



## The Future of Washington's Forests and Forestry Industries



# Retention of High-Valued Forest Lands at Risk of Conversion to Non-Forest Uses in Washington State



Final Report  
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Prepared for the Washington State Legislature and  
Washington Department of Natural Resources  
by the College of Forest Resources, University of Washington



## Executive Summary

The 2007 Washington State Legislature directed the University of Washington College of Forest Resources and its Northwest Environmental Forum to produce recommendations “*for retaining the highest valued working forest lands at risk of conversion to non-forest uses.*” Since 2004, Forum dialogues have brought together over 400 participants from 94 organizations, representing the full range of interests concerned about the future of Washington’s forests. Informed by in-depth research from the College, a remarkable consensus about the nature of the threats and the steps that must be taken to conserve our state’s working forests has emerged.

The 2008 Forum defined “working forests” as “sustainably managed for commodity products as well as ecological and social values” and requiring a “permanent and un-fragmented land base.” The Forum made a series of major recommendations for the 2009 Legislature.

1. Fund the maintenance and enhancement of the Land Parcel Database.
2. Establish right to practice forestry legislation.
3. Support Washington Farm Forestry Association and Washington State Department of Natural Resources (DNR) requests to fully fund the Family Forest Fish Passage Program (FFFPP) and Forestry Riparian Easement Program (FREP) programs, for DNR requests for expert forestry assistance for small landowners, and for landowner incentives to provide benefits for threatened and endangered species.
4. Support the central Puget Sound Transfer of Development Rights (TDR) pilot project.
5. Fund the DNR forest health initiative.
6. Create a Legislative Task Force to address in detail a full complement of additional issues such as tax reform, regulatory stability, incentives and ecosystem services payments.

The description of all 2006-2008 Forum recommendations is in Appendix B.

Ownership of the state’s 11.6 million acres of private forestland is split evenly among industrial and non-industrial owners. These private lands provide critical fish and wildlife habitat, especially in highly-productive lower elevation riparian areas. The Washington State Forestland Database, developed by the University of Washington Rural Technology Initiative (RTI), analyzed data for over 3 million properties including property valuation, forest soil productivity, forest cover, tax status and other factors. Properties with a differential of greater than \$2500/acre between forest production value and the value of other uses were deemed at “high risk” of converting to non-forest uses. About 972,000 acres of private forestland in western Washington are threatened with conversion. In this report, high-risk watersheds are displayed in map and tabular format.

The forest products industry is a significant economic driver for communities in all regions of the state. Forest and paper industries represent 11% of all manufacturing jobs and play a particularly important role in rural, timber-dependent communities. However, population pressures, changing forest ownership patterns and the desire for rural housing sites are fragmenting once continuous forests into smaller tracts that are economically and environmentally unsustainable.

The potential risk of conversion is highest in the Puget Sound region. There and elsewhere, reductions in harvest levels due to conversion will translate into less supply for forest products mills. Washington mills will become less competitive over the next four decades and all sectors – mills, export, veneer and plywood and pulp manufacturers – will find their raw material supply significantly scarcer. Forest conversion will eliminate major opportunities to leverage forest carbon sequestration to address climate change and also negatively affect biodiversity, fisheries resources and open space.

A successful state strategy to support the long-term future of working forests must (a) increase working forest values (by improving the product value of the timber resource and the value of non-timber resources) and (b) decrease alternative land use values by either compensating/incentivizing landowners for forgoing fragmentation or by containing urban sprawl to prevent fragmentation. This report presents mechanisms to achieve these outcomes in three displays: current Washington state programs, successful programs from other states, and proposed mechanisms from Forum participants. Until the state makes a commitment to an integrated strategy, it will be difficult for a significant number of landowners to willingly commit to a future in which their ability to continue managing their land for forestry appears to be jeopardized by regulatory uncertainty and real estate pressures.

Ensuring a stable land base for forestry requires that a reasonable economic expectation from forest management can be met. A specific example is securing landowner support for Working Forest Conservation Easements, designed to ensure that the land remains as working forest for a stipulated time or in perpetuity. A significant number of family forest owners would consider such long-term easements, though fewer indicate a preference for permanent easements. Landowners more concerned about the development pressure on their forestland appear more willing to participate in forest conservation programs. The demand by forest landowners for large premiums in return for long or perpetual easements to their development rights should provide food for thought for policymakers and conservation organizations alike. Tradeoffs will have to be made between the number of forest landowners participating in forest protection programs and the length of such programs. Decisions regarding the desirability of wider program coverage at the expense of permanence will have to be made.

## Table of Contents

<b>Executive Summary</b> .....	i
<b>Acknowledgements</b> .....	1
<b>Project Background</b> .....	2
Northwest Environmental Forum Beginnings and Sustainable Forest Communities.....	2
Forum Attendees and Sponsors .....	2
Legislative 2005 Proviso .....	2
Legislative 2007 Proviso .....	2
What Defines a Working Forest? .....	3
Washington’s Forests and Forest Industries’ Future.....	3
Economic Contribution – Local Jobs and Exports from Washington’s Forests .....	6
Why Protecting Working Forest Ownership is Important Now.....	6
A Forest Land Parcel Database is Critical to Understand Consequences of Shifting Land Uses.....	7
Methodology for the Retention Report - The Washington State Forestland Database – New and Comprehensive Spatial Analysis .....	7
<b>Consequences of Forest Land Conversion on Watersheds and Adjoining Anchor Forests</b> .....	8
Identifying forest lands at risk of conversion .....	8
Anchor Forests.....	14
<b>Forest land lost to conversion threatens harvest levels, wood supply and all aspects of the forest industry</b> .....	15
The effect of a lower number of forested acres is reduced harvest levels. ....	17
The effect of a lower number of forested acres is reduced harvest levels in all timberheds. ....	17
Sawmill raw material input may be reduced by more than 1,000 Million Board Feet (MMBF) by 2080, a 43% decline.....	18
Sawmill competitiveness in regions with high-risk forestlands will diminish.....	18
Small mills will not be able to compete .....	18
Exports of Washington logs will decline, along with sawmills .....	18
Veneer and Plywood mills will have insufficient supply.....	18
12 pulp mills statewide will experience significantly-reduced raw material supply.....	18
<b>Incentives are Needed for Retaining Working Forests</b> .....	19
<b>Comparing Incentives to Retain and Mitigate Forest Value Losses in Washington and other states</b> .....	19
A Four-Way Framework for Preserving Working Forests: Increasing Working Forest Values (Timber and non-Timber), or Mitigating Alternative Land Use Values (Compensation or Regulation) .....	20
What the Table 6 and 7 matrices of current Washington and other states’ programs don’t show about program success and why new efforts such as the Incentives Proposed in Table 8 should be considered. ....	42
<b>Legislative Task Force is Critical to Explore the Tradeoffs and Options</b> .....	43
An Incentive Can Create Public Value if Applied Correctly.....	43
Mitigations of Losses are Not Incentives.....	44
Market-based Strategies are Fundamental to Success for Ecosystem Services .....	44
Carbon is a Working Forest Ecosystem Service .....	45
Biodiversity Conservation needs a Stable Working Forest Base .....	46
<b>What Landowners Say About Incentives to Support Continued Ownership and Management of Forest Land</b> .....	47
Regulatory Reform and the “Hassle Factor” .....	48
Tax Reform and Competitive Position.....	49

Compensation for Development Rights and Cascade Land Conservancy Findings .....	49
Payments for Ecosystem Services – Supply and Demand - What Landowners Said to University of Washington that Encumbrances for Conservation are Worth .....	51
Minnesota Lessons about Landowner Motivations .....	52
On-the-Ground Feedback from Washington Forest Land Owners .....	52
Policy Choices to Address Fragmentation and Parcelization through Compensation.....	53
Perpetuity is a Lot Longer than 100-Years to a Forest Landowner .....	53
<b>Conclusions</b> .....	54
<b>References</b> .....	54
<b>Appendix A</b> - Detail Maps of High Conversion Risk, High Value Private Forestland Near Anchor Forests in Washington .....	57
<b>Appendix B</b> - Major Findings & Proposals for 2009 Legislative Action Northwest Environmental Forum.....	67
<b>Appendix C</b> - Participants in Northwest Environmental Forum 2004-2008.....	79
<b>Appendix D</b> - Pilot Forest Landowner Survey .....	89
<b>Appendix E</b> - The 2007 Washington State Forestland Database Final Report.....	105
<b>Appendix F</b> - Infrastructure Consequences of Lost Forest Production from Forest Land Conversion .....	181
<b>Appendix G</b> - Preserving Oregon’s Working Forests: a Landowner’s Perspective on Sustainability ....	193

## List of Figures

Figure 1. Only 15 feet of forested buffer is maintained around the stream, and houses are built within 30 feet of the stream edge.....	4
Figure 2. Watersheds where Private Forests are at the Greatest Risk of Conversion.....	10
Figure 3. Projected Percentage of Watersheds Converted from Private Forest to Non-Forest Uses by 2050.....	13
Figure 4. High Conversion Risk, High Value Private Forestland Near Anchor Forests in Washington ..	14
Figure 5. Harvest levels in million board feet (MMBF).....	17
Figure 6. Harvest levels in million board feet (MMBF) by timbershed .....	17
Figure 7. A Four-Part Framework for Preserving Working Forests .....	20

## List of Tables

Table 1. Washington State Forestland Parcel Acres by Owner Type and County.....	5
Table 2. Risk of Forest Conversion by Water Resource Inventory Area (WRIA).....	11
Table 3. Summary of High Value Forest Lands at Risk .....	15
Table 4. Small forest landowner, Industrial and Tribal forested acres in western Washington counties with positive conversion risk, and total forested acres.....	16
Table 5. Forested acres and annual loss rate percent by timbershed.....	16
Table 6. Current Programs.....	21
Table 7. Other States’ Programs.....	25
Table 8. Proposed Programs.....	34

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The Family Forest Foundation and the Washington State Farm Forestry Association advocated for funds to develop a database of family forestlands in Washington State, resulting in a 2006 federal budget allocation of \$500,000 for a "private landowner database," culminating in a USDA Forest Service contract with the Rural Technology Initiative to create the Washington State Forestland Database. This project could not have been completed without their combined efforts.

We thank Matthew Donegan of Forest Capital Partners for his "Four-part Framework for Preserving Working Forests," and allowing us to reproduce his paper in Appendix G.

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## Forum Sponsors

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## Project Background

### Northwest Environmental Forum Beginnings and Sustainable Forest Communities

The Northwest Environmental Forum was created at the College of Forest Resources (CFR) at the University of Washington in 2003 to apply CFR's environment-related sciences to help resource managers and public policy makers confront resource conflicts through a facts-based dialogue and establish new ways to sustain natural resource systems with market-related initiatives. An “educational observatory” is also a Forum objective, such that faculty and students can add value and learn from the dialogue. The Forum creates a working space to move outside past disagreements and cultural perceptions and weigh complex resource management expectations in terms of the pressures imposed by rapid population expansion.

### Forum Attendees and Sponsors

In the five years (2004-08) that the Forum has met, over 400 participants from 94 organizations, besides the University of Washington, have engaged in a dialogue and made recommendations about the issues surrounding the losses of working forests to urbanization. The Forum has been funded to date by the philanthropy of 44 sponsor organizations, including conservation, forestry, federal and state agencies, and foundations. Forum attendees have included a diverse group of environmental advocacy, land trust and conservation organizations, Indian tribes, forest industry large and small, academic, foundation, and government – local, state and federal. Forum Proceedings, recommendations and sponsors (2004-2008) can be found at: [www.nwenvironmentalforum.org](http://www.nwenvironmentalforum.org). Major Findings and Proposals for 2009 Legislative Action from the 2008 Forum can be found in Appendix B. Appendix C lists the organizations and people who attended one or more Forums.

### Legislative 2005 Proviso

Following the initial Forum of 2004, “Saving Washington’s Working Forest Land Base,” the 2005 Washington State Legislature responded by appropriating \$1.0 million for the College of Forest Resources to research timber supply, industry competitiveness, and the impacts of forest land losses to development pressures. College researchers reported study findings *The Future of Washington’s Forests and Forest Industries*, to the Forum in October and November 2006, which prompted new Forum recommendations.

### Legislative 2007 Proviso

The 2007 Legislature asked for: *“recommendations from the College’s Northwest Environmental Forum for retaining the highest valued working forest lands at risk of conversion to non-forest uses. These recommendations should include an examination of means to enhance biodiversity through strategic retention of certain lands, as well as economic incentives for landowners to retain lands as working forests and provide ecosystem services. The recommendations shall consider the health and value of the forest lands, the rate of loss of working forest lands in the area, the risk to timber processing infrastructure from continued loss of working forest land and the multiple benefits derived from retaining working forestlands. The recommendations shall prioritize forest lands in the Cascade foothills,*



*which include the area generally encompassing the non-urbanized lands within the Cascade mountain range and drainages lying between three hundred and three thousand feet above mean sea level and located within Whatcom, Skagit, Snohomish, King, Pierce, Thurston and Lewis counties.”*

## **What Defines a Working Forest?**

The 2008 Forum defined “working forests” as “sustainably managed for commodity products as well as ecological and social values” and requiring a “permanent and un-fragmented land base.”

## **Washington’s Forests and Forest Industries’ Future**

Washington State has large industrial and non-industrial land holdings and also has state forests managed to produce income for schools and universities. The forest products industry is a significant economic driver for communities in all regions of the state. Forests, even logged periodically, provide protection for riparian ecosystems far more than when the forest is gone, yet the forces of growth are fragmenting the forests into unsustainable economic and environmental units.

The economics of forest ownership are changing as urban expansion has encroached on forest lands. These forces, in turn, stimulate additional forest conversion for scattered rural housing. Reduced timber supply limits sawmill supply and expansion, transportation distances for saw-logs become uneconomic, and overcrowded roads make haulage costs prohibitive.

Forest land is increasingly a financial, rather than an industrial asset, as old-line companies have monetized their forest assets and been replaced by institutional investor-managers, or reorganized into real estate investment trusts. The landscape of forest ownership is changing rapidly, and the income expectations of owners are often met by converting land to take advantage of rising land development values. Even non-profit landowners have revenue needs.

The study *The Future of Washington’s Forests and Forest Industries (2007)*, conducted for the Legislature by the College of Forest Resources, shows that national forests in Washington produce only about 10 percent of the timber that was harvested during their heydays in the 1970’s, and highly-productive industrial, state, and small private, non-industrial forest lands have filled the gap. Non-industrial and family-owned woodlots, with 215,000 small landowners and about 25 percent of the forest base of Washington, are typically at lower elevations, closer to cities and under the greatest pressure to develop. See Table 1 for ownership by landowner type. Under current rules, these ownerships typically have the highest per acre regulatory costs to harvest their timber. It is actually easier under some local rules to build a house near a stream in Washington State than it is to log and replant a forest near the same stream.



**Figure 1. Only 15 feet of forested buffer is maintained around the stream, and houses are built within 30 feet of the stream edge.**

Source: FWF 2007, DP7-7

Had this parcel been used for forestry, a minimum of 50-foot no harvest buffer would have been required, with additional buffering out to a total of 90-200 feet depending on stream type and site class.

These lands are also important for wildlife habitat and fish regeneration, especially in highly-productive lowland riparian areas. We cannot easily quantify biodiversity or other ecological factors of the land since markets don't exist for ecological services, yet they have value and their loss is dramatic and permanent when the forests are converted to shopping malls. The importance of industrial, non-industrial, and family ownerships of these woodlands in terms of state gross business income, family income, total jobs, and contribution to local and national economies were quantified in the College of Forest Resources' *Future of Washington's Forests and Forest Industries* research commissioned as result of the first Forum.

Table 1. Washington State Forestland Parcel Acres by Owner Type and County

Washington State Forestland Parcel Acres by Owner Type and County					
County	Industrial	SFLO	Tribal Industrial	Tribal SFLO	County Total
Adams	3,759	28,004			31,763
Asotin	39,794	134,658		994	175,445
Benton	1,284	9,383			10,667
Chelan	60,260	127,220			187,480
Clallam	261,485	81,337	3,896	1,084	347,803
Clark	42,016	128,761			170,777
Cowlitz	418,491	124,499		16	543,006
Douglas	11,698	116,208		296	128,203
Ferry	126,367	183,298	56,628	5,272	371,564
Franklin	2,338	30,060			32,397
Garfield		161,413			161,413
Grant	3,393	6,867			10,260
Grays Harbor	555,518	134,700	41,382	15,646	747,246
Island	299	76,239			76,537
Jefferson	141,068	62,378		96	203,542
King	237,371	171,150		1,823	410,344
Kitsap	24,376	116,703	10,429	1,279	152,788
Kittitas	181,472	104,607		30	286,109
Klickitat	225,848	273,961	75,766	156	575,730
Lewis	604,033	248,426		198	852,658
Lincoln	14,889	216,230		72	231,190
Mason	229,339	101,326		3,126	333,790
Okanogan	33,468	439,367	29,014	1,857	503,705
Pacific	381,005	70,023		137	451,166
Pend Oreille	86,020	110,447		1,004	197,471
Pierce	235,462	180,364		312	416,139
San Juan		76,378			76,378
Skagit	191,991	118,523		1,522	312,036
Skamania	81,905	33,497			115,402
Snohomish	92,235	216,846		10,219	319,300
Spokane	39,021	527,052			566,073
Stevens	303,898	623,554		2,891	930,344
Thurston	94,966	163,911		1,196	260,073
Wahkiakum	91,195	28,640			119,835
Walla Walla	2,991	79,567			82,558
Whatcom	89,203	138,678		3,709	231,590
Whitman		199,304			199,304
Yakima	37,861	58,084	697,995	2,944	796,884
<b>State Total</b>	<b>4,946,321</b>	<b>5,701,661</b>	<b>915,111</b>	<b>55,878</b>	<b>11,618,971</b>

## Economic Contribution – Local Jobs and Exports from Washington’s Forests

The *Economic Contribution* section of the *Future* report shows that the forestry and wood products manufacturing sectors have played an increasingly important role in the economy of Washington State since 2001. The sector provided over 45,000 jobs in 2005, generated approximately \$16 billion in gross business revenue, and paid out over \$2 billion in wages and over \$100 million in tax receipts. As a result, the forestry and related wood products sector of the state economy employed 1.43% of the workers in the private sector in Washington, accounted for 1.8% of the total wages paid within the private sector, and generated 3.2% of the gross business income of the private sector. There are estimated to be 7.7 direct jobs and 32.3 indirect jobs linked to each million board feet of timber harvest in Washington.

Employment in the forest and paper industries represents 11% of all manufacturing jobs in the state, suggesting that the forest products industry plays an important role within the diversified economy of the state. This is of particular relevance since many of these jobs are located in rural, timber dependent communities where family wage jobs are difficult to come by. For example, the 2005 employment and wage data show that jobs in the lumber manufacturing and paper manufacturing industries provide an annual average wage of \$45,703 and \$60,421, respectively. Indeed, even the logging industry provides an average annual wage of \$40, 208.

The exporting of wood products from private lands is also an important contributor to the State’s economy, particularly in the current economic downturn. Despite the fact that softwood lumber production in the state dropped by 19.8% between 2007 and 2008, exports of wood products from Washington actually increased by 8.6% from \$1.28 to \$1.39 billion. This represents the only bright spot within an otherwise down economy. Between 2007 and 2008, Washington saw its share of total US wood product exports increase from 19.6% to 19.9%.

## Why Protecting Working Forest Ownership is Important Now

The challenge of how to protect Washington’s private and public forests for the next century is remarkably similar to the situation of 75 years ago, when in the midst of the Great Depression, a 1934 report from the University of Washington identified the key problem then facing the state and the future of its forest industries as: the rapid loss of productive forest land from timber companies who had “cut and run” and subsequently were unwilling to pay county taxes or re-forest the land. The report said: “We must look to the perpetuation of the forest as the forest land problem is rapidly becoming one of the most aggravating of the State.” The report called for “adjustments in the entire tax system to conserve all the social values for society of large forested areas.” The legislature responded by passing the Forest Board statutes providing for transfer of these tax-delinquent properties to the state for long-term forest management. These 626,000 acres of highly productive lands now serve as critical “anchor forests” in many of our urbanized and urbanizing counties. This concept of anchor forests will be examined further in this report.

Today we face a problem of similar magnitude, but now it is characterized by the fragmentation of the state's most productive forests from real estate pressures, changes in forest company ownerships, and lack of incentives for forest land owners to manage their lands for ecological, along with timber values.

## **A Forest Land Parcel Database is Critical to Understand Consequences of Shifting Land Uses**

The 2007 Forum supported a newly-created Forest Land Parcel Database, created by the College of Forest Resources with funds granted to the Family Forest Foundation and Washington Farm Forestry Association. Leading up to the 2008 Forum, this data structure enabled the production of a series of "risk of conversion and opportunities for conservation" maps, which include critical areas, forest economic values, real estate values, environmental and wildlife values, and the potential impacts upon forest products processing infrastructure. This report includes a description of the methodology of these analyses and includes critical maps.

## **Methodology for the Retention Report - The Washington State Forestland Database – New and Comprehensive Spatial Analysis**

Beginning with the passage of Washington State House Bill 2091, otherwise known as the Salmon Recovery Act (1998), the State has had an interest in quantifying the numbers, acres, and other characteristics of small forest landowners (SFLO) and their lands. The Washington State Forestland Database was developed to provide a comprehensive platform for understanding the spatial characteristics of productive private and public forestlands in the state, including family forests. The Database is an ArcGIS 9.2 Geodatabase and designed for use in Microsoft Access or any ESRI ArcGIS product. Appendix E contains a full explanation of the history and the methodology of the Database.

The Washington State Forestland Database combines land ownership, land use and assessment information with physical characteristics of the land to develop economic, social and environmental metrics about the forest land base. The spatially-explicit information in the database allows for analysis at the watershed, county and state level. This high-resolution dataset can produce maps, statistics and models at multiple scales. Over time it will become a comprehensive platform for understanding how forest land ownership and land use are changing, thereby enabling new science and research to inform public policy analysis, debate and action.

Three primary products were developed: the Washington State Forestland Database, statistics on the numbers and acres of forestland parcels and maps of the distribution and extent of private forestlands. Statistics derived from the Database reveal that 215 thousand small forest landowners own 5.7 million acres of forestland, half of the 11.6 million acres of private forestland in the state. Over 55 thousand of those small forest landowners have ownerships greater than 20 acres. The maps of the distribution of forestlands in the State of Washington show that small forest landowner

properties, often adjacent to suburban and exurban lands, provide a critical buffer between industrial forestlands and residential areas.

To map and quantify the location and features of forestlands, parcel data and assessor's attributes from the state's 39 counties were collected and normalized into a common statewide format. In counties where no GIS parcel data exist, GIS "pseudo parcels" were developed from assessor's legal descriptions. The three million individual parcels in the normalized database were then compared to forestland cover maps developed from Landsat satellite imagery as part of the National Land Cover Dataset. In addition to the landcover assessments, assessor's tax rolls were used to identify forested land uses as well as participation in forestland tax programs. Forest land parcels as small as 1 acre were included in the database.

Owner names, categories and style of forest management were classified into five "owner type categories": government, corporate, tribal, conservation and other private. Using owner type and number of acres, parcels were classified into management types: industrial or small forest land owner. By use of the Landscape Management System, the management regimes and the physical characteristics of the property, including site index, forest type and regulatory buffers, were modeled to develop a financial profile for each forest parcel. In addition, multiple physical and political characteristics were computed for each parcel such as distance to development, proximity to roads, distance from a designated Urban Growth Area and contiguous ownership area.

## **Consequences of Forest Land Conversion on Watersheds and Adjoining Anchor Forests**

### **Identifying forest lands at risk of conversion**

The projected risk of forest conversion to non-forest use was determined for timberlands located in the State using the Washington State Forestland Database developed by the University of Washington College of Forest Resources (Rogers and Cooke 2009). The conversion threat was determined by calculating the difference between per acre market value and per acre forest value for each parcel. Any property with an assessed value higher than its value for forestry (SEV) was deemed to have "positive risk." Forest properties with a current value of \$2,500 per acre or more than their forest production value were considered at "high risk of conversion." DNR lands and parcels enrolled in the Designated Forest Land (DFL) program were not included in the "at risk" analysis.

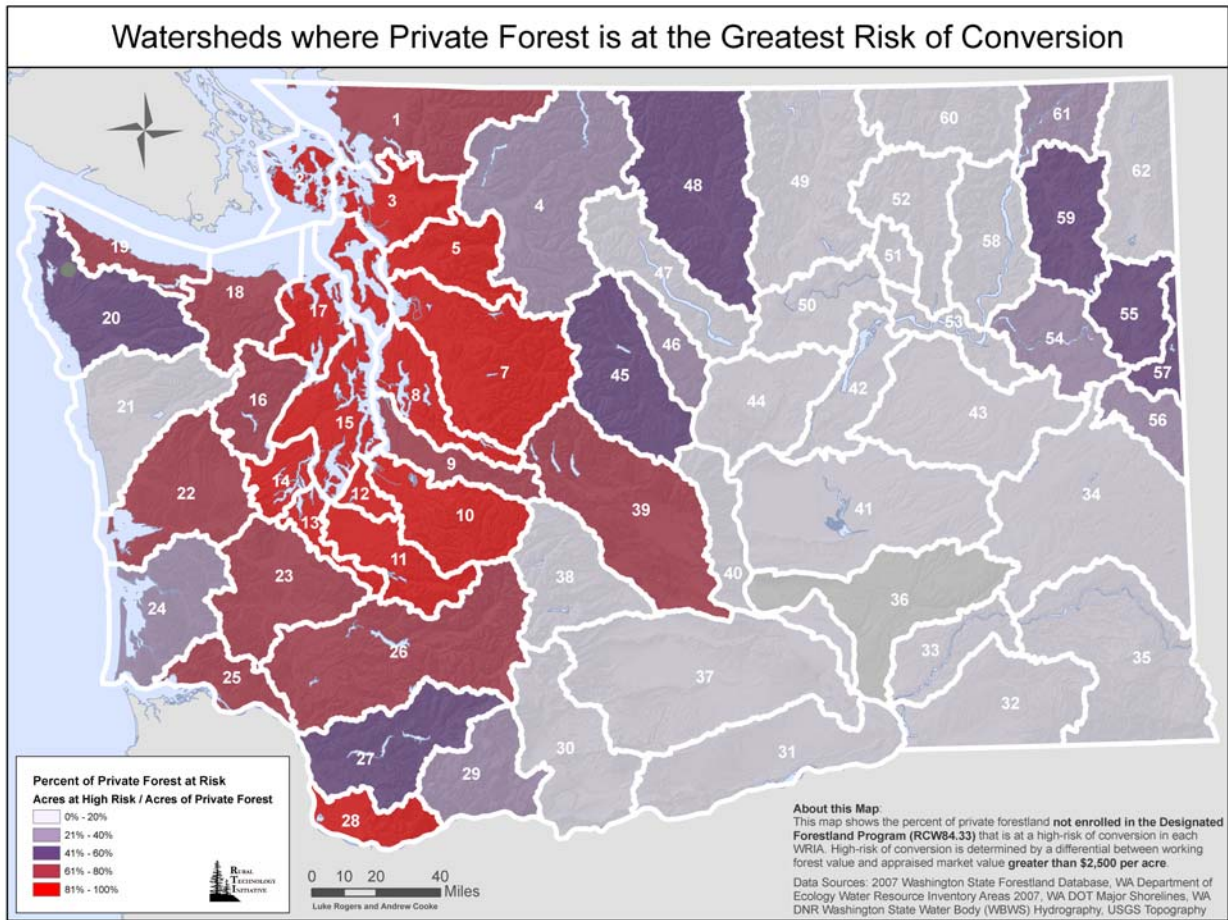
The Designated Forest Land Program, under RCW 84.33, provides substantial reductions in annual property taxation rates, in exchange for a stumpage value tax at the time of timber harvest. Forest lands in the DFL current use taxation program were assumed to have zero conversion risk. Market value appraisals for DFL lands are not available from most county assessors and could not be inferred from adjacent lands.

Many counties are required to develop comprehensive plans to manage urban growth, critical areas and resource lands of “long term commercial significance” under RCW 36.70A. These plans and the resulting land use zoning restrictions are intended to discourage residential and commercial development within agricultural and forest lands of long-term commercial significance. The effect of land use planning on forestland conversion was recognized as an important factor in the analysis of conversion risk, however GIS-based representations of these plans were not available statewide and could not be incorporated into the risk assessment. Future research is needed to accurately quantify the risk of conversion in designated forest resource zones.

Detailed maps of “High Conversion Risk, High Value Private Forestland Near Anchor Forests in Washington” can be found in Appendix A. The State is broken out as nine sub-regions to allow a more fine-grained view of the working forest land base and its relationship to Department of Natural Resources-managed forests and Designated Forest Lands (DFL).

The following maps display the results of three analyses quantifying the resource impacts and conservation opportunities associated with forestland conversion. Summarizing private forestlands at high-risk of conversion as a proportion of the non-Designated Forest Land (non-DFL) base, by watershed, reveals where private forestlands are scarce, have a high real estate value, or both.

Figure 2 shows that in a substantial number of Puget Sound’s watersheds 80% or more of the remaining private forestlands not enrolled in the Designated Forestland Program have a high risk of conversion. Making the assumption that all forest resource lands which are both (a) not enrolled in the DFL program and (b) have a positive conversion risk, will convert from working forest to other land uses, a map of the amount of forestland conversion was created.



**Figure 2. Watersheds where Private Forests are at the Greatest Risk of Conversion**



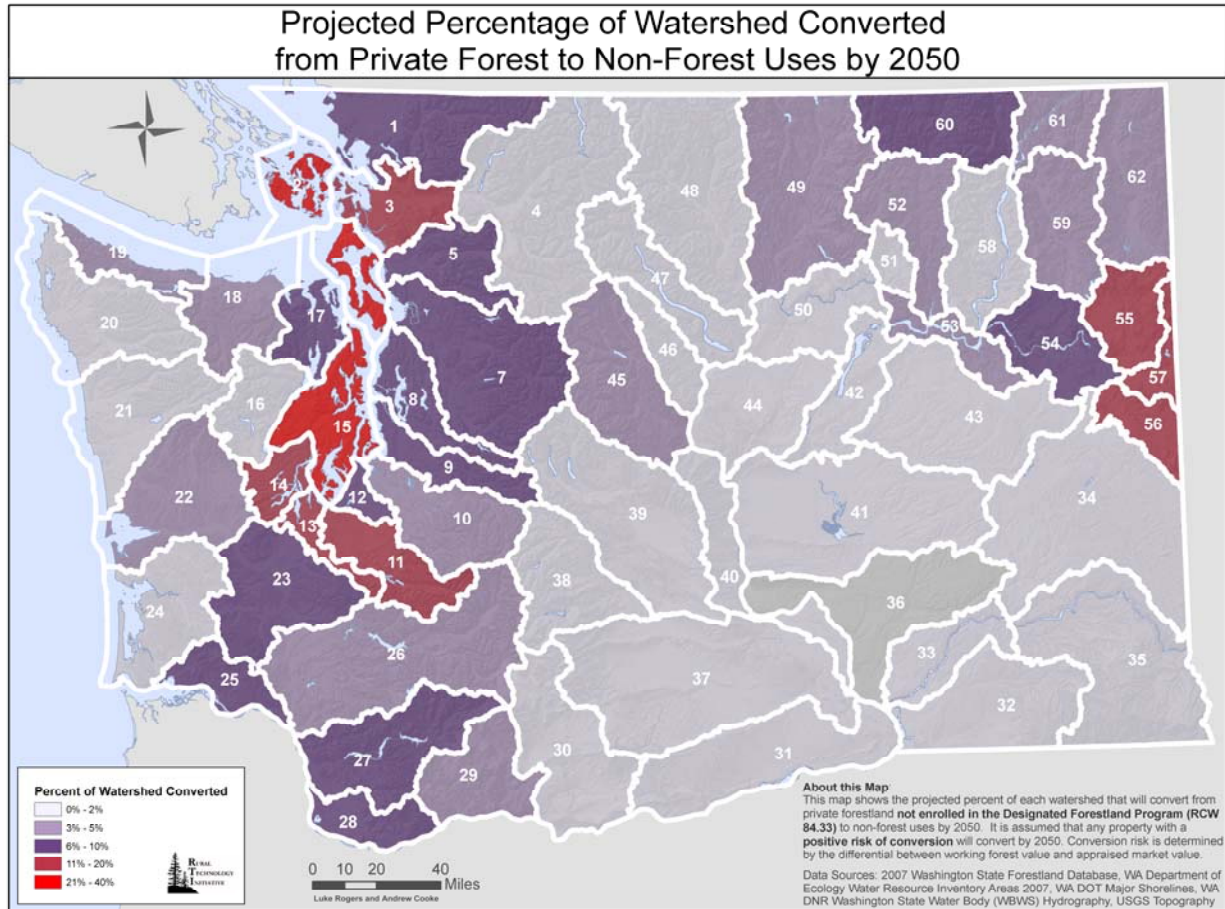
**Table 2. Risk of Forest Conversion by Water Resource Inventory Area (WRIA)**

**Private Forestland Acres at High Risk of Conversion by Watershed**

<b>WRIA #</b>	<b>WRIA Name</b>	<b>Private Acres</b>	<b>DFL Acres</b>	<b>High Risk Acres</b>	<b>Percent High Risk Non-DFL</b>
1	Nooksack	251,715	138,027	77,075	68%
2	San Juan	76,378	15,398	57,924	95%
3	Lower Skagit / Samish	161,006	86,925	62,568	84%
4	Upper Skagit	109,335	84,539	10,244	41%
5	Stillaguamish	152,716	93,183	54,464	91%
6	Island	76,433	8,964	65,190	97%
7	Snohomish	361,187	185,959	151,709	87%
8	Cedar-Sammamish	49,867	2,609	44,807	95%
9	Duwamish-Green	128,917	86,518	34,304	81%
10	Puyallup-White	263,974	211,312	45,903	87%
11	Nisqually	220,495	122,714	88,957	91%
12	Chambers-Clover	11,573	118	10,619	93%
13	Deschutes	105,050	60,200	36,677	82%
14	Kennedy-Goldsborough	161,335	112,466	41,759	85%
15	Kitsap	254,536	76,486	160,978	90%
16	Skokomish-Dosewallips	58,224	46,284	6,925	58%
17	Quilcene-Snow	107,833	73,422	31,138	90%
18	Elwha-Dungeness	46,232	17,578	22,300	78%
19	Lyre-Hoko	122,589	111,177	7,631	67%
20	Soleduc	231,887	222,731	4,223	46%
21	Queets-Quinault	175,553	108,739	3,604	5%
22	Lower Chehalis	576,126	530,324	27,869	61%
23	Upper Chehalis	566,957	430,528	90,579	66%
24	Willapa	491,896	456,281	13,190	37%
25	Grays/Elochoman	219,339	192,519	17,897	67%
26	Cowlitz	737,257	602,456	80,584	60%
27	Lewis	297,329	173,355	80,248	65%
28	Salmon-Washougal	80,632	24,739	52,045	93%
29	Wind-White Salmon	141,629	90,951	21,206	42%
30	Klickitat	651,892	210,230	19,074	4%
31	Rock-Glade	146,735	17,973	3,398	3%
32	Walla Walla	80,926	2,606	5,394	7%
33	Lower Snake	5,083		400	
34	Palouse	311,838	2,588	9,398	3%
35	Middle Snake	365,647	1,729	1,899	1%
36	Esquatzel Coulee	32,372			
37	Lower Yakima	429,471	11,977	3,138	1%
38	Naches	63,122	39,006	1,900	8%
39	Upper Yakima	270,979	200,740	31,507	45%

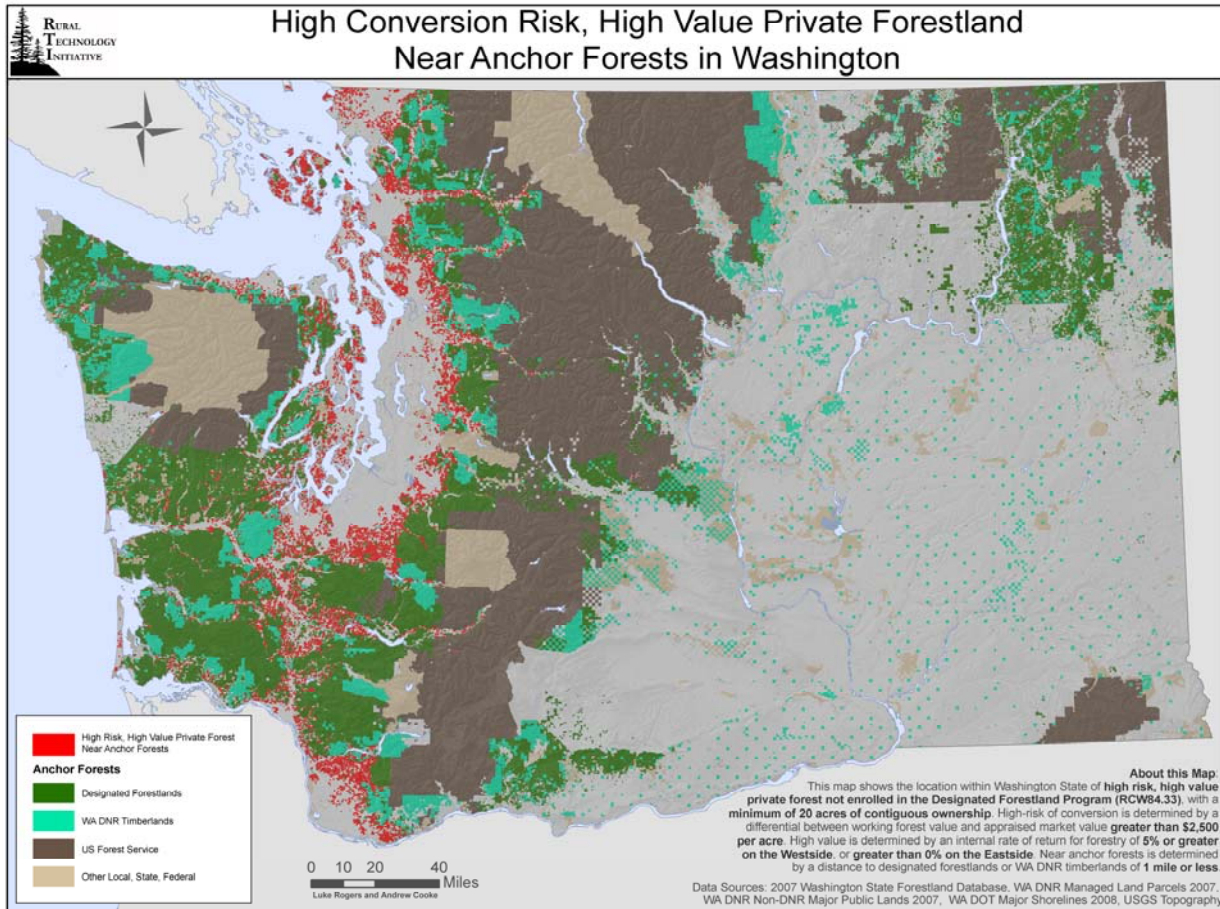
WRIA #	WRIA Name	Private Acres	DFL Acres	High Risk Acres	Percent High Risk Non-DFL
40	Alkali-Squillchuck	36,960	9,002	4,384	16%
41	Lower Crab	3,923		154	
42	Grand Coulee	15,122		79	
43	Upper Crab-Wilson	72,915	185	2,647	4%
44	Moses Coulee	71,932	349	4,378	6%
45	Wenatchee	110,404	59,982	21,330	42%
46	Entiat	20,604	12,290	2,005	24%
47	Chelan	31,791	2,896	5,655	20%
48	Methow	46,824	3,806	21,255	49%
49	Okanogan	317,260	47,648	12,766	5%
50	Foster	66,386	89	1,926	3%
51	Nespelem	21,589	2,678	82	0%
52	Sanpoil	130,680	62,158	5,712	8%
53	Lower Lake Roosevelt	135,161	8,617	2,455	2%
54	Lower Spokane	243,529	93,467	26,323	18%
55	Little Spokane	262,191	86,748	88,411	50%
56	Hangman	128,319	9,465	28,723	24%
57	Middle Spokane	88,331	43,067	22,846	50%
58	Middle Lake Roosevelt	265,497	187,730	5,912	8%
59	Colville	375,185	311,571	25,710	40%
60	Kettle	209,257	88,082	12,663	10%
61	Upper Lake Roosevelt	215,675	184,372	7,329	23%
62	Pend Oreille	153,371	36,121	8,845	8%
<b>Total</b>		<b>11,618,971</b>	<b>6,103,675</b>	<b>1,790,316</b>	<b>45%</b>

Figure 3 shows what percent of Washington’s watersheds could be impacted by forestland conversion through the year 2050 if the depressed timber economy and high real estate values continue to drive conversion trends. Considering the conversion risk, productivity and proximity to relatively stable State and private DFL lands, an analysis of high-value forestlands at risk of conversion was undertaken to produce a map of possible areas for encouraging and focusing long-term forestry.



**Figure 3. Projected Percentage of Watersheds Converted from Private Forest to Non-Forest Uses by 2050**

Figure 4 shows high value forestlands at risk of conversion that are located near “anchor forests” – areas where State and private forestlands dominate the landscape and function as a more-or-less intact working forest land base.



**Figure 4. High Conversion Risk, High Value Private Forestland Near Anchor Forests in Washington**

## Anchor Forests

Anchor forests are landscape-scale areas in which managed forests are the dominant land use. For the purpose of this report, “anchor forests” are contiguous areas of working forest land managed by the Department of Natural Resources, private forest lands in Designated Forest Land tax status and USDA Forest Service ownership. There has been no official or unofficial designation of these areas. For evaluation purposes, these areas were considered to have a reasonable likelihood of stability for meeting the multiple commodity and non-commodity demands from the state’s forests. High value forest lands at risk of conversion within one mile of these contiguous areas were judged to be highly strategic because the impact of fragmentation or parcelization of these lands would affect the stability of larger integrated blocks of forest land.

**Table 3. Summary of High Value Forest Lands at Risk**

<b>Summary of High Value Forest lands at Risk of Conversion</b>				
<b>Category</b>	<b>Forest Acres</b>	<b># of Parcels</b>	<b>Total Appraised Market Value, 2007</b>	
<b>≥ 20 acre tract</b>	1,207,366	63,166	19,554,454,307	
<b>≥ 20 acre tract, High Risk</b>	360,579	30,546	17,726,441,900	
<b>≥ 20 acre tract, High Risk, High Value</b>	256,471	19,274	10,842,785,582	
<b>≥ 20 acre tract, High Risk, High Value, Near DFL/DNR</b>	232,719	17,404	7,396,484,356	

## **Forest land lost to conversion threatens harvest levels, wood supply and all aspects of the forest industry**

A University of Washington study (Perez-Garcia, et al. 2009) analyzed the economic viability of forest products facilities in light of a large potential conversion of productive, privately- or Tribally-owned forestlands. The projected risk of forest conversion to non-forest use was determined for timberlands located in western Washington using the Washington State Forestland Database.

The conversion risk attribute was applied to three ownership classes: small forest landowners, industrial landowners, and tribal landowners. An existing model for westside forests was used, with some modifications to allow for a changing land base. Modeling eastside forests is much more complex and the budget did not allow development of eastside scenario model. While qualitative statements can be made based on the risk of eastside conversion, measures of their potential effects are needed.

The results suggest significant potential harvest reductions by 2080 and a continued decline in the potential harvest level. Harvest level reduction translates into less supply and rising timber prices.

The following tables present the total forest acres, losses in the past 18 years, at-risk acres and percent at-risk acres within western Washington counties and their five timbersheds: North Coast (Clallam and Jefferson), North Puget Sound (Island, King, San Juan, Skagit, Snohomish and Whatcom), South Coast (Grays Harbor and Pacific), South Puget Sound (Kitsap, Mason, Pierce, and Thurston) and Southwest (Clark, Cowlitz, Lewis, Skamania and Wahkiakum).

Table 4. Small forest landowner, Industrial and Tribal forested acres in western Washington counties with positive conversion risk, and total forested acres

Private Forestland Acres in Western Washington Counties with Positive Conversion Risk			
County	Forest Acres	Forest Acres with a Positive Conversion Risk Value	Percent with a Positive Conversion Risk Value
Clallam	330,411	30,711	9.30%
Jefferson	192,051	22,083	11.50%
Island	56,600	47,027	83.10%
King	350,138	97,292	27.80%
San Juan	56,938	40,677	71.40%
Skagit	278,104	56,430	20.30%
Snohomish	247,327	114,344	46.20%
Whatcom	173,933	52,101	30.00%
Grays Harbor	697,079	32,385	4.60%
Pacific	434,474	9,470	2.20%
Kitsap	124,462	73,918	59.40%
Mason	314,769	44,734	14.20%
Pierce	354,860	97,304	27.40%
Thurston	196,948	62,424	31.70%
Clark	118,450	61,262	51.70%
Cowlitz	514,403	39,977	7.80%
Lewis	761,252	70,315	9.20%
Skamania	88,116	12,450	14.10%
Wahkiakum	114,642	7,129	6.20%
<b>Total</b>	<b>5,404,957</b>	<b>972,033</b>	<b>18.00%</b>

Table 5. Forested acres and annual loss rate percent by timbershed

Forested acres and annual loss rate (%) by timbershed					
Timbershed	Forest Acres circa 2008 <sup>1</sup>	Forest Acres circa 1990 <sup>2</sup>	Annual loss rate in percent <sup>3</sup>	Acres with positive conversion risk value	Percent with positive conversion risk value
North Coast	522,462	533,000	0.1%	52,794	10.1%
North Puget Sound	1,163,040	1,342,000	0.7%	407,871	35.1%
South Coast	1,131,553	1,256,000	0.5%	41,855	3.7%
South Puget Sound	991,039	1,062,000	0.4%	278,380	28.1%
Southwest	1,596,862	1,607,000	0.0%	191,133	12.0%
<b>Total</b>	<b>5,404,956</b>	<b>5,800,000</b>	<b>0.3%</b>	<b>972,033</b>	<b>17.8%</b>

<sup>1</sup>From University of Washington Forest Land Parcel Data Base

<sup>2</sup>From Adams et al., 1992 (excludes DNR and other public lands)

<sup>3</sup>Based on 19 years difference (1990 to 2008)

The risk of conversion is highest in the North and South Puget Sound timbersheds, where an estimated 250,000 private forest acres have been converted to date, and nearly 1 out of 3 acres have

a positive associated conversion risk. Approximately 972,000 acres in western Washington have a higher market value per-acre than forest value per-acre.

Maps showing the loss of forest land for sustainable forest production in the five Western Washington Timbersheds over the course of four decades (until 2050) can be found in Appendix A.

### The effect of a lower number of forested acres is reduced harvest levels.

Figure 5 shows the potential harvest levels that could occur for timber between the ages of 40 to 65 years using a 1990 harvest baseline, a 2008 harvest baseline and a likely to convert scenario based on forest vs. HBU value differences

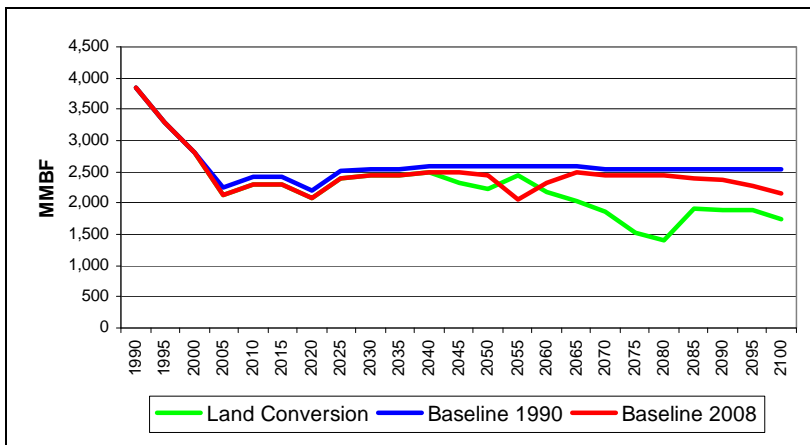


Figure 5. Harvest levels in million board feet (MMBF)

### The effect of a lower number of forested acres is reduced harvest levels in all timbersheds.

Figure 6 shows the impact by timbershed of the affected conversion of forests over the next century. If current trends continue, in 60 years, South Puget Sound will produce no forest products.

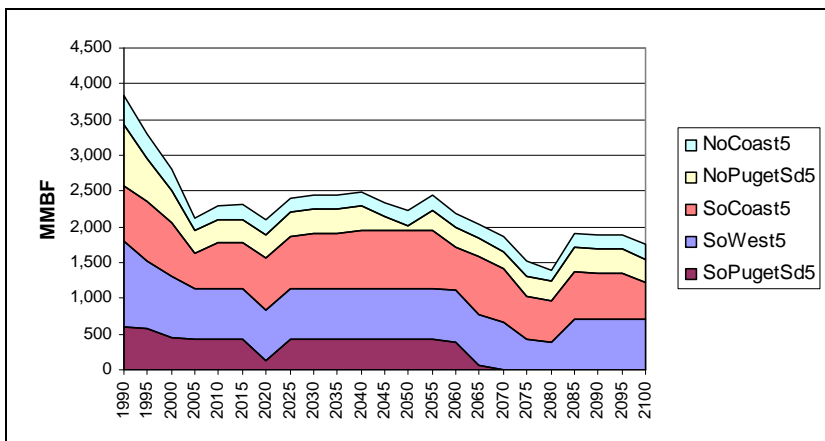


Figure 6. Harvest levels in million board feet (MMBF) by timbershed

## **Sawmill raw material input may be reduced by more than 1,000 Million Board Feet (MMBF) by 2080, a 43% decline.**

The forest industry consumed nearly 2,484 MMBF of logs from private sources according to the 2006 Washington Mill Survey (Smith et al. 2008; Table 8a). About 62% of these logs went to lumber mills. The majority of the remaining volume went to exporting and veneer and plywood facilities. By 2080 the supply of logs could potentially fall to 1,402 MMBF, a loss of over a billion board feet. (This would represent over 90% of the volume of logs consumed by the sawmilling sector alone in 2006.) However, not all logs go to lumber production since some timber goes to veneer and plywood mills, as well as for export and other forest enterprises.

## **Sawmill competitiveness in regions with high-risk forestlands will diminish**

Eight sawmills operated in the South Puget Sound timbershed in 2006 (Smith et al. 2008). All but two have a capacity to produce 0.120 MMBF. Two mills have eight-hour shift capacities that produce more than 0.500 MMBF. The loss of potential timber harvest levels within this timbershed by 2060 will impact the competitiveness of these sawmills.

## **Small mills will not be able to compete**

While larger sawmills could compete with other sectors consuming logs, a third of the mills in the state are smaller in size and could find it more difficult to compete. Rural, timber-dependent communities will be severely affected by the projected reductions. If wood processing facilities that purchase logs from forest thinning operations are closed, this will undermine the ability of forest managers to actively manage their forests, and potentially result in forest health decline.

## **Exports of Washington logs will decline, along with sawmills**

Exports of Washington logs reached 286 MMBF in 2006 (Smith et al. 2008; Table 57). This volume represents 76% of the loss in potential timber harvest levels in 2055. Should sawmills successfully compete with exporting enterprises for this volume, sawmills will fall short in meeting their current consumptive needs.

## **Veneer and Plywood mills will have insufficient supply**

Veneer and plywood mills consumed another 234 MMBF of logs (Smith et al. 2008; Table 35) in 2006 although this number does not distinguish the log volumes that originated from Washington private lands. Similar in volume to Washington logs exported, this volume can help meet existing consumptive needs by sawmills, but at higher cost.

## **12 pulp mills statewide will experience significantly-reduced raw material supply**

Sawmills, and veneer and plywood mills are sources of chips and wood residuals for other industries, primarily pulp mills. In 2006, 3.3 million dry tons of chips and wood residuals were produced in



western Washington (Smith et al. 2008; Table 26). The twelve pulp mills statewide consumed a total of 4.2 million tons of mill residues in 2006 (Smith et al. 2008; Table 44). A 43% reduction in timber consumed by lumber and plywood mills by 2080 will significantly impact this raw material supply to pulp mills.

## **Incentives are Needed for Retaining Working Forests**

The 2007 Washington legislative budget language directed the Forum to examine “economic incentives for landowners to retain lands as working forests for the purposes of providing ecosystem services.” Since its first meeting in 2004, the Forum has focused on this question and has supported various reports, presentations and evaluations of existing and potential opportunities to “incentivize” the retention of working forest lands. Representatives from major forestland owners and processors, tribal, state and local governments and conservation organizations broadly support mechanisms to address the core issues of forest fragmentation and land owner commitment to long-term stewardship. The Forum process of review, consideration, debate and agreement strongly signals the need for the legislature to bring a more comprehensive, coordinated and focused set of programs to bear on the issues of forest fragmentation and loss. Much of the necessary vetting of feasible programs is incorporated in the materials below. The “end-state” question is: Can Washington make the necessary policy and financial commitments to ensure that forest values compare favorably with alternative land uses?

## **Comparing Incentives to Retain and Mitigate Forest Value Losses in Washington and other states**

Three investigations – regarding Current Washington Incentive Programs for forest landowners, a compilation of recent innovative efforts from Other States, and some Proposed Programs, that are the recommendations of 2006-07-08 Forums - are presented below in Tables 6, 7, and 8, with web links provided for each incentive program.

The report “Recent Efforts by States to Incentivize Working Forests” (Sarah Murray, 2005) is found at <http://www.nwenvironmentalforum.org/ForestForum/topicpapers/tp13.pdf>. In 2008, the Forum received an update to Murray’s work by Jana Dilley: “Working Forests Incentive Programs and Legislation for Private Forest Lands in United States” as well as an updated report on Washington’s programs: “Washington State Working Forest Incentive Programs” <http://www.nwenvironmentalforum.org/documents/ForestIncentivePrograms.pdf>

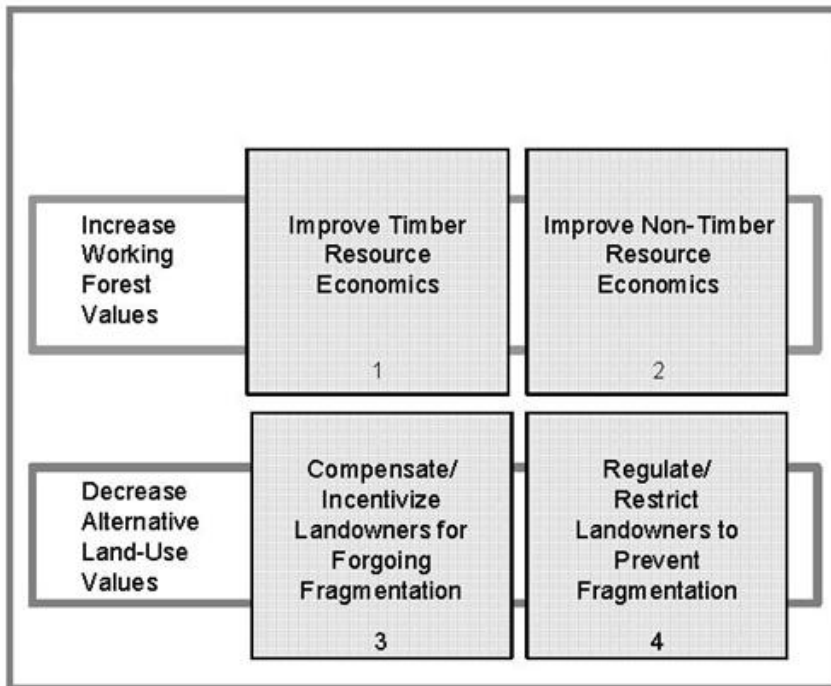
The Cascade Land Conservancy and College of Forest Resources carried out an extensive review of ‘Forest Land Conversion in Washington State (Study 4, FWF and FI Report 2007) and reported on “Current incentive programs to maintain forest land in Washington” ((Section 3) as well as investigating “Future incentive programs to maintain forest land in Washington.” (Section 6) [http://www.ruraltech.org/projects/fwaf/final\\_report/pdfs/05\\_Study4\\_LandConv.pdf](http://www.ruraltech.org/projects/fwaf/final_report/pdfs/05_Study4_LandConv.pdf))

Tables 6, 7, and 8 are organized according to a “Four-part Framework for Preserving Working Forests” presented by Matthew Donegan (Forest Capital Partners, LLC) to the Oregon Task Force on Land Use Planning (September 2007).

### **A Four-Way Framework for Preserving Working Forests: Increasing Working Forest Values (Timber and non-Timber), or Mitigating Alternative Land Use Values (Compensation or Regulation)**

The core principle of this framework is to address the fundamental problem that forest lands are converted to other uses because the difference in value between their use as forest land and their value for other uses becomes large enough to cause an owner with rational economic motives to divest of the land or (develop it) for more economically valuable uses. To understand how to best bridge this value gap, Matthew Donegan proposes to view all policies and programs for forest retention through two complementary lenses: 1) does the policy or program Increase Working Forest Values (by improving the value of the timber resource and the value of non-timber resources such as ecosystem services); and 2) does it Decrease or Off-set Alternative Land Use Value by either compensating/incentivizing landowners for forgoing fragmentation or by regulating/restricting landowners to prevent fragmentation?

The full text of Donegan’s presentation is in Appendix G.



**Figure 7. A Four-Part Framework for Preserving Working Forests**

Source: *Preserving Oregon’s Working Forests: A Landowner’s Perspective on Sustainability*, Matthew W. Donegan, Forest Capital Partners LLC (Portland, Oregon)

Table 6. Current Programs

<b>Currently Available Mitigation and Incentive Programs in Washington</b>					
<b>POLICY FUNCTION with associated available programs</b>	<b>Implementing Agencies (Lead in Bold)</b>	<b>Program Type</b>	<b>Year Created</b>	<b>Budget</b>	<b># of acres/stream or habitat miles protected/number of enrollees to date; NOTES</b>
<b>MITIGATION</b>					
Family Forest Fish Passage Program (RCW 76.13.150)	<b>Washington State Department of Natural Resources (DNR);</b> Washington Department of Fish & Wildlife (WDFW); Recreation and Conservation Office (RCO), formerly Office of Interagency Committee	Cost Share; Technical Assistance	2003	\$6,000,000 (2007-09)	350 stream miles opened at 580 sites per 500 landowners. To meet fish barrier removal requirements at road crossings; up to 75% cost share.
Forestry Riparian Easement Program (FREP) (RCW 76.13.120)	<b>DNR</b>	Direct Payment for 50-year easement to mitigate impacts of Forest and Fish on small land owners	2000	\$10,000,000 (2008-09)	3,398 acres/NA/NA Underfunded since inception; potential state obligation of \$1,567,486,545 (RTI stats) for full implementation.
Riparian Open Space Program (RCW 76.09.040)	<b>DNR</b>	Direct Payment for permanent easements in channel migration zones for timber harvest prohibited under Forest and Fish	2001	\$1,850,000 (2008-09)	584 acres/NA/NA Because of landowner hesitancy, there is more funding than applicants. Preference for 50-year easement of FREP rather than perpetual easement required by this program.
Forest and Fish Leave Tree Tax credit (RCW 84.33.0775)	<b>Washington State Department of Revenue (DOR); DNR</b>	16% forest excise tax credit for harvests impacted by Forest and Fish riparian requirements	1999	NA	Credit equals 4-10 % of value of foregone timber value (2001 DOR Study)

Table 6. Current Programs (continued)

POLICY FUNCTION with associated available programs	Implementing Agencies (Lead in Bold)	Program Type	Year Created	Budget	# of acres/stream or habitat miles protected/number of enrollees to date; NOTES
<b>IMPROVE WORKING FOREST VALUE</b>					
<i>Improve Timber Economics</i>					
Current Use/ Designated Forest Land (DFL) tax (RCW 83.33)	<b>County Assessors;</b> DOR	Current Use Tax reduction until harvest of timber	1972	NA	6,166,024 acres enrolled (2008). Forest management plan required. Some counties require a 10-year commitment to not develop the land.
Forest Practices Act - Alternative Plans	<b>DNR</b>	Regulatory relief from Forest and Fish rules with alternate plan providing equal level of resource protection	2000	NA	From 2000-2005, 112 alternative plans developed and approved. Requires professional assistance. Many small landowners forego this option because of expense and complexity.
Small Forest Landowner Long Term Forest Practices Permit WAC 222-12-030, -035, -0401, -0402, 222-16-010, -050, and chapter 222-20 WAC Forest Practices Permit	<b>DNR</b>	Regulatory relief from operation-by-operation Forest Practices permit applications. Available to Small Landowners as defined in WAC 22-21-010(13).	2007	NA	3 to 15 year permit (time frame at landowners' discretion).
Safe Harbor Agreements	<b>United States Fish and Wildlife Service (USFWS)</b>	Voluntary management agreements for listed species with stability for future regulatory restrictions	NA	NA	NA

Table 6. Current Programs (continued)

POLICY FUNCTION with associated available programs	Implementing Agencies (Lead in Bold)	Program Type	Year Created	Budget	# of acres/stream or habitat miles protected/number of enrollees to date; NOTES
Business and Occupation (B&O) tax reduction (RCW 82.04.260)	<b>DOR</b>	Provides tax incentives for the timber and timber products industries	2006	NA	Washington State Senate • Final Bill Report SSB 6874. <a href="http://apps.leg.wa.gov/documents/billdocs/2005-06/Pdf/Bill%20Reports/Senate%20Final/6874-S.FBR.pdf">http://apps.leg.wa.gov/documents/billdocs/2005-06/Pdf/Bill%20Reports/Senate%20Final/6874-S.FBR.pdf</a> SSB 6874 (2006) reduces B&O tax rate from 0.484% to 0.2904% until July, 2024. A 0.052% surcharge is imposed for implementation of the state's Forests and Fish Report.
<b>Improve non-timber economics</b>					
Conservation Stewardship Program	<b>Natural Resource Conservation Service (NRCS)</b>	Direct Stewardship Payment (five year contract); Technical Assistance	2008	\$6,200,000 (2007)	Recently expanded to include forestlands. To date, only information on agricultural enrollments available (379,000acres/NA/323). High demand by forest land owners expected.
Environmental Quality Incentive Program (EQIP)	<b>NRCS</b>	Cost Share (50-70%); Technical Assistance	1996	\$16,000,000 (2008-9)	To date, only information on agricultural enrollments available (256,000 acres/NA/NA). Expanded in 2008 Farm Bill to include forest land. Covers road de-commissioning, site prep, and upland wildlife habitat management. Requires forest management plan. Fully subscribed with less than 1/2 of applications funded.
Partners for Fish and Wildlife	<b>USFWS</b>	Cost Share; Technical Assistance	1992	\$245,000 (2009)	264 acres/12 miles habitat; two miles in stream habitat; 15 miles fish passage
Wildlife Habitat Incentives Program	<b>NRCS, WDFW, USFWS</b>	Cost Share (50-70%); Technical Assistance	1996	\$608,000 (2008-09)	11,000 acres/NA/NA Restoration of native habitat and vegetation for threatened and endangered species on forest or agriculture land

**Table 6. Current Programs (continued)**

<b>POLICY FUNCTION with associated available programs</b>	<b>Implementing Agencies (Lead in Bold)</b>	<b>Program Type</b>	<b>Year Created</b>	<b>Budget</b>	<b># of acres/stream or habitat miles protected/number of enrollees to date; NOTES</b>
Conservation Technical Assistance	<b>NRCS</b>	Conservation planning, design and implementation assistance	1935	NA	NA
Forest Stewardship	<b>DNR, USFS</b>	Technical assistance to develop management plans	1990	\$750,000 (2008-9)	Plan (2008) must commit to management and stewardship for 10 years. Plans often required for cost-share and other programs.
<b>DECREASE/OFFSET ALTERNATIVE LAND USE VALUES</b>					
<i>Compensate/incentivize for forgoing fragmentation</i>					
Forest Legacy Program	<b>USDA Forest Service (USFS); DNR</b>	Direct payment for fee interest or easement (75% federal funds)	1990	\$7,000,000 (2008-9)	16,000 acres/NA/NA Not open to small landowners. Primary applicants are land trusts, conservation organizations and large landowners. Major funding source for Mountains to Sound Greenway Trust.
King County Transfer of Development Rights	<b>King County</b>	Direct Payment from private development interests	2001	NA	92,000 acres/NA/NA 89,500 acres in Snoqualmie Tree Farm (Hancock TIMO) (one development credit per 5 acres)
Conservation Easements	<b>Land Trusts, Internal Revenue Service (IRS)</b>	Donation or purchase of development rights. Donations may provide federal tax code benefits.	NA	NA	Does not require the land remain in commodity production. Depends on mutually agreeable conditions between landowner and easement holder.
<i>Regulate/restrict to prevent fragmentation</i>					
Growth Management Act (GMA)	<b>Counties</b> under CTED guidance	Comprehensive Plan designation, zoning codes, Land Use regulations	1991	NA	Lands of long-term commercial significance for forestry (40-80 acre lot size). No evaluation of effectiveness of GMA on facilitating or preventing parcelization of productive forest land.

**Table 6. Current Programs (continued)**

<b>POLICY FUNCTION with associated available programs</b>	<b>Implementing Agencies (Lead in Bold)</b>	<b>Program Type</b>	<b>Year Created</b>	<b>Budget</b>	<b># of acres/stream or habitat miles protected/number of enrollees to date; NOTES</b>
Current Use/Designated Forest Land (DFL) Tax (RCW 83.33)	<b>County Assessors;</b> DOR	Compensating tax due upon removal from DFL for other uses	1972	NA	DOR does not collect compensating tax information.
Information in table derived from: Future of Washington’s Forests Final Report (2007): Study 4 Land Conversion; Section 6 “Future Incentive programs to maintain forest land in Washington State” 2008 Northwest Environmental Forum Handouts: "Washington State Working Forest Incentive Programs" (2008), Jana Dilley.					

**Table 7. Other States’ Programs**

<b>Other States' Incentive Programs</b>					
<b>POLICY FUNCTION with associated programs</b>	<b>State</b>	<b>Program Type</b>	<b>Status</b>	<b>Notes (including funding source, if applicable) Points of interest boldfaced</b>	<b>Citation (law or bill) Internet Links to Cited Documents</b>
<b>IMPROVE WORKING FOREST VALUE</b>					
<i>Improve Timber Economics</i>					
Forests for the Future Program	<b>Minnesota</b>	State Plan	SF3056, Passed in 2008	Authorized Commissioner of Natural Resources to protect private working forests and acquire fee interest or easements. "Strategic Report of the DNR Commissioner’s Advisory Team on the Minnesota Forests for the Future Program" (4/08).	2008 Minnesota Statute 84.66 Minnesota Forests for the Future Program Minnesota Forests for the Future - April 2008 <a href="http://www.valleyconservation.org/agforestal_mor e.html">http://www.valleyconservation.org/agforestal_mor e.html</a> Minnesota House of Representatives House File Number 3328 - Minnesota forests for the future program created <a href="http://www.house.leg.state.mn.us/bills/billnum.asp?Billnumber=3328&amp;ls_year=85&amp;session_year=2007&amp;session_number=0&amp;Go.x=0&amp;Go.y=0&amp;Go=Search">http://www.house.leg.state.mn.us/bills/billnum.asp?Billnumber=3328&amp;ls_year=85&amp;session_year=2007&amp;session_number=0&amp;Go.x=0&amp;Go.y=0&amp;Go=Search</a>

Table 7. Other States' Programs (continued)

POLICY FUNCTION with associated programs	State	Program Type	Status	Notes (including funding source, if applicable) Points of interest boldfaced	Citation (law or bill) Internet Links to Cited Documents
"No Net Forest Loss" Task Force	<b>Maryland</b>	Task Force to develop State Plan	Signed into law 4/24/08	Law established a task force to develop a plan and <b>draft legislation to reach a point of "no net forest loss."</b> Based on multi-state Chesapeake Executive Council directive (12/07): <i>Protecting the Forests of the Chesapeake Bay Watershed</i> . Forestry Conservation Initiative committed the bay states to permanently protect an additional 695,000 acres of forest in the bay watershed from conversion by 2020 in addition to 724,000 acres of forest lands already protected.	Senate Bill 431 (2008) Report due 12/1/08 No report or legislation on "no net loss" found.  Maryland Senate Bill 431 • Task Force to Study a No Net Loss of Forest Policy <a href="http://mlis.state.md.us/2008rs/billfile/sb0431.htm">http://mlis.state.md.us/2008rs/billfile/sb0431.htm</a>  Possibly Senate Bill 549 "Sustainable Forestry Act of 2009" • incorporates issues defined in Senate Bill 431  Maryland Senate Bill 549 • Sustainable Forestry Act of 2009 <a href="http://mlis.state.md.us/2009rs/bills/sb/sb0549f.pdf">http://mlis.state.md.us/2009rs/bills/sb/sb0549f.pdf</a>
Protect the Forests of Tennessee	<b>Tennessee</b>	State Plan for integrating protection of forests with local and state planning	House Joint Resolution (HJR) 577, unanimously passed 2008	Instructs the Departments of Economic and Community Development and Agriculture to "recommend specific actions, initiatives, policies and programs that will integrate the protection of forest lands into the planning activities and decisions of state and local governments" and " <b>minimize the impact of land use change.</b> "	Tennessee House Joint Resolution 577 • Directs department of economic and community development and department of agriculture to report on the protection of forest lands <a href="http://www.capitol.tn.gov/legislation/Archives/105GA/bills/BillStatus/HJR0577.htm">http://www.capitol.tn.gov/legislation/Archives/105GA/bills/BillStatus/HJR0577.htm</a>



Table 7. Other States' Programs (continued)

POLICY FUNCTION with associated programs	State	Program Type	Status	Notes (including funding source, if applicable) Points of interest boldfaced	Citation (law or bill) Internet Links to Cited Documents
Interim Study Related to Future of Vermont's Forests	<b>Vermont</b>	6 member study commission	House Resolution (HR) 22, passed in 2008	Committee established to examine: access to capital; workers' compensation system; curbing the parcelization of Vermont land; reviewing the current use program; modernizing and opening more wood mills; using more low-quality wood for energy production; reduce carbon emissions; and other topics.	Vermont House Resolution 22 • Authorizing an Interim Study Committee to Develop Legislation Related to Forestry <a href="http://www.leg.state.vt.us/database/status/summary.cfm?Bill=HR0022&amp;Session=2008">http://www.leg.state.vt.us/database/status/summary.cfm?Bill=HR0022&amp;Session=2008</a>
Forest Improvement Program	<b>California</b>	Focus: to ensure adequate high quality timber supplies and provide technical and cost share assistance to private forest landowners, forest operators, wood processors and public agencies	California Forest Improvement Act of 1978 • Active program since 1978	Cost share for management planning, site preparation, tree purchasing and planting, and timber stand improvement. Funds available to private forest landowners, Resource Conservation Districts and non-profit watershed groups <b>for aggregated land ownership tracts up to 5,000 acres.</b>	California Dept of Forestry and Fire Protection • California Forest Improvement Program  <a href="http://www.fire.ca.gov/resource_mgt/resource_mgt_forestryassistance_cfip.php">http://www.fire.ca.gov/resource_mgt/resource_mgt_forestryassistance_cfip.php</a>

Table 7. Other States' Programs (continued)

POLICY FUNCTION with associated programs	State	Program Type	Status	Notes (including funding source, if applicable) Points of interest boldfaced	Citation (law or bill) Internet Links to Cited Documents
Forest Resource Trust	<b>Oregon</b>	Financial, technical and other assistance to forest land owners	Passed in 2007	Provides cost share for stand establishment and improved management of nonindustrial private forestlands as well as wildlife, water quality and other environmental purposes <b>on forests with moderate to high probability of success for long-term stand establishment and improved forest management activities.</b>	Chapter 201 Oregon Laws 2007 <a href="http://www.leg.state.or.us/07orlaws/sess0200.dir/0201.htm">http://www.leg.state.or.us/07orlaws/sess0200.dir/0201.htm</a>  Oregon House Bill 2293 • Relating to Forest Resource Trust
Rural Forest Landowner Assistance Program	<b>Illinois</b>	Technical assistance to NIPF landowners to manage their forests for multiple resources and cost-share assistance for landowners to implement forest stewardship practices	NA	Implement forest stewardship practices. <b>Funded through a four percent harvest fee on all timber sales.</b>	Illinois Dept of Natural Resources • Illinois Forestry Assistance Programs <a href="http://dnr.state.il.us/conservation/forestry/programs.htm">http://dnr.state.il.us/conservation/forestry/programs.htm</a>

Table 7. Other States' Programs (continued)

POLICY FUNCTION with associated programs	State	Program Type	Status	Notes (including funding source, if applicable) Points of interest boldfaced	Citation (law or bill) Internet Links to Cited Documents
Forest Resource Development Program	<b>Mississippi</b>	Cost share up to \$7,000 per year	Established 1974	Funds 50-75% for tree planting and forest improvement practices costs. Program distributes about \$3 million per year. Total funding over \$78 million since inception. <b>Funding comes from a timber severance tax.</b> Requires a 10-year management commitment.	Mississippi Forestry Commission • Forest Resources Development Program <a href="http://www.mfc.state.ms.us/frdp.htm">http://www.mfc.state.ms.us/frdp.htm</a>
Forest Renewal Program	<b>South Carolina</b>	Cost-share and technical assistance	1982	Matching funds to reforest cutover land, plant open land, or improve woodlands. <b>Funded mostly by a tax on roundwood processed by state forest industry.</b>	South Carolina Forestry Commission • Cost Share Programs <a href="http://www.state.sc.us/forest/mcs.htm">http://www.state.sc.us/forest/mcs.htm</a>
Reforestation of Timberlands Program	<b>Virginia</b>	Financial incentive to private landowners to plant pine seedlings	1970	Projects between 1-100 acres. Pine seedlings offered are genetically enhanced. Participation requires a forest management plan. <b>Funding comes from a severance tax on pine timber harvests as well as General Revenue funds.</b>	Virginia Dept of Forestry • Reforestation of Timberlands Program <a href="http://www.dof.virginia.gov/boards/index-rt-program.shtml">http://www.dof.virginia.gov/boards/index-rt-program.shtml</a>
Forest Landowner Grant Program	<b>Wisconsin</b>	Cost Share (up to 50%) for forest land improvement	NA	At least 40% funding set aside for planting and stand improvement for soil and water protection. For landowners with at least 10 but not more than 500 contiguous acres of non-industrial private forest.	Wisconsin Dept of Natural Resources • Forest Landowner Grant Program <a href="http://dnr.wi.gov/forestry/Private/financial/wflgp.htm">http://dnr.wi.gov/forestry/Private/financial/wflgp.htm</a>

Table 7. Other States' Programs (continued)

POLICY FUNCTION with associated programs	State	Program Type	Status	Notes (including funding source, if applicable) Points of interest boldfaced	Citation (law or bill) Internet Links to Cited Documents
<b>Improve non-timber economics</b>					
California Forest Improvement Program	<b>California</b>	Cost share	1978	Cost share funds for fish and wildlife habitat improvement, and land conservation practices.	California Dept of Forestry and Fire Protection • California Forest Improvement Program <a href="http://www.fire.ca.gov/resource_mgt/resource_mgt_forestryassistance_cfip.php">http://www.fire.ca.gov/resource_mgt/resource_mgt_forestryassistance_cfip.php</a>
Forest Resource Trust	<b>Oregon</b>	Technical assistance and cost share	1993, expanded in 2007	Assist landowners in securing payments for ecosystem services.	Chapter 201 Oregon Laws 2007 <a href="http://www.leg.state.or.us/07orlaws/sess0200.dir/0201.htm">http://www.leg.state.or.us/07orlaws/sess0200.dir/0201.htm</a>
Oklahoma Canadian River Riparian Restoration Project	<b>Oklahoma</b>	Technical assistance and cost share	NA	Regional partnership between state foresters, wildlife biologists and other conservation organizations. Works with landowners to restore streamside forests in western Oklahoma and plant trees, control invasive species, prescribed burning, and other practices.	Oklahoma Forestry Services • Canadian River Riparian Forest Restoration Cost-Share <a href="http://www.forestry.ok.gov/canadian-river">http://www.forestry.ok.gov/canadian-river</a>
Forest Landowner Grant Program	<b>Wisconsin</b>	Cost Share (up to 50%) for conservation practices	NA	Eligible conservation practices include: nest boxes and platforms, creation of wildlife corridors, bank stabilization, in-stream habitat, buffer establishment. Landowners must have at least 10 but not more than 500 acres contiguous acres within Wisconsin.	Wisconsin Dept of Natural Resources • Wisconsin Forest Landowner Grant Program <a href="http://dnr.wi.gov/forestry/Private/financial/wflgp.htm">http://dnr.wi.gov/forestry/Private/financial/wflgp.htm</a>

Table 7. Other States' Programs (continued)

POLICY FUNCTION with associated programs	State	Program Type	Status	Notes (including funding source, if applicable) Points of interest boldfaced	Citation (law or bill) Internet Links to Cited Documents
<b>DECREASE/OFFSET ALTERNATIVE LAND USE VALUES</b>					
<i>Compensate/incentivize for forgoing fragmentation</i>					
Forest Legacy Partnership	<b>Minnesota</b>	Purchase of Development Rights	1990 (as part of USDA Farm Bill)	Protect north central Minnesota large industrial forests threatened by conversion to non-forest uses while maintaining the rights to manage for timber. Partnership with Minnesota Dept of Natural Resources, conservation organizations, and timber industry.	Minnesota Dept of Natural Resources • Minnesota Forest Legacy Partnership <a href="http://www.dnr.state.mn.us/forestlegacy/kochiching_washington/about.html">http://www.dnr.state.mn.us/forestlegacy/kochiching_washington/about.html</a>
Sustainable Forest Incentive Program (SFIA)	<b>Minnesota</b>	Direct per acre payment	2001	Forest land owners with 20 acres or more (with approved plan) sign minimum 8 year contract and agree not to develop. No maximum but any ownership more than 1,920 acres must allow year-round, non-motorized public access to fish and wildlife resources. Minimum payment of \$7 per acre (2008). SFIA Work Group (2005-6) reviewed act because of relatively low rate of participation by family forest landowners. Payment formula does not provide a large enough payment to attract a substantial number of family forest landowners to enroll their property in the program. Program costs exceed program benefits for most.	Minnesota Dept of Revenue • Sustainable Forest Incentive Act Fact Sheet <a href="http://www.taxes.state.mn.us/taxes/property/publications/fact_sheets/html_content/sust_forest_fact_sheet.shtml">http://www.taxes.state.mn.us/taxes/property/publications/fact_sheets/html_content/sust_forest_fact_sheet.shtml</a>

Table 7. Other States' Programs (continued)

POLICY FUNCTION with associated programs	State	Program Type	Status	Notes (including funding source, if applicable) Points of interest boldfaced	Citation (law or bill) Internet Links to Cited Documents
Forest Legacy	<b>Utah</b>	Purchase of conservation easements on land threatened by development	1999	Based on the federal Forest Legacy program, 53,923 acres in conservation easements - sixteen landowners \$17.8 million in Legacy funding, \$4.2 million in Quality Growth Funding. \$46 million in conservation easement value received. \$23+ million value donated by landowners partnership with The Trust for Public Land, U.S.D.A. Forest Service, The Nature Conservancy, Utah Open Lands, and The Rocky Mountain Elk Foundation, with funding from Governor's Quality Growth Commission.	Utah Division of Forestry, Fire & State Lands • Utah Forest Legacy <a href="http://www.ffsl.utah.gov/forestryassist/Legacy/Legacy.php">http://www.ffsl.utah.gov/forestryassist/Legacy/Legacy.php</a>
Community Forest Authority	<b>Oregon</b>	Revenue bond purchase	2005	Allows municipalities to form community forest authorities with the power to issue tax-exempt bonds or other revenue obligations for purchase of "community forestland," for timber, recreation and other uses. Deschutes Land Trust and US Forest Capital in negotiation with Cascade Timberlands (2007) for acquisition of Skyline Forest (33,000 acres) by Bend Community Forest Authority.	Oregon Chapter 530 — State Forests; Community Forests • Acquisition, Management and Development of State Forests <a href="http://www.leg.state.or.us/ors/530.html">http://www.leg.state.or.us/ors/530.html</a>

**Table 7. Other States' Programs (continued)**

<b>POLICY FUNCTION with associated programs</b>	<b>State</b>	<b>Program Type</b>	<b>Status</b>	<b>Notes</b> (including funding source, if applicable) <b>Points of interest boldfaced</b>	<b>Citation (law or bill)</b> <b>Internet Links to Cited Documents</b>
Agriculture and Forestal Districts	<b>Virginia</b>	Landowner initiated resource management districts	1977	A minimum of 200 acres (with one or more landowners) required for petition to county to form a District - landowner-initiated only. Once established, any property within a mile of the district can be added by request. No minimum acreage, no minimum number of landowners (one parcel can be a district), and no maximum size for districts. County defines local conditions. Landowners sign voluntary contract of 4-10 years and receive current-use value, some protection of rural use, no infrastructure improvements, and agree not to divide or develop.	Code of Virginia Title 15.2; Chapter 43 • Agricultural and Forestal Districts Act <a href="http://www.valleyconservation.org/agforesta_l_more.html">http://www.valleyconservation.org/agforesta_l_more.html</a>
Information partially derived from Future of Washington's Forest Forum (2008) handouts: "Working Forests Incentive Programs and Legislation for Private Forest Lands in United States," Jana Dilley, University of Washington College of Forest Resources, 2008, and "Recent Efforts by States to Incentivize Working Forests," Sarah Murray, University of Washington College of Forest Resources, 2005.					

Table 8. Proposed Programs

<b>Incentives Proposed or Under Consideration (from the Northwest Environmental Forum)</b>					
<b>POLICY FUNCTION with associated available programs</b>	<b>Suggested Implementing Agencies</b>	<b>Program Type</b>	<b>Status</b>	<b>Notes</b>	<b>Source</b>
<b>IMPROVE WORKING FOREST VALUE</b>					
<i>Improve Timber Economics</i>					
Develop overall state plan for retention of working forests	DNR/Office of Governor/UW Forum	Integrated resource plan across programs, integrating Land Use, Forest Practices, and Forest Tax authorities	Proposed	Primary consensus recommendation from 2007 and 2008 Forums	<b>MFP 07</b> <b>MFP 08</b>
Continued funding for Land parcel Database	UW Institute of Forest Resources (IFR)	Multi-layered GIS-database of properties, based on Assessors' records and resource information	Available but requires continued funding	Support, interest and need expressed from multiple state and federal agencies	<b>MFP 07</b> <b>MFP 08</b>



**Table 8. Proposed Programs (continued)**

<b>POLICY FUNCTION with associated available programs</b>	<b>Suggested Implementing Agencies</b>	<b>Program Type</b>	<b>Status</b>	<b>Notes</b>	<b>Source</b>
Encourage diversified forest products infrastructure	Community Trade and Economic Development (CTED); UW CINTRAFOR	Trade and Market opportunity identification and development	Ongoing	Particularly important for processing and utilizing materials from overstocked Eastern Washington forests. Global competitiveness assessment of Washington's forests and forest industry needed.	<b>MFP 07</b> <b>MFP 06</b>
Provide investment incentives for Eastside sawmills and bio-fuels facilities	Legislature; CTED	Tax relief. Low-interest loans, grants.	Proposed	Particularly important for processing and utilizing materials from overstocked Eastern Washington forests. Global competitiveness assessment of Washington's forests and forest industry needed.	<b>MFP 06</b> <b>MFP 07</b>
Bio-fuels feasibility study focused on eastside forest health	UW	Analysis and evaluation	Preliminary work done by UW	Initial research done as part of timber supply study for FWF 07 Report. Requires LiDAR analysis for accuracy and stand level data.	<b>MFP 06</b> <b>MFP 07</b> <b>MFP 08</b>

**Table 8. Proposed Programs (continued)**

<b>POLICY FUNCTION with associated available programs</b>	<b>Suggested Implementing Agencies</b>	<b>Program Type</b>	<b>Status</b>	<b>Notes</b>	<b>Source</b>
Fully fund DNR Forest Health Initiative	DNR	Integrated agency response across disciplines	Begun in 2007	Fundamental for reducing fired danger, diminishing disease pressure, and improving habitat values for eastern Washington forests.	<b>MFP 08</b>
Joint UW/WSU pilot bioenergy project for forest cellulose conversion	UW/WSU/CTED	Inventory, research and analysis	Ongoing	2007 Legislature funded UW/WSU with \$300,000 for biofuel assessment and CTED with \$200,000 for biofuel barrier research.	<b>MFP 06</b> <b>MFP 07</b>
Assure stable timber supply from Federal forests	USFS	Implementation of portions of Northwest Forest Plan to allow thinning on federal forests	Required for industry infrastructure stability	Harvest volumes from federal lands declined from 11% of harvest in 1990 to 1% in 2002 (97% decrease in volume)	<b>MFP 06</b> <b>MFP 07</b>
Encourage coordination with other public land managers for active thinning programs on Federal lands	USFS/DNR/Tribes/NGOs	Forest health, biofuels reductions	Needed to achieve on-the ground results for forest health	Possible subject of upcoming Forest Forum (Northwest Environmental Forum)	<b>MFP 06</b> <b>MFP 07</b>
Provide tax incentives for working forest land	Legislature	Review and revise forest tax framework to encourage retention of forest lands	Proposed	Tax rates in Washington are high in comparison to neighboring states, creating a competitive disadvantage	<b>MFP 06</b> <b>FWF2007: Study 4, Sec 6</b>

**Table 8. Proposed Programs (continued)**

<b>POLICY FUNCTION with associated available programs</b>	<b>Suggested Implementing Agencies</b>	<b>Program Type</b>	<b>Status</b>	<b>Notes</b>	<b>Source</b>
Separate rule structure for certified forest lands : Sustainable Forestry Initiative (SFI) Forest Stewardship Council (FSP) American Tree Farm System (ATFS)	Forest Practices Board	Alternative to Forest Practices rules	Proposed	Assumes certification programs ensure equal level of resource protection. Certification would “stand in” for Forest Practices permit. Conceptual with many details to work out.	<b>MFP 06</b>
Establish a stronger “Right-to-Practice Forestry” in statute	Legislature	RCW (state law)	Request legislation by WFPA to address 2005 Supreme Court case	Case law requires clarification; broader statement of Right-to-Practice could be explored.	<b>MFP 08</b>
Provide regulatory incentives for riparian corridor thinning to produce “desired future conditions of older forest structures”	Forest Practices Board	RCW 76.09.10	Analysis in FWF 2007 (Study 1)	Prohibition and/or difficult FPA rules for entry means that the desired structure will not be produced for many decades into the future. Requires re-consideration of current rules.	<b>MFP 07</b>
Fully fund existing landowner assistance and mitigation (for Forest and Fish) programs especially for small family forest land owners (Refer to Current Programs table)	Legislature through DNR	FREP @\$21.4 million FFFPP @\$19.6 million DNR Expert Forestry Assistance Program @\$797,800 Landowner Incentives @\$414,200	Under budget consideration during 2009 session	FREP and FFFPP are oversubscribed. Expert Forestry assists in resource protection and maintaining healthy forest. Landowner Incentives assist in developing voluntary practices to benefit threatened and endangered species.	<b>MFP 07</b> <b>MFP 08</b>

Table 8. Proposed Programs (continued)

POLICY FUNCTION with associated available programs	Suggested Implementing Agencies	Program Type	Status	Notes	Source
<b><i>Improve non-timber economics</i></b>					
Reduce timber tax in exchange for environmental gains	Legislature; DNR; DOR	RCW amendment similar to tax credit provided in RCW 84.33.0775 for riparian leave trees	Proposed	Credits would have to be more in line with lost values than current RCW to attract landowner interest	<b>MFP 07</b>
<b>DECREASE/OFFSET ALTERNATIVE LAND USE VALUES</b>					
<b><i>Compensate/incentivize for forgoing fragmentation</i></b>					
Purchase of Development Rights	NGOs in partnership with DNR	Conservation and/or fee purchase	Ad hoc, opportunistic	Protection of significant acreage will require state, federal and private funds working in partnership	<b>MFP 06 MFP 07 MFP 08 FWF2007: Study 4, Sec 6</b>
TDR Pilot Project	Cascade Land Conservancy (CLC)	Legislatively authorized and funded pilot (\$250,000) in 2006 in Pierce and Snohomish counties.	Pilot program for 2006)		
Regional Transfer of Development Rights (TDR) market	CLC and regional governments	Private market with government support and framework		CTED Study of a Regional TDR program authorized by RCW 43.362.020 (2007). Will require technical and financial assistance to local governments. Report issued 12/08.	<b>FWF2007: Study 4, Sec 6</b>
Encourage cities to adopt TDR programs	City governments	Local land use codes			<b>FWF2007: Study 4, Sec 6</b>

**Table 8. Proposed Programs (continued)**

<b>POLICY FUNCTION with associated available programs</b>	<b>Suggested Implementing Agencies</b>	<b>Program Type</b>	<b>Status</b>	<b>Notes</b>	<b>Source</b>
Legislative authority for Rural Village Demonstration projects	CLC and local governments	Pilot project	Authority for three demonstration sites sought in 2007 session but bill did not pass	Cluster development of small lots, transferring rights from surrounding resource lands with permanent conservation easements	<b>FWF2007: Study 4, Sec 6</b>
Tax incentives for forest land set-asides in exchange for higher density developments					<b>MFP 07 MFP 08</b>
Lease of Development Right (DR) with option to purchase	State or local government	Public lease of DR		Could be structured as lease-to-own or as an installment purchase DR. Many conceptual and financial issues to be worked out.	<b>FWF2007: Study 4, Sec 6</b>
Establish forest of long-term community significance	Local governments		Concept exploration for new efforts. Some historical precedence.	Examples: City of Anacortes Community Forest Lands (1981); City of Seattle Cedar River Watershed (1899)	<b>FWF2007: Study 4, Sec 6 MFP 06</b>
Private Financing	CLC in conjunction with private business partners	Private "Conservation Timber Fund"	Concept exploration	Private investment fund for timberland acquisition with removal of development rights. Could include partnerships with public and philanthropic sources.	

**Table 8. Proposed Programs (continued)**

<b>POLICY FUNCTION with associated available programs</b>	<b>Suggested Implementing Agencies</b>	<b>Program Type</b>	<b>Status</b>	<b>Notes</b>	<b>Source</b>
Public Financing	Non-profit NGOs in partnership with state government and TIMOs	“Triage” financing of large tracts of working forests to prevent subdivision and/or parcelization	Concept exploration	Foothill forests have high long-term productivity but low available harvest volumes because of age-class. Potential constraint on four strategies below.	<b>FWF2007: Study 4, Sec 6 MFP 06</b>
1) Community Forest Bonds	Non-profit NGOs	Purchase by non-profit with tax-free bonds issued by local government.	In Congress	Requires federal legislation to allow non-profits to issue revenue bonds.	<b>FWF2007: Study 4, Sec 6</b>
2) Locally-issued revenue-backed bonds	Local governments	Local government purchase of forest land important for community integrity with General Obligation (GO) Bonds	Concept exploration	Local governments could create TDR programs or conservation development options	<b>FWF2007: Study 4, Sec 6</b>
3) Public Development/Conservation Authorities (PDA/PCA)	Local governments	Revenue Bond proceed purchased timber land, then managed to produce revenue for bond repayment.	Concept exploration		<b>FWF2007: Study 4, Sec 6 MFP 07</b>
4) State Credit Enhancement for locally issued revenue-backed bonds	Washington State government	Fill cash flow needs for local government to service debt	Concept exploration	State could make grants or loans with partial property interest as security, or state could use repayment for revolving fund.	<b>FWF2007: Study 4, Sec 6</b>

**Table 8. Proposed Programs (continued)**

<b>POLICY FUNCTION with associated available programs</b>	<b>Suggested Implementing Agencies</b>	<b>Program Type</b>	<b>Status</b>	<b>Notes</b>	<b>Source</b>
<b><i>Regulate/restrict to prevent fragmentation</i></b>					
Assess Growth Management Act (GMA) effects on fragmentation and conversion of working forest land	CTED, DNR	Analysis using State Parcel Database	Proposed and required	To date, no such evaluation has taken place	<b>MFP 06</b>
Zoning policies that support forestry and infrastructure development	CTED, local governments	Land Use codes	Based on above analysis	Based on review of GMA results, state policy direction and local code improvements may be required	<b>MFP 07</b>
<p>Table information derived from:            Future of Washington’s Forests Final Report (2007): Study 4 Land Conversion, Section 6 “Future Incentive programs to maintain forest land in Washington State” [FWF2007: Study 4, Sec 6]            Major Findings and Proposals, Northwest Environmental Forum (2006) [MFP 06]            Major Findings and Proposals, Northwest Environmental Forum (2007) [MFP 07]            Major Findings and Proposals, Northwest Environmental Forum (2008) [MFP 08]</p>					

## **What the Table 6 and 7 matrices of current Washington and other states' programs don't show about program success and why new efforts such as the Incentives Proposed in Table 8 should be considered.**

Mechanisms such as Washington's Fish Passage program or the Leave Tree Tax credit were designed by the Legislature to address significant timber values lost to landowners because of previous regulatory changes. As with many such programs, these efforts mitigate only a small amount of the actual impact on a landowner's asset values. Despite the virtues of many incentive efforts, the economics of land conversion, coupled with landowner frustration with regulatory requirements, creates a powerful dynamic favoring disposal of high-value forest land for other uses.

Programs designed specifically as incentives vary from marginal (though important) programs such as site specific assistance for tree planting or stand improvement to core public policies such as Minnesota's Forests For the Future Program, which is an integrated suite of incentives and easement purchases. Habitat and water quality improvement programs appeal to the stewardship motivation of many small forest landowners, and the attraction of these programs can be judged by the fact that many are over-subscribed.

The clearest way to close the gap between forestry values and "highest and best use" (HBU) is to improve timber resource values and simultaneously reduce the opportunity for large forest fragmentation. A fundamental requirement of a successful state policy is that it integrates regulatory and tax programs into a stable and predictable framework to make long-term forestry investments attractive. Such a framework would also include incentives for production mills and bio-fuel investment and support for developing markets for the state's wood products.

Neutralizing or off-setting alternative land use options is as critical as providing viable incentives. Transfer or purchase of development rights can separate the development values normally derived from landscape fragmentation. This requires a serious investment of public and private funds and energy coupled with a market-based transactional framework that supports the efforts. Washington has recently begun efforts for regional TDRs. Utah and Minnesota have effectively used purchase of development rights programs to begin to stabilize their states' land bases for sustainable forestry. The state of Virginia provides the option for associations of local landowners to become a "forestal district" (sic) with reduced tax benefits and higher levels of protection against competing land uses. Although the regulatory approach of limiting land division and parcelization of forest land has been partially addressed by Washington's Growth Management Act (GMA), the effectiveness of this law and its implications for long term forest retention has not been evaluated. The Forum recommended that an effort such as that in Minnesota should be initiated by the Washington Legislature.



## Legislative Task Force is Critical to Explore the Tradeoffs and Options

Forum participants agree on the need to create a legislative Task Force. The Task Force would be charged with developing an overall strategy for Washington State focused on retaining and enhancing working forests to ensure their long-term viability for producing economic, environmental and social benefits. The Forum proposed that tax reform, regulatory stability and simplicity, incentives for working forest ecosystem management, bio-fuels and biomass production and ecosystem services payments should be addressed by the Task Force. These issues are all addressed below, with proposed Task Force actions.

The incentives from other states, of existing programs in Washington and recommendations from the Forum need to be explored in order to determine which work now, which could work better and which would be most effective at the lowest possible cost. Incentives for forest land owners can be effective and attractive, if aimed at a time horizon that is realistic for the landowner. The cost may be surprisingly low, if policy makers are prepared to surrogate perpetual encumbrances in order to accomplish relatively long-term protection and management that ensures environmental sustainability.

### An Incentive Can Create Public Value if Applied Correctly

The above mentioned reports were effectively catalogs of programs that included classic “incentives” of cost-share and technical assistance as well as programs that Forum participants identified as “mitigation” for loss of management options as a result of the Forest and Fish Agreement and other regulatory impacts. This distinction is important because, from a landowner’s perspective, an incentive provides an opportunity for a voluntary response to create additional, quantifiable public values. The compensation/value received has to be above and beyond the costs of application, conforming to necessary rules and meeting program requirements (usually a forest plan). From a public investment perspective, an incentive should produce “additionality” above and beyond that expected from meeting regulatory standards.

As noted from the current Washington program matrix as well as programs from other states, much of the additional “non-timber value” is based on wildlife and fish habitat enhancement. Timber values are enhanced either directly through financial and/or technical assistance to landowners for reforestation and other silvicultural treatments or through an overall state plan or strategy that commits the state to an integrated set of policies and program to ensure forest stability, ranging from industrial and infrastructure incentives to investments in forest land retention (see Minnesota).

Compensation to reduce fragmentation usually results from purchase or transfer of development rights (Utah, Minnesota, Washington (King County)). Washington’s Growth Management Act appears to be reasonably effective in designating and restricting large industrial forest land ownerships with “long-term significance” for forestry. Nonetheless, all county forest zones (except Whatcom) embed a development right in their zoning code which still provides the potential for

fragmentation or large-lot real estate sale and parcelization. Virginia's program of landowner-initiated special "resource districts" appears to achieve some of the goals of reducing parcelization coupled with a short to mid-term commitment to resource management with little or no public cost.

## **Mitigations of Losses are Not Incentives**

Washington private forest owners, particularly small family forest landowners control 5.7 million acres, predominantly located on low elevation, highly productive land with an abundance of watercourses and a high likelihood of conversion because of the very characteristics which make them good forest land. The Legislature (and the Forest Practices Board) recognized that the Forest and Fish regulations had a disproportionate impact on these small owners (those with fewer than 5,000 acres) in two major ways: 1) riparian buffers disproportionately affected small landowners because they could not spread the impact over a larger area as could owners with larger properties; and 2) repair and replacement of fish passage blockages on forest roads in a specified time frame was difficult, if not impossible, given the episodic cash-flow from timber harvest and the up-front cost of such repairs. Both the Forest Riparian Easement Program (FREP) Program and the Family Forest Fish Passage Program (FFFPP) were designed to partially compensate owners for this loss of timber value and increased complexity of management.

Unfortunately, FREP has been underfunded since its inception. The College of Forest Resources Rural Technology Initiative estimates that the program's unfunded obligation, if fully implemented, is upwards of \$1.5 billion. The FFFPP is also over-subscribed and under-funded. This is a problem because compliance is required by 2015. There is also a Forest and Fish Leave Tree Tax Credit to address loss of value in riparian areas. However, a 2001 Washington Department of Revenue study indicated that small forest land owners received only about 4% of value credit for trees that they were not allowed to harvest.

The net result of these "mitigation" programs is a sense that early and/or lucky applicants are partially kept whole while many landowners simply absorb the costs of providing public benefits. The longer-term problem is that a significant number of these owners or their children may chose not to absorb these costs and simply sell their land for rural residential housing which would both fragment the landscape and change the regulatory framework to county zoning and building codes rather than the Forest Practices Act.

## **Market-based Strategies are Fundamental to Success for Ecosystem Services**

There was widespread agreement among Northwest Environmental Forum participants that the state must recognize and create markets for ecosystem services provided by sustainable forests. Some method of paying for those services will ultimately be needed to improve non-timber resource economics and keep working forests on the landscape. Creating markets for carbon, wildlife habitat or clean water, while conceptually attractive, is extremely complex. Hardened perspectives and past concepts of regulation inhibit new ideas that might reward landowners for protecting public

resources dependent on private land management. Forum participants from all interest groups want to sustain working forests and forest-related jobs.

The Washington Conservation Markets Study (2009), issued by the Washington Conservation Commission in response to SSB 6805 (2008) evaluates the feasibility of conservation markets in Washington to pay farmers and foresters for environmental benefits from conservation projects on their land. Produced in parallel with the 2008 Forum, the report delves into “ecosystem services” in greater depth than Forum participants were able. Current and potential markets include selling credits for wetland or habitat restoration, for mitigation and compliance requirements and programs that provide ongoing revenue to sustain the long-term viability of farms and small forestry operations, in exchange for maintaining or enhancing environmental benefits. “Markets for greenhouse gas emissions (or carbon markets) appear to be the most promising [market] for early implementation...” and “...this is an excellent time to consider an expansive role for farmers and foresters in creation of greenhouse gas credits” (page 5).

## **Carbon is a Working Forest Ecosystem Service**

Previous reports to the Forum have proposed carbon sequestration as an emerging non-timber “ecosystem services” market. Carbon sequestration values can improve the economics of forest management while simultaneously meeting environmental goals. The report of the Forest Sector Working Group of the state’s Climate Action Team (November 2008), produced in parallel with Forum deliberations, incorporates the most in- depth analysis and investigation of this opportunity to date. That report also contains future policy and legislative consideration.

[http://www.ecy.wa.gov/climatechange/2008FAdocs/11241008\\_forestreportversion2.pdf](http://www.ecy.wa.gov/climatechange/2008FAdocs/11241008_forestreportversion2.pdf)

The framework recognizes the need to provide “incentives for retention of Washington’s working forests,” and to “not penalize Washington forest landowners for the environmental benefits they already provide as a result of Washington’s strong forest practices rules.”

The Working Group recommends two mechanisms to enhance the protection of working forests: The first provides offset-based incentives for reducing the “footprint” of development and retention of forest cover. In the “clustering scenario” the offset or credit would be limited to non-designated rural resource lands under the Growth Management Act (GMA). For forest lands of long-term significance, development rights would be transferred into Urban Growth Areas, using the mechanism of Transfer of Development Rights (TDR). The Working Group endorsed the TDR program being developed pursuant to RCW 43.362.020.

The second mechanism provides dual offset and non-offset incentives for carbon-sequestering forest management on productive forests, including accounting for in-forest and wood products carbon pools. Forest landowners and managers recognize the required nexus between a commitment to stewardship and a market for carbon credits such as in the Chicago Climate Exchange. Institutionalizing the necessary mechanisms to allow entry into the carbon market place and the accounting for such incentives still requires considerable work.

## Biodiversity Conservation needs a Stable Working Forest Base

A bio-diverse landscape provides clean water, productive soil and habitat, all of which have real value to the economy. However, these values are generally not priced or exchanged in existing markets, so landowners are given few incentives to provide them, beyond what is required by regulation. As with carbon, payments or credit-trading would establish the value of these broad benefits. Market certification programs recognize stewardship practices above required baseline levels. As with organic food, these programs are intended to raise the market price of a commodity in exchange for certifiable improvements in land stewardship practices, and may also bring increased revenue to landowners. Their efficacy for improving the price received by producers of forest products is yet to be demonstrated.

The incentive and market-based mechanisms for forest retention proposed by the Forum are consistent with the Washington Biodiversity Council's Conservation Strategy, "Sustaining our Natural Heritage for Future Generations," (December 2007). That Strategy recognizes that working forest management and biodiversity conservation are complementary activities. Both require a stable and un-fragmented land base. Since more than 60% of Washington's lands are privately owned, private landowners are on the frontlines of efforts to conserve biodiversity. The Council's strategy recognizes their central role and seeks to foster good stewardship through positive recognition, incentives, and market-based mechanisms rather than increased regulation or mandates (page 10).

Areas simultaneously identified as high-value working forest land with the presence of high biodiversity components provide a useful metric for prioritizing public and private investment and policy initiatives. With this concept in mind, Forum participants reviewed Biodiversity Council maps of priority landscapes. In many cases, high priority areas coincided with high-value forests. Given different regional definitions and dissimilar levels of available data, Forum participants were not able to designate specific areas as under threat, but were able to conclude that protecting the integrity of high-priority contiguous forests would also protect biodiversity.

Simply ensuring an un-fragmented landscape will meet the key threat identified in the Council's Strategy : "If current rates of land conversion continue, the good stewardship practiced by working landowners will ultimately have a limited impact in conserving Washington's biodiversity." The best way to maintain landscape continuity and to ensure and enhance biodiversity will be through partnerships of non-profit conservation organizations, local and state agencies and forest land owners. The Council strategy offers "an integrated suite of incentives and market-based programs to private landowners" structured to "make voluntary stewardship and conservation a practical and rewarding option." Numerous programs in the "Current Program Matrix" (above) are oriented toward protecting and improving habitat conditions. Those programs should be focused on working forest areas threatened with conversion with significant opportunity for biodiversity protection and enhancement.

## What Landowners Say About Incentives to Support Continued Ownership and Management of Forest Land

Analysis of the Forestland data base (see Maps), confirms a working assumption of the Forest Forum - that high value working forest lands at the highest risk of conversion and forest fragmentation are controlled by some 215,000 family forest land owners, in tracts ranging from 2 to 5,000 acres. Located in lower elevation rural landscapes crisscrossed by watercourses, these properties often serve as the “buffer” between development and industrial or public forest land. As indicated elsewhere in this report, further fragmentation of these highly productive forest lands compromises the prospects of the forest industry and its infrastructure, as well as habitat and biodiversity. In turn, conversion of these properties potentially puts into play the larger-scale industrial land base by introducing management conflicts with non-forest neighbors, inducing changes in real estate value and diminishing long-term supply needed for sustaining mill capacity to provide the market value for industrial forest timber.

From its inception, a key question facing Forum participants has been: “What factors or policies would motivate private forest landowners to forego parcelization and to maintain and enhance the biological productivity of their land, including committing that land, long-term or in perpetuity, to sustainable forestry?” In the face of economic pressures to sell all or portions of property for “higher and better uses” and in light of a long-standing and ongoing expressions of frustration with the consequences of a highly complex regulatory environment, are there incentives that might help achieve the desired goal: retaining a permanent, unfragmented forest landscape, sustainably managed for commodities as well as ecological and social values?

Landowner interest in permanently dedicating forestland for resource production and foregoing future options is contingent upon a reasonable likelihood of long-term stability, coupled with a supportive policy framework that recognizes the critical role private forestlands play. Currently, family forest owners have underlying doubts about shifting regulatory requirements and concerns about what might happen on their borders as new neighbors constrain their practices while simultaneously acting as a wedge to drive property values higher and make conversion even more attractive. Until the state makes a commitment to an integrated strategy, it will be difficult for a significant number of landowners to willingly commit to a future in which their ability to continue managing their land for forestry appears to be jeopardized.

Findings from the 2006-2008 Forums strongly emphasized a need for financial incentives as part of an overall strategy to keep working forests viable. The matrices (Tables 6-8) provide an organized framework to view current and potential opportunities to increase working forest values and offset alternative land use values. Within this framework, three key mechanisms can exert a high degree of leverage to affect landowner behavior: Regulatory Reform, Tax Reform and Compensation for Development Rights. What do we know about landowner interest in and support for these

mechanisms? A combination of research, anecdotal information, responses to actual programs and Forum Findings provides some answers.

## Regulatory Reform and the “Hassle Factor”

Forum participants representing landowner interests have repeatedly emphasized their frustration with the complexity of the Forest Practices Act rules structure as it has evolved since initial passage of the Timber Fish and Wildlife framework and its subsequent evolution to the current Forest and Fish Agreement. Results from Cascade Land Conservancy workshops (FWF 2007) reveal that “Forest landowners thought that reduction of regulatory complexity would encourage landowners to remain in forestry, as they would see immediate cost-savings and have greater confidence that investments and land management practices would pay off in the long term. Environmental representatives were generally supportive, on condition that the final proposal ensures that there would be no reduction of resource protection and that there would be proper oversight of management actions.” Forum participants support for a 15 year Forest Practices permit was instrumental in achieving one benchmark for reducing the perceived “hassle factor” for small landowners.

A continuing frustration for small landowners has been the issue of riparian management to achieve “Desired Future Condition” (DFC) of mature forest structure (140 years) while maintaining viable economic land use. “Most family forest owners forego harvesting within the three-tiered Riparian Management Zones because of the complexity/ uncertainty/fear/cost of learning or following these rules for their infrequent harvests.” (Ken Miller, personal communication). The net result of current rules for these owners who cannot average harvest impact over larger acreage is to both reduce potential income and to not achieve the desired DFC in a reasonable time. Foregoing all harvest in the riparian zone results in an estimated 25-57% loss of economic value (FWF, DP7, 2-5).

Building on these concerns about the effect of regulations on creating an affirmative climate for continued forest management and to achieve desired biological conditions, the 2008 Forum recommended “Resource Protections with Regulatory Stability and Simplicity” as one of the “most urgent” elements for a proposed state Task Force to address:

- 1) Clarification and simplification of the forest practices-related rules structure to protect the ability of small forest landowners to operate as working forest managers. “Clarification and simplification” is intended to expand choices to accomplish resource protection and not diminish overall protection, as for example, with riparian buffers standards that can be managed with lower risk and potential impacts, commensurate with their smaller harvests.
- 2) Incentives that enhance landowner ability to effect resource protection standards.

Forum participants recognized the time-consuming realities of grappling with these regulatory complexities. Legislation and current rule changes under considerations by the Forest Practices Board may address these issues. Forum participants support efforts to provide a simpler regulatory

framework that removes some of the current disincentives for landowners and provides incentives for long-term stewardship and enhancement of non-timber resources.

## **Tax Reform and Competitive Position**

Since 1971, Washington has used a “Current Use” tax structure for enrolled “Designated Forest Land” (DFL) properties of 20 acres or larger. The legislature’s intent was to assure “... continuous production of timber and forest products from the significant area of privately owned forests ... whose forests contribute to the natural ecological equilibrium, and in providing employment and profits to its citizens and raw materials for products needed by everyone” (RCW 84.33010). The annual property tax rate on DFL land ranges from an average of \$1.79/acre/ year for western Washington to \$0.58/acre/year for eastern Washington. Timber is taxed at harvest at a rate about \$19/thousand board feet (MBF). (FWF 2, 133-134) DFL designation requires a 10-year commitment to resource production with significant penalties for withdrawal. The intent is to keep holding costs low for committed forestland owners and for the state to derive revenue at the time of harvest. Approximately 6 million acres of private forest land are enrolled (see Map #3). From a competitive position analysis, Washington has the highest per acre tax burden of any state for forestland and is therefore at a disadvantage when compared with neighboring timber-producing states (Oregon and Idaho).

Over nearly 40 years, there have been numerous amendments and adjustments to this basic framework. Forum participants recognized that a new look at the forest tax system could potentially provide an additional set of incentives for landowners to retain land in forestry, discourage conversion and produce habitat, carbon sequestration and other ecosystem services. In parallel with the 2008 Findings to examine Regulatory Reform, the Forum recommended that the Task Force address:

- 1) An integrated forest-specific tax structure that will provide incentives to retain forest land, encourage long-term forest management, produce a range of ecosystem services and provide for the movement of forest products to processing sites.
- 2) Notwithstanding potential 2009 Legislative session actions, the Task Force should be charged with developing tangible next steps for:
  - a. Introducing incentives for green energy wood sources;
  - b. A “sustainability” tax waiver for working forests;
  - c. A biomass exemption from the forest excise tax and \$10/Ton credit for transportation;
  - d. Consideration of a transfer of development rights (TDRs) exemption from the real estate excise tax (REET).

## **Compensation for Development Rights and Cascade Land Conservancy Findings**

If only one action could be taken to ensure the future continuity of the state’s forests, elimination of the development right from working forestland would be the key. All incentives to encourage biodiversity, reduce the costs of holding timber from the market, and minimize regulatory complexity will be futile unless the issue of parcelization and fragmentation is addressed head on.

The right to build a house on rural or forestry property is a function of county zoning. Under the state's Growth Management Act, all counties must designate lands of Long Term Commercial Significance for Forestry. Depending on the county and the local zoning code, each parcel of forest land from 5- 80 acres includes the right to build a single family residence. The only exception is Whatcom County which explicitly does not provide a building right in its Commercial Forest Zone.

Ensuring a stable land base for forestry requires that reasonable economic expectation from forest management can be met. Equally important is landowner support for Working Forest Conservation Easements to either permanently remove this development right or ensure that the land remains as working forest for a stipulated time frame. Forum participants have focused significant time examining various mechanisms to monetize this embedded value through private markets, public funding and a combination of mechanisms. As noted in Forum Findings from 2007 and 2008, there is a high degree of support for the concept of Transfer of Development Rights (TDR) and Purchase of Development Rights (PDR) to protect working forestland and for private non-profits to work in partnership with state and local governments to achieve this outcome. From the landowner's perspective, the actual mechanism to produce the required funds may be relatively unimportant, unless it is too complex.

In 2007, the Cascade Land Conservancy convened a series of landowner focus groups to evaluate a range of possible choices, including transfer or sale of development rights, lease of development rights, lease with an option to purchase development rights and leasing of ecosystem services. (FWF, Sec 6) Focus group interviewees had two responses to the opportunity to remove the threat of development. One segment of family landowners expressed hesitancy to participate in a perpetual easement program due to its permanent nature, concern about whether their land would be financially viable for them or future generations and fear of "seller's remorse." The opportunity for permanent protection so attractive to conservationists was seen by these owners as creating a "cloud on the title that will prevent options on the future."

The interviewer found that "with these landowners in general, simpler agreements are better received, but people will not agree to terms that increase their restrictions." The other segment of landowners expressed a willingness to sell their development rights or lease those rights with an option to purchase in exchange for a one-time payment or a series of annual payments. Conservationists were interested in the leasing option only if it included a right to purchase a permanent easement. Yearly contract payments that did not guarantee long-term stability were viewed by conservationists as a less effective use of private and public funds than straight-out purchase of those interests from willing sellers.

Proposals to lease ecosystem services received a uniform and skeptical response. Landowners were reluctant to commit to increasing the quality or quantity of an ecosystem service. "To many forest landowners, adhering to the regulations is difficult enough and performing at an increased level would be financially undesirable or unrealistic." The interest level of the landowners decreased substantially in response to this option of management above current regulatory baseline



(“additionality”). “One work group member asserted that it was unlikely that the lease payments for an ecosystem service could offset the increased management costs and the loss of revenue.

For the leasing entity, the cost to offset the reduced or deferred income from delaying cutting of trees would make the program costly, and perhaps beyond their willingness to invest. Based on these responses, the work group did not recommend pursuing this option despite a multi-year expression from the Forum of conceptual interest. While the theory may be attractive, landowner participation is crucial. It appears, under current circumstances, that there is not the necessary level of interest to make such a program feasible.

### **Payments for Ecosystem Services – Supply and Demand - What Landowners Said to University of Washington that Encumbrances for Conservation are Worth**

A recent University of Washington survey of family forest landowners (Appendix D) explored their willingness to participate in working forest easement contracts within a range of payments per acre and contract terms (ranging from 10 years to perpetuity) (Rabotyagov, 2008). Produced in conjunction with the Family Forest Foundation, preliminary results confirm that a significant number of family forest owners would consider such long-term encumbrances, though fewer indicate a preference for permanent solutions.

Nearly 2/3 (64%) of those surveyed indicated that they would be willing to accept a payment of \$100/acre per year for a 50 year commitment to forestry, with no management requirements beyond the regulatory baseline. Willing participation increased as the price /acre was incrementally raised (up to 78% @ \$250/acre/ year) and decreased with a longer contract. Half of the respondents would commit their ownership for 100 years at \$10/acre/ year but only 33% would make a perpetual commitment for that amount. In order to have a 50% participation rate in a permanent easement contract, landowners would need to be offered \$225/acre annually in perpetuity, whereas a *higher* participation rate can be achieved by offering a \$10/acre payment for a 100-year term easement.

The results show that it is more difficult, all other things being equal, to have landowners commit to a particular management regime for biodiversity, in perpetuity. For example, contract duration would have to be reduced from 50 to 30 years in order for 64% of landowners to agree to a conservation easement contract. However, the hurdle is not as high for fairly lengthy term contracts (50 or 100 years). The survey respondents appear to have preferences for preserving forest management flexibility, even if that flexibility can only be realized in decades.

Surprisingly (and affirmative for the goal of stabilizing the forest land base), “landowners concerned about the development pressure on their forestland appear more willing to participate in forest preservation programs...” University of Washington researchers conclude that “forest retention efforts could be informed and made more effective by paying attention to landowners who are concerned with forestland conversion.”

## Minnesota Lessons about Landowner Motivations

It is instructive to view these hypothetical survey results in light of a similar, currently operating program in Minnesota. The Minnesota Sustainable Forest Incentive Act (SFIA) is a property tax law, initiated in 2002, that encourages private landowners to make a long-term commitment to sustainable forestry in exchange for annual payments on a per acre/ year basis. Minimum payments in 2006 were about \$5/acre/year. In 2006, 731 ownerships encompassing 602,000 acres were enrolled in the program of 8-year rolling contracts. In 2005, a multi-party state Work Group examined the programs' "relatively low rate of participation in SFIA by family forest landowners in the face of growing development pressure on private forestland."

[http://transition.blandinfoundation.org/html/documents/SFIA\\_Revisions\\_FINAL\\_032706.pdf](http://transition.blandinfoundation.org/html/documents/SFIA_Revisions_FINAL_032706.pdf)

The Work Group Findings recommended "substantive program changes," including:

"...current SFIA payment formula does not provide a large enough payment to attract a substantial number of family forest landowners to enroll their property in the program."

"... program costs exceed program benefits for most family forest owners. Such costs include obtaining a stewardship plan, submitting an application, preparing and recording a covenant on the land, and annual recertification. ...These requirements constitute a major barrier to participation given the perceived low level of the incentive payment provided by the program."

The net present value (NPV) of these "term easements" was estimated to be less than \$300/acre/year. Perpetual working Forest easements at 30%-80% of FMV were estimated at \$200-\$1,000/acre/year. [www.lccmr.leg.mn/ItemsforMeetings/2007/Presentations/2007-06-13SFIAPresentation-MichaelKilgore.pps](http://www.lccmr.leg.mn/ItemsforMeetings/2007/Presentations/2007-06-13SFIAPresentation-MichaelKilgore.pps)

This disparity between what **can** be paid to ensure a term easement and what **must** be paid for a perpetual easement should be food for thought when funds are sought for implement a forest incentive policy. This disparity is also addressed in the University of Washington survey of landowners in the next section.

## On-the-Ground Feedback from Washington Forest Land Owners

Two current programs provide some perspective on landowner preferences between term and permanent easements. Designed to partially compensate for harvest rights lost under the Forest and Fish agreement, both programs are considered "mitigation" rather than "incentive" programs by forest land owners. The 2008 Environmental Forum recommended that the legislature fully fund the 50-year term contract Forest Riparian Easement Program (FREP) administered by DNR with a \$19.6 appropriation. The 2005-2007 budget funded the program at \$8 million and the last biennial budget appropriation was \$10 million. Since 2000, 177 landowners have protected 3,398 acres. The Rural Technology Initiative estimates that fully-protecting riparian corridors on family forest

ownerships would cost over \$1.5 billion. Based on landowner response, the program has been underfunded since its inception in 2001.

In contrast, the Riparian Open Space Program, a permanent easement program for channel migration zone protection, also administered by DNR, has been undersubscribed since inception (2001). Only 584 acres have been enrolled. \$1.85 million was appropriated for 2008-2009. Both programs attempt to achieve similar goals: compensation to landowners for lost riparian timber value. The preference for a 50 year easement instead of a perpetual easement supports both anecdotal landowner responses and the survey results discussed above.

## **Policy Choices to Address Fragmentation and Parcelization through Compensation**

Forest landowners signal a willingness to contractually encumber property to ensure its continuing use as working forests. With 215,000 ownerships, there is clearly not one single price or term that will satisfy all. University of Washington survey results indicate that those owners who self-identified as having land at risk of conversion are more willing to consider permanent easements. If specific strategic areas were identified and prioritized in an overall state approach for working forest conservation, financial and other resources would logically be focused in these areas.

If term easements were also an available option, a parallel track to efficiently allocate public funds would be an “auction” in which owners would bid in their properties for a certain yearly price/acre for a specified term. The public policy debate would likely be fierce about whether term easements (probably with an option right) or permanent easements would be the best investment of public resources. If the survey results are indicative, at a certain price a bare majority of owners would be willing to make a permanent commitment and a slightly larger number would be willing to enter long-term (up to 100 year) contracts.

## **Perpetuity is a Lot Longer than 100-Years to a Forest Landowner**

On average, 17% fewer owners were willing to enter into a permanent contract than a 100 year commitment. There will always be a certain number of owners who, given present circumstances, will choose to not retain future options for their descendants. Translation of the proposed yearly payment schedule to a Net Present Value (NPV) figure would allow potential buyers and sellers to test the proper strike price to consummate protection transactions.

In conclusion, landowners prefer larger per-acre annual incentive payments, they prefer to commit to shorter contract duration and they require extra compensation to engage in ecosystem production-enhancing forest management. Landowners strongly resist permanent conservation easement programs. There is significant drop-off in willingness to accept a perpetual easement from even a 100-year contract duration at all payment levels.

Large premiums demanded by forest landowners for long or perpetual encumbrances to their development rights should provide food for thought for policymakers and conservation organizations alike. Tradeoffs between the number of forest landowners participating, the length of programs and the desirability of a wider program coverage at the expense of their permanence will have to be made.

## Conclusions

For the past 5 years, the Northwest Environmental Forum has considered the future of Washington's forests and how to retain them for the multiple economic, environmental and social benefits they produce. A consensus conclusion has emerged from these deliberations, based on research conducted by the University of Washington. The state's most productive privately-owned forest lands are under enormous pressures for conversion to non-forest uses. The loss of these forests will permanently and irreversibly affect the economic well-being of key state industries, further diminish fisheries and habitat values and jeopardize the very essence of the state's identity as the "Evergreen State."

Despite the current economy and housing down-market, this period should be viewed as a time to take action before the next upturn, given that Washington's population will continue to grow. Smaller land ownerships around the Puget Sound and other growth corridors are most threatened by regulatory and growth pressures, and are also the least-compensated within the meager programs that are available. Just as it was recognized in 1934, a time of drastic downturn is also a time of opportunity.

The key strategy recommended by the Forum is a legislatively appointed Task Force directed to produce an overall plan for integrating Washington's regulatory, tax and forest land protection initiatives. The long-term retention of our state's working forests will require a commitment to an overall program of incentives, policies and actions.

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