term (Income Generating)

A medium term investment is to purchase the woodlot for income generating potential. The income can be used to regain some of the capital used in purchasing the lot or to make improvements to generate more future income. For example, one could purchase a woodlot that includes Christmas trees, some mature fibre that could be sold for stumpage (a royalty paid to the woodlot owner for the right to harvest the fibre), and a hunting lease from a local outfitter. The income earned from these ventures could be used to recover some of the capital used to purchase the property, improve the Christmas tree lot, reforest the harvested areas if required, or improve conditions for hunting to generate more income.



Figure 3. *Cabin rental, Christmas trees, and forest product sales can generate income.*

Long Term Investment (Retirement)

Long term investment in woodland generally refers to the purchase of a woodlot with young trees, where by most of the mature trees have been removed by fire, insects, or man. The trees will grow, increasing the woodlot's value over time. This type of investment is popular way to generate retirement income or build a nest egg.



Figure 4. *Young woodlot - a long term investment.*

Although trees in the Maritimes do not grow as fast as they do in more southern climates, they do grow fast enough to make purchasing a woodlot a reasonable investment. In simple terms, the quality of the investment depends on the amount of wood present now and the growth rate. Common Maritime growth rates are listed in Table 1.

Table 1. Potential Growth rates of Nova Scotia forests. Management can also increase quality which will also increase value.

Growth Rate (m ³ /ha/yr)			Increase in Value (\$/ha/yr)		
	Unmanaged	Managed	Stumpage	Unmanaged	Managed
Hardwoods	2 to 3	3 to 4	\$3/m ³ (firewood)	6 to 9	9 to 12
			\$8/m ³ (firewood and sawlogs)	16 to 24	24 to 32
Softwoods	3 to 6	7 to 10	\$8/m ³ (pulpwood and sawlogs)	24 to 48	56 to 80

Based on the above values, purchasing a well-stocked managed woodlot for \$1000 per hectare could provide a return of 5 to 10 percent. In the last 10 years, investments in woodlots have provided returns in excess of 10 percent. However, the above example is a very simple example of what can be a very complicated analysis. Other factors to consider include:

- increased value for high quality hardwoods or softwoods
- a potential real increase in bare land value
- money spent on management
- money spent on management
- potential for income in addition to selling wood products
- amount of wood present at time of purchase
- taxes (see part B of this module)
- potential for self employment
- other personal reasons for owning land

Planning the purchase of a woodlot allows you to combine short and long term objectives with your personal goals. Managed properly, you can own a property that will generate income as well as maintain a reasonable rate of growth on your investment, so that there will be a nest egg for your retirement.

To illustrate the importance of matching objectives with woodlots, complete the exercise on the next page:

Matching woodlot investment objectives with available woodlot.

Based on the woodlot description, which woodlot would best meet the needs of the buyer whose objectives are stated. Please indicate which woodlot lettered **A** through **E** best match buyers numbered **1** through **5**. You may record your choices below.

1.____ 2.____ 3.____ 4.____ 5.____

Objectives

1. I have some extra cash and am looking for a place to make a fast dollar.
2. I am looking for a second income and would like to work outside.
3. I have exhausted my contributions to an RRSP plan and would like to invest in something that will be there for my retirement.
4. I always wanted to own some land and not be concerned if I make money or not.
5. I want to invest on a piece of land to go and enjoy my days off. If I can make some money that would be great!

Woodlot Descriptions

- A. Woodlot located close to home, approximately 10 acres of Christmas trees along a road right-of-way. The rest is forested with many age classes.
- B. Woodlot is one km from a road; a fire went through 25 years ago, and the forest has rejuvenated back in dense hardwood and softwood.
- C. Woodlot located by Trans-Canada Highway. It is forested, but supposedly sitting on a huge reserve of building material. Word on the street is that a huge highway project is upcoming in the area.
- D. The resources of the woodlot have been depleted. The forest is starting to rejuvenate, and with some work, such a thinning and planting, would become very productive. It may be available at a good price because the resources have been depleted.
- E. Woodlot is located at the base of a mountain. It is a diverse property with forest openings, a small lake, and some trails cut across the front section. There are some high value wood products on the side hill, and if harvested properly could generate some income.

Below you can list your own purchase objectives and list characteristics of a woodlot that fits:

PURCHASE OBJECTIVES:

CHARACTERISTICS:

1. (example) Retirement nest egg without a huge capital investment.

Young woodlot, close to home, so I can watch it grow over time.

2. _____

3. _____

4. _____

5. _____

Financial Resources

Before looking for a woodlot you should assess your financial resources to make sure you can secure the required dollars. It can be frustrating to locate a woodlot you would like to buy then find out you are unable to complete the transaction because of lack of money.

You may be fortunate and have a pool of cash on hand that you can use to pay for the woodlot. However, you may have to sell an asset or borrow to generate the funds. Below is a list of lenders that lend money to purchase woodlots:

1. Financial Institutions - generally require a mortgage to secure the loan.
2. Government Loan Agencies - Farm Credit Corporation and Farm Loan Board
3. Family and friends - not for everyone.

When calculating the amount on money required to purchase a woodlot, remember you will need more than just the purchase price. You will need to hire a lawyer to search the old deed and prepare the new one, and you may also need the lawyer to prepare a mortgage. There might be an obligation to pay property and sales tax.

Finding a Woodlot to Purchase

Once you have decided on the type of woodlot to purchase and have determined your financial resources, you are ready to begin your search.

Some suggestions to get you started include:

Real Estate Agencies

Occasionally woodlot owners will list their property with a real estate agency. Generally the agency will have information on the property which has been supplied by the owner. his

information may include a woodlot map, aerial photographs, and a survey plan. As well, the agent may be willing to take you to the lot to show you some of the woodlot features, such as roads, boundary lines, and ponds.

Newspapers

Newspapers, particularly local ones, are a possible lead for properties for sale. Owners will often advertise property for private sale.



Auctions

An estate settlement or a foreclosure on a piece of land can lead to a sale of land at an auction. It is recommended that a person wishing to purchase land through an auction conduct all their research on the property prior to the sale. With your research complete, establish a maximum price that you are willing to pay and stick to it during the bidding.

Tax Sales

Municipalities occasionally conduct property sales to recover delinquent taxes. The dates and locations of these sales are advertised in the local paper. One note of caution: depending on the circumstances surrounding the property, you may not get clear title from the municipality until one year after the sale. It is advised that you ask representatives of the Municipality what type of title you will be purchasing. This is done so that delinquent landowners have a grace period after the sale to pay their taxes. As with an auction, research the property prior to the sale. Many sales require you to have 10 percent of the purchase price in cash or certified cheque and the successful purchaser will have 10 to 30 days to pay the remaining balance.

Industry Newsletters

Many woodlot owner associations publish newsletters which occasionally advertise woodlots for sale. You may find out more about these newsletters by contacting a woodlot owner group such as the Nova Scotia Group Venture Association or Nova Scotia Landowners and Forest Fibre Producers Association.

Word of Mouth

One of the best ways to obtain leads on possible land to purchase is by word-of-mouth. For example, you may be talking to an individual who may refer you to a friend that has been thinking of selling his or her lot. A phone call to find out more may reveal a woodlot that meets your needs.

Direct Approach

If you see a woodlot that interests you, you may wish to contact the owner directly to see if

he or she would be interested in selling it.

Finding out What Is on a Property

Once a potential property has been identified, collect as much information about it as possible to ensure that you are fully informed before making your investment. Several resources are available to assist you.

Existing Management Plan

Approximately 8000 private woodlots in Nova Scotia have had forest management plans prepared for them. Ask the owner if he or she has a management plan and if you could review it. These plans are an excellent source of information about boundary lines, types of forest cover, and infrastructures, such as roads and bridges that are on the property.

Existing Survey Plan

Some woodlots have survey plans of the boundary lines. These plans can accurately show where the boundary lines are located and the amount of acreage that is contained within the boundaries.

Land Information Centers

Another resource to assist you is the Land Information Centers. You can obtain a photocopy of a property map which will have the property lines identified. You will need to provide the center with a property identification number (PID) which you can obtain at your municipal assessment office. The information on this property map may not be as accurate as a current survey plan. The Land Information Center is located at 5151 Terminal Road, P.O. Box 2205 Halifax, NS, B3J 1V7. You may also visit one of the regional offices. Offices are located in New Glasgow, Lawrencetown, Bridgewater, Sydney, and Amherst. The toll-free number for more information is 1-800-798-0706 (Amherst).

Aerial Photography

Color aerial photographs (1:10,000) can be purchased at the Land Information Centers described above. Aerial photographs give you a bird's-eye view of the property. You will be able to see the type of vegetation on the property, and other features such as roads, fields, wetlands, openings, and gravel pits. With the purchase of stereo pairs (photographs on either side of the property interest) you may use a stereoscope to view the woodlot in 3-dimension and therefore be able to see the heights of trees and topography of the land.

Topographic Maps

Topographic maps may be used to give you a sense of the topography in a localized area and are particularly helpful when you are looking for a certain type of terrain. These maps are also available at the Land Information Centers.

Geographic Information Systems Mapping (GIS)

GIS Maps have been developed using current provincial forest cover inventory data. The maps contain information such as timber volume, timber height, size of stand, species and other important information for specific stands within a woodlot. The information contained on the maps has been provided by professional photo interpreters using aerial photographs. Some of the sites have been ground checked for accuracy with the photo interpretation work. However, have this information verified as accurate before using the GIS information as a basis for a land purchase. You may obtain GIS maps from the Department of Natural Resources, P.O. Box 68, Truro, NS B2N 5B8 (902-893-5650). You will need permission from the woodlot owner before information will be released to you.

Professional Advice and Forestry Expertise

Summarizing all the information to produce a clear and concise picture of the resources on the woodlot can be complex. Private companies, located across the province, have foresters and forest technicians on staff who have years of experience dealing with woodlots and their resources. You may consult them to review the information you have collected and to get assistance in obtaining more information if necessary, such as a timer cruise. One service that you may want to obtain from these professionals is to walk the property with you and point out features such as boundary lines, recreational potential and stands of mature timber to name a few. Their experience allows them to navigate quickly through the forest, allowing you to see as much of the property as you wish. There is no substitute for sound professional advice.



Figure 6. Forester and woodlot owner summarizing information before purchase

Determining Property Value

After researching the property and identifying the resources that are present, the next step is to determine the value of the property. Determining the value of a property can be described as building a tower. You start with a base and continue to add to it as resources are identified and valued.

Bare land Value

The first platform of the tower is the bare land value which is what the marketplace is willing to pay for woodland that does not have any resources on or under it.

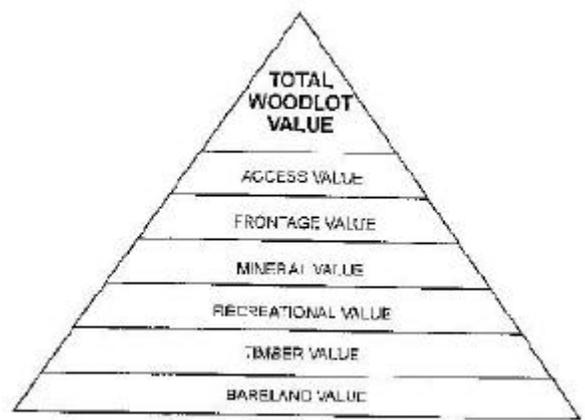


Figure 7. Tower with each layer representing value found on woodlot

Bare land values vary throughout Nova Scotia depending on local market conditions and types of terrain. It's can even fluctuate within an individual woodlot. For example, fertile, well-drained areas generally attract a higher value than barrens or poorly drained soils. To determine the bare land value in the area you are interested in, you could contact a local area forester, forestry technician, or talk to a local land appraiser.

Timber Value

Timber value refers to the timber resources on the property. In the past, timber resources generally referred to merchantable timber; however in recent years, timber value has expanded to include pre-merchantable timber.

Merchantable timber refers to the fibre that could be harvested and sold at present time, if it has a market. The value is determined by estimating the volume of merchantable timber on the property and multiplying local stumpage rates. Merchantable timber is the sawlogs, pulpwood, chips, firewood, and hardwood logs that can be sold from the property.

Pre-merchantable timber refers to the timber that has no present market but that is expected to become merchantable timber in the future.

Values are established based on the estimated number of years from maturity or merchantability; for example, young stands of wood are significantly less valuable than stands that are close to merchantability.

If a woodlot contains a lot of timber, have the timber cruised by a professional, since the timber value will represent a large part of the purchase price.

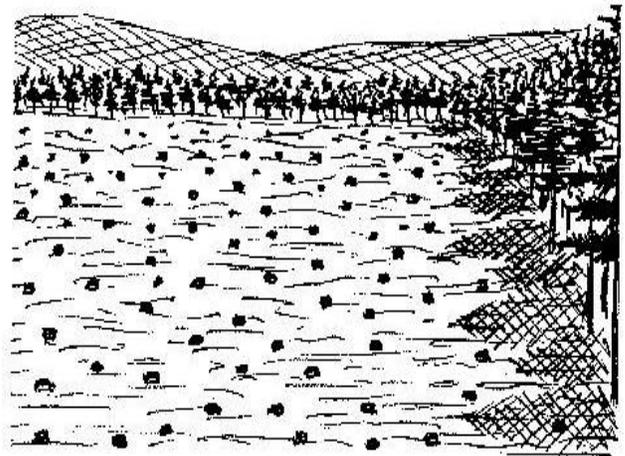


Figure 8. A cutover woodlot is usually only worth bare land value unless other resources such as gravel have been identified.



Figure 9. Mature and young trees both establish woodlot value.

Recreational Value

Woodlot recreation, as discussed in Module 9, includes a lot of activities. A woodlot that can provide for such activities has more value than one that is not suitable for recreational uses.

Personal Recreation Value

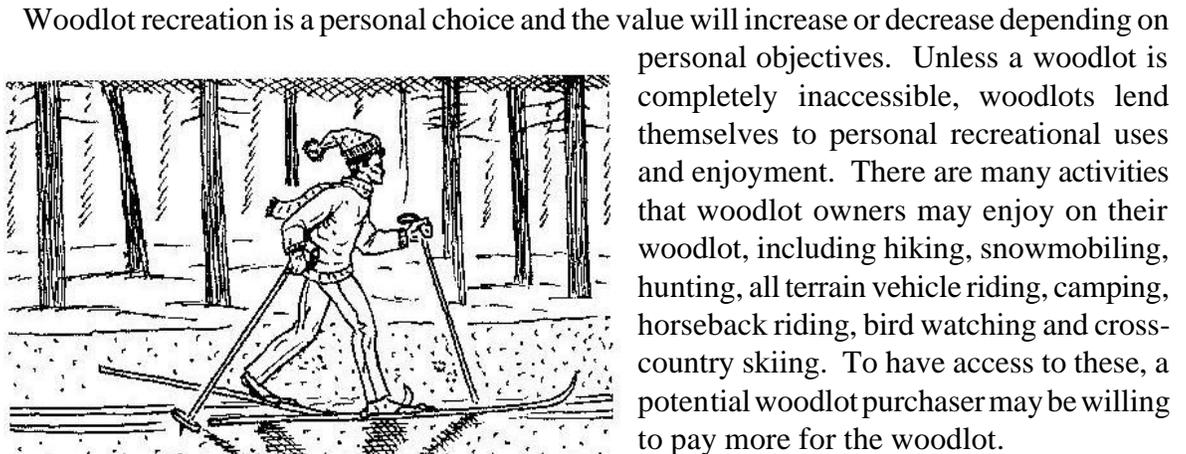


Figure 10. *Skier enjoying recreational activity.*

Woodlot recreation is a personal choice and the value will increase or decrease depending on personal objectives. Unless a woodlot is completely inaccessible, woodlots lend themselves to personal recreational uses and enjoyment. There are many activities that woodlot owners may enjoy on their woodlot, including hiking, snowmobiling, hunting, all terrain vehicle riding, camping, horseback riding, bird watching and cross-country skiing. To have access to these, a potential woodlot purchaser may be willing to pay more for the woodlot.

Commercial Recreational Value

Some woodlots, often due to their location or unique characteristics, have commercial recreation potential. If you are interested in learning more about commercial recreation value, please read *The Woodlot Recreation Manual* by Glyn Bissex. (See additional readings).

Mineral Value

When assessing a woodlot, the value that lies underground is sometimes overlooked. Deposits of gravel, fill and gypsum can be located on woodlots. If a market develops for such



Figure 11. *Gravel deposits can increase woodlot value.*

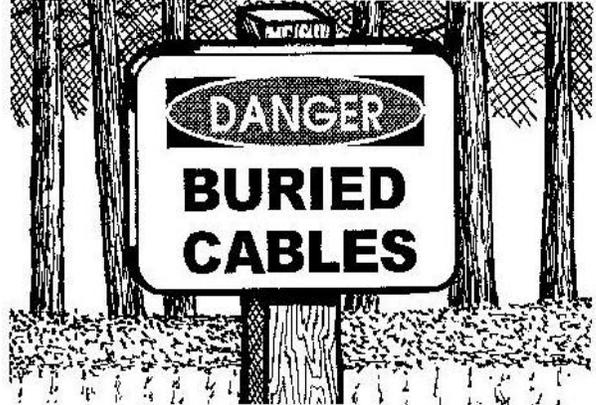
deposits, the woodlot's value can increase significantly. Most of the minerals located on your property, such as copper, zinc, or gold are owned by the Province of Nova Scotia. However, before they can be mined, access would have to be granted by the woodlot owner. Granting access can be profitable.

Frontage Value

Woodlots that are adjacent to roads, lakes or beaches have additional value. The demand for frontage has increased in recent years, and with this increased demand, the value of property with frontage has increased. The demand is high because people want to build homes or cottages along roads or near a beach or lake. These types of woodlots can be very valuable.

Access Value

Granting access to your land can generate income. Corporations, pulp and paper companies, sawmills, governments, utilities, pipeline companies, and individuals may want access through your property. It is common practice to compensate the landowner for such access. The right-of-way agreement is usually a legal agreement registered with appropriate authorities.



Total Woodlot Value

After assessing the woodlot for the above values, a price can be determined. The total price will be bareland value plus the value of other resources. This may not be the price offered for the woodlot, but there will be comfort in knowing the value of the lot. You may want to have an appraiser or a forestry professional to help establish the values of the resources.

For example, a woodlot could be valued as follows:

Bareland Value	\$ 2,000
Timber Value	\$ 11,000
Recreational Value	\$ 2,000
Mineral Value	\$ 2,000
Frontage Value	\$ 2,000
Access Value	\$ 2,000
TOTAL WOODLOT VALUE	\$ 20,000

Title: Ensuring That it Is a Good One

When investing in a woodlot, make sure that you receive a good and marketable title.

Deeds

Two types of deeds generally used to transfer woodland are the *Warranty Deed* and the

Quick Claim Deed.

A ***Warranty Deed*** is preferred and in most cases required by most buyers. It is a deed where the seller (grantor), through covenants (promises), guarantees the buyer (grantee) that he owns the total interest in the property and promises to allow the buyer to quietly enjoy the lands. By making these promises, the seller has an obligation to settle any future competing interests for the title. If a competing interest for the title arises and the seller does not settle these interests, the buyer has the right to sue the seller.

A ***Quick Claim Deed*** is an instrument for the seller (grantor) to transfer all his or her interest in a property to the buyer (grantee). Unfortunately, the seller may not own any or only have a partial interest in the property being transferred. This creates a problem for the buyer, as he is not assured that he is purchasing the total outstanding interest in the property. If there was a future dispute over actual ownership of the land, the buyer has to settle these competing interests on his own. He has no other recourse.

Certification of title

Whether transferring property by warranty or quick claim deed, you should obtain the services of a lawyer to prepare the deed and search the title for the property. Your lawyer will search the title back for 40 years to make sure that there have been no judgements or lies against the property. Also, he will make sure that there is no gap in the transfer of the title in the past that may present future competing interests for title.

After completing the search, the lawyer will present you with a ***Certificate of Title***. In this document, your lawyer states that he has carried out a search and in his opinion, you have a good and marketable title. If the title turns out to be poor, and it can be shown that the lawyer made a mistake, the buyer then has legal recourse and could sue his lawyer.

Right-of-way Agreements

All properties are not located along existing roads or right-of-way. Some are completely surrounded by other woodlots (landlocked). Before obtaining a property, make sure that there is a legal right-of-way. If there is none, you will have to obtain one.

If unable to obtain a right-of-way to a property through agreement with adjacent landowners, the Private Ways Act can be used to obtain access.

This is a Nova Scotia Provincial Act that allows the landowner to apply to a municipality to gain access to his woodlot through and adjoining property. This is an expensive way to gain access as the right-of-way has to be surveyed and the application process will require time.

In New Brunswick, the process would have to be pursued through civil courts and the landowner would have to prove there was no other way to gain access.

LESSON TWO QUIZ

Answer -True or False

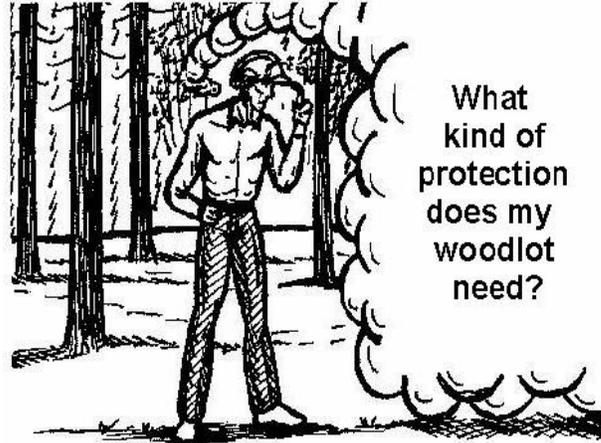
1. When buying a woodlot consider whether you want a short term or long term investment.
T F
2. Real estate agencies are the only source for finding woodlots for sale.
T F
3. Timber value includes both merchantable and pre-merchantable timber.
T F
4. Reviewing management plans, aerial photographs, topographic maps, contacting Land Information Centers, and consulting with forestry professionals are some of the ways to discover that features are on a property.
T F
5. Long term and short term investment goals are incompatible on all woodlots.
T F
6. Bare land value refers to the total value of land when all assets including timber, recreational, mineral, access and frontage values have been considered.
T F
7. A right-of-way agreement is something that should be dealt with before transfer of title.
T F
8. The preferred way to transfer property is by Warranty Deed.
T F
9. A Certificate of Title will allow you to gain access to your woodlot through an adjacent property.
T F
10. Christmas trees, stumpage, and hunting leases are some examples of sources of income that can be generated through a woodlot investment.
T F
11. Three values that should be considered when deciding what a woodlot is worth are _____, _____, and _____.

Chapter Three: Protecting Your Asset

Introduction

Like any other asset a woodlot requires protection. The first step in any protection program is to identify risks such as:

Fire	Insects and disease
Vandalism	Wind
Liability	Vegetation



If not managed properly the above agents can reduce the value of your woodlot in a short time.

Breaking the list into two categories may help us better understand the protection required to minimize the exposure. The category *Resource Protection* will discuss ways to minimize the exposure of the resources on the woodlot. The second category, *Financial Protection*, will discuss ways to minimize the exposure of the woodlot owner's financial resources.

The chapter also contains preventative measures that can be taken to minimize risk. At the end of the chapter there is an exercise to review the chapter.

Resource Protection

Fire

Fire is by far the most aggressive threat to our woodlots; however, with some consideration and planning you can reduce your woodlot's risk of fire.

Fire requires oxygen and fuel to burn. By removing fuels such as dead and diseased trees, a woodlot owner can reduce the chance of fire breaking out. Fine fuels such as branches and tree tops will ignite very quickly if a spark touches them. The healthier the woodlot, the less the chance of fire.

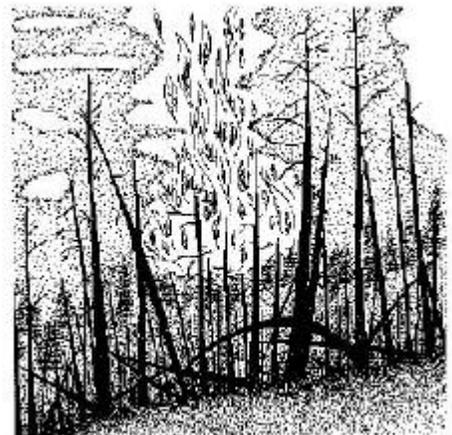


Figure 14. *The risk of a major fire can be lessened by reducing the amount of fuel.*

Activities

At certain times of the year, when dry conditions exist, the fire hazard in the forest is high. Limiting access to the woodlot and rescheduling activities to another time of year will reduce the chance of fire. The Department of Natural Resources can give you an up-to-date report on the fire hazard.

Harvesting forest products during the dry, warm months can create a dangerous fire hazard. Machinery can come in contact with stone and rocks, generating sparks which can come in contact with stone and rocks, generating sparks which can cause a fire. As well, harvesting operations leave a lot of fine fuels in the form of slash (tops of trees and branches). This fine fuel dries out very quickly in the warm breezes of summer and can be ignited by a small spark.

Using machines equipped with fire extinguishers will allow the operator to quickly extinguish a small fire. Back tanks or larger machine tanks at the site will give the machine operator an available source of water in case of an emergency. As well, removing slash from the sides of roads will reduce the amount of fuel available to ignite a fire if a careless traveler throws a match or cigarette on your woodlot.

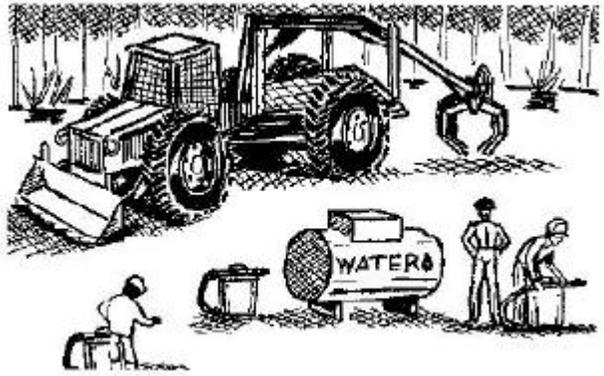


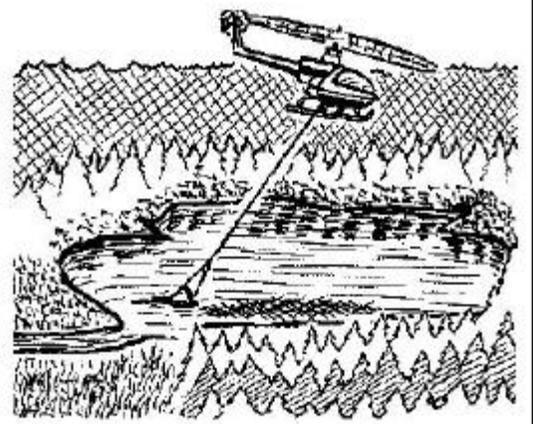
Figure 15. *Firefighting equipment is vital during the fire season.*

Silviculture activities can increase the chance of fire, as many silviculture activities are labor intensive and require many workers in the woods. Certain treatments require the use of spacing saws and chain saws which when hitting a rock will create a spark. Again by having the appropriate fire equipment on site, such as a water tank, shovels, and small fire extinguishers, the risk of fire can be reduced.

Care must also be taken during the fire season when using the woodlot for recreation. Open fires should be eliminated and smoking should only be done when sitting down in a place where a cigarette can be properly extinguished.

Fire Ponds and Breaks

If a fire does break out, quick access to a water supply will allow the fire to be extinguished while it is small and manageable. Some woodlot owners are fortunate enough to have a lake or a natural pond located on the property.



If a natural water source is not present, a **Figure 16.** *A well constructed firepond can provide quick access to water.*

be accessed by road, and capable of holding water during the dry season of summer.

More information on the construction of fire ponds can be obtained by referring to the brochure *Environmental Standards for the Construction of Forest Roads and Fire Ponds in Nova Scotia*, dated April 27, 1983. (These standards have been prepared by the Nova Scotia Department of the Environment and the federal Department of Fisheries and Oceans.)

Fire breaks are only recommended in situations where a fire hazard is identified. An example of fire hazards are blueberry fields, which require frequent burning, or a populated area where there is a chance of grass fires.

Fire breaks can be used to prevent fires from spreading through your woodlot. A fire break is generally created by using a bulldozer or excavator creating a continuous area of mineral soil or ditch around the edge of the area to be protected. The dozer or excavator will eliminate all fuels such as brush, stumps and organic material.



Figure 17. Fire break construction is only necessary when fire is used as a management tool (eg. blueberries).

Insurance

Although not easily found, fire insurance is available for timber, Christmas trees and other resources pending circumstances. Premiums are calculated as a percentage of the resource value. This type of insurance is found in specialty markets and may require an insurance broker to locate it.

Insects and Disease

Disease and insects can be present on your woodlot without causing damage. Only when their populations explode will damage be noticed. Some of the results of disease and insects include downgrading timber quality, reduction in tree growth, and mortality. Outbreaks of disease and insects decrease the value of many resources on the woodlot.

You can learn about the disease and insects present in your area by visiting your local Department of Natural Resources' office. It is also a good idea to walk or have a forestry professional walk the woodlot annually to identify any disease or insect problems. The department of Natural Resources monitors the provincial forests through insect



Figure 18. High insect

populations may cause severe damage.

surveys. When significant increases in the populations of disease and insects are detected the public is notified.

Diversity

To prevent a large outbreak of disease or insects in your woodlot, it is helpful to diversify the woodlot's species. Having a variety of species and age classes will reduce the chance of a significant outbreak that will wipe out your entire woodlot. For example, the spruce budworm will only feed on softwood, especially balsam fir. By introducing a mixture of pine, hardwood, hemlock, and spruce to the woodlot, there is less of a risk of losing all your trees in an outbreak.

This concept of diversification is similar to the way one would be encouraged by a financial advisor to diversify your RRSP portfolio. By putting some of your savings in short term deposits, such as GIC's, some in longer term bonds or mortgage funds, and some in equities, you reduce the chance of taking a big loss if there is a down turn in part of the market.



Figure 19. *Diverse stands of varying age classes and species will reduce the risk of insect or disease outbreak.*

Harvesting

As with fire protection, keeping your woodlot vibrant and healthy is one of the best ways to control disease and insects. Insects and diseases are attracted to weaker trees which are less able to withstand an outbreak of disease and insects than healthy trees.

If an isolated population of disease or insects is identified on your woodlot, it may be best to harvest the infected trees. The residual slash can then be burned or buried to prevent further spread of the disease or insect. This technique is used in the management of Dutch elm disease, *serrococcus* in red pines, bark beetle, mistletoe, etc.

Time is critical in this technique, with quick identification of the problem and fast removal of infected debris to prevent the spread of pests.

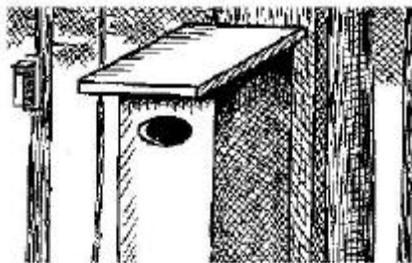


Figure 20. *Bird houses can attract beneficial birds to control insects.*

Promotion of Beneficial Insects and Birds

Encouraging beneficial insects and birds on your woodlot is another way of reducing insect problems. Species of birds and beneficial insects will feed on more harmful insects. By promoting beneficial birds and insects, a woodlot owner is less likely to have insect problems. The Christmas tree industry in Nova Scotia has been using this technique to control insects. Example are the construction of bird houses to encourage birds that will

reduce insect populations. And the introduction of lady bugs, which eat aphids that damage Christmas trees in the spring on the year.

Insecticides and Fungicides

Insecticides and fungicides will prevent or control insects and diseases. Although readily available, the cost of both the pesticide and the application can be very high. In an extreme outbreak, the Department of Natural Resources may implement a provincial or regional protection program. As a woodlot owner, you may become involved in this program. The Christmas Tree Council of Nova Scotia has a chart showing the best times to sample for each insect.

Record Keeping

As in any management system, keeping records of insect and disease populations and documenting practices that you have successfully used, will provide a valuable history for future use. Information such as the time of year the insect or disease emerged, treatment, the conditions of the season are all important facts that can be used to prevent damage from insects or diseases. Records can also help to forecast potential insects to watch for in the future.

Integrated Pest Management (IPM)

There are many techniques that can be used to keep a woodlot healthy. No one technique will do the job successfully and consistently. Woodlot owners should develop an Integrated Pest Management strategy for their woodlots which incorporates many of the techniques discussed above. You may want to seek advice from a forestry professional when developing your approach.

Vegetation

Vegetation can compete with trees for light, water and nutrients on the woodlot. This competition generally occurs when the trees are small. Competing vegetation at this stage can be controlled with spacing saw or herbicides to protect your investment in a young stand.

Vandals and Poachers (Timber and Wildlife)



Figure 21. *Woods road gated with a sign will inform people of your intentions.*

Protecting the resources on your woodlot from vandals and poachers can be difficult. This is especially true if you are an absentee woodlot owner. Trespassers can poach wildlife from your property, cause unnecessary damage to your roads, steal timber of Christmas trees and cause a fire hazard by smoking during the dry season. Any of these actions may decrease the value of your woodlot.

Limiting Access

Under the *Protection Of Private Property Act*, Nova Scotia woodlot owners have the right to prevent someone from entering your property. The only exception is the *Angling Act* which allows anyone to cross your property to gain access to their favorite fishing holes.

In New Brunswick there are access laws for hunting, trapping, and motor vehicles, but there are no laws to prevent people from entering your property as long as they are not hunting or trapping.

If someone is entering your property against your wishes, you can serve him notice that you want him to cease entering your property. If he doesn't stop, you can apply to the court to obtain a court order to prevent entrance to your property.

Gates are another way to prevent vehicles from entering or damaging woodlot roads during wet times of the year. They are expensive to build and require maintenance to keep them working. Before erecting a gate consider the message you are sending to your neighbours who may use your woodlot for recreation. It is advisable to discuss the erection of a gate with neighbours and perhaps provide them with a key.

A gate should be well marked with orange fluorescent paint and should be visible from a distance so that people will have a chance to stop their vehicle. You should also erect signs warning public of a gate's location. Without taking these precautions, you as the owner of the property may be liable.

Signs such as "No Hunting" and "No Trespassing" can inform people of your wishes regarding access to your property. Again, if they continue to use the property against your wishes, you can serve them notice of your intent, and then proceed to the courts.

Wind

Blowdown of trees from wind can reduce the value you have built into your woodlot. Blowdown can knock down trees in parts of stands or even a whole stand. Our native softwoods, with the exception of pines and hemlock, are more susceptible to blowdown than our native hardwoods because of their shallow rooting systems.

Blowdown forces you to harvest the tree or stand at a time when it may not be convenient for you. As well, when trees are lying criss-crossed on the ground the cost of harvesting increases. Unless harvesting is carried out in the first year of the blowdown, the quality of the wood decreases.

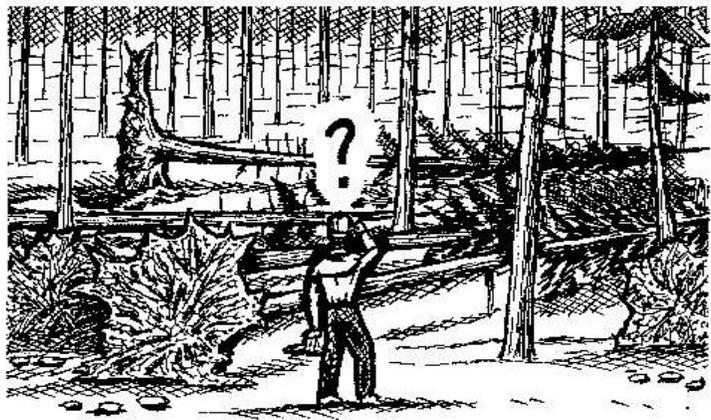


Figure 22. *Blowdown looks bad and can reduce woodlot value.*

Through silviculture practices, the risk of blowdown can be minimized. By keeping your woodlot healthy and harvesting timber as it matures, the risk of blowdown can be reduced. Also, before thinning softwood give careful consideration to exposure from wind.

Woodlot Owner Liability Protection

Owning an asset such as a woodlot where the general public can travel, requires care to protect people from injury. Lack of responsibility could expose a woodlot owner to a civil liability suit if someone should hurt themselves when occupying your woodlot or if activities on your woodlot cause damage to another woodlot.

Different levels of care are expected by society depending on who visits your woodlot. The level of care to protect a trespasser is no more than making sure that a trap is not set for them. Unfortunately, in an effort to limit access, a gate or chain may be seen as a trap depending on the effort made to make it visible to the trespasser. Therefore take care erecting a gate.

The highest level of care has to be displayed when a person pays to use your woodlot. For example, make sure a broken branch dangling from a tree is cut before it injures someone. A lower level of care is expected if a person is invited to use a woodlot but does not pay. For information on the level of care expected in your situation, you should seek the advice of a lawyer. As a rule of thumb, if you display due diligence and act as a reasonable person would act as you carry out your activities, it goes a long way toward protecting yourself in third party liability suits.

As with visitors on the woodlot, a woodlot owner should be diligent in all activities. An activity such as burning could expose a woodlot owner to financial risk if the fire was to get away and damage a neighbour's property. The woodlot owner may be liable for the fire fighting costs and property damage.

When using a contractor to carry out activities on the woodlot, it goes without saying that one should use a reputable contractor. However, it would be smart to ensure the contractor has liability insurance, fire fighting insurance, and has a letter of good standing from the Worker's Compensation Board.

Even if you carry out all of your activities in a diligent way, you may also want to purchase General Liability Insurance to protect you from the unexpected accident. Liability insurance can be purchased for a reasonable premium. Premiums are calculated based on the degree of exposure. The underwriters will look at the activities on the woodlot and rate the premium accordingly.

Threats to Woodlot

As a review of Chapter Three, fill in the spaces provided with activities listed below that will minimize the threats to your woodlot. Remember, an activity can be used for more than one threat.

FIRE	INSECTS DISEASE	VANDALS POACHERS	WIND	LIABILITY
L		C	I	

(Examples)

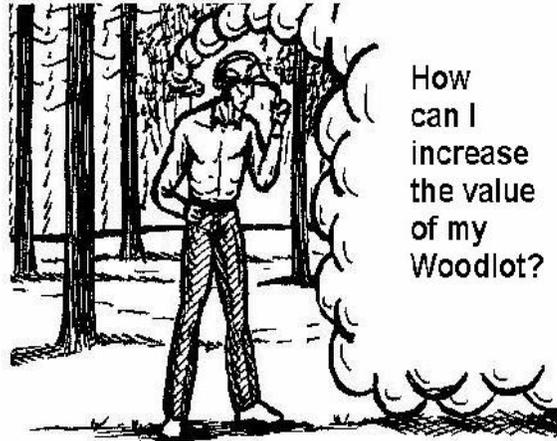
- | | |
|----------------------------------|------------------------------|
| A Scheduling of Activities | I Woodlot Health |
| B Fire Breaks | J Fire Ponds |
| C Gates | K Integrated Pest Management |
| D Monitoring | L Insurance |
| E Record Keeping | M Harvesting |
| F Signage | N Diversity |
| G Promotion of Insects and Birds | O Due Diligence |
| H Insecticides and Fungicides | |

LESSON THREE QUIZ

Answer -True or False

1. Risk from fire can be reduced by removing dead trees and branches.
T F
2. Because of the health risk of forest fires, insurance companies do not sell fire insurance on woodlots.
T F
3. A good way to detect disease or insect damage in your woodlot is to regularly walk and check your woodlot for visible signs of damage.
T F
4. By introducing a variety of trees on your woodlot, you are increasing the risk of outbreak from disease and insects.
T F
5. IPM is the brand name of an insecticide.
T F
6. Under the laws of Nova Scotia, you cannot limit access to anyone who wishes to enter your woodlot for any reason.
T F
7. Gates are an effective way to limit vehicle access to your woodlot, however care must be taken that the gate is visible from a distance.
T F
8. Hardwood stands are often victim to wind blowdown in Nova Scotia due to their shallow root characteristics.
T F
9. To avoid damage from blowdown, avoid thinning softwoods on exposed sites along the coast or on top of a mountain.
T F
10. Woodlot owners are to ensure the safety of all who enter their woodlots.
T F

Chapter Four: How Can I Improve My Woodlot?



INTRODUCTION

A woodlot is a dynamic asset that can be managed to increase in value. Woodlots include the bare land and the resources located under and on top of the bare land. It is difficult to improve the bare land value of our woodlots; however, we know the value of bare land, will continue to slowly increase.

Woodlot owners can make improvements to the resources on their woodlot and increase the value of their woodlots. Below is a list of improvements that will be discussed in this chapter:

- * boundary line maintenance and roads
- * harvesting. thinning
- * planting trees
- * locating mineral deposits
- * improving wildlife populations
- * improving recreational opportunities
- * identifying specialty markets for woodlot products.

Boundary Lines

Although establishing boundary lines can be expensive, it is money well spent. You'll know exactly what you own!



Figure 23. *Well-maintained boundary lines can add value to a woodlot.*

Your property will also be more marketable should you decide to sell it. As well, with the lines cut out and marked, you can manage it from boundary to boundary without wondering if you are on your neighbour's land. Generally, a woodlot will increase in value by the amount you have invested in your boundary lines. There are also cases where landowners, after establishing the property lines, found they owned more acreage than initially suspected.

Well maintained boundary lines also improve both the recreational and wildlife resources on the woodlot.

The lines can be used as a hiking trails by people, or by wildlife as travel ways and edge.

Boundary Line Renewal

If enough evidence exists to know the exact location of your boundary lines you will be able to upgrade the boundary line. This is done by cleaning it out and applying fresh paint on the old blazes, which is less expensive than hiring a surveyor to establish a new line. When upgrading an old line do not destroy the old evidence.

If a new blaze is required, it should be placed above the old blaze, which should not be disturbed. If a new corner post is required, make sure the new post is placed in exactly the same location as the old one. Lay the old post beside the newly erected post, before renewing a boundary line, a licensed surveyor should be contacted for an opinion on the evidence that will be used to renew a line.

Boundary Line Survey

If evidence of a line cannot be found a survey should be carried out to locate the line. The only people authorized to carry out land surveys in Nova Scotia are registered Nova Scotia Land Surveyors. The names of all Nova Scotia Land Surveyors can be obtained by contacting the Association of Nova Scotia Land Surveyors, 159 Portland Street, Suite 301, Dartmouth, NS, B2Y 1H9.

Once boundary lines are established, they should be maintained every ten years or so to ensure that surveying will not become necessary again.

Roads

After establishing where your property is located, you may need to improve access. A

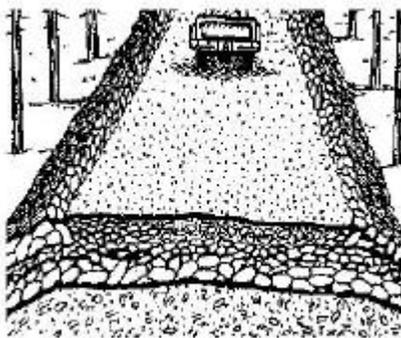
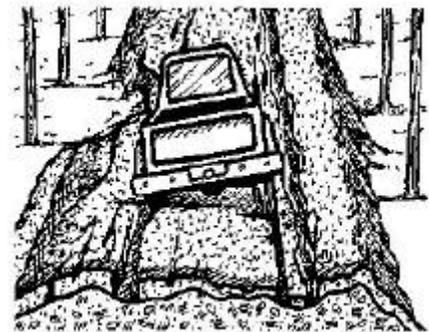


Figure 24 A) *A Well maintained road allows easy travel.*

road network will help you extract forest products and make the woodlot more accessible to yourself or the public. The cost depends on terrain, length, quality or grade of road, proximity to topping (such as shale, and gravel), and type of machinery available in the area. As with boundary lines, properly constructed and maintained road systems will increase the recreational potential allowing access with snowmobiles, all terrain vehicles, or a place to easily travel by foot. It also increases the edge and travel ways for wildlife, and increases the timber value because of lower extraction costs.

road network will help you extract forest products and make the woodlot more accessible to yourself or the public. The cost depends on terrain, length, quality or grade of road, proximity to topping (such as shale, and gravel), and type of machinery available in the area. As with boundary lines, properly constructed and maintained road systems will increase the recreational



B) *A poorly maintained road causes lots of frustration.*

Proper Harvesting

Harvesting the timber from your woodlot should decrease the value of your woodlot. After all you are removing the timber value and some of the wildlife and recreational value. On the surface this sounds correct; however, as we look a little closer we see how proper harvesting can increase the value of your woodlot.

Sometimes we are forced to remove the timber from our woodlots because of insects, disease or age. In these cases, not only do we not have time to schedule the harvest properly, we do not have options as to how the harvest is completed. Generally we have to clear-cut, which decreases the timber value of the woodlot and maybe other resources a swell. However, if a woodlot is not over mature and is made up of wind firm, long-lived species (such as red spruce, eastern hemlock, white pine, sugar maple, yellow birch, and white ash), several harvest options are available to us (Refer to Module 2) We can harvest the mature to over mature growing stock in a series of partial harvests. (e.g. shelterwood cuts, selection cuts and patch clearcuts). These methods of harvesting allow removal of the mature and over mature growing stock leaving the younger more vibrant trees behind. Growth is concentrated on fewer remaining trees, thus increasing the size of the trees in the stand.

Increasing the size of the trees will increase the timber value of your woodlot.

In addition to increasing the size of the trees, partial cuts encourage natural regeneration of shade tolerant species. Partial cuts can also improve the recreational value of the property, shelterwood cuts improve how the woodlot looks while patch clearcuts create forest openings and edge for wildlife.

Although the cost of partial cuts can be higher than conventional clearcuts, the long term benefits of higher quality trees, shade tolerant natural regeneration, and increase in recreation and wildlife potential will balance the loss in revenues at the time of harvest.

Below is a table that compares the relative cost of harvesting with regeneration establishment

Table 2. Summary of harvesting methods and relative costs of harvesting and reforestation.

Uneven-aged Stands

Harvesting System	Harvesting Costs	Reforestation Costs
Selection cut	Harvesting Costs are High.	Reforestation Costs are Low.
Clear-cut	Not Applicable*	
Shelterwood	Not Applicable*	
Seed Tree	Not Applicable*	

Even-aged Stands

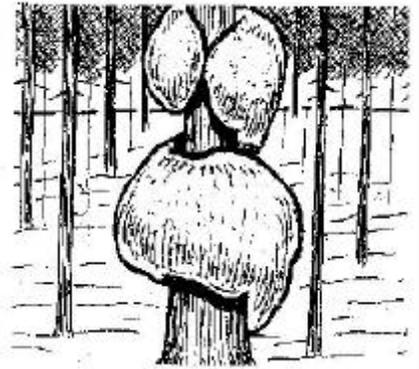
Harvesting System	Harvesting Costs	Reforestation Costs
Selection Cut	Not Generally Applicable	
Clear-cut	Harvesting Costs are Low	Reforestation Costs can be High.
Shelterwood	Harvesting Costs are Medium	Reforestation Costs are Medium.
Seed Tree	Harvesting Costs are Low.	Reforestation Costs are Medium.

* *Will not maintain uneven-age stands. Will create even-aged stands.*

As you can see, determining the age structure of the stands in your woodlot will help you use the above table to choose a harvest method that meets your financial objectives. To improve your woodlot through harvesting, appropriate harvesting methods must be used (See module 2).

Markets

Locating markets for forest products harvested from your woodlot may require some effort and time. However, time may reveal a niche market that will offer a better for some of your forest products than traditional markets. Remember, an increase in price for your forest products will increase your bottom line. If the high end market is stable, it will increase the value of your standing timber which increases the value of your woodlot.

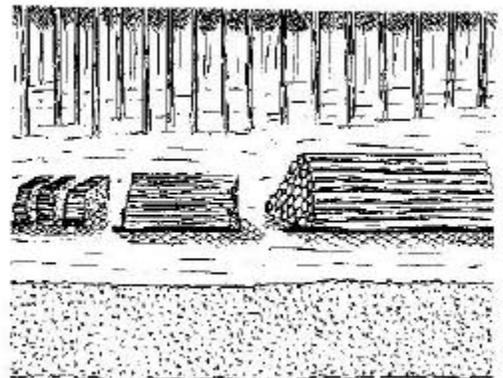


Examples of markets that increase the value of your woodlot would be veneer markets, and markets which can use defective trees for bowls and other things

Figure 25. *A burl on a tree can be cut off and sold to a wood turner.*

Utilization

Utilizing the tree by extracting all the forest products will increase the amount of revenue from a harvested tree. The harvested area will also be free of unsightly large tops of trees and trees partly limbed up. The area will be more aesthetically pleasing and may increase recreational activities such as walking and snowmobiling.



Wildlife Guidelines

By following the Forestry/ Wildlife guidelines, harvested tree will increase the value of your woodlot. wildlife populations will be sustained or enhanced,

Figure 26. *Good utilization of a harvested tree will increase the value of your woodlot.*

water courses will be protected and erosion will be minimized. For example, in a clearcut operation, protecting a stream by leaving a green belt along the stream will maintain the fish population and increase the edge on the property which may increase the population of deer, rabbits, foxes and other wildlife. Improving the wildlife habitat will increase the potential for hunting or fishing, or activities involving viewing or listening to wildlife.

Proper Equipment

Harvesting forest products requires equipment to extract the products or to cut and process the wood. Although some of the equipment is light, most of it is heavy enough to damage the soil if not properly used. Avoid harvesting during wet times of the year and use equipment with wide tires or tracks to prevent damage to soil and roads, which can be expensive to repair. Using the proper equipment can decrease the cost of reforestation and improve the aesthetics of the harvested areas. If wide tired forwarders use different extraction trails as they extract the forest products, the machines will crush the debris and slash that is generated during the harvest. This extraction technique will eliminate the need for site preparation if planting is required, will make the job look tidy, and will make it easy to walk the woodlot.

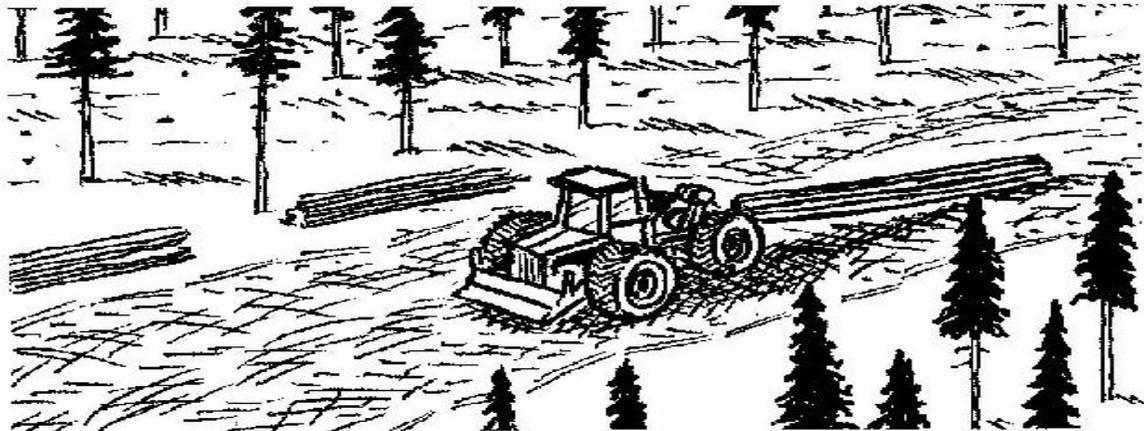


Figure 27. *Skidder preparing site for planting while hauling wood from harvest operation.*

Silviculture Investments

Growing trees makes good sense. It will ensure that there is a forest for generations to come. Better still, using silviculture techniques will increase wood production and improve the value of our woodlots.

Planting or thinning can be expensive. Consideration should also be given to the return on your investment. You can spend a lot of money on a treatment for your woodlot and not get a return on your investment. However, with careful planning you can get a good return on a silviculture investment.

In Table 3 is a list of silviculture techniques used in Nova Scotia and their approximate cost.

Table 3. Approximate 1997 costs of silviculture techniques used in Nova Scotia.
Costs would be less for those who do their own work.

Plantations		
Site Preparation	Preparing The Site for Seedlings	\$ 0- \$180/ hectare
Stock Acquisition	Producing Improved Seedlings	\$ 275/hectare
Planting	Planting Improved Growing Stock	\$ 270/ hectare
Weeding	Suppressing Competing Vegetation in Plantations	\$ 250/hectare
Thinning	Removing Merchantable Volume from Stand to Encourage Diameter Growth on Remaining Stems.	\$ 400/hectare
Natural Stands		
Pre Commercial	Thinning out Unmerchantable Stems (height 2-6 meters)	\$ 800/hectare
Weeding	Suppressing Competing Vegetation in Natural Stands	\$ 250/hectare
Thinning	Removing Merchantable Volume from Stand to Encourage Diameter Growth on Remaining Stems	\$ 400/hectare

Does Silviculture Pay?

This is a difficult question to answer. It depends on many variables such as silviculture costs, prices of wood products and other resources, and productivity of the land. However, the question “Can we increase the growth of our forest by using silviculture techniques?” can be answered “Yes!”. On average we can double the growth of a forest with intensive silviculture. Also we can change the species of stands to longer-lived species which gives us more management options in the future. Longer-lived species lend themselves to partial cutting over clear cutting.

To see the financial impact a silviculture investment will create, use the following assumptions for the exercise on the next page.

Assumption #1

The price of forest products will increase at a rate of 5 per cent per year in the next 40 years.

Assumption #2

Price today for forest products is \$6/m³ after harvesting costs (stumpage).

Assumption #3

Using the information presented in Table 1 regarding the increased growth rate using silviculture, we are able to generate the future worth of a stand that is treated versus one that is not.

No Silviculture

$$5 \text{ m}^3/\text{ha}/\text{year} \times 40 \text{ years} = 200 \text{ m}^3/\text{ha}$$

Intensive Silviculture

$$10 \text{ m}^3/\text{ha}/\text{year} \times 40 \text{ years} = 400 \text{ m}^3/\text{ha}$$

Calculation of Money Invested in Silviculture

Using values from Table III, it can be calculated that the cost to artificially regenerate area is as follows:

Site Preparation	\$ 180/ha
Planting	\$ 270/ha
Stock	\$ 275/ha
Weeding	<u>\$ 250/ha</u>
TOTAL COST	\$ 975/ha

Looking at our investment in 40 years, we would make the following calculations.

Price of Forest Products in 40 years.

\$6/m³ at year 0 is increased at 5 percent per year for the next 40 years equals \$42.2/m³ at year 40.

Value of Forest Products in Stand per hectare:

$$\text{No Silviculture} \quad \$42.2/\text{m}^3 \times 200 \text{ m}^3 = \$8,440$$

$$\text{Intensive Silviculture} \quad \$42.2/\text{m}^3 \times 400 \text{ m}^3 = \$16,880$$

However, because the trees are large in the treated stand, let's assume an increase of 50 percent for quality $\$16,880 \times 1.50 = \$25,320$.

The difference doing the intensive silviculture generate \$16,880 ($25,320 - 8,440$) more value for the product per hectare. This suggest that we should do silviculture work; however, remember we invested \$975 per hectare 40 years ago. If we invested that same \$975 in a financial institution, would perhaps dissuade you from investing in silviculture.

Grants of Incentives

The federal and provincial governments recognize the benefit for society of a healthy forest industry, especially in the form of taxation and a better environment. They also recognize that woodlot owners can not afford the total cost of doing intensive silviculture. In the last 25 years governments have cost shared silviculture programs with woodlot owners. Under these agreements, governments have reimbursed landowners up to 00% of the cost of silviculture treatments. Participating in these programs makes good economic sense for a woodlot owner. Using the above example, figure out your return if your cost was only 30 percent of \$975. To sustain the forest resource into the future, it makes good economic sense for governments and industry to continue to participate in silviculture programs with woodlot owners.

Other Products

In addition to fiber sales, woodlots have other products. Although developing these products are labor intensive and require some investment of capital, they can be financially rewarding if managed properly and also improve the value of your woodlot.

Mineral and Aggregate Deposits

As mentioned in Chapter 2, value on a woodlot can be found below the ground as well as above the ground. Woodlots can contain deposits of gravel, gypsum or other aggregates. By identifying such deposits and quantifying the amount, the value of the woodlot may increase significantly.

It may be necessary to hire a geologist to review topography and geology maps of the woodlot to identify deposits. He/she will also advise you as to the best procedure for testing the deposit.



Figure 28. *With the assistance of a geologist you may find valuable resources below the forest floor.*

Recreation and Wildlife Resource Potential

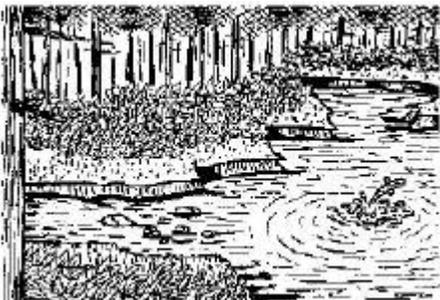


Figure 29. *Identifying recreational areas on your woodlot can increase its value.*

All woodlots in Nova Scotia have some recreation and wildlife potential. However, because some woodlots have greater potential than others.

To identify the recreational potential on your woodlot, refer to Module 9. Investing in small structures such as camps, benches, foot the area of commercial outdoor recreation, see *Woodlot Recreation Manual* by Glynn Bissex (see additional reading).

Christmas Tree Production

Most of the Christmas trees produced in Nova Scotia are balsam fir which originate from



Figure 30. *Christmas tree production can be enjoyable, generate income and increase the value of your woodlot.*

natural stands. Christmas tree markets tend to be cyclic, with the prices rising and falling according to supply and demand. It has been suggested that one person can efficiently manage 4 hectares of Christmas trees as a second job. Trying to manage more than 4 hectares requires additional labor and expense.

Maple Syrup

Only a limited number of the woodlots in Nova Scotia lend themselves to the production of maple syrup. Maple syrup comes from mostly sugar maple (*Acer saccharum*) and to a lesser extent Red maple (*Acer rubrum*). These species are usually found on well-drained, upland soils. To help sap collection, the stand should be located on a hillside so that sap can flow downhill to a catchment area, where an evaporator the water from sap and produce syrup. Otherwise a more time consuming method will be required. Equipment required for large scale maple syrup production is expensive. Some of the equipment includes taps and lines to collect the sap, a holding tank to store the sap, and an evaporator to evaporate the water from the sap. In addition, a camp has to be erected to house the evaporator.

Only a limited number of the woodlots in Nova Scotia lend themselves to the production of maple syrup. Maple syrup comes from mostly sugar maple (*Acer saccharum*) and to a lesser extent Red maple (*Acer rubrum*).



Figure 31. *Maple syrup production can generate extra income.*

Mushrooms

Mushrooms have traditionally been harvested in Europe and are a relatively new product for Nova Scotia forests. A popular variety call the chanterelle mushroom grows under mature white spruce stands. The conditions created on the forest floor under theses stands are ideal for the growth of the chanterelle mushroom.

Ginseng

Producing ginseng is new in Nova Scotia. Although ginseng grows naturally in Nova Scotia, it is difficult to locate. Ginseng can grow well under hardwood stands, which create the proper amount of sunlight for the plant. It requires more light in the spring and fall and shade in the direct sunlight of summer. This requirement is timed exactly with the production and loss of leaves in Nova Scotia's hardwood stands.

Although ginseng can require up to ten years to mature, it can yield good prices as a health

product.

The NS Department of Natural Resources is growing ginseng seedlings at their Strathlorne Forest Nursery in Inverness as an experiment. If successful, it is hoped woodlot owners will plant the seedlings under their hardwood canopies. For more information, call The Strathlorne Forest Nursery at (902) 258-2626 or The Nova Scotia Agricultural College at (902) 258-2626.

Service Berry

The production of service berry (indian pear) may be a future crop for woodlots. Demand for the berry in Western Canada is increasing. Studies are presently being carried out in a cooperative venture between The Department of Natural resources and The Department of Agriculture and Marketing to determine what species of service berry can be grown in Nova Scotia. For more information call Strathlorne Forest Nursery at (902) 258-2626.

Blueberries

Although considered an agricultural crop, blueberries are grown on many woodlots in Nova Scotia. Blueberries can be found naturally on acidic forest soils.

By properly managing competing vegetation, burning, stumping and leveling, a woodlot can produce blueberries in a relatively short time. Production of blueberries requires special equipment. Contact The Department of Agriculture and Marketing before proceeding.

In recent years, developed blueberry land has increased in value. At present, even undeveloped blueberry potential is getting increased prices.

Cranberries

Suitable locations for the production of cranberries are found in selected woodlots in Nova Scotia. Again, like blueberries, cranberries are considered an agricultural crop; however, they can be grown in a woodlot environment.

Certification

A relatively new Marketing concept which may increase the value of the forest products for woodlot owners is the push for certification. Woodlot owners who have practiced sustainable forest management may get an increased price for their forest products which would increase the value of their woodlots.

Background

Most of the forest products produced in Nova Scotia are exported to other countries; two of the largest importers of Nova Scotia forest products are the United States and the European Community. In the past, Nova Scotia forest products were considered equal, whether they were produced from timber coming from forests that were properly managed or not.

Nova Scotia forest products that are exported are sold to large buying groups, who represent a large portion of the available market.

In recent years, in response to concern over the public's negative perception of forestry practices in Canada, the buying groups have been demanding that forest products being produced come from forests that are managed on a sustainable basis.

In the near future, it is possible to have two sets of forest sustainability standards in Canada, the Canadian Standards Association (CSA) and the Forest Stewardship Council (FSC), that would be recognized and desired by consumers abroad.

What does this mean to me as a woodlot owner?

At this point it is unclear exactly what it will mean to individual woodlot owners. It appears that a portion of Nova Scotia's traditional market will require certified forest products that come from sustainable forests. The certification process is elaborate and expensive. It is difficult to see how individual woodlot owners will be certified; however, it is quite conceivable woodlot owner groups rather than individuals could afford to be certified. If a group of woodlot owners were to become certified it may create a greater demand for individual woodlot owners' products.

At this point, it does not appear the buying groups are willing to pay a premium for certified products; however if the law of supply and demand come into play, and there are not enough certified products to supply the demand, the market may pay a premium to receive such a product.

If certification comes to be, an opportunity could be created for woodlot owners who manage their woodlots on a sustainable basis. Their forest products could be in demand, which may increase the value of the woodlot.

LESSON FOUR QUIZ

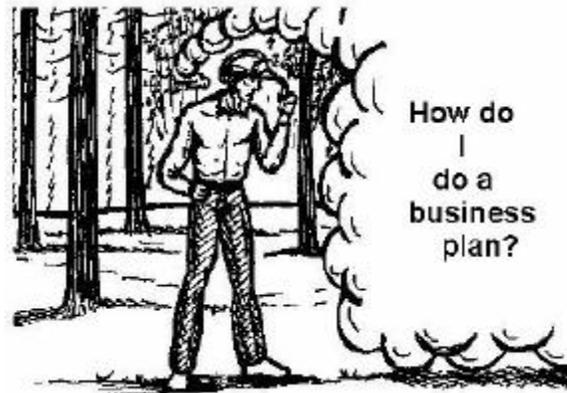
Answer -True or False

1. Boundary line renewal increases the recreational potential of a woodlot.
T F
2. Improper harvesting can decrease the timber value and the recreation value of a woodlot.
T F
3. Investing in silviculture is a way to improve my woodlot; however, I should make sure I get a return on my investment.
T F
4. Ginseng is a popular new health product that can be readily found growing in our province's bogs.
T F
5. Improving a woodlot through building roads, establishing boundary lines and following proper harvesting techniques can increase the timber value of a property.
T F
6. Identifying and developing recreational potential will increase the value of my woodlot.
T F
7. Increasing the value of one resource usually increases the value of another resource on my woodlot.
T F

For questions 8 to 10, please select the best answer.

8. Identifying deposits of gravel, fill and other aggregates _____ the value of your woodlot.
A) Decreases B) Increases C) Has no impact
9. Because I am identifying my woodlot in a sustainable way, my woodlot _____ if certification becomes a reality.
A) Will increase in value B) May increase in value C) Will decrease in value
10. Using silviculture incentives to increase the value of my woodlot will _____, therefore generating a higher return on my investment.
A) Reduce my cost of silviculture work B) Help me find mineral deposits
C) Prevent me from managing my woodlot the way I want.

Chapter Five: Developing a Business Plan



INTRODUCTION

Whether your woodlot is for hobby or for profit, you should prepare a business plan for it. It is surprising the amount of revenue generated and the expenditures required even if you have acquired the woodlot for a hobby. If managing your woodlot for profit, your financial success will depend on a solid business plan. A business plan is made up of two components, a woodlot management plan and a financial plan. The woodlot management plan is the steering wheel with which you drive your woodlot and the business plan is the gas pedal controlling the speed you carry out activities on your woodlot.

This chapter discusses the components of both the resource management plan and financial plan. You are lead through the steps of building the financial plan, from assessing the market to operating budgets. Suggestions are given on record keeping systems. Upon completion of this chapter, **a step-by-step exercise is located in the Appendix to assist you in developing a business plan for your woodlot.**

Business Plan

A business plan is developed through forecasts - it is a guide to assist us in reaching forecasted results. The most difficult part is the forecasting; that is why people shy away from business plans. Remember, the forecasts are only estimates and the do not have to be exact - all you have to do is get started and you will see very quickly how good yo are at forecasting. It forces you to put your thoughts on paper.

The thought of developing a business plan for a woodlot may seem overwhelming at first, especially when you consider that you are planning for forty or more years in the future! In reality, it does not have to be complicated or overwhelming. If you take the time to forecast in small intervals and frequently update your business plan, it can be enjoyable.

Why do I need a business plan?

A business plan allows you to link your financial goals with your woodlot management plan goals. It also will assist in controlling cost, determine financing, encouraging long term planning, prioritizing conflicting goals and calculating return on investment. Developing a business plan is a process in forecasting how the scheduled activities on your woodlot will impact you financially. After you develop an acceptable plan, it will act as a guide for you to manage our woodlot. A business plan needs constant massaging and updating as events change. Developing a business

plan is not difficult if you do it in stages as listed on the following pages.

Woodlot Management Plan

The first component of a business plan is the woodlot management plan. A woodlot management plan is a resource development guide. It includes the woodlot owner's goals, identifies the resources on the woodlot, and assists the woodlot owner in reaching his goals by developing the resources on the woodlot.

A woodlot resource plan should include the following:

1. Goals:

Activities on the woodlot will be completed in the context of the woodlot owner's goals, with each activity taking the woodlot closer to the goals. Examples of some goals are: good access, personal recreation, maximizing fibre production, maximizing quality hardwoods, increasing wildlife abundance, and maintaining water quality. These objectives are critical because they will have a significant influence on the management activities of the woodlot.

2. Woodlot Description

Woodlot description can be written or described with a woodlot map. Generally, it is an inventory of what is on the woodlot. It may include the following:

- * Boundary lines
- * Roads and ponds on site
- * Timber - volumes, health and age
- * Recreational opportunities and facilities
- * Wildlife features - Bald Eagle nesting sites, deer yards
- * Special features - rock outcrops, cemeteries, etc.

3. Recommendations:

This section is the action plan, what you plan to do.

4. Woodlot Map (Summary of Description and Recommendations):

The plan should contain a map that will identify the location of the resources on the property. It usually shows forest stands, roads, special features, ponds and boundary lines. It will also indicate the locations of recommended treatments. It is a useful planning tool and can be used to keep track of progress and future activities on the woodlot.

In summary, a woodlot plan will state the woodlot owner's objectives for the woodlot and explain how to achieve them. It does not go into detail on the financial impact of the recommended activities.

Financial Plan

The second component of the business plan is the financial plan. It is the financial guide for your woodlot. It will determine how fast you will carry out the activities that are identified in your woodlot management plan. A financial plan will help you identify the amount of money you can invest in your woodlot. It will also assist you in identifying markets, reviewing the strengths and weaknesses of the woodlot owner and woodlot. It should state clear financial goals, and strategies to reach these goals. Both one year and five year forecasts should be produced. Financial records generated will allow you to monitor the woodlot's progress.

1. Market Assessment (Plan)

A financial plan begins with an assessment of the markets and the products you have to market. Managing your woodlot without markets for the products you generate from the woodlot would be difficult. Without markets there would be no revenues to finance the activities on the woodlot. Market research should identify the potential markets available to you.

The first step is to locate existing markets. The second step is to create new markets. Creating new markets for products on your woodlot requires more effort but may give you a significantly higher return for your product than traditional markets.

When assessing potential markets consider how long has the market been available? Is it stable? Where are the potential markets located? Can you economically deliver forest products to the market?

2. Strength and weakness of woodlot owner and woodlot

The second step in developing a financial plan is to identify the strengths and weaknesses of the woodlot and the woodlot owner. Which will make your plan realistic.

If your plans are not realistic, your financial expectations may fall short. One example of a weakness may be that you are an absentee owner, living in another province and have trouble visiting the woodlot yourself. Another common weakness for some woodlot owners is time or lack of it. Everyone has good intentions; however, time constraints limit the amount of work you can do on your woodlot. Strengths may include owning equipment that can be used to extract forest products or having a woodlot that is located close to a large pulpmill and sawmill or a woodlot that oversees a national park or other beautiful scenery.

Take a few minutes to list some strengths and weaknesses that you may have identified in your situation.

Strengths

Woodlot:

a. (Example: Located close to mill, transportation cost low.)

b. _____

c. _____

Woodlot Owner:

a. (Example: Own a farm tractor with winch.)

b. _____

c. _____

Weaknesses

Woodlot:

a. (Example: Located in another County or province.)

b. _____

c. _____

Woodlot Owner:

a. (Example: Lack of time. Job and family demanding.)

b. _____

c. _____

These strengths and weaknesses will be used in Appendix I to develop your personal business plan for your woodlot.

3. Financial Objectives

Although difficult, setting financial objectives is crucial in developing a business plan. You need to set a goal to get you started. You may find out later that it is too aggressive or not aggressive enough but at least it is a starting point - in the process you can come back and change your goals.

In fact, you will probably change your financial goals. At first, take your best shot! Remember, be specific, so that objectives are measurable.

Having measurable objectives allows you to evaluate your progress, and the budgeting will help insure you have the resources to meet your objectives.

An example of a measurable objective would be: "I would like to increase the value of my woodlot by 5 per cent per year and generate approximately \$5,000 annually from the woodlot as a second source of income.

List some specific financial goals for your woodlot.

1. _____
2. _____
3. _____

These goals will be used in Appendix I to develop your business plan.

4. Strategic Plan

The fourth step in developing a financial plan is to develop strategies. Strategic plans are methods you develop to meet both your financial and resource related goals. Reflecting on the strengths and weaknesses of you and your woodlot, you can develop realistic strategies to achieve your goals. This is a critical point in your planning process, since it forces you to prioritize goals and decide if they are achievable. Developing realistic strategies will assist you in your operational planning.

Below is an example of a strategy:

Resource Management Goal: (from woodlot management plan): To harvest over mature timber in the next five years.

Financial Plan Goal: Improve the value of the woodlot by 5 per cent per year and generate \$5,000 annually. There is an abundance of timber on the property, and you don't have equipment or want to purchase it, **your best strategy** may be to hire contractors to harvest and market the timber, paying you a royalty (stumpage) for the right to harvest the timber.

5. Operating Plans and Budgets

Once strategies have been developed to achieve your goals, more current planning can begin. One-year and five-year operating plans are common for small businesses. This forces you to put on paper what you want to achieve in the next year, while keeping it in the context of a five-year plan. Below is an example of a five-year operating plan for a woodlot. A five-year operating plan can be derived from recommendations in your woodlot management plan.

A typical five year plan may look like this:

Year	1	2	3	4	5	Total
Harvest (ha)	4	4	-	4	-	12
Boundary lines (km)	1	-	-	-	-	1
Roads (km)	1	1	1	-	-	3
Site Preparation (ha)	-	-	4	4	-	8
Planting (ha)	-	-	-	4	4	8
Snowmobile trails (km)	-	-	1	-	-	1
Camp	-	-	-	-	1	1

After reviewing your five year operating plan, you are able to develop a five-year budget. By talking with local contractors, and forestry professionals you can estimate the revenues (money coming in) and costs (money you pay out). At this stage, these numbers do not have to be exact, they need only be reasonable estimates.

By applying estimated revenues and costs to your five year operating plan above, you can develop a five year budget which may look as follows:

YEAR	1	2	3	4	5	Total
REVENUE						
Stumpage	9000	9000	-	9000	-	27000
EXPENSES						
Boundary	1600	-	-	-	-	1600
Roads	3000	3000	3000	-	-	9000
Site. Prep.	-	-	720	720	-	1440
Stock	-	-	-	1120	1120	2240
Planting	-	-	-	1067	1067	2134
Trails	-	-	2000	-	-	2000
Camp	-	-	-	-	4000	4000
Total	4600	3000	5720	2907	6187	22414

Revenue - Expenses

+4400	+6000	(5720)	+6093	(6187)	+4586
-------	-------	--------	-------	--------	-------

The five year plan, although not a cash flow forecast, will give you a sense of what cash resources will be required each year. It will also indicate if the activities you are planning are profitable and if the results meet your financial goals. If not, (as in the above example) you can change your strategies, or modify both your financial or resource plan goals and produce another five year budget until your action plan meets both your financial resource management goals.

From your five year operating plan, you can develop your one year operating plan. These can be completed month by month, seasonally or for the whole year. The one year operating plan should be more detailed and accurate than the five year plan.

ONE YEAR OPERATING PLAN

	Spring	Summer	Fall	Winter	Total
Harvesting (ha)	-	-	4	-	4
Boundary lines (km)	4	-	-	-	4
Roads (km)	-	1	-	-	1

From your one year operating plan you can develop a one year budget. Try to be as accurate as possible when developing a one year budget. You should call markets and suppliers for current prices. A one year budget generated from the action plan above may look like this:

Revenue

Harvesting

(Four ha have been cruised, there is supposed to be 350 cords).

A contractor has offered \$30/cd in one lump sum payment as stumpage (the right to harvest the wood).

10,500

Right-of-way harvest

50 cords @ \$20/cord

1,000

Total Revenues

\$ 11,500

A

Expenses

Boundary line - A local surveyor will establish one kilometer of boundary line

1,500

Road Construction - A local road construction contractor gave me an estimate for building the road; however, I must harvest the right-of-way myself.

Road Construction

1,800

Culverts

500

Gravel		<u>800</u>	
	Total Expense	\$ 4,600	B
	SURPLUS	\$ 6,900	(A-B)

Developing operating plans and budgets are critical. They force you to put your plans on paper and generate projected financial results which you can compare to your financial goals. If the results are not acceptable to you, you can change your strategies or your goals.

Business plans need constant updating, review your business plan at least once a year. Events will happen that will cause you to change your plans and strategies. You can bet on it. However, if you use the above process you can forecast how these changes will impact your financial health.

Record Keeping

General records are not part of the planning process however, proper record keeping allows you to compare what you forecast to what you actually complete. Keeping records is not exciting; however, it is the only way to know if you are meeting the financial goals set out in your financial plan.

To have good records requires a system to keep track of the records generated during operations. Establish two sets of records; one we will call *General* records and one we will call *Financial* records. These types of records to be kept in these categories are discussed in more detail below.

General Records

General records include the records on the woodlot that are not financial. You do not need an elaborate filing system to hold these records. However, a small filing cabinet would be appropriate; if unavailable, a filing box would do the job.

General woodlot records tend not to be annual records. These are records you would like at your finger tips from year to year; therefore, a place has to be allocated in your filing cabinet to contain them year after year. Some example of general files are listed below:

1. Title of Property

A file should contain information such as the deed, certificate of title, a survey map, and boundary line or right-of-way agreements.

2. Woodlot Management Plan

A file folder should contain your woodlot management plan and a copy of all maps relating to activities on your woodlot.

3. Technology

File any new information regarding technology that may pertain to your woodlot. You may not use it today; however, there may be a need for it in the future.

4. Woodlot Owners Association

Retain information on associations, cooperatives, etc.

Financial Records

Financial Records are usually annual records. The calendar year is usually used as a reporting period. At year end, they can be taken out of the filing cabinet and stored in a more permanent location such as a vacant room in the house, basement, etc. For very small operations this may not be necessary, and they should be kept in your filing cabinet. You should keep these files for at least seven years, but longer if possible.

Most of the time, financial records are used to calculate income for taxation purposes. However, financial records can also be used to assist you in the management of your woodlot. This type of record keeping is sometimes termed “managerial accounting.”

A financial record keeping system should be simple in the beginning with flexibility to grow and develop with the business. The simplest form of financial record keeping is a system that keeps track of revenues and expenses. This system requires a calculator, four file folders, and a synoptic journal which can be purchased at any stationary store. This system allows you to develop a statement of income (Income Statement). Comparing your one year budget to your Income Statement will allow you to compare your forecast to how you actually did financially.

The general journal will be used to record all financial transactions, as indicated in the illustration. It is simply a lined scribbler with columns. The columns allow you to record the date of transaction, whether it is a revenue or expense, and the amount. It may be useful to group revenues or expenses into categories such as timber, recreation, roads, boundary lines, etc. To simplify record keeping, you should record on a cash basis in your general journal.

GENERAL JOURNAL		INIT	DATE
Donovan Kyle's Woodlot		PREP.	/ /
		APP.	/ /
Date	Description	Revenue	Expenses
1 June 1	Cheque from the "ABC" Mill	700. ⁰⁰	
2 June 3	Payment to Surveyors (Cheque # 37)		1500. ⁰⁰
3 June 6	Cheque from local outfitter	400. ⁰⁰	
4			
5			
6			
7			

Figure 32. A general journal.

As needs require, you may want to record income and expense on an accrual basis - it is suggested you consult an accountant to set up your books for accrual recording. There are a few more accounts to keep track of. The only difference between accrual and cash accounting is the time when you record the revenues and expenses in your journal.

Cash basis is recorded when you receive the money or pay the bill, while an accrual basis the transaction is recorded when you earn the revenue or occur the expense.

Once your general journal is prepared, you should label file folders for accounts receivable, accounts payable, revenue and expenses.

These file folders will be used to retain the sources documents of your financial transactions during the year.

Note, we will have an 'accounts receivable' folder and an 'accounts payable' folder to put sales slips and invoices in until we get paid or pay for them, at which point we will record them.

Accounts Receivable

This folder contains the invoices you issue. The invoice will be kept in the folder until you receive your payment at which time you will pull it out and place it into your revenue folder.

Accounts Payable

This folder will contain any invoices that are sent to you. They can be kept in this folder until you pay them when they will be placed in the expense folder.

Revenue

This folder will be used to contain all account receivable invoices and sales slips that you have received when you are paid for the products. These are the source documents for income transactions - they are a critical document for any record keeping system. Before inserting them into this folder in alphabetical order, the transactions should be recorded in the synoptic journal.

Expenses

This folder will be used to contain all accounts payable invoices that you have paid and payments records. These are source documents for expense transactions - as with revenue, they are critical documentation for any record keeping system. Before inserting them into this folder in alphabetical order, the transactions should be recorded in the general journal.

All bills should be paid with cheque and revenues be deposited into a bank account. Cheque books and deposits slips generate good records.

Accurately recording the revenues and expenditures will generate an income statement, which can be used to make comparisons between actual and budget income statements.

SAMPLE INCOME STATEMENT

	BUDGET	ACTUAL
Revenue		
Harvesting	\$10,500	\$10,500
Right-of-way Harvest	<u>\$ 1,000</u>	<u>\$ 1,000</u>
Total Revenue	\$11,500	\$11,500
Expenses		
Boundary Lines	\$ 1,500	\$ 1,550
Roads	<u>\$ 3,100</u>	<u>\$ 3,250</u>
Total Expense	\$ 4,600	\$ 4,800
Budget Surplus	\$ 6,900	\$ 6,700

The totals in this example indicate the year wasn't quite as good as the financial forecast. By reviewing the individual accounts, the reason for the difference can be found.

This simple system to keep track of financial records has two purposes:

1. Revenue and expense information is readily available to compare to the budget, and you can be used to assist in reviewing this year and planning for next year.
2. Records of transactions are available to prepare your year end tax return.

Other statements discussed on page 42 can be used to enhance record keeping and managerial accounting; however, they are not required to get you started.

FINANCING

Once you have developed your annual operating plan, to meet your financial goals, and record keeping system, thought must be given to financing the operations. If you have a pool of cash available, you may not have to give much thought to this. However, most people do not have cash waiting to be used.

Cash is required by businesses to pay weekly expenses such as wages, monthly expenses such as goods and services used, interest, insurance, etc., and yearly expenses such as taxes.

Where do I find the cash to run my business: (woodlot)?

1. Sales

One of the best ways to generate cash is through sales of products from your woodlot. Unfortunately, woodlot owners cannot always sell enough products to meet all their obligations.

2. Borrowing

a) Suppliers of goods and services - most suppliers give you 30 days to pay their invoices. In fact, they are lending you money for 30 days. Most businesses use their suppliers as a source of cash; however, this form of financing has to be managed properly or you will upset your suppliers and it may end up costing you more in late charges or loss of services.

b) Family and friends - family and friends are a source of cash when needed; however, the loan should be treated in a business-like way with a note being generated and an interest rate attached. It is a win-win situation when it is handled properly. The borrower raises money for operations, the family member or friend places their money with a secure investment and receives an appropriate interest rate for the use of the money.

c) Financial Institutions - borrowing short term money from financial institutions is a good source of cash to run your business or woodlot. Two common sources of financing are:

1. Short term note - the financial institution lends you a lump sum of money and you promise to pay it back in a certain period of time, with interest.

2. Line of Credit - the financial institution will pre-approve a credit limit, which you can borrow against when you require money to operate your business. A line of credit is becoming the method of choice by most business owners because they only borrow and pay interest on the money they use.

If borrowing with a line of credit from a financial institution, they may require you to do a cash flow so they can identify the times of the year you will require the money. This is not a difficult task.

Cash flow forecast

This is a forecast of money flowing into and out of a business. The forecast is developed by making assumptions on how long it will take to receive money generated from your sales (I.E. 30 days, 60 days, etc.) and how quickly you pay your bills. By using the annual budget, you can predict your cash flow and identify times during the year when cash will be short.

If you expect to have a lot of activities happening on your woodlot and do not have cash to meet the commitments, you may want to develop a cash flow forecast. You should consult an accountant or book keeper to get you started.

A financial institution may also require a list of what assets the business (woodlot) has and what liabilities the business (woodlot) owes. The financial institution requires this to get a feel for the business' ability to pay back the loan. A common way is in the form of a balance sheet.

Balance Sheet

The balance sheet is a statement that shows the financial position of a business (woodlot) at a particular point in time. It lists the assets, liabilities and worth (equity) of the business (woodlot). It gives leaders an idea of what the business is worth and allows you to track your investments.

In the example below, we see that the Burt Smith woodlot as of December 31, 1996 is worth \$32,000. This amount is calculated by subtracting the liabilities from the assets of the woodlot. the amount (\$32,000) is also referred to as the Equity. Equity is the book value of the business (woodlot). It may not reflect the actual value, since the only way to calculate this is to obtain a detailed appraisal of the assets or sell all the assets and pay all the liabilities. What is left is the actual figure the woodlot is worth.

Book keeping systems will generate a balance from your daily transactions. These skills can be picked up at a book keeping course.

BURT SMITH - WOODLOT Sample Balance Sheet December 31, 1997

Assets

Cash	\$ 2,000
Receivables	\$ 6,000
Bare land	\$ 10,000
Timber Value	<u>\$ 25,000</u>
Total	\$ 43,000

Liabilities

Payables	\$ 1,000
Loan	<u>\$ 10,000</u>
Total	\$ 11,000

$$\text{Equity} = \text{Assets} - \text{Liabilities}$$
$$32,000 = 43,000 - 11,000$$

Cash is money in the bank account of the business (woodlot)

Payables is money owed to suppliers

Receivables are moneys owed to the woodlot by buyers

Loan is long term loans used to purchase the woodlot

Bare land is the value placed on the bare land

Timber Value is the value of timber on the woodlot

Equity is the book value of the business (woodlot)

LESSON FIVE QUIZ

Answer -True or False

1. A woodlot management plan and a financial plan will guide you in the successful management of your woodlot.
T F
2. Two types of records woodlot owners should keep are general records and financial records.
T F
3. Financial records should include general information on your woodlot including the property deed, certificate of title and survey map.
T F
4. Financial records are used to determine net income for taxation purposes and to help you manage your woodlot successfully.
T F
5. A simple system of financial record keeping will keep track of revenues and expenses.
T F
6. If you have acquired your woodlot as a hobby rather than as a business, it is recommended that you not prepare a business plan.
T F
7. Financial goals should be broad and flexible in order to allow for events that cannot be forecasted.
T F

For the following questions, please select the best answer.

8. Developing a business plan begins with:
A) strategic planning
B) market assessment
C) developing operational plans
D) all of the above
9. One year and five year operating plans are usually developed from:
A) woodlot management plan
B) a woodlot management plan, strategies, goals and market analysis
C) financial goals
D) all of the above
10. After you develop a five year budget, you will be able to determine:
A) if your financial plans conflict with resource management goals
B) profitability of activities
C) a feeling for cash flow, although a cash flow forecast may be better
D) all of the above

GLOSSARY

Absentee Owner: A woodlot owner owning a woodlot in one location with a place of residence in another.

Accounts Payable: Amounts which a business owes its creditors for goods and services.

Accounts Receivable: Amounts which a business expects to collect from its customers for goods and services sold to them on credit.

Aerial Photograph: Color photographs (10" x 10") that are taken from a fixed-wing plane. They are generally taken by the province of Nova Scotia every ten years.

Aggregates: Refers to gravel, stone, slate, etc.

Asset: Economic resources owned by a business.

Balance Sheet: A financial statement which shows the financial position of a business entity by summarizing the assets, liabilities and equity at a specific date.

Budget: A financial forecast.

Cash Flow: Forecast of cash being received and paid out by a company.

Edge: Refers to the edge of forest stands, fields, swamps.

Extraction Cost: The cost of moving timber from the stump to a road system.

General Journal: A book of original entry, a day-to-day entry for each transaction in a business.

Income Statement: A statement of income and expenses.

Mortgage: A legal agreement between the lender and borrower that states the obligations of both parties in regards to payback terms, interest, defaults, etc.

Selection Cut: A partial cut in uneven-aged stands that encourages natural regeneration.

Shelterwood Cut: A partial cut in even-aged stands that encourages natural regeneration.

Stand: A group of trees with similar characteristics, such as species, age, height, volume, etc. Stands can range in size from <1 hectare to >100 hectares.

Stereoscope: An instrument with a set of mirrors that creates a three dimensional image over two overlapping photographs.

Stumpage: A royalty paid to a woodlot owner by a contractor for the right to harvest the resource (fibre).

ADDITIONAL READING

Bissex, Glynn (1995), **Woodlot Recreation Manual**, Nova Scotia Department of Natural Resources.

Brathwaite, Glen C. P. Eng. (1992) **Woodlot Roads, Stream Crossing** Canada-Nova Scotia Cooperation Agreement for Forestry Development 1991-1995.

Environmental Standards for the Construction of Forest Roads and Fire Ponds in Nova Scotia - April 27, 1983, NS. Department of the Environment *et. al.*

Pansegrau, Gary E. (1977) **Century 21 Accounting** - Canadian Edition. Gage Publishing Ltd, Toronto.

Computer Accounting Systems

Simply Accounting
4 Home productions
Computer Associates, 1770 Burrard Street,
Vancouver, BC

Mind Your Own Business
Bestware, Toronto

* Each of these programs cost approximately \$200.

Web-site

The Canadian/British Columbia Business Service Centre
Interactive Business Planner
<http://www.sb.gov.bc.ca>

QUIZ AND EXERCISE ANSWERS

Lesson One Quiz

Answers: 1. T 2.T 3.F 4.F

Matching woodlot investment objectives with available woodlot.

Answers: 1.C 2.A 3.D 4.B 5.E

Lesson Two Quiz

Answers: 1.T 2.F 3.T 4.T 5.F 6.F 7.T 8.T 9.F 10.T

11. Any of these is correct: Bareland, Timber, Recreation, Mineral, Frontage, or Access

Lesson Three Quiz

Answers: 1.T 2.F 3.T 4.F 5.F 6.F 7.T 8.F 9.T 10.F

Threats to a woodlot

FIRE	INSECTS DISEASE	VANDALS POACHERS	WIND	LIABILITY
				C
A	D	C	I	O
B	E	F	M	L
C	G			F
I	H			
J	I			
L	K			
M	M			
	N			

Lesson Four Quiz

Answers: 1.T 2.T 3.T 4.F 5.T 6.T 7.T 8.B 9.B 10.A

Lesson Five Quiz

Answers: 1.T 2.T 3.F 4.T 5.T 6.F 7.F 8.B 9.B 10.D

APPENDIX

DEVELOPING A BUSINESS PLAN

Below is a step-by-step exercise to help you develop a business plan for your woodlot.

A. WOODLOT (RESOURCE) MANAGEMENT PLAN

STEP 1 Woodlot Owner Goals

List resource related goals you have for your woodlot. They should be specific. Here are two examples to get you started.

1. To build a camp and enhance the wildlife on the property
2. To harvest what I need to, but grow the woodlot for fifteen years and liquidate some of the growing stock to fund my son and daughter's education.
3. _____
4. _____
5. _____
6. _____
7. _____

Step II Professional Advice

After developing your goals, it is good practice to get advice from a forestry professional to prepare a woodlot management plan based on your goals. This plan will be used to guide your future operational plans. Working with the forestry professional at the time of plan preparation will help ensure the plans meet your objectives.

B. FINANCIAL PLAN

STEP III Markets

This step initiates the financial plan. Investigate available markets, and if possible, develop new markets. Remember, markets you developed your self may generate a better return than traditional markets. List the markets you acquire below (complete with phone numbers and addresses). You can list markets according to products.

Timber Markets

1. _____
2. _____
3. _____
4. _____

Recreational Markets

1. _____
2. _____
3. _____
4. _____

Other

1. _____
2. _____
3. _____
4. _____

STEP IV Strengths and Weakness Assessment

Transfer the lists of strengths and weaknesses of the woodlot and yourself that you determined in Chapter 5. This step forces you to put the strengths and weaknesses on paper where you can refer back to then when developing your strategies in STEP VI.

Strengths

Woodlot:

- a. (i.e. Located close to mill, transportation cost low)
- b. _____
- c. _____

Woodlot Owner:

a. (i.e. Own a farm tractor with winch)

b. _____

c. _____

Weaknesses

Woodlot :

a. (i.e. Located in another county or province)

b. _____

c. _____

Woodlot Owner:

a. (i.e. lack of time. Demanding job and family)

b. _____

c. _____

STEP V Financial Goals

List financial goals that you developed when completing Chapter 5. Remember to state clearly and be specific.

1. *I want to generate \$5,000/year, etc*

2. _____

3. _____

4. _____

5. _____

STEP VI Strategic Plan

Review the markets you identified in Step III and your strengths and weaknesses in Step IV. Then develop strategies to achieve both your resource goals STEP 1 and your financial

goals STEP V.

You may find all your goals are not compatible and you will have to prioritize your goals. After prioritizing your goals, working with your strengths, weaknesses and markets, you can develop some realistic strategies to achieving your goals.

Strategies:

1. Harvesting strategies: (ie. *To use contractors and harvest old timber first.*)
2. Silviculture strategies: (ie. *To work with natural regeneration.*)
3. Recreation strategies: (i.e. *To make woodlot assessable to public*)
4. Wildlife strategies: (i.e. *To improve wildlife habitat by following wildlife guidelines*)
5. _____
6. _____

Remember, strategies will state the direction (method) with which you will manage your woodlot to achieve your goals.

STEP VII Operating Plans (One and Five Year)

Using the recommendations in your woodlot management as a guide, list the activities you want to achieve in the next five years.

FIVE YEAR OPERATING PLAN

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
1. <i>i.e. boundary line (km)</i>	1				
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

From your five year operating plan, you can generate a five year income forecast.

FIVE YEAR BUDGET

	Year 1	Year 2	Year 3	Year 4	Year 5
Revenues					
Expenses					
<i>i.e. Boundary Line</i>	1600				
Surplus/ Deficit					

After estimating the revenues or costs of the forecasted activities, place these estimates on your five year budget as in the example above.

After completing your five year budget you will be able to compare the results of the forecast to see if the numbers meet your financial goals. Remember, the activities you listed in your forecast will meet you resource goals; however, the financial results may not meet financial goals.

If the forecast does not meet both your resource and financial goals, you may have to modify some of your strategies. You may also have to modify some of your goals (financial and resource) and go through the process again. It may take several runs before your five year budget generated by your five year operational plan meets your financial goals.

Once your five year forecast meets both your financial and resource goals, you can develop your one year operating plan.

ONE YEAR OPERATING PLAN

ACTIVITY	Spring	Summer	Fall	Winter

ONE YEAR BUDGET

REVENUES	\$
EXPENSES	
SURPLUS/DEFICIT	

Does the bottom line meet your financial goals in STEP V? If not, try again. Keep trying until your budget meets you financial goals.

Once you are satisfied with your business plan, the fun begins. As you implement it, compare your progress to your forecast. Remember, woodlot management is a small business that requires planning! Without a plan it is difficult to control where the business is heading.