



# Financing Stewardship Forestry:

**A Guide to Conservation-Based Markets and  
Programs for Small Forest Landowners**



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NNRG, Port Townsend, Washington

**ABOUT The Northwest Natural Resource Group** – For over 15 years Northwest Natural Resource Group (NNRG) has been leading efforts to make ecological forestry a paying proposition in the Pacific Northwest. Our Northwest Certified Forestry program uses protocols designed by the Forest Stewardship Council ([www.fscus.org](http://www.fscus.org)) to provide a broad suite of economic, educational and informational benefits to small forest landowners in Washington and Oregon. More info at [www.nnrg.org](http://www.nnrg.org), [www.nwneutral.org](http://www.nwneutral.org) or 360-379-9421.

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## Section I: Introduction

This guidebook provides a point of entry into an emerging marketplace associated with conservation-based forest management, in which landowners can be paid to sustain and produce a diverse range of goods and services including and beyond traditional wood products. It is intended to help small forest landowners learn and take advantage of a diverse array of conservation-based markets and programs available through public agencies and private organizations. Utilizing these opportunities can help landowners diversify income streams from their property and reduce ongoing management costs. This book is a resource for forest landowners who are interested in keeping their lands vibrant, productive and financially sound through the generations.



This guidebook focuses on four primary markets and programs for financing stewardship forestry and offers several examples of landowners who have used one or several of these programs in combination. The markets and programs this guidebook addresses are:

- 1. FSC Certification and Markets**
- 2. Federal Conservation Cost-Share Programs**
- 3. Carbon Offset Markets**
- 4. Conservation Easements**

The guidebook is not intended as a complete solution, but rather to guide landowners to resources and information they can use, including: publications, natural resource consultants, public agencies, websites and other educational resources. This guidebook was written to be used as a companion guide to the various landowner workshops offered by Northwest Certified Forestry, including:

- Conservation Options for Small Woodland Owners
- Diversifying Income Opportunities on Small Woodlands
- Conservation Programs for Small Woodland Owners: A Coached Planning Workshop

### *Conservation-Based Markets Give Landowners Flexibility*

Most private small woodland owners choose to manage their forestlands for a range of values and uses including timber harvest, recreation and wildlife. At the same time, there are values and resources that the public benefits from and expects from private lands, such as air and water quality, flood mitigation, carbon sequestration and wildlife habitat. Today this public demand for benefits and resources is beginning to translate into markets and public programs that support private landowners in providing these benefits and resources.

| Many forestland owners maintain their land for reasons beyond just monetary gain. They may *need* to make a profit, but they also *want* to leave a valuable asset for future generations, keep it in the family, and leave the land better than they found it. In addition to providing a livelihood, their forests represent an asset that has a value that will extend well beyond their own lifetimes.

Many small forestland owners have invested much of their lives in improving and maintaining their lands. As a result, they often have a more valuable stock of “ecosystem capital” in their land than their industrial counterparts – such as older and more diverse forest stands, better wildlife habitat and healthy streamside zones. This is a distinct advantage in today’s economy and can translate to diverse income opportunities for landowners who want to manage for conservation values.

The markets and programs described herein provide options for all types of forest landowners, from those who harvest timber on a regular basis to those who are more interested in taking a passive management approach. All programs referenced in this guidebook are non-regulatory and completely voluntary. If used together effectively, they can maintain management flexibility for current and future property owners while ensuring the protection of conservation-values into the future.

While more technical and financial assistance programs exist now than ever before, it should be noted that many of these programs and markets are still in their infancy, may provide value only in certain circumstances, and vary depending on the political and economic climate of the time. It behooves all landowners to take an active role in making these programs successful and in advocating for policies to stimulate growth of the market.

This guidebook is intended as a helpful starting point for landowners who want to explore all options from a practical point of view. We encourage a systematic, conservative approach to evaluating the costs and benefits of each program individually, and help illustrate the tradeoffs and/or synergies of using the programs in combination. Most importantly, this guidebook offers expanded opportunities for landowners to ***express their values*** through forest management decisions and actions.

**Using this guide should not be a replacement for seeking the help of a qualified consultant or other professional resources.**

**We must do everything we can to protect the health of our forests—for the health of the planet that our children and grandchildren will inherit,”**

**- Peter Goldmark,  
Washington Commissioner of  
Public Lands 2010**

## Section II: Financing Stewardship Forestry

This guidebook contains valuable information for small forest landowners on how to finance stewardship forestry by reducing costs and generating additional income from careful, ecologically mindful forest management. The tools and strategies described here were selected for their ability to support a conservation-based approach to forest management by making it more profitable, with more favorable pricing and cash flow. The guidebook also discusses how to use these various conservation programs in unison to optimize the value of conservation forestry.

It should be noted that utilizing conservation programs individually or in combination can be a complicated, confusing process even for professionals who specialize in executing complex conservation and real estate deals. Tapping new markets requires a great deal of patience, commitment and a willingness to partner with organizations and/or consultants that share similar goals and objectives.

Fortunately there are many resources and support services created to assist landowners in this process. With more options becoming available over time, diversifying income sources from forestland can be achieved with a little work.

The following pages provide an overview of four core conservation based markets and programs and suggest a 7-step process which landowners can use to take advantage of these opportunities.

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willingness to partner with  
organizations and/or  
consultants that share  
similar goals and objectives.**



## Core Conservation-Based Markets & Programs

This guidebook covers the following four conservation-based markets and programs:

### *FSC Certification and Markets*

Forest Stewardship Council (FSC) certification is an internationally recognized third-party independent forest management certification program that provides market recognition for good forest stewardship. FSC is a brand that allows landowners to distinguish their wood products in the marketplace and often receive a premium price. Small woodland owners in the Pacific Northwest can obtain FSC certification from Northwest Certified Forestry as well as receive marketing assistance for their timber and the value-added lumber produced from their forests.

### *Federal Conservation Cost-share Programs*

The USDA Natural Resources Conservation Service manages several “cost-share” programs that provide financial assistance for wildlife habitat enhancement and timber stand improvement activities. Through programs such as the Environmental Quality Incentives Program and the Wildlife Habitat Incentives Program, the NRCS “shares” the cost of improving forestland for its ability to provide public benefits and services. .

### *Carbon Offset Markets*

As the significant role forests play in the atmospheric carbon cycle becomes more and more apparent, markets are emerging to pay forest owners for sequestering and maintaining carbon in their forests. Through programs such as NNRG’s *NW Neutral*, a landowner can be paid for the *additional* carbon they store in their forest that is above and beyond a recognized *baseline*. Typically this translates to growing older timber and/or retaining higher volumes of timber during harvesting.

### *Conservation Easements*

A conservation easement is a legally binding agreement not to develop part or all of a property permanently or for a specified period of time. The property still belongs to the landowner, but land-use restrictions are placed both on the current landowner and on subsequent landowners. In some cases conservation easements can provide income or tax benefits to a landowner in exchange for the long-term conservation of the land.

### *Other Opportunities*

Other conservation programs and opportunities are discussed to a lesser degree in this guidebook and include:

- “Current-use” property tax designation through a County’s Assessor’s Office
- Managing non-timber or specialty forest products
- Other “ecosystem service” markets
- Additional local, state and federal financial and technical assistance programs



Refer to Appendix 1. Resources Directory for details on these programs.

### Take a Systematic Approach

As a forestland owner or manager you know that decisions for good stewardship cannot be rushed. Your choices now will influence the character and productivity of your land for decades and generations to come. Reaching your long-term objectives requires a patient, systematic approach based on a thorough understanding of your land and its natural resources. It also requires a sense of strategy and timing for making key decisions and actions.

Utilizing conservation-based market opportunities, whether for certified wood products or ecosystem services, presents a number of new and possibly unfamiliar options which you will want to consider thoroughly before making any decisions. Fortunately, new forest management options rely on the same foundations of information and planning which most landowners are already familiar with:



1. A detailed assessment and/or inventory of the forest, its resources and the potential goods and services it can provide
2. A forest stewardship plan which guides management actions over time to achieve a landowner's goals and objectives for their land

Inventory and planning processes can carry certain costs for the landowner, which tend to increase as the complexity of the project and size of the property grows. You should factor these costs into the expected return on investment for each management action, whether it is a financial or environmental return, and have the necessary capital to invest at the outset. This guide offers a step-wise approach which encourages landowners to build one decision or action upon the next, and to combine steps to achieve multiple objectives efficiently.



## Step 1: Learn and Explore Your Options

### *Landowner Workshops*

While this guide is a valuable resource on its own, landowners will get the greatest value from it when used in conjunction with three workshops offered by Northwest Certified Forestry. These are:

<b>Landowner Workshops Offered by Northwest Certified Forestry*</b>		
<b>Conservation Options for Small Woodlands</b> ½-day seminar introduces landowners to voluntary strategies and mechanisms to protect forestland for future generations while reducing costs and generating income	<b>Diversifying Income Opportunities on Small Woodlands</b> 1-day seminar introduces strategies and tools for maximizing economic potential of conservation-based forest management	<b>Conservation Programs for Small Woodland Owners: A Coached Planning Workshop</b> 1-day workshop which provides an in-depth exploration of specific strategies and tools tailored to individual landowners' management goals and plans
*Check <a href="http://www.nwcertified.org">www.nwcertified.org</a> for a schedule of upcoming forest landowner workshops.		

### *Seek out Additional Information and Resources*

Beyond Northwest Certified Forestry's workshops and guidebooks, there are many other excellent resources and sources of information which you should explore to help you understand and evaluate the available options. Additional Resources are recommended at the end of each section of this guidebook. Also, a *Directory of Resources and Markets* is included in Appendix 1 of this guidebook, which provides direct contact information, websites, and other reference materials. Landowners can also contact Northwest Certified Forestry directly for up-to-date information on all technical, financial and educational resources available to them.

### *Use the Worksheets in this Guide*

Two worksheets are provided with this guidebook to help you develop a strategic plan for the long-term viability of your forest. These worksheets will help you balance your personal and financial objectives with a conservation-based approach to forest management. These worksheets are:

- Forest Stewardship Plan – Pre-planning Worksheet
- Conservation Markets Planning Worksheet

#### **Forest Management Plan Templates**

NNRG has developed two *forest management plan templates* to help landowners develop a forest management plan that meets FSC certification requirements. NNRG also has a variety of sample forest management plans that were developed by our members

These resources are available on our website at: [www.nwcertified.org](http://www.nwcertified.org), or by calling 360-379-9421.

## Step 2: Create a Forest Stewardship Plan

Taking the time to create a forest stewardship plan is a first step to access many of the programs and markets described in this guide. Each specific program may have special requirements which need to be included in your management plan, but the basic content is the same. Writing a plan will help you understand your forestland better, and help you clarify your goals for the forest over time. It will also help you decide what additional investments you may need to make to acquire good inventory data or conduct intermediate management practices such as pre-commercial thinning.

Get a good idea of all the programs and markets you may want to utilize so you can create a plan that will serve all your needs. You can do a lot of the legwork yourself, and access free technical assistance to save money for the in-depth inventory and analysis you will need in order to access particular markets and programs.

These resources will help you get started, but in many cases you may need the services of a qualified forester or resource professional to help you complete your management plan and create the necessary documentation.

### Forest Stewardship Planning Workbook

The WSU Extension Forestry program has developed an excellent guidebook that walks landowners through the entire process of developing a forest stewardship plan for their property. You can find the publication on-line at:

<https://cru84.cahe.wsu.edu/ItemDetail.aspx?ProductID=13973>

## Step 3: On-site Consulting and Technical Assistance

A number of private organizations and public agencies provide free -consultation and technical assistance to rural landowners. Some of these organizations and agencies include:

1. Northwest Certified Forestry
2. State-level Departments of Natural Resources or Forestry
3. USDA's Natural Resources Conservation Service
4. Conservation districts
5. State university forestry extension programs
6. Local land trusts
7. Local conservation organizations
8. Private forestry consulting companies

As part of the process of developing a forest management plan, you should review all of these resources, the services and programs they have to offer and document which resources are the best fit for you. All of the organizations and



agencies have websites and can provide publications on their programs. Additionally, many of these organizations and agencies will provide a no-cost site visit to help a landowner evaluate conservation options for their land and discuss specific programs in detail.

For a list of the organizations and agencies that provide assistance to small woodland owners, please visit the Resources Directory in the Appendix 1.

#### **Step 4: Conduct Forest Inventory and Documentation**

Beyond the basic inventory you conduct for your forest stewardship plan, some conservation programs may require further inventory and documentation. For example, a conservation easement may require an initial property survey and inventory of conservation values that creates a baseline against which future monitoring can be compared. Additionally, landowners are always advised to conduct a timber inventory, or cruise, prior to arranging a timber sale. Selling carbon offsets will also require a detailed inventory of forest biomass in order to estimate saleable carbon volumes.

The requirements of any additional inventories should be clearly defined and understood prior to entering any agreements. All the necessary protocols and tools, such as software, should be provided by the brokering organization or an appropriate resource professional. The costs of this research will in most cases be paid by the landowner, or out of the proceeds of the sale of timber, carbon or other forest resource. Be sure to clearly understand the costs and requirements of any program before deciding to participate.

#### **Step 5: Forest Ownership Business Plan**

A forest stewardship plan should be accompanied by at least a basic business plan designed to help you make thoughtful decisions about long term investments, cost/benefit analysis, and periodic and annual cash flow needs and projections. A business plan will define the

#### **A Word about Legal Agreements**

Some of the programs and markets described here involve legal agreements which may limit the type and/or intensity of forest management activities. Additionally, some legal agreements act as a long-term encumbrance on the title of a property, and the obligation to abide by the terms of the agreement carry forward to future landowners. These terms can last from a few years to 100 years or even “in perpetuity”. The terms of these agreements are typically negotiated between the landowner and an organization or agency, and therefore can be designed to provide a landowner as much flexibility as possible while still protecting the underlying conservation values of their land.

Entering such contracts creates an obvious need for “due diligence” to clearly understand the terms of the agreement, and to negotiate for the future options and desired flexibility. You will want to have any agreement reviewed by an attorney and/or tax planner to understand its implications before signing.

preferred and alternative approaches to bundling and sequencing conservation programs in a manner that complements the forest stewardship plan.

The *Conservation Markets Planning Worksheet* on page 17 of this guidebook is a useful tool for evaluating the financial aspects of different conservation programs. This worksheet can be used to evaluate the financial values of conservation programs in aggregate or by themselves.

As you update your forest stewardship plan with new information and document management practices on your property, you should also update your business plan with new information, new conservation programs and the financial results of current forest management activities.

### Step 6: Apply for Current Use Taxation

Every county government taxes land according to its dominant use, be it residential development, farming, forestry or another use. You should review the tax statement from the County Assessor's office in order to verify the land-use designation the county has applied to your property. If the land-use designation is residential, or some designation that is incompatible with forestry, you may be paying more taxes than necessary on your property. After creating a forest stewardship plan, you can apply for a forestry related *current use tax designation* through your County Assessor's office. Once enrolled, property taxes will be assessed according to the value of the land's current use rather than its "highest and best use". Current use taxation designations provide landowners a tax break when their land use meets the criteria for farm/agricultural, timber land, open space, and/or forest land. Tax savings are significant and can save a landowner as much as 90 percent the rate of a residential land-use designation for your land.

Current use taxation encourages landowners to keep acreage in forestry use by reducing land values and their associated tax rate. So if a landowner is feeling the pressure of rising property values and increasing taxes, but doesn't plan to develop their land for at least the next ten years, applying for current use tax designation is a "no-brainer."

### Step 7: Bundling and Sequencing Conservation Programs

In traditional timber management, the timing of timber harvesting and other management activities can be crucial factors influencing the quality, quantity and value of wood products. The same goes for a conservation programs, but there are even more factors to consider depending on which programs and markets you are interested in.

Some of the programs and markets described in this book can be combined or "bundled" to reduce costs and increase income from multiple sources. This can be a very effective strategy for generating income, especially when traditional timber markets are depressed or if a landowner is primarily interested in the conservation values of their land. However,



enrolling in one conservation program may preclude participation in others depending on the terms of the contractual agreement. For example, selling carbon offsets will limit the amount of timber that can be harvested for up to 100 years.

Through careful sequencing, you may be able to bundle multiple conservation programs so they do not conflict with each other and provide optimal value. For example, you could sell carbon offsets from your land while you still have full management control of your timber, then grant a conservation easement that protects your forest in perpetuity after the term of the carbon contract have ended.

This approach to bundling and sequencing will be further discussed in the breakout boxes in subsequent chapters.

## Forest Stewardship Pre-Planning Worksheet

This worksheet is intended to help landowners begin developing a forest stewardship plan. It can be used in conjunction with Financing Stewardship Forestry workshops by NCF. Please take about 30 minutes to give brief 1-2 line answers prior to attending an NCF workshop. If you own more than one parcel, you can complete one worksheet per parcel.

<b>Landowner Name:</b>	<b>Name of Property:</b>	
<b>Physical Address:</b>	<b>Parcel #:</b>	
<b>General Property Description</b>		
<b>Current Use Tax Designation:</b>		<b>Primary Tree Species</b>
<b>#Acres Non-Forest:</b>		
<b>Total Acres:</b>		
<b>#Acres Forest:</b>		
<b>Describe Soils / Site Index Classifications:</b>		
<b>Describe Significant Water Features (e.g. river, lake, wetland, shoreline):</b>		
<b>Describe Other Ecological Features (e.g. mature forest, unique habitats, etc)</b>		
<b>Describe Topography, Elevation, Aspect</b>		
<b>Describe Roads, Culverts, Bridges; and their condition</b>		
<b>Describe Adjacent Land Use, incl. nearby Protected Areas</b>		
<b>Describe Wildlife species you have:</b>		

Forest Management Values and Priorities:			
Please use this section to describe your forest management values and goals. Check All that apply, make notes, and elaborate in the space provided.			
<b>What are Your most important Values and Goals regarding your Forest Land?</b>			
Please Describe your Financial Needs / Goals re: your Land:			
<input type="checkbox"/> Maximize Profit	<input type="checkbox"/> Sustaining Income	<input type="checkbox"/> Nest-Egg Saving	<input type="checkbox"/> Intergenerational Wealth / Asset-Building
Please Describe your Natural Resource Production Values / Goals:			
<input type="checkbox"/> Timber Production	<input type="checkbox"/> Agricultural Production	<input type="checkbox"/> Non-Timber Forest Products	<input type="checkbox"/> Other
Please Describe your Environmental Values / Goals:			
<input type="checkbox"/> Ecological Services	<input type="checkbox"/> Air/Water Quality	<input type="checkbox"/> Wildlife Habitat	<input type="checkbox"/> Carbon Sequestration
Please Describe your Personal Values / Goals:			
<input type="checkbox"/> Recreation	<input type="checkbox"/> Beauty	<input type="checkbox"/> Community	<input type="checkbox"/> Spiritual
Conservation-Based Markets			
Given your Property and Goals, please describe your interest in the Conservation-Based Markets and Programs outlined in this Guide. Check all that apply, make notes, and elaborate in the space provided:			
FSC Certification and Markets:			
<input type="checkbox"/> Group Certification through NCF	<input type="checkbox"/> Value-added manufacturing	<input type="checkbox"/> Marketing Assistance	<input type="checkbox"/> Other
Federal Conservation Cost-share Programs. Describe Management / Restoration Projects you may have Considered:			
Carbon Offset Markets. Why do you think a Carbon Credit Sale may be right for you?			
Working Forest Conservation Easements: Are you interested in ...			
<input type="checkbox"/> Donating a Conservation Easement (possible tax benefits)	<input type="checkbox"/> Selling a Conservation Easement (possible one-time payment)	<input type="checkbox"/> Transfer of Development Rights	
NCF Use:			

# Conservation Market Planning Worksheet

This worksheet is designed to help you perform a first assessment of the revenue and cost factors you need to consider as you evaluate options and develop a business plan for your property. Use it to make notes and preliminary calculations based on your forest resources and your land management goals and values. You may use one sheet per parcel.

<b>Landowner Name:</b>		<b>Name of Property:</b>			
<b>Physical Address:</b>		<b>Parcel #:</b>			
<b>Property Characteristics</b>					
#Acres Forest:		Timber -Total volume:		Carbon - total volume	
#Acres Non-Forest:		Timber - annual harvest:		Carbon - volume/acre	
Total Acres:		Timber - annual growth:		Carbon - acres in set-asides:	
Descriptive Notes:					
<b>Ownership Costs:</b>					
Property Mortgage:	\$	/ year	Insurance:	\$	/ year
Property Taxes:	\$	/ year			
<b>Timber Management Costs / Revenues</b>					
FSC Certification:	\$	/ year	Tree Planting:	\$	
NCF Renewal	\$	/ year	Noxious Weeds:	\$	
Timber Cruise:	\$		Road Maintenance:	\$	
Consulting Forester:	\$		Mowing / Brushing:	\$	
Management Plan:	\$		Logging Costs:	\$ / mbf	
<b>Timber Harvest #1: 20__</b>					
Harvest Type:			FSC Market	Non-FSC Market	
Scope:	#	acres	Log Sale Price	\$ /mbf	\$ /mbf
Volume:	#	bf / acre	Log Sale Revenue:	\$	\$
Total Volume:	#	mbf	Lumber Sale Price	\$ /mbf	\$ /mbf
Logging Costs:	\$		Lbr Sale Revenue:	\$	\$
<b>Management Cost-Share Grant Costs / Revenues</b>					
Management Practice	Stand	# Acres Or Units of Production	\$ Unit Cost	Total Planned \$ Amount	Landowner \$ Cost-Share
1.					
2.					
3.					
4.					
5.					
<b>Conservation Easement Costs / Revenues</b>					
<b>Estimated Preparation Costs:</b>			<b>Sale of a Conservation Easement</b>		
Appraisal:	\$		Full Market Value:	\$	
Tax / Legal Counsel:	\$		Value Dev. Rights:	\$	
Stewardship \$:	\$		Easement Sale:	\$	
<b>Carbon Sale Costs / Revenues</b>					
Biomass Inventory:	\$		Total Volume:	#	tons / acre
Legal Review:	\$		Insurance pool (e.g. 20% total volume):	#	tons / acre
Broker fee (e.g. 7% of sale price):	\$		Net tons:	#	tons / acre
Total Costs:	\$		Market Price:	\$	/ ton
Insurance pool: (e.g. 20% of sale):	\$		Total Sale Price:	\$	



## Section III: Conservation-Based Markets and Programs

This section provides detailed information on the four following conservation-based programs and markets:

1. FSC Certification and Markets
2. Federal Conservation Cost-share Program
3. Carbon offset markets
4. Conservation Easements

### 1. FSC Certification and Markets

Forest Stewardship Council (FSC) certification is a market-based, voluntary system that recognizes wood products that come from well-managed forests. Similar to organic certification for farmers, FSC certification provides consumers a way to support sustainable forestry practices with their purchasing decisions. In recent years FSC markets in the Pacific Northwest have grown considerably, with dozens of Northwest retailers now carrying FSC products.

As consumer recognition of the FSC brand continues to grow, it is beginning to translate into a marketplace that forest owners can use to distinguish their forest products. Much as organic certified foods command a premium in the marketplace, and small family-owned farms are distinguishing themselves as suppliers of organic produce, so are FSC certified forest products beginning to command a price premium and small woodland owners can use the FSC brand to distinguish their products in an otherwise highly anonymous wood products marketplace.

Price premiums for FSC wood products are typically dependent on two primary factors:

1. Proximity to an FSC certified mill or log buyer
2. The landowner's ability to leverage the FSC brand in their favor



#### List of FSC Certified Wood Products Companies

A list of all FSC chain of custody certified mills, retailers, wholesalers, and secondary manufacturers in the U.S. can be found on-line at:

[http://www.fscus.org/certified\\_companies/](http://www.fscus.org/certified_companies/)

### ***FSC Log Markets***

Some FSC certified mills state a flat, per thousand board foot premium for FSC logs (e.g. \$25 - \$90/mbf) over non-certified logs. Other FSC certified mills will not overtly state a premium, but have a “purchasing preference” for FSC certified logs over non-certified logs. Even this slight edge can make a difference in a down timber market when mills become increasingly particular about the logs they purchase. These mills may require a minimum volume (e.g. 100 mbf or more) before they will be willing to negotiate a premium for FSC logs. If you are not experienced at selling logs, it may be in your best interest to work with a consulting forester who understands log markets and log marketing in order to negotiate the best price possible for your logs.

#### **FSC Certified Mills in the NW**

For a list of FSC certified mills and log buyers in the Northwest, please visit Northwest Certified Forestry’s website at:

<http://nnrg.org/wood-products/fsc-log-sales>

### ***FSC Lumber Markets***

For landowners who have their own mill and/or secondary manufacturing equipment, a much broader range of opportunities exist for using FSC certification and the FSC brand in their favor. As stated above, consumers are becoming much more environmentally conscious and willing to put their money where their environmental ethics are. This is creating a niche market that provides landowners with the opportunity to make direct sales to home owners, builders and craftsmen. Generally speaking, FSC certified retail lumber yards charge approximately a 15% premium for FSC certified wood products over conventional, non-certified wood products. This provides a general price point that landowners can expect for their value-added lumber products.

### ***Green Building Markets***

A large part of the demand for FSC wood products is due to the construction industry’s increasing adherence to a variety of state and national green building certification systems which give builders credit for the use of FSC certified wood products. Green builders are often willing to pay more for FSC-certified wood than non-certified wood either to earn credit towards the certification of their building, or to meet the requests of the homeowner or client. It is important to realize that FSC premiums can vary widely and are subject to a variety of factors, including species, grade, market

#### **FSC Certification: Pros and Cons**

##### **Pros:**

- Premium prices for certified wood products
- Access to markets not available otherwise
- Long-term higher volume, better quality timber
- Required management plan satisfies other conservation program requirements
- Marketing and manufacturing support available through
- Improved wildlife habitat, aesthetics, etc.

##### **Cons:**

- Requires more retention than state forest management regulations
- Higher monitoring and reporting requirements than state forest management regulations
- May not be compatible with intensive management (i.e. even-age, short rotation)

availability, etc. It is often useful to compare FSC and non-FSC prices with two or more log or lumber purchasers prior to making a sale. Some landowners choose to sell to both FSC and non-FSC markets in order to target the highest value market for their wood products.

### ***Becoming FSC Certified***

Today the process of becoming FSC certified is more accessible than ever for small woodland owners. “Group certification” programs, such as Northwest Certified Forestry, are streamlining the certification process and dramatically reducing costs for landowners.

Additionally, group certifiers frequently provide a wide range of additional forest management services as part of a membership program, thereby increasing the value of participation in these programs.

FSC certification for forest owners is based on a series of 10 Principles and 57 Criteria that qualify good forest stewardship under the FSC brand. Landowners must abide by these standards in order to qualify for FSC certification, and can expect a periodic audit of their forest management operations by either the group certifier or a third-party independent certified to confirm compliance with the FSC standards. Some of the requirements of FSC certification include:

1. Development of a comprehensive forest management plan
2. Limiting clear cut sizes to under 40 acres
3. Retaining 10% - 30% pre-harvest volume within clearcuts over 6 acres
4. Retaining mature trees within up to 200 feet of streams and other sensitive aquatic sites
5. Minimizing chemical use in the treatment of invasive species
6. Monitoring forest management activities and changes to forest ecosystems

#### **Group Certification through Northwest Certified Forestry**

If you are a small woodland owner in the Pacific Northwest who is interested in becoming FSC certified, Northwest Certified Forestry provides low-cost certification services as part of its membership program. The initial fees for Certified Membership in Northwest Certified Forestry are:

1. <100 acres: \$230\*
2. 101 – 200 acres: \$330\*
3. 200+ acres: negotiated

\*Annual renewal fees are reduced for landowners in years when no significant management activities take place.

To learn more about FSC certification through Northwest Certified Forestry, please visit our website at: [www.nwcertified.org](http://www.nwcertified.org).

#### **FSC Forest Management Standards**

More information about FSC certification, including a copy of FSC’s forest management standards for the Pacific Coast, can be found on-line at: <http://nnrg.org/nw-certified-forestry/About%20FSC%20Certification>

If you are interested in becoming FSC Certified, you should become familiar with the FSC Standards, as well as the terms of any group certification program. This will help you fully

understand the obligations and requirements of these programs prior to becoming certified.

### ***Multiplying Value through Manufacturing***

For landowners with the capacity and inclination, the benefits of FSC certification can be multiplied by adding value to their timber through basic processing, such as milling and air-drying, to custom manufacturing of high value wood products such as flooring, trim, moulding, furniture, etc. For individual landowners this process can be daunting. However, landowner networks such as Northwest Certified Forestry are pioneering new strategies for small-scale manufacturing and marketing, which are helping landowners increase the value from every log. Sorting logs by their “highest



and best use” is a key to getting the most for value from timber. See the case study on Wild Thyme Farm later in this publication for an example of one landowner that is obtaining more value from his wood through custom manufacturing.

**Get to know the local markets for your logs or lumber products. With this information, you can plan to manage and grow trees for the highest value markets, be they log markets, such as veneer or poles, or lumber markets such as flooring, paneling and moulding.**





### **Sustainable Northwest Wood, Inc. & the Healthy Forests, Healthy Communities Partnership**

Two excellent resources for small wood products manufacturers are Sustainable Northwest's Healthy Forests, Healthy Communities Partnership (HFHCP) and Sustainable Northwest Wood, Inc. a for-profit subsidiary of the (HFHCP). The HFHCP is a membership-based network of small mills and wood products manufacturers that specialize in locally produced and sustainably harvested wood products. The HFHCP facilitates business-to-business networking amongst its members and provides marketing assistance for its members' wood products.

As a wholesale lumber yard east of Portland, Oregon, Sustainable Northwest Wood warehouses wood products from HFHCP members and supplies the material to green builders, retailers and conscientious consumers throughout the Northwest. HFHCP helps small businesses build capacity and develops market connections and demand for wood products made with a commitment to environment and community.

Sustainable Northwest Wood stocks a wide range of products including dimensional lumber, interior and exterior finish lumber, and native hardwoods. Everything they carry is from the Pacific Northwest and grown on forests managed either to the standards of the FSC or as part of a stewardship program restoring native ecosystems.

To learn more about Sustainable Northwest Wood warehouse and the HFHCP, visit their website at: <http://www.sustainablenorthwest.org/programs/forests/hfhc/>.

## Case Study #1: Wild Thyme Farm, Oakville, WA

About 15 years ago, John Henrikson realized he was losing hundreds of thousands of dollars on his forestland investment, simply due to a lack of management. John and his brothers Robert, Richard and Jack own Wild Thyme Farm, a 150-acre tree farm near Oakville, Washington where John lives and works the forest and the land. Fifty acres of farm, field and facilities complement 100 acres of mixed conifer/hardwood forest with fir, cedar, alder and maple timber.



After 15 years, John credits his ability to establish a profitable niche-marketed wood products business to his participation in FSC certification through Northwest Certified Forestry. John also is reducing some of the annual management expenses of his farm through a current use taxation program that recognizes the dominant forestry use of his property, as well as federal cost-share grants for timber stand and wildlife habitat improvements.

“A while back Kirk Hanson from Northwest Certified Forestry suggested FSC was a growing brand and a marketing opportunity that we should pursue” John remembers. “Since then nearly all of my business has come from people specifically looking for FSC wood products. It’s made all the difference.”

John has a passion for nature, and a knack for extraordinary wood products. He has combined his passion with sustainable forestry practices he’s learned from around the U.S., and has become an innovator in the small-scale timber industry of Southwest Washington. Hundreds of foresters, manufacturers and others involved in economic and workforce development have taken inspiration and lessons from his example. As a pathfinder, John exemplifies the motto of the National Network of Forest Practitioners (NNFP): “Finding a Way in the Woods.” John participates in NNFP, NCF and the Northwest EcoBuilding Guild – among other leading organizations.

After the big ice storm in 1996 that devastated approximately 25 acres of alder dominated forest, John dedicated himself to the practice of silviculture which he knew was an art as much as a science. In the process, he has built a value-added FSC certified wood products business that is both profitable and beneficial to the



environment. Like other landowners, he has taken advantage of NRCS management cost-share funding, and considered marketing his carbon credits.

John says timber land owners have two basic options: 1) sell logs and accept the low value conventional mills provide, or 2) get into the business of adding value to their logs by manufacturing and marketing a niche product. “FSC was critical to making that work” he says.

A couple years ago, with the assistance of Northwest Certified Forestry, John had his timber cruised. If he were to clear cut his entire forest today he estimates he could gross up to \$1,000,000 for his timber excluding logging costs...and then wait 25-40 years to do it again. Alternatively, by turning his trees into finished lumber products before they leave the property, and selling into the FSC marketplace, John estimates his forest can generate approximately \$150,000 per year by harvesting only a small fraction of his standing timber. This approach also maintains a mature forest that John, his brothers and the farm’s community can enjoy. Over the same 25-40 year timeframe he would otherwise be waiting before clear-cutting again, John could earn between \$3,750,000 - \$6,000,000.

On his 100 acres of forestland, John measures about 100,000 board feet of annual growth each year. In order to ensure a sustained yield of timber into the future, as well as to protect the conservation values of his forest, John has set a maximum annual harvest rate of 50,000 board feet (bf) per year. If he were to simply sell logs to conventional mills in the area, he would receive approximately \$0.30 - \$0.50/bf (\$300 - \$500/mbf), or a gross of between \$15,000 - \$25,000/year, which does not include logging costs that can account for up to 50% of the total value of his logs. Instead, John does the logging, primary milling, storing and drying, secondary processing and marketing himself. His average sale price for finished lumber is \$3.00/bf, thereby earning him a gross of up to \$150,000 per year.



“If you’re willing and able to do it all, you can get 5 to 10 times the value out of the wood than for logs alone” John says. “But not many people can do that and it’s taken me 10 years to get close.

“I like to use what I call the 50/50 model to help me think about the business proposition. On average, I am aiming to charge \$3.00/bf for my lumber. This \$3.00 gets divided up in \$0.50 chunks: \$0.50 to the landowner as stumpage for the log, \$0.50 to the logger, \$0.50 to the primary miller, \$0.50 to the facility (e.g. warehouse rental), \$0.50 to the secondary processor, and \$0.50 to sales and marketing.”

The ownership scenario presented below is based on John's 50/50 model for illustration purposes, and assumes higher-than-average cost of goods for a conservative comparison. In real life, John works hard to cut each of the above costs to less than \$0.30/bf; however, some steps in the manufacturing process are less and some are more than \$0.50/bf. His actual records for the last three years show John received an average of \$2.58/bf for his rough and finished lumber. Therefore, instead of an estimated \$300/mbf gross value for simply selling logs to local mills, his gross profit was on average \$2,580/mbf through value-added manufacturing.

It is also important to note that much of the "costs" listed above are actually paid to John for doing most of the work himself (e.g. logging, secondary processing and facility rental). Over time this builds the value of his physical business assets (e.g. facility and equipment purchases get paid off in 5-15 years) as well as the quantity and quality of his forest asset due to harvesting less volume than his forest grows.



This scenario illustrates John's take-home lesson about the potential values of a small-scale lumber manufacturing business. "The more steps you can do yourself, the more of the value of your timber comes to you, which gives you the time to take care of the forest and work with wood. The rewards of doing it myself go way beyond the success of my business, though. Helping to create the healthiest and most diverse forest possible, while producing the highest quality lumber, is the best way that I can honor the land. I have the job of my dreams."

**"If you're willing and able to do it all yourself, you can get 5-10 times the value out of the wood than for logs alone. It's taken me 10 years to get close to that."**

- John Henrickson, Owner  
Wild Thyme Farm



**Table 1.1 “Real-world” Ownership Scenario #1: FSC-certified forest with value-added manufacturing and marketing of wood products.**

Based on Wild Thyme Farm actual experience, a comparison of hypothetical intensive sustained yield timber harvest, Wild Thyme 100% FSC Value-added, and Hypothetical FSC / partial Value-Added scenarios.

<b>100 acre tree farm, 40 year age class</b>	<b>Intensive Sustained Yield Management</b>	<b>Wild Thyme Farm*: Full FSC / VA</b>	<b>Landowner X: FSC + partial Value Added†</b>
<b>Revenue Comparison</b>			
5-year harvest cycle	500,000 bf	300,000 bf	300,000 bf
@ price / bf	\$0.50 / bf	\$2.50 / bf	\$2.50 / bf
5-year Revenue	\$250,000	\$750,000	\$750,000
<b>Expense Comparison</b>			
Logging	\$100,000	\$50,000	\$50,000
Milling	-	\$150,000	\$150,000
Drying / Storage	-	\$150,000	\$75,000
Transport	-	-	\$50,000
Finish Processing	-	\$150,000	\$150,000
Sales and Marketing	-	\$50,000	\$150,000
<b>Comparison of Gross Profit</b>			
Gross Profit	\$150,000	\$200,000	\$125,000
Gross Profit/ScribnerBF	\$0.30	\$0.80	\$0.50
<p style="text-align: center;"><u>Assumptions</u></p> <p>The intensive, sustained yield scenario assumes a forest landowner does nothing and harvests 100% of annual growth on a 5-year harvest cycle, which he sells to the commodity log market at \$0.50 / bf. Logging costs for the 25 acre clearcuts (25 acres x 20,000 bf = 500k bf) run about \$0.20 / bf. No other costs are counted against the landowner’s income.</p> <p>At Wild Thyme Farm, John does his own logging (\$0.20/bf includes equipment maintenance and log transport from the woods), leases a mobile mill (with operator @ \$0.50/bf), air-dries on site in a facility built with a construction loan (costs about \$0.50/bf), and owns his own secondary processing and warehousing capacity – paying only labor (~\$0.50/bf). Sales and marketing expenses – which he does himself with help from NCF and local FSC retailers - costs another ~\$0.15/bf. By sorting and processing every log for its “highest and best use”, he increases his stumpage volume by an average of 25% over Scribners scale if the logs were sold to a mill. So, even though he harvests only 50% of annual growth (compared to 100% in the intensive scenario) he still can sell 300,000 bf over 5 years compared to 500,000 bf.</p> <p>Landowner X is a hypothetical landowner who wants to start on a conservation-based, value-added wood products program, and decides to conduct his own logging (\$0.30/bf includes equipment purchase &amp; maintenance + log transport). He too will lease a mobile mill (\$0.50/bf), and use a portion of income to pay for his own storage / drying facility (\$0.50/bf)). He uses his own flatbed truck to transport lumber to a finish processor (\$0.20/bf). Finally the finished products are sold through Sustainable Northwest Woods warehouse in Portland (\$0.50/bf cost) and other FSC distributors.</p>			

## Case Study #2: Shady Grove Orchards, Onalaska, WA

Omroa Bhagwandin and his wife Annie own 65 acres of third growth forestland in Lewis County. Their land represents some of the best timber growing ground in Washington State due to high productivity soils and abundant rainfall. The land has a fish-bearing stream and is rich with a diversity of native trees and shrubs. The majority of their forest, about 40 acres, was comprised of dense stands of 30 year old alder interspersed with individual conifers and big leaf maple. The forest's composition was a product of past high-grading where the highest value timber, typically Doug-fir and cedar, was cut from the forest in large clear cuts and the harvest units never replanted. In this area of the state, soils exposed by logging equipment typically regenerate into thickets of alder, vine maple and thimbleberry. Until a year ago the Bhagwandin's forest was a jumble of spindly alder that was beginning to fall over and was preventing other native conifers from regenerating in its shade.



Omroa and Annie's long-term goals for their land are to pass on to their children a healthy forest that can support sustainable timber harvesting and food security through agriculture and hunting. So they decided to get serious about getting the land back on a productive trajectory through a rehabilitation harvest that involved both selective thinning and large patch cuts across most of his forest. They joined Northwest Certified Forestry and began to get connected with professional forestry contractors, specialty FSC markets, and federal cost-share programs. By combining these resources, Omroa and Annie recently completed a timber harvest that generated revenue for them as well as paid to decommission an old road, build a new road and replace two culverts, regrade 1500 feet of driveway, clear a shop site and plant 9,100 young seedlings. They also got 20 cords of firewood out of the deal.

That was something, since three previous logging contractors said they would lose money logging the dense alder and their only option was to clear cut and start over. But with the help of the NCF Preferred Provider network, the Bhagwandin's came into contact with John Zapel and Westek Forest, Ltd., a full-serve forestry contractor that operates a Swedish "cut-to-length processor" and forwarder. Due to the high efficiency of the modern logging equipment, and its ability to manufacture a single tree into several different log sorts, Omroa and Annie were able net \$22,000 by niche marketing their logs



to several different markets.

“In a thinning like we did, most loggers would be looking down to the ground to cut trees” Omroa recalls. “But John was looking up to decide which tree to take, sorting logs in his head and making decisions based on his extensive silvicultural experience. He also spent 6 hours programming the cut-to-length processor with information on sorts and markets, so the computer could scan the logs, and tell him where to cut to maximize yield for revenue. It’s a whole different approach to logging – not just a skidder and a chainsaw anymore.”

The Bhagwandin’s harvest yielded about 17 percent saw logs and veneer logs 12 inches in diameter and above, with the rest going to pulp. The saw logs went to Alexander’s Lumber Mill just down the road in Onalaska. Alexander’s is one of the oldest family-operated hardwood mills in the Northwest and in 2008 became FSC chain-of-custody certified in order to purchase FSC certified logs and manufacture FSC certified lumber. Omroa’s saw logs represented some of the first FSC logs that Alexander purchased.



The FSC markets that Alexander is selling its lumber to are profitable enough that the mill is able to provide a \$40 - \$90/mbf premium for FSC certified logs. Omroa received approximately \$540/mbf from Alexander for his alder saw logs. The alder veneer logs were also sold to an FSC log buyer, International Veneer Company, based in West Virginia. IVC purchased two loads of veneer for \$1,800/mbf, more than triple the price of the saw logs. Omroa also sold a small volume of figured maple, getting \$1,400 for one 20’ log and selling 8 music blocks for \$25 each.

Omroa feels he has set his property up for long-term sustained revenue generation. “By taking more of a conservation approach to timber management I am setting up my forest for multiple thinning, where every entry is a money-making entry. With the lightweight and low-impact equipment from Europe, it allows me to commercially thin my forest every 10-15 years with minimal soil disturbance.”

Realizing this potential required some significant management actions and investments to get the forest back on a productive trajectory, Omroa also sought federal cost-share assistance through the NRCS’s EQIP program. Omroa applied for and received funding for activities such as: clearing brush and prepping planting sites, planting trees, creating wildlife habitat components such as brush piles and downed logs, and other treatments. “The process was really simple” Omroa remembers. “I went in and filled out a 1-page application. The folks at the Chehalis NRCS office were extremely supportive and responsive. They sent biologists out on two field visits; we walked around and came up with a set of prescriptions which met my objectives for wildlife diversity and forest productivity. Bundling the practices made the proposal more competitive.”

The grant helps pay for management actions to accelerate old-growth conditions on the property, paying \$75 / log to put large conifer logs on the forest floor to create habitat. They will also create snags, replant the riparian area with native forages species, and hang bird boxes to attract pileated wood peckers, wood ducks and other native birds. A custom seed mix for deer and elk forage will be spread along the many dirt access roads.

“We slashed a 30-acre vine maple/salmonberry thicket overtopped by bigleaf maple, and replanted with native conifers. We’ll go back to keep the maples from re-sprouting so the new stand can get established.”

Beyond their own goals, they have a bigger vision of a forested landscape with healthy wildlife populations supported by a rural resource-based economy. Their 65 acres is bordered by a 350-acre industrial tree farm on the north and east, 40 acres of organic orchard and forestland on the west property line, and another forested homestead to the south. The entire eastern boundary is cut up into 5-10 acre lots. All together this 500-acre green belt supports cougar, lynx, bear, coyotes, deer and elk that run through their hills, with resident cutthroat trout in the stream on the property.

Yet with historic shift in ownership away from commercial timberland, their little tree farm won’t hold off growing development pressures for long. As a former DNR manager who used creative funding strategies to keep forests in working timber and habitat conservation, Omroa has formed a small non-profit that is exploring buying timberlands to manage under a conservation forest model. He is convinced he can return 10-17% on investment using a combination of working forest conservation easements, carbon credits, and specialty FSC and traditional commodity wood markets on some of the most productive forestland in the world, right there in his neighborhood. They have an FSC-certified mill in town, and reasonable hauling distance to other nearby markets.

The following table shows how Shady Grove combined FSC, specialty wood, non-FSC and commodity markets to create a revenue-positive timber sale, while improving productivity, timber access and many factors crucial to restoring a healthy habitat for native species including rare and endangered species.

<b>Table 2.1 Shady Grove Rehabilitation/Restoration Timber Sale</b>		
<b>Timber Sale Revenues:</b>		
<b><i>Sale Item</i></b>	<b><i>Net Board Feet Sold</i></b>	<b><i>Gross Revenue</i></b>
FSC Alder and Maple Sawlogs	44.4 mbf @ \$540 /mbf	24,000
FSC Alder Veneer	7090 BdFt @ \$1,800 /mbf	12,654
Non-FSC Alder Sawlogs	74.83 Mbf @525/Mbf	39,286
Specialty Maple logs	720BdFt @ \$1.986/ BdFt	1,430.00
Maple Instrument Blocks	#8 @ \$25/each	400.00
Non-FSC Pulp	1,061.57T @ \$ 30 / T	31,847
Revenue Totals:		<b>\$109,617</b>
<b>Timber Sale Costs: (includes road / culvert costs, reforestation, etc)</b>		
<b><i>Description</i></b>	<b><i>Total Cost</i></b>	
Silvicultural Contractor	\$38,788	
Equipment Rental	\$12,243	
Hauling	\$19,660	
Supplies	\$6,722	
Total Costs	\$77,413	
<b>Net Income to Landowner:</b>		<b>\$23,587</b>

The following table outlines practices funded under the Bhagwandin's WHIP Grant:

<b>Table 2.2 Shady Grove NRCS WHIP grant - 2011 - 2014</b>			
<b>Practice</b>	<b>#</b>	<b>Unit Grant Amount</b>	<b>Total Grant</b>
Down Woody Debris for Wildlife Habitat - place habitat logs	26 logs	\$75	\$1950
Reseeding with Native Grasses for Wildlife Forage	1.7 acres	\$256 /ac	\$256
Bird Nesting Boxes	11 boxes	\$37.50	\$413
Native Planting	200 plugs	\$0.83	\$166
Site-Preparation – hand / mechanical slashing	6 acres	\$187.50	\$1,125
Tree Planting and Protectors	900 trees	\$1.73/tree \$1.24/prot.	\$2,675
Post-planting weed control (2x)	900 trees	\$0.38	\$684
<b>Total NRCS Grant:</b>			<b>\$7,754</b>



## 2. Federal Conservation Cost-share Programs

The USDA Natural Resources Conservation Service (NRCS) manages several financial assistance programs that can help small woodland owners improve timber stands and enhance wildlife habitat. Although the NRCS offers a variety of programs, this guidebook will focus specifically on the Environmental Quality Incentives Program (EQIP) and the Wildlife Habitat Incentives Program (WHIP).

Both EQIP and WHIP are referred to as “cost-share” programs because the federal government *shares* in the cost of implementing specific forest management practices. A pre-determined reimbursement rate is set for each practice. If a landowner can accomplish the particular practice within the set reimbursement rate, the cost-share program can pay for 100% of the cost of the practice. If the cost of the practice exceeds the reimbursement rate, the landowner must pay the difference.



### More information on EQIP & WHIP

For more information on EQIP, WHIP and other NRCS programs, as well as to find contact information for your local NRCS field office, visit the WA NRCS website at: <http://www.wa.nrcs.usda.gov/programs/index.html>

### Eligibility

All private rural landowners can apply for the NRCS’s conservation programs. However, a landowner must meet at least one of the following three criteria in order to be eligible:

1. Have a forest management plan
2. Show investment in the property within the past five years
3. Show income derived from the property within the past five years

### Program Priorities and Eligible Practices

WHIP focuses its funding exclusively on wildlife habitat enhancement for prioritized wildlife species and habitat types. According to the NRCS’s website, “WHIP is a voluntary program for private landowners to develop and improve high quality habitat that supports wildlife



*populations of National, State, Tribal, and local significance.” The NRCS periodically revises its priority list for species and habitats and makes this information available on its website. Any federally listed “threatened” or “endangered” species is automatically a priority.*

Some of the eligible practices under WHIP include, but are not limited to:

1. Planting trees & shrubs
2. Installing bird boxes
3. Creating snags, downed logs and wildlife habitat piles
4. Improving browse forage for elk and deer
5. Improving pollinator habitat
6. Riparian restoration
7. And more...

EQIP pays for a wide range of timber stand improvement and wildlife habitat enhancement practices that are based on national, state and locally identified natural resource priorities. According to the NRCS’s website, funding for “EQIP [is] based on locally identified natural resource needs consistent with national EQIP

*priorities. Local Work Groups convened by the Conservation Districts provide advice to NRCS about local priorities within their local area. With this advice, NRCS evaluates applications for funding EQIP contracts consistent with these local, state and national priorities.”*

Some of the eligible practices under EQIP include all of the aforementioned practices under WHIP, but also:

1. Pre-commercial thinning
2. Pruning
3. Tree and shrub planting
4. Forest road improvements
5. Replacing fish barriers

Funding for both EQIP and WHIP is provided on a competitive basis, which means that funding applications will be ranked according to their benefit to the priorities the NRCS has addressed for improving natural resources within the state. **Applications for funding are not**

**automatically accepted, nor is funding guaranteed to all landowners who apply.** Each program receives a limited pool of funding each year, and the highest ranking applications are funded first. It is very important that a landowner understand the NRCS’s natural resource priorities before submitting a funding application in order to ensure that their property and projects address those priorities.

#### **Washington’s Forestry EQIP Program**

For comprehensive information on Washington’s forestry EQIP program, please visit their website at:  
<http://www.wa.nrcs.usda.gov/programs/equip/forestry/index.html>.

#### **Bundling and Sequencing:**

Management cost share programs are ideal for bundling with other programs, and can be incorporated at any stage in the process. Ideally they can be used to conduct treatments that will enhance a properties potential for other conservation-based markets by improving the quality of trees to be sold for timber, or increasing the stock of “ecosystem capital” which can improve the potential to sell a conservation easement or carbon credits.

### Case Study #3: Albert Tree Farm, Olympia, WA

They thought they'd just let nature take its course.

But after a few years, Donna and Leonard Albert realized that growing a natural, healthy forest would also require a healthy dose of nurture. "Our forest consultant told us that for the health of the forest we should do some thinning, harvesting and salvage harvesting. So we did some minimal work, initially," Donna Albert says.

Then, the Albert's received a flier in the mail and attended a workshop by Northwest Certified Forestry (NCF) on income opportunities for small woodlot owners. "That was followed by becoming members of NCF, who helped with our application for the EQIP program," Donna says.



One of the first lessons the couple learned was that implementing the conservation practices outlined in the stewardship plan would take time and money. "It's expensive to do all of the work," she says, "but if owners can do some of the work themselves they can make their dollars go further. EQIP provided the funding to help us take the necessary steps to implement our plan."

Donna says navigating her way through the program was taxing. "We're all on this learning curve with the requirements and the deadlines and the cycles associated with the program," she says. Through the program, the Albert's have done forest thinning, planted some 4,000 trees and shrubs, and have focused on developing wildlife habitat for species of concern. "I think it's important, especially near urban areas, for someone to maintain trees and forests – it's important for the wildlife as well as for our quality of life," she says.

"Every day we take the dogs and go walking – and we can actually see through the woods. And I look at those habitat piles created with woody debris that came from the thinning and wonder what animal might be living there – and hope I'm bigger than it is," she says laughing.

NRCS's Jeff Swotek says the Albert's, and other forest stewards like them are providing additional benefits to their urban neighbors. "They not only provide wildlife habitat, but healthy forests also help control flooding by reducing peak flows during storm events," he says.

For Donna and Leonard, their quest to maintain a healthy forest is a gift not to just themselves, but to the future. "My husband and I will try to find a way to leave this land in perpetuity, maybe through a conservation easement or charitable organization," she says.

Table 3.1: EQIP Landowner Scenario –Albert Tree Farm

Project Name	Project Description	Year	Acres	Planned amount	Unit Cost	Planned \$\$\$	Approximate Landowner Share
Restoration & Management of Rare or Declining Habitats	Habitat Piles in driveway loop & east of house	2008	15	45	\$90.00	\$4,050.00	\$1,012.50
Upland Wildlife Habitat Management	Site visit & Planning	2008	All	1	\$500.00	\$500.00	\$125.00
Tree/Shrub Establishment	Band-tailed Pigeon	2009	0.5	170	\$2.07	\$353.00	\$88.25
Restoration & Management of Rare or Declining Habitats	Bird boxes	2009	15	30	\$45.00	\$1,350.00	\$337.50
Restoration & Management of Rare or Declining Habitats	Habitat Piles throughout stand 2	2009	55.4	165	\$90.00	\$14,580.00	\$3,645.00
Forest Stand Improvement	Thinning throughout stand 2	2009	40		\$100.00	\$4,000.00	\$1,000.00
Tree/Shrub Pruning	Pruning conifers across entire property	2009	5		\$75.00	\$375.00	\$93.75
Tree/Shrub Site Preparation	Patch cuts along skid road and thinning driveway, etc	2009	20.4		\$225.00	\$4,590.00	\$1,147.50
Tree/Shrub Establishment	Conifers @ 300 tpa in patch cuts, skid trail, etc	2009	20.4	6,120	\$1.48	\$9,107.00	\$2,276.75
Tree/Shrub Establishment	Tree protectors	2009	60.4	10,120	\$0.90	\$9,108.00	\$2,277.00
Tree/Shrub Establishment	Shrubs @ 100 tpa	2009	20.4	2040	\$2.07	\$4,236.00	\$1,059.00
Tree/Shrub Establishment	Conifers @ 100 tpa throughout stand	2009	40	4000	\$1.48	\$5,952.00	\$1,488.00
Early Successional Habitat Development	Seeding skid road	2010	0.5		\$521.25	\$261.00	\$65.25
Pest Management	Brush control in driveway loop & east of house	2010	5	2000	\$0.50	\$1,000.00	\$250.00
Restoration & Management of Rare or Declining Habitats	Bird boxes throughout stand 2	2011	55.4	110	\$45.00	\$4,950.00	\$1,237.50
Pest Management	Brush control in patch cuts, skid trail, etc	2011	60.4	9360	\$0.50	\$4,680.00	\$1,170.00
Access Road	Fixing driveway	2012		1050	\$1.08	\$1,890.00	\$472.50
Pest Management	Brush control in patch cuts along skid road	2012	15.4	6160	\$0.50	\$3,080.00	\$770.00
Pest Management	Brush control throughout stand 2	2013	40	1200	\$0.50	\$600.00	\$150.00
				<b>Totals:</b>		<b>\$74,662.00</b>	<b>\$18,665.50</b>



### 3. Conservation Easements

A conservation easement is a tool which landowners can use to keep their property intact and in the family for generations to come. Typically an easement extinguishes the development rights on a parcel of land, and may also restrict other ways in which the land is managed depending on how the terms of the easement are established. The easement is granted to a local land trust or public agency, which then assumes responsibility for monitoring the land's conservation values even if the property changes hands in the future. The land stays in private ownership, and the landowner can manage and utilize the land in any manner that does not conflict with the terms of the easement.



Many landowners are motivated to protect and preserve their land regardless of the financial implications because of the peace and beauty they enjoy, for the unique ecosystems found there, or for its hunting, fishing and recreational opportunities. They may share society's concern for water and air quality, and the health of our planet's climate or they may simply feel better knowing the property will stay a forest long after they are gone. There is no wrong reason to conserve land with an easement, though not all lands are appropriate for this tool.

Although some government agencies provide limited term (e.g. 30 – 50 year) conservation easements, in most cases when you donate or sell a conservation easement you agree to permanently restrict development and other activities and protect the land's conservation values “in

#### **Conservation Easements: Pros & Cons**

##### Pros:

- Completely voluntary; landowner decides what uses will be restricted / allowed
- Conserves forestland for future generations, wildlife, and value of ecosystem services
- May increase value of nearby real estate
- Can provide valuable income and estate tax benefits
- Working Forest Conservation Easement is compatible with timber harvest
- In some cases, you can be paid to grant a conservation easement on your land
- Property can be sold with easement terms passing to new owners

##### Cons:

- Permanently limits certain uses of property for current and future owners
- High up-front costs include appraisal and legal fees, stewardship donation
- Involves another party (e.g. Land Trust) in future land management decisions



perpetuity.” An easement is completely voluntary and can be quite flexible in allowing you to retain your rights for certain activities on certain parts of the property as long as there is significant public benefit being created at the same time.

With a donated easement, the income tax benefit you could receive comes in the form of a deduction for a charitable contribution. This is calculated as a portion of the difference between fair market value of your land before the easement, and the reduced appraised value it will have after the easement is recorded. If you have an income tax burden to deduct against, the value of this contribution can be spread out over time, in some cases up to 15 years.

#### **Bundling and Sequencing**

If a landowner intends to both sell carbon from their land and place a conservation easement on the property, they should consult with a land trust or other experts before moving forward with either transaction. Donating or selling a conservation easement may extinguish the ability to sell carbon in the future while selling a significant part of a property's carbon futures may limit a land trusts ability to secure funding for payment of a conservation easement.

An easement does not necessarily result in a reduction of assessed value and property tax relief.

Easement values vary greatly; in general, the highest value will result from very restrictive conservation easements on tracts of developable forest land under intense development pressure. In some jurisdictions, placing an easement on your property may also result in property tax savings (see Current Use Taxation above). The tax benefits which can be derived from such an easement depend on this value. In some cases (not all) these benefits will be more valuable to you than the expense of establishing the easement, which would result in a cost-saving which can improve your bottom line.

Perhaps the most important benefit, a conservation easement can be essential for passing your undeveloped forestland on to the next generation. By removing the land's development potential, the easement typically lowers the property's market value, which may lower or eliminate the potential estate tax. Whether the easement is donated during life or by will, it can make a critical difference in your heirs' ability to keep the land intact.

#### ***Working Forest Conservation Easement***

A working forest conservation easement is a variation of an easement which allows you to maintain management flexibility while extinguishing the property's development rights to construct residential or commercial buildings, roads and other intensive uses. This can help maintain forestlands in productive use including timber harvesting, while protecting the land from conversion due to rising property values and development pressures.

Most working forest easements require you to manage based on a forest management plan which is to be submitted to, and approved by the organization holding the easement (rather than including specific prescriptions in the easement itself). While this does give another party a stake in your property, it need not limit your range of management options if written properly.

The majority of the donation value of a property typically rests in the development rights, not the timber rights. So you can often receive 75 to 90 percent of the income tax deduction for donation of a working forest easement as you can for a full conservation easement.

Establishing a conservation easement on your land carries costs which are usually borne by the landowner. These may include appraisal and tax analysis, attorney's fees and a stewardship donation used to monitor and maintain the easement in perpetuity. Contact a land trust for an estimate of these costs for your property.

### ***Selling a Conservation Easement on Your Property***

In certain circumstances, a conservation easement or development rights may be sold to a land trust or public agency, providing a substantial one-time payment equal to or less than the fair market value of the development potential being sold. This can be an effective solution to keep working lands in forestry when financial pressures may lead to conversion of land to real estate development. There are two primary ways this can occur:

#### ***Grant Funded Project***

You may be able to get paid for a conservation easement by working with a land trust or public agency that is willing to seek out grants or other charitable funds for the project. The property must have characteristics which potential funders are looking for, usually significant ecological features such as endangered species habitat, important wetlands or lands adjacent to other protected lands to act as a buffer or wildlife corridor. This is a highly competitive process in which your project will be ranked against other worthy projects, sometimes on a national basis. Success usually requires a high level of collaboration and buy-in from public, private and non-profit partners interested in seeing your land conserved. Depending on their priorities, the funders of such a project may require specific provisions in the easement to protect certain values (i.e. there may be strings attached).

**“The only thing we can’t do is go out and start destroying a bunch of hillsides. All in all, if I should die tomorrow I would be very happy we did exactly what we did.”**

**Charlene Wynne**

### Purchase of Development Rights

Some jurisdictions have established programs to purchase development rights (“PDR” programs) to conserve productive rural lands for timber, agriculture, open space or ecological services such as floodplain protection. The rights may be simply extinguished or transferred to a nearby city or town to encourage higher density and urban in-fill development and discourage suburban sprawl.

Like a donation, purchase of an easement or development rights can be structured as a Working Forest Conservation Easement although this may be more difficult depending on the interests of the funding agencies. The land trust or partnership buys the development rights, and potentially

some timber rights, but the landowner reserves the right to harvest forest products according to mutually acceptable stewardship standards.

Working forest conservation easements may provide up to 40 to 60 percent of the full market value of a property in an up-front easement sale. In areas with higher development pressures, the proportion may be higher.

Recent changes to the federal tax code may allow for the eventual recuperation of the full value of the land, not just the rights granted in the easement. Thus, this route may provide a large source of income to landowners (see [www.lta.org](http://www.lta.org) for more details on current tax implications of conservation easements).

Lands with an easement can be sold just like any property, as is often done, with the easement terms running with the land. Thus, you can be paid now for the development value of your lands, and later sell it outright to a new owner who understands they are buying a property whose potential uses are limited to conservation or forestry.

### Donating a Conservation Easement – A Gift to the Future

If you are one of those people for whom the financial implications of your forest are less important than your conservation values and goals, then you might want to consider donating a conservation easement. Preserving your land and its ecological value through a conservation easement is a gift to future generations which offers the deep satisfaction of knowing your property will remain intact as a natural ecosystem in perpetuity. Unless you structure it as a working forest easement, you will be forgoing future timber harvests, development opportunities and the ability to sell carbon credits. On the other hand your land will remain a refuge for wildlife,



a source of clean water, and a carbon-storage factory for the foreseeable future. As mentioned before, there are costs involved, and potential tax benefits. If this is your choice, we applaud your generosity and vision for a connected, healthy landscape.

#### Case Study #4: Wynne Farm, Olympia, WA

Tom Wynne got his start as a professional forester on a 1500 acre tree farm in the Skookum Valley just northwest of Olympia, WA. He took over management of his Grandfather's 80-acre tree farm in the 1950s, and has been working to restore and manage it ever since. At 592 acres, the Wynne Farm is the largest private property in the Kennedy Creek Valley.

Tom recalls "all the land was run down; the timber had been logged and damaged. Most of it was just brush; you couldn't get to the back corners. In '63 I made up a forest plan for the upper part. We started getting roads into the different areas where we needed them. We took the cattle off 120 acres, cleaned things up and it took about 5 years before it started looking like forestland."

That was just the first of many restoration and timber enhancement projects Tom has completed over the years. He has used NRCS management cost-share grants, salmon enhancement grants, and the generous participation of many partners and volunteers to steadily improve the ecology and timber on his property.



In 1997, Tom and his partners replaced an undersized culvert to restore the natural meander to Schnieder Creek which ran through a channel dug in 1930s across the floodplain on his farm. "To reconstruct the old creek" he remembers, "they staked out the deepest water during a flood. When we dug out along the stakes, about 3 feet down, there was the old creek channel!"

The project was funded through the South Puget Sound Salmon Enhancement Group, with State and Federal Fish & Wildlife grants. Afterward, he worked with the Thurston Conservation District to bring 3 busloads of school kids. Together they planted hundreds of riparian trees paid for by a WHIP cost-share grant from NRCS.



Then in 2005, the Salmon Enhancement Group sponsored a



project funded by DNR's Family Forest Fish Passage Program, to remove a decaying cedar puncheon under a road on McDonald Creek and replace it with a 72" culvert (photos above). The objective of the project was to allow fish passage and natural sediment transport and restore the natural hydrology and riparian vegetation.

Meanwhile, he has used EQIP funds to conduct pre-commercial thinning, pruning, under-planting and other timber stand enhancements to increase the productivity of his land. Unlike Donna Albert (see case study #2 above) who paid cash to cover her share of project costs, Tom does a lot of the work himself, and his equipment and labor are counted as match against the cost-share funds and he receives a net income out of the project.



He's learned a lot along the way. "We used to keep it *too* clean, taking out the slash, snags, brush and we were losing our wildlife. So we stopped that and they came back, now we want habitat trees and log jams in the streams. We also leave the tops and branches.

Tom is not a big fan of plans to produce biomass energy using forest slash. "The best thing you can do is lop and scatter - our soils are built on that organic matter and animals use that stuff as habitat."

Then in 2007, the Wynne's donated a working forest conservation easement to Capitol Land Trust, and now manages his farm on a 70-year rotation in accordance with the terms of the easement. That means he's allowed to do about 80 acres/year of commercial thinning, and just 6 acres / year of clearcutting. "Since it costs loggers a lot to get in, I try to group 3 years worth of harvest together."

Tom's wife Charlene explains that although they gave up some flexibility under the easement, the terms are quite lenient. "We still own the land, we can sell it. We kept the right to build another agricultural building, and grow any product we want.

Capitol Land Trust Director Eric Erler says the Wynne's "lovingly manage their property as a tree farm, caring equally for the animals and the environment. They wait nearly  $\frac{3}{4}$  of a century between cuttings. This enables the property to function as a healthy ecosystem, and the easement ensures the valley remains forever undeveloped. Charlene and Tom have given a gift to the people, the wildlife and the future health of this region, unlike anyone before them."

#### 4. Carbon Offset Markets

Carbon sequestration – the process by which trees convert atmospheric carbon to living biomass - is one of many “ecosystem services” performed by healthy forests, in addition to providing flood control, water quality, and biological diversity. These natural functions underpin the health and productivity of the environment and our natural resources.

Traditional economics assumed that these services were free and virtually inexhaustible. The declining health of our forests, environment and human beings has revealed the hidden costs of unlimited resource use. “Payment for Ecosystems Services” is an emerging approach to help account for those costs and create incentives for sustainable management.

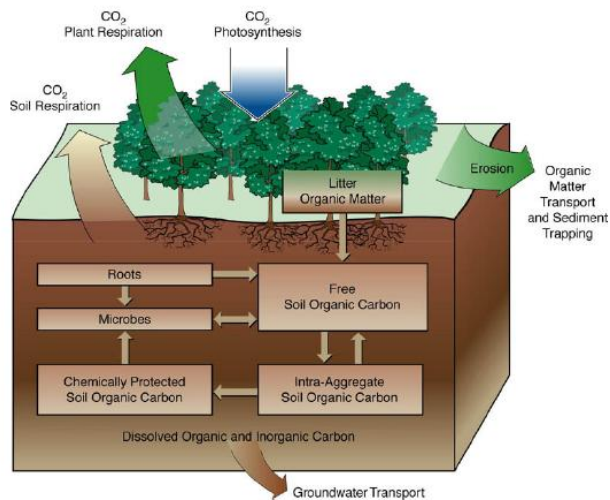


Illustration courtesy of: climatescience.gov.

Climate change is a major issue driving development of the first market for ecosystem services in the United States – paying landowners to grow and retain trees which “sequester” or absorb carbon from the atmosphere. Carbon is the most common and prominent greenhouse gas causing global warming.

#### Northwest Neutral

NNRG has developed one of the first programs in the U.S. that pays small woodland owners for the carbon sequestered in the forests.



Through NW Neutral NNRG brokers the sale of carbon offsets, in the form of metric tons of carbon dioxide, to buyers interested in “offsetting” their carbon emissions. This is a voluntary market made up of buyers who include businesses, individuals, conservation groups and other entities.

Through NW Neutral, landowners who choose to sell carbon offsets receive an upfront payment for the carbon currently stored in their forest. In exchange, the landowner agrees to maintain that volume of carbon in their forest for up to 100 years. As their forest continues to grow, the landowner has the option to sell this additional growth as either timber or carbon as part of a subsequent transaction.

## Eligibility

In order to be eligible for NW Neutral, a landowner must meet the two following basic criteria:

1. Be an FSC certified member of Northwest Certified Forestry
2. Have a minimum of 20 acres of well stocked 35+ year old timber

If you are interested in participating in NW Neutral, you should first have a conversation with an NNRG staff person to confirm the eligibility of your land and discuss the long-term obligations of the program. If your forest is deemed to be eligible, you must then hire a qualified independent consulting forester to conduct a biomass inventory of your forest. A biomass inventory is similar to a timber cruise, but the forester will measure all trees over 6" in diameter, as well as snags and downed logs - not just the merchantable trees. A biomass inventory can cost between \$20 - \$30/acre. You should consider having the forester also conduct a timber cruise at the same time as the biomass inventory so the value of your timber can be compared to the value of your carbon. Having a timber cruise conducted simultaneously may incur an additional cost.

NNRG will analyze your biomass inventory and run the field data through a carbon modeling program that determines the gross metric tons of carbon stored in the forest. NNRG will also estimate the additional carbon sequestration potential of your forest over the next 100 years. You will receive a report detailing how much carbon you can sell, what the value of the carbon is based on current market prices, and the potential value of

### **Bundling and Sequencing:**

While a carbon sale will not preclude timber harvests, it will limit how much a landowner can harvest, so it is a good idea to determine timber harvest goals (or desired flexibility) prior to entering a carbon sale agreement. If a landowner intends to donate or sell a conservation easement, it may be necessary to complete the carbon sale first, since an easement could restrict the ability to harvest timber, and therefore restrict the volume of saleable carbon.

### **Northwest Neutral: Pros & Cons**

#### Pros:

- Provides income to a landowner without the need to harvest timber
- Long-term contract protects mature forests much like a conservation easement
- Landowner can still manage forest and harvest timber
- Buy-out option preserves flexibility

#### Cons:

- Volatile market, prices may fluctuate
- Long-term contract obligates portion of standing timber to conservation use
- Landowner must pay for the cost of a biomass inventory prior to enrolling in program
- Program not compatible with forests less than 35 years old or for landowners who intend to intensively harvest timber.

future sequestration. If you choose to sell carbon, NNRG will develop a carbon sales contract that, in short, obligates you to maintain the volume of carbon you sell for a minimum of 100 years once the sale has been completed.

You cannot receive credit for 100 percent of the carbon in your forest, but rather only that portion which exceeds a “business-as-usual” baseline volume. The volume of carbon that comprises the baseline for a forest is defined by both the timber that a landowner cannot harvest according to state forest management laws, as well as the average annual volume of carbon that a conventional industrial plantation would maintain on a 40-year harvest rotation. If you have a pre-existing conservation easement or other legal encumbrance on your property that limits the volume of timber you can harvest, you can only receive credit for the volume of timber that you can harvest according to the easement. Additionally, NNRG will deduct 20 percent of the net volume of eligible carbon and set it aside in an “insurance pool” that serves as a hedge against catastrophic loss of carbon in the forest due to natural disturbances such as fire, wind, ice and other potential losses. Therefore, the net volume of carbon that remains after the “baseline” and insurance volumes have been deducted represents the actual saleable volume of carbon within a forest.

When you are prepared to sell carbon, and a carbon buyer has been identified by NNRG, you can choose to sell as much or as little of the saleable carbon as you choose. For instance, if you need some short term income, but also want to “play the market” and save some of your saleable carbon in anticipation of higher future prices, you could sell 25 – 50 percent of your carbon today, then sell the remaining volume at a later date. Either way, you will receive a one-time payment for the carbon you sell. All future carbon sales will require a re-inventory of the forest biomass and a new contract with NNRG.

### **Carbon Markets**

Global carbon markets are generally categorized as *voluntary* or *regulatory*. In a voluntary market, such as the U.S., carbon transactions are conducted business-to-business on a voluntary basis with no requirement placed on a carbon emitter to offset any specific volume of their carbon. In a regulatory market, such as the European Union, a government administered “cap-and-trade” system typically regulates the volume of carbon that an emitter can emit, as well as how transactions are conducted between emitters and carbon offset projects.

#### **Tracking Carbon Prices**

Landowners can keep track of current carbon prices in both voluntary and regulatory markets through the Ecosystem Marketplace website at: <http://www.ecosystemmarketplace.com/>

In voluntary markets, prices for a metric ton of carbon tend to vary widely much like any commodity product. In regulatory markets, prices tend to remain more stable as the supply and demand for carbon offsets is much more predictable. NNRG is

currently selling carbon within the voluntary carbon marketplace of the U.S. At the time of publication of this guidebook prices for carbon are in the range of \$5 - \$7 per metric ton. If either the federal government or a regional initiative enacts a regulatory cap-and-trade system, the price per metric ton of carbon is expected to go up significantly as the demand for carbon offsets will, at least temporarily, exceed the supply. Carbon markets are therefore worthwhile to watch. You should make a decision as to either what price per metric ton is reasonable for you to consider selling carbon offsets from your forest, or what the minimum total value is you would need to receive for your carbon in order to encumber your forest under a 100 year contract.



## Case Study #5: Bulis Forest Preserve, Port Townsend, WA

Jefferson Land Trust (JLT) is a private, non-profit, grass-roots organization with a mission to preserve open space, working lands and habitat. According to Erik Kingfisher, JLT's Stewardship Manager, NNRG played a key role in getting the land trust to incorporate working forest lands into their mission.

In addition to managing conservation easements, JLT owns property outright, including the 126-acre Bulis Forest Preserve, a property donated by Janis Bulis in honor of her late husband. The forest is approximately 85 years old and comprised of mature Douglas fir, western red cedar, western hemlock, red alder, big-leaf maple.



The property includes a 100-acre “no-touch” zone, with the remaining 25 acres managed for income to support long-term stewardship. These 25 acres were recently the focus of an historic event – JLT's first-ever carbon sale. NNRG worked with JLT to inventory the forest stand and determined that the 85 year old conifer dominated forest contained a total of 64 metric tons of carbon per acre (1,600 tons within the entire stand). Given that no streams, wetlands or other regulatory required buffer zones occurred within this stand, only the average annual volume associated with a 40 year industrial rotation (in this case 317 metric tons of C) was deducted from JLT's total carbon volume in order to determine the carbon additionality within their forest. This left 1,283 metric tons of carbon available for sale.

Given that the saleable commodity is carbon dioxide, the conversion from carbon to carbon dioxide results in 4,704 metric tons of carbon dioxide available for sale. At \$20/metric ton (the going price at the time) JLT could have earned approximately \$94,000 by selling all of their available carbon. Instead, JLT chose to maintain greater management flexibility with the timber in their forest, as well as wait to watch future timber markets, and sold 400 metric tons of carbon offsets through NNRG's Northwest Neutral program for \$20/ton resulting in a total sale price of \$8,000.

“If you are a forest landowner, you can harvest a certain amount of timber under state law,” Kingfisher notes. “With a carbon sale, you get paid for growing trees as a carbon pool. You can sell carbon in lieu of harvestable timber. As long as you maintain the base amount of carbon agreed to in your contract, you can still harvest some timber, just less than what you would without selling the offsets.”

By selling carbon offsets for just a portion of the trees, JLT is keeping their options open to sell timber or carbon in the future, depending on what the respective markets do. This project was a pilot which helped NNRG to establish and test the infrastructure to make this type of transaction available to other landowners. NNRG is working expand the Northwest Neutral program so it can be a powerful tool to provide landowners management flexibility in a conservation-based “ecosystem services” market.

Kingfisher is enthusiastic about this program. “As a society we don’t have a lot of tools to provide incentives to landowners to prevent forested property being converted to other uses,” he says. “Forestlands provide a lot of benefits to society. Carbon markets can help us maintain those public benefits while providing that incentive to landowners.”

## Section IV: Financial Scenarios

There is no set formula for financing stewardship forestry. One size does *not* fit all. Since each property is unique, your choices are based on a distinct set of ecological and economic conditions and are by definition unique and creative choices. To successfully combine different conservation markets and programs together requires a systematic approach of looking at your personal needs balanced with the needs of the land, and then making decisions using experience, insight and intuition. You will not only compare different strategies from a financial point of view; you will also consider your long-term goals and values as a property owner or manager. We encourage you to be creative and explore different scenarios which seem suited to your particular circumstances.

The process of analysis will help you create a forest stewardship plan to guide your management decisions now and into the future, designed for mutual environmental and economic benefit: to you the landowner; and to future generations of the forest.

This guide offers information, resources and options, to help you make an informed decision about which strategy is your preferred alternative, your second and so on. From there it's up to you to carry out your plan.

### Fictional Scenarios and Sample Financial Calculations

This section contains some additional forestland ownership scenarios including financial considerations based on use of all the conservation-based markets described in this guide. Given the wide variety of situations a landowner may face, and the potential for changes in prices and payments, these calculations are meant only for the purposes of illustrating how to think about the various options. They are not intended to be a definitive statement or prospectus of potential financial gains.

#### Forest Landownership Scenario #1: 20-acre family investment property

Let's consider a hypothetical scenario, a small 20-acre family forest, recently purchased as an investment property and family residence. It is a former Weyerhaeuser Company Douglas fir timber plantation harvested 35 years ago. Now it is overstocked with 400-600 trees per acre. The land is on flat ground with no streams or wetlands.

The new owners are conservation-minded: They would like to put the forest back on a natural trajectory, to diversify the stand and attract wildlife for their own and their neighbor's enjoyment. Generating revenue is a secondary value, but they would like property to pay for itself. One challenge is a high property tax rate, since the land was kicked out of current use "timber" tax status when they bought it.

After attending several workshops and studying the options in this guide, they decide to take the following actions:

- First, they join NCF to access information & technical assistance available
- After a site visit from NCF, they hire a forester from NCF's list of Preferred Providers to help them develop a forest stewardship plan.
- With that plan, they become FSC Certified, and apply for Current Use Taxation (designation as forestland).
- The Forest Stewardship Plan is adapted to create a Farm Plan, with which they apply for and receive NRCS Cost Share grants.
- They select a logging contractor from NCF's list of Preferred Providers to conduct an initial commercial thin to reduce stocking and diversify the stand.
- During the logging operation, they use cost-share assistance from the EQIP program to conduct additional habitat enhancement. They take the summer off from work and perform the habitat work themselves. They create 40 snags / habitat trees, prune timber trees, and create habitat piles with the logging slash. 8 bird boxes are installed, and they plant fruit and nut producing trees and shrubs along the edge of forest stands. Skid roads are seeded with native grasses and forbs for browsing animals.
- For the portion of the project they do themselves, they get paid the allowed amount, but their only costs are hard costs to do the work, such as purchase of a chain saw & hand tools, supplies, nursery stock, tree protectors, grass seed, etc. They hire a tree planting crew to reforest.
- After the commercial thin, they perform a baseline inventory of biomass to generate a "carbon profile" for the property, then sell carbon credits to a direct buyer through NCF at \$15/metric ton. The inventory indicates their forest has a total of 110 tons CO<sub>2</sub>/acre. After NNRG runs their carbon calculations and removes the necessary baseline value, they have a net volume of 100 tons CO<sub>2</sub>/acre or a total of 2,000 metric tons across their entire property. 20% of their saleable volume must be set aside in an insurance pool, leaving them a total saleable volume of 1,600 metric tons CO<sub>2</sub>.

**Up-front costs:**

NCF Fees: \$230 first year membership (\$50 annual renewal fee)

Forest Stewardship Plan: \$500

Forest biomass inventory: \$40/acre = \$800

Total up-front costs: \$1,580

Annual cost savings from Current Use Taxation: [Analysis in Development]

After upfront costs are paid, the following cost – benefit analysis shows a combined net profit to landowner of \$35,038:

<b>Table 4.1 Fictional Scenario: 20-acre Family Forest – Commercial Thinning Operation</b>					
<b>Cost calcs</b>		<b>Total Costs</b>	<b>Revenue</b>	<b>Total Revenue</b>	<b>Net Profit</b>
Logging costs include: cut-to-length operator, permitting/consulting forester, trucking, etc.	62 mbf logs @ cost of \$250/mbf	\$15,500	Conventional sawlog @ \$435/mbf + \$45/mbf FSC premium = \$480/mbf	\$29,760	\$14,260
	200 ton pulp @ cost of \$250 /mbf	\$6,250	Conventional pulp @ \$27/ton – no FSC market was available	\$5,400	(\$850)
<b>Net to landowner:</b>					<b>\$13,410</b>

<b>Table 4.2 NRCS Conservation Cost-Share Grant</b>					
	#Units	Cost / Unit	CS Grant	Hard Costs	Landowner Income
Create 40 Snag Trees	40 Trees	\$75	\$3,000	\$900	\$2,100
Prune Timber Trees	20 acres	\$75	\$1,500	\$420	\$1,080
Habitat Piles	40 piles	\$71.25	\$2,850	\$850	\$2,000
Bird Boxes	40 Boxes	\$37.50	\$1,500	\$725	\$775
Site prep for fruit trees	3 acres	\$187.50	\$562.50	\$150.50	\$412
Plant/establish trees	750 trees	\$1.73	\$1,297.50	\$1,725	(\$427)
Tree protectors	750 trees	\$1.24	\$930	\$1,260	(\$330)
Seed skid roads	1.25 acre	\$521.25	\$651.50	\$165.50	\$486
<b>Net to Landowner:</b>					<b>\$6,096</b>

<b>Table 4.3 Carbon Credits Sale</b>					
Quantity	Sale Price	<b>Total Revenue</b>	Biomass Inventory	7% Broker fee	<b>Net to Landowner</b>
1,600 tons CO2	\$15/ton	<b>\$24,000</b>	\$800	\$1,680	<b>\$21,520</b>



## Forestland Ownership Scenario #2: 120-Acre Retirement Property

Now let's consider another scenario, a 65 year old factory worker owns a vacation home on 120 mostly forested acres near a growing mountain retirement community. Upon retirement, she decides to move from the city to take up full-time residence there. Given her new "fixed income" she is considering subdividing the property and selling a large chunk of the land to developers to pay off the mortgage. After attending a workshop on conservation options, she decides she would rather see the land kept as a working forest, and sets the goal of donating a conservation easement as soon as she can afford to do it.

Of the 120 acres, 100 acres is in forest, with a "no-touch" buffer of 5 acres along a fish-bearing stream which traverses the property. This leaves 95 acres of 50-year-old Douglas fir forest to be managed. After considering her options and consulting with NCF, she decides the best plan is to conduct an initial sale of carbon offsets to give her the money she needs to pay off the mortgage, then try to augment her retirement income with periodic logging every 5 years, harvesting less than annual growth to maintain the base of standing carbon required in her contract. After the carbon sale is complete, she conducts a commercial thinning in about 5 years, followed by small clearcuts every 5 years or so on a rotating basis. As she realizes the satisfaction of knowing the land will be a gift to the future, she decides to enhance the wildlife habitat and timber using NRCS cost-share grants and a riparian enhancement contract. She and her friends do a lot of the work themselves, and earn extra money which she puts in her retirement fund. Then on her 75<sup>th</sup> birthday, she donates a working conservation easement to the local land trust, restricting the land's use to low-impact timber management in perpetuity.

As she carries out her plans, she takes the following actions:

- She joins NCF, paying the \$230 fee, \$50 annual renewal.
- She hires an NCF Preferred Provider to help her develop a forest management plan, then completes the FSC certification of her land through NCF
- She hires an NCF Preferred Provider to conduct a timber cruise and biomass inventory in order to understand both the timber and carbon value in her forest. The biomass inventory indicates her forest has a total of 180 metric tons CO<sub>2</sub>/acre. After NNRG runs her carbon calculations and removes the necessary baseline value, she has a net volume of 130 tons CO<sub>2</sub>/acre, or a total of 12,350 metric tons across her entire property. 20% of her saleable volume must be set aside in an insurance pool, leaving her a total saleable volume of 9,880 metric tons CO<sub>2</sub>.
- She executes an initial carbon sale, using the proceeds to pay off the mortgage.
- 5 years later, she conducts the first commercial thin, followed by a 10-acre harvest using small patch clear cuts in year 10.
- During the commercial thin, she does habitat enhancement through an EQIP grant:
  - She hires a contractor to fix the road in several places.
  - She pays a local forestry crew for to pre and post-logging work of site prep, reseeding the road, tree planting etc.
  - They salvage most of the 950 native forage plants from a nearby logging operation.

- With a group of friends working alongside the crew, they do 50% of the work thus “hiring themselves” for half the work and pay a crew for the rest.
- The next spring, she and a class of college students helps finish the habitat work, so they pay themselves for all of that work.
- For both of these activities they incur some hard costs for tools, supplies, equipment rental, etc. as above.
- They create snags and habitat piles, install bird boxes, and under-plant existing stands with shade tolerant conifers and native vegetation to diversify the stands.
- Later she enters a CREP contract to reforest 5 acres where the stream crosses the field behind her house.

### **Upfront costs**

NCF Fees: \$230 first year membership (\$50 annual renewal fee)

Forest Stewardship Plan: \$500

Timber cruise & forest biomass inventory: \$20/acre = \$2,000

**Total up-front costs: \$2,730**

<b>Table 5.1 Fictional Scenario: 120-acre Retirement Property – Carbon Credits Sale</b>					
Carbon Sale	Sale Price	Total	Biomass Inventory	7% Broker fee	Net to Landowner:
9,880 tons CO <sub>2</sub>	\$15/ton	<b>\$148,200</b>	\$2,000	\$10,374	<b>\$135,826</b>

<b>Table 5.2: Commercial Thinning Operation @ 5 &amp; 10 years</b>					
	Costs	Total Costs	Revenue	Total FSC Revenue	Net Profit
Logging costs include: cut-to-length operator, permitting/consulting forester, trucking, etc.	250 mbf logs @ cost of \$200/mbf	\$50,000	Conventional sawlog @ \$450/mbf ; + \$40/mbf FSC premium = \$490/mbf	\$122,500	\$72,500

<b>Table 5.3 NRCS Environmental Quality Incentive Grant</b>					
Action Item	#Units	Grant \$/ Unit	CS Grant	Hard Costs	Landowner Income
Create 2 Snag Trees / acre*	190	\$75	\$14,250	\$1,250	\$14,250
Create 2 Habitat Piles / acre*	190	\$71.25	\$13,537.50	\$2,637.50	\$10,900
Install 2 Bird boxes / acre*	190	\$37.50	\$7,125	\$1,375	\$5,750
Site Prep for Under- planting**	95 acres	\$187.50	\$17,812	\$11,875	\$5,937
Tree Planting**	9500	\$0.75	\$7,125	\$4,750	\$2,375
Native Plants**	950	\$2.10	\$1,995	\$1,190	\$805
Tree Protectors*	4750	\$1.24	\$5,890	\$6,000	(\$110)
Seed Skid Roads*	1.25 ac	\$521.25	\$652	\$435	\$217
Regrade forest road, add water bars***	1000 lineal feet	\$2.25	\$2,250	\$3,000	(\$750)
<b>Net to Landowner:</b>					<b>\$41,954</b>

\* Portion of project completed by landowner (hard costs exclude labor)

\*\*Portion of project 50% completed by landowner, 50% by contractor (e.g. tree planting hard costs = 4,250 trees @ \$1.00 / tree, native plants hard costs = 425\*\$2.80)

\*\*\*Portion of project 100% completed by contractor

## Appendix I: Resources Directory

### FSC Certification and Markets

#### Organizations

1. FSC International  
[www.fsc.org](http://www.fsc.org)
2. FSC U.S.  
[www.fscus.org](http://www.fscus.org)
3. Northwest Certified Forestry  
[www.nwcertified.org](http://www.nwcertified.org)
4. Sustainable Northwest  
[www.sustainablenorthwest.org](http://www.sustainablenorthwest.org)
5. FSC Family Forests Alliance  
[www.familyforestsalliance.org](http://www.familyforestsalliance.org)

#### Publications

1. FSC Pacific Coast Forest Management Standards  
[http://www.fscus.org/images/documents/2006\\_standards/pcwg\\_9.0\\_NTC.pdf](http://www.fscus.org/images/documents/2006_standards/pcwg_9.0_NTC.pdf)
2. FSC Brochure  
[http://www.fscus.org/images/documents/FSC\\_brochure.pdf](http://www.fscus.org/images/documents/FSC_brochure.pdf)
3. FSC U.S. Market Prospectus  
[http://www.fscus.org/images/documents/FSC\\_prospectus.pdf](http://www.fscus.org/images/documents/FSC_prospectus.pdf)

#### Resources

1. List of FSC certified businesses in the U.S.  
[http://www.fscus.org/certified\\_companies/?num=20](http://www.fscus.org/certified_companies/?num=20)
2. Searchable database for FSC certified product suppliers in the U.S.  
[http://www.fscus.org/faqs/fsc\\_products.php?link=1](http://www.fscus.org/faqs/fsc_products.php?link=1)
3. List of FSC certified businesses in WA  
[http://nnrg.org/files/fsc\\_cocs\\_wa.xls](http://nnrg.org/files/fsc_cocs_wa.xls)
4. List of FSC certified mills in WA  
<http://nnrg.org/wood-products/fsc-log-sales>

### Government Agencies & Conservation Programs

#### Agencies

1. Natural Resource Conservation Service  
<http://www.nrcs.usda.gov/>
2. WA Department of Natural Resources  
<http://www.dnr.wa.gov>
3. OR Department of Forestry  
<http://www.oregon.gov/ODF/>
4. WA State University Forestry Extension  
<http://ext.wsu.edu/forestry/index.htm>
5. OR State University Forestry Extension  
<http://extensionweb.forestry.oregonstate.edu/>

6. WA Conservation Districts  
<http://www.scc.wa.gov/index.php/District-News/Conservation-District-Locator-Map.html>
7. OR Soil and Water Conservation Districts  
<http://www.oregon.gov/ODA/SWCD/swcc.shtml>

#### Cost-share Programs

1. Environmental Quality Incentives Program  
<http://www.wa.nrcs.usda.gov/programs/eqip/FY10/index.html>
2. Wildlife Habitat Incentives Program  
<http://www.wa.nrcs.usda.gov/programs/whip/WHIP10/index.html>
3. Conservation Stewardship Program  
<http://www.wa.nrcs.usda.gov/programs/newCSP/index.html>
4. Conservation Reserve Enhancement Program  
<http://www.scc.wa.gov/index.php/Conservation-Reserve-Enhancement-Program/>
5. Family Forest Fish Passage Program  
[http://www.dnr.wa.gov/BusinessPermits/Topics/SmallForestLandownerOffice/Pages/fp\\_sflo\\_fffp.aspx](http://www.dnr.wa.gov/BusinessPermits/Topics/SmallForestLandownerOffice/Pages/fp_sflo_fffp.aspx)

#### Conservation Easement Programs

1. Wetlands Reserve Program  
<http://www.wa.nrcs.usda.gov/programs/wrp/wrp.html>
2. Forestry Riparian Easement Program  
[http://www.dnr.wa.gov/BusinessPermits/Topics/SmallForestLandownerOffice/Pages/fp\\_sflo\\_frep.aspx](http://www.dnr.wa.gov/BusinessPermits/Topics/SmallForestLandownerOffice/Pages/fp_sflo_frep.aspx)
3. Riparian Open Space Program  
[http://www.dnr.wa.gov/BusinessPermits/Topics/OtherIndustryLandownerResources/Pages/riparian\\_open\\_space\\_program.aspx](http://www.dnr.wa.gov/BusinessPermits/Topics/OtherIndustryLandownerResources/Pages/riparian_open_space_program.aspx)
4. Forest Legacy Program  
[http://www.dnr.wa.gov/BusinessPermits/Topics/ConservationTransactions/Pages/forest\\_legacy.aspx](http://www.dnr.wa.gov/BusinessPermits/Topics/ConservationTransactions/Pages/forest_legacy.aspx)

### **Carbon Offset Markets**

#### Publications

1. Forest Carbon in the United States: Opportunities and Options for Private Lands  
<http://www.pacificforest.org/policy/forestcarbon.html>
2. U.S. Forest Carbon and Climate Change: Controversies and Win-Win Policy Approaches  
[http://wilderness.org/files/ForestCarbonReport\\_0.pdf](http://wilderness.org/files/ForestCarbonReport_0.pdf)
3. Ecosystem Markets: New Mechanisms to Support Forestry  
<http://www.dovetailinc.org/files/DovetailEcoMkts0308dk.pdf>
4. Effects on carbon storage of conversion of old-growth forests to young forests  
<http://academic.evergreen.edu/curricular/ftts/downloadsw/harmonetal1990.pdf>
5. State of the Voluntary Carbon Markets 2010  
[http://www.forest-trends.org/publication\\_details.php?publicationID=2433](http://www.forest-trends.org/publication_details.php?publicationID=2433)



## Websites

1. Northwest Neutral  
[www.nwneutral.org](http://www.nwneutral.org)
2. Ecosystem Marketplace  
<http://www.ecosystemmarketplace.com/>
3. Forest Carbon Portal  
<http://www.forestcarbonportal.com/>
4. U.S.F.S Tools for carbon inventory, management, and reporting  
<http://www.nrs.fs.fed.us/carbon/tools/>

## **Conservation Easements**

### Organizations

1. The Land Trust Alliance  
[www.lta.org](http://www.lta.org)
2. Cascade Lands Conservancy  
<http://www.cascadeland.org/>
3. Trust for Public Lands  
<http://www.tpl.org/>
4. Pacific Forest Trust  
<http://www.pacificforest.org/>

### Publications

1. Working Forest Conservation Easements: A Primer for Forest Landowners  
<http://www.naturalresources.umd.edu/Publications/PDFs/Other/Workingforest.pdf>
2. Ensuring Sustainable Forestry Through Working Forest Conservation Easements  
[http://www.forestguild.org/publications/research/2006/Forest\\_Conservation\\_Easements\\_Forest\\_Guild.pdf](http://www.forestguild.org/publications/research/2006/Forest_Conservation_Easements_Forest_Guild.pdf)
3. Using Conservation Easements to Protect Working Forests  
<http://www.privatelandownernetwork.org/plnpro/workingforestces.pdf>
4. Conservation Easements to Protect Working Forests  
<http://www.dovetailinc.org/files/DovetailEasements0206.pdf>

## Websites

1. Private Landowner Network  
<http://www.privatelandownernetwork.org/>
2. National Learning Center for Private Forest and Range Landowners  
<http://forestandrangerange.org/>