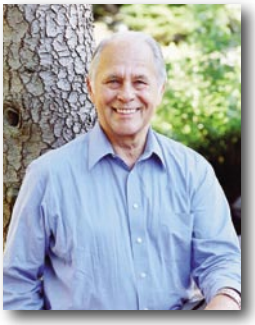


Washington's forest lands help define our state's unique identity and culture. Along with wheat fields, orchards and vineyards, bustling ports, salmon, microchips, jet airplanes, and coffee shops, our forests help us know who we are as Washington residents, and what we value. Our diverse forest lands have been constantly changing, before and throughout human history in Washington, and we can expect change in the future as well. Whether that future change will be perceived as favorable or unfavorable is a question we can all help answer by our actions and decisions today.

Many citizens and leaders are concerned about the future of Washington's forests – their ecological, cultural, scenic, and recreation values, their ability to provide timber, clean and abundant water, and other products and environmental services. They are concerned about the future of our state's forest-related industries and the important contribution those industries make to our state and local economies and communities. Washington's legislature in 2005 authorized a major study of that future, and directed the University of Washington, College of Forest Resources and the State Department of Natural Resources to collaborate in carrying it out.

In a year marking both the 100-year anniversary of the College and the 50-year anniversary of the Department, we take great pleasure in bringing you this summary legislative report on the Future of Washington's Forests. We're grateful to the legislature for funds and direction and especially grateful to the many researchers and others who assembled the rich body of information summarized here. We also congratulate and thank the scores of interested citizens, representing all those with an interest in Washington's forests, for their hard collaborative work developing recommendations to the legislature, based on the research results.

We hope you enjoy this document -- its compilation of the College's technical research results, its new insights on major issues, and its summary of the dynamic discussion at the College's Northwest Environmental Forum, which produced the recommendations. We encourage you to read the College's technical reports for more detail. Ongoing citizen and policy-maker discussion and debate based on the study's findings, as well as policy action by the legislature and other bodies, will encourage new initiatives needed to secure the common future we all want for Washington's forests.

Sincerely,

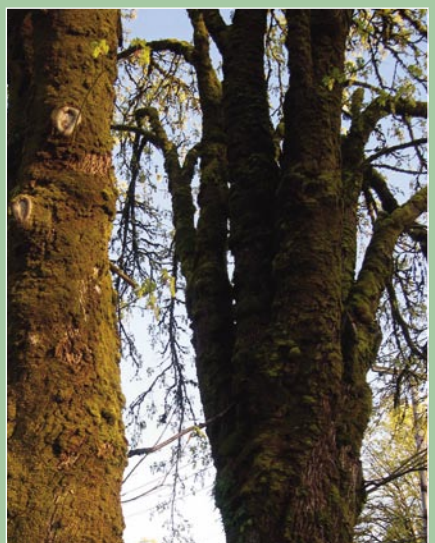
Doug Sutherland
Commissioner of Public Lands
Department of Natural Resources

Dr. B. Bruce Bare
Dean
College of Forest Resources

WASHINGTON STATE DEPARTMENT OF
Natural Resources
Doug Sutherland - Commissioner of Public Lands

UNIVERSITY OF WASHINGTON
College of Forest Resources
CREATING FUTURES SINCE 1907

Table of Contents



Figures and Tables

Executive Summary

Overview

In 2005, the Washington State Legislature expressed its ongoing interest in the economic and environmental health and contribution of the state's forestlands and forest industry, as well as the protection of working forest lands. It appropriated $1 million to the Department of Natural Resources (DNR) to contract with the University of Washington's College of Forest Resources to complete a comprehensive report on the Future of Washington Forests. The legislative request grew out of the College's first Northwest Environmental Forum session on working forests, held in November 2004.

The project was intended to include in-depth studies on a series of questions regarding future timber supply, Washington's position in the national and global forest product marketplace, the contribution the forest sector makes to Washington's economy, the pattern of land conversion from forest to non-forest development, and also the financial return to be expected from state-owned trust forest lands. The project also was intended to use study findings as the basis for stakeholder discussions leading to policy recommendations to the legislature for protecting the working forest land base for its multiple benefits and strengthening Washington's forest industry.

Since fall of 2005, the project has produced a large and useful body of research findings, contained in four major progress reports. The final study reports will be completed by June 2007. In October and November 2006, the project brought together a broad range of stakeholders with the study leaders in a technical "Roundtable" discussion, and then the College's third Northwest Environmental Forum collaborative policy dialogue, attended by almost ninety participants. The Forum was aimed at providing policy recommendations, informed by the project's research studies, to the 2007 legislature. Several presentations were made to key legislative committees early in the 2007 legislative session, and this Executive Summary was made available. Publication of this full report completes materials for the 2007 legislative session.

Other study reports can be found at www.nwenvironmentalforum.org.

Summary Findings

The following summary statements encapsulate many of the major points emerging from the Future of Washington Forest Studies. (See the more complete summary of study findings and key issues beginning on page 71.)

1. Washington state's forests show great diversity; however, land available for commercial timber harvest has decreased.

2. Timber harvest declined by 40 percent in the past fifteen years, on all ownerships.

3. About 61 percent of Washington's timber harvest goes to sawmills producing lumber primarily for North America's housing industry.

4. Mills have undergone a major restructuring, with older mills closing in rural areas and larger modern mills opening in more urban locations. Mills provide employment and the economic incentive for active forest management.

5. Washington's forest industry has been recovering, with increases in production, employment, and taxes, a $16 billion economic contribution in 2004, and a 15 percent (and rising) share of manufacturing jobs. Nevertheless, loss of past export markets and dependence on domestic commodity markets exposes producers to cyclical swings in the U.S. housing market.

6. Costs of timber production are high compared to other states, especially costs of taxes and regulations, which can especially burden family owners of small forest parcels.

7. Industrial landowners are intensifying management of forest plantations and moving away from thinning, with better economic results but decreased biodiversity.

8. Remaining old growth is largely off-limits to logging, but much of Washington's abundant second-growth forests, especially on federal and state-owned lands, are over-crowded and unhealthy and in need of thinning.

9. A forest health crisis is developing in eastern Washington, driven by exceptionally hot and dry summers, over-crowded forests, and unprecedented infestations of forest insects, leaving forests susceptible to severe wildfires.

10. Markets could emerge for wood-based biofuel and for carbon storage credits, providing economic incentives to improve forest health and to keep productive land in forestry.

11. Since the late 1980s, about 17 percent of Washington's commercial forests – and their multiple benefits – have been converted to development or agriculture. Near urban populations, development value may be 15-20 times greater than commercial forestry value.

12. Washington's timber supply is projected to stabilize at about 3.5 billion board feet per year in the coming two decades, and could then rise higher unless the rate of land use conversion continues.

13. A stable timber supply is the most-cited influence on new investments in sawmills or other processing facilities.

14. The large private forest ownership structure is shifting from integrated manufacturing firms to large institutional financial investors and real estate investment trusts.

Major Recommendations

The following are summary statements for a series of policy strategies strongly supported by the diverse participants of the University of Washington's College of Forest Resources' November 2006 Northwest Environmental Forum, as part of the Future of Washington Forests project. Many other ideas were discussed and received varying levels of support as part of the project, and are included in the body of this report. Recommendations are grouped by major issues derived from the study findings. See full discussion of Recommendations beginning on page 77.

Confronting the Forest Health Crisis in Eastern Washington

1. The legislature must acknowledge the need for thinning and controlled burning treatments of unhealthy forests on all ownerships.

2. The legislature should extend DNR's authority for contracted harvesting for forest health treatments on state trust lands.

3. All parties should learn from the successful forest health programs of the Yakama and Colville tribes.

4. The legislature should fund DNR's budget proposal to implement forest health measures on private lands.

5. See also the recommendations for emerging wood-based biofuel markets below.

Improving the Productivity and Competitiveness of Washington's Timber Supply

1. All parties should recognize the desirability of a healthy forest industry in Washington.

2. The state needs all current sources of timber supply – federal, state trust lands, large private, small private, and tribal.

3. Timber supply from owners of small forest parcels should be enhanced by a variety of policy measures, including regulatory streamlining, estate tax exemptions, purchase of conservation easements, and funding for DNR's Forest Riparian Easement Program and Small Forest Landowner Office.

4. The state should seek to regain an appropriate timber supply from national forests, especially those in eastern Washington suffering from the forest health crisis, while avoiding old growth and roadless areas.

5. The legislature should authorize a study of the impact of Washington's business tax and regulatory costs on the competitiveness of the forest products industry.

6. Avoid further expansion of the regulatory system, seek regulatory efficiencies, and avoid new market barriers.

Timber supply from owners of small forest parcels should be enhanced by a variety of policy measures, including regulatory streamlining, estate tax exemptions, purchase of conservation easements, and funding for DNR's Forest Riparian Easement Program and Small Forest Landowner Office.

Encouraging Investment in New Processing Facilities

1. Policy makers should recognize that a healthy network of mills and other processing facilities forms the core of Washington's forest industry, generating the economic basis for sustainable forest management.

2. A stable timber supply is the key to investments in processing facilities. (See timber supply recommendations above.)

3. The legislature should fund a program of research needed to evaluate and support wood-based biofuel plants.

Improving Forest Biodiversity through Incentives and Regulatory Flexibility to Improve Management Practices

1. The legislature should consider providing incentives to landowners for undertaking thinning or extending the age of final harvest, to achieve overall biodiversity benefits.

2. Explore regulatory flexibility in streamside areas with dense, over-crowded forests to encourage thinning to achieve biodiversity benefits.

3. The legislature should fund research by the U. W. College of Forest Resources to study landowner disincentives for managing to enhance biodiversity.

4. The state and federal governments, with interested stakeholders, should find ways to allow timber harvest on national forests which would promote biodiversity improvements over time.

Reducing Forest Land Losses on the Urban Fringe

1. The legislature should fully fund existing successful programs, such as the Washington Wildlife and Recreation Program ($100 million), the Forest Riparian Easement Program ($13.8 million), and the Family Forest Fish Passage Program ($6 million).

2. The legislature should authorize and fund development of "transfer of development rights" projects, "purchase of development rights", DNR's budget proposal for its Small Forest Landowner Program, and recognition and reward for providing forest "ecosystem services."

3. Implementation of the Growth Management Act should become more attuned to the realities of parcelization and long-term working forest conversion.

4. The legislature should fund the Family Forest Landowner Database proposal.

Encouraging Emerging Markets

1. The state should create a forest biofuel feasibility study, linked to the need for market incentives for forest thinning for forest health and biodiversity.

2. Steps should be taken to increase the supply of alder from Washington forests to meet the current demand of the hardwood market.

Additional Cross-Cutting Themes

1. There is a great need for improved information on Washington's forests, such as from LiDAR inventory methods, and for appropriate use of scientific information to improve policy dialogue.

2. Multi-stakeholder collaborative problem-solving holds great promise as a viable means of reaching durable decisions on complex issues related to sustainable working forests.

MULTI-STAKEHOLDER COLLABORATIVE PROBLEM-SOLVING HOLDS GREAT PROMISE AS A VIABLE MEANS OF REACHING DURABLE DECISIONS ON WORKING FORESTS.

Preface

In 2004, the University of Washington held its first annual Working Forest Forum, conducted by the College of Forest Resources' Northwest Environmental Forum.

One of the attendees of that first Working Forest Forum was Senator Ken Jacobsen of the 46th legislative district. In the next legislative session (2005), Senator Jacobsen and others asked for the creation of the "Future of Washington's Forests Review Council" (2SSB 5405). The bill did not pass. However, in the FY05-07 operating budget (ESSB 6090 Section 309 (11)), the legislature included a proviso for DNR, which essentially created the study process intended by the bill. It appropriated $1 million to DNR to contract with the UW's College of Forest Resources and to develop a report to the legislature.

The Future of Washington Forests project represents a unique effort to engage the research capabilities of the University as the foundation for a well-informed policy dialogue on an important natural resource, economic development and land use issue. It provides a strong foundation of information on which to base proposals for public policy change. And it gives assurance that university-based study will be relevant to important public policy issues.

The project has consisted of several elements, and has produced a number of documents:

- Beginning in summer 2005, five studies conducted by UW's College of Forest Resources, with in-house study teams and external technical advisory committees, under an interagency agreement providing legislative funding through DNR.
- A subcontract with Cascade Land Conservancy as part of a land conversion study, to bring into this project the results of the forestry work group of the Conservancy's "Cascade Agenda".
- Four published technical progress reports and numerous sets of presentation materials.
- A "Roundtable" discussion held October 30 and 31, 2006 at the UW Center for Urban Horticulture, at which about 60 diverse participants heard the presentations of study findings and discussed ramifications and potential policy responses.
- The third annual Working Forest Forum on November 20 and 21, 2006 in Blaine, WA at which about 90 participants deliberated on the policy ramifications of the studies and developed a range of legislative recommendations.
- This legislative summary report, intended to bring the major points of the studies themselves and the policy dialogue to the 2007 legislature.
- The College of Forest Resources' "Forum Proceedings" for the Future of Washington's Working Forest Land Base in December, 2006.
- Final study reports due June 30, 2007.

This summary legislative report is intended to further stimulate and support legislative deliberation, public discussion and ongoing research related to the findings, key issues, and recommendations of the Future of Washington Forests project.

This legislative summary report is based almost entirely on project materials published by the University of Washington's College of Forest Resources and the Cascade Land Conservancy as part of the Future of Washington Forests project. The Department of Natural Resources wishes to acknowledge the hard work and express its deepest thanks to the following individuals who were responsible for research and documentation, as well as for tireless assistance in the development of this summary report:

Mr. Bruce Lippke, Director, Rural Technology Institute;
Timber Supply and Forest Structure Study
Dr. Ivan Eastin, Director, Center for International Trade in Forest Products;
Economic Contribution Study
Dr. John Perez-Garcia, Professor of Forest Economics and Trade;
Market Competitive Position Study
Dr. Gordon Bradley, Professor of Forest Land Use Planning;
Forest Land Conversion Study
Ms. Ara Erickson, Research Consultant;
Forest Land Conversion Study
Mr. Brian Boyle, Overall Project Coordinator
Ms. Michelle Conner, Vice-President for Cascade Agenda,
Cascade Land Conservancy; *Forest Land Conversion Study*

While acknowledging the primary contributions of those identified above, along with other college staff and students, Cascade Land Conservancy staff, and others, the Department of Natural Resources accepts full responsibility for this legislative summary report, along with any errors, inaccuracies, or mischaracterizations it may contain.

DNR also wishes to thank the many people who participated in project events, including the Roundtable discussion on October 30-31, 2006 and the Northwest Environmental Forum on November 20-21, 2006. Lists of those participants can be found in Appendix D.

The Executive Summary of this report was previously made available as a handout to the legislature and the public, as part of several committee work sessions on the Future of Washington Forests project in the Senate and House of Representatives. In addition, several pieces of proposed legislation and proposals for budget expenditures related to the recommendations in this report have been under consideration by the legislature in its 2007 session.

This summary legislative report is intended to further stimulate and support legislative deliberation, public discussion and ongoing research related to the findings, key issues, and recommendations of the Future of Washington Forests project.

Introduction

Washington has long been known as the Evergreen State. While maybe not giving due recognition to grass lands and shrub lands, and farms of the Columbia Plateau, this nickname nevertheless captures the reality of Washington's extensively forested mountains and foothills, coastal regions, and Puget Sound lowlands. Washington's green forests have long been crucial to the state's economy, to family livelihoods, to residents' quality of life, and to the environmental support systems Washingtonians rely upon.

However, Washington's forests have constantly changed, as have society's interactions with the forests. Before European settlement, slow development of vast "old growth" forests was punctuated by frequent forest fires and windstorms creating new clearings. With European settlement, human-caused clearings spread from the waters' edge, and human-caused forest fires burned. Following the loggers' axe and saw, harvested areas eventually re-sprouted naturally into new young forests. Today, we're fascinated by black and white images of logging camps and steam engines in the woods as well as of exotic Model T excursions to forest giants in early national parks. Lumber, shake, plywood, and pulp and paper mills drove the economy of many towns. Rural forests welcomed hunters, fishers, and horse packers. Smokey Bear taught us to prevent forest fires. The largest forest landowners were the federal and state governments, and large private companies feeding their own mills. They were joined by hundreds of owners of smaller forest parcels.

Washington's forests display many faces, including significant areas of protected mountainous old growth forests, foothills and relatively flat country with maturing second-growth forests, and many vigorous third-growth plantations.

Increasing mid-20th century population and demand for lumber for housing brought further changes. Hundreds of miles of logging roads extended into forests of all kinds and ownerships to reach newly valuable timber. Logged areas began to be re-planted to create young forest plantations. Broad areas of federal forests were placed off-limits to logging and retained their old growth, while other federal and state lands saw large scale timber harvesting and replanting, similar to that on private lands. State forest lands held in trust to provide funds for building schools were tapped to meet the growing needs of the baby boomers. Mills were modernized, mechanized, consolidated, and computerized, and in some cases geared to produce more specialized products. Generations of firefighters still battled forest blazes.

Near cities and towns, permanent loss of forest lands to housing and commercial development began to spread. The baby boom sparked an explosion of urban-based recreational use of forests and other wildlands, and new appreciation for these lands' scenic qualities. An increasing understanding of environmental and ecological benefits of healthy forests led to campaigns to protect wilderness areas on national forests, and habitat for spotted owls and other species, especially those dependent on declining old growth. The state strengthened its regulations of forestry on state and private lands to protect water quality and salmon habitat. Congress restricted exports of logs from federal and state lands, while private forests supplied a growing international market. Those who were able built both vacation and year-round homes further out into the forest, creating a far-flung "urban-forest interface".

The late 20th century saw a divergence between "high yield" industrial forest plantations on the best growing sites and more "natural" managed forests elsewhere, especially on federal lands, while everywhere, more trees were retained along streams when timber was harvested.

At the beginning of the 21st century, Washington's forests display many faces. These include significant areas of protected mountainous old growth forests, foothills and relatively flat country with maturing second-growth forests, and many vigorous third-growth plantations. Washington's forests also include unhealthy densely-packed young stands where fire control did its job too well, steep clearcut hillsides and high ridges where re-growth is slow, lowland areas cleared for spreading subdivisions and malls, punctuated with isolated pristine remnants of forest biological diversity.

Today, changes in our relations with Washington's forests continue. New businesses and industries have overtaken the economic dominance of timber in many areas, while some rural regions remain timber dependent, and timber products now supply commodity markets driven by demand for housing. In the global marketplace, Washington forest products compete with products from as near as British Columbia and as far as Southeast Asia. Likewise, a global to local concern about forest "sustainability" is evident, even among some consumers of lumber and paper. Because decades of fire control have not necessarily produced healthy forests, we see a movement toward thinning and other active management strategies to restore healthier conditions, as well as habitat restoration such as along miles of salmon streams and around wetlands. State and local governments have moved toward managing the spread of human development, and property

owners have moved in turn to secure their property rights. Federal and state tax law changes have brought new financial forces to bear on forest landownership, and some very large private holdings have moved from industrial owners with mills to feed to institutional owners driven by expectations of direct financial return. Meanwhile, technology has carried a whole new generation of motorized recreationists into the forests, sometimes encountering new gates on forest roads. Family owners of small forest holdings are seeing a generational change as retirements create questions over continued willingness to keep these properties growing trees instead of houses. And across the political landscape, divisive courtroom battles break out in some places while collaborative consensus agreements emerge elsewhere.

What Will The Future Hold for Washington's Forests and Forest-Oriented Society?

Washington citizens have many questions: Will green forests still blanket our lowlands, foothills, and mountains, providing homes to all the diverse flora and fauna of Washington, and flowing with clean, cold water? Will workers still take lunchbuckets into the woods and mills every day to provide livelihoods for their families and lumber for our houses? Will tribal elders teach the next generation to gather medicinal forest plants? Will forest roads and trails remain open to recreationists of all kinds, young and old? Who will own these forests? Will new generations of family forest landowners stay on the land? Will spreading subdivisions and other development inexorably displace forested horizons? Will private investment in modern computerized mills dry up, and Washington wood go begging in a global market supplied by fast-growing trees from warmer climates? Will two-by-fours wear an "organic" label? Will forests be mainly valued for breathing in and storing carbon dioxide? Will climate change cause non-native trees to spread into Washington?

The citizens of Washington continue to hope for a broad array of benefits from living in the Evergreen State, based on the diverse values of our forests, including forests as a foundation for personal inspiration and community-building. Many visions of the future have competed for public attention throughout Washington's history.

The citizens of Washington continue to hope for a broad array of benefits from living in the Evergreen State, based on the diverse values of our forests, including forests as a foundation for personal inspiration and community building.

What Will Be The Future of Washington's Forests?

A new vision of Washington's forests is crystalizing, one which acknowledges strong environmental regulation of logging and large areas of protected forests, especially on federal lands blanketing the encircling mountain slopes. This vision also sees sustainable "working" forest landscapes filling much of the spaces between our suburbs and those protected forests beyond. This vision anticipates a partnership between government, community, and industry to keep working forest lands profitable for a diversity of owners over the long term, continuing to supply lumber, jobs, and taxes, while providing the financial means to actively improve forest health for our air, water, fish and wildlife, and recreation. Inevitable development occurs but is more clearly contained in defined areas, leaving more forestland intact.

It's clear that the community of interested parties is large and diverse, including forest landowners, woods and mill workers, environmental advocates, recreationists, those who live in or near forests, scientists, government agencies, Indian tribes, land trusts, and school children. That diversity can enrich community discussions about Washington's forests, and it can accentuate the tensions among different values. Washington State has a long history of public debate about forests. Strongly held values and available scientific understanding have both played a major role in shaping this debate. The Future of Washington Forests Project provides an opportunity to enhance both of these contributors to forest policy discussion.

The community of parties interested in Washington's Forests is large and diverse, including forest landowners, woods and mill workers, environmental advocates, recreationists, those who live in or near forests, scientists, government agencies, Indian tribes, land trusts, and school children.

University-based study and analysis has made up the majority of the effort. The economic studies assemble and evaluate the latest data and information about the timber supply and supply of, demand for, and economic and ecological significance of forest products and services. While the timber supply and economic studies were independent research projects, their findings are inter-related and are grouped in this report. In addition, several special "focus areas" are included, giving more in-depth treatment to critical topics touching on multiple research studies. The working forestland conversion study compares the influences on land use of the forest products markets with the influences of the simultaneous land development markets. This report closes with a summary of major findings of the research project and a set of policy recommendations.

All these studies and their findings have formed a factually-rich setting in which technical and policy leaders from across the range of interested parties have come together for dialogue at the Future of Washington Forests Roundtable in October of 2006, and the University of Washington's Working Forests Forum in November of 2006. That policy dialogue has continued in the Washington legislature's consideration of the project findings, conclusions, and recommendations contained in this report. Interested parties have, in parallel with this report, brought their views and proposals to the legislature. In addition, the technical studies will be finalized during the winter and spring of 2007, leading to final study reports that may add to the information and recommendations in this report. Finally, both scientific study and policy debate will no doubt continue to unfold into the future as it has in the past. This report is intended to make a significant but not timeless contribution to that knowledge and debate.